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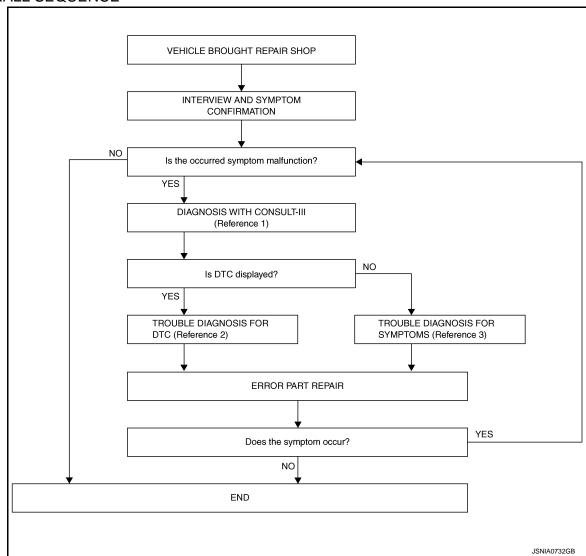
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## **BASIC INSPECTION**

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

#### **OVERALL SEQUENCE**



- Reference 1... Refer to <u>AV-43</u>, "<u>CONSULT-III Function (MULTI AV)</u>".
- Reference 2··· Refer to <u>AV-117</u>, "<u>DTC Index</u>".
- Reference 3... Refer to AV-241, "Symptom Table".

#### **DETAILED FLOW**

### 1.INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

- Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred).
- · Check the symptom.

#### Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

2.DIAGNOSIS WITH CONSULT-III

DIAGNOSIS AND REPAIR WORKFLO	) V V
< BASIC INSPECTION >	[WITHOUT NAVIGATION]
<ol> <li>Connect CONSULT-III and perform a self-diagnosis for "MULTI AV". Reference (MULTI AV)".</li> <li>NOTE:</li> </ol>	r to AV-43, "CONSULT-III Func-
Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed.  2. Check if any DTC is displayed in the self-diagnosis results.	
Is DTC displayed?	
YES >> GO TO 3. NO >> GO TO 4.	
3. TROUBLE DIAGNOSIS FOR DTC	
<ol> <li>Check the DTC indicated in the self-diagnosis results.</li> <li>Perform the relevant diagnosis referring to the DTC Index. Refer to AV-117</li> </ol>	7, "DTC Index".
>> GO TO 5.	
4.TROUBLE DIAGNOSIS FOR SYMPTOMS	
Perform the relevant diagnosis referring to the diagnosis chart by symptom Table".	n. Refer to <u>AV-241, "Symptom</u>
>> GO TO 5.	
5. ERROR PART REPAIR	
<ol> <li>Repair or replace the identified malfunctioning parts.</li> <li>Perform a self-diagnosis for "MULTI AV" with CONSULT-III.</li> <li>NOTE:</li> </ol>	
Erase the stored self-diagnosis results after repairing or replacing the re has been indicated in the self-diagnosis results.  3. Check that the symptom does not occur.	elevant components if any DTC
Does the symptom occur?	
YES >> GO TO 1. NO >> INSPECTION END	

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#### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

[WITHOUT NAVIGATION]

### INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

Always correct the center position of the predicted course line after disconnecting the battery negative terminal.

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement

1. CORRECTION OF CENTER POSITION OF PREDICTED COURSE LINE

Refer to the following for details.

>> Refer to <u>AV-16, "REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUSTMENT: Special Repair Requirement"</u>.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000003838529

When camera control unit is replaced, the center position of predicted course line shall be corrected.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

1.correction of center position of predicted course line

Refer to the following for details.

>> Refer to AV-16, "REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUSTMENT: Special Repair Requirement".

REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUST-MENT

REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUST-

MENT: Description

Adjust the center position of the predicted course line of the rear view monitor if it is shifted.

REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUST-

MENT : Special Repair Requirement

INFOID:0000000003838532

1.DRIVING

Drive the vehicle straight ahead 100 m (328.1 ft) or more at a speed of 30 km/h (18.6 MPH) or more.

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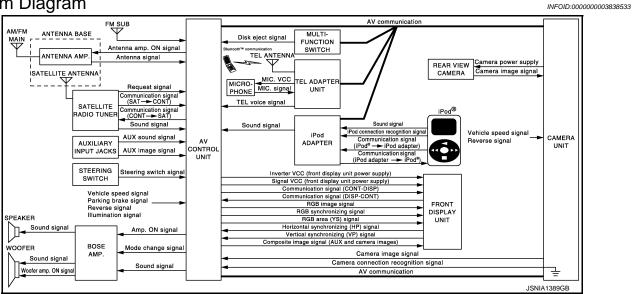
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## SYSTEM DESCRIPTION

### **MULTI AV SYSTEM**

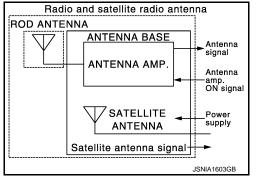
System Diagram



#### NOTE:

 The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

 A radio antenna base integrated with radio antenna and satellite radio antenna is adopted.



## System Description

Multi AV system means that the following systems are integrated.

System name	System explanation
AUDIO SYSTEM	AV-22, "System Description"
VEHICLE INFORMATION SYSTEM	<ul> <li>Status of audio, climate control system, fuel economy, maintenance and navigation are displayed.</li> <li>AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM, unified meter and A/C amp.</li> <li>AV control unit is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> </ul>
HANDS-FREE PHONE SYSTEM	AV-26, "System Description"
AUXILIARY INPUT SYSTEM	Refer to the following "AUXILIARY INPUT SYSTEM".
REAR VIEW MONITOR SYSTEM	AV-29, "System Description"

AV control unit functions by transmitting/receiving data one by one with each unit (slave unit) that configures
them completely as a master unit by connecting between units that configure the MULTI AV system with two
AV communication lines (H, L).

Two AV communication lines (H, L) adopt a twisted pair line that is resistant to noise.

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#### **MULTI AV SYSTEM**

#### < SYSTEM DESCRIPTION >

#### [WITHOUT NAVIGATION]

- AV control unit is connected by CAN communication, and it receives data signals from the ECM, unified
  meter and A/C amp. It computes and displays fuel economy information values with the obtained information. The transmitting/receiving of data signals is performed by BCM. In addition, it transmits the required
  signal of vehicle setting and receives the response signal.
- AV control unit is connected with display and serial communication, and it transmits the required signal of display and display control and receives the response signal from front display. Also, it is connected with satellite radio by serial communication, and it transmits the operating signal and receives the display signal.

#### NOTE:

AV control unit can perform CONSULT-III self-operating function and on board self-diagnosis.

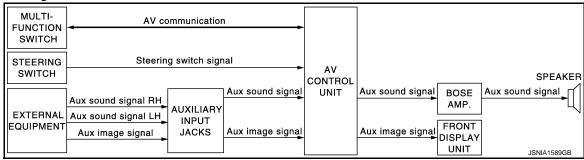
- CONSULT-III self-diagnosis: refer to <u>AV-43, "CONSULT-III Function (MULTI AV)"</u>.
- On board self-diagnosis: refer to AV-33, "Diagnosis Description".

On board self-diagnosis of TEL adapter unit can be performed.

• Refer to AV-46, "Diagnosis Description" for on board self-diagnosis.

#### **AUXILIARY INPUT SYSTEM**

- Image and sound can be output from an external device by connecting a device with auxiliary input jacks.
- Operation can be performed with multifunction switch and steering switch. Multifunction switch transmits
  operation signal to AV control unit with communication.



### **Component Parts Location**

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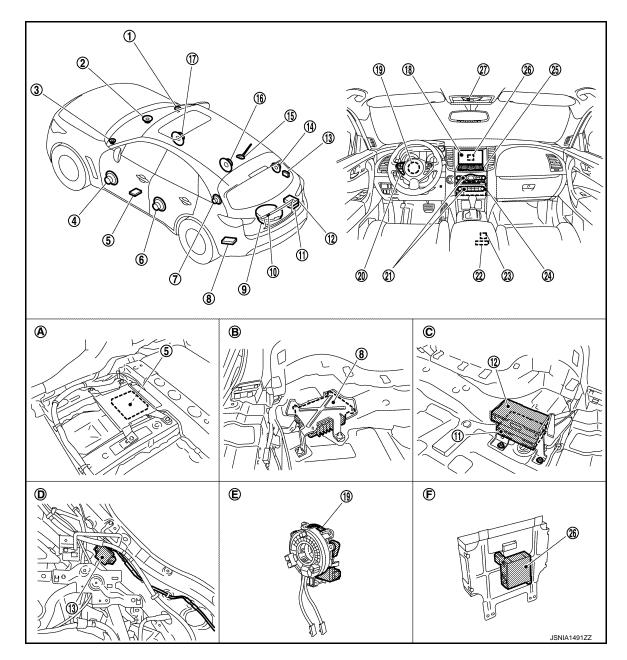
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- Front squawker RH
- Front door speaker LH
- Rear squawker LH 7.
- 10. Rear view camera
- 13. TEL antenna
- 16. Rear door speaker RH
- 19. Steering angle sensor
- 22. Auxiliary input jacks
- 25. Multifunction switch
- Under front seat (LH side) A.
- Luggage side RH

- Center speaker
- 5. Camera control unit
- 8. BOSE amp.
- 11. Satellite radio tuner
- 14. Rear squawker RH
- 17. Front door speaker RH
- 20. Steering switch
- 23. iPod connector
- 26. iPod adapter
- В. Luggage floor (LH side)
- Spiral cable part

- Front squawker LH
- 6. Rear door speaker LH
- 9. Woofer
- 12. TEL adapter unit
- 15. Antenna base (antenna amp. and satellite antenna)
- 18. Front display unit
- 21. Preset switch
- 24. AV control unit
- 27. Microphone
- Luggage floor (RH side) C.
- Rear view of the front display unit

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**AV-19** Revision: 2009 March 2009 FX35/FX50

### [WITHOUT NAVIGATION]

## **Component Description**

INFOID:0000000003838536

Part name	Description
AV CONTROL UNIT	<ul> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Auxiliary image signal is input from the auxiliary input jacks.</li> <li>Camera image signal is input from camera control unit.</li> </ul>
FRONT DISPLAY UNIT	<ul> <li>Front display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal is input from AV control unit (RGB, RGB area and RGB synchronizing). Camera image signal is input from AV control unit.</li> <li>Composite image signal (auxiliary images) is input from the AV control unit.</li> <li>Synchronize signal (HP, VP) is output to AV control unit.</li> </ul>
BOSE AMP.	<ul> <li>Inputs power (amp. ON) and sound signal from AV control unit, and outputs sound signal to woofer and each speaker.</li> <li>Input "Driver's Audio Stage" mode change signal from AV control unit.</li> <li>Woofer amp. ON signal is transmitted to woofer.</li> </ul>
FRONT DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>
REAR DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>
FRONT SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
REAR SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
CENTER SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
WOOFER	<ul> <li>Inputs power (woofer amp. ON) and sound signal from BOSE amp.</li> <li>Outputs low-frequency sound.</li> </ul>
MULTIFUNCTION SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio and auxiliary input operations are integrated.</li> <li>Connected with preset switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> </ul>
PRESET SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio and air conditioner operations are integrated.</li> <li>Connected with multifunction switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> <li>The disk ejection operating signal is performed by hardwire.</li> </ul>
CAMERA CONTROL UNIT	<ul> <li>Camera image signal is input from rear view camera. Camera image signal is output to AV control unit.</li> <li>Power (camera ON signal) is transmitted to rear view camera.</li> <li>Superimposes the guiding line and predicted course line to the camera image that outputs to AV control unit.</li> <li>Camera control unit is connected via AV communication.</li> </ul>
REAR VIEW CAMERA	<ul> <li>The image from rear camera is transmitted to camera control unit.</li> <li>It receives power (camera ON signal) from camera control unit and operates.</li> </ul>
STEERING SWITCH	<ul> <li>Operations such as audio and hands-free phone are possible.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>

## **MULTI AV SYSTEM**

### < SYSTEM DESCRIPTION >

### [WITHOUT NAVIGATION]

Part name	Description	
STEERING ANGLE SENSOR	It is connected to the AV control unit and transmits the steering angle signal via CAN communication.	
AUXILIARY INPUT JACKS	Auxiliary input jacks Image and sound signal are transmitted to AV control unit.	
ANTENNA BASE	A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.  ANTENNA AMP.  Radio signal received by rod antenna is amplified and transmitted to AV control unit.  Power (antenna amp. ON signal) is supplied from AV control unit.  SATELLITE RADIO ANTENNA  Receives satellite radio waves and outputs it to satellite radio tuner.	
iPod ADAPTER	<ul> <li>Inputs iPod sound signal from iPod<sup>®</sup>, and outputs iPod sound signal to AV control unit.</li> <li>Receiving/transmitting of iPod<sup>®</sup> operation signals are performed as follows:</li> <li>between AV control unit and iPod adapter: AV communication.</li> <li>between iPod<sup>®</sup> and iPod adapter: serial communication.</li> </ul>	
TEL ADAPTER UNIT	<ul> <li>Inputs the TEL voice signal from TEL antenna and outputs it to AV control unit.</li> <li>It is connected with AV control unit via AV communication and controlled with AV control unit.</li> </ul>	
TEL ANTENNA	Receives the TEL voice signal and outputs it to TEL adapter unit.	
MICROPHONE	<ul> <li>Used only when hands-free phone is operated.</li> <li>Outputs Mic. signal (TEL voice signal) to TEL adapter unit.</li> <li>The power (Mic. power supply) is supplied from TEL adapter unit.</li> </ul>	
SATELLITE RADIO TUNER	<ul> <li>Inputs the satellite radio signal from satellite radio antenna and outputs the sound signal to AV control unit.</li> <li>It is controlled with AV control unit and serial communication (communication signal and request signal).</li> </ul>	

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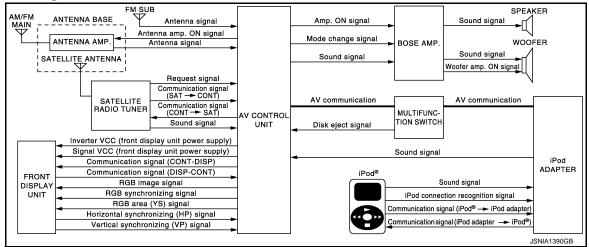
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### **AUDIO SYSTEM**

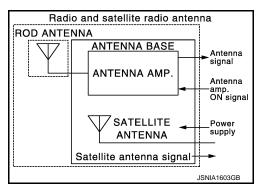
### System Diagram

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#### NOTE:

A radio antenna base integrated with radio antenna and satellite radio antenna is adopted.



### System Description

INFOID:0000000003838538

The audio system is equipped with the following functions. Each function can be operated by multifunction switch, preset switch or steering switch. It indicates the operation status of AUDIO to display.

Function		
AM/FM radio		
Satellite radio		
CD		
iPod connection		
Driver's Audio Stage		

#### **FUNCTION DESCRIPTION**

#### Operating Signal

Operation of the audio system can be performed with multifunction switch, preset switch or steering switch.

- Operating signal is transmitted to AV control unit with AV communication when it is operated by multifunction switch or preset switch. The disk ejection operating signal is performed by hardwire.
- Operating signal is transmitted to AV control unit with steering switch signal when it is operated by steering switch.

#### Screen Display

- The display is switched by communication signal between front display unit and AV control unit.
- The image signal that displays operating status is performed by the RGB image signal, RGB area signal and RGB synchronizing signal.

#### AM/FM Radio Mode

AM/FM radio tuner is built into AV control unit.

#### AUDIO SYSTEM

#### < SYSTEM DESCRIPTION >

#### [WITHOUT NAVIGATION]

- Audio signal is received by rod antenna, next it is amplified by antenna amp., and finally it is input into AV
  control unit. The FM sub antenna is installed on the back door window glass and AV control unit receives
  audio signal.
- Audio signal is input to BOSE amp., BOSE amp. outputs to woofer and each speaker from AV control unit.

#### Satellite Radio System

- Satellite radio tuner is controlled by serial communication and request signal from AV control unit.
- Satellite radio wave is received by satellite radio antenna and is input into satellite radio tuner. Satellite radio tuner outputs satellite radio sound signal to AV control unit. AV control unit outputs satellite radio sound signal to BOSE amp., BOSE amp. outputs the sound signal to each speaker and woofer.

#### CD Mode

- CD function is built into AV control unit.
- AV control unit outputs audio signals to BOSE amp., BOSE amp. outputs to woofer and each speaker when CD is inserted to AV control unit.

#### iPod Connection

- Connect iPod<sup>®</sup> and iPod adapter with the wire harness. iPod adapter inputs iPod sound signal from iPod<sup>®</sup>.
   When iPod mode is selected, iPod adapter outputs iPod sound signal to AV control unit. AV control unit outputs sound signal to BOSE amp. and BOSE amp. outputs sound signal to woofer and each speaker.
- Receiving/transmitting of iPod® operation signals are performed as follows:
- between AV control unit and iPod adapter: AV communication.
- between iPod<sup>®</sup> and iPod adapter: serial communication.
- iPod<sup>®</sup> connection status can be recognized whether iPod adapter receives iPod connection recognition signal.
- iPod adapter can charge iPod<sup>®</sup>.

#### Driver's Audio Stage Mode

- Driver's Audio Stage controls the speaker output characteristic by BOSE amp. so that driver seat is the center of sound.
- ON/OFF signals of Driver's Audio Stage are transmitted from AV control unit to BOSE amp. using Mode signal.

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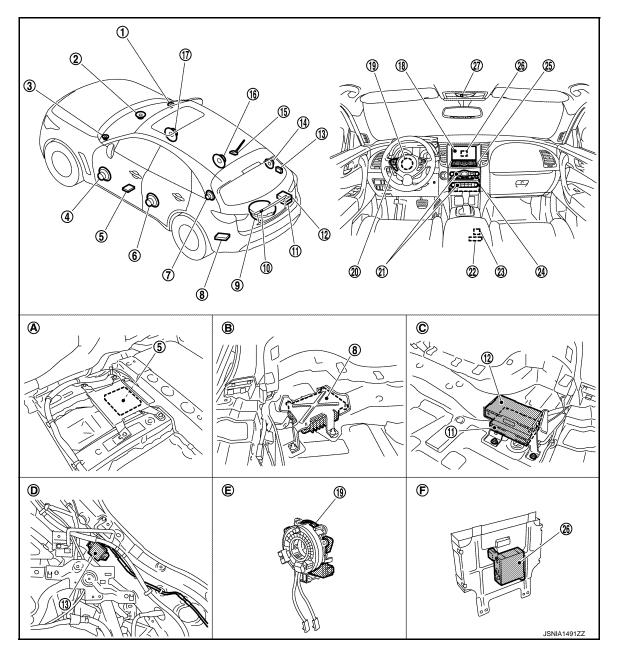
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Revision: 2009 March AV-23 2009 FX35/FX50

### Component Parts Location

INFOID:0000000003931342



- 1. Front squawker RH
- 4. Front door speaker LH
- 7. Rear squawker LH
- 10. Rear view camera
- 13. TEL antenna
- 16. Rear door speaker RH
- 19. Steering angle sensor
- 22. Auxiliary input jacks
- 25. Multifunction switch
- A. Under front seat (LH side)
- D. Luggage side RH

- 2. Center speaker
- 5. Camera control unit
- 8. BOSE amp.
- 11. Satellite radio tuner
- 14. Rear squawker RH
- 17. Front door speaker RH
- 20. Steering switch
- 23. iPod connector
- 26. iPod adapter
- B. Luggage floor (LH side)
- E. Spiral cable part

- Front squawker LH
- 6. Rear door speaker LH
- 9. Woofer
- 12. TEL adapter unit
- 15. Antenna base (antenna amp. and satellite antenna)
- 18. Front display unit
- 21. Preset switch
- 24. AV control unit
- 27. Microphone
- C. Luggage floor (RH side)
- F. Rear view of the front display unit

### **AUDIO SYSTEM**

### < SYSTEM DESCRIPTION >

### [WITHOUT NAVIGATION]

# **Component Description**

INFOID:0000000003838540

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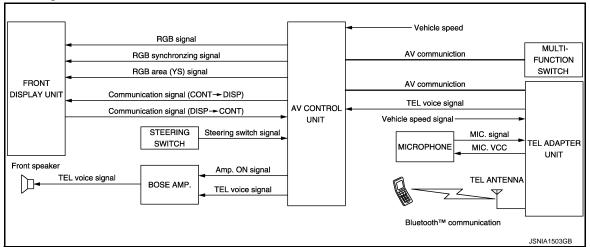
Part name	Description	
AV CONTROL UNIT	<ul> <li>The AM/FM receiving function and the CD playing function are equipped.</li> <li>BOSE amp. ON signal and sound signal are transmitted to BOSE amp.</li> </ul>	
FRONT DISPLAY UNIT	<ul> <li>Front display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal (audio operation condition) is input from AV control unit.</li> </ul>	
BOSE AMP.	<ul> <li>Inputs power (amp. ON) and sound signal from AV control unit, and outputs sound signal to woofer and each speaker.</li> <li>Input "Driver's Audio Stage" mode change signal from AV control unit.</li> <li>Woofer amp. ON signal is transmitted to woofer.</li> </ul>	
FRONT DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>	
REAR DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>	
FRONT SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>	
REAR SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>	
CENTER SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>	
WOOFER	<ul> <li>Inputs power (amp. ON) and sound signal from BOSE amp.</li> <li>Outputs low-frequency sound.</li> </ul>	
MULTIFUNCTION SWITCH	<ul> <li>Each audio operation can be operated.</li> <li>Connected with preset switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> </ul>	
PRESET SWITCH	<ul> <li>Each audio operation can be operated.</li> <li>It is connected to multifunction switch by AV communication. The operation signal is transmitted to AV control unit.</li> <li>The CD ejection operating signal is performed by hardwire.</li> </ul>	
STEERING SWITCH	<ul> <li>Each audio operation can be operated.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>	
ANTENNA BASE	<ul> <li>A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.</li> <li>ANTENNA AMP.</li> <li>Radio signal received by glass antenna is amplified and transmitted to AV control unit.</li> <li>Power (antenna amp. ON signal) is supplied from AV control unit.</li> <li>SATELLITE RADIO ANTENNA</li> <li>Receives the satellite radio waves and outputs it to satellite radio tuner.</li> </ul>	
iPod ADAPTER	<ul> <li>Inputs iPod sound signal from iPod<sup>®</sup>, and outputs iPod sound signal to AV control unit.</li> <li>Receiving/transmitting of iPod<sup>®</sup> operation signals are performed as follows:</li> <li>between AV control unit and iPod adapter: AV communication.</li> <li>between iPod<sup>®</sup> and iPod adapter: serial communication.</li> </ul>	
SATELLITE RADIO TUNER	<ul> <li>Inputs the satellite radio signal from satellite radio antenna and outputs the sound signal to AV control unit.</li> <li>It is controlled with AV control unit and serial communication (communication signal and request signal).</li> </ul>	

**AV-25** Revision: 2009 March 2009 FX35/FX50

### HANDS-FREE PHONE SYSTEM

### System Diagram

INFOID:0000000003838541



### System Description

INFOID:0000000003838542

- TEL adapter unit is controlled with AV communication from AV control unit.
- The connection between portable telephone and TEL adapter unit is performed via Bluetooth<sup>™</sup> communication.
- The voice guidance signal is input from TEL adapter unit to AV control unit and output via BOSE amp. to front speaker when operating cellular phone.
- TEL adapter unit has the on board self-diagnosis function. Refer to AV-46, "Diagnosis Description".

#### When receiving a call

TEL voice signal received with the portable telephone is input from TEL antenna via TEL adapter unit to AV control unit via Bluetooth<sup>™</sup> communication and output via BOSE amp. to front speaker. The operation is performed via steering switch or voice recognition function (TEL operation only).

#### When a call is transmitted

Voice sound (TEL voice signal) is input from the microphone to TEL adapter unit. It is input from TEL antenna via Bluetooth communication to portable telephone. It is transmitted to phone on the other side. The operation is performed with steering switch or voice recognition function (TEL operation only).

### **Component Parts Location**

INFOID:0000000003931344

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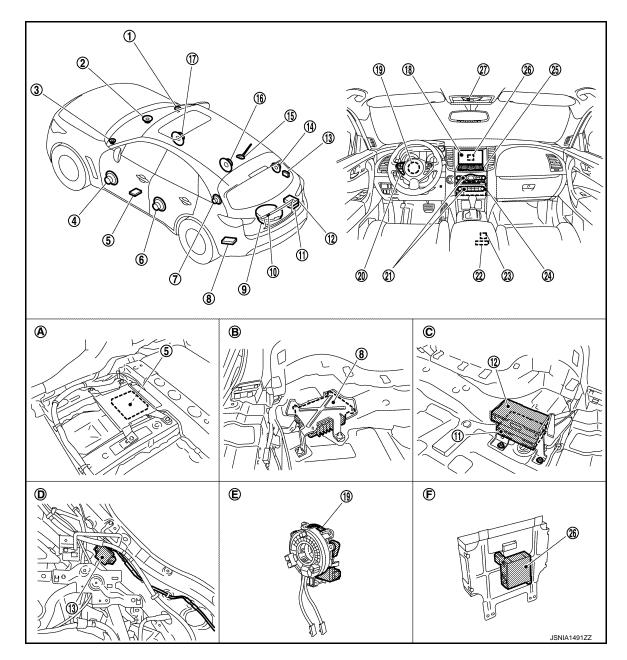
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- Front squawker RH
- Front door speaker LH
- Rear squawker LH 7.
- 10. Rear view camera
- 13. TEL antenna
- 16. Rear door speaker RH
- 19. Steering angle sensor
- 22. Auxiliary input jacks
- 25. Multifunction switch
- Under front seat (LH side) A.
- Luggage side RH

- Center speaker
- 5. Camera control unit
- 8. BOSE amp.
- 11. Satellite radio tuner
- 14. Rear squawker RH
- 17. Front door speaker RH
- 20. Steering switch
- 23. iPod connector
- 26. iPod adapter
- В. Luggage floor (LH side)
- Spiral cable part

- Front squawker LH
- 6. Rear door speaker LH
- 9. Woofer
- 12. TEL adapter unit
- 15. Antenna base (antenna amp. and satellite antenna)
- 18. Front display unit
- 21. Preset switch
- 24. AV control unit
- 27. Microphone
- Luggage floor (RH side) C.
- Rear view of the front display unit

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### HANDS-FREE PHONE SYSTEM

### < SYSTEM DESCRIPTION >

### [WITHOUT NAVIGATION]

## **Component Description**

INFOID:0000000003838544

Part name	Description
AV CONTROL UNIT	<ul> <li>Inputs TEL voice signal or voice guidance signal from TEL adapter unit and outputs it to BOSE amp. during reception.</li> <li>Connects with TEL adapter unit and AV communication and controls hands free phone system.</li> </ul>
FRONT DISPLAY UNIT	<ul> <li>Front display image is controlled by the serial communication from AV control unit.</li> <li>Inputs RGB image signal (RGB, RGB area and RGB synchronizing) from AV control unit and displays the status of hands free phone system.</li> </ul>
BOSE AMP.	Inputs TEL voice signal or voice guidance signal from AV control unit and outputs it to front door speaker and center speaker.
FRONT DOOR SPEAKER	Outputs TEL voice signal or voice guidance signal from BOSE amp.
FRONT SQUAWKER	Outputs TEL voice signal of voice guidance signal from BOSE amp.
PRESET SWITCH	<ul><li>Adjust the sound when using TEL.</li><li>The operation signal is transmitted to AV control unit via AV communication.</li></ul>
STEERING SWITCH	<ul> <li>The hands free phone system can be operated.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>
MICROPHONE	<ul> <li>Used when operating the hands-free phone.</li> <li>Outputs Mic. signal (TEL voice signal) to TEL adapter unit.</li> <li>The power (Mic. power supply) is supplied from TEL adapter unit.</li> </ul>
TEL ADAPTER UNIT	<ul> <li>Inputs the TEL voice signal from TEL antenna and outputs it to AV control unit.</li> <li>It is connected with AV control unit via AV communication and controlled with AV control unit.</li> </ul>
TEL ANTENNA	Receives the TEL voice signal and outputs it to TEL adapter unit.

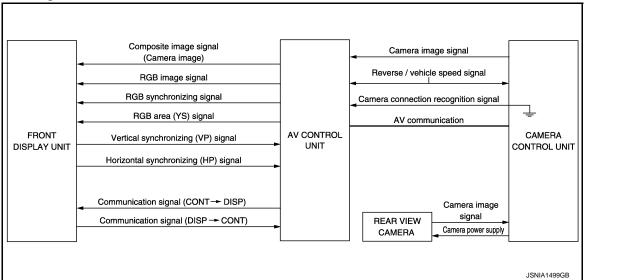
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### **REAR VIEW MONITOR SYSTEM**

### System Diagram



### System Description

INFOID:0000000003838546

#### CAMERA IMAGE OPERATION PRINCIPLE

- Power is supplied to rear view camera from camera control unit and the rear view camera outputs the camera image to camera control unit when selector lever is set to reverse position and the reverse signal on camera control unit is input.
- Camera control unit superimposes the guiding line and predicted course line to the image from rear view
  camera and outputs to front display unit. In this case, the reverse signal is also input to AV control unit.
  Therefore, AV control unit recognizes the selector lever as in the reverse position. And then AV control unit
  switches the image displayed by the communication signal between AV control unit and front display unit
  with the camera image.
- AV control unit outputs camera image signal that is inputted from camera control unit to front display unit.
- Camera control unit controls the direction and distance of predicted course line according to the sensor signal from steering angle sensor.
- Steering angle sensor connected to the AV control unit and transmits the steering angle signal via CAN communication.
- AV control unit determines whether rear view camera is equipped or not, based on the presence of camera connection recognition signal. It switches to rear view monitor image at the time of reverse signal input when rear view camera is equipped.
- Warning message under the rear view monitor display is described by AV control unit.

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### Rear view monitor guiding line Vehicle width Rear view camera Predicted course line guiding line Vehicle distance guiding line Green: Approx. 3 m (9.84 ft) (6.56 ft) Yellow: Approx. 1 m (3.28 ft) <u>\*</u>/ Red: Approx. 0.5 m (1.64 ft) Rear bumper JSNIA1420GB

### **Component Parts Location**

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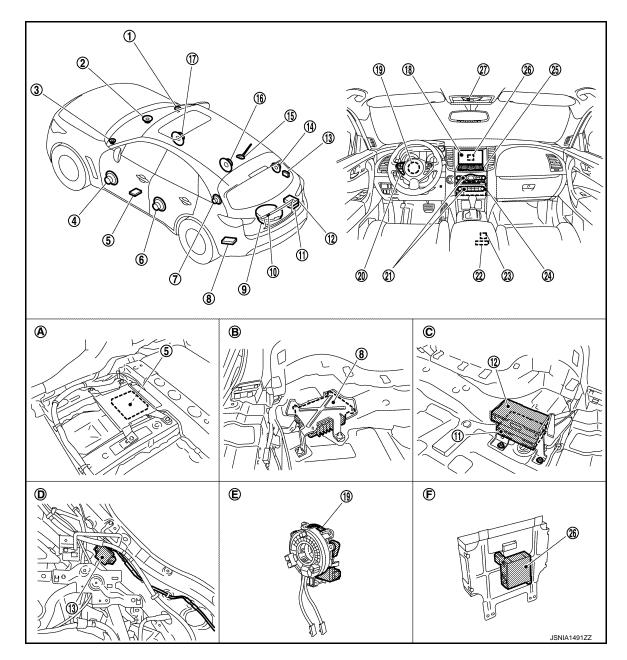
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- Front squawker RH
- Front door speaker LH
- Rear squawker LH 7.
- 10. Rear view camera
- 13. TEL antenna
- 16. Rear door speaker RH
- 19. Steering angle sensor
- 22. Auxiliary input jacks
- 25. Multifunction switch
- Under front seat (LH side) A.
- Luggage side RH

- Center speaker
- 5. Camera control unit
- 8. BOSE amp.
- 11. Satellite radio tuner
- 14. Rear squawker RH
- 17. Front door speaker RH
- 20. Steering switch
- 23. iPod connector
- 26. iPod adapter
- В. Luggage floor (LH side)
- Spiral cable part

- Front squawker LH
- 6. Rear door speaker LH
- 9. Woofer
- 12. TEL adapter unit
- 15. Antenna base (antenna amp. and satellite antenna)
- 18. Front display unit
- 21. Preset switch
- 24. AV control unit
- 27. Microphone
- Luggage floor (RH side) C.
- Rear view of the front display unit

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### **REAR VIEW MONITOR SYSTEM**

### < SYSTEM DESCRIPTION >

### [WITHOUT NAVIGATION]

## **Component Description**

INFOID:0000000003838548

Part name	Description	
AV CONTROL UNIT	<ul> <li>Image on display is transmitted to rear view monitor image by serial communication between AV control unit and front display unit.</li> <li>Warning displayed on the rear view monitor image is illustrated.</li> <li>AV control unit recognizes the presence of camera system with camera connection recognition signal.</li> </ul>	
FRONT DISPLAY UNIT	<ul> <li>Camera image signal is input from AV control unit.</li> <li>RGB image signal for warning display is input from AV control unit.</li> <li>Rear view monitor image is changed by serial communication from AV control unit.</li> </ul>	
CAMERA CONTROL UNIT	<ul> <li>Camera image signal is input from rear view camera. Camera image signal is output to AV control unit.</li> <li>Power (camera ON signal) is transmitted to rear view camera.</li> <li>Superimpose the guiding line and predicted course line to the camera image that outputs to AV control unit.</li> <li>Inputs the sensor signal from steering angle sensor, and then controls the predicted course line.</li> <li>Camera control unit is connected via AV communication.</li> </ul>	
REAR VIEW CAMERA	<ul> <li>The image of vehicle rear view is transmitted to camera control unit.</li> <li>It receives power (camera ON signal) from camera control unit and operates.</li> </ul>	
STEERING ANGLE SENSOR	It is connected to the AV control unit and transmits the steering angle signal via CAN communication.	

### **DIAGNOSIS SYSTEM (AV CONTROL UNIT)**

< SYSTEM DESCRIPTION >

[WITHOUT NAVIGATION]

### DIAGNOSIS SYSTEM (AV CONTROL UNIT)

### Diagnosis Description

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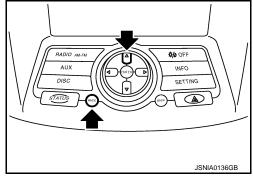
#### MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

The ON/OFF operation (continuity) of each switch in the multifunction switch and preset switch can be checked.

#### Self-diagnosis Mode

- Press the "BACK" switch and the "UP" switch of the 4-direction switches within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 seconds or more. The buzzer sounds, all indicators of the preset switch illuminate, and the selfdiagnosis mode starts.
- The continuity of each switch in the ON position can be checked by pressing the switch. The buzzer sounds if the switch is normal.

The hazard switch and disk eject switch cannot be checked.



#### Finishing Self-diagnosis Mode

Self-diagnosis mode is canceled when turning the ignition switch OFF.

#### MULTI AV SYSTEM ON BOARD DIAGNOSIS FUNCTION

- The AV control unit diagnosis function starts up with multifunction switch operation and AV control unit performs a diagnosis for each unit in the system during the on board diagnosis.
- Perform a CONSULT-III diagnosis if the on board diagnosis does not start, e.g., the screen does not display anything, multifunction switch does not function, etc.

#### ON BOARD DIAGNOSIS

### Description

- The trouble diagnosis function has a self-diagnosis mode for conducting trouble diagnosis automatically and a confirmation/adjustment mode for operating manually.
- Self-diagnosis mode performs AV control unit diagnosis and the connection diagnosis between each of the units that make up the system, and it indicates the results to the display.
- The confirmation/adjustment mode allows the technician to check, modify or adjust the vehicle signals and set values, as well as to monitor the system error records and system communication status. The checking, modifying or adjusting generally requires human intervention and judgment (the system cannot make judgment automatically).

#### On Board Diagnosis Item

Mode Description	
Self Diagnosis	<ul><li>AV control unit diagnosis</li><li>Perform the connection diagnosis between each of the units.</li></ul>

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### **DIAGNOSIS SYSTEM (AV CONTROL UNIT)**

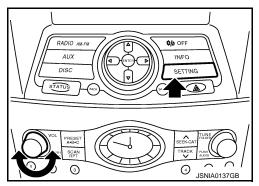
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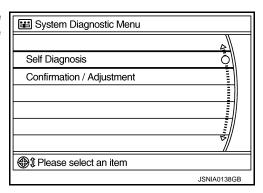
	Mode	Description	
	Display Diagnosis	The confirmations of the tint with the color spectrum bar display and shading of color with the gradation bar display can be performed.	
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse.	
	Speaker Test	The connection of a speaker can be confirmed by test tone.	
	Climate Control	Start auto air conditioner system self-diagnosis.	
Confirmation/	Error History	The system malfunction and the frequency when occurring in the pa are displayed. When the malfunctioning item is selected, the time ar place that the selected malfunction last occurred are displayed.	
Adjustment	Vehicle CAN Diagnosis	The transmitting/receiving of CAN communication can be monitored.	
	AV COMM Diagnosis	The communication condition of each unit of Multi AV system can be monitored.	
	Camera Cont.	The signal connected to camera control unit can be checked and the guiding line position that overlaps rear view camera image can be adjusted.	
	Delete Unit Connection Log	Erase the connection history of unit and error history	
-	Initialize Settings	Initializes AV control unit memory.	

#### STARTING PROCEDURE

- 1. Start the engine.
- 2. Turn the audio system OFF.
- 3. While pressing the "SETTING" button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. (When the self-diagnosis mode starts, a short beep will sound.)
  - Shifting from the current screen to the previous screen is performed by pressing the "BACK" button.



4. The trouble diagnosis initial screen is displayed, and then the items of "Self Diagnosis" and "Confirmation/Adjustment" can be selected.



**SELF-DIAGNOSIS MODE** 

### **DIAGNOSIS SYSTEM (AV CONTROL UNIT)**

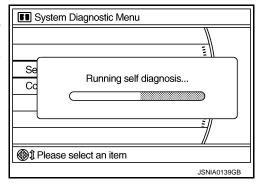
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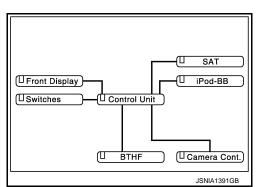
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- 1. Start the self-diagnosis function and select "Self-diagnosis".
- Self-diagnosis subdivision screen is displayed, and the selfdiagnosis mode starts.
- The bar graph visible on the center of the self-diagnosis subdivision screen indicates the progress of the trouble diagnosis.



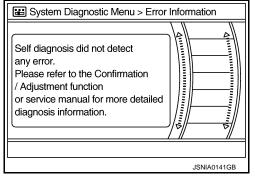
 Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

Diagnosis results	Unit	Con- nection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction Note	Red	Green



#### NOTE:

- · Only the control unit (AV control unit) is displayed in red.
- Replace AV control unit if "Self-Diagnosis did not run because of a control unit malfunction" is indicated. The symptom is an AV control unit internal error. Refer to <u>AV-251</u>, "Exploded View".
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.
- The comments of the self-diagnosis results can be viewed with a component in the diagnosis result screen.



#### **SELF-DIAGNOSIS RESULTS**

- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between AV control unit and each unit, and the internal operation of AV control unit.
- Because the start condition of the diagnosis function is a switch operation, the on board diagnosis function cannot be started up if any malfunction is detected in the communication circuit between AV control unit and the multifunction switch.
- Check the applicable display in following table, and then repair the malfunctioning parts.

Self-diagnosis Result Chart

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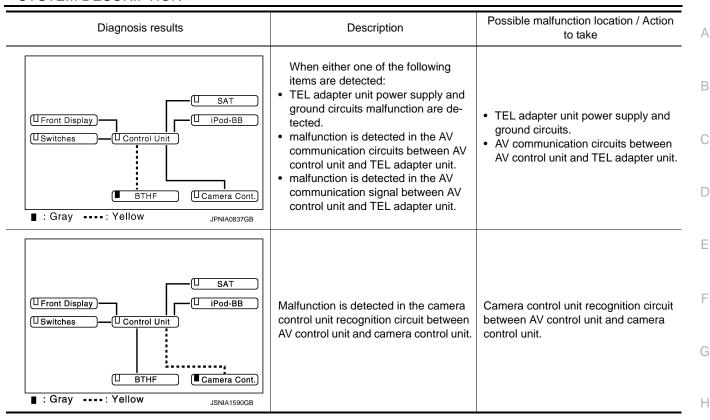
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Diagnosis results	Description	Possible malfunction location / Action to take
"Self-Diagnosis did not run because of a control unit malfunction"	AV control unit malfunction is detected.	Replace AV control unit.
■ : Red  JPNIA0833GB  NOTE:  When a control unit malfunction is detected (red in unit display), connection malfunctions with other connection units may be displayed.	Malfunction is detected in AV control unit power supply and ground circuits.	Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.
■ : Gray ••••: Yellow USAT    SAT	When either one of the following items are detected:  malfunction is detected in the communication circuits between AV control unit and front display unit.  malfunction is detected in the communication signal between AV control unit and front display unit.	Communication circuits between AV control unit and front display unit.
SAT  SAT  I Pod-BB  U Switches  U Control Unit  BTHF  U Camera Cont.  JPNIA0835GB	When either one of the following items are detected:  satellite radio tuner power supply and ground circuits malfunction are detected.  malfunction is detected in the communication circuits between AV control unit and satellite radio tuner.  malfunction is detected in the communication signal between AV control unit and satellite radio tuner.  malfunction is detected in the request signal circuit between AV control unit and satellite radio tuner.	<ul> <li>Satellite radio tuner power supply and ground circuit.</li> <li>Communication circuits between AV control unit and satellite radio tuner.</li> <li>Request signal circuit between AV control unit and satellite radio tuner.</li> </ul>
U SAT  U Front Display  U Switches  U Control Unit  U Camera Cont.  PNIA0836GB	When either one of the following items are detected:  iPod adapter power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and iPod adapter.  malfunction is detected in the AV communication signal between AV control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuit.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>

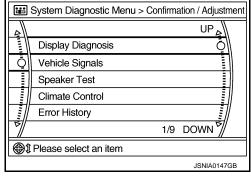
#### < SYSTEM DESCRIPTION >

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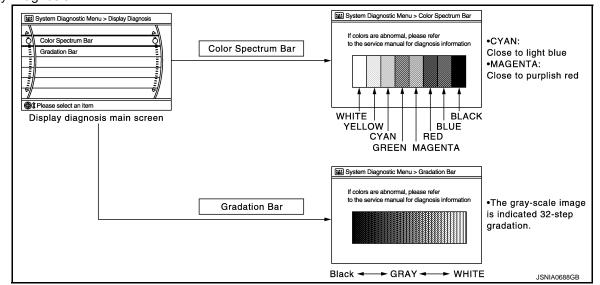


#### CONFIRMATION/ADJUSTMENT MODE

- Start the diagnosis function and select "Confirmation/Adjustment". The confirmation/adjustment mode indicates where each item can be checked or adjusted.
- Select each switch on the "Confirmation/Adjustment Mode" screen to display the relevant trouble diagnosis screen. Press the "RETURN" switch to return to the initial Confirmation/Adjustment Mode screen.



#### Display Diagnosis



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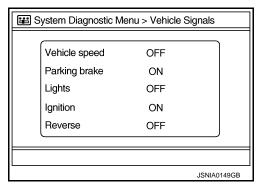
The tint of the color bar indication is as per the following list if a RGB signal error is detected.

R (red) signal error : Light blue (Cyan) tint
G (green) signal error : Purple (Magenta) tint

B (blue) signal error : Yellow tint

#### Vehicle Signals

A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



Diagnosis item	Display	Vehicle status	Remarks	
Vahiala ana ad	ON	Vehicle speed > 0 km/h (0 MPH)		
Vehicle speed		Vehicle speed = 0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.	
Parking brake	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.	
Faiking brake	OFF	Parking brake is released.		
Lights	ON	Light switch ON		
	OFF	Light switch OFF	<del></del>	
Ignition	ON	Ignition switch ON		
	OFF	Ignition switch ACC	<del></del>	
Reverse	ON	Shift the selector lever to the "R" position.	Changes in indication may be delayed. This is normal.	
	OFF	Shift the selector lever to a position other than the "R" position.	Changes in indication may be delayed. This is normal.	

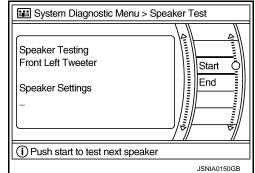
#### Speaker Test

Select "SPEAKER DIAGNOSIS" to display the Speaker Diagnosis screen. Press "START and NEXT" to generate a test tone in a speaker. Press "Start" to generate a test tone in the next speaker. Press "End" to stop the test tones.

#### NOTE:

The frequency of test tone emitted from each speaker is as follows.

Tweeter\* : 3 kHz
Front speaker : 300 Hz
Rear speaker : 1 kHz



#### \*: Squawker

#### Climate Control

Refer to "HEATER & AIR CONDITIONING CONTROL SYSTEM" for details.

#### **Error History**

The self-diagnosis results are judged depending on whether any error occurs from when "Self-diagnosis" is selected until the self-diagnosis results are displayed.

However, the diagnosis results are judged normal if an error has occurred before the ignition switch is turned ON and then no error has occurred until the self-diagnosis start. Check the "Error Record" to detect any error that may have occurred before the self-diagnosis start because of this condition.

#### < SYSTEM DESCRIPTION >

### [WITHOUT NAVIGATION]

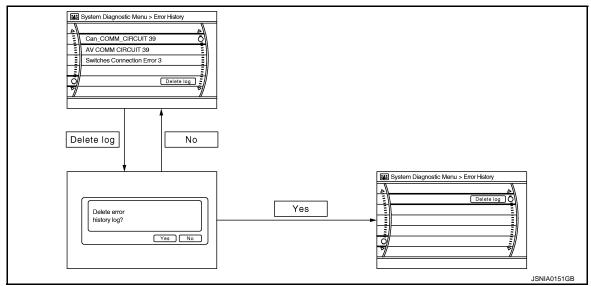
#### Count up method A

- The counter resets to 0 if an error occurs when the ignition switch is turned ON. The counter increases by 1 if the condition is normal at the next IGN ON cycle.
- The counter upper limit is 39. Any counts exceeding 39 are ignored. The counter can be reset (no error record display) with the "Delete log" switch or CONSULT-III.

#### Count up method B

- The counter increases by 1 if an error occurs when the ignition switch is ON. The counter will not decrease even if the condition is normal at the next IGN ON cycle.
- The counter upper limit is 50. Any counts exceeding 50 are ignored. The counter can be reset (no error record display) with the "Delete log" switch or CONSULT-III.

Display type of occur- rence frequency	Error history display item	
Count up method A	CAN communication line, control unit (CAN), AV communication line, control unit (AV communication)	
Count up method B	Other than the above	



#### Error item

Error items may be displayed simultaneously according to the cause. If error items are displayed simultaneously, the cause can be detected by the combination of display items.

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair malfunctioning parts according to the diagnosis results.  Refer to AV-43, "CONSULT-III Function (MULTI AV)".
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	Replace AV control unit.
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.	
CAN Controller Memory Error	Av control unit mailunction is detected.	

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### [WITHOUT NAVIGATION]

Error item	Description	Possible malfunction factor/Action to take
Front Display Connection Error	When either one of the following items are detected:  front display unit power supply and ground circuits malfunction are detected.  malfunction is detected in the communication circuits between AV control unit and front display unit.  malfunction is detected in the communication signal between AV control unit and front display unit.	<ul> <li>Front display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and front display unit.</li> </ul>
SAT Connection Error	When either one of the following items are detected:  satellite radio tuner power supply and ground circuits malfunction are detected.  malfunction is detected in the communication circuits between AV control unit and satellite radio tuner.  malfunction is detected in the communication signal between AV control unit and satellite radio tuner.  malfunction is detected in the request signal circuit between AV control unit and satellite radio tuner.	<ul> <li>Satellite radio tuner power supply and ground circuits.</li> <li>Communication circuits between AV control unit and satellite radio tuner.</li> <li>Request signal circuit between AV control unit and satellite radio tuner.</li> </ul>
Camera Control Unit Connection Error	Malfunction is detected in the camera con- nection recognition circuit between AV con- trol unit and camera control unit.	Camera connection recognition circuit between AV control unit and camera control unit.
AV COMM CIRCUIT     Switches Connection Error	When either one of the following items are detected:  multifunction switch power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and multifunction switch.  malfunction is detected in the AV communication signal between AV control unit and multifunction switch.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>
AV COMM CIRCUIT     iPod Connection Error	When either one of the following items are detected:  iPod adapter unit power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and iPod adapter.  malfunction is detected in the AV communication signal between AV control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>
AV COMM CIRCUIT     Rear View Camera Connection Error	When either one of the following items are detected:  camera control unit power supply and ground circuits malfunction is detected.  malfunction is detected in the AV communication circuits between AV control unit and camera control unit.  malfunction is detected in the AV communication signal between AV control unit and camera control unit.	<ul> <li>Camera control unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and camera control unit.</li> </ul>

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#### [WITHOUT NAVIGATION]

Error item	Description	Possible malfunction factor/Action to take
AV COMM CIRCUIT     H/F Unit Connection Error	When either one of the following items are detected:  TEL adapter unit power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and TEL adapter unit.  malfunction is detected in the AV communication signal between AV control unit and TEL adapter unit.	<ul> <li>TEL adapter unit power supply and ground circuit.</li> <li>AV communication circuits between AV control unit and TEL adapter unit.</li> </ul>
<ul> <li>AV COMM CIRCUIT</li> <li>Switches Connection Error</li> <li>iPod Connection Error</li> <li>Rear View Camera Connection Error</li> <li>H/F Unit Connection Error</li> </ul>	Malfunction is detected in the AV communication circuits between AV control unit and camera control unit.	AV communication circuits between AV control unit and camera control unit.

#### Vehicle CAN Diagnosis

- CAN communication status and error counter is displayed.
- The error counter displays "OK" if a malfunction was not detected in the past and displays "0" if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle. The upper limit of the counter is 39.
- The error counter is erased if reset.

Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / UNKWN	OK / 0 - 39
Rx(ECM)	OK / UNKWN	OK / 0 - 39
Rx(Cluster)	OK / UNKWN	OK / 0 - 39
Rx(BCM)	OK / UNKWN	OK / 0 - 39
Rx(HVAC)	OK / UNKWN	OK / 0 - 39
Rx(USM)	OK / UNKWN	OK / 0 - 39

#### System Diagnostic Menu > Vehicle CAN... (3)BACK Checking Status Count Signal Tx(HVAC) OK OK Rx(ECM) OK OK Rx(Cluster) OK OK Reset Rx(BCM) OK OK Rx(HVAC) OK OK Rx(USM) OK OK JSNIA0080GB

#### **AV COMM Diagnosis**

- Displays the communication status between AV control unit (master unit) and each unit.
- The error counter displays "OK" if any malfunction was not detected in the past and displays "0" if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle. The upper limit of the counter is 39.
- The error counter is erased if reset.

Items	Status (Current)	Counter (Past)
C Tx(ITM-SW)	OK / UNKWN	OK / 0 - 39
C Rx(PrimarySW-ITM)	OK / UNKWN	OK / 0 - 39
C Rx(BTHF–ITM)*	OK / UNKWN	OK / 0 - 39
C Rx(iPod Adpt.–ITM)	OK / UNKWN	OK / 0 - 39

System Diagnostic Menu > AV COMM Diagnosis Checking Signal **StatusCount** CTx(ITM-SW) OK OK C Rx(PrimarySW-ITM) OK OK C Rx(BTHF-ITM) Reset OK OK C Rx(iPod Adpt.-ITM) OK OK JPNIA0512GB

#### Camera Cont.

The two functions of "Connection Confirmation" and "Adjust Offset of Rear View Camera" are available. CONNECTION CONFIRMATION

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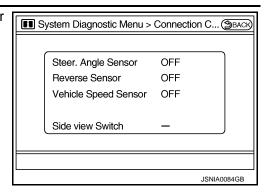
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<sup>\*:</sup> With hands-free phone

### < SYSTEM DESCRIPTION >

### [WITHOUT NAVIGATION]

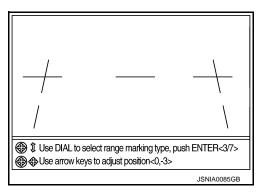
The steering angle sensor, reverse signal and vehicle speed sensor can be inspected.



Diagnosis item	Display	Vehicle status	
	ON	When steering the vehicle with ignition switch ON (remains ON until connection mode is stopped when it is turned ON)	
Steer. Angle Sensor	OFF	Ignition switch at ACC     No steering with ignition switch ON	
	_	Malfunction detected in camera connection recognition signal	
	ON	Selector lever is in "R" with ignition switch ON	
Reverse Sensor	OFF	Ignition switch at ACC     Selector lever is in position other than "R" with ignition switch ON	
	_	Malfunction detected in camera-connection recognition signal	
	ON	Vehicle speed is more than 0 km/h (0 MPH) with ignition switch ON	
Vehicle Speed Sensor	OFF	Ignition switch at ACC     Vehicle speed is 0 km/h (0 MPH) with ignition switch ON	
	_	Malfunction detected in camera connection recognition signal	
Side view Switch	-	Not used	

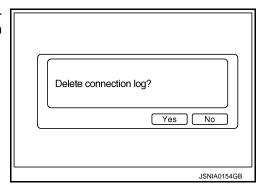
### ADJUST OFFSET OF REAR VIEW CAMERA

Use this mode to adjust the guide line display position of the rear view monitor if necessary after removing the rear view monitor camera.



#### **Delete Unit Connection Log**

Deletes any unit connection records and error records from AV control unit memory. (Clear the records of the unit that has been removed.)

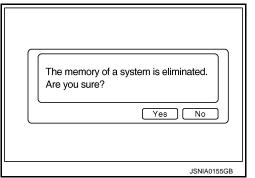


Initialize Settings

#### < SYSTEM DESCRIPTION >

### [WITHOUT NAVIGATION]

Initializes AV control unit memory.



### CONSULT-III Function (MULTI AV)

INFOID:0000000003838550

### **CONSULT-III** functions

CONSULT-III performs the following functions via the communication with AV control unit.

Diagnosis mode	Description	
Ecu Identification	The part number of AV control unit can be checked.	
Self Diagnostic Result	Performs a diagnosis on AV control unit, a connection diagnosis for the communication circuit of the Multi AV system and displays the current and past malfunctions collectively.	
Data Monitor	The diagnosis of vehicle signal that is input to AV control unit can be performed.	

#### AV COMMUNICATION

When "AV communication" of "CAN Diag Support Monitor" is selected, the following function will be performed.

AV communication	AV&NAVI C/U	Displays the communication status from AV control unit to each unit as well as the error counter.
	AUDIO	Displays AV control unit communication status and the error counter.

### **ECU IDENTIFICATION**

The part number of AV control unit is displayed.

#### SELF DIAGNOSIS RESULT

- In CONSULT-III self-diagnosis, self-diagnosis results and error history are displayed simultaneously.
- The timing is displayed as "0" if any of the error codes [U1000], [U1010], [U1300] or [U1310] are detected. The counter increases by 1 if the condition is normal at the next ignition switch ON cycle.

#### Self-diagnosis results display item

Error item	Description	Possible malfunction factor/Action to take	
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results.	M
		Refer to AV-48, "Diagnosis Procedure".	AV
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.		AV
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	Replace AV control unit.	0
Control Unit FLASH-ROM [U1200]	AV control unit malfunction is detected.		
CAN CONT [U1216]	AV CONTROL UNITE MAINTAINCHOIT IS DELECTED.		Р

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# DIAGNOSIS SYSTEM (AV CONTROL UNIT) [WITHOUT NAVIGATION]

< SYSTEM DESCRIPTION >

Error item	Description	Possible malfunction factor/Action to take
FRONT DISP CONN [U1243]	When either one of the following items are detected:  front display unit power supply and ground circuits malfunction are detected.  malfunction is detected in communication circuits between AV control unit and front display unit.  malfunction is detected in communication signal between AV control unit and front display unit.	<ul> <li>Front display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and front display unit.</li> </ul>
CAMERA CONT. CONN [U1250]	Malfunction is detected in camera connection recognition circuit between AV control unit and camera control unit.	Camera connection recognition circuit between AV control unit and camera control unit.
SAT CONN [U1255]	When either one of the following items are detected:  satellite radio tuner power supply and ground circuits malfunction are detected.  malfunction is detected in communication circuits between AV control unit and satellite radio tuner.  malfunction is detected in communication signal between AV control unit and satellite radio tuner.  malfunction is detected in request signal circuits between AV control unit and satellite radio tuner.	<ul> <li>Satellite radio tuner power supply and ground circuits.</li> <li>Communication circuits between AV control unit and satellite radio tuner.</li> <li>Request signal circuits between AV control unit and satellite radio tuner.</li> </ul>
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items are detected:  multifunction switch power supply and ground circuits malfunction are detected.  malfunction is detected in AV communication circuits between AV control unit and multifunction switch.  malfunction is detected in AV communication signal between AV control unit and multifunction switch.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>
AV COMM CIRCUIT [U1300]     REAR CAMERA LAN CONN [U1252]	When either one of the following items are detected:  camera control unit power supply and ground circuits malfunction are detected.  malfunction is detected in AV communication circuits between AV control unit and camera control unit.  malfunction is detected in AV communication signal between AV control unit and camera control unit.	<ul> <li>Camera control unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and camera control unit.</li> </ul>
AV COMM CIRCUIT [U1300]     IPod CONN [U1254]	<ul> <li>When either one of the following items are detected:</li> <li>iPod adapter power supply and ground circuits malfunction are detected.</li> <li>malfunction is detected in AV communication circuits between AV control unit and iPod adapter.</li> <li>malfunction is detected in AV communication signal between AV control unit and iPod adapter.</li> </ul>	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>

### < SYSTEM DESCRIPTION >

### [WITHOUT NAVIGATION]

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Error item	Description	Possible malfunction factor/Action to take
AV COMM CIRCUIT [U1300]     HAND FREE CONN [U1256]	When either one of the following items are detected:  TEL adapter unit power supply and ground circuit malfunction are detected.  malfunction is detected in AV communication circuits between AV control unit and TEL adapter unit.  malfunction is detected in AV communication signal between AV control unit and TEL adapter unit.	<ul> <li>TEL adapter unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and TEL adapter unit.</li> </ul>
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>REAR CAMERA LAN CONN [U1252]</li> <li>IPod CONN [U1254]</li> <li>HAND FREE CONN [U1256]</li> </ul>	Malfunction is detected in the AV communication circuits between AV control unit and camera control unit.	AV communication circuits between AV control unit and camera control unit.

#### **DATA MONITOR**

#### **ALL SIGNALS**

- Displays the status of the following vehicle signals inputted into AV control unit.
- For each signal, actual signal can be compared with the condition recognized on the system.

Display Item	Display	Vehicle status	Remarks	
VHCL SPD SIG	On	Vehicle speed > 0 km/h (0 MPH)		
	Off	Vehicle speed = 0 km/h (0 MPH)		
PKB SIG	On	Parking brake is applied.	Changes in indication may be delayed. This is normal.	
	Off	Parking brake is released.		
ILLUM SIG	On	Light switch ON		
	Off	Light switch OFF		
IGN SIG	On	Ignition switch ON	<del>_</del>	
	Off	Ignition switch ACC		
REV SIG	On	Shift the selector lever to the "R" position		
	Off	Shift the selector lever to a position other than the "R" position	Changes in indication may be delayed. This is normal.	

#### **SELECTION FROM MENU**

Allows the technician to select which vehicle signals should be displayed and displays the status of the selected vehicle signals.

Item to be selected	Description
VHCL SPD SIG	
PKB SIG	
ILLUM SIG	The same as when "ALL SIGNALS" is selected.
IGN SIG	
REV SIG	

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### **DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)**

< SYSTEM DESCRIPTION >

[WITHOUT NAVIGATION]

### DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

### **Diagnosis Description**

INFOID:0000000003838551

#### HANDS-FREE PHONE SYSTEM ON BOARD DIAGNOSIS

During on board diagnosis the diagnosis function of TEL adapter unit starts with the operation of steering switch and performs the diagnosis when ignition switch is turned to ACC.

#### ON BOARD DIAGNOSIS ITEM

The on board diagnosis has 3 modes: the self-diagnosis mode that performs the trouble diagnosis, the speaker adaptation data deleting mode and the hands-free phone system initialization mode.

CAUTION:

- Perform the diagnosis with the vehicle stopped.
- Perform STEP2 if necessary.

STEP	MODE	Description
STEP1	Self-diagnosis	<ul> <li>The self-diagnosis mode performs the microphone test.</li> <li>The self-diagnosis mode also diagnoses TEL adapter unit, TEL antenna and steering switch.</li> <li>Those results are indicated with voice guidance and displayed on the screen.</li> </ul>
STEP2	Speaker adaptation data deleting	The speaker adaptation data deleting mode can delete the speaker adaptation data.
	Hands-free phone system initialization	Hands-free phone system initialization mode can perform the initialization of the hands-free phone system.

#### **SELF-DIAGNOSIS RESULTS**

Self-diagnosis mode reads out the self-diagnosis results and indicates DTC on the display.

#### NOTE:

- Error count is read out simultaneously when reading out the DTC name.
- The errors are read out continuously when some errors occur at the same time. The DTC displays are combined and displayed. For example, DTC 01100 is displayed when DTC 01000 and DTC 00100 are indicated at the same time.

Self-diagnosis results

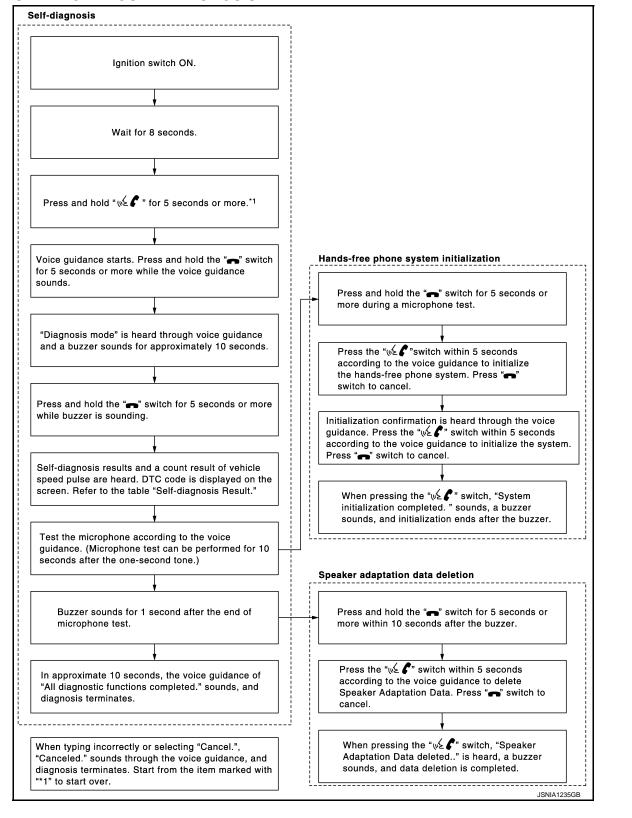
DTC	DTC name	Possible causes	
DTC 10000	INTERNAL FAILURE	TEL adapter unit	
DTC 01000	ANT. SHORT TO BATT OR OPEN	TEL antenna	
DTC 00100	ANT. SHORT TO GROUND		
DTC 00010	STEERING REMOTE BUTTON STUCK A	Stooring quitab	
DTC 00001	STEERING REMOTE BUTTON STUCK B	Steering switch	
DTC 00000	THERE ARE NO FAILURE RECORDS TO REPORT	_	

#### The Details Of Error Count

The error count displays "0" when an error occurs. The next time it counts up to "1" if conditions are normal with the ignition switch ON. It continues the count up unless the initialization of hands-free phone system is performed.

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### FLOW CHART OF TROUBLE DIAGNOSIS



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### **U1000 CAN COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### DTC/CIRCUIT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

Description INFOID:0000000038385552

CAN (Controller Area Network) is a serial communication line for real-time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independently). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

CAN Communication Signal Chart. Refer to LAN-32, "CAN Communication Signal Chart".

DTC Logic

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-III	Diagnostic item is detected when	Probable malfunction location
U1000	CAN COMM CIRCUIT	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

### Diagnosis Procedure

INFOID:0000000003838554

### 1.PERFORM SELF-DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 2. Check "Self Diagnostic Result" of "MULTI AV".

#### Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to "LAN system". Refer to LAN-22, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI section. Refer to GI-35, "Intermittent Incident".

### **U1010 CONTROL UNIT (CAN)**

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

U1010 CONTROL	. UNIT (	(CAN)
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Description

Initial diagnosis of AV control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-III	Diagnostic item is detected when	Probable malfunction location
U1010	CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	AV control unit.

### Diagnosis Procedure

1. REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit.

>> INSPECTION END

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### U1310 AV CONTROL UNIT

Description INFOID:0000000003838558

Replace the AV control unit if this DTC is displayed. Refer to AV-251, "Exploded View".

Part name	Description
AV CONTROL UNIT	<ul> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by communication. It operates each system according to communication signals from the AV control unit.</li> <li>AV control unit includes audio function and vehicle information function.</li> <li>It is connected to ECM and unified meter and A/C amp via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Auxiliary image signal is input from the auxiliary input jacks.</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit.

### **U1200 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [WITHOUT NAVIGATION]

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# U1200 AV CONTROL UNIT

Description

Replace the AV control unit if this DTC is displayed. Refer to AV-251, "Exploded View".

Part name	Description
AV CONTROL UNIT	<ul> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by communication. It operates each system according to communication signals from the AV control unit.</li> <li>AV control unit includes audio function and vehicle information function.</li> <li>It is connected to ECM and unified meter and A/C amp via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Auxiliary image signal is input from the auxiliary input jacks.</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take	
U1200	Cont Unit FLASH- ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	Replace AV control unit.	

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### [WITHOUT NAVIGATION]

### **U1216 AV CONTROL UNIT**

Description INFOID:000000003838562

Replace the AV control unit if this DTC is displayed. Refer to AV-251, "Exploded View".

Part name	Description
AV CONTROL UNIT	<ul> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by communication. It operates each system according to communication signals from the AV control unit.</li> <li>AV control unit includes audio function and vehicle information function.</li> <li>It is connected to ECM and unified meter and A/C amp via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Auxiliary image signal is input from the auxiliary input jacks.</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1216	CAN CONT [U1216]	Internal malfunction of AV control unit (CAN controller) is detected.	Replace AV control unit.

### **U1243 FRONT DISPLAY UNIT**

### < DTC/CIRCUIT DIAGNOSIS >

#### [WITHOUT NAVIGATION]

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INFOID:0000000003838566

### **U1243 FRONT DISPLAY UNIT**

Description INFOID:0000000003838564

Part name	Description	
FRONT DISPLAY UNIT	<ul> <li>Front display image is controlled by the serial communication from AV control unit.</li> <li>Inputs the RGB image signal (RGB, RGB area and RGB synchronizing) from AV control unit and the auxiliary image signal from the auxiliary input jacks.</li> <li>Outputs the synchronizing signals (HP and VP) to the AV control unit.</li> </ul>	

**DTC** Logic INFOID:0000000003838565

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1243	FRONT DISP CONN [U1243]	When either one of the following items is detected:  front display unit power supply and ground circuits malfunction is detected.  malfunction is detected in communication circuits between AV control unit and front display unit.  malfunction is detected in communication signal between AV control unit and front display unit.	<ul> <li>Front display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and front display unit.</li> </ul>

### **Diagnosis Procedure**

# 1. CHECK FRONT DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check front display unit power supply and ground circuits. Refer to AV-59, "FRONT DISPLAY UNIT: Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

### 2.check continuity communication circuit

- Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	splay unit	AV control unit		Continuity
Connector	Terminals	Connector Terminals		Continuity
M71	11	11 M83 56		Existed
1017 1	22	10100	44	LAISIGU

Check continuity between front display unit harness connector and ground.

Front dis	splay unit	Ground	Continuity
Connector	Terminals		
M71	11	Glound	Not existed
IVI7 I	22		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

# 3.check communication signal (cont $\rightarrow$ disp)

- Connect front display unit connector and AV control unit connector.
- Turn ignition switch ON.

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### **U1243 FRONT DISPLAY UNIT**

### < DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

3. Check signal between front display unit harness connector and ground.

(+) Front display unit		(–)	Condition	Reference value
Connector	Terminal			
M71	11	Ground	When adjusting display brightness.	(V) 6 4 2 0  + 1ms  PKIB5039J

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

4. CHECK COMMUNICATION SIGNAL (DISP→CONT)

Check signal between front display unit harness connector and ground.

(+) Front display unit		(-)	Condition	Reference value
Connector	Terminal			
M71	22	Ground	When adjusting display brightness.	(V) 6 4 2 0 → 1 ms PKIB5039J

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front display unit.

### **U1250 CAMERA CONTROL UNIT**

### < DTC/CIRCUIT DIAGNOSIS >

### [WITHOUT NAVIGATION]

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### U1250 CAMERA CONTROL UNIT

**Description** 

Part name	Description
CAMERA CONTROL UNIT	<ul> <li>Camera image signal is input from rear view camera, and camera image is indicated on the display.</li> <li>Power (camera ON signal) is sent to rear view camera.</li> <li>Controlled by AV communication sent from AV control unit.</li> <li>AV control unit recognizes the presence of camera system with camera connection recognition signal.</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1250	CAMERA CONT. CONN [U1250]	A malfunction is detected in camera connection recognition signal circuit	Camera connection recognition signal circuit

### Diagnosis Procedure

INFOID:0000000003838569

# 1. CHECK CAMERA-CONNECTION RECOGNITION SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector and camera control unit connector.
- 3. Check continuity between AV control unit harness connector and camera control unit harness connector.

AV cor	AV control unit		Camera control unit	
Connector	Terminal	Connector Terminal		Continuity
M84	68	B50	14	Existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector and ground.

AV con	+) atrol unit	(-)	Voltage	
Connector	Terminal	,	(Approx.)	
M84	68	Ground	5.0 V	

### Is inspection result normal?

YES >> Replace camera control unit.

NO >> Replace AV control unit.

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### **U1255 SATELLITE RADIO TUNER**

Description INFOID:000000003838570

Part name	Description
SATELLITE RADIO TUNER	<ul> <li>Inputs the satellite radio signal from satellite radio antenna and outputs it to the AV control unit.</li> <li>It is controlled with the communication (communication signal, request signal) from AV control unit.</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1255	SAT CONN [U1255]	When either one of the following items is detected:  satellite radio tuner power supply and ground circuits malfunction is detected.  malfunction is detected in communication circuits between AV control unit and satellite radio tuner.  malfunction is detected in communication signal between AV control unit and satellite radio tuner.  malfunction is detected in request signal circuit between AV control unit and satellite radio tuner.	<ul> <li>Satellite radio tuner power supply and ground circuits.</li> <li>Communication circuits between AV control unit and satellite radio tuner.</li> <li>Request signal circuit between AV control unit and satellite radio tuner.</li> </ul>

### Diagnosis Procedure

INFOID:0000000003838572

### 1. CHECK SATELLITE RADIO TUNER POWER SUPPLY AND GROUND CIRCUIT

Check satellite radio tuner power supply and ground circuit. Refer to <u>AV-62, "SATELLITE RADIO TUNER:</u> <u>Diagnosis Procedure"</u>.

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# 2.CHECK CONTINUITY COMMUNICATION CIRCUIT AND REQUEST SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector and satellite radio tuner connector.
- 3. Check continuity between AV control unit harness connector and satellite radio tuner harness connector.

AV cor	AV control unit		Satellite radio tuner	
Connector	Terminals	Connector Terminals		Continuity
	28		8	Existed
M82	29	B236	9	
	30		10	

4. Check continuity between AV control unit harness connector and ground.

AV cor	ntrol unit		Continuity
Connector	Terminals		Continuity
	28	Ground	
M82	29		Not existed
	30		

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

### **U1255 SATELLITE RADIO TUNER**

### < DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

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# $\overline{3}$ . CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector and ground.

(+)  AV control unit  Connector Terminals		(–)	Voltage (Approx.)
			( , , , , , , , , , , , , , , , , , , ,
M82	28	Ground	7.5 V
IVIOZ	29	Giouna	7.0 V

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

# 4. CHECK SATELLITE RADIO TUNER

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector.
- 3. Connect satellite radio tuner.
- 4. Turn ignition switch ON.
- 5. Check voltage between satellite radio tuner harness connector and ground.

(+) Satellite radio tuner		(-)	Voltage (Approx.)
Connector	Terminal		( , , , , , , , , , , , , , , , , , , ,
B236	10	Ground	7.0 V

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace satellite radio tuner.

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Revision: 2009 March AV-57 2009 FX35/FX50

### U1300 AV COMM CIRCUIT

Description INFOID:000000003838573

U1300 is indicated when malfunction occurs in communication signal of multi AV system. Indicated simultaneously, without fail, with the malfunction of control units connected to AV control unit with communication line. Determine the possible malfunction cause from the table below.

### SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items is detected:  multifunction switch power supply and ground circuits malfunction is detected.  malfunction is detected in AV communication circuits between AV control unit and multifunction switch.  malfunction is detected in AV communication signal between AV control unit and multifunction switch.	Multifunction switch power supply and ground circuits.     AV communication circuits between AV control unit and multifunction switch.
U1300 U1252	AV COMM CIRCUIT [U1300]     REAR CAMERA     CONN [U1252]	When either one of the following items is detected:  camera control unit power supply and ground circuits malfunction are detected.  malfunction is detected in AV communication circuits between AV control unit and camera control unit.  malfunction is detected in AV communication signal between AV control unit and camera control unit.	Camera control unit power supply and ground circuits.     AV communication circuits between AV control unit and camera control unit.
U1300 U1254	AV COMM CIRCUIT [U1300]     IPod CONN [U1254]	When either one of the following items is detected:  iPod adapter power supply and ground circuits malfunction is detected.  malfunction is detected in AV communication circuits between AV control unit and iPod adapter.  malfunction is detected in AV communication signal between AV control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>
U1300 U1256	AV COMM CIRCUIT [U1300]     HAND FREE CONN [U1256]	When either one of the following items is detected:  TEL adapter unit power supply and ground circuits malfunction is detected.  malfunction is detected in AV communication circuits between AV control unit and TEL adapter unit.  malfunction is detected in AV communication signal between AV control unit and TEL adapter unit.	TEL adapter unit power supply and ground circuits. AV communication circuits between AV control unit and TEL adapter unit.
U1300 U1252 U1254 U1256	AV COMM CIRCUIT [U1300] SWITCH CONN [U1240] REAR CAMERA CONN [U1252] IPod CONN [U1254] HAND FREE CONN [U1256]	Malfunction is detected in the AV communication circuits between AV control unit and camera control unit.	AV communication circuits between AV control unit and camera control unit.

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000003838574

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### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19
Ignition switch ON or START	3

#### Is the inspection result normal?

>> GO TO 2. YES

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between AV control unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M81	19	OFF	Battery voltage
ACC power supply	M81	7	ACC	Battery voltage
Ignition signal	M85	104	ON	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between AV control unit and fuse.

### 3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect AV control unit connectors.
- 3. Check continuity between AV control unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M81	20	OFF	Existed
	M85	85	OH	LAISIGU

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

### FRONT DISPLAY UNIT

### FRONT DISPLAY UNIT: Diagnosis Procedure

### 1. CHECK POWER SUPPLY CIRCUIT (DISPLAY SIDE)

Check voltage between front display unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Inverter VCC	M71 2	2	ACC	9.0 V
Signal VCC	1717 1	3	700	3.0 V

#### Is the inspection result normal?

YES >> GO TO 4. NO >> GO TO 2.

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### < DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

# 2.check power supply circuit (continuity)

- 1. Turn ignition switch OFF.
- 2. Disconnect the harness connector between front display unit and AV control unit.
- 3. Check continuity between front display unit harness connectors and AV control unit harness connector.

Signal name	Front display unit (M71)	AV control unit (M83)	Continuity
Inverter VCC	2	59	Existed
Signal VCC	3	47	Existed

Check continuity between front display unit harness connectors and ground.

Signal name	Front display unit (M71)	_	Continuity
Inverter VCC	2	Ground	Not existed
Signal VCC	3	Ground	Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

# ${f 3.}$ CHECK POWER SUPPLY CIRCUIT (AV CONTROL UNIT SIDE)

- 1. Connect the AV control unit harness connector.
- 2. Turn ignition switch ACC.
- 3. Check voltage between AV control unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Inverter VCC	M83	59	ACC	9.0 V
Signal VCC	IVIOS	47	AGG	3.0 V

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replacement of AV control unit.

### 4. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect front display unit connector.
- Check continuity between front display unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M71	1	OFF	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

### MULTIFUNCTION SWITCH

### MULTIFUNCTION SWITCH: Diagnosis Procedure

INFOID:0000000003838576

### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Ignition switch ACC or ON	19

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2. CHECK POWER SUPPLY CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

#### [WITHOUT NAVIGATION]

Check voltage between multifunction switch harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
ACC power supply	M72	3	ACC	Battery voltage

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between multifunction switch and fuse.

### 3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect multifunction switch connector.
- 3. Check continuity between multifunction switch harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M72	1	OFF	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

BOSE AMP.

### BOSE AMP.: Diagnosis Procedure

INFOID:0000000003838577

### 1. CHECK FUSE

Check for blown fuse.

Power source	Fuse No.
Battery	8

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between BOSE amp. harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B42	11	OFF	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between BOSE amp. and fuse.

### 3.CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BOSE amp. connector.
- 3. Check continuity between BOSE amp. harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B42	12	OFF	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

### iPod ADAPTER

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< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### iPod ADAPTER: Diagnosis Procedure

INFOID:0000000003838578

### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between iPod adapter harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M111	5	OFF	Battery voltage
ACC power supply	M111	3	ACC	Battery voltage

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Check harness between iPod adapter and fuse.

### SATELLITE RADIO TUNER

### SATELLITE RADIO TUNER: Diagnosis Procedure

INFOID:0000000003838579

### 1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between satellite radio tuner harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B236	12	OFF	Battery voltage
ACC power supply	B236	16	ACC	Battery voltage

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Check harness between satellite radio tuner and fuse.

### CAMERA CONTROL UNIT

### CAMERA CONTROL UNIT: Diagnosis Procedure

INFOID:0000000003838580

### 1. CHECK FUSE

Check for blown fuses.

### < DTC/CIRCUIT DIAGNOSIS >

### [WITHOUT NAVIGATION]

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Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between camera control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B50	32	OFF	Battery voltage
ACC power supply	B50	30	ACC	Battery voltage

### Is inspection result normal?

YES >> GO TO 3.

NO >> Check harness between camera control unit and fuse.

# 3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect camera control unit connector. 2.
- Check continuity between camera control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B50	31	OFF	Existed

#### Is inspection result normal?

YES >> INSPECTION END

>> Repair harness or connector. NO

### TEL ADAPTER UNIT

### TEL ADAPTER UNIT: Diagnosis Procedure

### 1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19
Ignition switch ON or START	3

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between TEL adapter unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B237	1	OFF	Battery voltage
ACC power supply	B237	2	ACC	Battery voltage
Ignition signal	B237	3	ON	Battery voltage

### Is the inspection result normal?

YES >> GO TO 3.

>> Check harness between TEL adapter unit and fuse. NO

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### < DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect TEL adapter unit connector.
  Check continuity between TEL adapter unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B237	4	OFF	Existed

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

### < DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### RGB (R: RED) SIGNAL CIRCUIT

**Description** 

Transmit the image displayed with AV control unit with RGB signal to the front display unit.

### Diagnosis Procedure

INFOID:0000000003838583

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# ${\bf 1.} {\sf CHECK} \; {\sf CONTINUITY} \; {\sf RGB} \; ({\sf R:} \; {\sf RED}) \; {\sf SIGNAL} \; {\sf CIRCUIT}$

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	Front display unit		AV control unit	
Connector	Terminal	Connector	Terminal	Continuity
M71	17	M83	40	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	17		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK RGB (R: RED) SIGNAL

- Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(	+)			
Front dis	splay unit	(-)	Condition	Reference value
Connector	Terminal			
M71	17	Ground	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4 → 40μs SKIB2238J

### Is the inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

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### **RGB (G: GREEN) SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### RGB (G: GREEN) SIGNAL CIRCUIT

**Description** 

Transmit the image displayed with AV control unit with RGB signal to the front display unit.

### Diagnosis Procedure

INFOID:0000000003838585

# 1. CHECK CONTINUITY RGB (G: GREEN) SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	Front display unit		AV control unit	
Connector	Terminal	Connector	Terminal	Continuity
M71	6	M83	39	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	6		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK RGB (G: GREEN) SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+) Front display unit		(-)	Condition	Reference value
Connector	Terminal			
M71	6	Ground	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4  → 40µs SKIB2236J

### Is the inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

### RGB (B: BLUE) SIGNAL CIRCUIT

**Description** 

Transmit the image displayed with AV control unit with RGB signal to the front display unit.

### Diagnosis Procedure

### INFOID:0000000003838587

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# 1. CHECK CONTINUITY RGB (B: BLUE) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	18	M83	38	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Connector Terminal		Continuity
M71	M71 18		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK RGB (B: BLUE) SIGNAL

- Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+) Front display unit		(-)	Condition	Reference value
Connector	Terminal			
M71	18	Ground	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.4  0

### Is the inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

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### **RGB SYNCHRONIZING SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### RGB SYNCHRONIZING SIGNAL CIRCUIT

Description INFOID.000000003838588

Transmit the RGB synchronizing signal to the front display unit so as to synchronize the RGB image displayed with AV control unit.

### Diagnosis Procedure

INFOID:0000000003838589

# 1. CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

	Front dis	splay unit	AV con	trol unit	Continuity
•	Connector	Terminal	Connector	Terminal	Continuity
	M71	19	M83	41	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	19		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK RGB SYNCHRONIZING SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+) Front display unit		(-)	Reference value
Connector	Terminal		
M71	19	Ground	(V) 4 0 → 20 µs SKIB3603E

### Is the inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

### **RGB AREA (YS) SIGNAL CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### RGB AREA (YS) SIGNAL CIRCUIT

Description INFOID:000000003838590

Transmits the display area of RGB image displayed by AV control unit with RGB area (YS) signal to front display unit.

### Diagnosis Procedure

#### INFOID:0000000003838591

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# 1. CHECK CONTINUITY RGB AREA (YS) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

	Front dis	splay unit	AV con	itrol unit	Continuity
•	Connector	Terminal	Connector	Terminal	Continuity
•	M71	9	M83	43	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	9		Not existed

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK RGB AREA (YS) SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+) Front display unit		(–) Condition		Reference value (Approx.)	
Connector	Terminal			(11 - 7)	
			At RGB image is displayed	5.0 V	
M71	9	Ground	At AUX image is displayed	(V) 6 4 2 0 * + 200μs PKIB4948J	

### Is the inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

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# HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT [WITHOUT NAVIGATION]

< DTC/CIRCUIT DIAGNOSIS >

### HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

**Description** 

In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from front display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

### Diagnosis Procedure

INFOID:0000000003838593

# 1. CHECK CONTINUITY HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	8	M83	45	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	8		Not existed

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2. CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+)				
Front display unit		(–)	Reference value	
Connector	Terminal			
M71	8	Ground	(V) 4 0 → 20µs SKIB3601E	

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace front display unit.

### **VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

# VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description INFOID:0000000003838594

In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from front display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

### **Diagnosis Procedure**

# 1. CHECK CONTINUITY VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	splay unit	AV control unit		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M71	20	M83	57	Existed	

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity	
Connector	Terminal	Ground	Continuity	
M71	20		Not existed	

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2. CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- Check signal between front display unit harness connector and ground.

(+) Front display unit		(–)	Reference value
Connector	Terminal		
M71	20	Ground	(V) 4 0 + 4ms SKIB3598E

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace front display unit.

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### AUX IMAGE SIGNAL CIRCUIT

**Description** 

- Transmits the image signal of AUX device from auxiliary input jacks to AV control unit.
- AV control unit transmits the image signal that is inputted to the front display unit.

### Diagnosis Procedure

INFOID:0000000003838597

# $1. {\sf CHECK\ CONTINUITY\ AUX\ IMAGE\ SIGNAL\ CIRCUIT\ (AUX\ INPUT\ JACKS\ AND\ AV\ CONTROL\ UNIT)}$

- Turn ignition switch OFF.
- 2. Disconnect auxiliary input jacks connector and AV control unit connector.
- 3. Check continuity between auxiliary input jacks harness connector and AV control unit harness connector.

Auxiliary i	Auxiliary input jacks		trol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M154	7	M84	66	Existed

4. Check continuity between auxiliary input jacks harness connector and ground.

Auxiliary	input jacks		Continuity
Connector	Terminal	Ground	Continuity
M154	7		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK AUX IMAGE SIGNAL (AUX INPUT JACKS TO AV CONTROL UNIT)

- 1. Connect auxiliary input jacks connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between auxiliary input jacks harness connector and ground.

(+) Auxiliary input jacks		(-)	Condition	Reference value
Connector	Terminal			
M154	7	Ground	At AUX image is displayed.	(V) 0. 4 0 -0. 4 → 40μs SKIB2251J

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check that there is no malfunction in the external device.

# 3. CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT AND FRONT DISPLAY UNIT)

- Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

#### **AUX IMAGE SIGNAL CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [WITHOUT NAVIGATION]

Front display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M71	15	M83	36	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	15		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

### 4. CHECK COMPOSITE IMAGE SIGNAL

- 1. Connect AV control unit connector and front display unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

	+) splay unit	(–)	Condition	Reference value
Connector	Terminal			
M71	15	Ground	At AUX image is displayed.	(V) 0. 4 0 -0. 4 • • 40μs SKIB2251J

#### Is the inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

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#### **DISK EJECT SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### **DISK EJECT SIGNAL CIRCUIT**

Description INFOID.000000003838598

The disk eject signal is output to AV control unit when the eject switch of multifunction switch is pressed.

### Diagnosis Procedure

#### INFOID:0000000003838599

# 1. CHECK CONTINUITY DISK EJECT SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect multifunction switch connector and AV control unit connector.
- 3. Check continuity between multifunction switch harness connector and AV control unit harness connector.

Multifunction switch		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M72	14	M85	103	Existed

4. Check continuity between multifunction switch harness connector and ground.

Multifunc	tion switch		Continuity
Connector	Terminal	Ground	Continuity
M72	14		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector and ground.

(	+)		Reference value
AV control unit		(–)	(Approx.)
Connector Terminal			
M85	103	Ground	3.3 V

#### Is the inspection result normal?

YES >> Replace preset switch.

NO >> Replace AV control unit.

#### REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:0000000004020318

• Camera control unit outputs camera power supply to rear view camera and inputs rear view camera image signal from rear view camera when the reverse signal is input.

 The camera control unit that inputs the camera image signal transmits the camera image signal to the AV control unit.

### **Diagnosis Procedure**

#### INFOID:0000000004020319

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### 1. CHECK CONTINUITY CAMERA POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect camera control unit connector and rear view camera connector.
- Check continuity between camera control unit harness connector and rear view camera harness connector.

Camera o	control unit	Rear view camera		Continuity
Connector	Terminal	Connector Terminal		Continuity
B50	8	D121	1	Existed

4. Check continuity between camera control unit harness connector and ground.

Camera o	control unit		Continuity
Connector	Terminal	Ground	Continuity
B50	8		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK VOLTAGE CAMERA POWER SUPPLY

- Connect camera control unit connector and rear view camera connector.
- Turn ignition switch ON.
- 3. Shift position is "R"
- 4. Check voltage between camera control unit harness connector and ground.

	+) control unit	(–)	Condition	Voltage (Approx.)
Connector	Terminal			(r pp. 5/11)
B50	8	Ground	Shift position is "R"	6.0 V

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace camera control unit.

# ${f 3.}$ CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect camera control unit connector and rear view camera connector.
- Check continuity between camera control unit harness connector and rear view camera harness connector.

Camera o	Camera control unit		w camera	Continuity
Connector	Terminal	Connector Terminal		Continuity
B50	6	D121	3	Existed

Check continuity between camera control unit harness connector and ground.

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#### REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

Camera o	control unit		Continuity
Connector	Terminal	Ground	Continuity
B50	6		Not existed

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

### 4. CHECK CAMERA IMAGE SIGNAL

- 1. Connect camera control unit connector and rear view camera connector.
- 2. Turn ignition switch ON.
- 3. Shift position is "R"
- 4. Check signal between camera control unit harness connector and ground.

	eontrol unit	(–)	Condition	Reference value
Connector	Terrilliai			
B50	6	Ground	At rear view camera image is displayed.	(V) 0. 4 0 −0. 4 → 40µs SKiB2251J

### Is inspection result normal?

YES >> Replace camera control unit.

NO >> Replace rear view camera.

# CAMERA IMAGE SIGNAL CIRCUIT (CAMERA CONTROL UNIT TO AV CONTROL UNIT)

#### < DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

# CAMERA IMAGE SIGNAL CIRCUIT (CAMERA CONTROL UNIT TO AV CONTROL UNIT)

Description INFOID:0000000003838604

- Camera control unit outputs camera ON signal to rear view camera and inputs rear view camera image signal from rear view camera when the reverse signal is input.
- The camera control unit that inputs the camera image signal transmits the camera image signal to the AV control unit.

### **Diagnosis Procedure**

1.CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT (CAMERA CONTROL UNIT TO AV CONTROL UNIT)

- 1. Turn ignition switch OFF.
- 2. Disconnect camera control unit connector and AV control unit connector.
- 3. Check continuity between camera control unit harness connector and AV control unit harness connector.

Camera o	Camera control unit		AV control unit	
Connector	Terminal	Connector Terminal		Continuity
B50	12	M84	65	Existed

Check continuity between camera control unit harness connector and ground.

Camera d	control unit		Continuity
Connector	Terminal	Ground	Continuity
B50	12		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK CAMERA IMAGE SIGNAL (CAMERA CONTROL UNIT TO AV CONTROL UNIT)

- 1. Connect camera control unit connector and AV control unit connector.
- Turn ignition switch ON.
- 3. Check signal between camera control unit harness connector and ground.

	+) control unit	(-)	Condition	Reference value
Connector	Terminal			
B50	12	Ground	At rear view camera image is displayed.	(V) 0. 4 0 -0. 4 → 40µs SKIB2251J

#### Is inspection result normal?

YES >> Replace AV control unit.

NO >> Replace camera control unit.

Revision: 2009 March AV-77 2009 FX35/FX50

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#### COMPOSITE IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### COMPOSITE IMAGE SIGNAL CIRCUIT

**Description** 

AV control unit that inputs the camera image signal and AUX image signal transmits the composite image signal to the front display unit.

### Diagnosis Procedure

INFOID:0000000003838607

1.CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector and front display unit connector.
- 3. Check continuity between AV control unit harness connector and front display unit harness connector.

AV control unit		Front display unit		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M83	36	M71	15	Existed	

4. Check continuity between AV control unit harness connector and ground.

AV cor	ntrol unit		Continuity
Connector	Terminal	Ground	Continuity
M83	36		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK COMPOSITE IMAGE SIGNAL (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

- Connect AV control unit connector and front display unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between AV control unit harness connector and ground.

-	+) itrol unit	(–)	Condition	Reference value
Connector	Terminal			
M83	36	Ground	At rear view camera or AUX image is displayed.	(V) 0. 4 0 -0. 4 -40μs SKIB2251J

#### Is inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

#### MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

INFOID-0000000003838609

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#### MICROPHONE SIGNAL CIRCUIT

Description

Supply power from TEL adapter unit to microphone. The microphone transmits the sound/voice to the microphone.

### Diagnosis Procedure

### 1. CHECK CONTINUITY BETWEEN TEL ADAPTER UNIT AND MICROPHONE CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect TEL adapter unit connector and microphone connector.
- 3. Check continuity between TEL adapter unit harness connector and microphone harness connector.

TEL ada	apter unit	Microphone		Continuity
Connector	Terminals	Connector	Terminals	Continuity
	7		1	
B237	8	R17	2	Existed
	29		4	

4. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit			Continuity
Connector	Terminals	Ground	Continuity
B237	7	Ground	Not existed
D231	29		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK VOLTAGE MICROPHONE VCC

- 1. Connect TEL adapter unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between TEL adapter unit harness connector.

(	+)	(–)		
TEL ada	apter unit	TEL adapter unit		Voltage (Approx.)
Connector	Terminal	Connector	Terminal	(11 )
B237	29	B237	8	5.0 V

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace TEL adapter unit.

### ${f 3.}$ CHECK MICROPHONE SIGNAL

- Turn ignition switch OFF.
- 2. Connect microphone connector.
- 3. Turn ignition switch ON.
- Check signal between TEL adapter unit harness connector.

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#### **MICROPHONE SIGNAL CIRCUIT**

(-	+)	(-	-)		
TEL ada	apter unit	TEL ada	TEL adapter unit Condition Re		Reference value
Connector	Terminal	Connector	Terminal	-	
B237	7	B237	8	Give a voice.	(V) 2.5 2.0 1.5 1.0 0.5 0

#### Is the inspection result normal?

YES >> Replace TEL adapter unit.

NO >> Replace microphone.

#### **CONTROL SIGNAL CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [WITHOUT NAVIGATION]

### **CONTROL SIGNAL CIRCUIT**

Description INFOID:0000000003838610

TEL adapter unit identifies the vehicle model according to the control signal and performs the control.

### Diagnosis Procedure

# 1. CHECK CONTINUITY CONTROL SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect TEL adapter unit connector.
- 3. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit			Continuity
Connector	Terminals		Continuity
	20	Ground	
B237	23		Existed
	24		

#### Is the inspection result normal?

YES >> Replace TEL adapter unit.

NO >> Repair harness or connector.

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#### MODE CHANGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### MODE CHANGE SIGNAL CIRCUIT

Description INFOID:000000003838612

• AV control unit transmits the mode change signal to BOSE amp.

 Driver's Audio Stage controls the speaker's output characteristic by BOSE amp. so that the driver's seat is to be the center of sounds.

### Diagnosis Procedure

INFOID:0000000003838613

### 1. CHECK CONTINUITY MODE CHANGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BOSE amp. connector and AV control unit connector.
- 3. Check continuity between BOSE amp. harness connector and AV control unit harness connector.

BOSE amp.		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
B41	17	M82	27	Existed

4. Check continuity between BOSE amp. harness connector and ground.

BOSE	≣ amp.		Continuity
Connector Terminal		Ground	Continuity
B41 17			Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2. CHECK MODE CHANGE SIGNAL

- 1. Connect BOSE amp. connector.
- 2. Turn ignition switch ON.
- 3. Check signal between BOSE amp. harness connector and ground.

(	+)		Poforonco valuo	
BOSE amp.		(–)	Reference value (Approx.)	
Connector Terminal			, , ,	
B41 17		Ground	8.5 V	

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace BOSE amp.

### **COMMUNICATION SIGNAL CIRCUIT (CONT-SAT)**

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### COMMUNICATION SIGNAL CIRCUIT (CONT-SAT)

Description INFOID:0000000003838614

Satellite radio tuner and AV control unit are connected with a serial communication. They transmit the operation signal from AV control unit to satellite radio tuner, and transmit the display signal from satellite radio tuner to AV control unit.

### Diagnosis Procedure

### 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect satellite radio tuner connector and AV control unit connector. 2.
- Check continuity between satellite radio tuner harness connector and AV control unit harness connector.

_					
Satellite radio tuner		AV control unit		Continuity	
	Connector	Terminals	Connector Terminals		Continuity
	B236 9		M82	29	Existed
	D230	10	IVIOZ	30	LXISIEU

Check continuity between satellite radio tuner harness connector and ground.

Satellite r	adio tuner		Continuity
Connector Terminals		Ground	Continuity
B236	9	Glound	Not existed
D230	10		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK COMMUNICATION SIGNAL (SATightarrowCONT)

- Connect satellite radio tuner connector and AV control unit connector.
- Turn ignition switch ON. 2.
- Check signal between satellite radio tuner harness connector and ground.

(+) Satellite radio tuner Connector Terminal		( )	Condition	Deference value
		(-)	Condition	Reference value
Connector	Terrilliai			
B236	9	Ground	When satellite radio mode is selected.	(V) 10 0 -10 -10 SKIA9300J

#### Is the inspection result normal?

YES >> GO TO 3.

Revision: 2009 March

NO >> Replace satellite radio tuner.

3.CHECK COMMUNICATION SIGNAL (CONTightarrowSAT)

Check signal between satellite radio tuner harness connector and ground.

**AV-83** 

INFOID:0000000003838615

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2009 FX35/FX50

### **COMMUNICATION SIGNAL CIRCUIT (CONT-SAT)**

### < DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

	+) radio tuner Terminal	(-)	Condition	Reference value
B236	10	Ground	When satellite radio mode is selected.	(V) 10 0 -10 -1ms SKIA9301J

#### Is the inspection result normal?

YES >> Replace satellite radio tuner. NO >> Replace AV control unit.

### **REQUEST SIGNAL CIRCUIT (SAT→CONT)**

#### < DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### REQUEST SIGNAL CIRCUIT (SAT→CONT)

Description INFOID:0000000003838616

Request signal transmits the signal to recognize the connection of satellite radio tuner from satellite radio tuner to AV control unit.

### Diagnosis Procedure

#### INFOID:0000000003838617

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# 1. CHECK CONTINUITY REQUEST SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner connector and AV control unit connector.
- 3. Check continuity between satellite radio tuner unit harness connector and AV control unit harness connector.

Satellite radio tuner		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
B236	8	M82	28	Existed

4. Check continuity between satellite radio tuner harness connector and ground.

Satellite r	adio tuner		Continuity
Connector	Terminal	Ground	Continuity
B236	8		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2. CHECK COMMUNICATION SIGNAL

- 1. Connect satellite radio tuner connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between satellite radio tuner harness connector and ground.

Satellite i	+) radio tuner	(–)	Condition	Reference value
Connector	Terminal			
B236	8	Ground	When satellite radio mode is selected.	(V) 10 -10 + 10ms SKIA9299J

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace satellite radio tuner.

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#### STEERING SWITCH SIGNAL A CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### STEERING SWITCH SIGNAL A CIRCUIT

**Description** 

Transmits the steering switch signal to AV control unit.

### Diagnosis Procedure

INFOID:0000000003838621

### 1. CHECK STEERING SWITCH SIGNAL A CIRCUIT

- 1. Disconnect AV control unit connector and spiral cable connector.
- 2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV control unit		Spiral cable		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M81	6	M36	24	Existed	

3. Check continuity between AV control unit harness connector and ground.

AV cor	AV control unit		Continuity
Connector	Connector Terminal		Continuity
M81	6		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2. CHECK SPIRAL CABLE

Check spiral cable.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

### 3.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector and spiral cable connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector.

(+)		(–)		Reference
AV con	trol unit	AV control unit		value
Connector	Terminal	Connector Terminal		(Approx.)
M81	6	M81	15	3.3 V

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

### 4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-87</u>, "Component Inspection".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

#### STEERING SWITCH SIGNAL A CIRCUIT

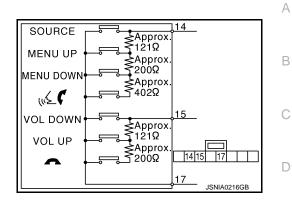
< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

INFOID:0000000003838622

### Component Inspection

Measure the resistance between the steering switch connector.



Steering	g switch	Steerin	g switch	Condition	Resistance value
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$
				SOURCE switch ON	0
	14	M303	17	MENU UP switch ON	120 – 122
				MENU DOWN switch ON	318 – 324
M303				w≨ <b>€</b> switch ON	716 – 730
	15			VOL DOWN switch ON	0
				VOL UP switch ON	120 – 122
				switch ON	318 – 324

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#### STEERING SWITCH SIGNAL B CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### STEERING SWITCH SIGNAL B CIRCUIT

**Description** 

Transmits the steering switch signal to AV control unit.

### Diagnosis Procedure

INFOID:0000000003838624

### 1. CHECK STEERING SWITCH SIGNAL B CIRCUIT

- 1. Disconnect AV control unit connector and spiral cable connector.
- 2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV con	trol unit	Spira	Continuity	
Connector	Connector Terminal			
M81	16	M36	31	Existed

3. Check continuity between AV control unit harness connector and ground.

AV cor	ntrol unit		Continuity
Connector	Terminal	Ground	Continuity
M81 16			Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2. CHECK SPIRAL CABLE

Check spiral cable.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

### 3.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector and spiral cable connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector.

(-	+)	(	Reference	
AV con	trol unit	AV cor	value	
Connector	Terminal	Connector	Terminal	(Approx.)
M81	16	M81	15	3.3 V

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

#### 4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-89, "Component Inspection"</u>.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

#### STEERING SWITCH SIGNAL B CIRCUIT

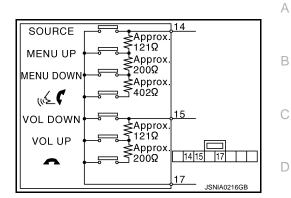
< DTC/CIRCUIT DIAGNOSIS >

### [WITHOUT NAVIGATION]

INFOID:0000000003838625

### Component Inspection

Measure the resistance between the steering switch connector.



Steerin	g switch	Steerin	g switch	Condition	Resistance value	
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$	
			SOURCE switch ON	0		
	4.4	M303	17	MENU UP switch ON	120 – 122	
	14			MENU DOWN switch ON	318 – 324	
M303				w≨ <b>€</b> switch ON	716 – 730	
	15			VOL DOWN switch ON	0	
				VOL UP switch ON	120 – 122	
				switch ON	318 – 324	

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#### STEERING SWITCH SIGNAL GND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT NAVIGATION]

### STEERING SWITCH SIGNAL GND CIRCUIT

**Description** 

Transmits the steering switch signal to AV control unit.

### Diagnosis Procedure

INFOID:0000000003838627

### 1. CHECK STEERING SWITCH SIGNAL GND CIRCUIT

- 1. Disconnect AV control unit connector and spiral cable connector.
- 2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV con	trol unit	Spira	Continuity	
Connector	Connector Terminal		Terminal	Continuity
M81	15	M36	33	Existed

3. Connect AV control unit connector.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2. CHECK SPIRAL CABLE

Check spiral cable.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

### 3. CHECK GROUND CIRCUIT

- 1. Connect AV control unit connector.
- 2. Check continuity between AV control unit harness connector and ground.

AV cor	ntrol unit		Continuity
Connector	Terminal	Ground	Continuity
M81	15		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

#### 4. CHECK STEERING SWITCH

- 1. Turn ignition switch OFF.
- 2. Check steering switch. Refer to AV-91, "Component Inspection".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

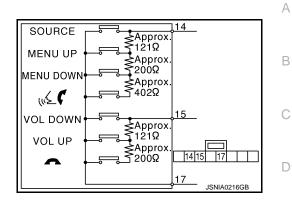
#### STEERING SWITCH SIGNAL GND CIRCUIT

[WITHOUT NAVIGATION]

INFOID:0000000003838628

### Component Inspection

Measure the resistance between the steering switch connector.



Steering	g switch	Steerin	g switch	Condition	Resistance value	
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$	
			17	SOURCE switch ON	0	
	14	M303		MENU UP switch ON	120 – 122	
				MENU DOWN switch ON	318 – 324	
M303				w≨ <b>€</b> switch ON	716 – 730	
	15			VOL DOWN switch ON	0	
				VOL UP switch ON	120 – 122	
				switch ON	318 – 324	

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# **ECU DIAGNOSIS INFORMATION**

### AV CONTROL UNIT

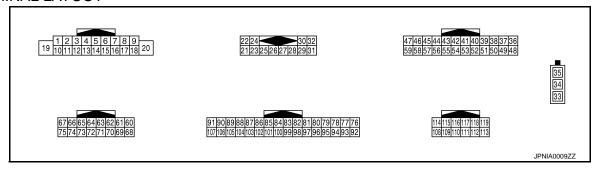
Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

#### CONSULT-III MONITOR ITEM

Monitor Item		Condition	Value/Status
VHCL SPD SIG	Ignition switch	Vehicle speed > 0 km/h (0 MPH)	On
VHCL SPD SIG	ON	Vehicle speed = 0 km/h (0 MPH)	Off
DIVD CIC	Ignition switch	Parking brake is applied.	On
PKB SIG	ON	Parking brake is released.	Off
ILLUM SIG	Ignition switch	Light switch ON	On
	ON	Light switch OFF	Off
IONI SIO	Ignition switch ON	_	On
IGN SIG	Ignition switch ACC	_	Off
REV SIG	Ignition switch	Selector lever in R position	On
KEV SIG	ON	Selector lever in any position other than R	Off

### **TERMINAL LAYOUT**



### PHYSICAL VALUES

Terminal (Wire color)		Description			Condition	Reference value
+	_	Signal name	Input/ Output		Conducti	(Approx.)
				Keep pressing SOURCE switch.	0 V	
				Ignition switch ON	Keep pressing $\Delta$ switch.	0.7 V
6 (P)	15 (B)	Steering switch signal A	Input		Keep pressing ∇ switch.	1.3 V
					Keep pressing √∠   switch.	2.0 V
					Except for above.	3.3 V
7 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
9	Ground	Illumination signal	Input	OFF	Lighting switch is OFF.	0 V
(R)	(R) Glouid	manmation signal	IIIput	011	Lighting switch is ON.	12.0 V

### < ECU DIAGNOSIS INFORMATION >

### [WITHOUT NAVIGATION]

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	minal e color)	Description			Condition	Reference value
+	-	Signal name	Input/ Output	Condition		(Approx.)
15 (B)	Ground	Steering switch signal Ground	_	Ignition switch ON	_	0 V
					Keep pressing VOL DOWN switch.	0 V
16 (L)	15 (B)	Steering switch signal B	Input	Ignition switch	Keep pressing VOL UP switch.	0.7 V
, ,				ON	Keep pressing - switch.	1.3 V
					Except for above.	3.3 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
20 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
22 (B)	21 (W)	Satellite radio sound signal LH	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
24 (G)	23 (R)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 1 0 -1 + + 2ms
25	_	Shield	_	_	_	SKIB3609E
26	_	Shield	_	_	_	_
27				Ignition	Driver's Audio Stage ON	0 V
(SB)	Ground	Mode change signal	Output	switch ON	Driver's Audio Stage OFF	8.5 V
28 (W)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 10 0 -10 +-+ 10ms SKIA9299J
29 (B)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 10 0 -10 ***1ms

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
30 (R)	Ground	Communication signal (CONT→SAT)	Output	Ignition switch ON	When satellite radio mode is selected.	(V) 10 0 -10 + 1ms SKIA9301J	
33	_	FM sub	Input	_	_	_	
34	_	AM-FM main	Input	_	_	_	
35	Ground	Antenna amp. ON signal	Output	Ignition switch ACC	_	12.0 V	
36 (SB)	Ground	Composite image signal	Output	Ignition switch ON	At rear view camera or AUX image is displayed.	(V) 0. 4 0 -0. 4 SKIB2251J	
37 (V)	Ground	Composite image ground	_	Ignition switch ON	_	0 V	
38 (P)	Ground	RGB signal (B: blue)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0	
39 (L)	Ground	RGB signal (G: green)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4 → 40μs SKIB2236J	
40 (G)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4  -0. 4  SKIB2238J	

### < ECU DIAGNOSIS INFORMATION >

	minal e color)	Description	_		Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
41 (W)	Ground	RGB synchronizing signal	Output	Ignition switch ON	_	(V) 4 0 +
42	_	Shield	_	_	_	_
					At RGB image display	5.0 V
43 (B)	Ground	RGB area (YS) signal	Output	Ignition switch ON	At AUX image display	(V) 6 4 2 0 ++200μs PKIB4948J
44 (BR)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 + 1ms PKIB5039J
45 (R)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON	_	(V) 4 0 → 20µs SKIB3601E
46 (LG)	Ground	Signal ground	_	Ignition switch ON	_	0 V
47 (O)	Ground	Signal VCC	Output	Ignition switch ACC	_	9.0 V
48 (BR)	_	Shield	_	_	_	_
49 (Y)	_	Shield	_	_	_	_
50	_	Shield	_	_	<del>-</del>	_
55	_	Shield	_	_	_	_

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
56 (Y)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0  +-1ms  PKIB5039J
57 (G)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch ON	_	(V) 4 0 ++4ms SKIB3598E
58 (BR)	Ground	Inverter ground	_	Ignition switch ON	_	0 V
59 (Y)	Ground	Inverter VCC	Output	Ignition switch ACC	_	9.0 V
64	_	Shield	_	_	_	_
65 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image display	0. 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
66 (G)	Ground	AUX image signal	Input	Ignition switch ON	At AUX image display	(V) 0. 4 0 -0. 4 -0. 4 SKIB2251J
68 (W)	Ground	Camera-connection recog- nition signal	_	Ignition switch	Connected to camera control unit connector.	0 V
				ON	Not connected to camera control unit connector.	5.0 V
73	_	Shield	_	_	_	_
74 (R)	Ground	AUX image signal ground	_	Ignition switch ON	_	0 V

### < ECU DIAGNOSIS INFORMATION >

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
80 (L)	79 (P)	TEL voice signal	Input	Ignition switch ON	During voice guide output with the 🗸 switch pressed.	(V) 1 0 -1 → 2ms SKIB3609E
81	_	Shield	_	_	_	_
83 (BR)	82 (Y)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
85 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
86 (L)	_	CAN-H	Input/ Output	_	_	_
87 (P)	_	CAN-L	Input/ Output	_	_	_
88 (LG)	_	AV communication signal (H)	Input/ Output	_	_	_
89 (V)	_	AV communication signal (L)	Input/ Output	_	_	_
90 (G)	_	AV communication signal (H)	Input/ Output	_	_	<del>_</del>
91 (V) <sup>*1</sup> (R) <sup>*2</sup>	_	AV communication signal (L)	Input/ Output	_	_	_
95 (B)	97 (W)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
96 (R)	97 (W)	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
99 (R)	98 (G)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
101 (BR)	Ground	Switch ground	_	Ignition switch ON	_	0 V
103 (SB)	Ground	Disk eject signal	Input	_	Pressing the eject switch.  Except for above	0 V 3.3 V
104 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
105	Ground	Reverse signal	Input	Ignition switch	R position	12.0 V
(O)			,	ON	Other than R position  Parking brake ON	0 V
106 (V)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake OFF	(V) 8 4 0 10 ms JSNIA0007GB
107 (R)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).
108 (BR)	114 (Y)	Sound signal rear RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 → +2ms SKIB3609E

#### < ECU DIAGNOSIS INFORMATION >

### [WITHOUT NAVIGATION]

	minal e color)	Description			Condition	Reference value	Α
+	_	Signal name	Input/ Output		Condition	(Approx.)	
109 (R)	115 (G)	Sound signal front RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	B C
110 (V)	Ground	Amp. ON signal	Output	Ignition switch ON	_	10.0 V	Е
111	_	Shield	_	_	_	_	
112 (V)	118 (LG)*1 (SB)*2	Sound signal rear LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	F
							Н
113 (P)	119 (L)	Sound signal front LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	J
						SKIB3609E	

#### NOTE:

\*1: With hands-free phone

Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION -

NOTE:

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Δ\/

M

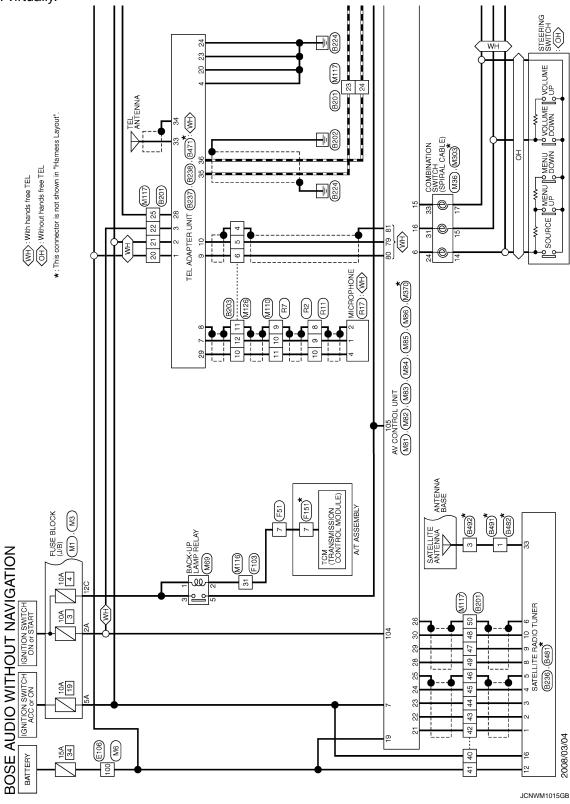
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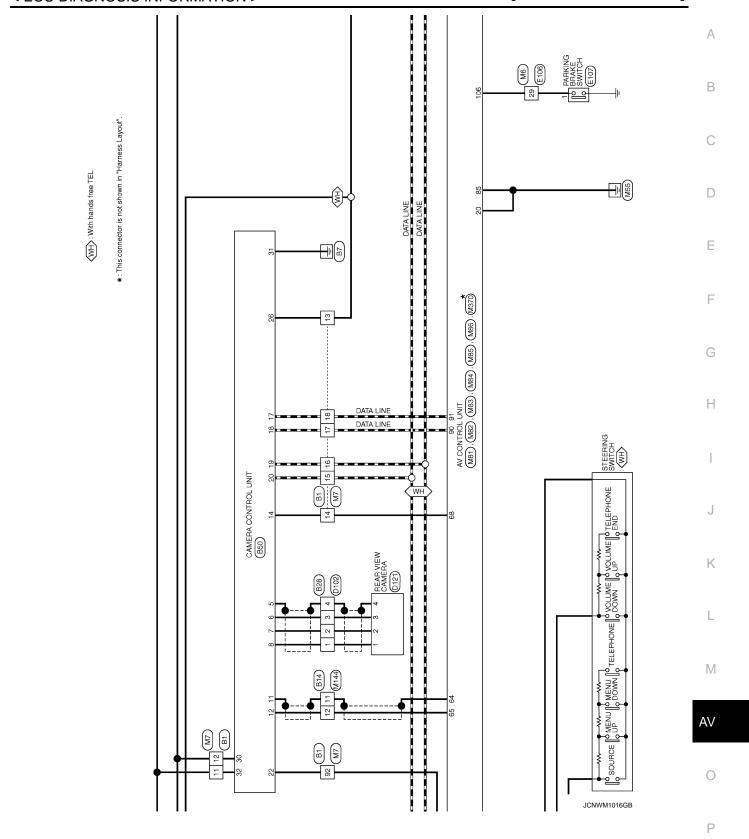
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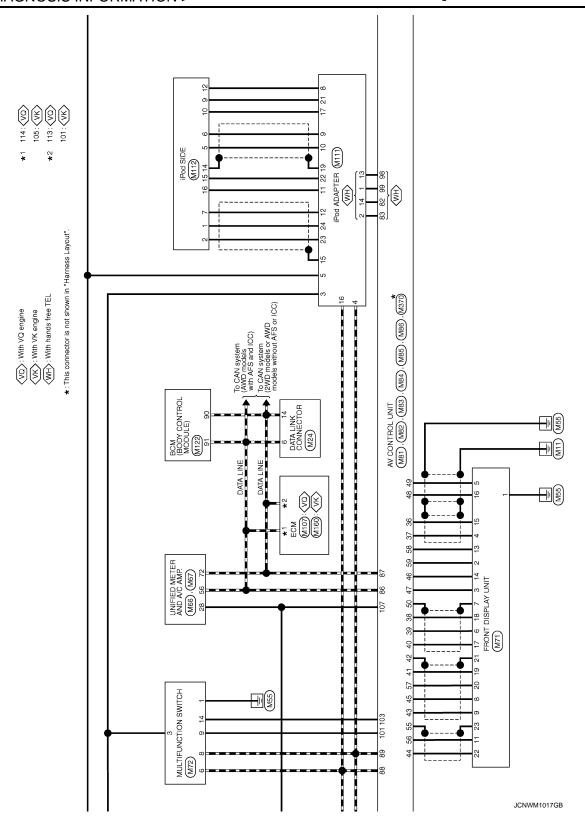
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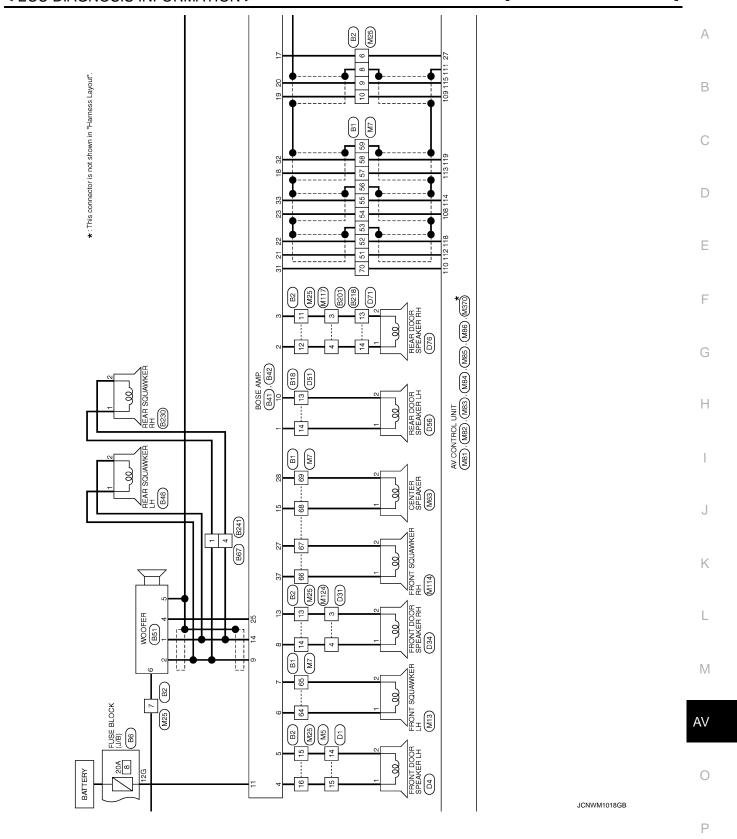
<sup>\*2:</sup> Without hands-free phone

The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

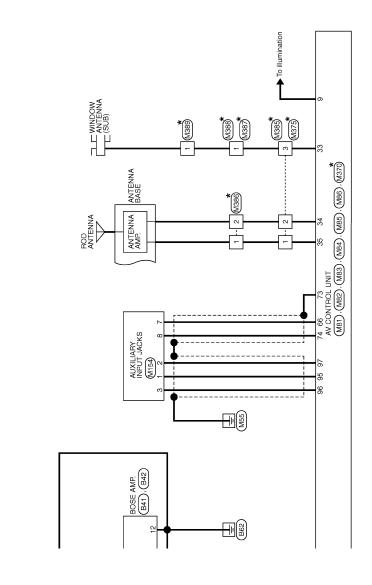








\*: This connector is not shown in "Harness Layout".



JCNWM1019GB

	А
OCK (J/B) -CS	В
Fuse Bud   NS12FBR   NS1	С
Connector No.  Connector Type  H.S.  H.S.  Oolor  Terminal Color  No.  Of Wire  GR	D
22 23 24 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4	Е
RE	F
wire TO 6 wire T	G
Connector No.   Connector No.   Connector Name   Connector No.   Connector N	Н
13 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1
B18	J
	K
	L
Connector Name   WIRE TO WIRE	
TO WIRE  NP-CS16-TM  Signal Name (Specification)  - Without pre-crash seat beld - Without pre-cr	M
UDIO WITHOLD   UDIO WITH   U	AV
Connector Type   Conn	0
JCNWM1020GB	Р

Revision: 2009 March AV-105 2009 FX35/FX50

12 B GND 13 Y SOUND SIGNAL PROVI DOOR SPEAKER RH (-) 14 R SOUND SIGNAL WOOFER AND FIGAR SOLLAWERR (-)		Connector No. B51  Connector Name WOOFER  Connector Type RS06FGY  H.S.	Terminal   Color   Signal Name [Specification]
Connector No. 642  Connector Type SGA17FBR-SJA2  H.S. 1413 12 11 10 10 10 10 10 10 10 10 10 10 10 10	Terminal   Color   Signal Name [Specification]     N	22 O REVERSE 26 G VEHICLE SPEED (8-PULSE) 30 B ACC 31 B GHD 32 SB BATTERY	
1   GR		Connector No.   B50	Terminal   Codor   Signal Name [Specification]   Codor   Shelia   Shelia
BOSE AUDIO WITHOUT NAVIGATION Commettor No. 641 Connector Type SCA1978R-SGA4  Connector Type SCA1978R-SGA4  H.S. 3738359433	Perminal   Color   Signal Name [Specification]     15	Connector No. B46 Connector Name REAR SOUAWKER LH Connector Type TK02FBR  H.S.	Terminal   Color   Signal Name [Specification]

JCNWM1021GB

Donnector Name   B203	A B C
A3   R   - [Without ICC]	E F G
Connector No.   B201	J K
Signal Name   Signal Name   Specification   Specification   Specification   Specification   Specification   Specification	M AV
JCNWM1022GB	Р

Revision: 2009 March AV-107 2009 FX35/FX50

BO	BOSE AUI	BOSE AUDIO WITHOUT NAVIGATION Connector No.	28 P VE	Connector No. B238	Connector No.   B241
Connec	Connector Name	TEL ADAPTER UNIT	29 P MICROPHONE VCC	Connector Name TEL ADAPTER UNIT	Connector Name WIRE TO WIRE
Connec	tor Type	Connector Type TH32FW-NH		Connector Type TH08FW-NH	Connector Type NS08FW-CS
Œ				1	昼
H S		2 4 6 8 10 12 14 16 18 20 224 28 28 30 32 1 3 5 7 9 11 13 15 17 19 21 28 27 29 31	_	35 37 39 41	8 7 6 5 4
Terminal No.	of Wire	Signal Name [Specification]		Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification] No. of Wire
	> 9	BATTERY		Н	Н
3 6	3 ≥	IGNITION		30 P AV COMM (L)	1
4	В	GND			
7	7	_			
ω .	SHELD				
<b>ග</b> !	- -	TEL VOICE SIGNAL (+)			
2 8	۵ ۵	TEL VOICE SIGNAL (=)			
3 8	9	CONTROL SICHAL			
24 2	a a	CONTROL SIGNAL			
Connec	Connector No.	B471	Connector No. B481	Connector No. B482	Connector No. B491
Connec	Connector Name	TEL ADAPTER UNIT	Connector Name SATELLITE RADIO TUNER	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE
Connec	Connector Type	GT16C-1S-HU	Connector Type FAKRA	Connector Type GT16C-1S-HU	Connector Type GT16C-1PP-HU
₽ E	N só	W S S S S S S S S S S S S S S S S S S S	H.S.	#\$.	HS.
Terminal No.	al Color of Wire	Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]
8 %	SHIELD	TEL ANTENNA SHIELD	33 - SATELLITE ANTENNA		1

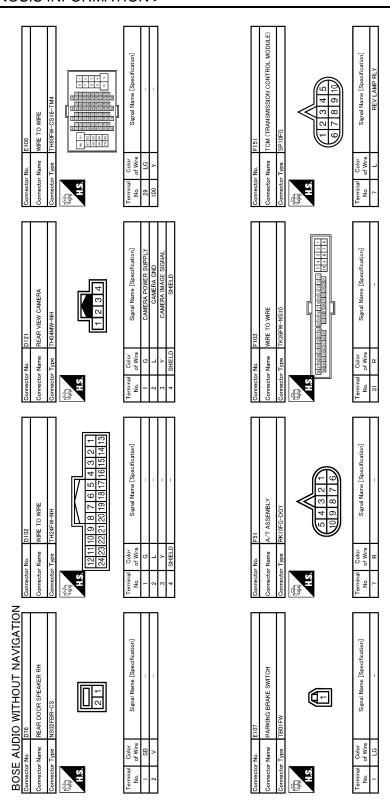
JCNWM1023GB

### **AV CONTROL UNIT**

# [WITHOUT NAVIGATION]

3   2   1   2   2   1   2   2   1   2   2	6 7 8 9 10   15 16 17 18   10   10   10   10   10   10   10		А
Name   WIRE TO WIRE	D71   WIRE TO WIRE   TK10MW-NS8		С
Connector No. Connector Name Connector Type  Terminal Color No. of Wive 3 P P 4 4 L	Connector No. Connector Name Commettor Type  A.S.  I.S. I.S. I.S. I.A. I.A. I.A. I.		D
LH oseification]	H H seelfcation)		Е
PRONT DOOR SPEAKER LH NS02FBR-CS  Z 1  Signal Name (Specification)	PEAR DOOR SPEAKER LH NSOZPER-CS  Signal Name [Specification]		F
No. Name Type Odlor of Wire L	No.		G
Connector Connector Connector Terminal No. 1	Connector Connector Connector Connector No.		Н
Name   WIRE TO WIRE	12 TO WIRE  IDMW-NS8  4 5 — 6 7 8 9 10  13 14 15 16 17 18  Signal Name [Specification]		I
MRE TO WIRE   TH40PW-CS15   MRE TO WIRE   TH40PW-CS15   MRE TO WIRE	13    13		3
Connector No. Connector Name Connector Type  C	Connector No. Connector Name Connector Type Terminal Color No. of Wire 13 V		K
NOIT			L
BOSE AUDIO WITHOUT NAVIGATION Connector Name ANTENNA BASE Connector Type GT16C-IPP-HU  Terminal Color Signal Name [Specification] No. of Wire SATELLITE ANTENNA  3 - SATELLITE ANTENNA	PROWT DOOR SPEAKER RH INSOZEBR-CS  Signul Name [Specification]		M
DIO WITHC	D04 NSO2FBH		AV
BOSE AUC Connector Name Connector Type Terminal Color No. of Wive	Connector No. Connector Name Connector Type  Terminal Color No. Terminal Color No. Terminal Color Delivery		0
		JCNWM1024GB	Р

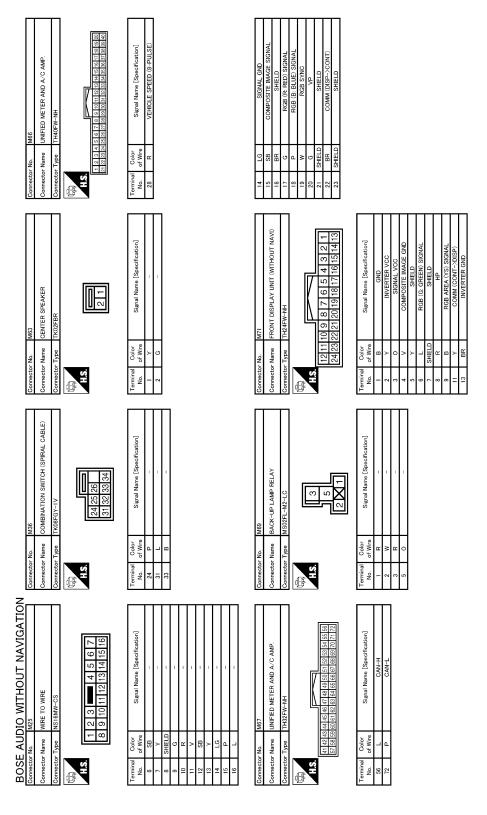
Revision: 2009 March AV-109 2009 FX35/FX50



JCNWM1025GB

WINE TO WINE THROMM-CSI G-TM4 THROMM-CSI	M24 BD16FW  9 10 11 12 13 14 15 16 1 2 3 4 5 6 7 8  Signal Name [Specification]	АВ
Connector No. Mis Connector Name WIRE TO WIRE COnnector Type THBOMW-CSII Connector Type To The Connector Type	Connector No. M24 Connector Name Connector Type BD16FW HS. Of Wire 6 14 P	C D
Name   WIRE TO WIRE	OUAWKER LH Signal Name [Specification]	E
Connector No.   M5	Connector Name FRONT SQUAWKER LH Connector Types TKW2FBR  Towns of Wire Signal Name [S  2 W — — — — — — — — — — — — — — — — — —	G
CS (J./B)  CS (J./B)  CS (J./C)		ı
Connector No.   M3	54 BR 54 BR 55 SH V V V V V V V V V V V V V V V V V V	J K
<u> </u>	WW-CS16-TM4  WW-CS16-TM4  WW-CS16-TM4  WW-CS16-TM4  Signal Name [Specification]  Signal Name [Specification]  Without pre-cross seat beld  - Without p	L
AUDIO W MI MI MI MI Wife V V V	M	AV
BOSE A Gonnector Na Connector Na Connector Na No. Of Na SA SA SA	Commetter R	O P

Revision: 2009 March AV-111 2009 FX35/FX50



JCNWM1027GB

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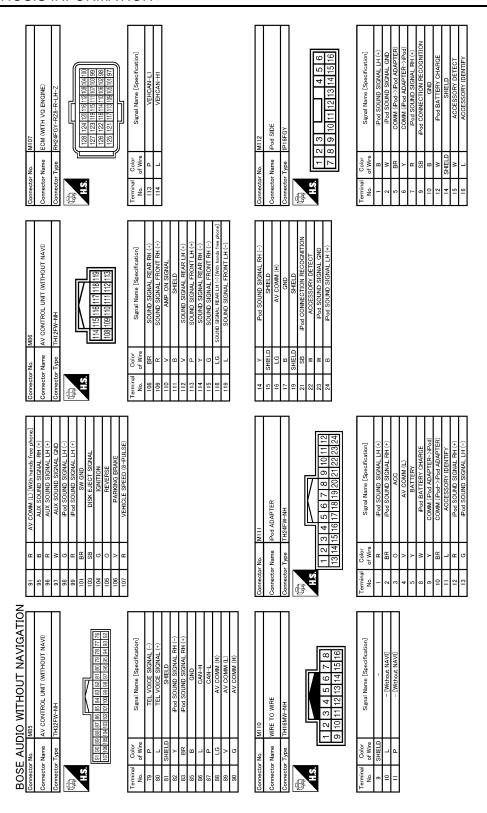
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Connector No. M82 Connector Name AV CONTROL UNIT (WITHOUT NAVI) Connector Type A12FW  CONNECTOR NAME A12FW  CO	Terminal   Color   Signal Name [Specification]	Connector Name AV CONTROL UNIT (WITHOUT NAVI)  Connector Type THISPW-NH  Connector Name THISPW-NH  THISPW-NH  Connector Name THISPW-NH  THISPW-NH  Connector Name THISPW-NH  THISPW-NH  Connector Name THISPW-NH  THISP	No. of Wire   Signal Name [Specification]
Connector No. M81 Connector Name AV CONTROL UNIT (WITHOUT NAVI) Connector Type TH18FW-CS2  H.S. T.	Terminal   Color   Signal Name [Specification]   Color   Col	47         O         SIGNAL, VCC           48         BR         SHIELD           50         SHIELD         SHIELD           56         SHIELD         SHIELD           56         SHIELD         SHIELD           56         V         VP           7         C         VP           87         G         VP           58         BR         INVERTER OND           59         Y         NVERTER VCC	
BOSE AUDIO WITHOUT NAVIGATION    M172   M172   M172	Color of Wire Signal Name (Specification) Of Wire Child OHD V V ACOMM (1) LG AV COMM (1) LG N AV COMM (1) BR SIN GAID SIR EJECT SIGNAL	No. MR3 Name AV CONTROL UNIT (WITHOUT NAV)) Type TH24FW-NH  47 46 45 44 43 42 41 40 39 38 37 36 58 57 56 55 54 53 52 51 50 49 48	Color Signal Name [Spearlication] Signal Name [Spearlication] Signal Name [Spearlication] Signal Name Commonstre IMAGE SIGNAL COMPOSTRE IMAGE SIGNAL COMPOSTRE IMAGE SIGNAL G RGB (R-RED) SIGNAL SHELD
BOSE ALL Connector No. Connector Type H.S.	Terminal 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Connector No. Connector Type H.S. H.S. A74  474  595  595	Terminal 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

JCNWM1028GB

**AV-113** Revision: 2009 March 2009 FX35/FX50



JCNWM1029GB

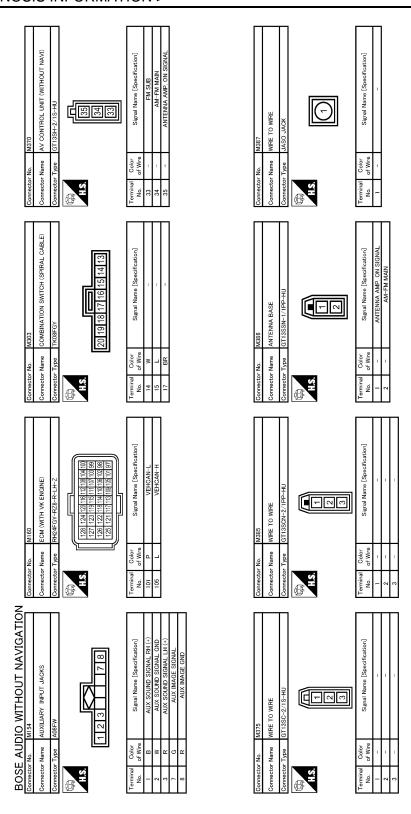
### **AV CONTROL UNIT**

# [WITHOUT NAVIGATION]

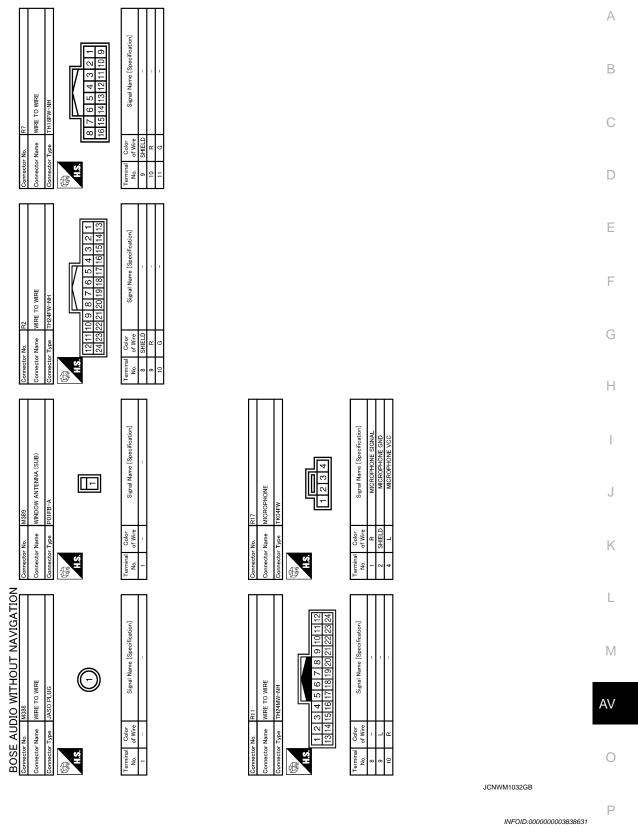
### < ECU DIAGNOSIS INFORMATION >

43 B - [Without ICC] 44 R - [Without ICC] 45 G - [Without ICC] 47 B - [Without ICC] 48 R - [Without ICC] 50 SHELD - [Without ICC]	Connector No. M144  Connector Name WIRE TO WIRE  Connector Type TH112MV-NH  Th112MV-NH  To 8 9 10 11 12  Terminal Color Signal Name [Specification]  To 9 Wire  Terminal Color Signal Name [Specification]	A B C
Connector No.   MI17	M126   Connector No.   M126   Connector No.   M128   Connector Type   TH12MW-NH   TH12MW	E F G
Connector No. Mil6 Connector Name WIRE TO WIRE Connector Type Trk:30MM-NS:10  1.2 3 4 5	Connector No.   MI24	J K
BOSE AUDIO WITHOUT NAVIGATION Connector Name FRONT SOLAWKER RH Connector Type TK02FBR  Terminal Color No. of Wive Signal Name [Specification] 1 V - 2 LG	Connector No.   M122	AV O JCNWM1030GB
		Р

Revision: 2009 March AV-115 2009 FX35/FX50



JCNWM1031GB



**DTC Index** 

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

### **AV CONTROL UNIT**

# [WITHOUT NAVIGATION]

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-48, "Diagnosis Procedure"
U1010	CONTROL UNIT (CAN) [U1010]	AV-49, "Diagnosis Procedure"
U1310	CONTROL UNIT (AV) [U1310]	AV-50, "DTC Logic"
U1200	Control Unit FLASH-ROM [U1200]	AV-51, "DTC Logic"
U1216	CAN CONT [U1216]	AV-52, "DTC Logic"
U1243	FRONT DISP CONN [U1243]	AV-53, "Diagnosis Procedure"
U1250	CAMERA CONT. CONN [U1250]	AV-55, "Diagnosis Procedure"
U1255	SAT CONN [U1255]	AV-56, "Diagnosis Procedure"
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	AV-58, "Description"
U1300 U1252	AV COMM CIRCUIT [U1300]     REAR CAMERA LAN CONN [U1252]	AV-58, "Description"
U1300 U1254	AV COMM CIRCUIT [U1300]     IPOD CONN [U1254]	AV-58, "Description"
U1300 U1256	AV COMM CIRCUIT [U1300]     HAND FREE CONN [U1256]	AV-58, "Description"
U1300 U1240 U1252 U1254 U1256	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]     REAR CAMERA LAN CONN [U1252]     IPOD CONN [U1254]     HAND FREE CONN [U1256]	AV-58, "Description"

### [WITHOUT NAVIGATION]

INFOID:0000000003838632

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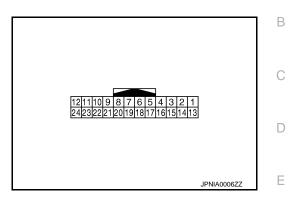
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# FRONT DISPLAY UNIT

Reference Value

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

Terminal (Wire color)		Description			Condition	Reference value		
+	_	Signal name	Input/ Output		Condition	(Approx.)		
1 (B)	Ground	Ground	_	Ignition switch ON	_	0 V		
2 (Y)	Ground	Inverter VCC	Input	Ignition switch ACC	_	9.0 V		
3 (O)	Ground	Signal VCC	Input	Ignition switch ACC	_	9.0 V		
4 (V)	Ground	Composite image ground	_	Ignition switch ON	_	0 V		
5 (Y)	_	Shield	_	_	_	_		
6 (L)	Ground	RGB signal (G: green)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.4 0 -0.4 -0.4 SKIB2236J		
7	_	Shield	_	_	_	_		
8 (R)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	_	(V) 4 0 ++20µs SKIB3601E		

# [WITHOUT NAVIGATION]

	minal e color)	Description			Condition	Reference value		
+	_	Signal name	Input/ Output		Condition	(Approx.)		
					At RGB image display	5.0 V		
9 (B)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At AUX image display	(V) 6 4 2 0 *** 200 μ s		
11 (Y)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 1ms PKIB5039J		
13 (BR)	Ground	Inverter ground	_	Ignition switch ON	_	0 V		
14 (LG)	Ground	Signal ground	_	Ignition switch ON	_	0 V		
15 (SB)	Ground	Composite image signal	Input	Ignition switch ON	At AUX image display	(V) 0. 4 0 -0. 4 -40μs SKIB2251J		
16 (BR)	_	Shield	_	_	_	_		
17 (G)	Ground	RGB signal (R: red)	Input	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	0. 4 - 40μs - SKIB2238J		
18 (P)	Ground	RGB signal (B: blue)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		

### < ECU DIAGNOSIS INFORMATION >

# [WITHOUT NAVIGATION]

	minal color)				Condition	Reference value			
+	_	Signal name	Input/ Output		Condition	(Approx.)			
19 (W)	Ground	RGB synchronizing signal	Input	Ignition switch ON	_	(V) 4 0 → 20 µs SKIB3603E	B C		
20 (G)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch On	_	(V) 4 0 → 4ms SKIB3598E	E		
21	_	Shield	_	_	_	_	G		
22 (BR)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 ••••1ms	Н		
23	_	Shield	_	_	_	_			

Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION -

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NOTE:

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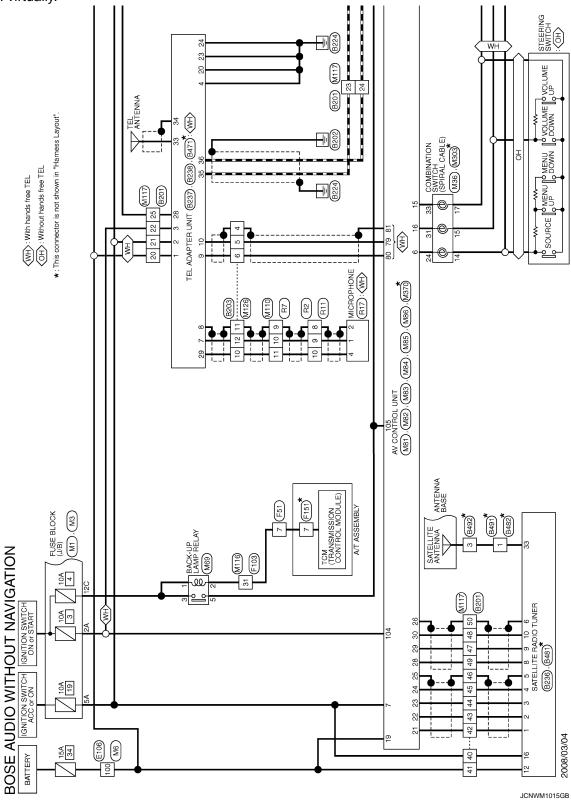
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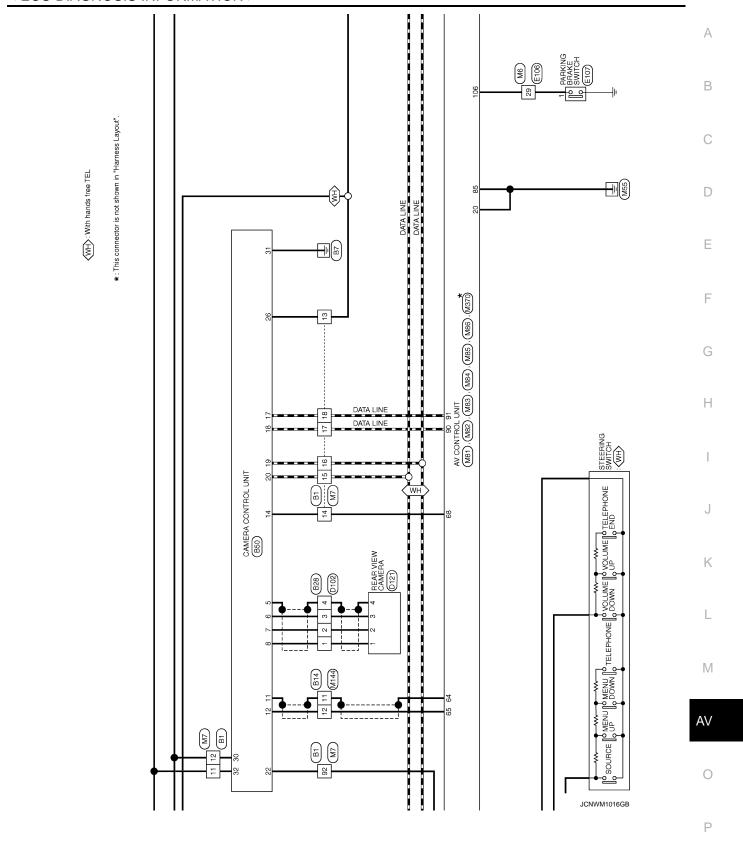
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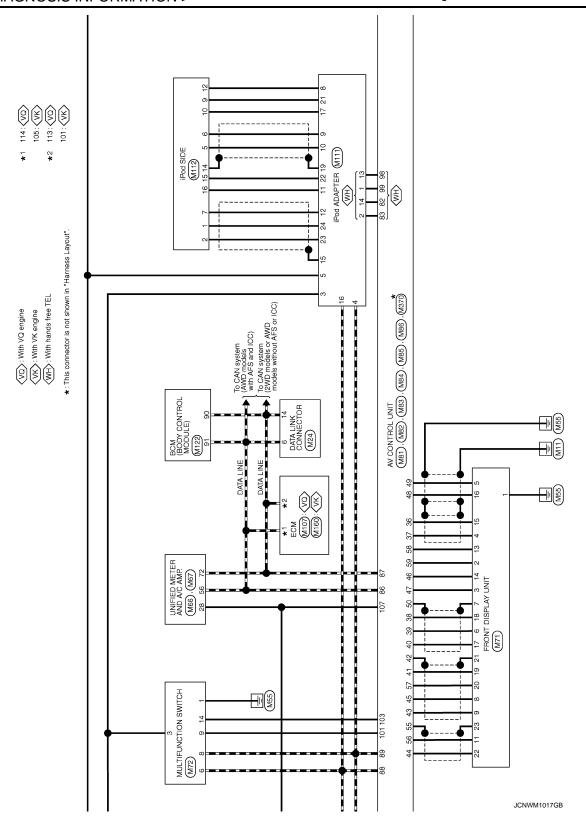
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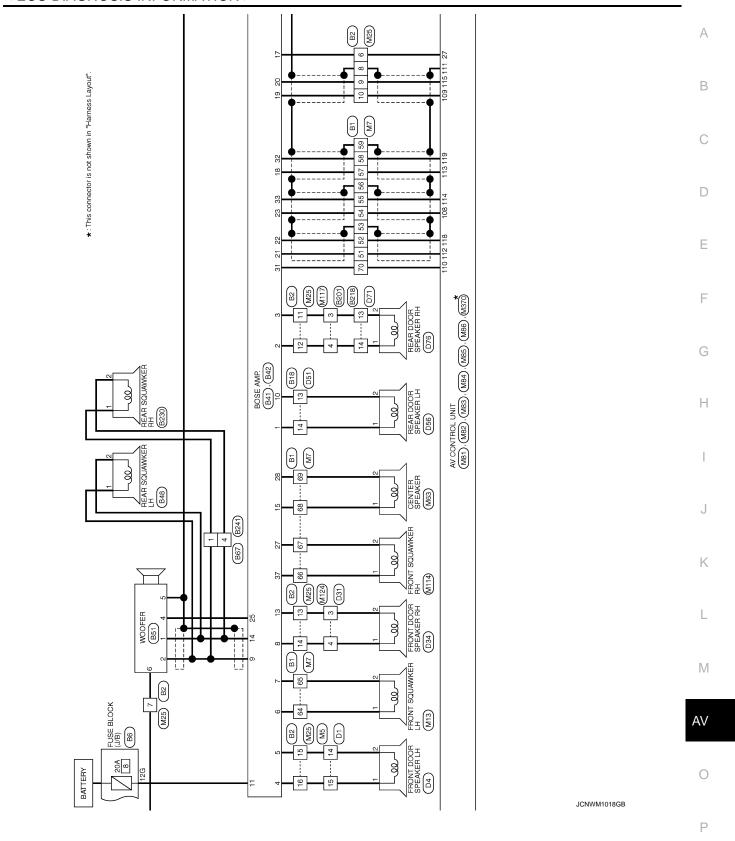
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

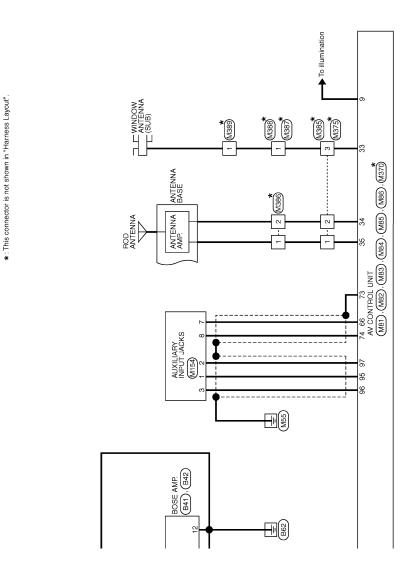






### [WITHOUT NAVIGATION]





JCNWM1019GB

ССК (J. B)  1-03  Signal Name [Specification]	A B
Connector No.   B6	C
	E
WIRE TO THE AMW.    15   14   15   16   17   18   18   18   18   18   18   18	F
Connector No.   Connector No.   Connector No.   Connector Type   Connector Type   Connector Type   Connector No.   Connector	Н
WIRE	I
### TK10FW    1	J
Section   Sect	K
IGATION    Con   C	L
WIRE  -OSIG-TM4  -OSIG-TM4  Signal Name [Specification]  -WRE  -Without pre-crash seat belt	M
WRE TO WRE   WRE TO WRE TO WRE   WRE TO WRE TO WRE TO WRE   WRE TO	AV
Connector Name   Signal Name   Specification   Connector Name   Specification   Connector Name   C	0
JCNWM1020GB	Р

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BOSE AUDIO WITHOUT NAVIGATION  Connector No. B41  Connector Name BOSE AMP.  Connector Type SCA19FBR-SGA4  WAS 37 86 35 34 33   32 31 30 22 28    AN 37 86 35 34 33   32 31 30 22 28    EXECUTE	31   GR   AMP ON SIGNAL	Connector No. B42 Connector Name B0SE AMP. Connector Type SGA12FBR-SJA2 HAS. 1413 12 11 10 9 8 7 1 6 5 4 3 2 1	12 B GNID 13 Y SOUND SIGNAL PROVIT DOOR SPEAKER RH (→) 14 R SOUND SIGNAL WOOFER AND PEAR SOUNWER (→)
Terminal   Color   Signal Name (Specification)   No. of Wive   No. of Wive   SOUND SIGNAL CENTER (+)   17   O   MODE CHANGE SIGNAL   18   P   SOUND SIGNAL FRONT ILH (+)   20   G   SOUND SIGNAL FRONT IRH (-)   21   V   SOUND SIGNAL FRONT IRH (-)   22   SB   SOUND SIGNAL FRONT IRH (-)   22   SB   SOUND SIGNAL FRAR IH (+)   SOUND SIGNAL FRONT SOUNMER IM (-)   SOUND SIGNAL FRONT SOUND SIGNAL FRONT SOUND SO		Terminal   Color   Signal Name [Specification]   Color   Nive   SOUND SIGNAL REAR DOOR LH (+)   SOUND SIGNAL REAR DOOR RH (+)   SOUND SIGNAL REAR DOOR RH (+)   SOUND SIGNAL REAR DOOR RH (+)   SOUND SIGNAL ROOM TOOR SEALER LH (+)   SOUND SIGNAL ROOM SEALER LH (+)   SOUND SIGNAL ROOM SEALER LH (+)   SOUND SIGNAL ROOM SEALER ROOM SEALER ROOM SEALER ROOM SIGNAL ROOM	
Connector No. B48 Connector Name REAR SQUAWKER LH Connector Type TR02FBR  H.S.	Connector Name CAMERA CONTROL UNIT  Connector Name CAMERA CONTROL UNIT  Connector Name TH32PW-NH  LS.  LS.  LS.  LS.  LS.  LS.  LS.  LS	22 O REVERSE 26 G VEHICLE SPEED (8-PULSE) 30 B ACC 31 B GND 32 SB BATTERY	Connector No. B51 Connector Name WOOFER Connector Type RS09FGY  H.S.
Terminal   Color   Signal Name [Specification]   Color   Col	Terminal   Color   Signal Nane [Specification]     No. of Wire   Signal Nane [Specification]     SHELD   SHELD   SHELD     N		Terminal   Color   Signal Name [Specification]   Octor   Signal Name [Specification]   Octor   SOUND SIGNAL WOOFER (+)   Color   SOUND SIGNAL WOOFER (+)   Color   C

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Connector No. B203 Connector Name WHE TO WHE Connector Type THISPY-NH No. of Wire 5 4 SHELD 11 SHELD 12 L 12 L 12 L	A B C
A3   R   -	E F G
Connector No.   E201	J K
BOSE AUDIO WITHOUT NAVIGATION	AV

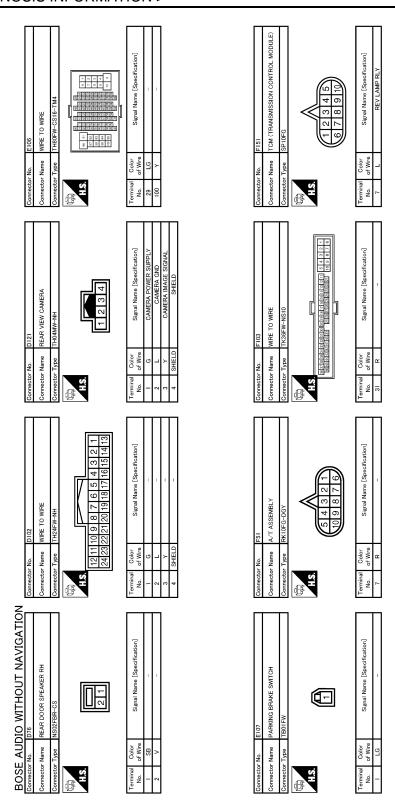
Connector No.   B241	Connector Name WIRE TO WIRE	Connector Type NS08FW-CS		8 7 6 5 4	Terminal Color Signal Name [Specification]	Н									Connoctor No B401	] e	Connector Type GT16C-1PP-HU	H.S.	Terminal Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]	-
Connector No. B238	Connector Name TEL ADAPTER UNIT	Connector Type TH08FW-NH	HS.	35 37 39 41 36 38 40 42	Terminal Color Signal Name [Specification]	Н	<u> </u>								Connector No BA92	l e	Connector Type GT16C-1S-HU	H3.	Terminal Color Signal Name [Specification]	
V VEHICLE SPEED (8-PULSE)	Н														Connoctor No BA81	l e	Connector Type FAKRA	HS.	Terminal Color Signal Name [Specification]	33 – SATELLITE ANTENNA
BOSE AUDIO WITHOUT NAVIGATION Connector No.   1827	TEL ADAPTER UNIT	TH32FW-NH		2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 33 1 3 5 7 9 11113 15 17 19 21 23 25 27 29 31	Signal Name [Specification]	BATTERY	IGNITION	GND	MICROPHONE SIGNAL	TEL VOICE SIGNAL (+)	TEL VOICE SIGNAL (-)	CONTROL SIGNAL	CONTROL SIGNAL	CONTROL SIGNAL	12/21	TEL ADAPTER UNIT	GT16C-1S-HU	34	Signal Name [Specification]	TEL ANTENNA SHIFI D
BOSE AUDI	Connector Name T	Connector Type	是 H.S.	2 4 6 8	Terminal Color No. of Wire	Ħ	3 W	4 B	7 L	T	OI	20 B	23 B	24 B	J. Wo	e	Connector Type	H.S.	Terminal Color No. of Wire	33 - 34 SHELD

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# [WITHOUT NAVIGATION]

WIRE	WRE NS8  14 15 16 17 18 9 10  14 15 16 17 18	А
D31 WRE TO 29 TH40PW WRe CO 2007 WWe CO 2007	D71 www.nse www.nse www.nse c TKIOMW-NSS 2 3 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	С
Connector No. Connector No. Connector Span History Terminal Col 3 4 L 1 Col 3 4 L 1 Col 4 L 1 Col 6 Col 7 Co	Connector No. Connector Typ  Connector Typ  List  List	D
offication]	off castion 1	Е
FRONT DOOR SPEAKER LH NS0ZFBR-CS  Z 1  Signal Name [Specification]	PEAR DOOR SPEAKER LH NSOZPER-CS  Z 1  Signal Name [Specification]	F
ector No. ector Name ector Type  Color D. of Wee	ector No. ector Name ector Type of Wie	G
Common Term 1 Te	In the second se	Н
Name   WIRE TO WIRE   TH40FW-CS15   TH40FW-CS15   TH40FW-CS15   TH40FW-CS15   TH40FW-CS15   TH5   TH	WRE NS8  14 15 16 17 18 9 10  14 15 16 17 18  Signal Name [Specification]	I
Mire TO Wire	D51 WIRE TO WIRE TKI IOMWIN-NSB 3 4 5	J
Connector No. D1 Connector Name WIRE Connector Type TH40 Connector Type TH40 TH90 Teminal Color No. of Wire Teminal Color No. of Wire The Color Teminal Color	Connector No. D51 Connector Name WIRE TO WIRE Connector Type TKI (MWW-NS8 Connector Type TKI (MWW-NS8 TO THIS TATE TO THE TATE	К
Š T		L
BOSE AUDIO WITHOUT NAVIGATION Connector Name   8482 Connector Name   ANTENNA BASE   Connector Type   GT18C-1PP-HU  Terminal   Color   Signal Name [Specification]   No. of Wire   SATELLITE ANTENNA   SATELLITE ANTENNA	PROWT DOOR SPEAKER RH NSOZEBR-CS  2 1  Signal Name [Specification]	М
Sate	FRONT DOOR	AV
BOSE AUD Connector Name Connector Name Connector Type II.S. H.S. H.S. S. Orffree No. of fifte	Connector No. Connector Name Connector Type  H.S.  H.S.  L. Color  D. Color  Color  L. Color  D.	0
A Property of the Property of		JCNWM1024GB
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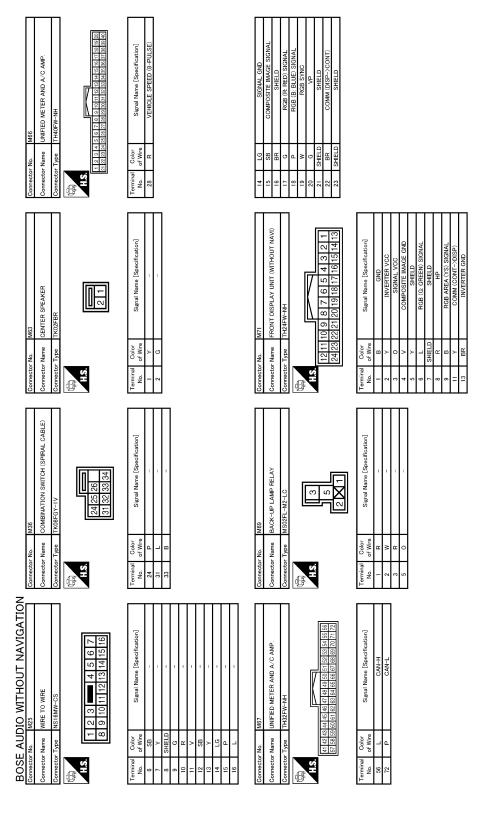


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# [WITHOUT NAVIGATION]

No. M6 Name WIRE TO WRE Type TH80MW-CS16-TM4    1	Cornector No.   M24   Cornector Name   DATA LINK CONNECTOR     DATA LINK CONNECTOR   D	В
Connector No. Connector Name Connector Type Terminal Color No. of Wire 29 29 100 Y	Connector Na Connector Top Connector Top Na Na Na Na Na Na Na Na Na Na Na Na Na	D
12   14   15   15   15   15   15   15   15	verification]	E
	FRONT SQUAWKER LH TKOZFBR  Signal Name [Specification]  -	F
MS   MS   MS   MS   MS   MS   MS   MS	HRONT S	G
Connector Name Connector Type  12  13  14  14  14  15  15	Connector No. Connector Name Connector Type H.S. H.S.  I L  I L  2 Wire	Н
CS (J./B)  CS (J./B)  CS (J./B)  CS (J./C)  CO (J./C)  CS (J./C)		ı
		J
Connector No. M3 Connector Name FUSE BL Connector Type NST2PW HS. 5C4C Terminal Color No. of Wire No. of Wire 12C R	85	К
NOIT		L
BOSE AUDIO WITHOUT NAVIGATION Somector No. MI MI Dennector Type INSOFFW-MZ  ALS.  Signal Name [Specification]  No. of Wire Signal Name [Specification]  SA V  Color  Sa V	WIFE CS16-TM4 CS16-TM6	M
MI FUSE BLOCK (J/B) SA TABOL BANGERY-MZ Signal Name	MWRE TO 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AV
BOSE AUIC Connector Name Connector Name Connector Name Connector Name Name Name Name Name Name Name Name	Connector No.   Connector Name   Connector Type   Conne	0
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		-

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BOSE AL Connector No. Connector Name Connector Type	AUD]	BOSE AUDIO WITHOUT NAVIGATION Connector No. M72 Connector Name MULTFUNCTION SWITCH Connector Type H16FW-NH	Connector No. Connector Name	Connector No. Connector Name Connector Type	MBI AV CONTROL UNIT (WITHOUT NAV!) THIBFW-GS2	Connector No. Connector Name	M82 AV CONTROL UNIT (WITHOUT NAVI) A12PW	AVI)
H.S.	N-	4 6 8 10 12 14 16 3 5 7 9 11 13 15	優 H.S.		123456789	语 H.S.	22 24 30 32 21 23 25 26 27 28 29 31	
Terminal No. No. 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Color of Wire P B B B S S B S B S S B S S B S S B S S B S	Signal Name (Specification)  GND ACC AV COMM (H) AV COMM (L) SW GND DISK EJECT SIGNAL	Terminal No. 6 6 7 7 9 9 9 9 15 15 15 20 20	Color of Wire V V P P V V V V V V V V V V V V V V V	Signal Name [Specification] STRG SW A COC ACC ACC STRG SW GND STRG SW B BATTERY GND	Color   Color	Signal Name (Specification)  SATELLITE SOUND SIGNAL LH (-)  SATELLITE SOUND SIGNAL LH (-)  SATELLITE SOUND SIGNAL HH (-)  SATELLITE SOUND SIGNAL HH (-)  SATELLITE SOUND SIGNAL HH (-)  MODE CHANGE SIGNAL  ROULEST (SAT->CONT)  COMM (SAT->CONT)  COMM (CONT->SAT)	0
Connector No. Connector Type Connector Type H.S. H.S. A74 595	r No. M r Type T 47 46 45 59 58 57	M83  AV CONTROL UNIT (WITHOUT NAVI)  TH24FW-NH  46 45 44 43 42 41 40 39 38 37 36 58 57 56 55 54 53 52 51 50 49 48	47 48 49 50 50 55 57 57 58 58	0 BR Y Y Y Y Y Y Y Y Y Y Y X HIELD SHIELD SHIELD Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	SIGNAL VCC SHELD SHELD SHELD SHELD SHELD SHELD SHELD SHELD INVERTER GND INVERTER GND INVERTER VCC	Connector No. Connector Name Connector Type H.S.	M84 AV CONTROL UNIT (WITHOUT NAV) THIGFW-NH  G7 66 65 64 63 62 61 60 75 74 73 72 71 70 69 68	AVI)
Terminal No. 36 37 38 39 40 40 41 42 43 45 45 45 46 46	Odor of Wire SB SB V V V P P P P P P P P P P P P P P P P	Signal Name [Specification]  COMPOSITE IMAGE SIGNAL  COMPOSITE IMAGE GND  RGB (B. BLUE) SIGNAL  RGB (G. GREDN) SIGNAL  RGB (R. RED) SIGNAL  RGB RR RRD SIGNAL  RGB RRB (YS) SIGNAL  PHO HPOONT  SIGNAL  SIGNAL  RGB ARBA (YS) SIGNAL  PHO HPOONT)				Cedor   Cedo	Signal Name (Specification)  SHIELD CAMERA IMAGE SIGNAL AUX IMAGE SIGNAL CONNECTION RECOGNITION D SHIELD AUX IMAGE GND AUX IMAGE GND	lua III

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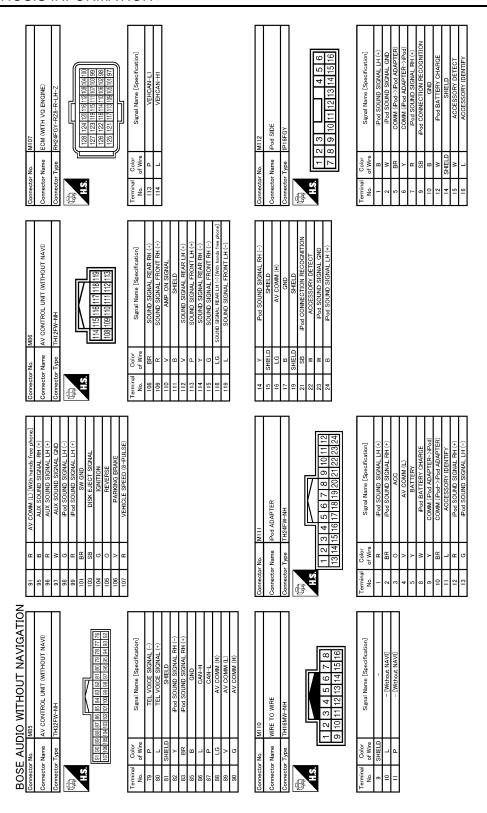
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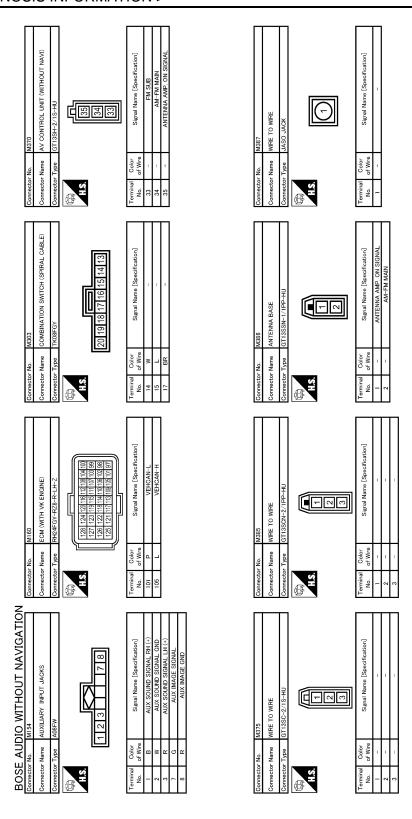


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# [WITHOUT NAVIGATION]

Cornector No.   MI16   Cornector No.   MI16   Cornector No.	43 B - [Without ICG] 44 R - [Mithout ICG] 45 G - [Without ICG] 47 B - [Without ICG] 48 R - [Without ICG] 50 SHELD - [Without ICG]	Miles   Mile	A B C
Connector No.   MITE	Mil 7   Mil 8   Mil	M126 WRE TO WRE	F
Signal Name (Specification)  Signal Name (Specification)  Signal Name (Specification)  CANI-L	Connector No. MI16 Connector Name WIRE TO WIRE Connector Type TK38MM-NS10  1.5 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	M124  WHRETOWIE  WING  W	ı
BOSE AUDIO W Connector Name FRONTS  Connector Type TROFFER  Connector Name BCM (BC  Connector Name BCM	AUDIO W MI14  Type TK02FBF  Color  V V  U C	Connector No. MI122 Connector Name BCM (BO Connector Type TH40FB-10-10-10-10-10-10-10-10-10-10-10-10-10-	AV

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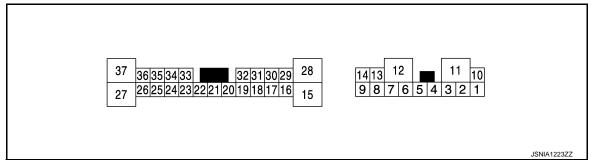
	ation]				А
MRE 41 1 2 1 1 1 1 0 9	Signal Name (Specification)				В
Connector No. R7  Connector Name WIRE TO WIRE  Connector Type TH-187W-14H  M.S. R 7 6 5  16 15 14 13	Oblor SHELD				С
Connector No. Connector Name Connector Type H.S.	Terminal No. 9 9 10 11 1 1 1 1 1				D
3 2 1	oeifeaton)				Е
PRE TO WIRE TO WIRE TO UNITE T	Signal Name [Specification]				F
r No. r Name r Type	al Color SHIELD				G
Connectc Connectc Connectc H.S.	Terminal No. 0 9 9 9 9 10 10 10 10 10 10 10 10 10 10 10 10 10	ПП			Н
i i i	pecification)		pecification]  E SIGNAL  INE GND  NNE VCC		I
M389 WINDOW ANTENNA (SUB) POITB-A	Signal Name (Specification)	RI7 MICROPHONE TROJAPW  1 2 3 4	Signal Name [Specification] MICROPHONE SIGNAL MICROPHONE CND MICROPHONE VCC		J
Connector No. M389 Connector Name WINDO Connector Type POTE H.S.	Color of Wire	Connector No. R17 Connector Name MICROF Connector Type TKG4FW	Color of Wine SHELD		K
0 0 0 2	Terminal No.		7 cm/ini		L
IT NAVIGA	Signul Name (Specification)	8 9 10 11 12 20 21 22 23 24	Signal Name [Specification]		M
M388 WIRE TO WIRE JASO PLUG	Signal Nam	O WIRE W-NH 5 6 7 17 18 19	Signal Nam		AV
BOSE AUDIO WITHOUT NAVIGATION Commetter No. M388 Connector Name WIRE TO WIRE Commetter Type JASO PLUG  M.S. P. J.	No. of Wire	Connector No. R11  Connector Type INF24M  II 2 3 4  II 2 3 4	Terminal Color No. of Wire 8 - 10 B - 10 R		0
m[외] 호 [외] [전종 <b>시</b>	<u>F 11</u>	[정] 정 [정] (년5 🔻	<u>  F                                    </u>	JCNWM1032GB	D
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# BOSE AMP.

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal e color)	Description			Constitute a	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (Y)	10 (G)	Sound signal rear door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 * + 2ms SKIB3609E
2 (SB)	3 (V)	Sound signal rear door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
4 (L)	5 (P)	Sound signal front door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 ** 2ms SKIB3609E
6 (O)	7 (W)	Sound signal front squawk- er LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 *** 2ms SKIB3609E

### **BOSE AMP.**

### < ECU DIAGNOSIS INFORMATION >

# [WITHOUT NAVIGATION]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
8 (LG)	13 (Y)	Sound signal front door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
9 (G)	14 (R)	Sound signal woofer and rear squawker (LH and RH)	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
11 (GR)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
12 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
15 (Y)	28 (G)	Sound signal center speaker	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
17	Ground	Mode change signal	Input	Ignition switch	Driver's Audio Stage ON	0 V
(O)		5 5	· ·	ON	Driver's Audio Stage OFF	8.5 V
18 (P)	32 (L)	Sound signal front LH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 → 2ms SKIB3609E
19 (R)	20 (G)	Sound signal front RH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E

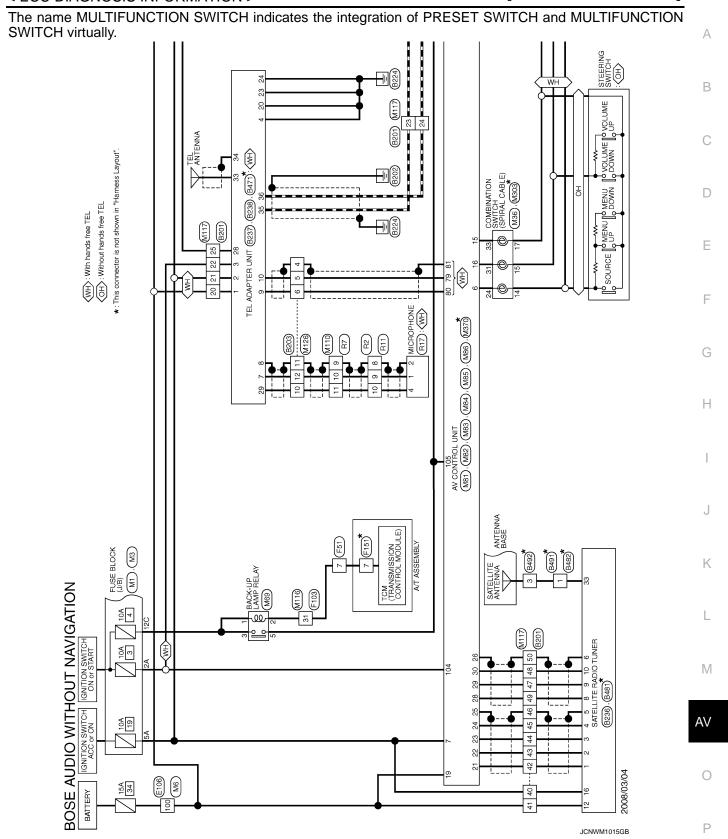
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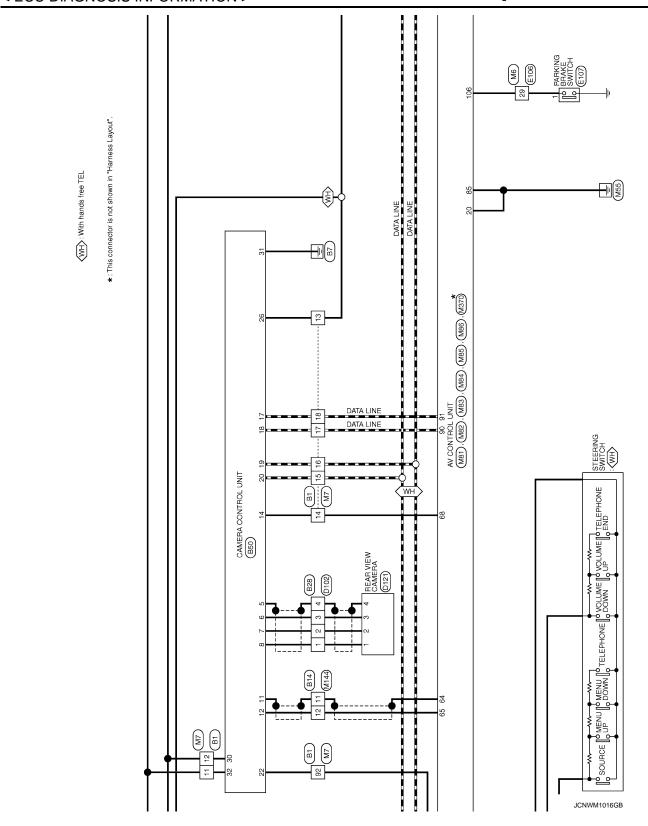
	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
21 (V)	22 (SB)	Sound signal rear LH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
23 (BR)	33 (Y)	Sound signal rear RH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
25 (L)	Ground	Woofer amp. ON signal	Output	Ignition switch ACC	_	12.0 V
37 (V)	27 (LG)	Sound signal front squawk- er RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
31 (GR)	Ground	Amp. ON signal	Input	Ignition switch ACC	_	12.0 V

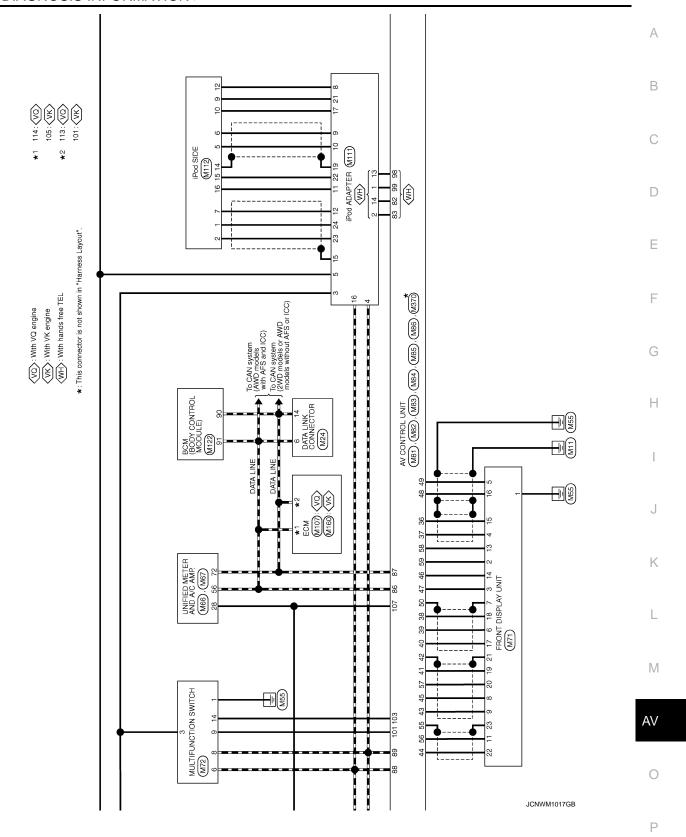
Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION -

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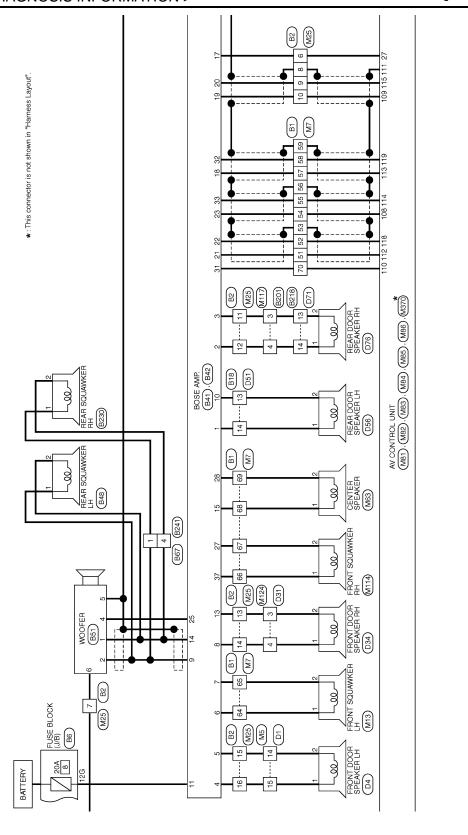
NOTE:







JCNWM1018GB



\*: This connector is not shown in "Harness Layout".

C D E F G H

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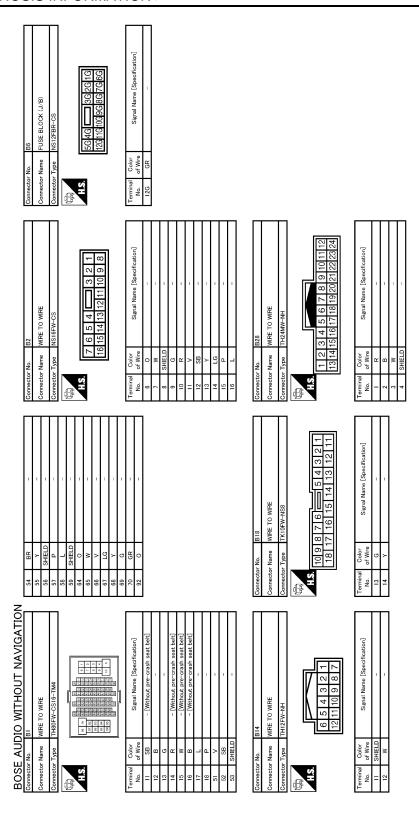
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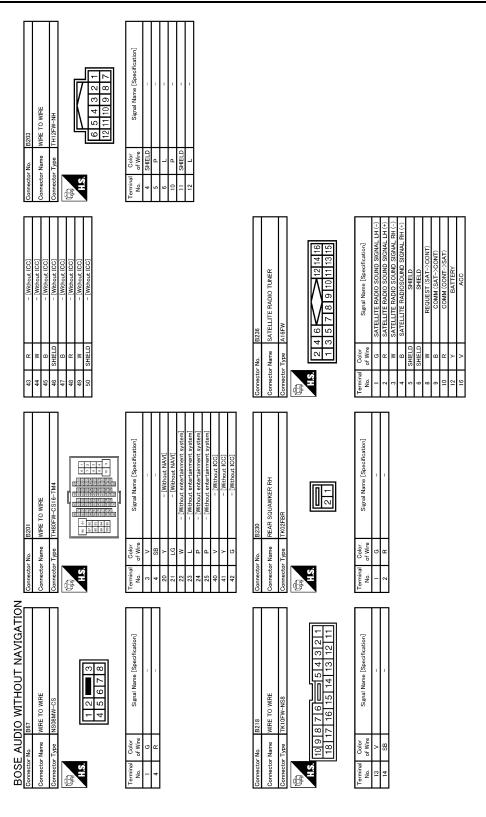
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JCNWM1020GB

12         B         SQUBD SIGNAL PROVIT DOOR SEEWER REF.           13         Y         SQUBD SIGNAL WOOFER AND FEAR SQUAWKER (·)           14         R         SQUBD SIGNAL WOOFER AND FEAR SQUAWKER (·)		Connector No. BS1 Connector Name WOOFER Connector Type RS09FGY	No. of Wire   Signal Name [Specification]   No. of Wire   Signal Name [Specification]		A B C
Connector No. B42 Connector Name BOSE AMP. Connector Type SGA1/PBR-SJA2  WAS 14 13 12 11 10 9 8 7 6 5 4 3 2 1	Color   Signal Name [Specification]   Color   Signal Name [Specification]   1   Y   SOUND SIGNAL REAR DOOR ILH (+)   2   SB   SOUND SIGNAL REAR DOOR RH (+)   3   V   SOUND SIGNAL REAR DOOR RH (+)   5   P   SOUND SIGNAL REAR DOOR RH (+)   5   P   SOUND SIGNAL REAR DOOR SEAWER ILH (-)   6   D   SOUND SIGNAL REONT SOUNAWER ILH (+)   7   W   SOUND SIGNAL REONT SOUNAWER ILH (+)   6   D   SOUND SIGNAL REONT SOUNAWER ILH (+)   9   G   SOUND SIGNAL REONT SOUNAWER (+)   10   G   SOUND SIGNAL REAR DOOR ILH (-)   11   GR   BATTERY	22 O REVERSE 26 G VEHICLE SPEED (8-PULSE) 30 B ACC 31 B GND 32 SB BATTERY			E F G
31   GR   SOUND SIGNAL     32   L   SOUND SIGNAL FRONT LH (-)     33   Y   SOUND SIGNAL FRONT SOUAWKER RH (-)     37   V   SOUND SIGNAL FRONT SOUAWKER RH (+)		Connector No. 850 Connector Name CAMERA CONTROL UNIT Connector Type TH32PW-NH  H.S.	Terminal   Color   Signal Name (Specification)   Color   ShIELD   SHIELD		J K
BOSE AUDIO WITHOUT NAVIGATION Connector Name B0SE AMP Connector Type SCA19FBR-SGA4  (A) 37 36 35 34 33	Terminal   Color   Signal Mame [Specification]	Connector No. B48 Connector Name REAR SOUAWKER LH Connector Type TK02FBR	Terminal Golor Signal Name [Specification] No. of Wire 1 G C - 2 R	JCNWM1021GB	M AV



JCNWM1022GB

B241	Color Signal Name [Specification] of Wire G R	December   December	Color Signal Name [Specification]		A B
Connector No. Connector Name Connector Type	Terminal No.	Connector No. Connector Name Connector Type	Terminal No.		D
	MM (4-)		pecification]		Е
NH 37 39 41 22 38 40 42	Signal Name [Specification] AV COMM (H) AV COMM (L)	S-HU 2	Signal Name [Specification]		F
В 238 ТЕL ADAPTI ТНОВРУ-NИ 35 3		B482 NMRE TO WIRE GT16C-1S-HU			G
Connector No. 6238  Connector Name TEL ADAPTER UNIT  Connector Type 1TH08FW-NH  M.S. 25 37 39 4  36 37 39 4	Color of Wire 35 L L 36 P P	Connector No. Connector Name Connector Type	Terminal Color No. of Wire 1		
$\prod$					Н
ONE VCC		류	Specification] ANTENNA		I
VEHIOLE SPEED (6-PULSE) MICROPHONE VGC		B481 SATELLITE RADIO TUNER FAKRA	Signal Name [Specification] SATELLITE ANTENNA		J
28 P		Connector No. B Connector Name S Connector Type F H.S.	Terminal Color No. of Wire 33 -		K
ATION SEE					L
BOSE AUDIO WITHOUT NAVIGATION  Connector No. 6237  Connector Name TEL ADAPTER UNIT  Connector Type TH3ZPIV-NH  LAS.  [2 4 6 8 1017 14 16 18 20 22 24 28 28 30 32 24 28 28 30 32 24 28 28 30 32 24 28 28 30 32 32 32 32 32 32 32 32 32 32 32 32 32	Signal Name [Specification] BATTERY ACC IGNITION GNU GNU MICROPHONE SIGNAL MICROPHONE SIGNAL TEL VOIGE SIGNAL (-) CONTROL SIGNAL CONTROL SIGNAL CONTROL SIGNAL	HHU HHU SISSISSISSISSISSISSISSISSISSISSISSISSIS	Signal Name [Specification] TEL ANTENNA SHIELD	_	M
C AUDIO WIT or No. 8237 or Name TELADAPTE or Type IH42FW-NH		1EL ADAPTER UNIT GT16C-1S-HU			AV
BOSE AUI Connector No. Connector Name Connector Type 12 4 6 13 5	Color   Color   Color     No.   Of Wire     1	Connector No. Connector Name Connector Type	Color   Colo		0
Berlin Gomman	-  -	Conn	<u> -</u>	JCNWM1023GB	
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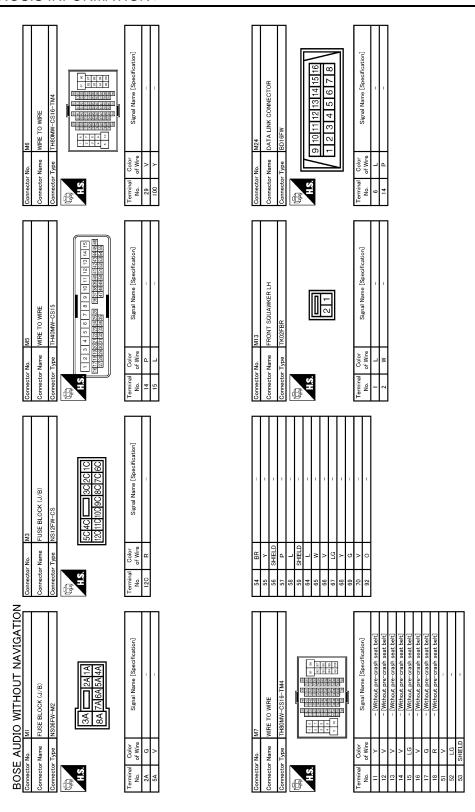
Revision: 2009 March AV-151 2009 FX35/FX50

BOSE AUDIO WITHOUT NAVIGATION	_						
Connector No. B492	Connector No.	D1	Connector No.	D4	Connector No.	D31	
Connector Name ANTENNA BASE	Connector Name	WIRE TO WIRE	Connector Name	FRONT DOOR SPEAKER LH	Connector Name	WIRE TO WIRE	
Connector Type GT16C-1PP-HU	Connector Type	TH40FW-CS15	Connector Type	NS02FBR-CS	Connector Type	TH40FW-CS15	
H.S.	15 15 11 13 13 13 13 13 13 13 13 13 13 13 13		H.S.	<u>                                      </u>	H.S. 115 174 175 175 175 175 175 175 175 175 175 175	15   15   15   16   18   17   18   18   18   18   18   18	
Terminal   Golor   Signal Name [Specification]   No.   of Wire   SATELLITE ANTENNA   3   SATELLITE ANTENNA	Terminal Golor No. of Wire 14 P 15 L	Signal Name [Specification]	Terminal Color No. of Wire 1 1 L 2 P	Signal Name [Specification]	Terminal Color No. of Wire 3 P 4 L	Signal Name (Specification)	
Connector No. D34	Connector No.	D51	Connector No.	D56	Connector No.	D71	
Connector Name FRONT DOOR SPEAKER RH	Connector Name	WIRE TO WIRE		REAR DOOR SPEAKER LH	Connector Name	WIRE TO WIRE	
Connector type Insuzerences  ILS.	H.S.	<b>⊣</b> 11≐1∓	H.S.	Makerak Co	H.S. 12	3 4 5 6 7 8 9 10 12 13 14 15 16 17 18	
Terminal Color Signal Name [Specification] No of Wire 2 P P	Terminal Golor No. of Wire 13 V 14 SB	Signal	Terminal Color No. of Wire 1 SB 2 V	Signal Name [Specification]	Terminal Golor No. of Wire 13 V 14 SB	Signal Name [Specification]	

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off centron)	TROL MODULE)  fineation]  RLY	А
TH80PW-CSIG-TM4  TH80PW-CSIG-TM4  Signal Name [Specification]	FF151 TOM (TRANSMISSION CONTROL MODULE) SPIDFG  (1 2 3 4 5 ) Signal Name [Speeifcation] REV LAMP RLY	В
Connector No. Connector Name Connector Type H.S. H.S. 100 Y	Connector No. Connector Name Connector Type H.S. H.S. Terminal Color No. of Wire 7 L	D
Specification) IER Supply A GND LGE SIGNAL. LD		Е
THOMWINH THOMWINH Signal Name [Specification] CAMERA DOWER SUPPLY CAMERA RAID CAMERA RAID CAMERA RAID SHELD	TO WIRE W-NSIO Signal Name Signal Name	F
ector No.  ector Type  inal Codor  Of Wire L  SHIELD	ector No. FI ector Name W  Establishmen  Establishmen  Intel Color  of Wire  R  R  R  R  R  R  R  R  R  R  R  R  R	G
Train 1	Tem Coommun S	Н
WIPE NH	DGV  DGV  4 3 2 1  9 8 7 6  Signal Name (Specification)	I
0   1   1   1   1   1   1   1   1   1		J
Connector No.   Diff.	Connector No. F51 Connector Name A/ Connector Type RK  HS.  Terminal Color No. of Wire  7 R	К
Š T	П П	L
BOSE AUDIO WITHOUT NAVIGATION Commetter No.  Terminal Color No. of Wire No. of Wire Signal Name [Specification]  Terminal Color Signal Name [Specification] Signal Name [Specification]	BRAKE SWITCH	M
Sign	E107 PARKING BRAKE SWITCH TB01FW  Sigrai Name (Spe	AV
BOSE AUD. Commetter Name Connector Type H.S. H.S. 1 SB 1 SB 2 V	Connector No. E Connector Type 1 Connector Type 1 Connector Type 1 Connector Type 1 LS.	0
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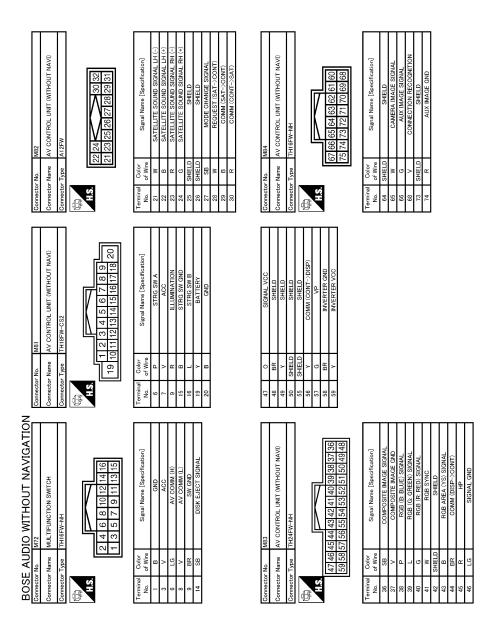
Revision: 2009 March AV-153 2009 FX35/FX50



JCNWM1026GB

M66 TH40FW-NH TH40FW-NH TH60FW-NH TH60FW-NH TH60FW-NH TH60FW-NH TH60FW-NH	Signal Name [Specification] VEHICLE SPEED (8-PULSE)	SIGNAL GND COMPOSITE IMAGE SIGNAL SHELD RGB (R. RED) SIGNAL RGB SYNC VP SHELD COMM (DISP->CONT) SHELD			АВ
Corrector No. M66 Corrector Name UNIFED METE Corrector Type TH40FW-NH MS H.S.	Terminal   Color   Sigra	14   LG   COMF   15   SB   COMF   17   G   RG   RG   RG   RG   RG   RG   RG			C D
M63 CENTER SPEAKER TK02/FBR	Signal Name [Specification]	M71 TH24PW-NH  10 9 8 7 6 5 4 3 2 1	Signal Name [Specification]  CMD INVERTER VOC SIGNAL VOC SIGNAL VOC COMPOSITE IMAGE GND SHELD SHELD SHELD HP RGB AREN (YS) SIGNAL HP RGB AREA (YS) SIGNAL COMM (CONT'-)DISP) INVERTER GND		E
Connector No. M63 Connector Type TK02FBR	Terminal Color No. of Wire 1 Y 2 G	Connector No. M71 Connector Name FRONT DISP Connector Type 11124PW-NH H.S. 12 111 10 9 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Terminal Color   Nor   Nor     1		G H
M36 COMBINATION SWITCH (SPIRAL CABLE) TROBEGY-1V  24 25 26 31 32 33 34	Signal Name [Specification]	MSGPL-MP RELAY MSGPL-M2-LC  MSCPL-M2-LC  1	Signal Name [Specification]		l J
Connector No. Connector Name Connector Type H.S.	Terminal   Color	Connector No. M69 Connector Name BACK-UP LAMF Connector Type MS02FL-W2-LC  H.S.	Terminal Color No. of Wire 1		K
BOSE AUDIO WITHOUT NAVIGATION	Signal Name [Specification]	M67  TH32 PN-10H  TH43 PN-10H  141 451 461 71 82 93 17 17 17 17 17 17 17 17 17 17 17 17 17	Signal Name [Specification] CAN+H CAN+L		M
BOSE AUDIO WITH	Terminal Color No. of Wire No. of Wire 1 State No. of Wire 1 State No. of Wire 1 State No. of Miles No. of Mi	Connector No. M67  Connector Name UniffeED MEI  Connector Type 114/32PW-NH  H.S. 141/32 81 81 81 81 81 81 81 81 81 81 81 81 81	Terminal Color Signal Color Sig		AV
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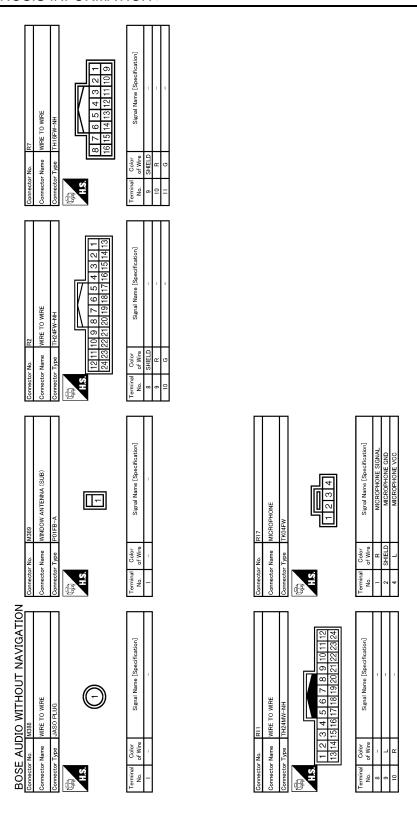
JCNWM1028GB

Connector No.   MI07   Connector Name   ECM (WITH VO ENGINE)	tor No. M112  tor Type   P16 S S D E   P6 D	12 W FOOD BATTERY CHARGE 14 SHELD 15 W ACCESSORY DENTIFY 16 L ACCESSORY IDENTIFY  17 ACCESSORY IDENTIFY  18 C ACCESSORY IDENTIFY  19 C ACCESSORY IDENTIFY  19 C ACCESSORY IDENTIFY  10 C ACCESSORY IDENTIFY  11 ACCESSORY IDENTIFY  12 C ACCESSORY IDENTIFY  13 C ACCESSORY IDENTIFY  14 SHELD 15 C ACCESSORY IDENTIFY  16 C ACCESSORY IDENTIFY  17 C ACCESSORY IDENTIFY  18 C ACCESSORY IDENTIFY  19 C ACCESSORY IDENTIFY  10 C ACCESSORY IDENTIFY  11 ACCESSORY IDENTIFY  12 C ACCESSORY IDENTIFY  13 C ACCESSORY IDENTIFY  14 C ACCESSORY IDENTIFY  15 C ACCESSORY IDENTIFY  16 C ACCESSORY IDENTIFY  17 C ACCESSORY IDENTIFY  18 C ACCESSORY IDENTIFY  19 C ACCESSORY IDENTIFY  10 C ACCESSORY IDENTIFY  10 C ACCESSORY IDENTIFY  11 C ACCESSORY IDENTIFY  12 C ACCESSORY IDENTIFY  13 C ACCESSORY IDENTIFY  14 C ACCESSORY IDENTIFY  15 C ACCESSORY IDENTIFY  16 C ACCESSORY IDENTIFY  17 C ACCESSORY IDENTIFY  18 C ACCESS
Connector No.   M86	14   Y   Pod SOUND SIGNAL PH (-)     15   SHIELD	E F G
91	tor No. MIII.  ctor Name Pod AD  tor Type TH24PAD  112 3 4 113 14 15 16  NWre R R R R R R R R W V V V W	9 Y COMM (Pack-Nipod) 10 BR COMM (Pack-Nipod) 11 L ACCESSORY (DENTIFY) 12 R Pod SOUND SIGNAL I'H (+) 13 G Pod SOUND SIGNAL LIH (-)
Connector Name   AV CONTROL UNIT (WITHOUT NAVIGATION Connector Name   AV CONTROL UNIT (WITHOUT NAVI)	Connector No.   M110	AV O
		Р

- [Without ICC]	- [Without IGG]				M144 WHE TO WHE THI ZAW-NH  THI Z 3 4 5 6  T 8 9 10 11 12	Signal Name [Specification]
43 B	₩	苏	<u> </u>		Connector No. Connector Name Connector Type	Terminal   Color   No.   0f Wire   11   SHIELD   12   W
Connector No. M117	e e	Connector Type TH80MW-CS16-TM4	H.S.	Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   Signal Name [Specification]   Signal Name [Specification]   Signal Name   Sig	Connector No. M126 Connector Name WIRE TO WIRE Connector Type TH12MW-NH  H.S. 1 2 3 4 5 6 7 8 9 10 11 12	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   Signal Name [Specification]
Connector No. M116	e e	Connector Type TK36MW-NS10	HS 1 S 1 S 1 IN THE RESERVENCE BENEFICIAL STREET OF THE RESERVENCE STREET	Terminal   Codor   Signal Name [Specification]   Name   Specification   Name   Name	Connector No.   M124	Terminal   Color   Signal Name [Specification]   No of Wire   Specification]   3   Y   -
BOSE AUDIO WITHOUT NAVIGATION Connector No.   Mi14	Je J	Connector Type TK02FBR	H.S.	Terminal Color   No. of Wire   Signal Name [Specification]	Connector No. M122 Connector Type TH40FB-NH  M.	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   90   P   CAN-H   S1   L   CAN-H   CAN-H

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M370 GT13SH-2/1S-HU GT13SH-2/1S-HU  GT13SH-2/1S-HU  Sigral Name (Specification) FM SUB  FM SUB  AM-FM MAIN  ANTENNA AMP. ON SIGNAL	OK COM Community (Community Community Communit	АВ
Cornector No.   M370   Cornector Name   Av CONTROL UNI	Connector No. M387 Connector Name WIRE TO WIRE Connector Type JASO JACK  This Color Color Signs No. of Wire Terminal Color Signs	C
M303     TKGBFGY     TKGBFGY	Ne Acse Net 7 ipp-HU Signal Name [Specification] ANTEWA ARP ON SIGNAL AN-FM MAIN	E
Manual   M	Connector No. M386 Connector Name ANTENNA BASE Connector Type GT135SN-1/IPP Connector Type GT135SN-1/IP	G
(WITH VK ENGINE) FGY-R28-R-LH-Z  124 128 18 114 108 104 108 125 119 114 114 100 109 98 125 118 114 114 100 109 98 125 118 114 114 100 109 98 125 118 114 114 100 109 98 125 118 114 114 100 109 98 125 118 114 114 100 109 98 125 118 114 114 100 109 98 125 118 114 114 114 114 114 114 114 114 114	WIRE 1-2/IPP-HU 2 3 Signal Name [Specification]	I
Connector No.   M160	Connector No. M385 Connector Name WIRE TO WIRE Connector Type GT13SGN-2/11  Terminal Color Signa 1 2 - 3 - 3 - 1	J K
ARY INPUT JACKS  Sigrul Name [Specification]  AUX SOUND SIGNAL GND  AUX MAGE SIGNAL  AUX MAGE SIGNAL  AUX MAGE SIGNAL	WIRE 2/15-HU Signal Name [Specification]	L M
Commetter No.   MI154	M375   M375   M375	AV
而 <u>[8] 8, [8] [6</u>	[g] g [g] [春 <b>】</b>	JCNWM1031GB



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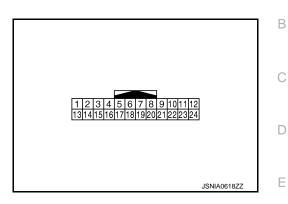
### [WITHOUT NAVIGATION]

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## **IPOD ADAPTER**

Reference Value

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

Terminal (Wire color)		Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (R)	13 (G)	iPod sound signal LH	Output	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 *** 2ms SKIB3609E
2 (BR)	14 (Y)	iPod sound signal RH	Output	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
3 (O)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
4 (V)	_	AV communication signal (L)	Input/ Output	_	_	_
5 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
8 (W)	Ground	iPod battery charge	Output	Ignition switch ON	Connected to iPod <sup>®</sup>	12.0 V

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## [WITHOUT NAVIGATION]

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
9 (Y)	Ground	Communication signal (iPod adapter→iPod <sup>®</sup> )	Output	Ignition switch ON	The wave pattern is displayed just after iPod connection.	JPNIA0462GB  NOTE:  After the wave pattern display, the value continues Approx 3.3 V
10 (BR)	Ground	Communication signal (iPod <sup>®</sup> →iPod adapter)	Input	Ignition switch ON	Connected to iPod <sup>®</sup>	(V) 3 2 1 0 ++2ms JPNIA0462GB
11 (L)	Ground	ACCESSORY-IDENTIFY	_	Ignition switch ON	Connected to iPod <sup>®</sup>	0 V
12 (R)	23 (W)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 → +2ms SKIB3609E
15	_	Shield			_	_
16 (LG)	_	AV communication signal (H)	Input/ Output	_	_	_
17 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
19		Shield		_	_	_
21	Ground	iPod connection recogni-	Input	Ignition switch	Not connected to iPod®	4.0 V
(SB)	Cround	tion signal	прис	ON	Connected to iPod®	0 V
22 (W)	Ground	ACCESSORY-DETECT	_	Ignition switch ON	Connected to iPod®	0 V
24 (B)	23 (W)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E

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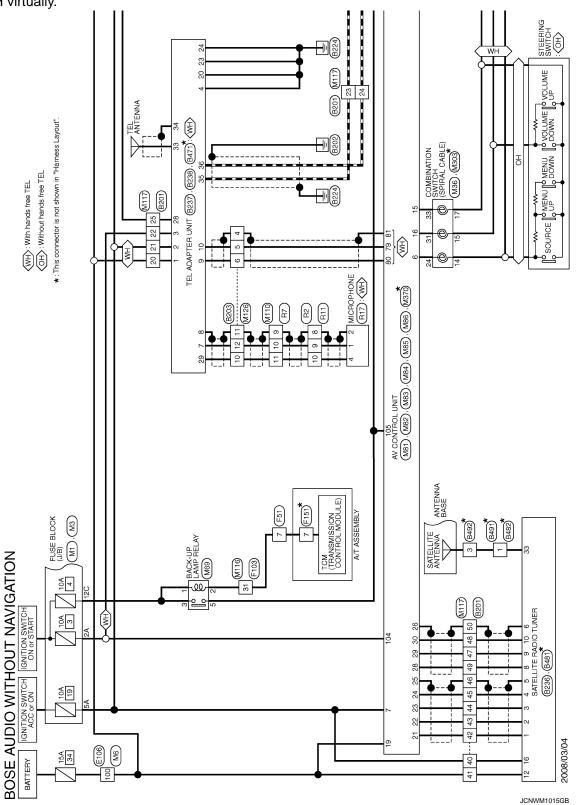
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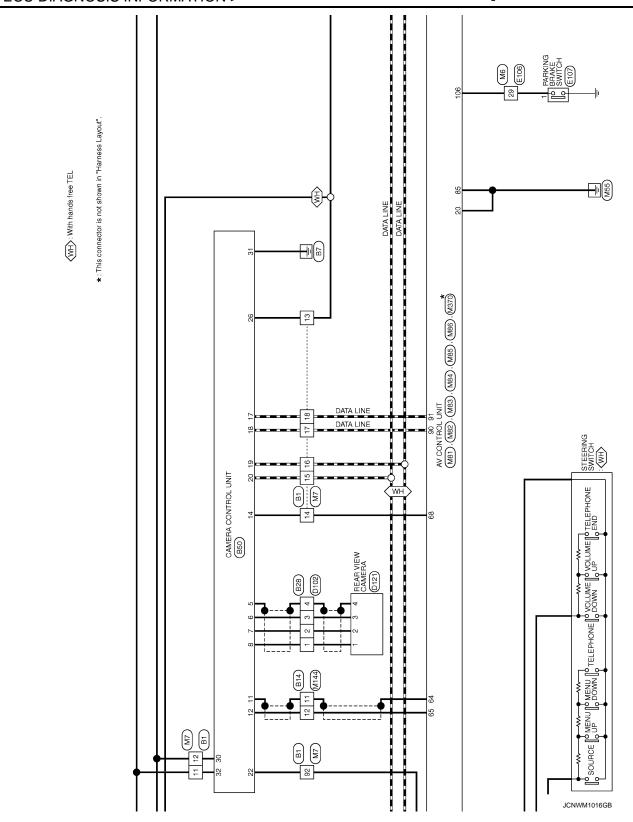
# Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION -

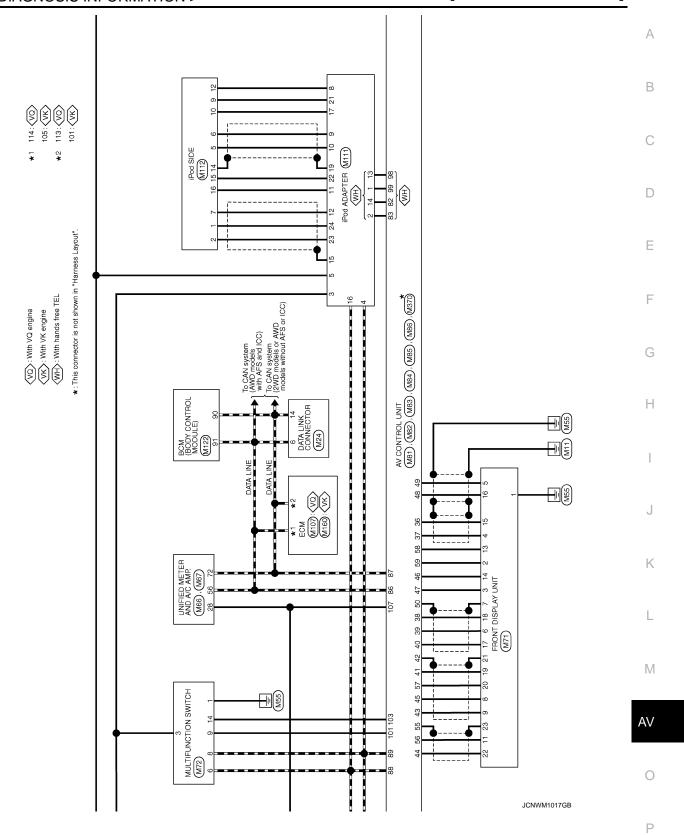
#### E AUDIO WITHOUT NAVIGATION - INFOID:000000003939966

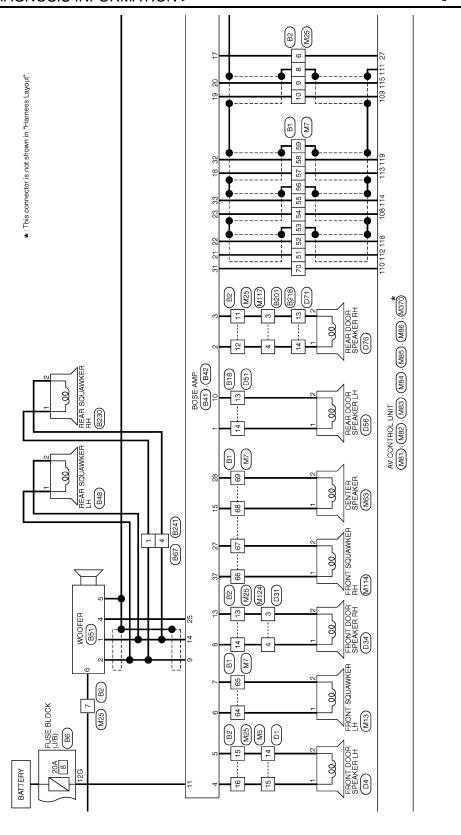
#### NOTE:

The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.









JCNWM1018GB

\*: This connector is not shown in "Harness Layout".

74 66 73 35 34 AV CONTROL UNIT AV CONTROL UNIT (M8E) ( AUXILIARY INPUT JACKS (M154) BOSE AMP. (B41), (B42) 

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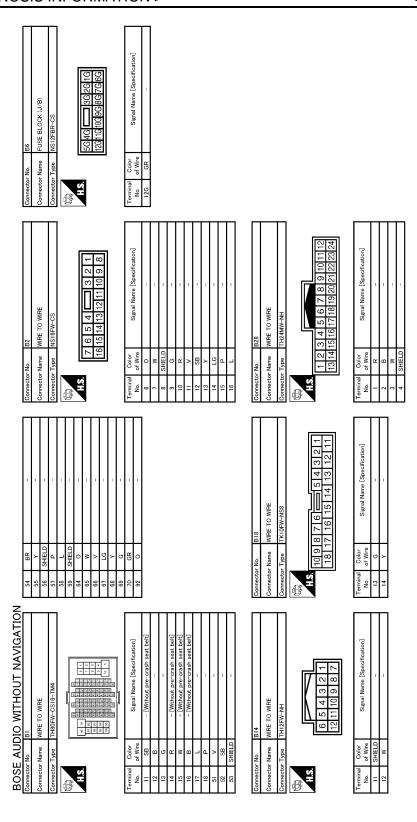
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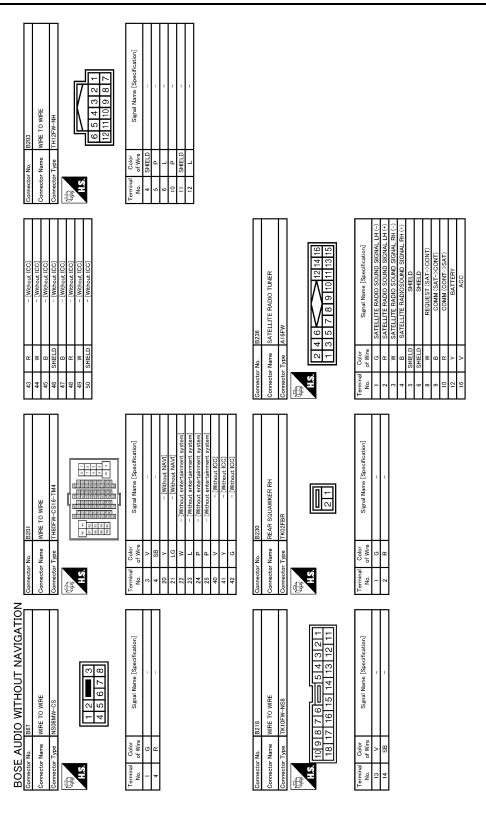
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JCNWM1020GB

12 B GND 13 Y SOUND SIGNAL PRONT DOOR SPEAKER PH (-) 14 R SOUND SIGNAL WOOFER AND REAR SOLMANKER (-)		Connector No. 851 Connector Name WOOFER Connector Type RS08FGY H.S.	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Color		A B C
Connector No. 842 Connector Name BOSE AMP. Connector Type SGA12FBR-SJA2  H.S. 1413 12 11 10 10 10 10 10 10 10 10 10 10 10 10	Terminal   Color   Signal Name [Specification]	22 O REVERSE 26 G VEHICLE SPEED (8-PULSE) 30 B AOC 31 B GND 32 SB BATTERY			E F G
31   GR		Connector No. 850  Connector Name CAMERA CONTROL UNIT  Connector Type TH32PW-NH  H.S.	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Signal Name [Specification]   Signal Name [StateLD   Signal Name [State		J K
BOSE AUDIO WITHOUT NAVIGATION  Connector No. 841  Connector Name BOSE AMP.  Connector Type SCA19FBR-SGA4  MA. 373635634332[21201918171615]	Terminal   Color   Signal Name [Specification]	Connector No. 648 Connector Name REAR SOLAWKER LH Connector Type TK02FBR	Terminal Color No. of Wire 1 Georgian Name [Specification] 2 R	JCNWM1021GB	M AV

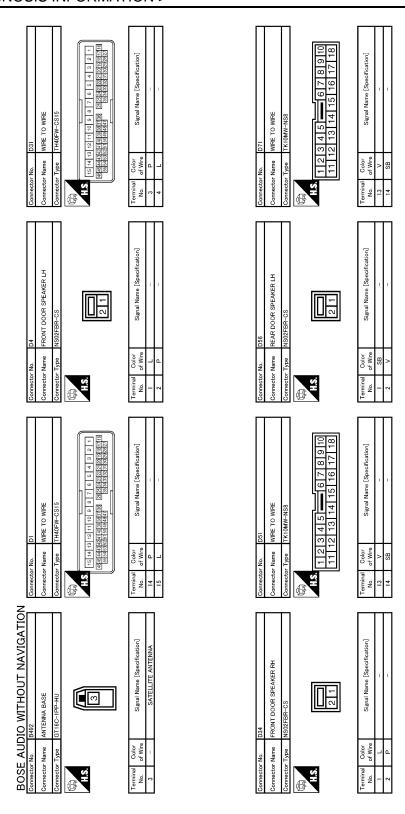
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JCNWM1022GB

CS CS 7 6 5 4	Signal Name [Specification]	WIRE PP HU	Signal Name [Specification]		A B
Connector No. B241 Connector Name WIRE TO WIRE Connector Type NSOBFW-CS H.S.	Terminal Color No. of Wire 1 G G 4	Connector No. B491 Connector Name WIRE TO WIRE Connector Type GT16O-IPP-HU	Terminal Color No. of Wire 1 -		C
	offication] (L)		offication]		Е
11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name [Specification] AV COMM (L) AV COMM (L)	B482 WIRE TO WIRE GTIGO-1S-HU	Signal Name [Specification]		F
Connector No. B238 Connector Name TEL A Connector Type TH088	Color   Color   No.   Of Wire   No.   Of Wire   No.   Of Wire   35   L   36   No.   Of Wire   No.   Of Wire	Connector No. B482 Connector Name WIRE Connector Type GT16 H.S.	Terminal Color No. of Wire 1		G
	F	8 8 8 4			Н
VEHICLE SPEED (8-PULSE) MICROPHONE VCC		BABI SATELLTE RADIO TUNER FAKRA	Signal Name [Specification] SATELLITE ANTENNA		J
28 P P P P P P P P P P P P P P P P P P P		Connector No. 6481 Connector Name SARTELL Connector Type FAKRA	Terminal Color No. of Wire 33 –		К
					L
Connector No.   R237   Connector Name   TEL ADAPTER UNIT   Connector Type   TH3ZFW-NH       TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH       TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH       TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH       TH3ZFW-NH     TH3ZFW-NH     TH3ZFW-NH       TH3ZFW-NH       TH3ZFW-NH       TH3ZFW-NH       TH3ZFW-NH       TH3ZFW-NH	Signal Name (Specification)  BATTERY  ACC  IGNITION  GND  MICROPHONE SIGNAL  TEL VOICE SIGNAL  CONTROL SIGNAL  CONTROL SIGNAL  CONTROL SIGNAL	ER UNITT HU 33	Signal Name (Specification) TEL ANTENNA SHIELD		M
110 WITHOU B237 TEL ADAPTER UNIT THRZEW-NH	ΰ	B471 TEL ADAPTER UNIT GT16C-1S-HU  334			AV
BOSE AUDIO WI Connector No. B237 Connector Name IEL.ADA Connector Type IHSZFV-1 MS. 246 8 100 121 [2 4 6 8 100 121 [1 3 5 7 9 111]	Terminal Color No. 1 V Y 2 2 LG 3 W W B 4 B B 2 2 HELD 10 P P 20 B B 24 B 24 B B 24 B B 24 B B B 24 B B B B	Connector No. Connector Name Connector Type H.S.	Color   No. of Wire   S3		0
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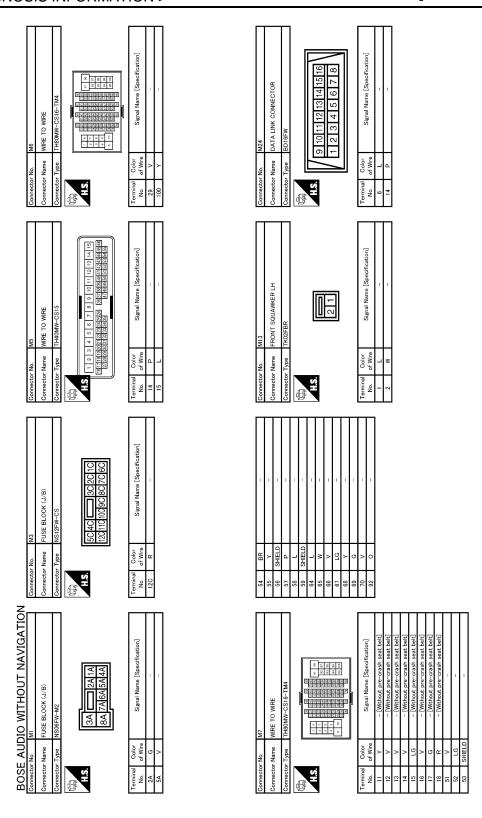
Revision: 2009 March AV-171 2009 FX35/FX50



JCNWM1024GB

	Signal Name [Specification]	F151 TOM (TRANSMISSION CONTROL MODULE) SPIOFG  (1 2 3 4 5 6 7 8 9 10)	Signal Name [Specification] REV LAMP RLY		АВ
No.   E106   176	Ferminal Color Signal No.   Color Signal   Color   C	Connector No. F151 Connector Name TOM (TRANSMIS Connector Type SP10FG  H.S.  H.S.  (6 7 8 3	Terminal Color Signal No. of Wire 7 L		C
EFA 4	Signal Name [Specification]  CAMERA POWER SUPPLY  CAMERA INACE  CAMERA INACE  SHELD		Signal Name [Specification]		E
-No. D121 -Name REAR VIII -Type THOMMW	Color   Signal   Color   Signal   Color   Co	Connector No. F103 Connector Type TK38FW-NS10  Connector Type TK38FW-NS10  F103 FW-NS10  F104 FW-NS10  F105 FW-NS10  F105 FW-NS10  FW-NS10	Color of Wire		G
Som Som		Conn	7 R N N N N N N N N N N N N N N N N N N		Н
6 5 4 3 2 1 18 17 16 15 14 13	Signal Name [Specification]	8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	Signal Name [Specification]		I
22 de To	Signal	ASSEM 0FG-DG 09 9 4 10 9 9	Signal		J
No. Name 12 11 24 23	Fermion   Color   Fermion   Color   Fermion   Color   Color	Connector No. F51 Connector Name A/1 Connector Type RKI	Terminal Color No. of Wire 7		K
NOIT					L
BOSE AUDIO WITHOUT NAVIGATION Connector No. D76 Connector Name REAR DOOR SPEAKER RH Connector Type INSIGERR-CS  RM  H.S.	Signal Name [Specification]	EIO7 PARKING BRAKE SWITCH TBOIFW	Signal Name [Specification]		M
DIO WITH	Ш	PARKING E TB01FW	Ш		AV
BOSE AUI Connector Name Connector Type	No. of Wire   No. of Wire   2	Connector No. Connector Name Connector Type	Terminal Color No. of Wire 1 LG	_	0
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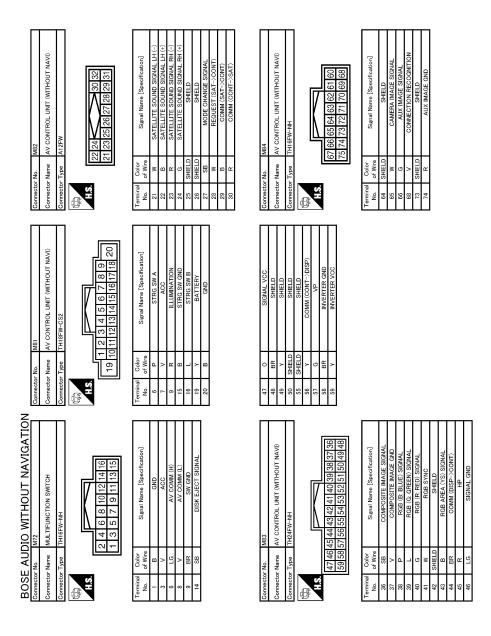
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JCNWM1026GB

M66  UNIFIED METER AND A/O AMP.  TH40FW-NH  E 7 8 9 10 11 12 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Signal Name [Specification] VEHICLE SPRED (9-PULSE)	SIGNAL GND COMPOSITE MAGE SIGNAL RGB (R RED) SIGNAL RGB (B. BLUE) SIGNAL RGB SNC VP VP SHELD COMM (DISP->CONT) SHIELD			АВ
Connector No. M66 Connector Name UNIFED ME Connector Type TH40FW-NH H.S. H.S. E.E. 2 4 5 6 7 8 9 E.E. 22 1 8 6 7 8 9	Terminal Color   Signature	14 LG 15 SB CO 16 BR 17 G G 18 P P 19 W 20 G 21 SHELD 22 SHELD 23 SHELD			C D
PEAKER 2 11	Signal Name [Specification]	TH24FW-NH  TH24FW-NH  TH2 10 8 7 6 5 4 3 2 1  TH2 12 12 19 18 17 16 15 14 13	Signal Name (Specification)  CADD  INVERTER VCC SIGNAL VCC COMPOSITE INAGE GND SHELD  ROB (G. GREEN) SIGNAL  SHELD  HP  ROB AREA (YS) SIGNAL  COMM. (CONT-DISS)  INVERTER GND		E F
Connector No. M63 Connector Name CENTER SPEAKER Connector Type TK02FBR H.S.	Terminal Color Signature of Yellor Color Yellor Color	Connector No. M71 Connector Name FRONT DISP Connector Type THZ4FW-HH  M.S. 12 [11 10 9 8 7] [24 23 22 21 20 1]	Terminal Color No. 0 Whre No. 0 W		G
M36 COMBINATION SWITCH (SPIRAL CABLE) TROBEGY-1V  24 25 26 31 32 33 34	Signal Name [Specification]	u LAMP RELAY M2-LC 3 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Signal Name [Specification]		I
Connector No. M36 Connector Name COMBINATION Connector Type TK08FGV-1V MS. 124 25	Terminal Color Sign 24 P P P 33 B B	Connector No. M69 Connector Name BACK-UP LAMP RELAY Connector Type MS02FL-M2-LC	Terminal Color No. of Wire of Wire 2 W W Sign State		J K
OUT NAVIGATION  1 4 5 6 7 2 13 14 15 16	Signal Name (Specification)	M67  THAZEVIV-NH  THAZEVIV-NH  44 45 46 17 46 49 50 51 58 56 50 51 58 50 51 58 50 51 58 50 51 58 50 50 51 58 50 50 51 58 50 50 51 58 50 50 51 58 50 50 51 58 50 50 51 58 50 50 51 58 50 50 51 58 50 50 51 58 50 50 51 58 50 50 51 58 50 51 50 50 51	Signal Name (Specification) CAN-H CAN-L		L M
BOSE AUDIO WITHOUT NAVIGATIO	Color   Color   Color	Connector No. M67  Connector Name UNIFED METER  Connector Type IH42FW-NH  LA. L.	Color   Color   No.   Of Wire   Signal   Signal   Terminal   Of Wire   Terminal   Terminal   Of Wire   Terminal   Of Wire   Terminal   Of Wire		AV
		<u> </u> 판		JCNWM1027GB	Р

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JCNWM1028GB

Connector No.   MIO7	Connector No.   M112	R B B B B B B B B B B B B B B B B B B B	
A	14 Y   Pod SOUND SIGNAL RH (-)     15 SHELD	E F G	
B	Connector No.   M111	W   COMM (Fod ADAPTER-)Fod)   PR   COMM (Fod ADAPTER)     L   ACCESSORY (DENTER)     R   Fod SOUND SIGNAL RH (+)     G   Fod SOUND SIGNAL LH (-)	
Connector No.   M85	Connector No.   MI 10   Connector Name   WIRE TO WIRE	AV O	
		_	

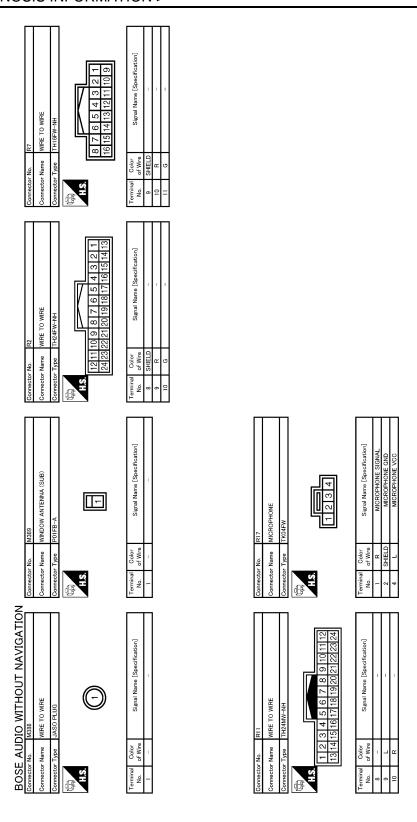
Revision: 2009 March AV-177 2009 FX35/FX50

B - [Without ICC]	R	Э			mme WIRE TO WIRE THI 2MM-NH  1 2 3 4 5 6  7 8 9 10 11 12	Color Signal Name (Specification) of Wire SHELD - W
43	44	H	8 S B B B B B B B B B B B B B B B B B B	Signal Name [Specification]  - [Without NAVI]  - [Without entertainment system]	Connector No. Connector Type Connector Type 11 12	Signal Name [Specification] No. of No. of 11 SH.
Connector No. M117	Connector Name WIRE TO WIRE	Connector Type TH80MW-CS16-TM4	H.S.	Terminal Golor   Signal Name   3	Connector No. M126 Connector Name WIRE TO WIRE Connector Type TH12MW-NH  H.S. 1 2 3 4 5 7 8 9 10 11	Terminal Golor   Signal Name   No. of Wire   Signal Name   4 SHIELD   5 P   P   10 P   11   SHIELD   11   11   SHIELD   11   11   SHIELD   1
M116	WIRE TO WIRE	TK36MW-NS10		Signal Name [Specification]	MI24 WRE TO WIRE TH40AW-CS15  [4   5   6   7   6   9   10   11   12   14   15    [5   6   7   6   9   10   11   12   14   15    [6   7   7   9   9   10   11   12   14   15    [7   7   7   7   7   7   7   7   7   7	Signal Name [Specification]
Connector No.	ě	ector Type	1.5 1.23 4 5 6.78 9 9 16	Terminal Color No. of Wire 31 W	Connector No. Connector Type	Terminal Color No. of Wire 3 Y 4 LG
BOSE AUDIO WITHOUT NAVIGATION Connector No.   M114	FRONT SQUAWKER RH	TK02FBR	21	Signul Name [Specification]	M122 BCM (BODY CONTROL MODULE) TH40FB-NH TH40FB-NH Single Sign Sign Sign Sign Sign Sign Sign Sign	Signal Name [Specification] CAN-L CANI-H
BOSE AUD	ne	ector Type	H.S.	Terminal Color No. of Wire 1 D. C. L.G. 2 L.G.	Connector Name Connector Type Connector Type  The Connector Type  The Connector Type  The Connector Type  The Connector Type	Terminal Color No. of Wire 90 P

JCNWM1030GB

Cornector No.   M370   Connector Name   AV CONTROL UNIT (WITHOUT NAVI)	Connector No. M337  Connector Name WIRE TO WIRE  Connector Type JASO JACK  LLS  Terminal Color Signal Name [Specification]  To of Wire Signal Name [Specification]	A B C
Connector No.   M303	Cornector No. M366 Cornector Name ANTENNA BASE Cornector Type GT13SSN-1/IPP-HU  Terminal Color No. of Wire T = ANTENNA AMP ON SIGNAL  Z = AM-FM MAIN	E F G
Connector No.   MITED	Connector No. M385 Connector Name WIRE TO WIRE Connector Type GT13SCN-2/1PP-HU  No. of Wire Signal Name [Specification]  2	J K
BOSE AUDIO WITHOUT NAVIGATION	Connector No.   M375	M AV

Revision: 2009 March AV-179 2009 FX35/FX50



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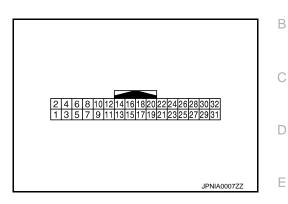
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# **CAMERA CONTROL UNIT**

Reference Value

**TERMINAL LAYOUT** 



### PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output	Gondanon		(Approx.)	
5	_	Shield	_	_	_	<del>_</del>	
6 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4	
7 (B)	Ground	Camera ground	_	Ignition switch ON	_	0 V	
8			_	Ignition	R position	6.0 V	
(R)	Ground	Camera power supply	Output	switch ON	Other than R position	0 V	
11	_	Shield	_	_	_	_	
12 (W)	Ground	Camera image signal	Output	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4	
14	Ground	Camera connection recog-		Ignition switch	Connected to camera control unit connector	0 V	
(R)	Cround	nition signal	_	ON	Not connected to camera control unit connector	5.0 V	
17 (P)	_	AV communication signal (L)	Input/ Output	_	_	_	
18 (L)	_	AV communication signal (H)	Input/ Output	_	_	_	
19 (B)	_	AV communication signal (L)	Input/ Output	_	_	_	

### **CAMERA CONTROL UNIT**

### < ECU DIAGNOSIS INFORMATION >

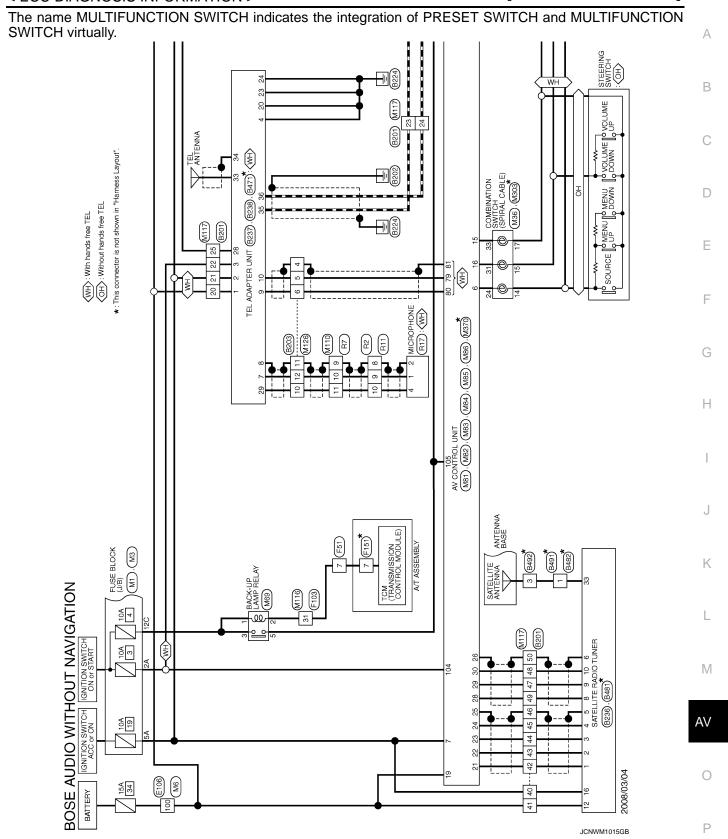
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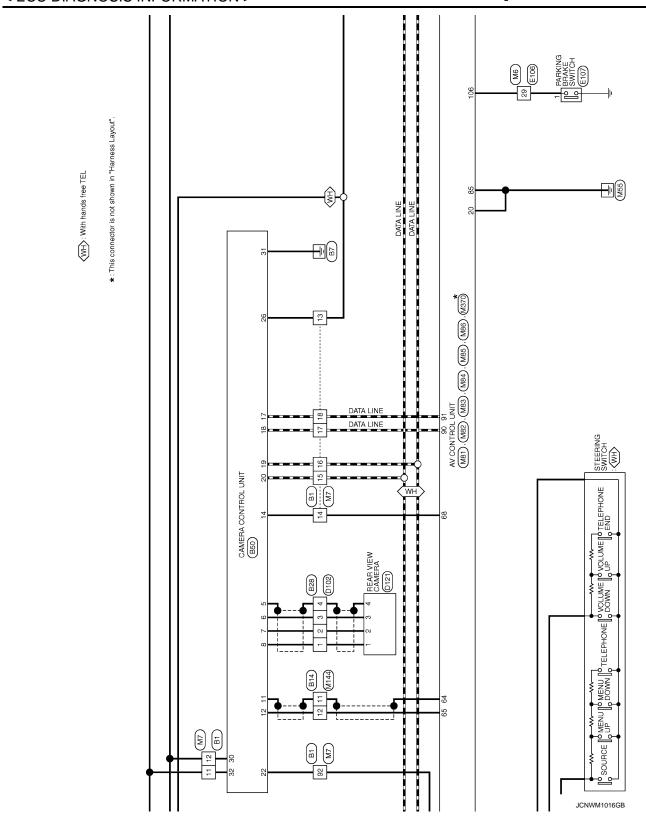
Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
20 (W)	_	AV communication signal (H)	Input/ Output	_	_	_	
22	Ground	Povorco signal	Input	Ignition switch	R position	12.0 V	
(O)	Ground	Reverse signal	Input	ON	Other than R position	0 V	
26 (G)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).	
30 (B)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
31 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
32 (SB)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	

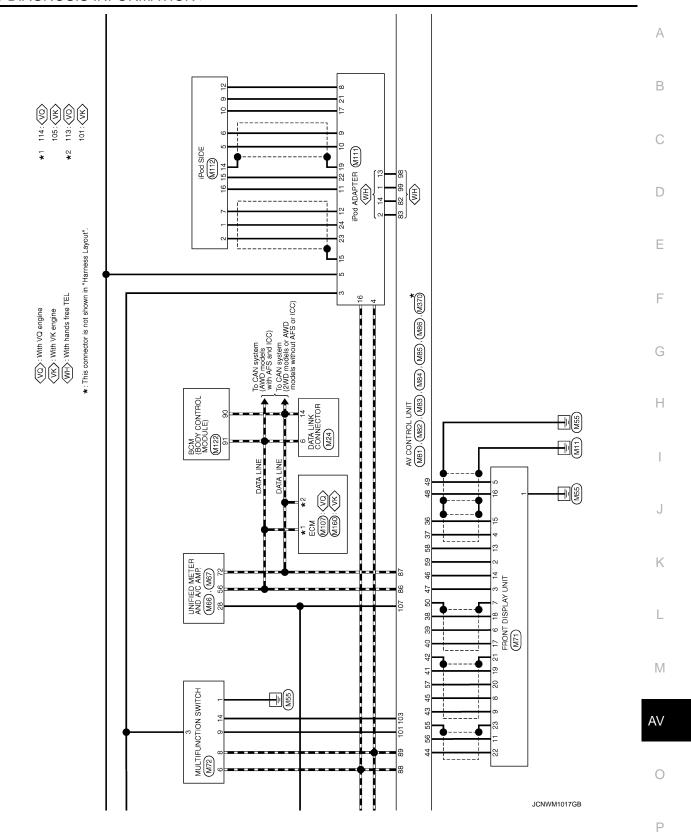
Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION -

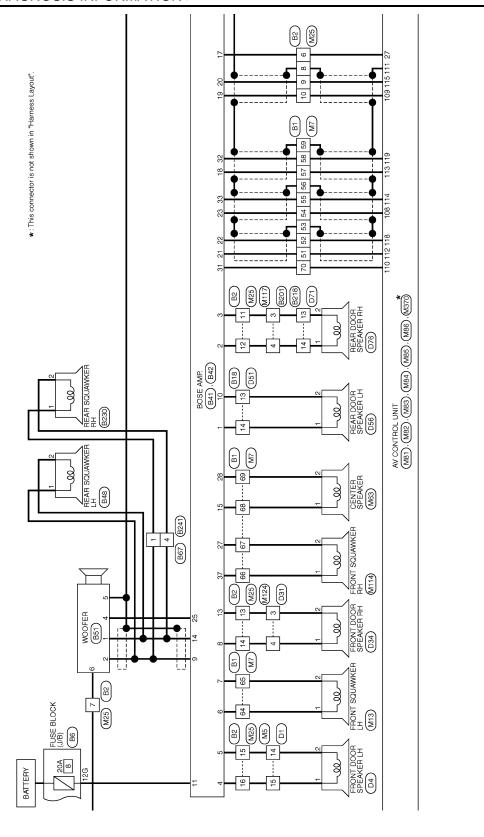
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NOTE:









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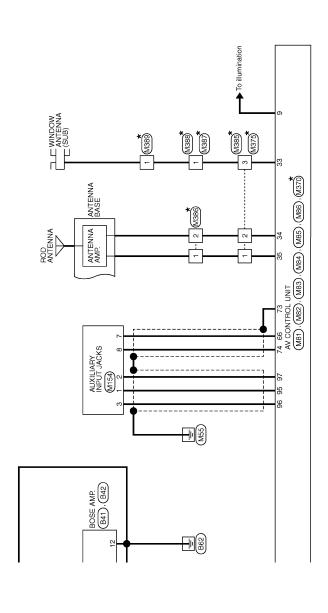
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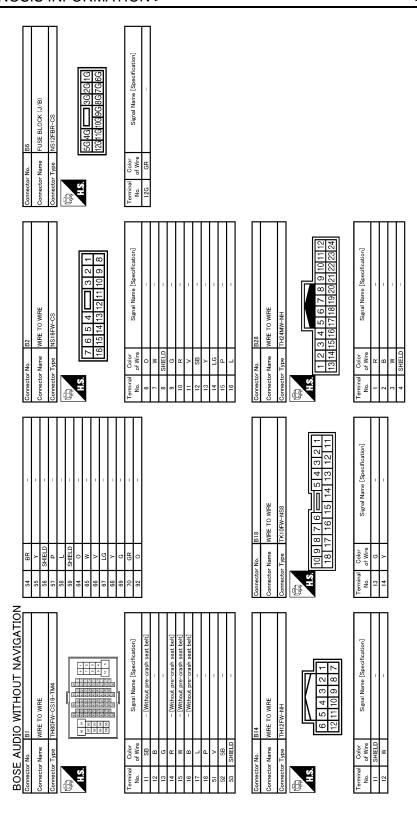
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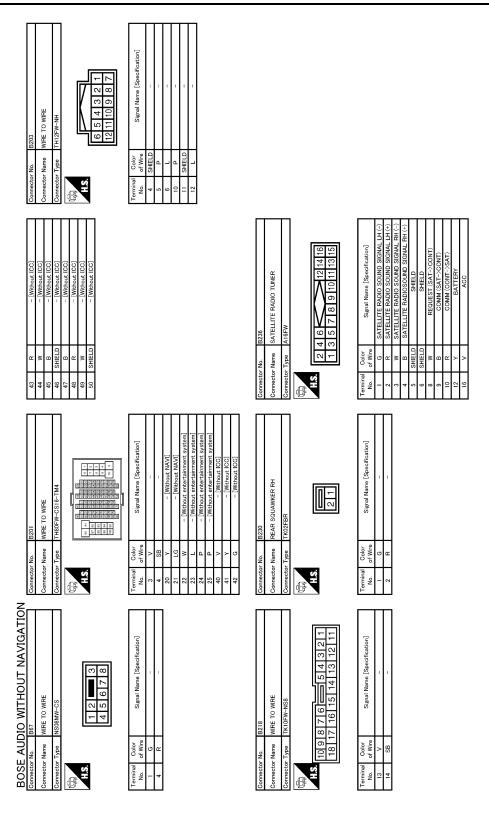




JCNWM1020GB

12   B   SOUND SIGNAL PROVIDER RH (-)     14   R   SOUND SIGNAL WOOFER AND REAR SQUAWER(-)     14   R   SOUND SIGNAL WOOFER AND REAR SGUAWER(-)     15   SOUND SIGNAL WOOFER AND REAR SGUAWER(-)     16   SOUND SIGNAL WOOFER     17   SOUND SIGNAL WOOFER     18   SOUND SIGNAL WOOFER     18   SOUND SIGNAL WOOFER     19   SOUND SIGNAL WOOFER     10   SOUND SIGNAL WOOFER     10   SOUND SIGNAL WOOFER     10   SOUND SIGNAL WOOFER     11   SOUND SIGNAL WOOFER     12   SOUND SIGNAL WOOFER     13   SOUND SIGNAL WOOFER     14   R   SOUND SIGNAL WOOFER     15   SOUND SIGNAL WOOFER     16   SOUND SIGNAL WOOFER     17   SOUND SIGNAL WOOFER     18   SOUND SIGNAL WOOFER     18   SOUND SIGNAL WOOFER     19   SOUND SIGNAL WOOFER     10   SOUND SIGN	Terminal   Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]   Olor   of Woofers (-)   Olor   of Woofers (-)   of Olor   of Woofers (-)   of Olor   of O
B42	E F G
Grametor N   Connector N   Connector N   Connector N   Connector N   Connector N   Count   Connector N   Count   Count   Count   Count	Tarminal Color   Signal Name (Specification)   Signal Name (Spec
Color   Signal Name [Specification]	Terminal Name (Specification)  AN  AN  AN  AN  AN  AN  AN  AN  AN  A

Revision: 2009 March AV-189 2009 FX35/FX50



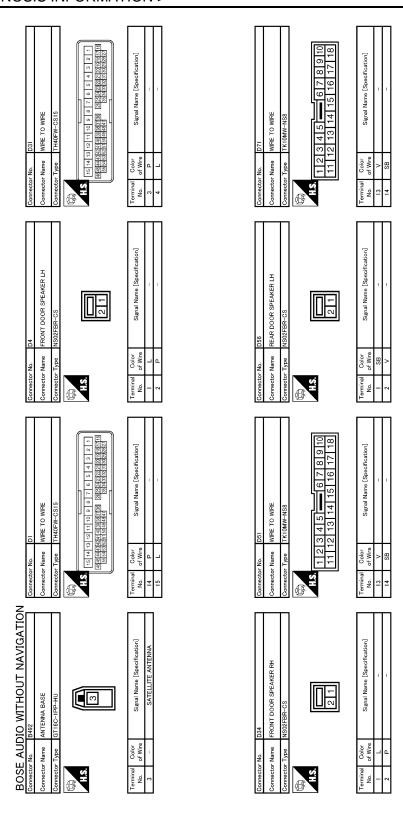
JCNWM1022GB

## **CAMERA CONTROL UNIT**

# [WITHOUT NAVIGATION]

BE21 WINE TO WIRE NSOBFW-CS  3	Signal Name [Speorfication]	WIRE TO WIRE GTIBG-IPP-HU 2	Signal Name [Speorfication]		A B C
Connector No. 6241 Connector Name WIFE Connector Type NS00 H.S.	Color   No.   Color   No.   Color   No.   Color   Co	Connector No. B491 Connector Name WIRE Connector Type GT16 H.S.	Terminal Color No of Wire		D
	MM (L)		specification)		Е
E238 TEL ADAPTER UNIT THOSFW-NH 35 37 39 41 36 38 40 42	Signal Name [Specification] AV COMM (1.) AV COMM (1.)	6482 WRE TO WIRE GTIGC-15-HU	Signal Name [Specification]		F
Connector No. Connector Name Connector Type H.S.	Terminal   Codor   No. of Wire   Codor   No. of Wire   Codor   Codor	Connector No. Connector Name Connector Type (M.S.	Terminal Coolor No. of Wire 1		G H
MICKOPHONE VCC		UNER	Signal Name [Specification] SATELLITE ANTENNA		I
MCROF		SATELLITE RADIO TUNER FAKRA			J
d d 88 88 88 88 88 88 88 88 88 88 88 88		Connector No. Connector Name Connector Type H.S.	Terminal Codor No. of Wire 33 -		K
IT NAVIGATIOI	Specification]  C C C C C ID ID INE SIGNAL		Specification]		L
Connector Name   R237   Connector Name   R24   Connector Name   TEL ADATER UNIT   Connector Type   THRZFW-NH   Connector Type   THRZFW-NH   Connector Type   THRZFW-NH   THR	Signal Name [Specification] BATTERY ACC IGNITION GIND MICROPHONE SIGNAL MICROPHONE SIGNAL MICROPHONE SIGNAL TEL VOICE SIGNAL OOUTROL SIGNAL COUNTROL SIGNAL COUNTROL SIGNAL COUNTROL SIGNAL CONTROL SIGNAL CONTROL SIGNAL CONTROL SIGNAL	1EL ADAPTER UNIT GTIGG-1S-HU 34	Signal Name [Specification] TEL ANTENNA SHIELD		AV
BOSE AUD Connector Ne. Connector Name Connector Type H.S.	Terminal   Color     No.   of Wire     1	Connector No Connector Name Connector Name	Terminal Color No. of Wire 33 - 34 SHIELD		0
				JCNWM1023GB	Р

Revision: 2009 March AV-191 2009 FX35/FX50



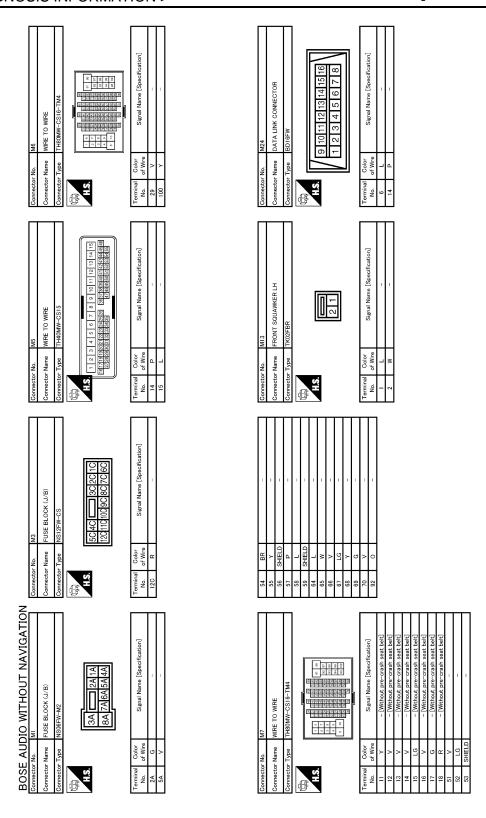
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## **CAMERA CONTROL UNIT**

# [WITHOUT NAVIGATION]

off centron)	TROL MODULE)  fineation]  RLY	А
TH80PW-CSIG-TM4  TH80PW-CSIG-TM4  Signal Name [Specification]	FF151 TOM (TRANSMISSION CONTROL MODULE) SPIDFG  (1 2 3 4 5 ) Signal Name [Speeifcation] REV LAMP RLY	В
Connector No. Connector Name Connector Type H.S. H.S. 100 Y	Connector No. Connector Name Connector Type H.S. H.S. Terminal Color No. of Wire 7 L	D
Specification) IER Supply A GND LGE SIGNAL. LD		Е
THOMWINH THOMWINH Signal Name [Specification] CAMERA DOWER SUPPLY CAMERA RAID CAMERA RAID CAMERA RAID SHELD	TO WIRE W-NSIO Signal Name Signal Name	F
ector No.  ector Type  inal Codor  Of Wire L  SHIELD	ector No. FI ector Name W  Establishmen  Establishmen  Intel Color  of Wire  R  R  R  R  R  R  R  R  R  R  R  R  R	G
Transport of the state of the s	Tem Coommun S	Н
WIPE NH	DGV  DGV  4 3 2 1  9 8 7 6  Signal Name (Specification)	I
0   1   1   1   1   1   1   1   1   1		J
Connector No.   Diff.	Connector No. F51 Connector Name A/ Connector Type RK  HS.  Terminal Color No. of Wire  7 R	К
Š T	П П	L
BOSE AUDIO WITHOUT NAVIGATION Commetter No.  Terminal Color No. of Wire No. of Wire Signal Name [Specification]  Terminal Color Signal Name [Specification] Signal Name [Specification]	BRAKE SWITCH	M
Sign	E107 PARKING BRAKE SWITCH TB01FW  Sigrai Name (Spe	AV
BOSE AUD. Commetter Name Connector Type H.S. H.S. 1 SB 1 SB 2 V	Connector No. E Connector Type 1 Connector Type 1 Connector Type 1 Connector Type 1 LS.	0
		JCNWM1025GB
		Р

Revision: 2009 March AV-193 2009 FX35/FX50

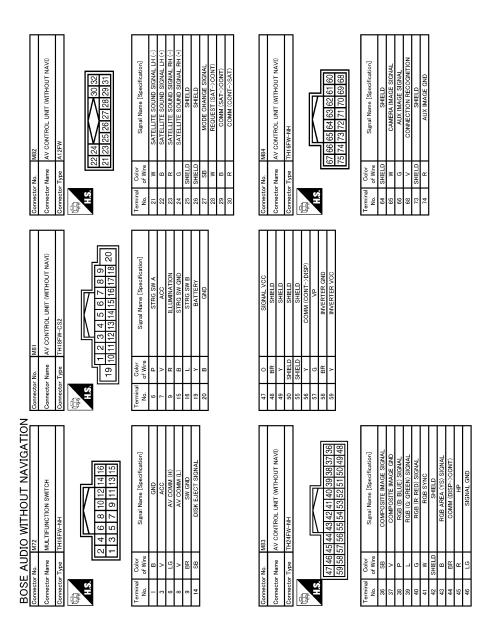


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## **CAMERA CONTROL UNIT**

M66   UNIFIED METER AND A/C AMP.   TH40FW-NH     TH50FW-NH     T	Signal Name [Specification] VEHICLE SPEED (8-PULSE)	SIGNAL GND COMPOSITE IMAGE SIGNAL SHELD RGB (R RED) SIGNAL RGB (B BLUE) SIGNAL RGB SINC VP VP SHELD COMM (DISP->CONT) SHELD			A B C
Connector No. Connector Name Connector Type H.S. R.S. R.S. R.S. R.S. R.S. R.S. R.S.	Terminal Color No. of Wire 28 R	14 LG 15 SB 16 BR 17 G 18 P 19 W 20 G 21 SHELD 22 SHELD 23 SHELD			D
	offication)	3 2 1 15 14 13	offication] CCC CCC CGE GND AGE GND SIGNAL SIGNAL SIGNAL SIGNAL SIGNAL		Е
M63 CENTER SPEAKER TK02FBR	Signal Name [Specification]	M71 FRONT DISPLAY UNIT (WITHOUT NAV)) TH24FW-NH 10 9 8 7 6 5 4 3 2 1 22 21 20 19 18 17 16 15 14 13	Signal Name (Specification) INVERTER VCC SIGNAL VCC COMPOSITE IMAGE GND SHELD RGB (G. GREEN) SIGNAL HP RGB AREA (YS) SIGNAL COMM (CONT->DISP) INVERTER GND INVERTER GND		F
ector No. ector Name ector Type	Terminal Color No. of Wire 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	lector No.	Color   Colo		G
Com	<u> </u>	Conr	<u> </u>		Н
M36 COMBINATION SWITCH (SPIRAL CABLE) TK08FGY-IV  24 25 26 31 32 33 34	Signal Name [Specification]	M69 BACK-UP LAMP RELAY MS02FL-M2-LC  1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name [Specification]		I
	ية م		. o .i.		
Connector No. Connector Name Connector Type H.S.	Color   Color   Color	Connector No. Connector Name Connector Type	Coder   Code		K
	Termir 1	Commo			L
BOSE AUDIO WITHOUT NAVIGATION    Somestor No.   M25	Signal Name (Specification)	M67  TH32FW-NH  TH43FW-NH  M4 4G 66 47 48 40 50 51 52 53 54 55 56 51 55 50 51 55 50 51 55 50 51 55 50 51 55 50 51 55 50 51 55 50 51 55 50 51 55 50 51 55 50 51 55 50 51 55 50 51 50	Signal Name (Specification) CAN+H CAN+L		M
MISS WIRE TO WIRE INSTERMY-CS  2 3  9 10 11 11		M67 UNIFIED ME TH32FW-NH 44 45 46 71 62 63			AV
Connector Nan- Connector Nan- Connector Nan- Connector Type H.S.	of Wire SB SB SHELD G V Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Golor of Wire		
BOSE A Connector No. Connector Typ	Terminal No. No. No. 10. 11. 12. 12. 13. 14. 15. 16. 16. 16. 16. 16. 16. 16. 16. 16. 16	Connector No.	Terminal No. 56 56 72		0
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Connector No.   M 107	Connector No.         M112           Connector Type         IP18FGY           H.S.         1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Terminal   Color   Signal Name [Specification]   No. or Wire   Pod South Signal LH (+)	A B C
Connector No.   M86	14 Y   Pod SOUND SIGNAL RH (~)   15 SHIELD   SHIELD   AV COMM (+)   16 LG   AV COMM (+)   17 B B   SHIELD   SHIELD   SHIELD   SHIELD   SHIELD   SHIELD   STORMECTION RECOGNITION RECOGNITION   22 W   A COMMECTION SIGNAL GND   24 B   Pod SOUND SIGNAL LH (+)		E F G
81	Connector No. MIII Connector Name   Pod ADAPTER	Terminal   Color   Signal Name [Specification]   No.   of Wire   Ped SOUND SIGNAL LH (+)     2   BR     Ped SOUND SIGNAL LH (+)     3   O	J K
Connector Name	Connector No.         M110           Connector Name         WRE TO WIRE           Connector Туре         THIBMW-NH           H.S.         1 2 3 4 5 6 7 8           9 10 11 112 13 14 15 16	Terminal   Color   Signal Name [Specification]   No. of Wire   9   SHELD   - [Without NAVI]   11   P   - [Without NAVI]	L  M  AV

Revision: 2009 March AV-197 2009 FX35/FX50

BOSE AUDIO WITHOUT NAVIGATION	Connector No. M16	Connector No.	M117	43 B	- [Without ICC]	
_	т			╀		
Connector Name FRONT SQUAWKER RH	Connector Name WIRE TO WIRE	Connector Name	WIRE TO WIRE	╀	- [Without ICC]	
Connector Type TK02FBR	Connector Type TK36MW-NS10	Connector Type	TH80MW-CS16-TM4	46 SHIELD	- [Without ICC]	
¢	¢	¢		47 B	- [Without ICC]	
[ ]	医	厚		48 R	- [Without ICC]	
[	E SI	2	2 S S S S S S S S S S S S S S S S S S S	49 W	- [Without ICC]	
21	1 2 3 4 5 TI20202020 6 7 8 9 10 PI2202020			50 SHIELD	- [Without ICC]	
Terminal   Color   Signal Name [Specification]   No. of Wire	Terminal Color Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]			
Н	Н	Н	-			
2 LG –		4	1			
		+	- [Without NAVI]			
		22 0	- [Without entertainment system]			
		23 L	- [Without entertainment system]			
		24 P	- [Without entertainment system]			
		25 V	- [Without entertainment system]			
		40 \	-			
		41 Y	- [Without ICC]			
		42 W	-			
Connector No. M122	Connector No. M124	Connector No.	M126	Connector No. M144	14	
Connector Name BCM (BODY CONTROL MODULE)	Connector Name WIRE TO WIRE	Connector Name	WIRE TO WIRE	Connector Name WIF	WIRE TO WIRE	
Connector Type TH40FB-NH	Connector Type TH40MW-CS15	Connector Type	TH12MW-NH	Connector Type TH:	TH12MW-NH	
	4	19		6		
HS.	H.S.	H.S.		H.S.		
91 100 100 100 100 100 100 100 100 100 1			1 2 3 4 5 6 7 8 9 101112		1 2 3 4 5 6 7 8 9 10 11 12	
Terminal Color Signal Name [Specification]	Terminal Golor Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	
Ф	3 ү	돐	1	S	-	
91 L CAN-H	4 LG –	G -	-	12 W	-	
		9 5				
		φ				
		12 L	_			

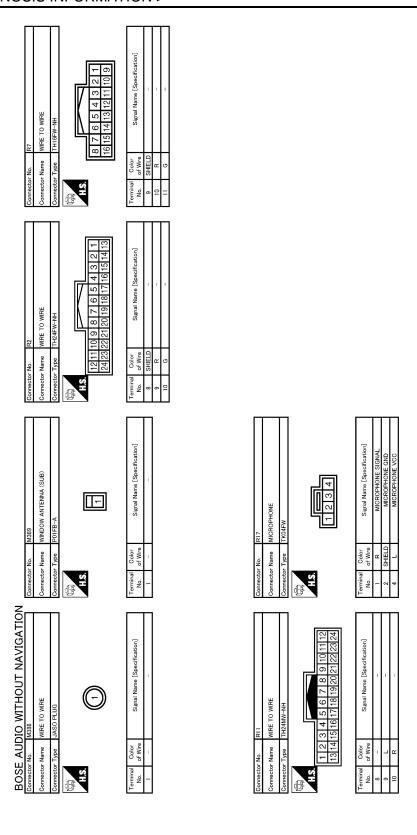
JCNWM1030GB

## **CAMERA CONTROL UNIT**

# [WITHOUT NAVIGATION]

AV CONTROL UNIT (WITHOUT NAVI) GT13SH-2/15-HU  GT13SH-2/15-HU  Signal Name [Specification]  FM SUB  AM-TW SUB  AM-TW MAIN  ANTENNA AMP. ON SIGNAL	WIRE  OK  Signal Name [Specification]		АВ
Connector No.   M370	Connector No.   M387		C
Signal Name [Specification]	N BASE N-1/IPP-HIU Signal Name [Specification] ANTENUA AMP ON SIGNAL AM-FM MAIN		Е
маоз СОМВПА ТКОВРСУ	M386 M386 GT13SSN Fre		F G
Connector No. Connector Type Connector Type No. Terminal No. of Wire The Management of	Connector No.		Н
WITH VK ENGINE)	WIRE 1-2/IPP-HU  Signal Name [Specification]		ı
No. Mi60  Type ECM (WI7  128 128 12  128 12  1	ector No. M385 ector Name WIRE TO ector Types GT13SCA.  S. C.		J K
			L
BOSE AUDIO WITHOUT NAVIGATIO	WIRE TO WIRE GT13SC-2/1S-HU  Signal Name [Specification]		AV
BOSE AUDIO V   Connector No.   M154   Connector No.   M154   Connector Type   AUSITUL Connector No.   Color	Connector No. M375 Connector Name WIRE Connector Type GT13 H.S. H.S.  Terminal Color No. of Wire 1		0
		JCNWM1031GB	Р

Revision: 2009 March AV-199 2009 FX35/FX50

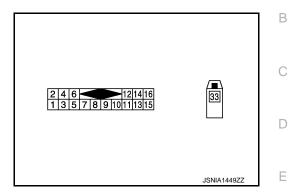


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# **SATELLITE RADIO TUNER**

Reference Value



### PHYSICAL VALUES

Ter	minal	Description				Deference value
+	_	Signal name	Input/ Output		Condition	Reference value (Approx.)
2 (R)	1 (G)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
4 (B)	3 (W)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
5	_	Shield	_	_	_	_
6	_	Shield	_	_	_	_
8 (W)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected.	(V) 10 0 -10 → 10ms SKIA9299J
9 (B)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected.	(V) 10 0 -10 → 1ms

### **SATELLITE RADIO TUNER**

### < ECU DIAGNOSIS INFORMATION >

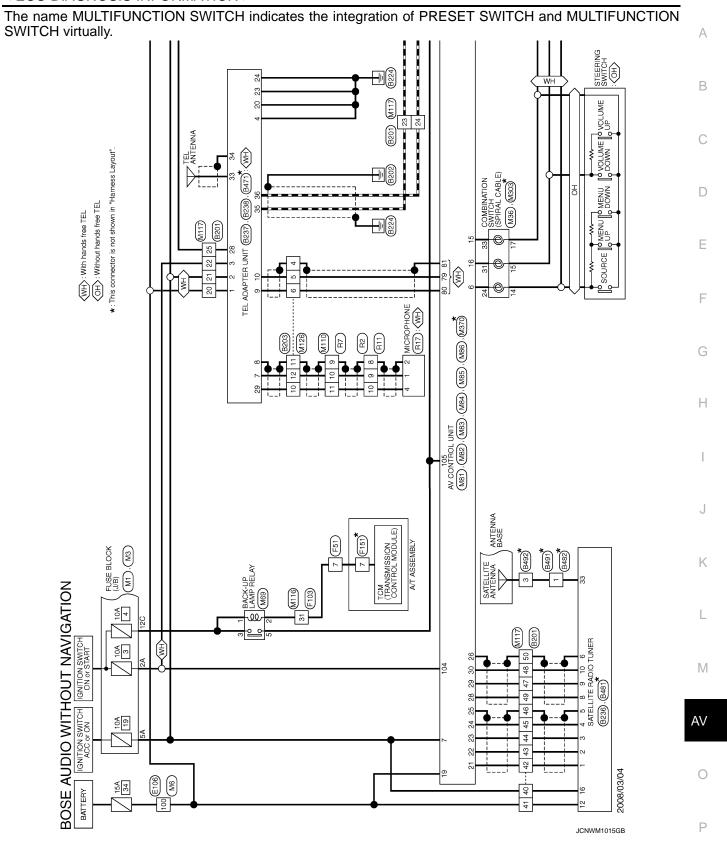
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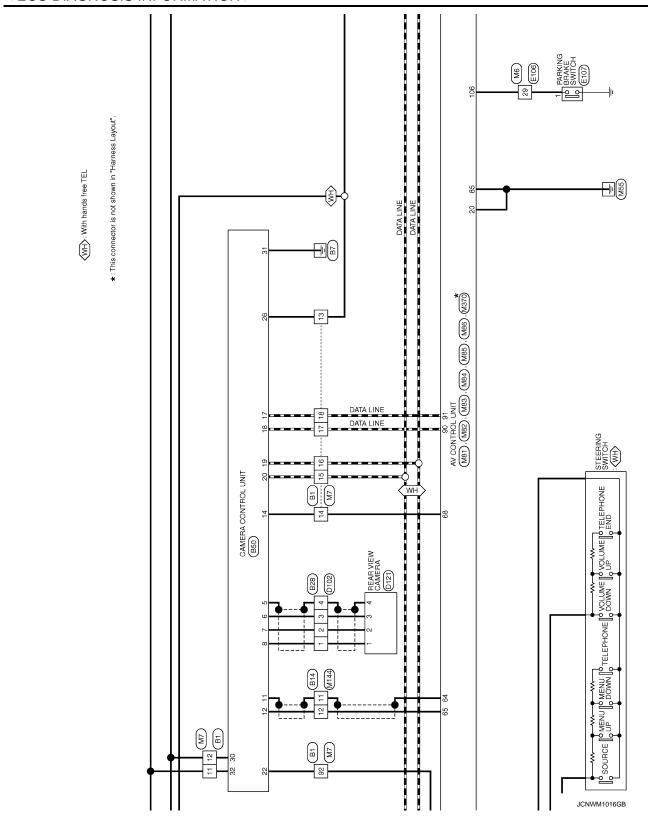
Ter	minal	Description				Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
10 (R)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 10 0 -10 + 1ms SKIA9301J	
12 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
16 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
33	_	Satellite antenna	Input	_	_	_	

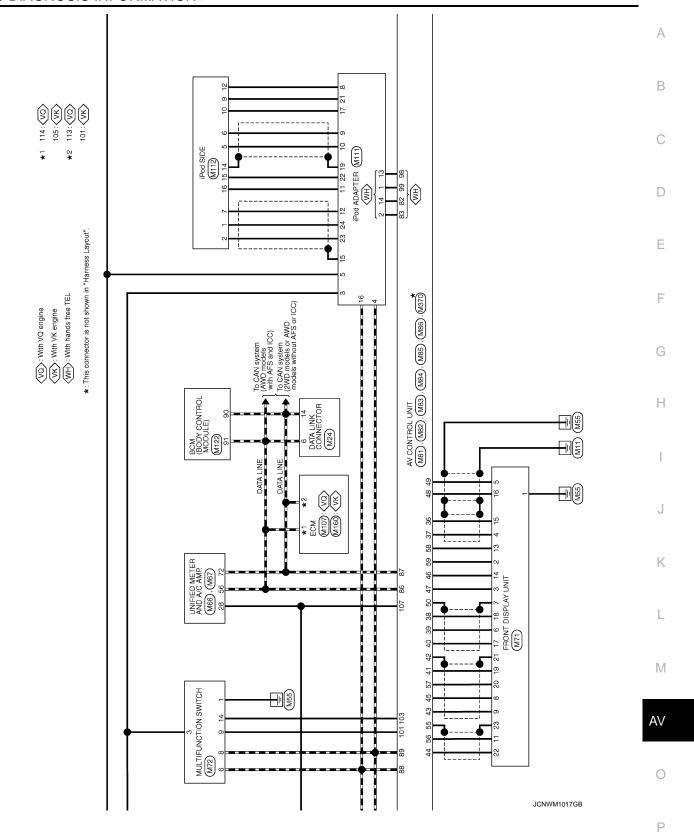
Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION -

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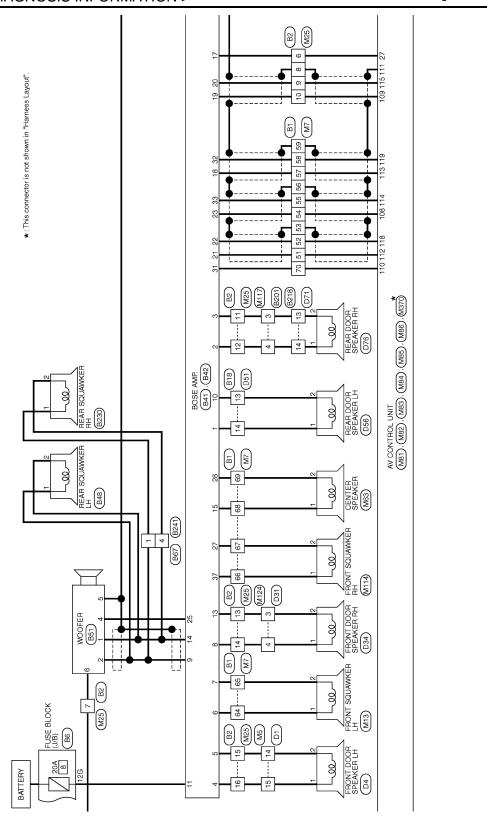
NOTE:







JCNWM1018GB



\*: This connector is not shown in "Harness Layout".

14 66 73 35 34 AV CONTROL UNIT ★ (MBE) (M AUXILIARY INPUT JACKS (M154) BOSE AMP. (B41), (B42) 

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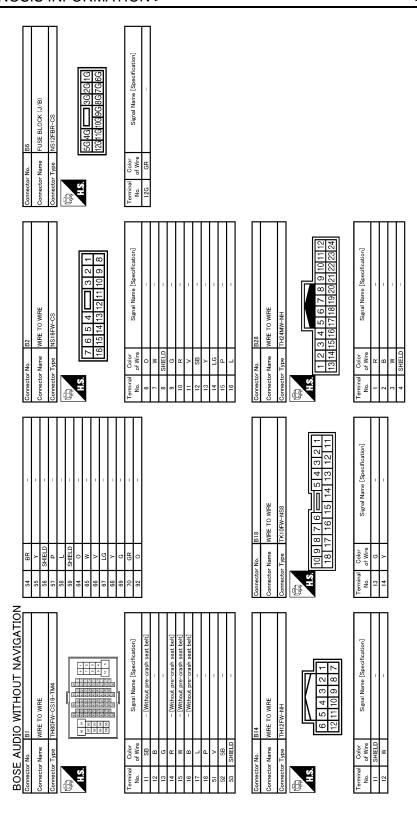
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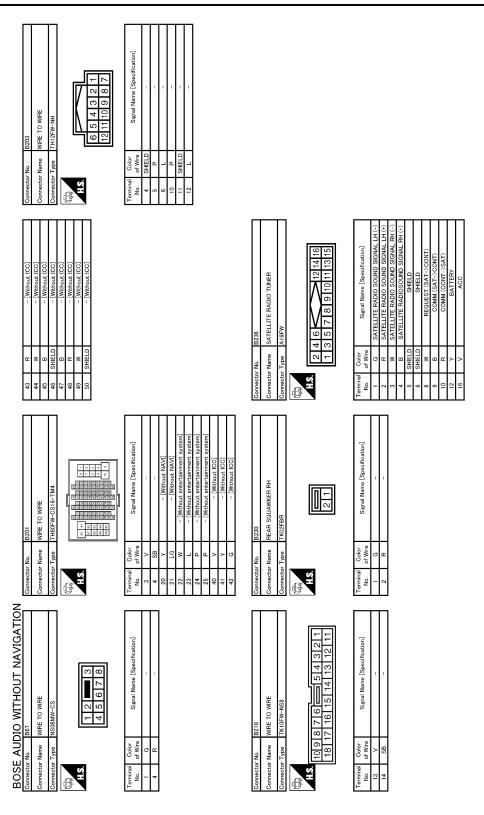
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12 B GND 13 Y SOUND SIGNAL WOOFER AND REAR SOUMWER (-) 14 R SOUND SIGNAL WOOFER AND REAR SOUMWER (-)		Connector No. B51 Connector Name WOOFER Connector Type RS08FGY  ALS  135	Terminal   Color   Signal Name (Specification)   Odor Wire   Souldo Signal Ware (Specification)   Odor Wire   Souldo Signal Woofer (+)   Odor Woofer AMP ON Signal   Odo		A B C
Connector No.         642           Connector Name         BOSE AMP.           Connector Type         SGA12FBR-SJA2           H.S.         14 13 12 11 10           9 8 7 6 5 4 3 2 1	Terminal Oolor	22 O REVERSE 26 G VEHICLE SPEED (6-PULSE) 30 B ACC 31 B GND 32 SB BATTERY			E F G
31   GR		Connector No. B50 Connector Name CAMERA CONTROL UNIT Connector Type TH32PW-NH  LS	Terminal   Color   Signal Name   Specification   Color   SheELD   SheELD		J K
BOSE AUDIO WITHOUT NAVIGATION Connector Num B41  Connector Name BOSE AMP.  Connector Type SCA19FBF-SGA4  H.S. 37 36 33 34 33   32 31 30 22 28    27 36 25 24 23 22 12 01 91 18171 16 15	Terminal   Color   Signal Name [Specification]	Connector No. B48 Connector Name REAR SQUAWKER LH Connector Type TK02FBR	Terminal Color Nignal Name [Specification] No. of Wire Signal Name [Specification]	JCNWM1021GB	M AV

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JCNWM1022GB

## **SATELLITE RADIO TUNER**

# [WITHOUT NAVIGATION]

BE21 WINE TO WIRE NSOBFW-CS  3	Signal Name [Specification]	WIRE TO WIRE GTIBG-IPP-HU	Signal Name [Specification]		A B C
Connector No. 6241 Connector Name WIFE Connector Type NS00 H.S.	Color   No.   Color   No.   Color   No.   Color   Co	Connector No. B491 Connector Name WIRE Connector Type GT16 H.S.	Terminal Color No of Wire		D
	MM (L)		specification)		Е
E238 TEL ADAPTER UNIT THOSFW-NH 35 37 39 41 36 38 40 42	Signal Name [Specification] AV COMM (1.) AV COMM (1.)	B482 WRE TO WIRE GTI6C-IS-HU	Signal Name [Specification]		F
Connector No. Connector Name Connector Type H.S.	Terminal   Codor   No. of Wire   Codor   No. of Wire   Codor   Codor	Connector No. Connector Name Connector Type H.S.	Terminal Coolor No. of Wire 1		G H
MICKOPHONE VCC		UNER	Signal Name [Specification] SATELLITE ANTENNA		I
MCROF		SATELLITE RADIO TUNER FAKEA			J
d d 88 88 88 88 88 88 88 88 88 88 88 88		Connector No. Connector Name Connector Type H.S.	Terminal Codor No. of Wire 33 -		K
IT NAVIGATIOI	Specification]  C C C C C ID ID INE SIGNAL		Specification]		L
Connector Name   R237   Connector Name   R24   Connector Name   TEL ADATER UNIT   Connector Type   THRZFW-NH   Connector Type   THRZFW-NH   Connector Type   THRZFW-NH   THR	Signal Name [Specification] BATTERY ACC IGNITION GIND MICROPHONE SIGNAL MICROPHONE SIGNAL MICROPHONE SIGNAL TEL VOICE SIGNAL OOUTROL SIGNAL COUNTROL SIGNAL COUNTROL SIGNAL COUNTROL SIGNAL CONTROL SIGNAL CONTROL SIGNAL CONTROL SIGNAL	B471 TEL ADAPTER UNIT GTIGC-1S-HU 34	Signal Name [Specification] TEL ANTENNA SHIELD		AV
BOSE AUD Connector Ne. Connector Name Connector Type H.S.	Terminal   Color     No.   of Wire     1	Connector No. Connector Name Connector Type	Terminal Color No. of Wire 33 - 34 SHIELD		0
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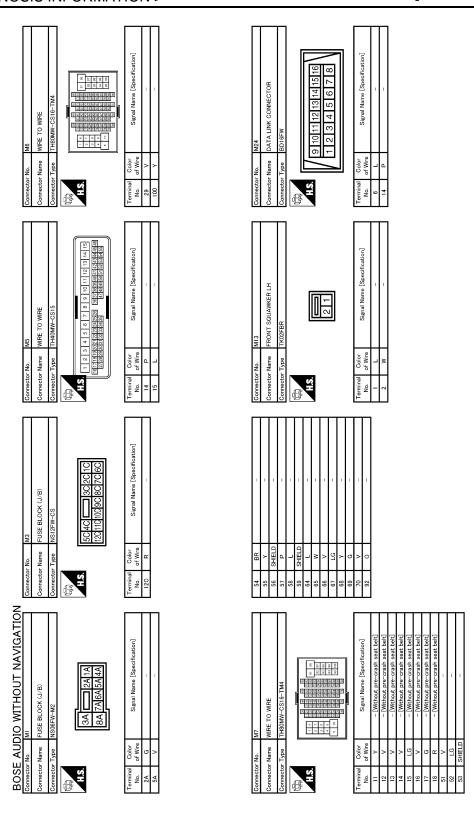
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## **SATELLITE RADIO TUNER**

# [WITHOUT NAVIGATION]

ation]	OL MODULE)	aton]		А
W-CS 16-TM4 W-CS 16-TM4 Signal Name [Specification]	FISI TOM (TRANSMISSION CONTROL MODULE) SPIDFG  1 2 3 4 5 6 7 8 9 10	Signal Name [Specification] REV LAMP RLY		В
M WRE TO THE TO		Color of Wire		С
Connector Name Connector Type Connector Type Terminal Color No. of Wire 29 100 V	Connector No. Connector Type	Terminal No. 7		D
Specification) FER SUPPLY A GND		Specification]		Е
THOMWINH THOMWINH THOMWINH Signal Name [Specification] Signal Name [Specification] CAMERA POWER SUPPLY CAMERA GND		Signal Name [Specification]		F
ector No.  ector Type  ector Type  of Mre  G	SHELD octor No. octor No.	Terminal Color No. of Wire 31. R R		G
	O O O O O			Н
WIRE NH  NH  1 6 5 4 3 2 1  0 19 18 17 16 15 14 13  Signal Name [Specification]		Signal Name [Specification]		I
D102 WIRE TO WIRE TH24FW-NH 10 9 8 7 6 22 21 20 19 18	F51 A/T ASSEMBLY RRIOFG-DGY  5 4 3 2 2 0 0 9 8 7 7	Signal Nam		J
Connector No. Connector Type Connector Type 124 23 Terminal Color No. of Wire 1 0	Connector No. Connector Name Connector Type	Terminal Color No. of Wire 7 R		K
NOITH				L
BOSE AUDIO WITHOUT NAVIGATIO Connector No. D16 Connector Name Rea Door SPEAKER RH Connector Type NSIZEBR-CS  Terminal Color No. Color No. Signal Name (Specification) No. Signal Name (Specification) No. Signal Name (Specification)	E107 PARKING BRAKE SWITCH TEDIFW	Signal Name [Specification]	_	M
DDIO WITH DISE REAR DOOR: NSQEEBR-CS Sign			A	V
BOSE AUII Connector No Connector Type Connector Type Connector Type H.S. H.S.  Terminal Color No. of Wire 1 SB	Connector No. Connector Name Connector Type	Neminal Color N. of Wire		0
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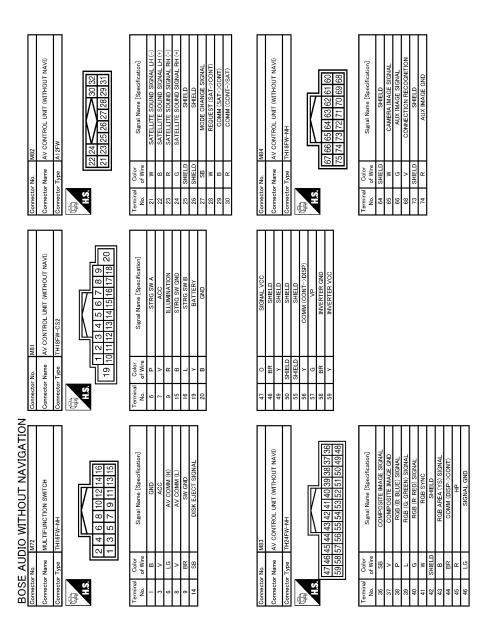
## **SATELLITE RADIO TUNER**

< ECU DIAGNOSIS INFORMATION >

# [WITHOUT NAVIGATION]

AMP.	orification]	IND SIGNAL SIGNAL OCONT)			А
Pr. No. M66  Trype TH40FW-NH  TIZES A SECTION IN SECTIO	Signal Name (Specification) VEHICLE SPEED (9-PULSE	SIGNAL GND COMPOSITE INAGE SIGNAL SHELD RGB (R RED) SIGNAL RGB (B BLUE) SIGNAL RGB SYNC V V SHIELD COMM (DISP->CONT) SHIELD			В
Connector No.  Connector Name Connector Type  Connector Type  LS.	Terminal Color No. of Wire 28 R	14 LG 15 SB 16 BR 17 C C 17 C C 18 P W 20 G 20 G 21 SHRLD 22 SHRLD 23 SHRLD 23 SHRLD			D
	Specification]	(WITHOUT NAV))	Specification]  ER VCC VCC VCC VCC VCC EN SIGNAL ED SIGNAL CO VS SIGNA		Е
MIS CENTER SPEAKER TKOZEBR	Signal Name [Specification]	No. M71 Name FRONT DISPLAY UNIT (WITHOUT NAVI) Type TH24PW-NH  12 11 10 9 8 7 6 5 4 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name [Specification] GND INVERTER VCC SIGNAL VCC COMPOSITE INAGE GND SHELD SHELD ROB (G. GREEN) SIGNAL SHELD HP ROB AREA (YS) SIGNAL COMM (CONT-)DISP) INVERTER GND INVERTER GND		F
Connector No. Connector Name Connector Type H.S.	Color   Colo	Connector No.  Connector Name FRG Connector Type THE  H.S.  12 [11] 10  [24 [23 [23]]	Color   No.   Color		G
(SPIRAL CABLE)	perfrestonl		pecification]		I
M36 COMBINATION SWITCH (SPIRAL CABLE) TK08FGY-1V  24 25 26 31 22 33 34	Signal Name (Specification)	M69 MCACK-UP LAMP RELAY MS02FL-M2-LC	Signal Name [Specification]		J
Connector No Monector Name Connector Type T	Terminal Codor No. of Wire 24 P P 24 31 L 33	Connector No. M. Connector Name B Connector Type M.	Terminal Codor No. of Wire 1 R R 2 W W S 5 O O		K
NAVIGATION	ification]	AMP. 80 54 55 66 80 70 71 72	ification]		L
10 WITHOUT N M25 WRE TO WIRE WISHAW-CS 2 3 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Signal Name [Specification]	M67 TH32FW-NH TH32FW-NH  A 45 66 47 60 50 50 50 50 50 50 50 50 50 50 50 50 50	Signal Name [Specification] CAN-H CAN-L		AV
BOSE AUDIO WITHOUT NAVIGATION Connector Name WIRE TO WIRE Connector Type NSTEMW-CS	Celor   No. of Wire   No. of   No.	Cornector No. M67 Cornector Name UNIFOCOMETOR THRS.  11.02 16. 14. 14. 14. 15. 15. 14. 14. 14. 15. 15. 14. 14. 14. 15. 15. 15. 15. 15. 15. 15. 15. 15. 15	Color   Color   No.   Of Wire   No.   Of Wire   Se		0
<u>~ 0  0  0  [₩</u>	<u>                                     </u>	이 이 이 명		JCNWM1027GB	Р

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Connector No.   MIO7	Connector No.   M112	A B C
Connector No.   M86   Connector Name   AV CONTROL UNIT (WITHOUT NAVI)   Connector Type   THI 2PW-NH	14 Y   Pod SQUND SIGNAL RH (-)   15 SHIELD   A V COMM (H)   17 B   GND   19 SHIELD   SHIELD	E F G
91 R AV COMM (L.) [With hands free phore] 95 B AUX SOUND SIGNAL BH (+) 96 R AUX SOUND SIGNAL LH (+) 97 W AUX SOUND SIGNAL LH (+) 98 G FPOR SOUND SIGNAL LH (+) 101 SER POR SOUND SIGNAL LH (+) 104 G FPOR SOUND SIGNAL LH (+) 105 G FPOR SOUND SIGNAL LH (+) 106 G FPOR SOUND SIGNAL LH (+) 107 RP PARRING BRAKE 106 V PARRING BRAKE 107 R VEHICLE SPEED (8-PULSE)	Connector Name   Pod ADAPTER	J K
Connector Name	Connector No.   MI10	M AV

Revision: 2009 March AV-217 2009 FX35/FX50

BOSE AL	BOSE AUDIO WITHOUT NAVIGATION		9777	-1		[	-	
Connector No.	M114	Connector No.	M116	Connector No.	M11/	43	8	- [Without ICC]
Connector Name	FRONT SQUAWKER RH	Connector Name	WIRE TO WIRE	Connector Name	WIRE TO WIRE	44	œ (	= - [Mithod to 100]
Connector Type	TK02EBR	Connector Type	TK36MW-NS10	Connector Type	TH80MW-CS16-TM4	46	SHELD	- [Without IGG]
	1					47	B 8	- [Without ICC]
F		· · · · · · · · · · · · · · · · · · ·		45		48	2	- [Without ICC]
Ě		Ě		Ě	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	49	M	- [Without ICC]
His		-	4 5 111 121 121 121 121 121 121 121 121 1	T T	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	20	SHIELD	- [Without ICC]
	2 1	8 2 8 8	हा व । व   व्यवस्थात   व्यवस्थात   व   व	_				
Terminal Color No. of Wire	or Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]			
-	-	31 W	-	3	-			
2 LG	-			4 SB	-			
				20 ×	- [Without NAVI]			
				+	- [Without entertainment system]			
				╀	- [Without entertainment system]			
				24 P	- [Without entertainment system]			
				25 V	- [Without entertainment system]			
				40 \	1			
				41 Y	- [Without ICC]			
				42 W	-			
Connector No.	M122	Connector No.	M124	Connector No.	M126	Connector No.	- No. M144	
Connector Name	BCM (BODY CONTROL MODULE)	Connector Name	WIRE TO WIRE	Connector Name	WIRE TO WIRE	Connector Name	Name WIRE TO WIRE	WIRE
Connector Type	TH40FB-NH	Connector Type	TH40MW-CS15	Connector Type	TH12MW-NH	Connector Type	Type TH12MW-NH	-NH
昏		昏		唇		匮	L	
H.S.		HS 1	3 4 5 6 7 8 9 10 11 12 13 14 15	H.S.	<i></i>	H.S.		
91 90 81	90, 989, 88, 77, 98, 95, 94, 63, 62, 81, 80, 197, 78, 77, 77, 78, 78, 78, 78, 78, 78, 7	11817 272888 37288	हि सहराम स्टब्स्ट स्थाउन स्थापन स्यापन स्थापन स्यापन स्थापन स्थापन स्थापन स्थापन स्थापन स्थापन स्थापन स्थापन स्था		1 2 3 4 5 6 7 8 9 10 11 12		7 8	2 3 4 5 6 3 9 101112
Terminal Color	or Signal Name [Specification]	Terminal Color	Signal Name [Specification]	Terminal Color	Signal Name [Specification]	Terminal	Color of Wire	Signal Name [Specification]
06		t		t	1	=	SHELD	1
H	CAN-H	4 LG	1	5 P	1	12	*	1
				9	-		-	
				10 P	-			
				11 SHIELD	1			
				12 L	-			

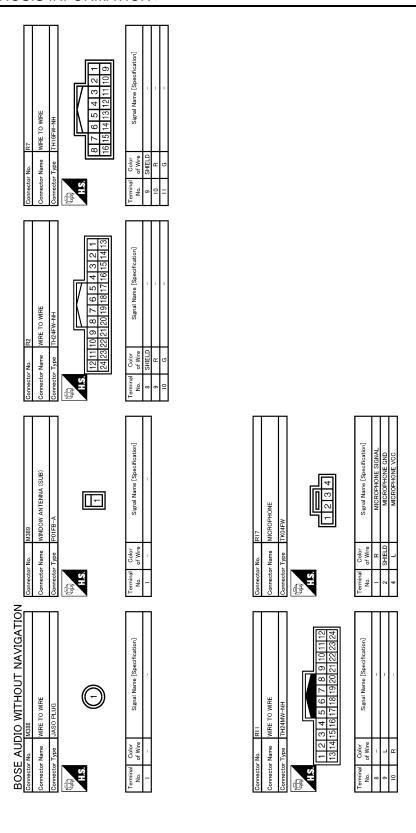
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### **SATELLITE RADIO TUNER**

## [WITHOUT NAVIGATION]

UT NAVI)  freation]  N I SIGNAL	ireation]		А
M370 GT13SH-2/15-HU GT13SH-2/15-HU  Signal Name [Specification] FM SUB  RAM-FM MAIN AMTENNA AMP. ON SIGNAL	WIRE TO WIRE LASIO JACK  Signal Name [Specification]		В
Connector No.   M370	Connector No. M383 Connector Name WIRE Commetor Type JASG HS.  Terminal Color No. of Wire 1		D
SPIRAL CABLE) 14 13	offication] NI SIGNAL AIN		Е
TGY Signal Name (Se	ANTENNA BASE  GTI3SSN-I/IPD-HU  Signal Name [Specification]  ANTENNA AMP. ON SIGNAL  AM-FM MAIN		F
Connector No.   M333	wetor No. wetor Name metor Type of Ville of Ville		G
	Connection of the second of th		Н
-RZB-R-LH-Z -RZB-R-RZB-R-RZB-R-RZB-RZB-RZB-RZB-RZB-R	WIRE P-2/IPD-HU P-2/IPD-HU Signal Name [Specification]		I
MIGO  RR24FGY-RZ8-R-LH-Z  RR24FGY-RZ8-R-LH-Z  128 129 118 114 116 109 12 128 129 118 114 116 116 116 116 116 116 116 116 116	WIRE TO WIRE GITJSCON-2/IPP-HU  Sigral Name		J
Connector No. Connector Type Connector Type Connector Type H.S. H.S.  H.S.  I of Wire 105  L.  105	Connector No.  Connector Name Connector Type Terminal Color  1		K
			L
BOSE AUDIO WITHOUT NAVIGATIO	WIRE 2/15-HU 2/15-HU 2/16-HU Signal Name [Specification]		M
MIS4 MIS4 MIS4 MIS4 MISEPW AUX 8 AUX	M975 WIRE TO WIRE GT138C-2/15-H  2 2 Signal Na		AV
BOSE AUDI Connector Name M Connector Type M Connector Typ	Connector No. M Connector Name W Connector Type 0 Connect		0
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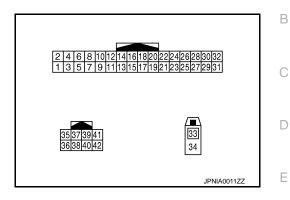
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# TEL ADAPTER UNIT

Reference Value



### PHYSICAL VALUES

	minal e color)	Description			-	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
2 (LG)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
3 (W)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
4 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
7 (L)	8	Microphone signal	Input	Ignition switch ON	Give a voice	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0 + 2ms
8	Ground	Microphone ground	_	Ignition switch ON	_	0 V
9 (L)	10 (P)	TEL voice signal	Output	Ignition switch ON	During voice guide output with the w≤ ✓ switch pressed.	(V) 1 0 -1 + 2ms SKib3609E
20 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V

### **TEL ADAPTER UNIT**

### < ECU DIAGNOSIS INFORMATION >

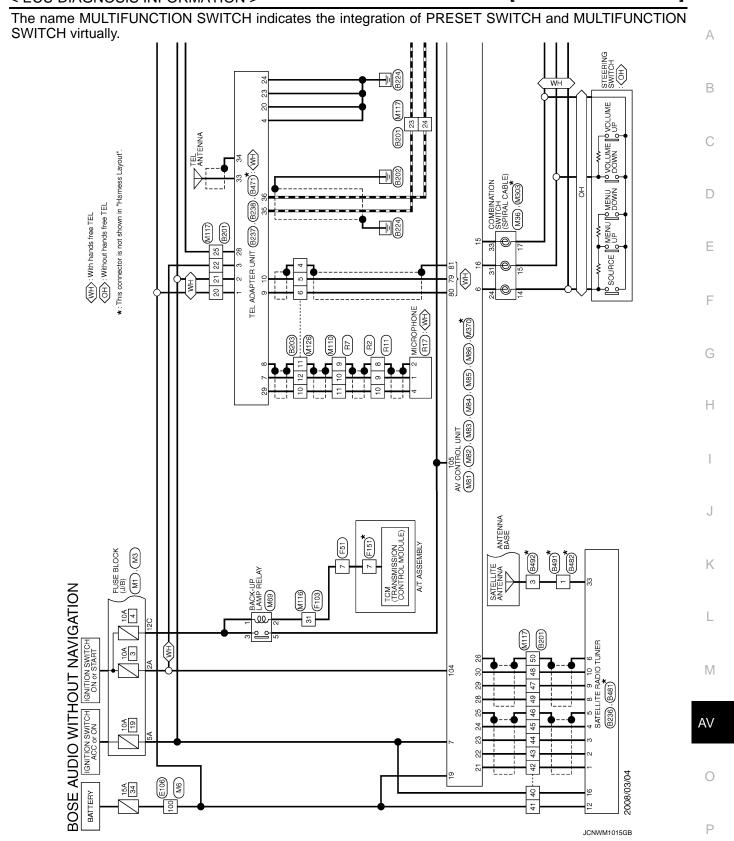
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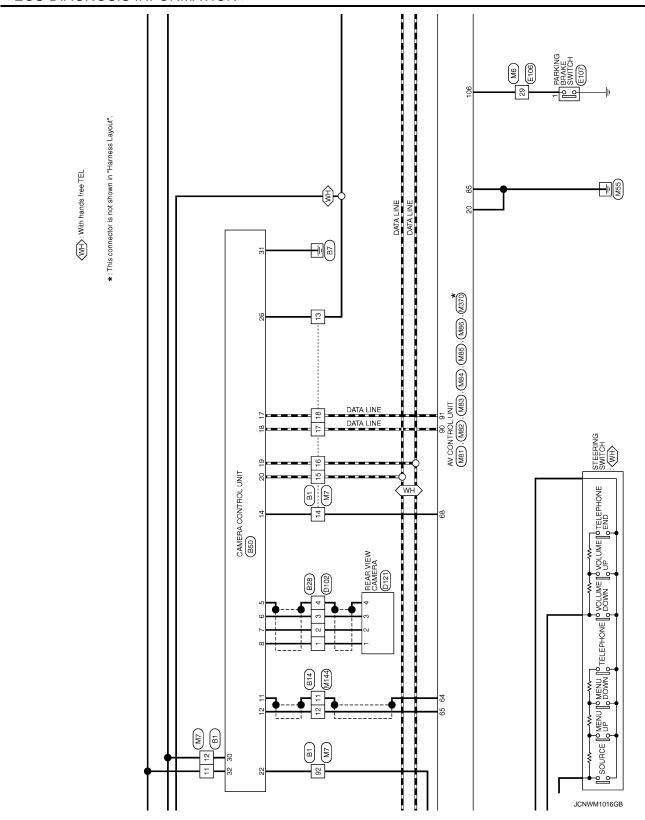
	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
23 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V
24 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V
28 (P)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).
29 (P)	8	Microphone VCC	Output	Ignition switch ON	_	5.0 V
33	_	TEL antenna	Input	_	_	_
34	_	Shield	_	_	_	_
35 (L)	_	AV communication signal (H)	Input/ Output	_	_	_
36 (P)	_	AV communication signal (L)	Input/ Output	_	_	_

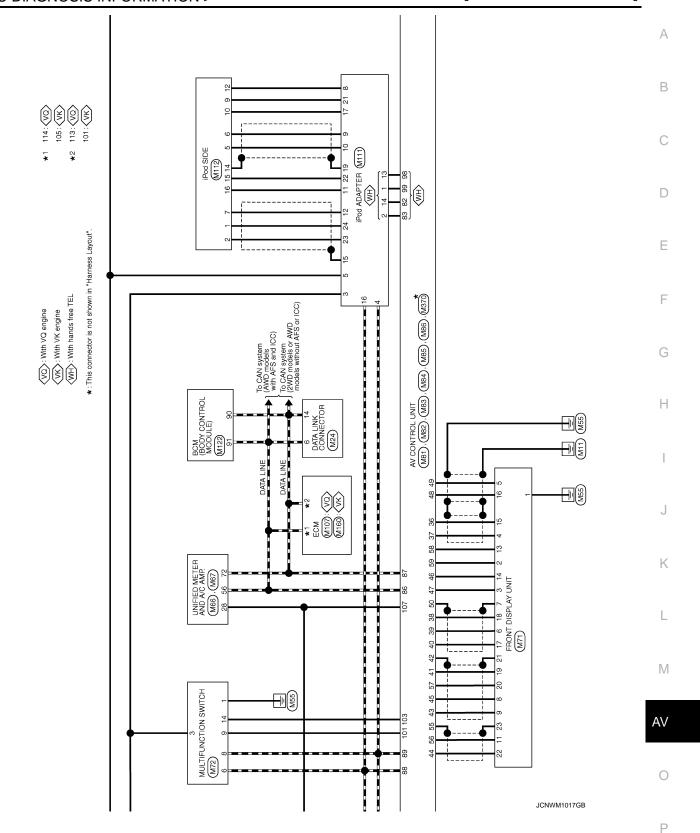
Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION -

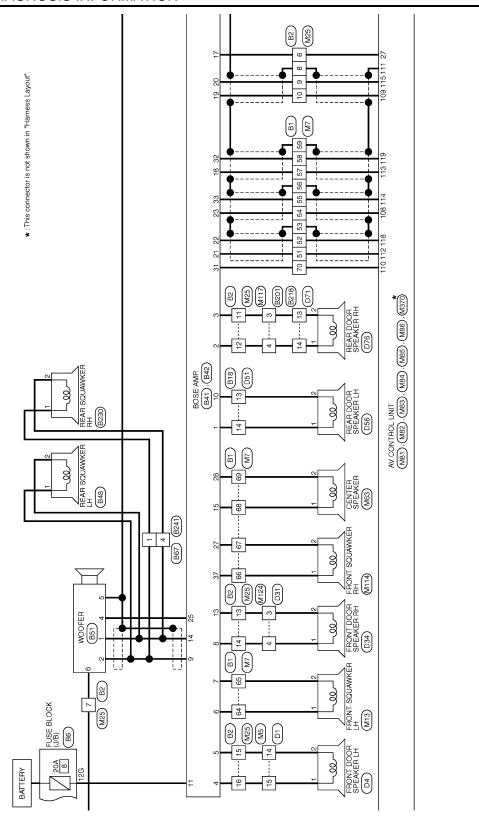
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NOTE:









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\*: This connector is not shown in "Harness Layout".

74 66 73 35 34 AV CONTROL UNIT AV CONTROL UNIT (M8E) ( AUXILIARY INPUT JACKS (M154) BOSE AMP. (B41), (B42) 

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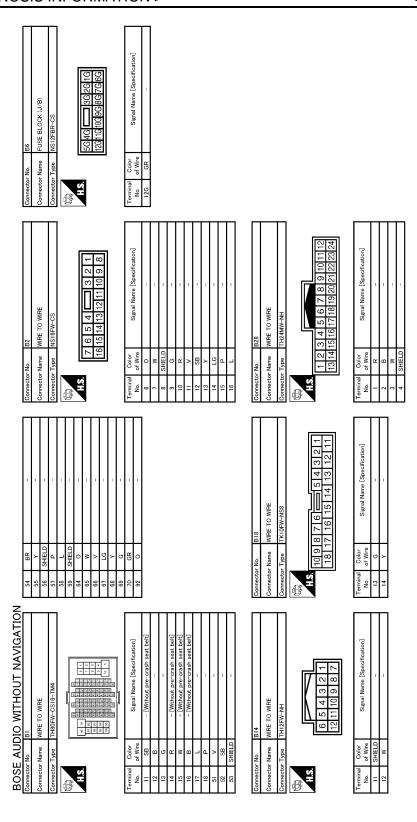
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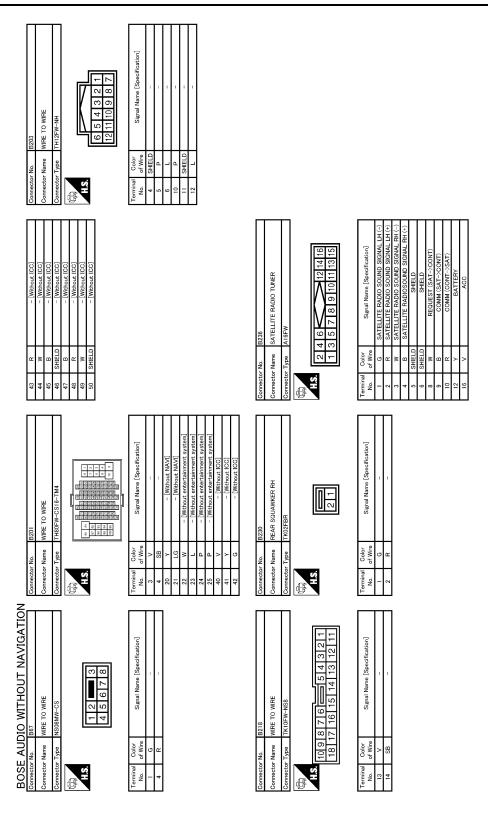
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12 B GND 13 Y SOUND SIGNAL FRONT DOOR SPEAKER RH (-) 14 R SOUND SIGNAL WOOFER AND FEAR SOUNMER (-)	Connector Na.  Connector Type RS00FGV  H.S.  (1 3 5	Color		A B C
Connector No.   E42   Connector Name   BOSE AMP.   Connector Type   SGA12FBR-SJA2     14 13   12   11 10	22         0         REVERSE           26         G         VEHICLE SPEED (6-PULSE)           30         B         ACC           31         GMD           32         SB         BATTERY			E F G
31   GR   AMP ON SIGNAL   32   L   SOUND SIGNAL FRONT LH (~)   33   Y   SOUND SIGNAL FRONT SOUAWKER RH (~)   37   V   SOUND SIGNAL FRONT SOUAWKER RH (~)	Connector No. B50 Connector Name CAMERA CONTROL UNIT Connector Type TH22FW-NH  LS.	Terminal   Color   Signal Name [Specification]   Color   No. of Wire   SHELD   SHELD		J K
BOSE AUDIO WITHOUT NAVIGATION	Connector No. B48 Connector Name REAR SQUAWKER LH Connector Type TK02FBR	Terminal   Codor   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1	JCNWM1021GB	M AV

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JCNWM1022GB

### **TEL ADAPTER UNIT**

## [WITHOUT NAVIGATION]

B241 WIRE TO WIRE NS08*W-CS  3	Signal Name [Specification]	B491 WIRE TO WIRE GTISC-IPP-HU	Signal Name [Specification]		A B
Connector No. Connector Name Connector Type H.S.	Color   Colo	Connector No. Connector Name Connector Type	Terminal Color No. of Wire 1		D
	ffeation]		ification]		Е
E238 TEL ADAPTER UNIT THOSFW-NH  55 57 29 41 36 38 40 42	Signal Mane [Specification] AV COMM (1) AV COMM (1)	B482 WIRE TO WIRE GTIGG-1S-HU	Signal Name [Specification]		F
ector No.	of Wire Door	Connector No. 6482 Connector Name WIRE 1 Connector Type GT160 H.S.	of Wire		G
Conne	Terminal No. 35	Сопи	No. o		Н
VEHICLE SPEED (8-PULSE) MICROPHONE VCC		SATELLITE RADIO TUNER FAKRA	Signal Name [Specification] SATELLITE ANTENNA		l J
28 29 P		Connector No. 6481 Connector Name SATELL Connector Type FAKRA	Terminal Color No. 07 Wire 33 -		K
ATION					L
NAVIG	Signal Mane (Specification)  BATTERY ACC IGANTON GOND GND MICROPHONE SIGNAL MICROPHONE SIGNAL TEL VOICE SIGNAL (-) CONTROL SIGNAL CONTROL SIGNAL CONTROL SIGNAL	ER UNITT	Signal Name (Specification) TEL ANTENNA SHELD		M
E AUDIO WITHOUT  **Name   B237  **Type   TH3ZFW-NH    E		B471 TEL ADAPTER UNIT GT16C-1S-HU  334	i iii		AV
BOSE AUDI Connector No.       Connector Name     Connector Type	Terminal Color No. of Wire 1. V Y Y C.	Connector No.  Connector Name  Connector Type  Connector Type	Terminal   Color   No. of Wire   No. of Wi		0
				JCNWM1023GB	Р

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or No.   D4   Connector No.   D31	Or Name         FRONT DOOR SPEAKER LH         Connector Name         WIRE TO WIRE           or Type         NS0ZFBR-CS         Connector Type         TH40FW-CS15	H.S. 15 41 1	Color   Signal Name [Specification]	ог No. D56  Ornector No. D71  Connector Name REAR DOOR SPEAKER LH  Connector Type IXIOWW-NSS  MSC I 2 3 4 5 6 7 8 9 10  11 12 13 14 15 16 17 18	Color   Signal Name [Specification]   Terminal   Color   Signal Name [Specification]
N   Connector No.   D1     Connector No.	Connector Name WIRE TO WIRE Connector Name Connector Type TH40FW-GS15 Connector Type		Terminal Color   Signal Name [Specification]   Terminal Color   No. of Wire   No. of	Connector No.  Connector Name WIRE TO WIRE  Connector Type  TX (IMM-NSS  Connector Type  Connector Type  TX   2   3   5   6   7   8   9   10  TX   1   2   14   15   16   17   18	Terminal Color No. of Wire Signal Name [Specification] Terminal (No. of Wire)
BOSE AUDIO WITHOUT NAVIGATION Connector No.   18492	Connector Name ANTENNA BASE Connector Type GT16C-IPP+HU	H.S.	Terminal Color No of Wre Signal Name [Specification] 3 - SATELLITE ANTENNA	Connector No. D34 Connector Name FRONT DOOR SPEAKER RH Connector Type NSZZEBR-CS  H.S.	Terminal Color Signal Name [Specification]

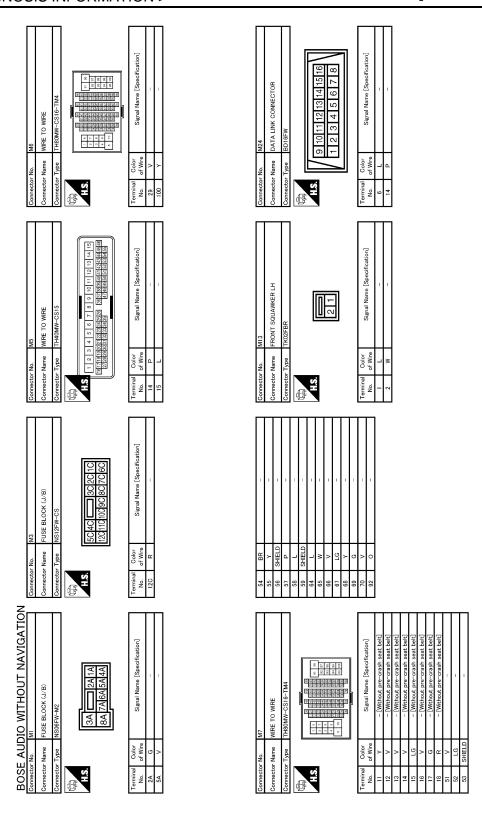
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### **TEL ADAPTER UNIT**

## [WITHOUT NAVIGATION]

	reation]	ROL MODULE)	reation]		А
E106  WHRE TO WIRE  TH80.PW-CSS 16-TM4	Signal Name (Specification)	F151 TCM (TRANSMISSION CONTROL MODULE) SP10FG  (1 2 3 4 5 6 7 8 9 10)	Signal Name [Specification] REV LAMP RLY		В
ector No. E ector Type 7	Color   Color   No.   Of Wire   29   LG   29   LG   100   V	ector No. ector Name ector Type	Terminal Color No. of Wire 7 L		C
Com Com	Termin No. 29 29 29 1100	Comm	<u> </u>		D
	R Superived State Superived State Superived Su	= 1	oscification]		Е
DIZI THOAMW-NH THOAMW-NH TTOAMW-NH	Signal Name [Specification] CAMERA POWER SUPPLY CAMERA GND CAMERA INAGE SIGNAL. SHIELD	WIRE TO WIRE TK36FW-NSIO	Signal Name [Specification]		F
No. Name Type	Color of Wire Color of Wire G	Connector No. F103 Connector Name WIRE T Connector Type TK38FY H.S. SITE SECRETOR THE STATE OF T	Color of Wire		G
Connector Connector	Terminal No. 1 1 2 2 3 3 4 4 4 4	Comn	Terminal No. 31		Н
No. D102  Name WIRE TO WIRE  TH24FW-NH  12   11   10   9   7   6   5   4   3   2   1    24   23   22   20   19   18   17   16   15   14   13	Signal Name [Specification]		Signal Name [Specification]		I
D102 WIRE TO WIRE TH24FW-NH  10 9 8 7 6 22 21 20 19 18		F51 A/T ASSEMBLY RK10FG-DGY  5 4 3 6 10 9 8 7	Signal Nas		J
Connector No. Connector Name Connector Type H.S. 12 11	Color   Colo	Connector No. Connector Type	Terminal Color No. of Wire 7 R R		K
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BOSE AUDIO WITHOUT NAVIGATIO Connector Name REAR DOOR SPEAKER RH Connector Type NSUZEBR-CS  MANAGER CO.  MANA	Signal Name [Specification]	ELOT PARKING BRAKE SWITCH TEDIFW	Signal Name [Specification]		M
IO WITH		E107 PARKING BF TB01FW	iš		AV
BOSE AUD) Connector Name   Connector Type   H.S.	Terminal   Color   No   Of Wire   1   SB   2   V	Connector No.  Connector Name  Connector Type  Light	Terminal Color No. of Wire 1 LG		0
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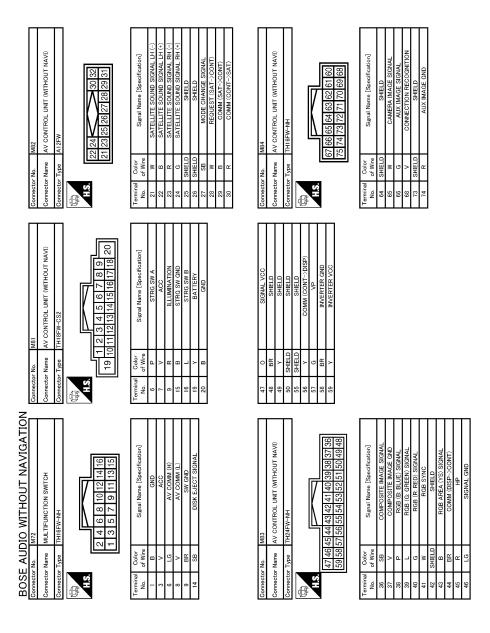


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### **TEL ADAPTER UNIT**

VC AMP.	Signal Name [Specification] VEHICLE SPEED (8-PULSE)	SIGNAL GND SIGNAL GND SWIELD RGB (R RED) SIGNAL RGB (B BLUE) SIGNAL RGB SWIC NP SHIELD COMM (DISP->CONT) SHIELD			A B
or No. M66 or Name UNIFED METER AND A/C AMP or Type TH40FW-NH	Color R Wire	LG   SIGNAL GND			С
Connector No. Connector Name Connector Type HS.	Terminal No. 28	14 15 16 17 17 18 19 20 20 21 22 23			D
	eoffication]	МПНОИТ NAVI) 4 3 2 1 16 15 14 13	ecification]  VCC VCC VCC VCC VS SIGNAL D SIGNAL SIGNAL SIGNAL SIGNAL C-DISP)		Е
MR3 CENTER SPEAKER TKOZFBR 211	Signal Name [Specification]	21 20 19 18 17	Signal Name (Specification)  GND  INVERTER VCC SIGNAL VCC COMPOSITE IMAGE GND SHIELD  HD  RGB (G. GREEN) SIGNAL SHIELD  HP  RGB AREA (YS) SIGNAL COMM (CONT-SDISP) INVERTER GND		F
Cornector No. MGS Connector Name CEN Connector Type TYCO	Terminal Color No. of Wire of Wire 2 G G	Connector Name FRC Connector Name FRC Connector Type TH2  12 [11] 10]	Color   Color   No. of Wire   No. of Wire   No. of Wire   S   S   S   S   S   S   S   S   S		G
					Н
M36 COMBINATION SWITCH (SPIRAL CABLE) TK08FGY-IV  24 25 26 31 32 33 34	Signal Name (Speorification)		Signal Name [Specification]		I
M36 COMBINATION SW TK08FGY-1V  24 25 26 31 32 33		M69 BACK-UP LAMP RELAY M302FL-M2-LC  1  2  1			J
Connector No. Connector Name Connector Type	Color   Colo	Connector No. Connector Type	Color   Colo		K
NOITA					L
BOSE AUDIO WITHOUT NAVIGATIO Connector No. M25 Connector Type WIRE TO WIRE Connector Type NS16MW-CS  H.S. 1 2 3	Signal Name (Specification)	M67  TH22FW-NH  TH4 G 66 17 88 60 50 15 50 61 55 60 15 15 60 15 15 60 17 15 60 15 15 60 15 15 60 15 15 60 15 15 60 15 15 60 15 15 60 15 15 60 15 15 60 15 15 60 15 15 60 15 15 15 60 15 15 15 15 15 15 15 15 15 15 15 15 15	Signal Name (Specification) CAN+H CAN+L		M
M25   M25   M25   M25   M25   M316MW-CS   M316MW-CS		M67  UNIFIED METE  TH3ZFW-NH  TH45 46 47 48 66 47 48 66 17 88 64 66 16 16 2 68 8 64 66 67 8 68 68 64 68 8 68 8 64 68 64 68 8 64 68	Sign Sign Sign Sign Sign Sign Sign Sign		AV
BOSE AUD Connector No. Connector Name Connector Type H.S.	Color   Colo	Connector No. Connector Name Connector Type H.S. A142-63 E7 58 59	Color   Color   No.   Of Wire   Sign   L   72   P   P		0
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No.   MIO7   Name   ECM (WITH VO ENGINE)	mme   Pod SIDE	Color   Signal Name   Specification   Of Wire   Pod SOUND SIGNAL (I.H. +)		A B
Connector Connector No. 113	Connector No. Connector Type  H.S.	Terminal 1		D
AV CONTROL UNIT (WITHOUT NAVI)	Pod SOUND SIGNAL, RH (+) SHIELD AV COMM (+) GND AND COMMECTION ACCESSORY DETECT Pod SOUND SIGNAL, LH (+) Pod SOUND SIGNAL, LH (+)			E F
M86   Connector No.   M86   Connector Name   AV CONTRO Connector Type   THIZPH-HH	14 Y PI 15 SHELD 16 LG 17 SB 19 SHELD 21 SB FPOd ( 22 W FF 23 W FF 24 B FP			G
AV COMM (1) [With bands froe phone) AUX SOUND SIGNAL, EH (+) AUX SOUND SIGNAL, EH (+) AUX SOUND SIGNAL, EH (+) Pod SOUND SIGNAL, EH (+) Pod SOUND SIGNAL, EH (+) Fod SOUND SIGNAL, EH (+) Fod SOUND SIGNAL, EH (+) Fod SOUND SIGNAL, EH (+) FOR SOUND	APTERNH - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Signal Name (Steerification) Pod SOUND SIGNAL, IH (+) Pod SOUND SIGNAL, IH (+) Pod SOUND SIGNAL, IH (+) ACC  AV COMM (L) BATTERY Pod BATTERY CHARGE COMM (Pod ADAPTER-)-Pod COMM (Pod ADAPTER-)-Pod COMM (Pod ADAPTER) Pod SOUND SIGNAL, IH (+) Pod SOUND SIGNAL, IH (-)		I
99 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Connector No. MIII  Connector Name   Pod ADAPTER  Connector Type   TH24FW-NH    1   2   3   4   5   6     1   1   1   1   1   1   1   1   1	Terminal Color No. of Wire 2 2 BR 4 V C 5 5 V V C 5 5 V V C 11 L L L L L L L L L L L L L L L L L		K
Connector Name	5 6 7 8 3141516	Signal Name [Specification] - [Without NAVI] - [Without NAVI]		L
M85	MITO WIRE TO WIRE THIGMW-NH  1 2 3 4 9 10 11 12 1			AV
BOSE AUIC Connector Name	Connector No. Connector Type Connector Type H.S.	Terminal   Color   No.   9   SHIELD   10   L   11   P	JCNWM1029GB	0

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43 B - [Without ICC]	<b>с</b> 0	SHIELD	48 R - [Without ICC] 49 W - [Without ICC] 50 SHIELD - [Without ICC]		Connector No. M144  Connector Name WHE TO WHE  Connector Type TH12MM-NH  H.S. 1 2 3 4 5 6 7 8 9 10 111 12	No.   Of Wire   Signal Name [Specification]   11   SHIELD   -
Connector No. M117	Connector Name WIRE TO WIRE	Connector Type TH80MW-CS16-TM4	H.S. 1	Terminal   Color   Signal Name   Specification	Connector No. MIZ6 Connector Name WIRE TO WIRE Connector Type THI2MM-NH  H.S. 1 2 3 4 5 6 7 8 9 10 11 12	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   Signal Name [Specification]
Connector No. M116	e e	Connector Type TK36MW-NS10	H.S. H.S. OF STREET STR	Terminal Color No. of Wire Signal Name [Specification]	MI24   Connector No.   MI24   Connector Name   WIRE TO WIRE   Connector Type   TH40MM-CS15   MI25   MI25	Terminal   Color   Signal Name [Specification.]   No. of Wire   Signal Name [Specification.]   3 Y
BOSE AUDIO WITHOUT NAVIGATION	e e	Connector Type TK02FBR	HS.	Terminal Color   Signal Name (Specification)   1	Connector No. M122 Connector Name BCM (BODY CONTROL MODULE) Connector Type ITH40FB-NH  M.S.  ITH0FB-NH  ITHIO TO BE BETTER SEE BE B	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   90   P   CAN-H   91   L   CAN-H

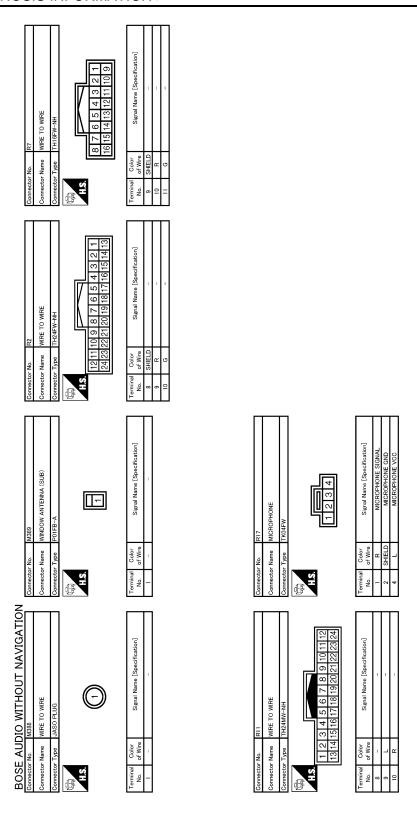
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### **TEL ADAPTER UNIT**

## [WITHOUT NAVIGATION]

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14 13	ifeation]	Е
Signal Name (Spe	M386 GT13SSN-1/IPP-HU GT13SSN-1/IPP-HU Signal Name [Specification] ANTENNA AMP. ON SIGNAL AM-FM MAIN	F
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Connector No. Connector Name Connector Type HAS HAS Is We of Wire Is W Is BR	Connector No. Connector Name Connector Type Terminal No. No. Of With	Н
H VK ENGINE)  -RZB-F-LH-Z  -RZB	WIRE 1-2/1PP-HU Signal Name [Specification]	I
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Connector No. Million Connector Name ECM. Connector Type RH241 128 127 128 101 P P 101 105 L P 105 105 L P 105 106 P P 105 107 108 P P 105 109 P P 105	Comector No. M355 Cornector Name WIRE Cornector Type GT13 H.S. H.S.  Terminal Color No. of Wire 1	K
		L
TTHOUT NAVIG	WIRE 2.1S-HU 2.1S-HU Signal Name (Specification)	M
DIO W MISS AUXILIA AUXILIA AUSEW	M375 WIRE TO GT13SC-	AV
BOSE AUIC Connector No. Connector No. Man. Connector Type Connecto	Connector No Connector Name Connector Type (1.5)	0
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## SYMPTOM DIAGNOSIS

### MULTI AV SYSTEM SYMPTOMS

Symptom Table

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#### **OPERATION**

Symptoms	Check items	Possible malfunction location / Action to take
Multifunction switch and preset switch operation does not work.	All switches cannot be operated.     "MULTI AV" is displayed on system selection screen when the CONSULT-III is started.	Multifunction switch power supply and ground circuit.     AV communication circuit between AV control unit and multifunction switch.     Perform CONSULT-III self-diagnosis.     Refer to AV-43. "CONSULT-III Function (MULTI AV)".
	All switches cannot be operated.     "MULTI AV" is not displayed on system selection screen when the CONSULT-III is started.	AV control unit power supply and ground circuit malfunction. Refer to AV-59, "AV CONTROL UNIT : Diagnosis Procedure".
	Only specified switch cannot be operated.	Multifunction switch or preset switch malfunction. Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-60, "MULTIFUNCTION SWITCH: Diagnosis Procedure"

#### RELATED TO HANDS-FREE PHONE

**Basic Inspection** 

 Check that the cellular phone is corresponding type (Bluetooth<sup>™</sup> correspond) when the hands-free related malfunction vehicle is in service before performing a diagnosis.

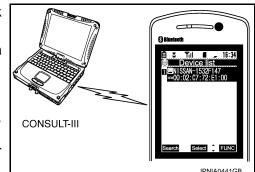
• There is a case that malfunction occurs due to the version change of the phone type, etc. even though it is a corresponding type. Therefore, confirm it by changing the cellular phone to another corresponding type phone, and check that it operates normally. It is necessary to distinguish whether the cause is the vehicle or cellular phone.

Simple check for Bluetooth<sup>™</sup> communication

- If cellular phone and AV control unit cannot be connected with Bluetooth<sup>™</sup> communication, following procedure allows the technician to judge which device has malfunction.
- 1. Turn on a cellular phone, not connecting Bluetooth<sup>™</sup> communication.
- 2. Start CONSULT-III, then start Windows®.
- 3. Set CONSULT-III near a cellular phone.
- 4. When operated Bluetooth<sup>™</sup> registration by cellular phone, check if CONSULT-III<sup>\*</sup> would be displayed on the device name. (If other Bluetooth<sup>™</sup> device is located near cellular phone, a name of the device would be displayed also.)

NOTE:

- \*:Displayed device name is "NISSAN-\*\*\*\*\*\*."
- If no device name is displayed, cellular phone is malfunctioning.
   Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.



On board self-diagnosis of hands-free phone system

Always perform the on board self-diagnosis at first after completing the basic inspection when the malfunction is detected on the hands-free phone system. Narrow down possible causes using the Diagnosis Chart if there is no malfunction in the on board self-diagnosis.

Trouble diagnosis chart by symptom

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## [WITHOUT NAVIGATION]

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection. (No connection is displayed on the display at the guide.)	Repeat the registration of cellular phone.	TEL adapter unit malfunction. Refer to AV-271, "Exploded View".
Hands-free phone cannot be established.	Both the reception and the speech cannot be performed.	<ul> <li>Perform CONSULT-III self-diagnosis. Refer to AV-43, "CONSULT-III Function (MULTI AV)".</li> <li>No malfunction. TEL adapter unit malfunction. Refer to AV-271, "Exploded View".</li> <li>Malfunction is detected. Refer to AV-43, "CONSULT-III Function (MULTI AV)".</li> </ul>
The other party's voice cannot	The operation of the "♥ "∠" switch can be performed.	TEL voice signal circuit malfunction between TEL adapter unit and AV control unit.
be heard by hands-free phone.	The operation of the " 🗸 " switch cannot be performed.	Control signal circuit. Refer to AV-81, "Diagnosis Procedure".
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	TEL adapter unit. Refer to AV-271, "Exploded View".
	Sound operation function does not work.	Microphone signal circuit.  Refer to AV-79, "Diagnosis Procedure".

### **RELATED TO RGB IMAGE**

Trouble diagnosis chart by symptom

Symptoms	Check items	Possible malfunction location / Action to take
	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-43, "CONSULT-III Function (MULTI AV)".
RGB image is not shown.	There is no malfunction in CONSULT-III self-diagnosis results.	<ul> <li>Front display unit power supply and ground circuit.     Refer to <u>AV-59</u>, "<u>FRONT DISPLAY UNIT</u>: <u>Diagnosis Procedure</u>".</li> <li>Vertical synchronizing (VP) signal circuit.     Refer to <u>AV-71</u>, "<u>Diagnosis Procedure</u>".</li> </ul>
	Light blue (Cyan) tint.	RGB signal (R: red) circuit. Refer to AV-65, "Diagnosis Procedure".
Color of RGB image is not proper.	Purple (Magenta) tint.	RGB signal (G: green) circuit. Refer to AV-66, "Diagnosis Procedure".
	Screen looks yellowish.	RGB signal (B: blue) circuit. Refer to AV-67, "Diagnosis Procedure".
RGB screen is rolling.	_	RGB synchronizing signal circuit. Refer to AV-68, "Diagnosis Procedure".
Fuel economy display is mal- functioning.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-43, "CONSULT-III Function (MULTI AV)".
	There is no malfunction in CONSULT-III self-diagnosis results.	Ignition signal circuit malfunction.  Refer to AV-59, "AV CONTROL UNIT : Diagnosis Procedure".

### **RELATED TO AUDIO**

Trouble diagnosis chart by symptom

Symptoms	Check items	Possible malfunction location / Action to take
The CD cannot be removed.	_	Disk eject signal circuit.  Refer to AV-74, "Diagnosis Procedure".

### **MULTI AV SYSTEM SYMPTOMS**

### < SYMPTOM DIAGNOSIS >

### [WITHOUT NAVIGATION]

Symptoms	Check items	Possible malfunction location / Action to take	
	No sound from all speakers.	<ul> <li>BOSE amp. power supply and ground circuit.     Refer to <u>AV-61</u>, "<u>BOSE AMP</u>. : <u>Diagnosis Procedure</u>".</li> <li>Amp. ON signal circuit</li> </ul>	
Audio sound is not heard.	Sound is not heard from woofer.	<ul> <li>Woofer power supply and ground circuit.</li> <li>Sound signal woofer circuit between BOSE amp. and woofer.</li> <li>Woofer ON signal circuit between BOSE amp. and woofer.</li> </ul>	
	Sound is not heard from center speaker.	Sound signal center speaker circuit.	
	Sound is heard only from specific places (RH front, RH rear, LH front and LH rear).	Sound signal circuit of malfunctioning system.	
It does not change to "Driver's Audio Stage" mode.	_	Mode change signal circuit.  Refer to AV-82, "Diagnosis Procedure".	
Satellite radio is not received.	"ANTENNA" is not displayed even when the channel is turned to 0 in Satellite radio mode.	Perform the following inspection procedure.  1. Check satellite radio antenna mounting nut for looseness.  NOTE:  Tightening torque: 6.5 N·m (0.66 kg-m, 58 in-lb.)  2. Visually check for satellite radio antenna feeder.  3. Replace the satellite radio antenna.  Refer to AV-261, "Exploded View".  4. Replace the satellite radio tuner.  Refer to AV-260, "Exploded View".	
Catolina radio is flot received.	"ANTENNA" is displayed when the channel is turned to 0 in Satellite radio mod	<ol> <li>Perform the following inspection procedure.</li> <li>Check the connection between satellite radio tuner and antenna feeder.</li> <li>Check the connection between satellite radio antenna and antenna feeder.</li> <li>Check Antenna feeder for open circuit.</li> <li>Replace the satellite radio antenna.         Refer to AV-261, "Exploded View".     </li> <li>Refer to AV-260, "Exploded View".</li> </ol>	
The sound of Satellite radio is not heard.	Other audio sounds are normal.	Satellite radio sound signal circuit between AV control unit and satellite radio tuner.	
It does not change to Satellite radio mode.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-43, "CONSULT-III Function (MULTI AV)".	
AM/FM radio is not received.	Other audio sounds are normal.	<ul><li>Antenna amp. ON signal circuit.</li><li>Antenna feeder.</li></ul>	

## RELATED TO iPod®

Trouble diagnosis chart by symptom

Connect another  $iPod^{\mathbb{R}}$  and check if the symptom is reproduced or not. If the symptom is reproduced, diagnose the vehicle. If no malfunction is detected, replace the iPod harness.

#### NOTE:

It is unable to check that between iPod® and iPod harness.

Symptoms	Check items	Possible malfunction location / Action to take
The sound of iPod <sup>®</sup> is not heard.	Other audio sounds are normal.	<ul> <li>iPod sound signal circuit between AV control unit and iPod adapter.</li> <li>iPod sound signal circuit between iPod<sup>®</sup> and iPod adapter.</li> </ul>
It does not change to iPod mode.	There is malfunction in the CONSULT-III self-diagnosis.	Perform CONSULT-III self-diagnosis. Refer to AV-43, "CONSULT-III Function (MULTI AV)".
"iPod is not connected" is dis- played when it comes to iPod mode.	Connected to iPod <sup>®</sup> .	iPod connection recognition signal circuit between iPod® and iPod adapter.

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### **MULTI AV SYSTEM SYMPTOMS**

### < SYMPTOM DIAGNOSIS >

### [WITHOUT NAVIGATION]

Symptoms	Check items	Possible malfunction location / Action to take
iPod <sup>®</sup> cannot charge the battery.	_	iPod battery charge circuit between iPod <sup>®</sup> and iPod adapter.
The title of music file in the iPod <sup>®</sup> is not indicated.		Communication circuit between iPod® and iPod adapter.
Accessing the iPod <sup>®</sup> is unavailable from the vehicle.	<del>-</del>	Communication circuit between IPod* and IPod adapter.

### RELATED TO STEERING SWITCH

Trouble diagnosis chart by symptom

Symptoms	Probable malfunction location
None of the steering switch operations work.	Steering switch signal GND circuit. Refer to AV-90, "Diagnosis Procedure".
Only specified switch cannot be operated.	Steering switch.
"SOURCE", "MENU UP", "MENU DOWN", " " ws witches of steering switch are not operated.	Steering switch signal A circuit. Refer to AV-86, "Diagnosis Procedure".
"VOL UP", "VOL DOWN", "•" switches of steering switch are not operated.	Steering switch signal B circuit. Refer to AV-88, "Diagnosis Procedure".

#### **RELATED TO AUX**

#### NOTE:

Check that there is no malfunction of AUX equipment main body before performing a diagnosis.

Trouble diagnosis chart by symptom

Symptoms	Check items	Probable malfunction location
No voice sound is heard when AUX mode is selected.	Voice sound is heard when other modes are selected.	AUX sound signal circuits malfunction between auxiliary input jacks and AV control unit.
Image is not displayed when	_	<ul> <li>AUX image signal circuit malfunction between auxiliary input jacks and AV control unit. Refer to AV-72, "Diagnosis Procedure".</li> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and front display unit. Refer to AV-70, "Diagnosis Procedure".</li> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and front display unit. Refer to AV-71, "Diagnosis Procedure".</li> <li>RGB area (YS) signal circuit malfunction between AV control unit and front display unit. Refer to AV-69, "Diagnosis Procedure".</li> </ul>
AUX mode is selected.	Camera image is normal (with rear view monitor)	AUX image signal circuit malfunction between auxiliary input jacks and AV control unit.  Refer to AV-72, "Diagnosis Procedure".
	Camera image is not displayed. (with rear view monitor)	<ul> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and front display unit. Refer to AV-70, "Diagnosis Procedure".</li> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and front display unit. Refer to AV-71, "Diagnosis Procedure".</li> <li>RGB area (YS) signal circuit malfunction between AV control unit and front display unit. Refer to AV-69, "Diagnosis Procedure".</li> </ul>
It does not change from AUX mode to other modes.	_	<ul> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and front display unit.     Refer to <u>AV-71, "Diagnosis Procedure"</u>.</li> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and front display unit.     Refer to <u>AV-70, "Diagnosis Procedure"</u>.</li> </ul>

RELATED TO REAR VIEW MONITOR

### **MULTI AV SYSTEM SYMPTOMS**

### < SYMPTOM DIAGNOSIS >

## [WITHOUT NAVIGATION]

Trouble diagnosis chart by symptom

Symptoms	Check items	Probable malfunction location
Camera image is not displayed (displayed in black and nothing can be displayed)	AUX image is not displayed.	<ul> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and front display unit.     Refer to AV-70. "Diagnosis Procedure".</li> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and front display unit.     Refer to AV-71. "Diagnosis Procedure".</li> </ul>
Camera image is not shown. (Guiding line is displayed.)	_	<ul> <li>Camera image signal circuit between camera control unit and rear view camera.</li> <li>Rear view camera power supply circuit.</li> <li>Refer to <u>AV-75. "Diagnosis Procedure"</u>.</li> </ul>
	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis.  Refer to AV-43, "CONSULT-III Function (MULTI AV)".
Camera image is not displayed. (Only warning message under area is displayed.)	AUX image is normal.	Camera image signal circuit malfunction between camera control unit and AV control unit.  Refer to AV-77, "Diagnosis Procedure".
	AUX image is not displayed.	RGB area (YS) signal circuit malfunction between AV control unit and display unit.  Refer to AV-69, "Diagnosis Procedure".
	Select "Camera Cont." of "Confirmation/ Adjustment" mode, Reverse Sensor is not turned ON at "Connection Confirmation".	Reverse signal circuit (camera control unit).
Camera image is rolling.	AUX image is also rolling.	Vertical synchronizing (VP) signal circuit malfunction between AV control unit and front display unit.  Refer to AV-71, "Diagnosis Procedure".
Camera image does not switch.	Malfunction of self-diagnosis result is indicated.	Camera connection recognition signal circuit Refer to AV-43, "CONSULT-III Function (MULTI AV)".
	Malfunction of self-diagnosis result is not indicated.	Reverse signal circuit (AV control unit).
The predicted course line display is malfunctioning.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis.  Refer to AV-43, "CONSULT-III Function (MULTI AV)".

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### NORMAL OPERATING CONDITION

Description INFOID:000000003838645

Vehicle operation information, refer to Owner's Manual.

#### **BASIC OPERATIONS**

Symptom	Possible cause	Possible solution
	The brightness is at the lowest setting.	Adjust the brightness of the display.
No image is displayed.	The system is in the video mode.	Press <b><disc></disc></b> to change the mode.
	The display is turned off.	Press <day night=""> to turn on the display.</day>
The screen is too dim. The movement is slow.	The temperature in the interior of the vehicle is low.	Wait until the interior of the vehicle has warmed up.
Some pixels in the display are darker or brighter than others.	This condition is an inherent characteristic of liquid crystal displays.	This is not a malfunction.
Some menu items cannot be selected.	Some menu items become unavailable while the vehicle is driven.	Park the vehicle in a safe location, and then operate the multi AV system.

#### RELATED TO VOICE RECOGNITION

#### Related to telephone

The system should respond correctly to all voice commands without difficulty. If problems are encountered, try the following solutions.

Where the solutions are listed by number, try each solution in turn, starting with number 1, until the problem is resolves.

Symptom	Solution	
System fails to interpret the command correctly.	Ensure that the command is valid.	
	2. Ensure that the command is spoken after the tone.	
	3. Speak clearly without pausing between words and at level appropriate to the ambient noise level in the vehicle.	
	Ensure that the ambient noise level is not excessive (for example, windows open or defroster on).     NOTE:     If it is too noisy to use the phone, it is likely that the voice commands will be recognized.	
	5. If more than one command was said at a time, try saying the commands separately.	
	6. If the system consistently fails to recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker. See "Speaker adaptation (SA) mode" earlier in this section. Refer to "OWNER'S MANUAL".	
The system consistently selects the wrong voicetag	Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the "List Names" command.	
	2. Replace one of the names being confused with a new name.	

#### **RELATED TO AUDIO**

- The majority of the audio malfunctions are the result of outside causes (bad CD/cassette, electromagnetic interference, etc.). Check the symptoms below to diagnose the malfunction.
- The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning.
   Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and then determine the cause.

#### NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA) or could be incorrectly mastered by the customer on a computer.
- Check if the CDs carry the Compact Disc Logo. If not, the disc is not mastered to the "red book" Compact Disc Standard and may not play.

### NORMAL OPERATING CONDITION

#### < SYMPTOM DIAGNOSIS >

### [WITHOUT NAVIGATION]

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Symptom	Cause and Counter measure	
Cannot play	Check if the CD was inserted correctly.	
	Check if the CD is scratched or dirty.	
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.	
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.	
	If there is a mixture of music CD files (CD-DA data) and MP3/WMA files on a CD, only the music CD files (CD-DA data) will be played.	
	Files with extensions other than ".MP3", ".WMA", ".mp3", or ".wma" cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.	
	Check if the disc or the file is generated in an irregular format, This may occur depending on the variation or the setting of MP3/WMA writing applications or other text editing applications.	
	Check if the finalization process, such as session close and disc close, is done for the disc.	
	Check if the CD is protected by copyright.	
Poor sound quality	Check if the CD is scratched or dirty.	
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA CD, or if it is a multi session disc, some time may be required before the music starts playing.	
Music cuts off or skips	The writing software and hardware combination might not match, or the writing speed, writing depth, writing width might not match the specifications. Try using the slowest writing speed.	
Skipping with high bit rate files	Skipping may occur with large quantities if data such as for high bit rate data.	
Move immediately to the next song when playing	When a non-MP3/WMA file has been given an extension of ".MP3", ".WMA", ".mp3", or ".wma", or when play is prohibited by copyright protection, the player will skip to the next song.	
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.	

Noise resulting from variations in field strength, such as fading noise and multi-path noise, or external noise from trains and other sources, is not a malfunction.

#### NOTE:

- Fading noise: This noise occurs because of variations in the field strength in a narrow range due to mountains or buildings blocking the signal.
- · Multi-path noise: This noise results from a time difference between the broadcast waves directly from the station arriving at the antenna and the waves reflected by mountains or buildings.

**AV-247** Revision: 2009 March 2009 FX35/FX50

## **PRECAUTION**

### **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIR BAG".
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
  ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s)
  with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly
  causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution for Trouble Diagnosis

INFOID:0000000003838647

#### AV COMMUNICATION SYSTEM

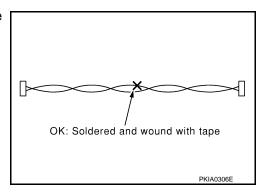
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

INFOID:0000000003838648

#### AV COMMUNICATION SYSTEM

• Solder the repaired parts, and wrap with tape. [Frays of twisted line must be within 110 mm (4.33 in).]

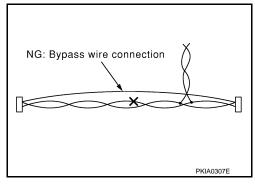


### **PRECAUTIONS**

### < PRECAUTION >

### [WITHOUT NAVIGATION]

• Do not perform bypass wire connections for the repair parts. (The spliced wire will become separated and the characteristics of twisted line will be lost.)



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# **PREPARATION**

## **PREPARATION**

< PREPARATION >

## **Commercial Service Tools**

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Tool name		Description
Power tool	PBIC0191E	Loosening screws

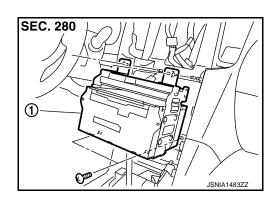
INFOID:0000000003928822

# REMOVAL AND INSTALLATION

### AV CONTROL UNIT

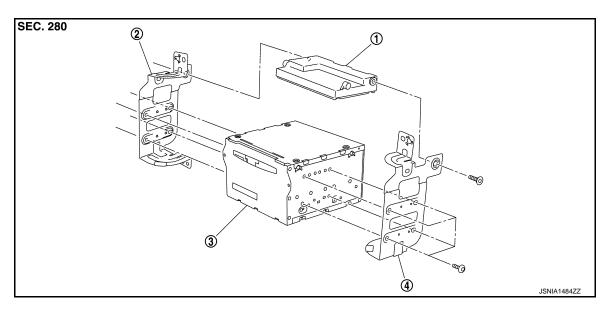
**Exploded View** 

**REMOVAL** 



1: AV control unit

#### DISASSEMBLY



- 1. Unified meter and A/C amp.
- 2. Bracket LH

3. AV control unit

4. Bracket RH

#### Removal and Installation

#### **REMOVAL**

- Remove front display unit. Refer to <u>AV-252, "Removal and Installation"</u>.
- Remove AV control unit with a unified meter and A/C amp. as a single unit from the body.
- 3. Remove bracket screws, and then remove AV control unit.

#### **INSTALLATION**

Installation is the reverse order of removal.

#### **CAUTION:**

Since AV control unit connector and unified meter and A/C amp. connector have the same form, be careful not to insert them wrongly.

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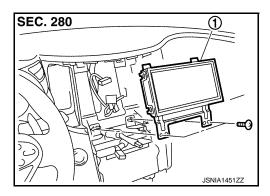
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INFOID:0000000003928823

## FRONT DISPLAY UNIT

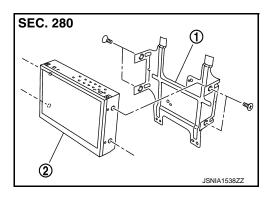
Exploded View

**REMOVAL** 



1. Front display unit

#### **DISASSEMBLY**



- Bracket
- 2. Front display unit

### Removal and Installation

INFOID:0000000003928825

#### **REMOVAL**

- 1. Remove cluster lid D. Refer to IP-12, "Removal and Installation".
- 2. Remove front display unit mounting screws.
- 3. Disconnect connector, and remove front display unit.

### **INSTALLATION**

Installation is the reverse order of removal.

#### FRONT DOOR SPEAKER

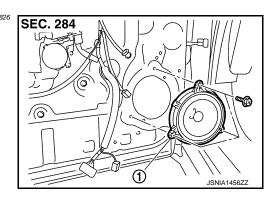
#### < REMOVAL AND INSTALLATION >

[WITHOUT NAVIGATION]

### FRONT DOOR SPEAKER

**Exploded View** 

INFOID:0000000003928826



Front door speaker

#### Removal and Installation

REMOVAL

- 1. Remove front door finisher. Refer to <a href="INT-11">INT-11</a>, "Removal and Installation".
- 2. Remove front door speaker mounting bolts.
- 3. Disconnect connector and remove front door speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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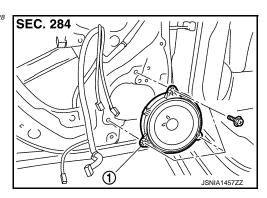
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### **REAR DOOR SPEAKER**

**Exploded View** 

INFOID:0000000003928828



Rear door speaker

#### Removal and Installation

#### **REMOVAL**

- 1. Remove rear door finisher. Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".
- 2. Remove rear door speaker mounting bolts.
- 3. Disconnect connector and remove rear door speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

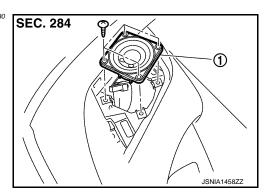
### **FRONT SQUAWKER**

#### [WITHOUT NAVIGATION]

### **FRONT SQUAWKER**

### **Exploded View**

INFOID:0000000003928830



Front squawker

### Removal and Installation

#### **REMOVAL**

- 1. Remove speaker grille. Refer to IP-12, "Removal and Installation".
- 2. Remove front squawker mounting screws.
- 3. Disconnect connector and remove front squawker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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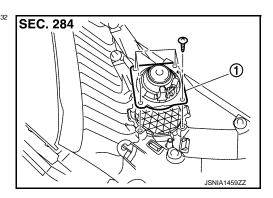
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### **REAR SQUAWKER**

### **Exploded View**

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Rear squawker

### Removal and Installation

INFOID:0000000003928833

#### **REMOVAL**

- 1. Remove luggage side finisher upper. Refer to <a href="INT-28">INT-28</a>, "Exploded View".
- 2. Remove rear squawker mounting screws.
- 3. Remove rear squawker.

#### **INSTALLATION**

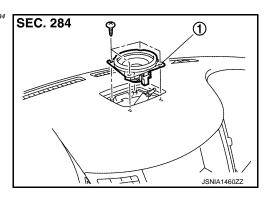
Installation is the reverse order of removal.

#### [WITHOUT NAVIGATION]

### **CENTER SPEAKER**

### **Exploded View**

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Center speaker

#### Removal and Installation

INFOID:0000000003928835

#### **REMOVAL**

- 1. Remove center speaker grille. Refer to IP-11, "Exploded View".
- 2. Remove center speaker mounting screws, lift up the center speaker and disconnect connector.
- 3. Remove center speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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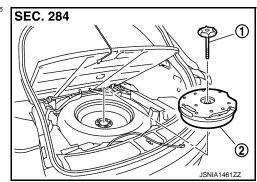
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### **WOOFER**

### **Exploded View**

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- 1. Woofer clamp
- 2. Woofer

### Removal and Installation

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#### **REMOVAL**

- 1. Pull up luggage finisher cover and hang the strap to upper body.
- 2. Remove woofer clamp.
- 3. Remove harness clip and connector.
- 4. Remove woofer.

#### **INSTALLATION**

Installation is the reverse order of removal.

#### [WITHOUT NAVIGATION]

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### BOSE AMP.

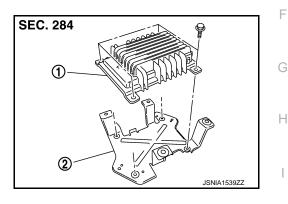
**Exploded View** 

**REMOVAL** 

**SEC. 284 ①**  $\mathcal{Q}$ つ JSNIA1462ZZ

1. BOSE amp.

#### **DISASSEMBLY**



- 1. BOSE amp.
- Bracket

### Removal and Installation

#### **REMOVAL**

- Remove luggage floor spacer (LH). Refer to <a href="INT-28">INT-28</a>, "Exploded View".
- Remove BOSE amp. mounting nuts.
- Disconnect connector and remove BOSE amp.

#### **INSTALLATION**

Installation is the reverse order of removal.

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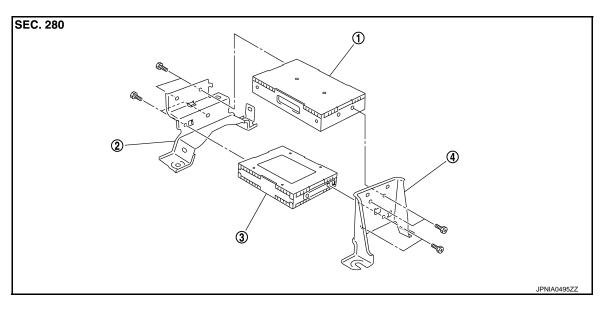
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### SATELLITE RADIO TUNER

Exploded View



- TEL adapter unit
- 2. Bracket (front)

3. Satellite radio tuner

4. Bracket (rear)

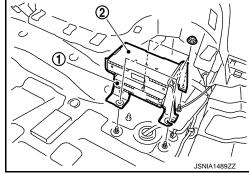
#### Removal and Installation

INFOID:0000000003928864

2009 FX35/FX50

#### **REMOVAL**

- 1. Remove luggage floor spacer (RH). Refer to INT-28, "Exploded View".
- 2. Remove nuts, and then satellite radio tuner connector and TEL adapter unit connector.
- 3. Remove satellite radio tuner (1) with TEL adapter unit (2) as a single unit from the body.



#### **INSTALLATION**

Install in the reverse order of removal.

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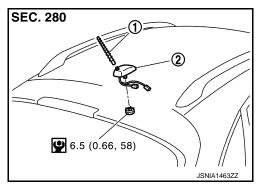
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### **ANTENNA BASE**

### **Exploded View**

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- 1. Antenna rod
- 2. Antenna base

Refer to GI-4, "Components" for symbols in the figure.

#### Removal and Installation

INFOID:0000000003928841

#### **REMOVAL**

- 1. Remove headlining (rear). Keep a service area. Refer to <a href="INT-23">INT-23</a>, "Exploded View".
- 2. Remove antenna base mounting nut.
- 3. Disconnect connector and remove antenna base.

#### **INSTALLATION**

Installation is the reverse order of removal.

Antenna base mounting nut 
9: 6.5 N·m (0.66 kg-m, 58 in-lb)

#### **CAUTION:**

Be careful about tightening torque. Antenna sensitivity becomes poor, and when it is excessive, roof panel may be deformed, when roof antenna mounting nut tightening torque is loose.

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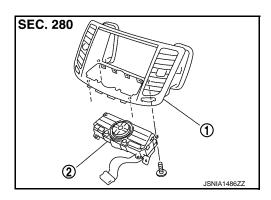
### **MULTIFUNCTION SWITCH**

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

**DISASSEMBLY** 



- 1. Cluster lid D
- 2. Multifunction switch

#### Removal and Installation

INFOID:0000000003928843

#### **REMOVAL**

- 1. Remove cluster lid D. Refer to IP-11, "Exploded View".
- 2. Remove multifunction switch mounting screws.
- 3. Disconnect connector and remove multifunction switch.

#### **INSTALLATION**

Installation is the reverse order of removal.

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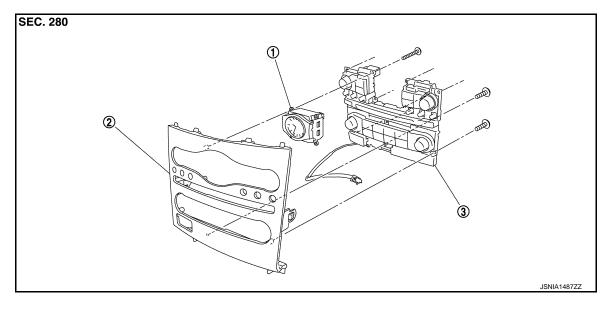
### PRESET SWITCH

**Exploded View** INFOID:0000000003928844

**REMOVAL** 

Refer to IP-11, "Exploded View".

DISASSEMBLY

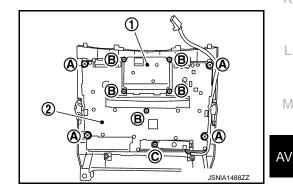


1. Clock Cluster lid C 3. Preset switch

#### Removal and Installation

#### **REMOVAL**

- Remove cluster lid C. Refer to IP-11, "Exploded View".
- 2. Remove preset switch mounting screws.
- Remove preset switch. 3.
  - 1. Clock
  - 2. Preset switch
  - A. Screw
  - B. Screw
  - Screw



#### INSTALLATION

Revision: 2009 March

Installation is the reverse order of removal.

#### NOTE:

When installing preset switch, do not allow the print wire that connects preset switch and multifunction switch to get caught in between AV control unit and preset switch.

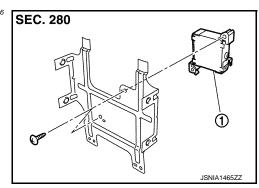
> **AV-263** 2009 FX35/FX50

#### [WITHOUT NAVIGATION]

### **IPOD ADAPTER**

### **Exploded View**

INFOID:0000000003928846



1. iPod adapter

### Removal and Installation

INFOID:0000000003928847

#### **REMOVAL**

- 1. Remove front display unit with bracket. Refer to AV-252, "Removal and Installation".
- 2. Remove front display from display bracket.
- 3. Remove iPod adapter mounting screws.
- 4. Disconnect connector and remove iPod adapter.

#### **INSTALLATION**

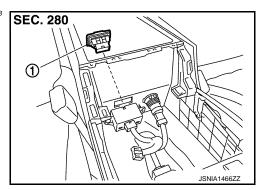
Install in the reverse order of removal.

### [WITHOUT NAVIGATION]

### **IPOD CONNECTOR**

### **Exploded View**

INFOID:0000000003928848



. iPod connector

### Removal and Installation

# REMOVAL

- 1. Remove console box assembly. Refer to IP-22, "Exploded View".
- 2. Press pawl from the back of console finisher to remove iPod connector.

#### **INSTALLATION**

Install in the reverse order of removal.

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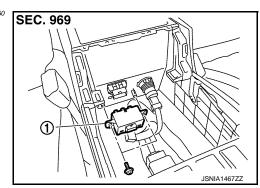
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## **AUXILIARY INPUT JACKS**

**Exploded View** 

INFOID:0000000003928850



1. Auxiliary input jacks

#### Removal and Installation

INFOID:0000000003928851

#### **REMOVAL**

- 1. Remove console box assembly. Refer to IP-22, "Exploded View".
- 2. Remove auxiliary mounting screws.
- 3. Disconnect connector and remove auxiliary input jacks.

#### **INSTALLATION**

Installation is the reverse order of removal.

#### [WITHOUT NAVIGATION]

### **MICROPHONE**

**Exploded View** 

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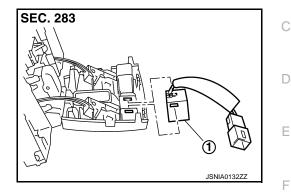
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**REMOVAL** 

Refer to INT-23, "Exploded View".

**DISASSEMBLY** 



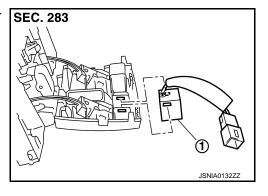
1. Microphone

#### Removal and Installation

INFOID:0000000003928853

#### **REMOVAL**

- 1. Remove map lamp assembly. Refer to <a href="INT-23">INT-23</a>, "Exploded View".
- 2. Remove microphone (1), stretching pawls of map lamp assembly.



#### **INSTALLATION**

Installation is the reverse order of removal.

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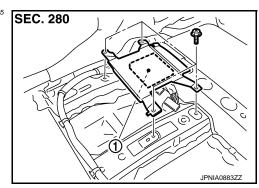
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### **CAMERA CONTROL UNIT**

### **Exploded View**

INFOID:0000000003928855



Camera control unit

#### Removal and Installation

INFOID:0000000003928856

#### **REMOVAL**

- 1. Remove front seat (LH side). Refer to SE-70, "Exploded View".
- 2. Remove floor carpet. Keep a service area.
- 3. Remove camera control unit mounting screws.
- 4. Disconnect connector and remove camera control unit.

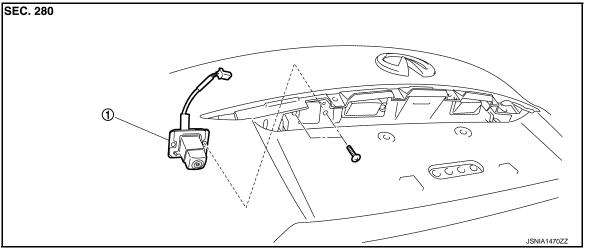
#### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- 2. Perform predicted course line center position adjustment. Refer to <u>AV-16, "REAR VIEW MONITOR POS-SIBLE ROUTE LINE CENTER POSITION ADJUSTMENT : Special Repair Requirement"</u>.

INFOID:0000000003928857

### **REAR VIEW CAMERA**

### **Exploded View**



1. Rear view camera

#### Removal and Installation

#### **REMOVAL**

- Remove back door outside finisher upper. Refer to EXT-49, "Exploded View".
- Remove door handle cover. Refer to EXT-49, "Exploded View".
- 3. Remove rear view camera mounting screws and rear view camera harness connector.
- Remove rear view camera.

#### **INSTALLATION**

- Installation is the reverse order of removal.
- 2. Adjust the guide line position if the guide line position is shifted after installing the rear view camera. Refer to AV-270, "Adjustment".

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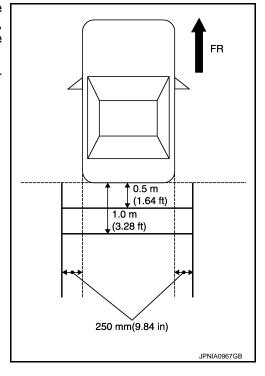
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Adjustment

- 1. Draw lines on rearward area of the vehicle passing through the following points: 250 mm (9.84 in) from both sides of the vehicle, and 0.5 m (1.64 ft), 1.0 m (3.28 ft) from the rear end of the bumper.
- Set into "Adjust offset of rear view camera" mode of Confirmation/Adjustment mode.

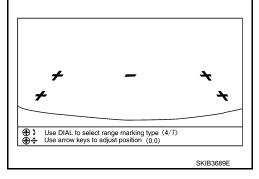


Rotate the center dial, and then select the guiding line pattern so that its angle is aligned with the correction line of the rear of the vehicle.

#### Selected pattern : 7

4. Fine adjust the guiding line so that its position is aligned to the correction line by pressing the up/down/left/right switches. Pressing "ENTER" enable the camera control unit to memory the adjusted guiding line position.

Up/Down adjustment range : -20 - 20Left/Right adjustment range : -20 - 20



#### **CAUTION:**

Never operate other function such as pressing BACK while writing index data.

If Confirmation/Adjustment mode does not function in the above procedure, perform one of the following service to adjust the index again.

- Remove battery for five min. Then reconnect battery.
- Remove camera control unit connector for five min. Then reconnect camera control unit connector.

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### **TEL ADAPTER UNIT**

### **Exploded View**

SEC. 280

- TEL adapter unit
- 2. Bracket (front)

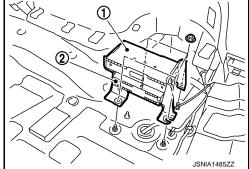
3. Satellite radio tuner

4. Bracket (rear)

#### Removal and Installation

#### REMOVAL

- 1. Remove luggage floor spacer (RH). Refer to <a href="INT-28">INT-28</a>, "Exploded View".
- 2. Remove nuts, and then remove TEL adapter unit connector and satellite radio tuner connector.
- 3. Remove TEL adapter unit (1) with satellite radio tuner (2) as a single unit from the body.



#### **INSTALLATION**

Install in the reverse order of removal.

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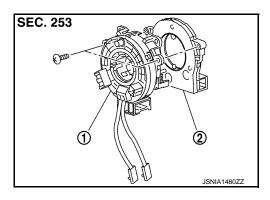
### STEERING ANGLE SENSOR

Exploded View

**REMOVAL** 

Refer to SR-8, "Exploded View".

**DISASSEMBLY** 



- 1. Spiral cable
- 2. Steering angle sensor

#### Removal and Installation

INFOID:0000000003928862

#### **REMOVAL**

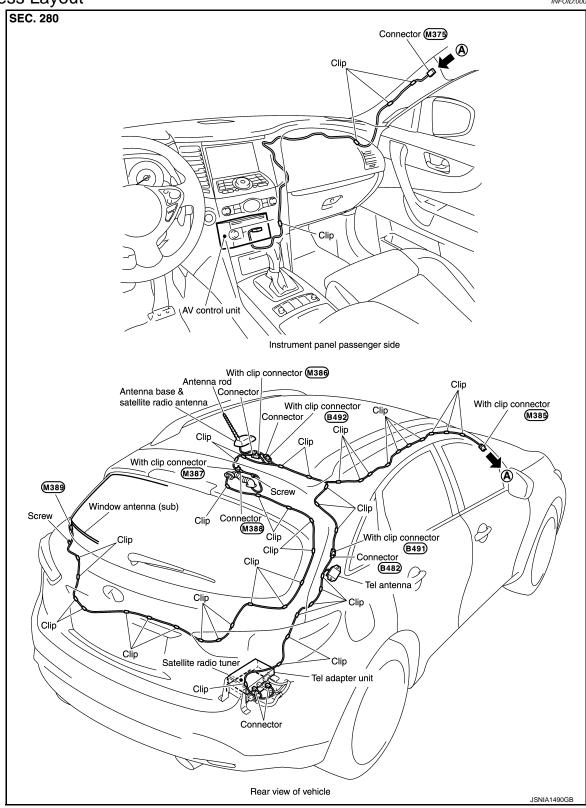
- 1. Remove spiral cable. Refer to SR-8, "Exploded View".
- 2. Remove steering angle sensor mounting screws.
- 3. Remove steering angle sensor.

#### **INSTALLATION**

Installation is the reverse order of removal.

### ANTENNA FEEDER

Harness Layout



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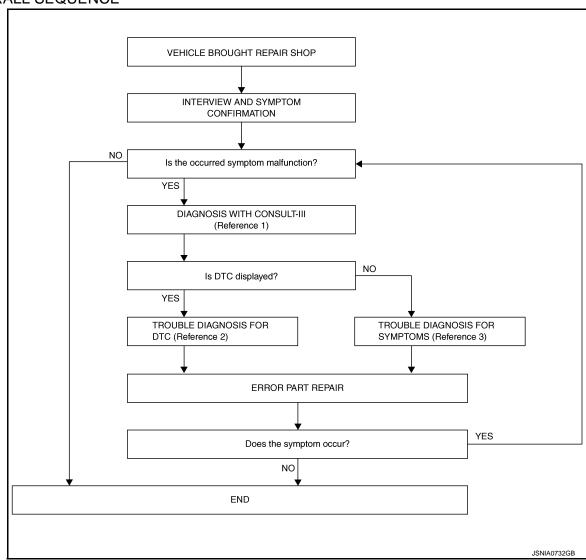
### **BASIC INSPECTION**

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow (Multi AV)

#### INFOID:0000000003940609

#### **OVERALL SEQUENCE**



- Reference 1... Refer to AV-330, "CONSULT-III Function (MULTI AV)".
- Reference 2··· Refer to <u>AV-442</u>, "<u>DTC Index</u>".
- Reference 3··· Refer to AV-565, "Symptom Table".

#### **DETAILED FLOW**

### 1.INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

- Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred).
- · Check the symptom.

#### Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

2.DIAGNOSIS WITH CONSULT-III

#### DIAGNOSIS AND REPAIR WORKFLOW

#### < BASIC INSPECTION >

#### [NAVIGATION (SINGLE MONITOR)]

Connect CONSULT-III and perform a self-diagnosis for "MULTI AV". Refer to AV-330, "CONSULT-III Function (MULTI AV)". NOTE:

Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed.

2. Check if any DTC is displayed in the self-diagnosis results.

### Is DTC displayed?

YES >> GO TO 3. NO >> GO TO 4.

## 3.trouble diagnosis for dtc

Check the DTC indicated in the self-diagnosis results.

Perform the relevant diagnosis referring to the DTC Index. Refer to AV-442, "DTC Index".

>> GO TO 5.

### 4.TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-565, "Symptom Table".

>> GO TO 5.

### 5. ERROR PART REPAIR

Repair or replace the identified malfunctioning parts.

2. Perform a self-diagnosis for "MULTI AV" with CONSULT-III.

Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC has been indicated in the self-diagnosis results.

3. Check that the symptom does not occur.

#### Does the symptom occur?

YES >> GO TO 1.

NO >> INSPECTION END

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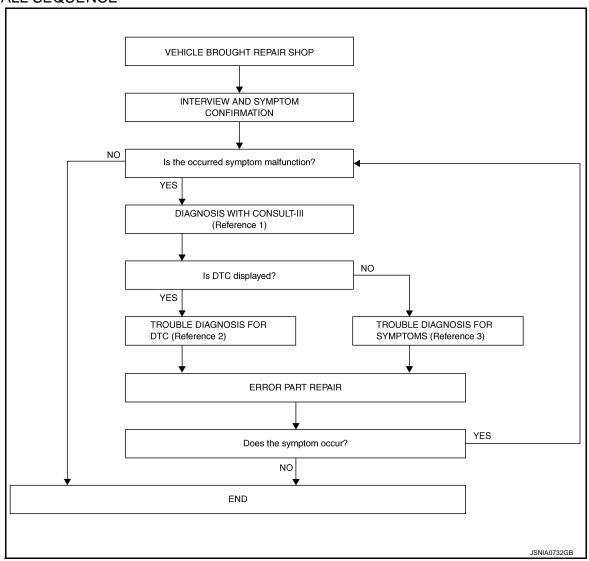
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**AV-275** Revision: 2009 March 2009 FX35/FX50 Work Flow (Sonar)

INFOID:0000000003940610

#### **OVERALL SEQUENCE**



- Reference 1... Refer to AV-337, "CONSULT-III Function (SONAR)".
- Reference 2··· Refer to AV-564, "DTC Index".
- Reference 3... Refer to AV-565, "Symptom Table".

#### **DETAILED FLOW**

### 1.INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

- Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred).
- · Check the symptom.

#### Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

### 2. DIAGNOSIS WITH CONSULT-III

1. Connect CONSULT-III and perform a self-diagnosis for "SONAR". Refer to AV-337, "CONSULT-III Function (SONAR)".

#### NOTE:

Skip to step 4 of the diagnosis procedure if "SONAR" is not displayed.

#### DIAGNOSIS AND REPAIR WORKFLOW

#### < BASIC INSPECTION >

[NAVIGATION (SINGLE MONITOR)]

2.	Check if any DTC is displayed in the self-diagnosis results.
Is DTC displayed?	

YES >> GO TO 3. NO >> GO TO 4.

### 3.trouble diagnosis for dtc

- 1. Check the DTC indicated in the self-diagnosis results.
- Perform the relevant diagnosis referring to the DTC Index. Refer to <u>AV-564, "DTC Index"</u>.

>> GO TO 5.

### 4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to <u>AV-565, "Symptom Table"</u>.

>> GO TO 5.

### 5. ERROR PART REPAIR

- 1. Repair or replace the identified malfunctioning parts.
- 2. Perform a self-diagnosis for "SONAR" with CONSULT-III.

#### NOTE:

Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC has been indicated in the self-diagnosis results.

3. Check that the symptom does not occur.

#### Does the symptom occur?

YES >> GO TO 1.

NO >> INSPECTION END

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Revision: 2009 March AV-277 2009 FX35/FX50

#### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

[NAVIGATION (SINGLE MONITOR)]

### INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

Always correct the center position of the predicted course line after disconnecting the battery negative terminal

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

1.correction of center position of predicted course line

Refer to the following for details.

>> Refer to AV-278, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Special Repair Requirement".

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000003826536

When around view monitor control unit is replaced, the center position of predicted course line shall be corrected.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

 ${f 1}$  .correction of center position of predicted course line

Refer to the following for details.

>> Refer to AV-278, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Special Repair Requirement".

PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT

PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Description

INFOID:0000000003826538

Adjust the center position of the predicted course line of the around view monitor if it is shifted.

PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Special Repair Requirement

1.STEERING OPERATION

Steer the steering wheel to the leftmost and rightmost ends.

>> GO TO 2.

2.DRIVING

Drive the vehicle straight ahead 100 m (328.1 ft) or more at a speed of 30 km/h (18.6 MPH) or more.

>> END
CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

#### [NAVIGATION (SINGLE MONITOR)]

### CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Description

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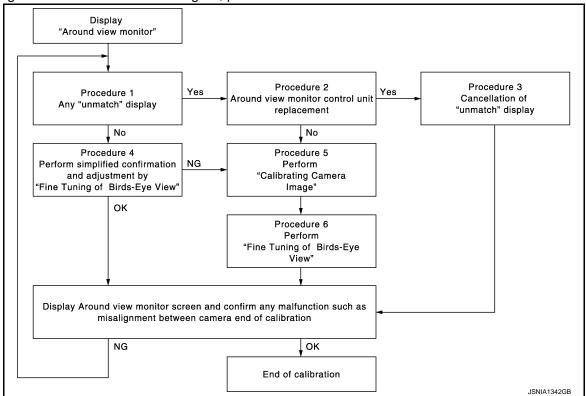
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- Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.
- Align the white lines on the road near the vehicle at the boundary of each camera image by this camera calibration. The white lines far from the vehicle may not be aligned at the boundary of each camera image. The farther the line, the greater the difference is.

# CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement

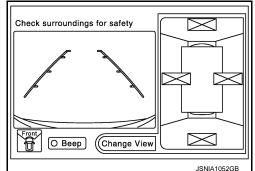
#### Calibration flowchart

Following the flowchart shown in the figure, perform the calibration.



#### NOTE:

In the un-match display, the un-match camera position is indicated as "\sum "on the birds-eye view.



#### Calibration procedure

1. AROUND VIEW MONITOR SCREEN CONFIRMATION

Revision: 2009 March AV-279 2009 FX35/FX50

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#### INSPECTION AND ADJUSTMENT

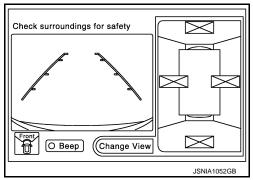
#### < BASIC INSPECTION >

#### [NAVIGATION (SINGLE MONITOR)]

Check that there is the un-match display in any camera.

#### Is the un-match display visible?

YES >> GO TO 2. NO >> GO TO 4.



### 2. CHECK THAT AROUND VIEW MONITOR CONTROL UNIT IS REPLACED

Check that the around view monitor control unit is replaced.

Is the around view monitor control unit replaced?

YES >> GO TO 3.

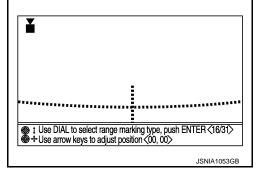
NO >> GO TO 5.

3. Release un-match display (perform only when the around view monitor control unit is replaced)

- 1. Select "Camera Cont." of Confirmation/ Adjustment mode, and then set to "Calibrating Camera Image" mode.
- Press the "ENTER" switch of the multifunction switch on each screen of "Rear Camera", "Front Camera", "Dr-Side Camera", "Pass-Side Camera".

#### **CAUTION:**

- Do never operate the center dial and up/down/left/right switches. Only press the "ENTER" switch.
- Never perform "Initialize Camera Image Calibration".
- 3. Display the around view monitor screen, and check that there is no malfunction such as a difference between each camera image.



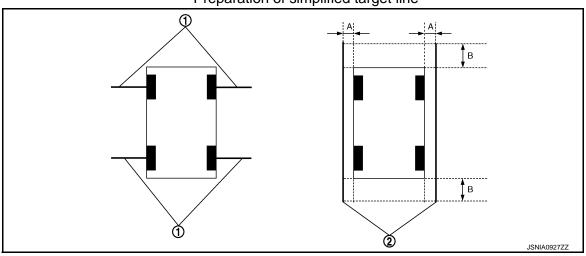
#### Is there a malfunction?

YES >> Calibration end NO >> GO TO 1.

### 4. PERFORM SIMPLIFIED CONFIRMATION/ADJUSTMENT BY "FINE TUNING OF BIRDS-EYE VIEW"

- 1. Put target line 1 on the ground beside each axle using packing tape, etc.
- 2. Put target lines 2 equal to the vehicle total length + approximately 1.0 m (39.3 in) from the vehicle side (right and left) at approximately 30 cm (11.8 in) away from the vehicle (make the line as parallel with the vehicle as possible).

#### Preparation of simplified target line



#### INSPECTION AND ADJUSTMENT

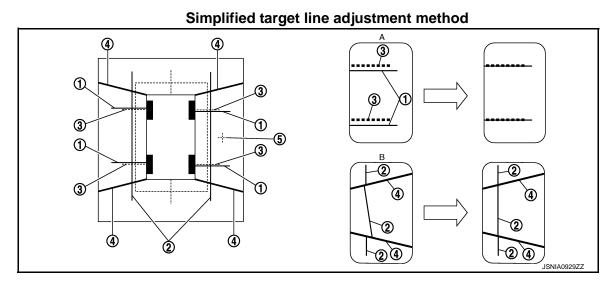
[NAVIGATION (SINGLE MONITOR)]

#### < BASIC INSPECTION >

1. Target lines 1

- 2. Target lines 2
- Approx. 30 cm (11.8in)
- B. Approx. 1.0 m (39.3 in)
- 3. Select "Camera Cont." of Confirmation/ Adjustment mode, and then set to "Fine Tuning of Birds-Eye View-
- Select left and right cameras by pressing the "CAMERA" switch, and perform the following confirmation.
- Check that target line 1 is aligned with the marker on the screen. Overlap the line aligned to the marker with the upper/lower switches if necessary.
- Check if there is a difference between target lines 2 between cameras. Adjust target lines 2 to be straight lines by operating the center dial and left/right switches if necessary.

- Never adjust the front camera and rear camera. Only adjust the right and left cameras.
- Operate the center dial slowly because the changing of the screen takes approximately 1 second.



1. Target lines 1 2. Target lines 2 Marker for target line 1

- 4 Boundary between cameras
- Crosshairs cursor (mark indicated 5. the selected camera)
- Adjustment method for target lines 1 A. (right)
- Adjustment method for target lines 2 (right)
- Adjust left and right cameras. Check that the difference between target line 1 and the marker on the screen, and between target lines 2 is solved.

#### NOTE:

- It can be initialized to the NISSAN factory default condition with "Initialize Camera Image Calibration" of "Calibrating Camera Image".
- The adjustment value is cancelled on this mode by performing "Initialize Camera Image Calibration".

#### Is the difference corrected?

YES >> Finish the writing to around view monitor control unit by pressing "ENTER" switch.

NO >> GO TO 5.

### ${f 5.}$ PERFORM "CALIBRATING CAMERA IMAGE"

#### Preparation of target line

- 1. Hang a string with a weight as shown in the figure. Put the points FM0, RM0 (mark) on the ground at the center of the vehicle front end and rear end with white packing tape or a pen.
- Route the vinyl string under the vehicle, and then pull and fix it on the point approximately 1.0 m (39.9 in) to the front and rear of the vehicle through the points FM0 and RM0 using packing tape.

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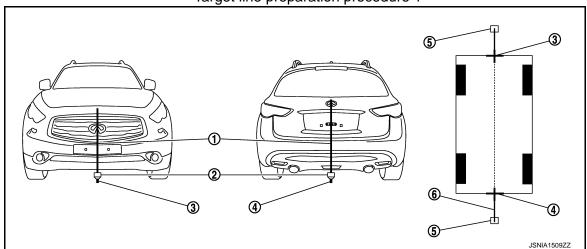
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#### Target line preparation procedure 1



1. Thread

2.

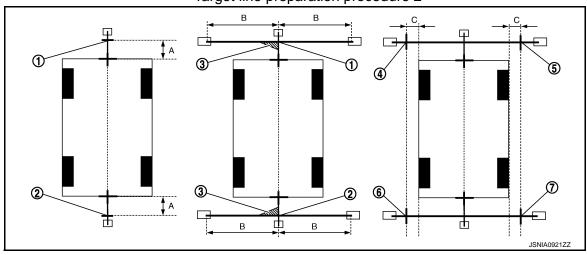
3. Point FM0 (mark)

- 4. Point RM0 (mark)
- 5. Packing tape (to fix the vinyl string)
- 6. Vinyl string
- Put the points FM and RM (mark) 75 cm (29.5 in) from the points FM0 and RM0 individually.

Weight

- 4. Route the vinyl string through the points FM and RM using a triangle scale, and then fix it at approximately 1.5 m (59 in) on both sides with packing tape.
- 5. Put the points FL, FR, RL, and RR (mark) to both right and left [vehicle width / 2 + 30 cm (11.8 in)] from the points FM and RM.

#### Target line preparation procedure 2



- 1. Point FM
- Point FL (mark)
- 7. Point RR (mark)
- A. 75 cm (29.5 in)

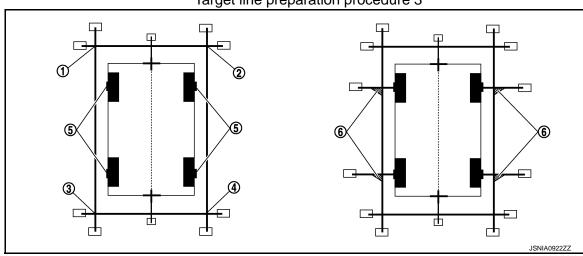
- 2. Point RM
- 5. Point FR (mark)

- 3. Triangle scale
- 6. Point RL (mark)
- 30 cm (11.8 in)
  - C. [Vehicle width/ 2 + 30 cm (11.8 in) from the points FM and RM]
- 6. Draw the lines of the points FL RL and FR RR with vinyl string, and fix it with packing tape.

Approx. 1.5 m (59 in)

7. Put a mark on the center of each axle, draw vertical lines to the lines of the points FL – RL and FR – RR from the marks on the center of the axle using a triangle scale, and then fix the lines using packing tape.

Target line preparation procedure 3



Point FL
 Point RR

- 2. Point FR
- Center position of axle
- 3. Point RL
- 6. Triangle scale

Perform "Calibrating Camera Image"

- 1. Select "Camera Cont." of "Confirmation/ Adjustment" mode, and then set to "Calibrating Camera Image" mode.
- Overlap the target lines drawn on the ground with the calibration marker on the screen by operating the center dial and upper/ lower/left/right switches of multifunction switch on each screen of "Rear Camera", "Pass-Side Camera", "Front Camera", "Dr-Side Camera".

\$\frac{1}{2}\$ Use DIAL to select range marking type, push ENTER \( \frac{16/31}{2} \)
\$\frac{1}{2}\$ Use arrow keys to adjust position \( \lambda(0, 00) \)

Adjustment range

Rotation direction (Center : 31 patterns (16 on the dial) center)

Upper/lower direction (up- : -99 - 99

per/lower switch)

Left/right direction (left/right : -99 - 99

switch)

3. "Writing..." is displayed by pressing the "ENTER" switch, and then the adjustment result is written to the around view monitor control unit.

#### **CAUTION:**

Check that "Writing..." is displayed. Do never perform other operations while "Writing..." is displayed.

>> GO TO 6.

### 6. PERFORM "FINE TUNING OF BIRDS-EYE VIEW"

This mode is designed to align the boundary between each camera image that could not be aligned in the "Calibrating Camera Image" mode.

1. Select "Camera Cont." of "Confirmation/ Adjustment" mode, and then set to "Fine Tuning of Birds-Eye View" mode.

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#### **INSPECTION AND ADJUSTMENT**

#### < BASIC INSPECTION >

#### [NAVIGATION (SINGLE MONITOR)]

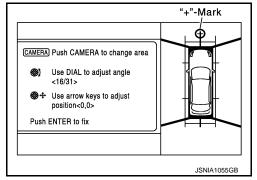
Operate the center dial and upper/lower/left/right switch to overlap the marker on the screen and the target lines on the ground. NOTE:

Move the "+"- mark on the camera position to adjustment by pressing the "CAMERA" switch.

3. When the target line is overlapped on the marker, press the "ENTER" switch to write the adjustment result to the around view monitor control unit.

#### **CAUTION:**

Check that "Writing..." is displayed. Do never perform other operations while "Writing..." is displayed.



- It can be initialized to the NISSAN factory default condition with "Initialize Camera Image Calibration" of "Calibrating Camera Image".
- The adjustment value is cancelled on this mode by performing "Initialize Camera Image Calibration".

>> Calibration end

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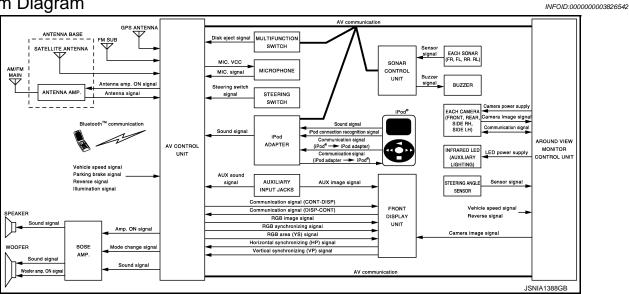
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INFOID:0000000003826543

## SYSTEM DESCRIPTION

### **MULTI AV SYSTEM**

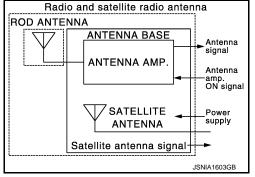
System Diagram



#### NOTE:

 The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

• A radio antenna base integrated with radio antenna and satellite radio antenna is adopted.



### System Description

Multi AV system means that the following systems are integrated.

System name	System explanation
AUDIO SYSTEM	AV-292, "System Description"
NAVIGATION SYSTEM	AV-297, "System Description"
AROUND VIEW MONITOR SYSTEM	AV-302, "System Description"
CAMERA ASSISTANCE SONAR SYSTEM	AV-312, "System Description"
VEHICLE INFORMATION SYSTEM	<ul> <li>Status of audio, climate control system, fuel economy, maintenance and navigation are displayed.</li> <li>AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM, unified meter and A/C amp.</li> <li>AV control unit is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> </ul>
HANDS-FREE PHONE SYSTEM	Refer to the following "HANDS-FREE PHONE SYSTEM".
AUXILIARY INPUT SYSTEM	Refer to the following "AUXILIARY INPUT SYSTEM".
VOICE RECOGNITION SYSTEM	Refer to the following "VOICE RECOGNITION SYSTEM".
TOUCH PANEL SYSTEM	Refer to the following "TOUCH PANEL SYSTEM".

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#### **MULTI AV SYSTEM**

#### < SYSTEM DESCRIPTION >

#### [NAVIGATION (SINGLE MONITOR)]

- AV control unit function by transmitting/receiving data one by one with each unit (slave unit) that configures them completely as a master unit by connecting between units that configure MULTI AV system with two AV communication lines (H, L).
- Around view monitor control unit transmits/receives the data signal with sonar control unit and controls sonar
  control unit. Around view monitor control unit transmits the information received from sonar control unit to AV
  control unit.
- Two AV communication lines (H, L) adopt a twisted pair line that is resistant to noise.
- AV control unit is connected by CAN communication, and it receives data signals from ECM, unified meter
  and A/C amp. It computes and displays fuel economy information value with the obtained information. The
  transmitting/receiving of data signal is performed by BCM. In addition, it transmits the required signal of vehicle setting and receives the response signal.
- AV control unit is connected with front display unit and serial communication, and it transmits the required signal of display and display control and receives the response signal from front display unit.

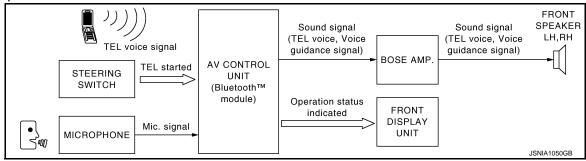
#### NOTE:

AV control unit can perform CONSULT-III self-operating function and on board self-diagnosis.

- CONSULT-III self diagnosis: Refer to AV-330. "CONSULT-III Function (MULTI AV)".
- On board self diagnosis: Refer to AV-317, "Diagnosis Description".

#### HANDS-FREE PHONE SYSTEM

- Hands-free communication can be operated by connecting using Bluetooth<sup>™</sup> with cellular phone.
- Operation is performed by steering switch, and operating condition is indicated on display.
- Guide sound that is heard during operation is input from AV control unit to BOSE amp. and is output from front speakers.



#### When a Call is Originated

Spoken voice sound output from the microphone (Mic. Signal) is input into AV control unit. AV control unit outputs to cellular phone with Bluetooth $^{\text{TM}}$  communication as a TEL voice signal. Voice sound is then heard by the other party.

#### When Receiving a Call

Voice sound is input to one's own cellular phone from the other party. TEL voice signal is output to front speakers, and the signal is input to BOSE amp. via AV control unit by establishing Bluetooth<sup> $\mathsf{TM}$ </sup> communication from cellular phone.

#### **AUXILIARY INPUT SYSTEM**

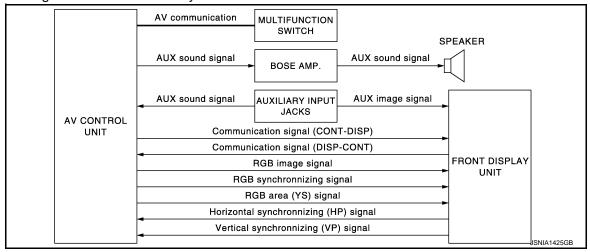
• Image and sound can be output from an external device by connecting a device with auxiliary input jacks.

#### **MULTI AV SYSTEM**

#### < SYSTEM DESCRIPTION >

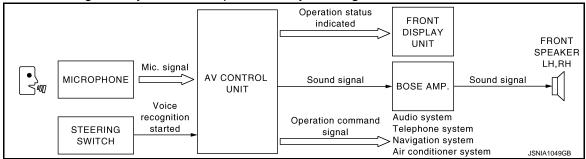
#### [NAVIGATION (SINGLE MONITOR)]

• Operation can be performed with multifunction switch and steering switch. Multifunction switch transmits operation signal to AV control unit by AV communication.



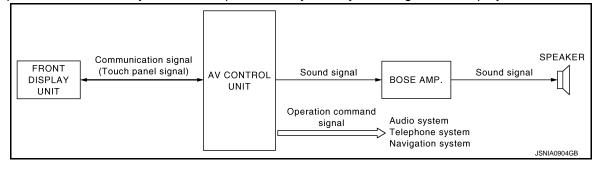
#### VOICE RECOGNITION SYSTEM

- Each operation of multi AV system can be performed by inputting sound to microphone.
- Start of sound recognition system can be performed by steering switch.



#### **TOUCH PANEL SYSTEM**

Each operation of multi AV system can be performed by directly touching a front display unit.



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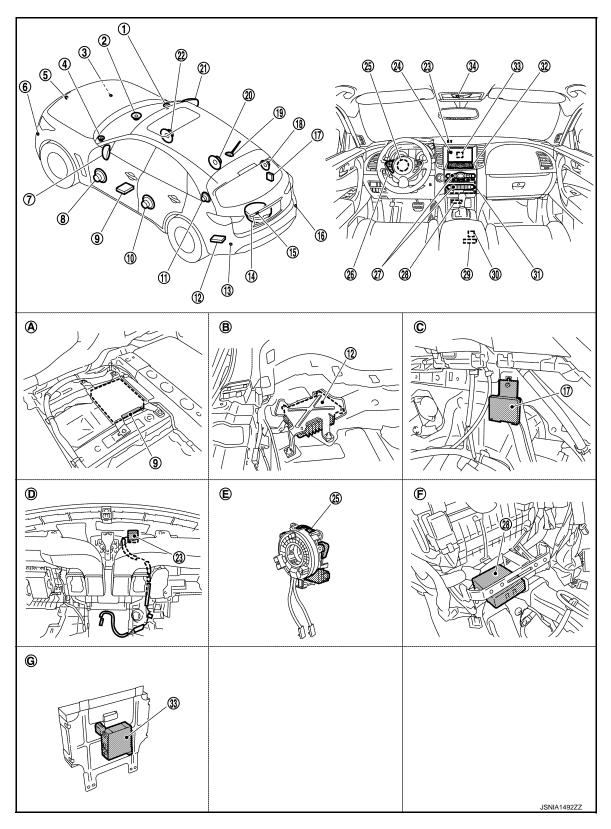
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### **Component Parts Location**

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- 1. Front squawker RH
- 4. Front squawker LH
- 7. Side camera LH
- 10. Rear door speaker LH
- 2. Center speaker
- 5. Front camera
- 8. Front door speaker LH
- 11. Rear squawker LH
- 3. Corner sensor front RH
- 6. Corner sensor front LH
- 9. Around view monitor control unit
- 12. BOSE amp.

## **MULTI AV SYSTEM**

# < SYSTEM DESCRIPTION >

## [NAVIGATION (SINGLE MONITOR)]

STEW DESCRIPTION >			•	(0
Corner sensor rear LH	14.	Woofer	15.	Rear camera
Corner sensor rear RH	17.	Buzzer	18.	Rear squawker RH
Antenna base (antenna amp. and satellite antenna)	20.	Rear door speaker RH	21.	Side camera RH and infrared LED (auxiliary lighting)
Front door speaker RH	23.	GPS antenna	24.	Front display unit
Steering angle sensor	26.	Steering switch	27.	Preset switch
Sonar control unit (with around view monitor)	29.	Auxiliary input jacks	30.	iPod connector
AV control unit	32.	Multifunction switch	33.	iPod adapter
Microphone				
Under front seat (LH side)	В.	Luggage floor (LH side)	C.	Luggage side RH
Instrument panel rear side	E.	Spiral cable part	F.	Console pocket assembly removed condition
Rear view of the front display unit				
	Corner sensor rear LH Corner sensor rear RH Antenna base (antenna amp. and satellite antenna) Front door speaker RH Steering angle sensor Sonar control unit (with around view monitor) AV control unit Microphone Under front seat (LH side) Instrument panel rear side	Corner sensor rear LH Corner sensor rear RH 17. Antenna base (antenna amp. and satellite antenna) Front door speaker RH 23. Steering angle sensor 26. Sonar control unit (with around view monitor) AV control unit Microphone Under front seat (LH side) Instrument panel rear side 17. 29. 32. 4. 4. 4. 5. 5. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6.	Corner sensor rear LH Corner sensor rear RH Antenna base (antenna amp. and satellite antenna) Front door speaker RH Steering angle sensor Sonar control unit (with around view monitor) AV control unit Microphone Under front seat (LH side) Instrument panel rear side  14. Woofer 17. Buzzer 20. Rear door speaker RH 23. GPS antenna 26. Steering switch 29. Auxiliary input jacks 32. Multifunction switch  B. Luggage floor (LH side) E. Spiral cable part	Corner sensor rear LH  Corner sensor rear RH  Antenna base (antenna amp. and satellite antenna)  Front door speaker RH  Steering angle sensor  Sonar control unit (with around view monitor)  AV control unit  Under front seat (LH side)  Instrument panel rear side  14. Woofer  15. Buzzer  18. Rear door speaker RH  21. Sear door speaker RH  22. Rear door speaker RH  23. GPS antenna  24. Steering switch  27. Sonar control unit (with around view monitor)  30. Multifunction switch  31. Spiral cable part  32. Multifunction switch  33. Microphone  Under front seat (LH side)  E. Spiral cable part  F.

# **Component Description**

INFOID:0000000003826545

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Part name	Description			
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each controunit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>			
FRONT DISPLAY UNIT	<ul> <li>Front display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal is input from AV control unit (RGB, RGB area and RGB synchronizing).</li> <li>Auxiliary image signal is input from the auxiliary input jacks.</li> <li>Camera image signal input to around view monitor control unit.</li> <li>Synchronize signal (HP, VP) is output to AV control unit.</li> <li>Touch panel function can be operated for each system by touching a display directly.</li> </ul>			
BOSE AMP.	<ul> <li>Inputs power (amp. ON) and sound signal from AV control unit, and outputs sound signal to woofer and each speaker.</li> <li>Input "Driver's Audio Stage" mode change signal from AV control unit.</li> <li>Woofer amp. ON signal is transmitted to woofer.</li> </ul>			
FRONT DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>			
REAR DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>			
FRONT SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>			
REAR SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>			
CENTER SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>			

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## **MULTI AV SYSTEM**

## < SYSTEM DESCRIPTION >

# [NAVIGATION (SINGLE MONITOR)]

Part name	Description
WOOFER	<ul> <li>Inputs power (amp. ON) and sound signal from BOSE amp.</li> <li>Outputs low-frequency sound.</li> </ul>
MULTIFUNCTION SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio, auxiliary input and navigation operations are integrated.</li> <li>Connected with preset switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> </ul>
PRESET SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio and air conditioner operations are integrated.</li> <li>Connected with multifunction switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> <li>The disk ejection operating signal is performed by hardwire.</li> </ul>
AROUND VIEW MONITOR CONTROL UNIT	<ul> <li>It supplies power to front camera, rear camera, and side camera. And then it superimposes the images from each camera and outputs them to front display unit.</li> <li>Superimpose the guiding line, predicted course line and sonar indicator to the camera image that outputs to front display unit.</li> <li>It performs the reception/transmission of communication signal with each camera.</li> <li>Inputs the sensor signal from steering angle sensor, and then controls the predicted course line.</li> <li>It transmits the sonar operation signal from sonar control unit and receives the sonar information from sonar control unit via AV communication.</li> <li>It transmits the information received/transmitted with sonar control unit via AV communication to AV control unit.</li> </ul>
FRONT CAMERA	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle front to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
REAR CAMERA	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle rear to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
SIDE CAMERA LH	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle LH to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
SIDE CAMERA RH	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle RH to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
INFRARED LED (AUXILIARY LIGHTING)	<ul> <li>It illuminates around the front RH wheel by the power supply from around view monitor control unit to improve nighttime visibility of Front-Side view.</li> <li>The infrared LED is an invisible light ray.</li> </ul>
STEERING SWITCH	<ul> <li>Operations for audio, hands-free phone, audio response and navigation, etc. are possible.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>
STEERING ANGLE SENSOR	Steering signal necessary for predicted course line control is transmitted to around view monitor control unit.
MICROPHONE	<ul> <li>Used for hands-free phone operation and voice recognition.</li> <li>Mic signal is transmitted to AV control unit.</li> <li>Power (Mic VCC) is supplied from AV control unit.</li> </ul>
AUXILIARY INPUT JACKS	Image signal of auxiliary input is output to front display unit, and sound signal is output to AV control unit.
GPS ANTENNA	GPS signal is received and transmitted to AV control unit.

## **MULTI AV SYSTEM**

## < SYSTEM DESCRIPTION >

# [NAVIGATION (SINGLE MONITOR)]

Part name	Description			
ANTENNA BASE	A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.     ANTENNA AMP.     Radio signal received by rod antenna is amplified and transmitted to AV control unit.     Power (antenna amp. ON signal) is supplied from AV control unit.     SATELLITE RADIO ANTENNA			
	Receives satellite radio waves and outputs it to AV control unit.			
iPod ADAPTER	<ul> <li>Inputs iPod sound signal from iPod<sup>®</sup>, and outputs iPod sound signal to AV control unit.</li> <li>Receiving/transmitting of iPod<sup>®</sup> operation signals are performed as follows:</li> </ul>			
II OU ADAI TER	<ul> <li>between AV control unit and iPod adapter: AV communication.</li> <li>between iPod<sup>®</sup> and iPod adapter: serial communication.</li> </ul>			
SONAR CONTROL UNIT (WITH AROUND VIEW	<ul> <li>It is connected with around view monitor control unit via AV communication and receives the sonar operation signal from around view monitor control unit.</li> <li>It transmits the sonar detection status to around view monitor control unit via AV communication.</li> </ul>			
MONITOR)	<ul> <li>It judges the warning level according to the signal from corner sensor and outputs the buzzer drive signal.</li> <li>Trouble diagnosis is supported with CONSULT-III (K-LINE).</li> </ul>			
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to sonar control unit.			
BUZZER	The warning buzzer outputs with the signal from sonar control unit.			

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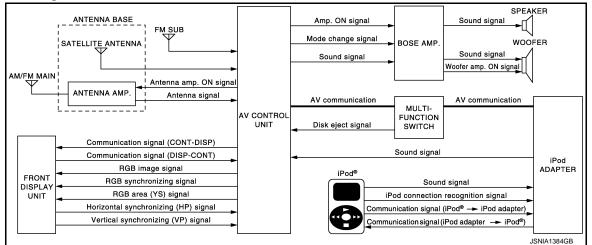
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# **AUDIO SYSTEM**

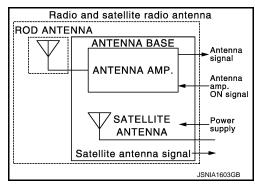
## System Diagram

INFOID:0000000003826546



#### NOTE:

A radio antenna base integrated with radio antenna and satellite radio antenna is adopted.



# System Description

INFOID:0000000003826547

The audio system is equipped with the following functions. Each function is operated by multifunction switch, preset switch, touch panel, steering switch or audio recognition. Operation status of AUDIO is indicated at display.

Function
AM/FM radio
Satellite radio
CD
Music Box (Hard Disk Drive)
CF (Compact Flash)
iPod connection
Driver's Audio Stage

## **FUNCTION DESCRIPTION**

### Operating Signal

Audio system operation can be performed with multifunction switch, preset switch, steering switch, touch panel function or voice recognition function.

- Operating signal is transmitted to AV control unit with AV communication when it is operated by multifunction switch or preset switch. The disk ejection operating signal is performed by hardwire.
- Operating signal is transmitted to AV control unit with steering switch signal when it is operated by steering switch.
- Refer to AV-285, "System Description" for explanation of voice recognition function and touch panel function.

Screen Display

## AUDIO SYSTEM

## < SYSTEM DESCRIPTION >

## [NAVIGATION (SINGLE MONITOR)]

- The display is switched by communication signal between front display unit and AV control unit.
- The image signal that displays operating status is performed by the RGB image signal, RGB area signal and RGB synchronizing signal.

#### AM/FM Radio Mode

- AM/FM radio tuner is built into AV control unit.
- Audio signal is received by rod antenna, next it is amplified by antenna amp., and finally it is input into AV
  control unit. The FM sub antenna is installed on the back door window glass and AV control unit receives
  audio signal.
- Audio signal is input to BOSE amp. and BOSE amp. outputs to woofer and each speaker for AV control unit.

#### Satellite Radio Mode

- Satellite radio tuner is built into AV control unit.
- Audio signal (satellite radio) is received by satellite antenna, and it is input to AV control unit. AV control unit outputs audio signal to BOSE amp. The signal is also outputted from BOSE amp. to both woofer and each speaker.

#### CD Mode

- CD function is built into AV control unit.
- AV control unit outputs audio signals to BOSE amp. and BOSE amp. outputs to woofer and each speaker when CD is inserted to AV control unit.

#### Music Box Mode

- Music CD data is stored on HDD that is built into AV control unit, and it can be played.
- AV control unit outputs music (audio signal) that is stored on HDD to BOSE amp., and BOSE amp. outputs to woofer and each speaker.

#### CF Mode

- AV control unit has built in CF replay function.
- Music (audio signal) that is stored in CF outputs to BOSE amp. and BOSE amp. outputs to woofer and each speaker when CF is inserted into AV control unit.

#### iPod Connection

- Connect iPod<sup>®</sup> and iPod adapter with wire harness and iPod adapter inputs iPod sound signal from iPod<sup>®</sup>.
   When iPod mode is selected, iPod adapter outputs iPod sound signal to AV control unit. AV control unit outputs sound signal to BOSE amp., and BOSE amp. output sound signal to woofer and each speaker.
- Receiving/transmitting of iPod<sup>®</sup> operation signals are performed as follows:
- between AV control unit and iPod adapter: AV communication.
- between iPod® and iPod adapter: serial communication.
- The iPod<sup>®</sup> connection status can be recognized whether iPod adapter receives iPod connection recognition signal.
- The iPod adapter can charge iPod<sup>®</sup>.

#### Driver's Audio Stage Mode

- Driver's Audio Stage controls the speaker's output characteristics by BOSE amp. so that the driver seat is the center of sound.
- ON/OFF signals of Driver's Audio Stage are transmitted from AV control unit to BOSE amp. using mode change signal.

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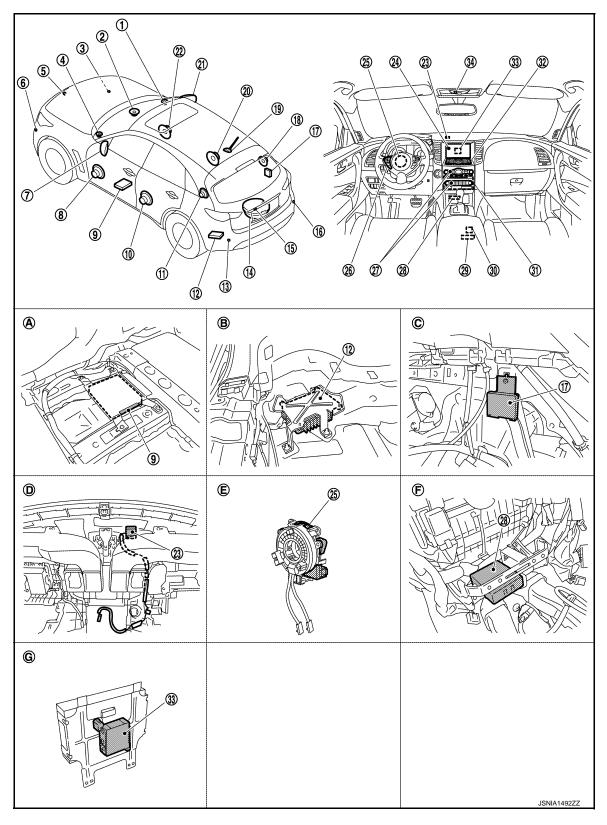
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# **Component Parts Location**

INFOID:0000000003931390



- 1. Front squawker RH
- 4. Front squawker LH
- 7. Side camera LH
- 10. Rear door speaker LH
- 2. Center speaker
- 5. Front camera
- 8. Front door speaker LH
- 11. Rear squawker LH
- 3. Corner sensor front RH
- 6. Corner sensor front LH
- 9. Around view monitor control unit
- 12. BOSE amp.

## **AUDIO SYSTEM**

# < SYSTEM DESCRIPTION >

# [NAVIGATION (SINGLE MONITOR)]

<u> </u>	JIEW DEGORM HON >					_
13.	Corner sensor rear LH	14.	Woofer	15.	Rear camera	_
16.	Corner sensor rear RH	17.	Buzzer	18.	Rear squawker RH	
19.	Antenna base (antenna amp. and satellite antenna)	20.	Rear door speaker RH	21.	Side camera RH and infrared LED (auxiliary lighting)	
22.	Front door speaker RH	23.	GPS antenna	24.	Front display unit	
25.	Steering angle sensor	26.	Steering switch	27.	Preset switch	
28.	Sonar control unit (with around view monitor)	29.	Auxiliary input jacks	30.	iPod connector	
31.	AV control unit	32.	Multifunction switch	33.	iPod adapter	
34.	Microphone					
A.	Under front seat (LH side)	В.	Luggage floor (LH side)	C.	Luggage side RH	
D.	Instrument panel rear side	E.	Spiral cable part	F.	Console pocket assembly removed condition	
G.	Rear view of the front display unit					

# **Component Description**

INFOID:0000000003826549

Part name	Description
AV CONTROL UNIT	<ul> <li>Receiving function of AM/FM/satellite radio, replaying function of CD, replaying/saving functions of music box (HDD), replaying function of CF and voice recognition function are integrated.</li> <li>Audio signal is output to BOSE amp. from each function.</li> </ul>
FRONT DISPLAY UNIT	<ul> <li>Front display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal (audio operation condition) is input from AV control unit.</li> <li>Touch panel function can be operated for each system by touching the display directly.</li> </ul>
iPod ADAPTER	<ul> <li>Inputs iPod sound signal from iPod<sup>®</sup>, and outputs iPod sound signal to AV control unit.</li> <li>Receiving/transmitting of iPod<sup>®</sup> operation signals are performed as follows:         <ul> <li>between AV control unit and iPod adapter: AV communication.</li> <li>between iPod<sup>®</sup> and iPod adapter: serial communication.</li> </ul> </li> </ul>
BOSE AMP.	<ul> <li>Inputs power (amp. ON) and sound signal from AV control unit, and outputs sound signal to woofer and each speaker.</li> <li>Input "Driver's Audio Stage" mode change signal from AV control unit.</li> <li>Woofer amp. ON signal is transmitted to woofer.</li> </ul>
MULTIFUNCTION SWITCH	<ul> <li>Each audio operation can be operated.</li> <li>Connected with preset switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> </ul>
PRESET SWITCH	<ul> <li>Each audio operation can be operated.</li> <li>Connected with multifunction switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> <li>The disk ejection operating signal is performed by hardwire.</li> </ul>
STEERING SWITCH	<ul> <li>Each audio operation can be operated.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>
FRONT DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>
REAR DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>
FRONT SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
REAR SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
CENTER SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>

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## **AUDIO SYSTEM**

## < SYSTEM DESCRIPTION >

# [NAVIGATION (SINGLE MONITOR)]

Part name	Description			
WOOFER	<ul><li>Inputs power (amp. ON) and sound signals from BOSE amp.</li><li>Outputs low-frequency sound.</li></ul>			
ANTENNA BASE	A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.  ANTENNA AMP.  Radio signal received by rod antenna is amplified and transmitted to AV control unit.  Power (antenna amp. ON signal) is supplied from AV control unit.  SATELLITE RADIO ANTENNA  Receives satellite radio waves and outputs it to AV control unit.			

## **NAVIGATION SYSTEM**

## System Diagram

GPS ANTENNA Communication signal (CONT-DISP) Communication signal (DISP-CONT) **FRONT** RGB area (YS) signal DISPLAY UNIT RGB image signal Illumination signal RGB synchronizing signal Vehicle speed signal (8-pulse) **AV CONTROL** Reverse signal UNIT Parking brake signal (HDD: Map data) FRONT SPEAKER RH, LH AV communication MULTIFUNCTION Voice guidance signal BOSE Voice guidance signal SWITCH AMP. Steering switch signal **STEERING** SWITCH JSNIA1385GE

# System Description

INFOID:0000000003826551

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INFOID:0000000003826550

### DESCRIPTION

- AV control unit controls navigation function while GPS tuner has built-in map data, GYRO (angle speed sensor), on the HDD (Hard Disk Drive).
- AV control unit inputs operation signals with communication signals, through display (touch panel), multifunction switch and steering switch.
- Guide sound is output to front speaker through BOSE amp. from AV control unit when operating navigation system.
- The vehicle position is calculated through the GYRO (angle speed sensor), vehicle sensor, signal from GPS satellite and map data stored on HDD (Hard Disk Drive), and transmits the map image signal (RGB image, RGB area, RGB synchronizing) to display.

### POSITION DETECTION PRINCIPLE

The navigation system periodically calculates the current vehicle position according to the following three types of signals.

- Travel distance of the vehicle as determined by the vehicle speed sensor
- Vehicle turning angle determined by the gyroscope (angular speed sensor)
- The travel direction of the vehicle determined by the GPS antenna (GPS information)

The current position of the vehicle is then identified by comparing the calculated vehicle position with map data, which is stored in the HDD (Hard Disk Drive) (map-matching), and indicated on the screen with the current location mark. More accurate data is used by comparing position detection results from GPS to map-matching.

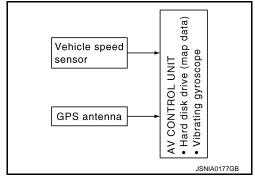
The current position is calculated by detecting the travel distance from the previous calculation point, and its direction change.

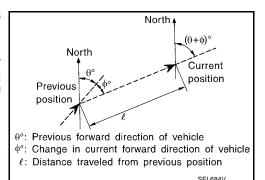
Travel distance

The travel distance is generated from the vehicle speed sensor input signal. The automatic distance correction function is adopted for preventing a miss-detection of the travel distance because of tire wear etc.

Travel direction

The gyroscope (angular velocity sensor) and GPS antenna (GPS information) detect a change in travel direction. Both have advantages and disadvantages as per the following descriptions.





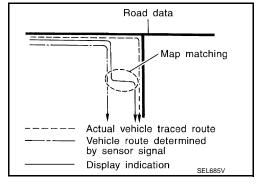
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Туре	Advantage	Disadvantage		
Gyroscope (angular velocity sensor)	The turning angle is precisely detected.	Errors are accumulated when driving a long distance without stopping.		
GPS antenna (GPS information)	The travel direction (North/South/East/West) is detected.	The travel direction is not precisely detected when driving slowly.		

Input signals are prioritized in each situation. However, this order of priority may change in accordance with more detailed travel conditions so that the travel direction is detected more accurately.

### MAP-MATCHING

Map-matching repositions the vehicle on the road map when a new location is judged to be more accurate. This is done by comparing the current vehicle position (calculated by the normal position detection method) from the map data stored in the HDD (Hard Disk Drive).

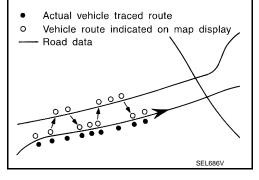


There is a possibility that the vehicle position may not be corrected in the following case, or when vehicle is driven over a certain distance or time in which GPS information is hard to receive. Manually correct the current location mark on the screen.

 In map-matching, several alternative routes are prepared and prioritized in addition to the road detected as currently being driven on.

Therefore, due to errors in the distance and/or direction, an incorrect road may be prioritized, and the current location mark may be repositioned to the incorrect road.

If two roads are running parallel, they are of the same priority. Therefore, the current location mark may appear on either of them alternately, depending on steering wheel movement and road configuration, etc.



- Map-matching does not function correctly when road that the vehicle is driving on new, etc, or not recorded in the map data. Also, map-matching does not function correctly when road patterns stored in the map data and the actual road pattern are different due to repair, etc.
  - Therefore, the map-matching function judges an other road as currently being driven on road if the road is not on the map, and displays the current location mark on it. Later, the current location mark may be repositioned if the correct road is detected.
- Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data is limited. Therefore, correction by map-matching is not possible when there is an excessive gap between current vehicle position or

Actual vehicle traced route
 Vehicle route indicated on map display
 Road data
 Road data
 (Road data not registered)

when there is an excessive gap between current vehicle position and the position on the map.

GPS (GLOBAL POSITIONING SYSTEM)

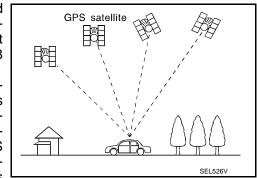
## **NAVIGATION SYSTEM**

## < SYSTEM DESCRIPTION >

## [NAVIGATION (SINGLE MONITOR)]

GPS (Global Positioning System) is developed for and is controlled by the US Department of Defense. The system utilizes GPS satellites (NAVSTAR), transmitting out radio waves while flying on an orbit around the earth at an altitude of approximately 21,000 km (13,048 mile).

The receiver calculates the travel position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves that four or more GPS satellites transmit (three-dimensional positioning). The GPS receiver calculates the travel position in two dimensions (latitude/longitude) with the previous altitude data if the GPS receiver receives only three radio waves (two-dimensional positioning). GPS position correction is not performed while the vehicle is stopped.



Accuracy of the GPS will deteriorate under the following conditions:

- In two-dimensional positioning, GPS accuracy will deteriorate when altitude of the vehicle position changes.
- The position of GPS satellite affects GPS detection precision. The position detection may not be precisely performed.
- The position detection is not performed if GPS receiver does not receive radio waves from GPS satellites.
   (Inside a tunnel, parking in a building, under an elevated highway etc.) GPS receiver may not receive radio waves from GPS satellites if any object is placed on the GPS antenna.

#### NOTE:

- The detection result has an error of approximately 10 m (32.8 ft) even with a high-precision three dimensional positioning.
- There may be cases when the accuracy is lowered and radio waves are stopped intentionally because the GPS satellite signal is controlled by the US trace control center.

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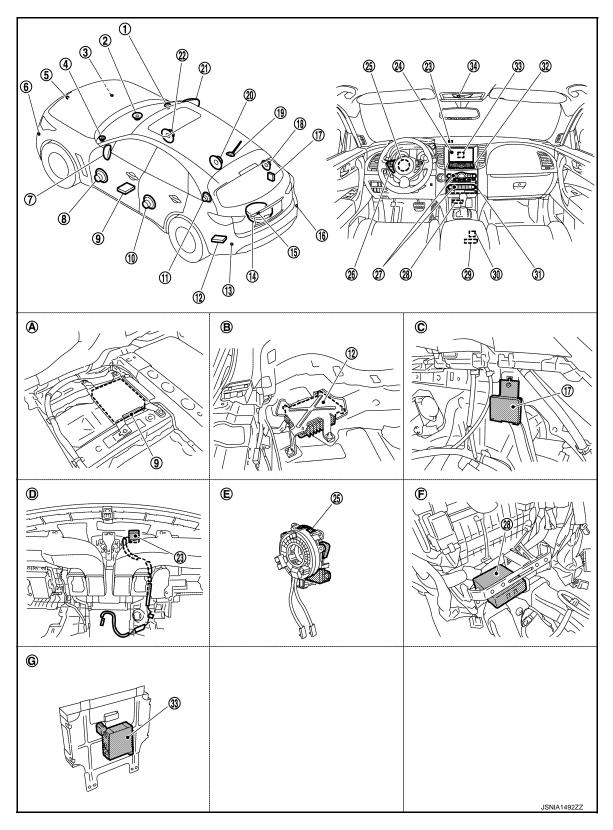
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Revision: 2009 March AV-299 2009 FX35/FX50

# **Component Parts Location**

INFOID:0000000003931391



- 1. Front squawker RH
- 4. Front squawker LH
- 7. Side camera LH
- 10. Rear door speaker LH
- 2. Center speaker
- Front camera
- 8. Front door speaker LH
- 11. Rear squawker LH
- 3. Corner sensor front RH
- 6. Corner sensor front LH
- 9. Around view monitor control unit
- 12. BOSE amp.

## **NAVIGATION SYSTEM**

# < SYSTEM DESCRIPTION >

# [NAVIGATION (SINGLE MONITOR)]

13.	Corner sensor rear LH	14.	Woofer	15.	Rear camera	_
16.	Corner sensor rear RH	17.	Buzzer	18.	Rear squawker RH	Α
19.	Antenna base (antenna amp. and satellite antenna)	20.	Rear door speaker RH	21.	Side camera RH and infrared LED (auxiliary lighting)	
22.	Front door speaker RH	23.	GPS antenna	24.	Front display unit	В
25.	Steering angle sensor	26.	Steering switch	27.	Preset switch	
28.	Sonar control unit (with around view monitor)	29.	Auxiliary input jacks	30.	iPod connector	C
31.	AV control unit	32.	Multifunction switch	33.	iPod adapter	
34.	Microphone					
A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH	D
D.	Instrument panel rear side	E.	Spiral cable part	F.	Console pocket assembly removed condition	
G.	Rear view of the front display unit					F

# **Component Description**

INFOID:0000000003826553

Part name	Description		
AV CONTROL UNIT	<ul> <li>It is the master unit that controls each operation of the Navigation system.</li> <li>The HDD (Hard Disk Drive) is built in, and the map data is stored in HDD.</li> <li>The RGB image signal (map information) is output to front display unit.</li> <li>The voice guidance signal is output to BOSE amp.</li> </ul>		
FRONT DISPLAY UNIT	<ul> <li>RGB image signal (map information) is input from AV control unit, and it is indicated on front display unit.</li> <li>Each operation of navigation can be performed by the touch panel function.</li> </ul>		
BOSE AMP.	Voice guidance signal is input from AV control unit, and it is output to front LH/RH speakers.		
FRONT DOOR SPEAKER	Voice guidance signal from BOSE amp. is output.		
FRONT SQUAWKER			
MULTIFUNCTION SWITCH	<ul> <li>Each operation of navigation can be performed.</li> <li>Connected with preset switch via cables and operation signal is transmitted to AV control unit via AV communication.</li> </ul>		
STEERING SWITCH	<ul><li>Each operation of navigation, etc. can be performed.</li><li>Switch operating signal is output to AV control unit.</li></ul>		
GPS ANTENNA	GPS signal is received and is output to AV control unit.		

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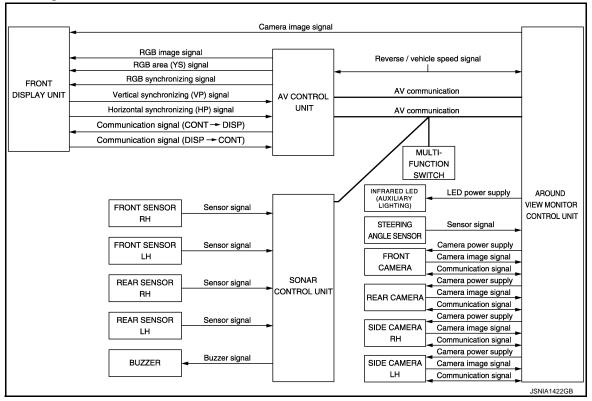
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Revision: 2009 March AV-301 2009 FX35/FX50

# AROUND VIEW MONITOR SYSTEM

System Diagram

INFOID:0000000003826562



## System Description

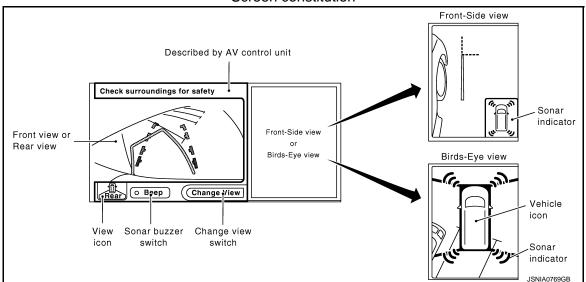
INFOID:0000000003826563

- This system is equipped with wide-angle high-resolution cameras on the front and rear of the vehicle and on both right and left door mirrors. The images from front view, rear view, front-side view (RH side), and birdseye view that shows the view from the top of the vehicle are displayed to monitor the vehicle surroundings.
- Around view monitor control unit cuts out and expands the image received from each camera to create each view
- The sonar indicator is displayed on display (superimposed on the camera image) in combination with the camera assistance sonar system to warm of the approach of an obstacle.
- In front view and rear view, the vehicle width, distance lines and predicted course lines are superimposed and displayed. In front-side view, the vehicle distance guiding line and vehicle width guiding line are displayed.
- The Birds-Eye view converts the images from 4 cameras into the overhead view and displays the status of the vehicle on display. The vehicle icon and sonar indicator that are displayed on the Birds-Eye view display are rendered by around view monitor control unit.

### AROUND VIEW MONITOR SCREEN

- Around view monitor combines and displays the travel direction view and "Birds-Eye view", "Front-Side view", and then it displays the sonar indicator on the "Birds-Eye view", "Front-Side view".
- · AV control unit renders the "Change View", "BEEP" switch, view icon, warning message on display.

#### Screen constitution



### OPERATION DESCRIPTION

- Around view monitor operates by pressing the "CAMERA" switch of multifunction switch and shifting the selector switch to the reverse position.
- When the selector lever is in any position other than the reverse position, the screen is switched to the around view monitor by pressing the "CAMERA" switch.
- The screen is switched to the around view monitor by shifting the selector lever to the reverse position.
- In the around view monitor, Birds-Eye view and Front-side view can be switched by pressing the "CAMERA" switch or the touch switch of display.
- The "Front-Side and Front screen" are displayed as a priority when turning "Default to Front-Side View" ON.
- The around view monitor is cancelled 3 minutes after pressing the "CAMERA" switch, and then the screen returns to the screen before displaying the around view monitor when selector lever is in a position other than the "R" position.
- ON/OFF setting of sonar indicator display on the Front-Side view screen can be performed.
- In the Birds-Eye view, the invisible area is displayed on the image to specify the boundary of the 4 cameras. The invisible area is displayed in yellow in the Birds-Eye view after turning the ignition switch ON.
- The sonar (both of buzzer and indicator) operates only when the camera screen is displayed.

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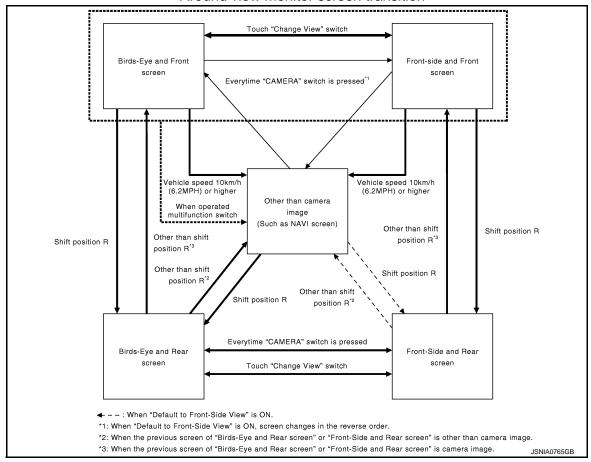
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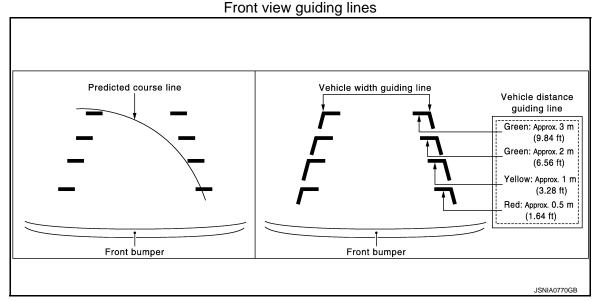
Revision: 2009 March AV-303 2009 FX35/FX50

#### Around view monitor screen transition



### FRONT VIEW

- The front view image is from the front camera.
- When the selector lever is in any position other than the reverse position, the front view is displayed by pressing the "CAMERA" switch. It improves the visibility of obstacles in front of the vehicle and helps driving by the images displayed from Birds-Eye view and Front-Side view.
- Display the vehicle width guiding line and vehicle distance guiding line in front view and display the predicted course line according to the steering angle.
- If the steering angle is within approximately 90 degrees, the predicted course lines on the left/right side are
  displayed. If the steering angle is exceeding approximately 90 degrees, only the predicted course line on the
  outside (in the opposite side of steering direction) is displayed.
- Around view monitor control unit controls the direction and distance of the predicted course line according to the sensor signal from steering angle sensor.



### **REAR VIEW**

- The rear view image is from the rear camera.
- When the selector lever is in the reverse position, the rear view is displayed. Backing and parking are improved by the images from Birds-Eye view and Front-Side view.
- Display the vehicle width guiding line and vehicle distance guiding line in Rear view and display the predicted course line according to the steering angle.
- The predicted course line is not displayed at the steering neutral position. The predicted course line is displayed and the vehicle width guiding line is not displayed by turning the steering wheel.
- Around view monitor control unit controls the direction and distance of predicted course line according to the sensor signal from steering angle sensor.

## Rear view guiding lines Vehicle width Rear camera redicted course line guiding line Vehicle distance guiding line Green: Approx. 3 m (9.84 ft) en: Approx. 2 m (6.56 ft) ellow: Approx. 1 m (3.28 ft) led: Approx. 0.5 m (1.64 ft) Rear bumper JSNIA1541GB

## FRONT-SIDE VIEW

- The front-side view image is from the side camera RH.
- In Front-Side view, display the vehicle distance guiding line and vehicle width guiding line.
- The infrared LED illumination is installed on the door mirror RH to illuminate around the front wheels.

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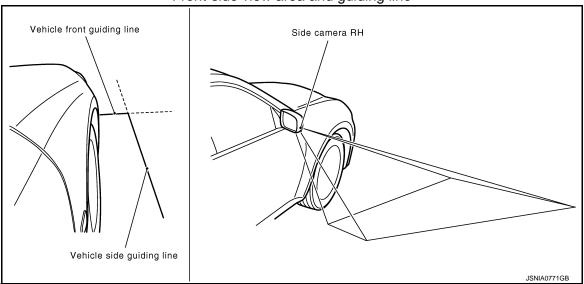
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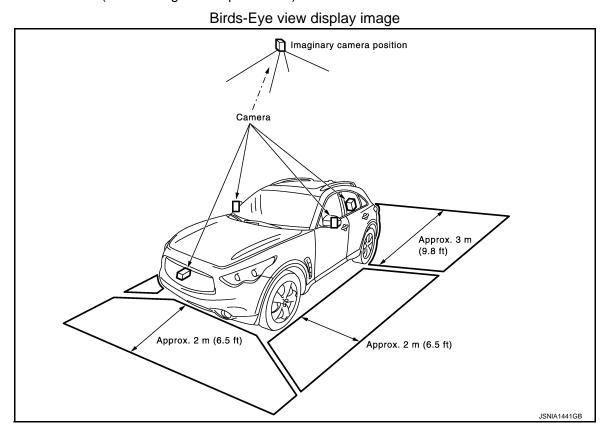
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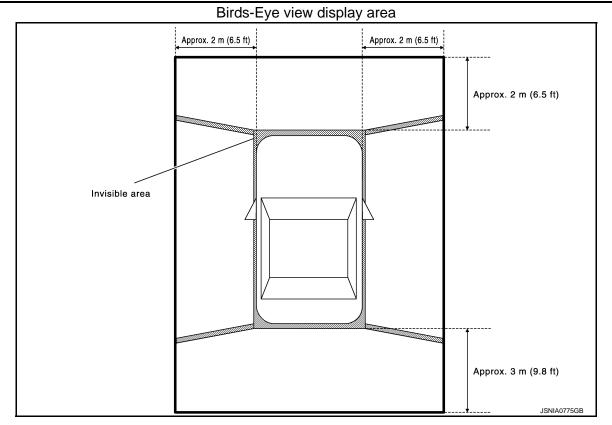
Front-side view area and guiding line



### **BIRDS-EYE VIEW**

- The image from the 4 cameras is cut out and converted into the overhead view, and the surroundings of the vehicle is displayed in birds-eye view.
- In Birds-Eye view, the invisible area is displayed on the image to specify the boundary of the 4 cameras.
- The invisible area is displayed in yellow in the Birds-Eye view after turning the ignition switch ON as an information for the user. (OFF setting can be performed)





## CAMERA IMAGE OPERATION PRINCIPLE

- If the information writing to around view monitor control unit and the information from the camera are not matched, the applicable camera position is indicated as an error on the Birds-Eye view display. (Calibration operation is necessary when replacing each camera or when replacing around view monitor control unit.)
- Around view monitor control unit receives the camera switch signal from AV control unit via AV communication by pressing the "CAMERA" switch of multifunction switch.
- Around view monitor control unit that receives the camera switch signal supplies the power to each camera and inputs the camera image from each camera.
- When the selector lever is in the reverse position, around view monitor control unit receives the reverse signal from AV control unit via AV communication, supplies the power to each camera, and inputs the camera image from each camera.
- Around view monitor control unit that receives the camera image signal from each camera cuts out the required screen for each view, superimposes the camera image, vehicle icon, guiding lines, sonar indicator, and outputs them to the display unit.

### PREDICTED COURSE LINE OPERATION PRINCIPLE

Detection of steering rotation direction

Around view monitor control unit detects the rotation direction of steering according to the phase difference of two pairs of pulse signals (sensor signal 1 and sensor signal 2) input from steering angle sensor.

Detection of steering neutral position

The sensor signal 3 input from the steering angle sensor is generated at 1 pulse per 1 rotation of the steering wheel. Around view monitor control unit detects the steering neutral position from this pulse.

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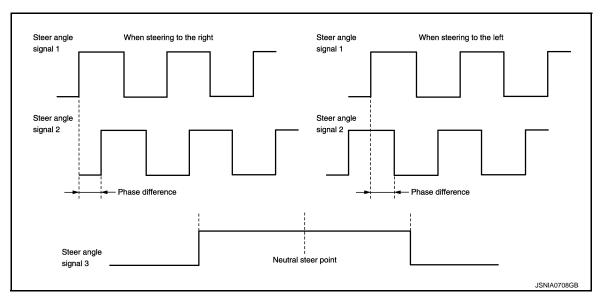
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Correction of steering neutral position

Around view monitor control unit corrects the steering neutral position during driving according to the vehicle speed signal and steering angle sensor signal.

# **Component Parts Location**

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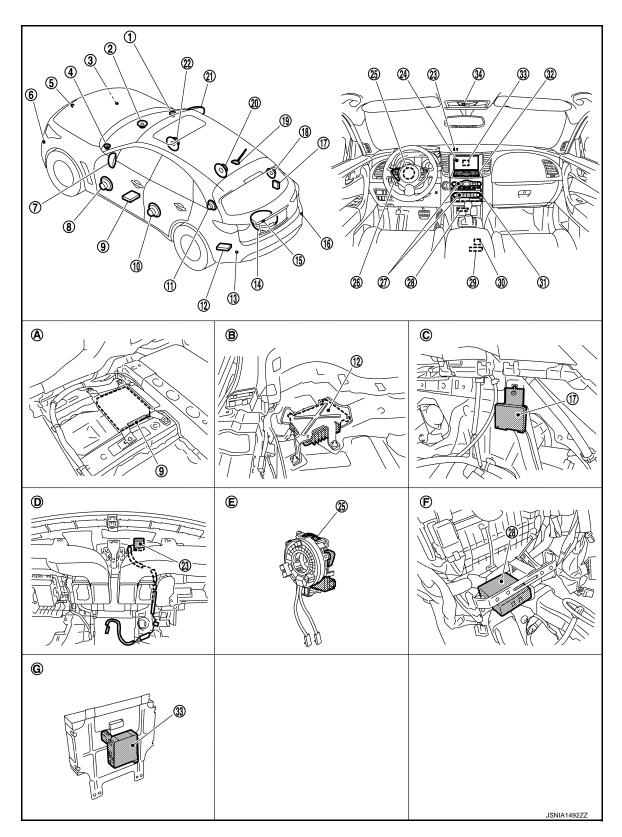
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- Front squawker RH
- 4. Front squawker LH
- 7. Side camera LH
- 10. Rear door speaker LH
- 2. Center speaker
- 5. Front camera
- 8. Front door speaker LH
- 11. Rear squawker LH
- 3. Corner sensor front RH
- 6. Corner sensor front LH
- 9. Around view monitor control unit
- 12. BOSE amp.

## **AROUND VIEW MONITOR SYSTEM**

# < SYSTEM DESCRIPTION >

# [NAVIGATION (SINGLE MONITOR)]

13.	Corner sensor rear LH	14.	Woofer	15.	Rear camera
16.	Corner sensor rear RH	17.	Buzzer	18.	Rear squawker RH
19.	Antenna base (antenna amp. and satellite antenna)	20.	Rear door speaker RH	21.	Side camera RH and infrared LED (auxiliary lighting)
22.	Front door speaker RH	23.	GPS antenna	24.	Front display unit
25.	Steering angle sensor	26.	Steering switch	27.	Preset switch
28.	Sonar control unit (with around view monitor)	29.	Auxiliary input jacks	30.	iPod connector
31.	AV control unit	32.	Multifunction switch	33.	iPod adapter
34.	Microphone				
A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
D.	Instrument panel rear side	E.	Spiral cable part	F.	Console pocket assembly removed condition
G.	Rear view of the front display unit				

# **Component Description**

INFOID:0000000003826565

Part name	Description
AV CONTROL UNIT	<ul> <li>Image on display is switched to around view monitor by serial communication between AV control unit and front display unit.</li> <li>Warning displayed in around view monitor image is illustrated.</li> </ul>
FRONT DISPLAY UNIT	<ul> <li>Camera image signal is transmitted from around view monitor control unit, and RGB image signal for warning display is transmitted from AV control unit.</li> <li>Around view monitor image is switched by serial communication between AV control unit and front display unit.</li> </ul>
MULTIFUNCTION SWITCH	It transmits the CAMERA switch signal via AV communication to AV control unit.
AROUND VIEW MONITOR CONTROL UNIT	<ul> <li>It supplies power to front camera, rear camera, and side camera, superimposes the images from each camera, and then outputs them to front display unit.</li> <li>It receives the CAMERA switch signal and reverse signal from AV control unit via AV communication.</li> <li>Superimpose the guiding line, predicted course line and sonar indicator to the camera image that outputs to front display unit.</li> <li>It performs the reception/transmission of communication signal with each camera.</li> <li>Input the sensor signal from steering angle sensor, and then control the predicted course line.</li> <li>It transmits the information received/transmitted with sonar control unit via AV communication to AV control unit.</li> </ul>
FRONT CAMERA	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle front to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
REAR CAMERA	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle rear to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
SIDE CAMERA LH	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle LH to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
SIDE CAMERA RH	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle RH to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
INFRARED LED (AUXILIARY LIGHTING)	It illuminates around the front RH wheel by the power supply from around view monitor control unit to improve nighttime visibility of Front-Side view.

## **AROUND VIEW MONITOR SYSTEM**

## < SYSTEM DESCRIPTION >

# [NAVIGATION (SINGLE MONITOR)]

Part name	Description	
SONAR CONTROL UNIT	<ul> <li>It is connected with around view monitor control unit via AV communication and receives the sonar operation signal from around view monitor control unit.</li> <li>It transmits the sonar detection status to around view monitor control unit via AV communication.</li> </ul>	
STEERING ANGLE SENSOR	Steering signal necessary for predicted course line control is transmitted to around view monitor control unit.	

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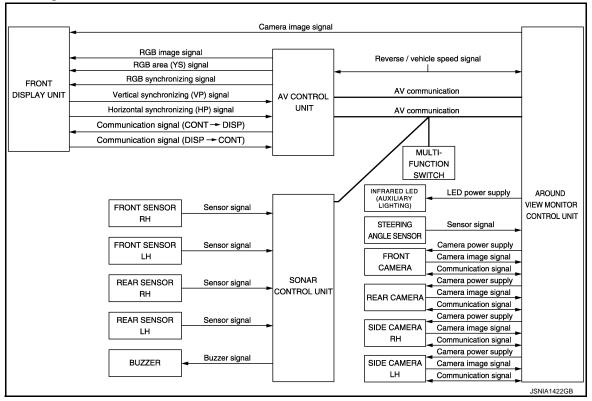
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## CAMERA ASSISTANCE SONAR SYSTEM

## System Diagram

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## System Description

INFOID:0000000003826567

### DESCRIPTION

- Install the corner sensor on the front bumper and rear bumper. It detects the obstacles around the vehicle when the around view monitor is displayed. It warns of the approach to the obstacles with the buzzer and indicator in the display linked with the around view monitor system.
- It displays the distance between the bumper and obstacle with the color of sonar indicator in the display and the blinking cycle of indicator in 3 stages.
- The buzzer warns of the distance to the obstacles with the cycle in 3 stages.

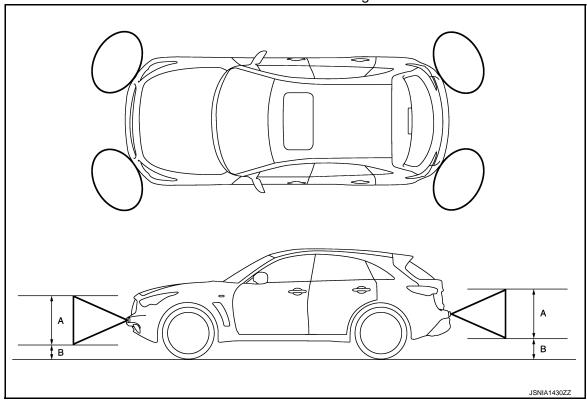
### SYSTEM OPERATION DESCRIPTION

- Around view monitor control unit transmits the sonar operation signal via AV communication to sonar control unit to control the operation of sonar indicator and sonar buzzer.
- Sonar control unit that receives the sonar operation signal from around view monitor control unit transmits
  the detection signal and detection distance signal according to the signal from corner sensor via AV communication to around view monitor control unit. around view monitor control unit operates the applicable sonar
  indicator.
- Sonar control unit that receives the sonar operation signal from around view monitor control unit outputs the buzzer signal to other buzzers based on the detection distance signal from corner sensor to operate the buzzer.
- Sonar control unit has the diagnosis function. It can detect the corner sensor malfunction or sensor harness
  open circuit. It transmits the diagnosis results to around view monitor control unit and always displays the
  sonar indicator in red to inform the user.

#### OBSTACLE DETECTION DISTANCE

- Sonar control unit changes the outputs of the sonar indicator and warning buzzer in 3 stages according to the obstacle detection distance from the corner sensor.
- The sonar control unit can change the setting of obstacle detection distance in 4 stages.

## Obstacle detection image



A. Approx. 50 cm (19.6 in)

B. Approx. 15 cm (5.9 in)

#### Detection distance

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Warning item	Sensitivity level 1 (Faster warning)	Sensitivity level 2 (Default value)	Sensitivity level 3 (Slower warning)	Sensitivity level 4 (Slowest warning)
First stage warning	70 - 80 cm (27.5 - 31.4 in)	60 - 70 cm (23.6 - 27.5 in)	50 - 60 cm (29.6 - 23.6 in)	40 - 50 cm (15.7 - 19.6 in)
Second stage warning	50 - 70 cm (19.6 - 27.5 in)	40 – 60 cm (15.7 – 23.6 in)	30 – 50 cm (11.8 – 19.6 in)	30 – 40 cm (11.8 – 15.7 in)
Third stage warning	Less than 50 cm (19.6 in)	Less than 40 cm (15.7 in)	Less than 30 cm (11.8 in)	Less than 30 cm (11.8 in)

## SONAR INDICATOR DISPLAY

- Around view monitor control unit that receives the detection signal and detection distance signal from sonar control unit displays the sonar indicator on display.
- Around view monitor control unit changes the color or blinking cycle of the indicator according to the detection distance.

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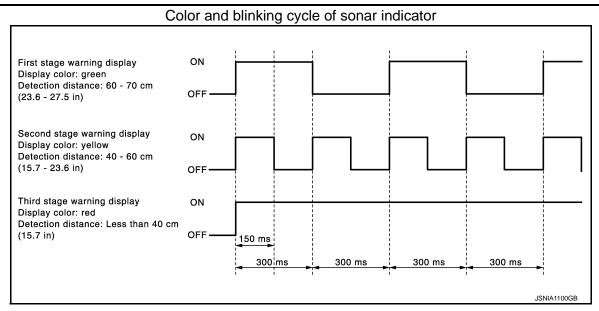
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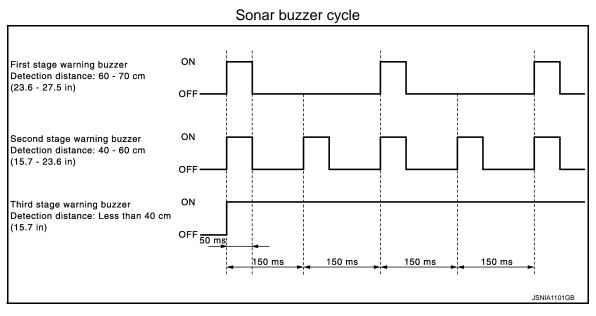
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## SONAR BUZZER OPERATION

- Sonar control unit outputs the buzzer signal to other buzzers and operates the buzzer when the detection signal is input from the corner sensor.
- It changes the buzzer cycle in 3 stages according to the detection distance.



# **Component Parts Location**

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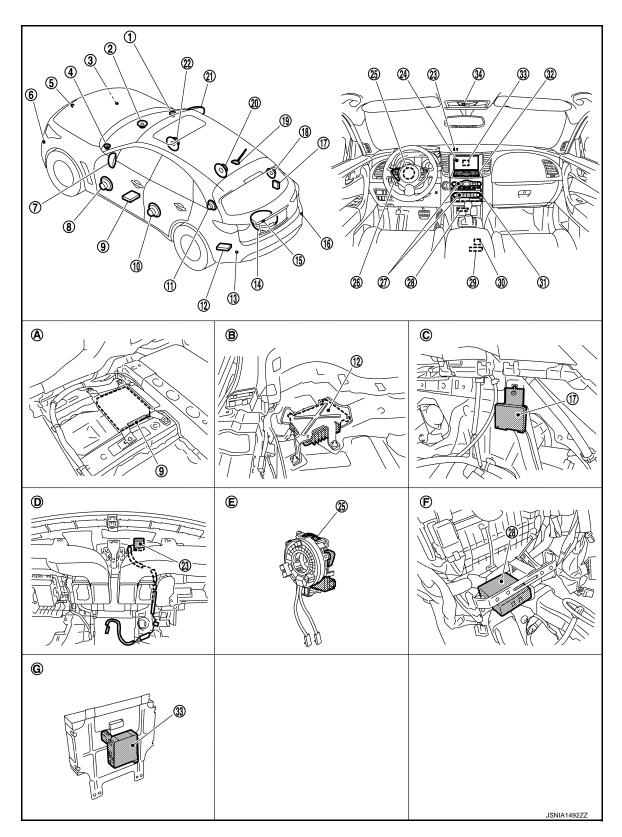
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- Front squawker RH
- 4. Front squawker LH
- 7. Side camera LH
- 10. Rear door speaker LH
- 2. Center speaker
- 5. Front camera
- 8. Front door speaker LH
- 11. Rear squawker LH
- 3. Corner sensor front RH
- 6. Corner sensor front LH
- 9. Around view monitor control unit
- 12. BOSE amp.

## **CAMERA ASSISTANCE SONAR SYSTEM**

# < SYSTEM DESCRIPTION >

# [NAVIGATION (SINGLE MONITOR)]

13.	Corner sensor rear LH	14.	Woofer	15.	Rear camera
16.	Corner sensor rear RH	17.	Buzzer	18.	Rear squawker RH
19.	Antenna base (antenna amp. and satellite antenna)	20.	Rear door speaker RH	21.	Side camera RH and infrared LED (auxiliary lighting)
22.	Front door speaker RH	23.	GPS antenna	24.	Front display unit
25.	Steering angle sensor	26.	Steering switch	27.	Preset switch
28.	Sonar control unit (with around view monitor)	29.	Auxiliary input jacks	30.	iPod connector
31.	AV control unit	32.	Multifunction switch	33.	iPod adapter
34.	Microphone				
A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
D.	Instrument panel rear side	E.	Spiral cable part	F.	Console pocket assembly removed condition
G.	Rear view of the front display unit				

# Component Description

INFOID:0000000003826569

Part name	Description		
AROUND VIEW MONITOR CONTROL UNIT	<ul> <li>It supplies power to front camera, rear camera, and side camera. And then it superimposes the images from each camera and outputs them to front display unit.</li> <li>Superimposes the guiding line, predicted course line and sonar indicator to the camera image that outputs to front display unit.</li> <li>It performs the reception/transmission of communication signal with each camera.</li> <li>Inputs the sensor signal from the steering angle sensor, and then controls the predicted course line.</li> <li>It transmits the sonar operation signal from sonar control unit and receives the sonar information from the sonar control unit via AV communication.</li> <li>It transmits the information received/transmitted with the sonar control unit via AV communication to AV control unit.</li> </ul>		
SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)	<ul> <li>It is connected with around view monitor control unit via AV communication and receives the sonar operation signal from around view monitor control unit.</li> <li>It transmits the sonar detection status to around view monitor control unit via AV communication.</li> <li>It judges the warning level according to the signal from corner sensor and outputs the buzzer drive signal.</li> <li>Trouble diagnosis is supported with CONSULT-III (K-LINE).</li> </ul>		
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to sonar control unit.		
BUZZER	The warning buzzer outputs with the signal from sonar control unit.		

< SYSTEM DESCRIPTION >

[NAVIGATION (SINGLE MONITOR)]

# DIAGNOSIS SYSTEM (AV CONTROL UNIT)

## **Diagnosis Description**

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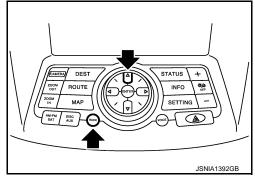
## MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

The ON/OFF operation (continuity) of each switch in multifunction switch and preset switch can be checked.

### Self-diagnosis mode

- Press the "BACK" switch and the "UP" switch of the 8-direction switches within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 seconds or more. Then the buzzer sounds, all indicators of the preset switch illuminate, and the self-diagnosis mode starts.
- The continuity of each switch in the ON position can be checked by pressing the switch. The buzzer sounds if the switch is normal.
   NOTE:

The hazard switch and disk eject switch cannot be checked.



Finishing Self-diagnosis Mode

Self-diagnosis mode is canceled when turning the ignition switch OFF.

### MULTI AV SYSTEM ON BOARD DIAGNOSIS FUNCTION

- AV control unit diagnosis function starts up with multifunction switch operation and AV control unit performs a diagnosis for each unit in the system during the on board diagnosis.
- Perform a CONSULT-III diagnosis if the on board diagnosis does not start, e.g., the screen does not display
  anything, multifunction switch does not function, etc.

### ON BOARD DIAGNOSIS

#### Description

- The trouble diagnosis function has a self-diagnosis mode for conducting trouble diagnosis automatically and a confirmation/adjustment mode for operating manually.
- The self-diagnosis mode performs diagnoses on AV control unit, connections between system components, AV control unit and GPS antenna and between AV control unit and satellite radio antenna. Then it displays the diagnosis results on display.
- The confirmation/adjustment mode allows the technician to check, modify or adjust the vehicle signals and set values, as well as to monitor the system error records and system communication status. The checking, modifying or adjusting generally require human intervention and judgment (the system cannot make a judgment automatically).

## On Board Diagnosis Item

Mode	Description
	<ul> <li>AV control unit diagnosis</li> <li>Diagnoses the connections across system components, between AV control unit and GPS antenna and between AV control unit and satellite radio antenna.</li> </ul>

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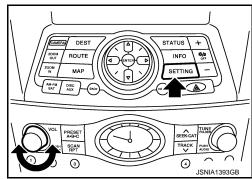
## < SYSTEM DESCRIPTION >

## [NAVIGATION (SINGLE MONITOR)]

	Mode		Description	
	Display Diagnosis		The following check functions are available: color tone check by color bar display, light and shade check by gray scale display and touch panel calibration response check.	
	Vehicle Signals		Diagnosis of signals can be performed for vehicle speed, parking brake lights, ignition switch, and reverse.	
	Speaker Test		The connection of a speaker can be confirmed by test tone.	
	Climate Control		Start auto air conditioner system self-diagnosis.	
		Steering Angle Adjustment	When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted.	
	Navigation	Speed Calibration	When there is a difference between the current location mark and the actual location, it can be adjusted.	
		XM SAT Subscription Status	The XM NavTraffic subscription status can be checked.	
Confirmation/	Error History		The system malfunction and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.	
Adjustment	Vehicle CAN Diagnosis		The transmitting/receiving of CAN communication can be monitored.	
	AV COMM Diagnosis		The communication condition of each unit of Multi AV system can be monitored.	
	Handsfree Phone		The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.	
	Camera Cont.		It can perform the confirmation of a signal connection to around view monitor control unit, the calibration of each camera, Correct Draw Line of Camera Image, and Fine Tuning of Birds-Eye View. Refer to <a href="https://example.com/AV-334">AV-334</a> , <a href="mailto:">"Diagnosis Description"</a> .	
	Bluetooth		The passkey and the device name can be checked and changed.	
	SAT	Change Channel	Any necessary channels required to receive traffic information from the satellite radio system can be set.	
		Change Application ID	Any application IDs required to receive traffic information from the satellite radio system can be set.	
		Diag	Not used.	
	Delete Unit Connec	tion Log	Erase the connection history of unit and error history.	
	Initialize Settings		Initializes AV control unit memory.	

## STARTING PROCEDURE

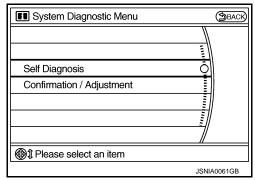
- 1. Start the engine.
- 2. Turn the audio system OFF.
- 3. While pressing the "SETTING" button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. (When the self-diagnosis mode is starts, a short beep will sound.)
  - Shifting from current screen to previous screen is performed by pressing the "BACK" button.



## < SYSTEM DESCRIPTION >

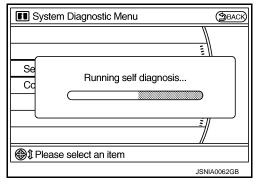
## [NAVIGATION (SINGLE MONITOR)]

 The trouble diagnosis initial screen is displayed, and then the items of "Self Diagnosis" and "Confirmation/Adjustment" can be selected.

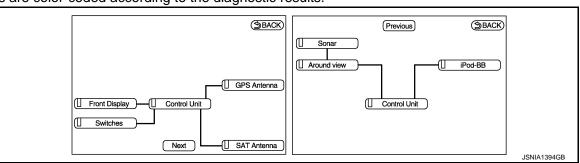


### **SELF-DIAGNOSIS MODE**

- 1. Start the self-diagnosis function and select "Self Diagnosis".
- Self-diagnosis subdivision screen is displayed, and the selfdiagnosis mode starts.
- The bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.



2. Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.



Diagnosis results	Unit	nection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction Note	Red	Green

## NOTE:

- Only the control unit (AV control unit) is displayed in red.
- Replace AV control unit if "Self-Diagnosis did not run because of a control unit malfunction" is indicated. The symptom is an AV control unit internal error. Refer to <u>AV-579</u>, "<u>Exploded View</u>".
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.

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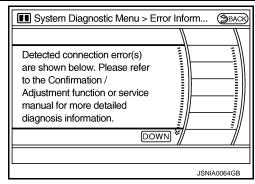
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## < SYSTEM DESCRIPTION >

## [NAVIGATION (SINGLE MONITOR)]

 The comments of the self-diagnosis results can be viewed with a component in the diagnosis result screen.

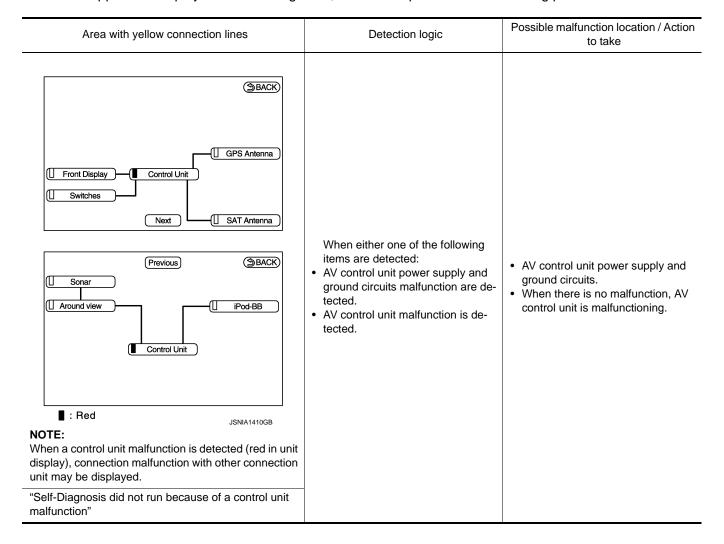


Detection Range of Self-diagnosis Mode

- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between AV control unit and each unit and the internal operation of AV control unit.
- Because the start condition of diagnosis function is switch operated, the on board diagnosis function cannot be started up if any malfunction is detected in the communication circuit between AV control unit and multifunction switch.

## **SELF-DIAGNOSIS RESULTS**

Check the applicable display in the following table, and then repair the malfunctioning parts.



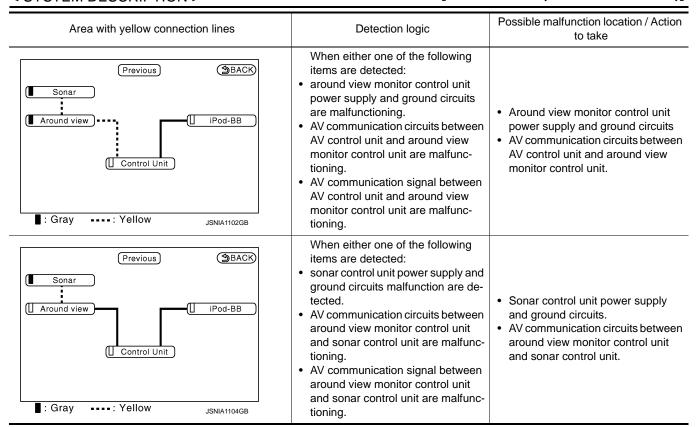
## < SYSTEM DESCRIPTION >

# [NAVIGATION (SINGLE MONITOR)]

Area with yellow connection lines	Detection logic	Possible malfunction location / Action to take
GPS Antenna  Front Display  Control Unit  Switches  Next  SAT Antenna  I : Gray  JSNIA0597GB	GPS antenna connection malfunction is detected.	GPS antenna.
GPS Antenna  GPS Antenna  GPS Antenna  SAT Antenna  SAT Antenna  SAT Antenna  SAT Antenna  JSNIA0598GB	Poor connection is detected in satellite radio antenna.	<ul> <li>Satellite radio antenna feeder.</li> <li>Satellite radio antenna.</li> </ul>
Front Display Control Unit  Switches  Next SAT Antenna  I : Gray SAT Antenna  JSNIA0599GB	When either one of the following items are detected:  communication circuit between AV control unit and front display unit are malfunctioning.  communication signal between AV control unit and front display unit are malfunctioning.	Communication circuits between AV control unit and front display unit.
Previous SBACK  Sonar  Around view iPod-BB  Control Unit iPod-BB	When either one of the following items are detected:  • iPod adapter power supply and ground circuits malfunction are detected.  • AV communication circuits between AV control unit and iPod adapter are malfunctioning.  • AV communication signal between AV control unit and iPod adapter are malfunctioning.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>

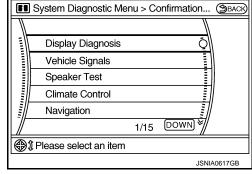
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## [NAVIGATION (SINGLE MONITOR)]



## CONFIRMATION/ADJUSTMENT MODE

- Start the diagnosis function and select "Confirmation/Adjustment". The confirmation/adjustment mode indicates where each item can be checked or adjusted.
- Select each switch on the "Confirmation/Adjustment Mode" screen to display the relevant trouble diagnosis screen. Press the "BACK" switch to return to the initial Confirmation/Adjustment Mode screen.



## < SYSTEM DESCRIPTION >

[NAVIGATION (SINGLE MONITOR)]

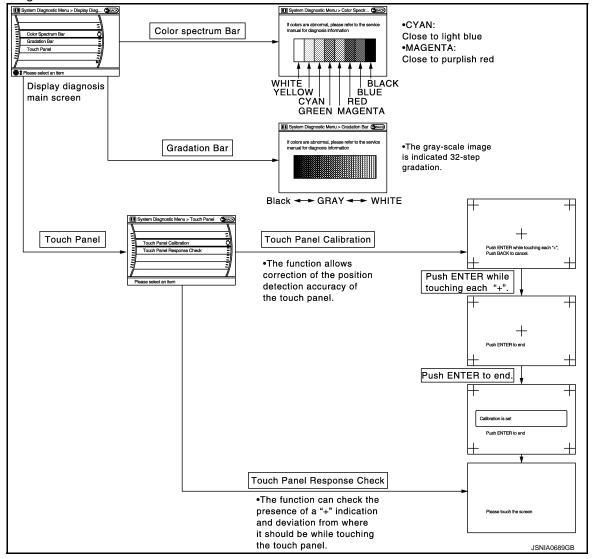
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## Display Diagnosis



The tint of the color bar indication is as per the following list if a RGB signal error is detected.

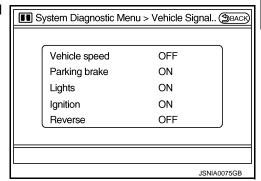
R (red) signal error : Light blue (Cyan) tint G (green) signal error : Purple (Magenta) tint

B (blue) signal error : Yellow tint

## Vehicle Signals

Revision: 2009 March

A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



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## < SYSTEM DESCRIPTION >

## [NAVIGATION (SINGLE MONITOR)]

Diagnosis item	Display	Vehicle status	Remarks	
Vehicle speed	ON	Vehicle speed > 0 km/h (0 MPH)		
verlicie speed	OFF	Vehicle speed = 0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.	
Parking brake	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.	
Faiking brake	OFF	Parking brake is released.		
Lights	ON	Light switch ON		
	OFF	Light switch OFF	<del>-</del>	
Ignition	ON	Ignition switch ON		
ignition	OFF	Ignition switch in THE ACC position	_	
Reverse	ON	Shift the selector lever to the "R" position	Changes in indication may be delayed. This is normal.	
Neverse	OFF	Shift the selector lever to a position other than the "R" position	Changes in indication may be delayed. This is notifial.	

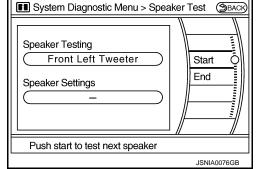
#### Speaker Test

Select "SPEAKER DIAGNOSIS" to display the Speaker Diagnosis screen. Press "START and NEXT" to generate a test tone in a speaker. Press "Start" to generate a test tone in the next speaker. Press "End" to stop the test tones.

### NOTE:

The frequency of test tone emitted from each speaker is as follows.

Tweeter\* : 3 kHz
Front speaker : 300 Hz
Rear speaker : 1 kHz



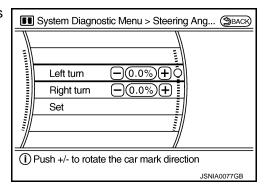
## Climate Control

Refer to "HEATER & AIR CONDITIONING CONTROL SYSTEM" for details.

### Navigation

## STEERING ANGLE ADJUSTMENT

The steering angle output value detected with the gyroscope is adjusted.



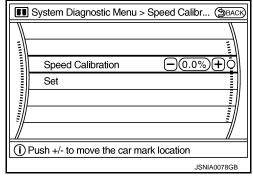
**SPEED CALIBRATION** 

<sup>\*:</sup> Squawker

#### < SYSTEM DESCRIPTION >

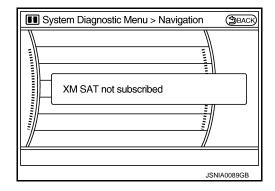
#### [NAVIGATION (SINGLE MONITOR)]

During normal driving, distance error caused by tire wear and tire pressure change is automatically adjusted for by the automatic distance correction function. This function, on the other hand, is for immediate adjustment, in cases such as driving with tire chains fitted on tires.



#### XM SAT SUBSCRIPTION STATUS

The XM NavTraffic subscription status can be checked.



#### **Error History**

The self-diagnosis results are judged depending on whether any error occurs from when "Self-diagnosis" is selected until the self-diagnosis results are displayed.

However, the diagnosis results are judged normal if an error has occurred before the ignition SW is turned ON and then no error has occurred until the self-diagnosis start. Check the "Error Record" to detect any error that may have occurred before the self-diagnosis start because of this condition.

The error record displays the time and place of the most recent occurrence of that error. However, take note of the following points.

- If there is a malfunction with the GPS antenna circuit board in AV control unit, the correct date and time of occurrence may not be displayed.
- Place of the error occurrence is represented by the position of the current location mark at the time an error occurred. If current location mark has deviated from the correct position, then the place of the error occurrence cannot be located correctly.
- The frequency of occurrence is displayed in a count up manner. The actual count up method differs depending on the error item.

#### Count up method A

- The counter resets to 0 if an error occurs when IGN switch is turned ON. The counter increases by 1 if the condition is normal at a next IGN ON cycle.
- The counter upper limit is 39. Any counts exceeding 39 are ignored. The counter can be reset (no error record display) with the "Delete log" switch or CONSULT-III.

#### Count up method B

- The counter increases by 1 if an error occurs when IGN switch is ON. The counter will not decrease even if the condition is normal at the next IGN ON cycle.
- The counter upper limit is 50. Any counts exceeding 50 are ignored. The counter can be reset (no error record display) with the "Delete log" switch or CONSULT-III.

Display type of occur- rence frequency	Error history display item	
Count up method A	CAN communication line, control unit (CAN), AV communication line, control unit (AV communication)	
Count up method B	Other than the above	

Revision: 2009 March AV-325 2009 FX35/FX50

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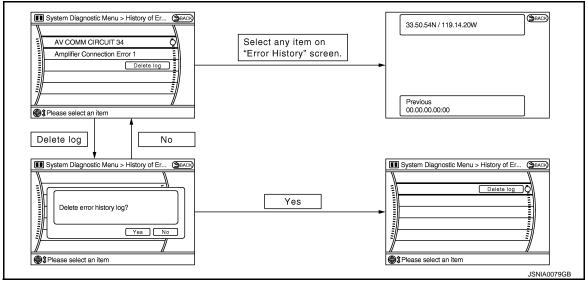
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### [NAVIGATION (SINGLE MONITOR)]



Error item

Some error items may be displayed simultaneously according to the cause. If some error items are displayed simultaneously, the detection of the cause can be performed by the combination of display items.

Error item	Detection logic	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results.  Refer to AV-330, "CONSULT-III Function (MULTI AV)".
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit		
Connection Of Gyro		
XM SERIAL COMM Error		Replace AV control unit.
CAN Controller Memory Error		
Bluetooth Module Connection Error		
HDD CONN Error	AV control unit malfunction is detected.	
HDD READ Error	AV control unit mailunction is detected.	
HDD WRITE Error		
HDD COMM Error		
HDD ACCESS Error		
DSP CONN Error		
DSP COMM Error		
Internal Communication Error	When either one of the following items are detected:  • malfunction is detected in AV control unit power supply and ground circuits.  • AV control unit malfunction is detected.	AV control unit power supply and ground circuits.     When there is no malfunction, AV control unit is malfunctioning.
GPS Communication Error		An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) oc-
GPS ROM Error		
GPS RAM Error	GPS malfunction is detected.	curs.
GPS RTC Error		Replace AV control unit if the malfunction occurs constantly.

#### < SYSTEM DESCRIPTION >

### [NAVIGATION (SINGLE MONITOR)]

Error item	Detection logic	Possible malfunction factor/Action to take
Front Display Connection Error	When either one of the following items are detected:  • front display unit power supply and ground circuits malfunction are detected.  • malfunction is detected in the communication circuits between AV control unit and front display unit.  • malfunction is detected in the communication signal between AV control unit and front display unit.	<ul> <li>Front display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and front display unit.</li> </ul>
GPS Antenna Error	GPS antenna connection malfunction is detected.	GPS antenna.
XM Antenna Connection Error	Poor connection is detected in satellite radio antenna.	Satellite radio antenna feeder.     Satellite radio antenna.
AV COMM CIRCUIT     Internal Communication Error	<ul> <li>When either one of the following items are detected:</li> <li>AV control unit power supply and ground circuits malfunction are detected.</li> <li>AV control unit malfunction is detected.</li> </ul>	AV control unit power supply and ground circuits.     When there is no malfunction, AV control unit is malfunctioning.
AV COMM CIRCUIT     Switches Connection Error	<ul> <li>When either one of the following items are detected:</li> <li>multifunction switch power supply and ground circuits malfunction are detected.</li> <li>malfunction is detected in the AV communication circuits between AV control unit and multifunction switch.</li> <li>malfunction is detected in the AV communication signal between AV control unit and multifunction switch.</li> </ul>	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>
AV COMM CIRCUIT     iPod Connection Error	<ul> <li>When either one of the following items are detected:</li> <li>iPod adapter power supply and ground circuits malfunction are detected.</li> <li>malfunction is detected in the AV communication circuits between AV control unit and iPod adapter.</li> <li>malfunction is detected in the AV communication signal between AV control unit and iPod adapter.</li> </ul>	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>
AV COMM CIRCUIT     AVM Connection Error	When either one of the following items are detected:  around view monitor control unit power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit.  malfunction is detected in the AV communication signal between AV control unit and around view monitor control unit.	<ul> <li>Around view monitor control unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and around view monitor control unit.</li> </ul>

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#### < SYSTEM DESCRIPTION >

#### [NAVIGATION (SINGLE MONITOR)]

Error item	Detection logic	Possible malfunction factor/Action to take
AV COMM CIRCUIT     AVM Sonar Connection Error	When either one of the following items are detected:  sonar control unit power supply or ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between around view monitor control unit and sonar control unit.  malfunction is detected in the AV communication signal between around view monitor control unit and sonar control unit.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between around view monitor control unit and sonar control unit.</li> </ul>
<ul> <li>AV COMM CIRCUIT</li> <li>Switches Connection Error</li> <li>iPod Connection Error</li> <li>AVM Connection Error</li> </ul>	Malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit.	AV communication circuits between AV control unit and around view monitor control unit.

#### Vehicle CAN Diagnosis

- CAN communication status and error counter is displayed.
- The error counter displays "OK" if any malfunction was not detected in the past and displays "0" if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle. The upper limit of the counter is 39.
- The error counter is erased if "Reset" is pressed.

Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / UNKWN	OK / 0 – 39
Rx(ECM)	OK / UNKWN	OK / 0 – 39
Rx(Cluster)	OK / UNKWN	OK / 0 - 39
Rx(BCM)	OK / UNKWN	OK / 0 – 39
Rx(HVAC)	OK / UNKWN	OK / 0 – 39
Rx(USM)	OK / UNKWN	OK / 0 - 39
Rx(TPMS)	OK / UNKWN	OK / 0 – 39

#### System Diagnostic Menu > Vehicle CAN... (\$\)BACK Checking Status Count Signal Tx(HVAC) OK OK Rx(ECM) OK OK Rx(Cluster) OK OK Reset Rx(BCM) OK OK Rx(HVAC) OK OK Rx(USM) OK OK Rx(TPMS) OK OK JSNIA1408GB

#### **AV COMM Diagnosis**

- Displays the communication status between AV control unit (master unit) and each unit.
- The error counter displays "OK" if any malfunction was not detected in the past and displays "0" if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle. The upper limit of the counter is 39.
- The error counter is erased if reset.

Items	Status (Current)	Counter (Past)
C Tx(ITM-PrimarySW)	OK / UNKWN	OK / 0 – 39
C Rx(PrimarySW-ITM)	OK / UNKWN	OK / 0 – 39
C Rx(STRG SW-ITM)	OK / UNKWN	OK / 0 – 39
C Rx(Audio-ITM)	OK / UNKWN	OK / 0 - 39
C Rx(Amp–ITM)	OK / UNKWN	OK / 0 – 39
C Rx(XM–ITM)	OK / UNKWN	OK / 0 – 39
C Rx(iPod–ITM)	OK / UNKWN	OK / 0 – 39
C RX(AVM–ITM)	OK / UNKWN	OK / 0 – 39

Signal	Status	Count.	Checking \
CTx(ITM-PrimarySW)	OK	OK	[     [
C Rx(PrimarySW-ITM)	OK	ОК	Reset
C Rx(STRG SW-ITM)	OK	OK	<del>           </del>
C Rx(Audio-ITM)	OK	OK	=   =
C Rx(Amp-ITM)	OK	OK	(4.111.111.11.11.11.11.11.11.11.11.11.11.
C Rx(XM-ITM)	OK	OK	
C Rx(iPod-ITM)	OK	ОК	<i>\$ </i>   <del></del>

#### < SYSTEM DESCRIPTION >

#### [NAVIGATION (SINGLE MONITOR)]

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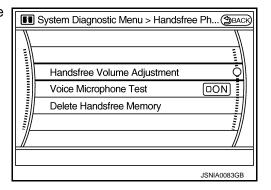
Items	Status (Current)	Counter (Past)
C Rx(Amp-Audio)	_	_
C Rx(iPod–Audio)	OK / UNKWN	OK / 0 – 39
C Rx(Sonar–AVM)	OK / UNKWN	OK / 0 – 39
C Tx(Audio-ITM)	OK / UNKWN	OK / 0 – 39

#### NOTE:

- "Audio" and "Amp" indicate the same status because "Amp" indicates the status of the amplifier integrated in AV control unit.
- "STRG SW", "Amp" and "XM" indicate the same status as "Audio".

#### Hands-Free Phone

The hands-free phone reception volume adjustment, microphone and speaker test, and memory erase functions are also available.



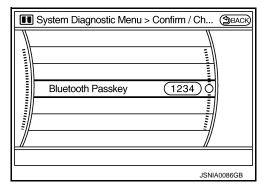
#### Camera Cont.

Refer to AV-334, "Diagnosis Description".

#### Bluetooth

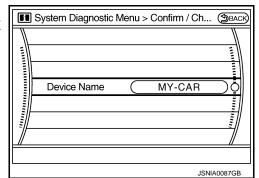
Confirm / Change Passkey

- The passkey of Bluetooth can be confirmed and changed.
- The passkey can be changed by four digits within 0 to 9.



#### Confirm / Change Device Name

- The device name of Bluetooth can be confirmed and changed.
- The device name can be changed by sixteen digits within A to Z (small character can be used) and - (hyphen).

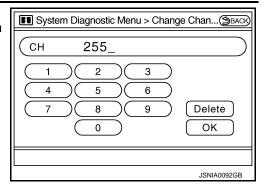


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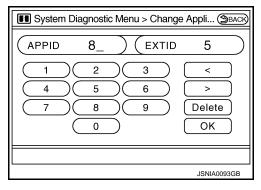
#### < SYSTEM DESCRIPTION >

#### [NAVIGATION (SINGLE MONITOR)]

- Change Channel
- Any necessary channels required to receive traffic information from the satellite radio system can be set.

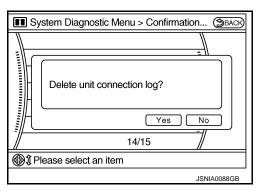


- Change Application ID
- Any application IDs required to receive traffic information from the satellite radio system can be set.



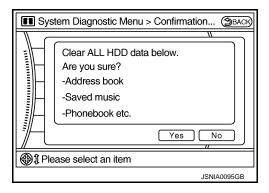
#### **Delete Unit Connection Log**

Deletes any unit connection records and error records from AV control unit memory. (Clear the records of the unit that has been removed.)



Initialize Settings

Deletes data stored in HDD.



CONSULT-III Function (MULTI AV)

INFOID:0000000003826571

#### **CONSULT-III FUNCTIONS**

CONSULT-III performs the following functions via the communication with AV control unit.

Replace AV control unit if the malfunction

occurs constantly.

Diagnosis mode	Description			
Ecu Identification	he part number of AV control unit can be checked.			
Self Diagnostic Result		erforms a diagnosis on AV control unit, a connection diagnosis for the communication circuit the Multi AV system, and displays the current and past malfunctions collectively.		
Data Monitor	The diagnosis of vehicle signal that is input to AV	ne diagnosis of vehicle signal that is input to AV control unit can be performed.		
AV COMMUNICATION When "AV communication" of "C	CAN Diag Support Monitor" is selected, the			
AV communication AV&NAVI C/U	Displays the communication status from A\ counter.	/ control unit to each unit as well as the error		
AUDIO	Displays AV control unit communication sta	atus and the error counter.		
The timing is displayed as "0"	s, self-diagnosis results and error history a f if any of the error codes [U1000], [U101 the condition is normal at the next ignition	0], [U1300] or [U1310] are detected.		
Error item	Description	Possible malfunction factor/Action to take		
CAN COMM CIRCUIT[U1000]	CAN communication malfunction is detected.	Refer to AV-339, "Diagnosis Procedure".		
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.			
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.			
Control Unit FLASH-ROM [U1200]				
Gyro NO CONN [U1201]				
CAN CONT [U1216]				
BLUETOOTH CONN [U1217]				
HDD CONN [U1218]		Replace AV control unit.		
HDD READ [U1219]	AV control unit molfing time in detects t			
XM SERIAL COMM [U1220]	AV control unit malfunction is detected.			
HDD WRITE [U121A]				
HDD COMM [U121B]				
HDD ACCESS [U121C]				
DSP CONN [U121D]				
DSP COMM [U121E]				
INTERNAL COMM [U121F]	When either one of the following items are detected:  malfunction is detected in AV control unit supply and ground circuit.  AV control unit malfunction are detected.	AV control unit power supply and ground circuits.     When there is no malfunction, AV control unit is malfunctioning.		
		A = int = ===itt = =t = === = = =		
GPS COMM [U1204]		An intermittent error caused by strong radio		
GPS COMM [U1204]  GPS ROM [U1205]		interference may be detected unless any symptom (GPS reception error, etc.) oc-		

GPS RTC [U1207]

### < SYSTEM DESCRIPTION >

### [NAVIGATION (SINGLE MONITOR)]

Error item	Description	Possible malfunction factor/Action to take
FRONT DISP CONN [U1243]	When either one of the following items are detected:  • front display unit power supply and ground circuits malfunction are detected.  • malfunction is detected in the communication circuits between AV control unit and front display unit.  • malfunction is detected in the communication signal between AV control unit and front display unit.	<ul> <li>Front display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and front display unit.</li> </ul>
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna.
XM ANTENNA CONN [U1258]	Poor connection is detected in satellite radio antenna.	<ul><li>Satellite radio antenna feeder.</li><li>Satellite radio antenna.</li></ul>
AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]	When either one of the following items are detected:  AV control unit power supply and ground circuits malfunction are detected.  AV control unit malfunction are detected.	AV control unit power supply and ground circuits.     When there is no malfunction, AV control unit is malfunctioning.
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items are detected:  multifunction switch power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and multifunction switch.  malfunction is detected in the AV communication signal between AV control unit and multifunction switch.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>
AV COMM CIRCUIT [U1300]     IPod CONN [U1254]	When either one of the following items are detected:  • iPod adapter power supply and ground circuits malfunction are detected.  • malfunction is detected in the AV communication circuits between AV control unit and iPod adapter.  • malfunction is detected in the AV communication signal between AV control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>
AV COMM CIRCUIT [U1300]     AROUND CAMERA CONN [U125B]	When either one of the following items are detected:  around view monitor control unit power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit.  malfunction is detected in the AV communication signal between AV control unit and around view monitor control unit.	<ul> <li>Around view monitor control unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and around view monitor control unit.</li> </ul>

#### < SYSTEM DESCRIPTION >

#### [NAVIGATION (SINGLE MONITOR)]

Error item	Description	Possible malfunction factor/Action to take
AV COMM CIRCUIT [U1300]     SONAR CONN [U125C]	When either one of the following items are detected:  sonar control unit power supply and ground circuit malfunction are detected.  malfunction is detected in the AV communication circuits between around view monitor control unit and sonar control unit.  malfunction is detected in the AV communication signal between around view monitor control unit and sonar control unit.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between around view monitor control unit and sonar control unit.</li> </ul>
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>IPod CONN [U1254]</li> <li>AROUND CAMERA CONN [U125B]</li> </ul>	Malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit.	AV communication circuits between AV control unit and around view monitor control unit.

#### **DATA MONITOR**

#### **ALL SIGNALS**

- Displays the status of the following vehicle signals inputted into AV control unit.
- For each signal, actual signal can be compared with the condition recognized on the system.

Display Item	Display	Vehicle status	Remarks
VHCL SPD SIG	On	Vehicle speed > 0 km/h (0 MPH)	
VIICE SPD SIG	Off	Vehicle speed = 0 km/h (0 MPH)	Changes in indication may be delayed. This is
DIAD OIO	On	Parking brake is applied.	normal.
PKB SIG	Off	Parking brake is released.	
III I I I I I I I I I I I I I I I I I	On	Block the light beam from the auto light optical sensor when the light SW is ON.	
ILLUM SIG	Off	Expose the auto light optical sensor to light when the light SW is OFF or ON.	_
ICM SIC	On	Ignition switch ON	
IGN SIG	Off	Ignition switch in the ACC position	
REV SIG	On	Shift the selector lever to the "R" position	Changes in indication may be delayed. This is
	Off	Shift the selector lever to a position other than the "R" position	normal.

#### **SELECTION FROM MENU**

Allows the technician to select which vehicle signals should be displayed and displays the status of the selected vehicle signals.

Item to be selected	Description
VHCL SPD SIG	
PKB SIG	
ILLUM SIG	The same as when "ALL SIGNALS" is selected.
IGN SIG	
REV SIG	

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### **DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)** [NAVIGATION (SINGLE MONITOR)]

< SYSTEM DESCRIPTION >

### DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

### **Diagnosis Description**

INFOID:0000000003826572

The diagnosis function of around view monitor control unit is displayed when selecting "Camera Cont." of Confirmation/Adjustment mode in the multi AV system.

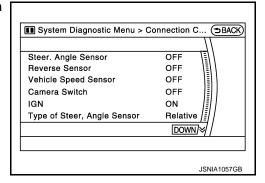
Around view monitor control unit diagnosis item

AV control unit Confirmation/Adjustment mode			Function
Connection Con		ation	The status of signals input to around view monitor control unit can be checked.
		Rear Camera	Performs the calibration of rear camera.
		Pass-Side Camera	Performs the calibration of side camera LH.
	Calibrating Cam-	Front Camera	Performs the calibration of front camera.
	era Image	Dr-Side Camera	Performs the calibration of side camera.
Camera Cont.		Initialize Camera Image Calibration*	The calibration can be initialized to NISSAN factory shipment condition.
		Rear View	The position of rear view guiding line can be changed.
	Correct Draw Line of Camera Image	Front-Side View	The position of Front-Side view guiding line can be changed.
		Front View	The position of front view guiding line can be changed.
Fine Tuning of E		-Eye View	The confirmation and adjustment of the difference between each camera can be performed.  The system changes to the ZOOM function by the operation of shift and the ZOOM ratio of each camera can be changed.

#### **CAUTION:**

#### **Connection Confirmation**

The status of signals inputted to around view monitor control unit can be checked.



Connection Confirmation item list

Diagnosis item	Display	Description
Steer. Angle Sensor	ON/OFF	<ul> <li>Input status of steering angle sensor is displayed by ON/OFF.</li> <li>When all of steering signals 1, 2, and 3 are input, it is turned ON. It remains ON until connection confirmation mode is stopped.</li> </ul>
Reverse Sensor	ON/OFF	Input status of reverse signal inputted to around view monitor control unit is displayed by ON/OFF in real time.
Vehicle Speed Sensor	ON/OFF	<ul> <li>Input status of vehicle speed signal inputted to around view monitor control unit is displayed by ON/OFF.</li> <li>When the vehicle speed signal is input, it is turned ON. It remains ON until connection confirmation mode is stopped.</li> </ul>
Camera Switch	ON/OFF	<ul> <li>The status of camera switch signal received via AV communication from AV control unit is displayed by ON/OFF.</li> <li>When the camera switch signal is received once, it is turned ON. It remains ON until connection confirmation mode is stopped.</li> </ul>
IGN	ON/OFF	Input status of ignition signal inputted to around view monitor control unit is displayed by ON/OFF in real time.

<sup>\*:</sup> Never perform other operations for approximately 10 seconds after performing "Initialize Camera Image Calibration".

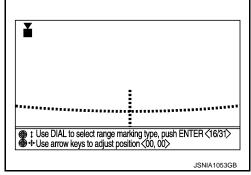
# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT) < SYSTEM DESCRIPTION > [NAVIGATION (SINGLE MONITOR)]

Diagnosis item	Display	Description
Type of Steer. Angle Sensor	Relative	The input type of steering angle sensor is displayed. ("Relative" is displayed on this model.)
Type of Steer. Gear ratio	1	The type of steering gear ratio is displayed. ("1" is displayed on this model.)
Left or Right Steer.	Left	The steering position is displayed. ("Left" is displayed on this model.)
Rear Camera Image Output signal	OK / NG	The input status of rear camera image signal is displayed by OK/NG in real time.
Rear Camera COMM Status	OK / NG	The communication status with rear camera is displayed by OK/NG in real time.
Rear Camera COMM Line	OK / NG	The status of communication line with rear camera is displayed by OK/NG in real time.
Front Camera Image Output signal	OK / NG	The input status of front camera image signal is displayed by OK/NG in real time.
Front Camera COMM Status	OK / NG	The communication status with front camera is displayed by OK/NG in real time.
Front Camera COMM Line	OK / NG	The status of communication line with front camera is displayed by OK/NG in real time.
Pass-Side Camera Image Output signal	OK / NG	The input status of side camera RH image signal is displayed by OK/NG in real time.
Pass-Side Camera COMM Status	OK / NG	The communication status with side camera RH is displayed by OK/NG in real time.
Pass-Side Camera COMM Line	OK / NG	The status of communication line with side camera RH is displayed by OK/NG in real time.
Dr-Side Camera Image Output signal	OK / NG	The input status of side camera LH image signal is displayed by OK/NG in real time.
Dr-Side Camera COMM Status	OK / NG	The communication status with side camera LH is displayed by OK/NG in real time.
Dr-Side Camera COMM Line	OK / NG	The status of communication line with side camera LH is displayed by OK/NG in real time.

#### Calibrating Camera Image

- Perform the calibration of camera image caused by the incorrect mounting position of each camera, etc. Always perform calibration after performing the following work.
- When each camera or each camera mount (door mirror, front grille, etc.) is removed
- When replacing around view monitor control unit
- When performing the calibration initialization, it can be set to the NISSAN factory shipment condition.

Refer to AV-279, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement" for the calibration procedure.



Adjustment range

Rotating direction : 31 patterns (16 on the

center)

Upper/lower direction : -99 - 99 Left/right direction : -99 - 99

Calibrating	Camera	Image	item

Items	Description
Rear Camera	Performs the calibration of rear camera.
Pass-Side Camera	Performs the calibration of side camera RH.
Front Camera	Performs the calibration of front camera.
Dr-Side Camera	Performs the calibration of side camera LH.
Initialize Camera Image Calibration*	The calibration can be initialized to the factory shipment setting.

#### **CAUTION:**

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<sup>\*:</sup> Never perform other operations for approximately 10 seconds after performing "Initialize Camera Image Calibration".

### **DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)**

#### < SYSTEM DESCRIPTION >

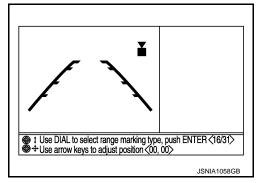
[NAVIGATION (SINGLE MONITOR)]

#### Correct Draw Line of Camera Image

The display position of guiding lines when displayed on the rear view, front view, and front-side view can be changed.

Adjustment range

Rotating direction : 31 patterns
Upper/lower direction : -25 - 25
Left/right direction : -25 - 25



Correct Draw Line of Camera Image item

Items	Description
Rear View	The position of rear view guiding line can be changed.
Front-Side View	The position of Front-Side view guiding line can be changed.
Front View	The position of Front view guiding line can be changed.

#### Fine Tuning of Birds-Eye View

- The fine adjustment function of camera calibration can check and adjust the difference between each camera.
- Fine adjustments can be performed for each camera. Move the "+"-mark to select the camera by pressing the "CAMERA" switch.
- Perform the adjustment with the center dial and upper/lower/left/ right switches.

#### **CAUTION:**

Operate the center dial slowly because the changing of the screen takes approximately 1 second.

#### NOTE:

- It can be initialized to the NISSAN factory shipment setting with "Initialize Camera Image Calibration" of "Calibrating Camera Image".
- The adjustment value is cancelled in this mode by performing "Initialize Camera Image Calibration".



Rotating direction : 31 patterns (16 on the

center)

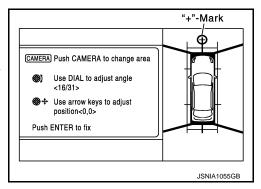
Upper/lower direction : -99 - 99 Left/right direction : -99 - 99

#### **ZOOM** function

- The ZOOM ratio of camera can be changed when calibrating the camera.
- It shifts to ZOOM function mode by shifting the selector lever to a
  position other than the "R" position → "R" position → other than "R"
  position in the "Fine Tuning of Birds-Eye View" mode.
- The changing of ZOOM ratio can be performed for each camera.
   Move the "+"-mark to select the camera by pressing "CAMERA" switch and press the left/right switch to change the ZOOM ratio.

#### NOTE:

- When the position is not correct in "Fine Tuning of Birds-Eye View" mode, use this "ZOOM" function to adjust it.
- If this function is used, always adjust the upper/lower/left/right position again on the "Fine Tuning of Birds-Eye View" screen.



ZOON	1	
CAMERA	) Push CAMERA to change area	
<b>(</b>	Use DIAL to adjust angle <15/31>	
<b>+</b>	Use arrow keys to adjust position<0,0>	
Push	ENTER to fix	
	5 (DEF 405) 3 (DEF 609)	

### DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONI-TOR)1

< SYSTEM DESCRIPTION >

[NAVIGATION (SINGLE MONITOR)]

# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

CONSULT-III Function (SONAR)

INFOID:0000000003826573

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#### DESCRIPTION

CONSULT-III can display each diagnostic item using the diagnostic test modes shown as follows:

Test mode	Function
Ecu Identification	Sonar control unit part number can be read.
Self Diagnostic Result	Sonar control unit checks the conditions and displays memorized error.
Data Monitor	Sonar control unit input/output data in real time.
Active Test	Gives a drive signal to a load to check the operation.
Work support	Changes setting of each function.

#### **ECU IDENTIFICATION**

Displays the part number of sonar control unit.

#### SELF-DIAGNOSTIC RESULTS

For details, refer to AV-564, "DTC Index".

#### DATA MONITOR

Monitor Item	Display	Description
SONAR OPE On		Around view monitor is ON. (sonar system is ON)
SONAR OPE	Off	Around view monitor is OFF. (sonar system is OFF)
DUZZED OUTDUT	On	Buzzer is output condition.
BUZZER OUTPUT	Off	Buzzer is not output condition.
ERF	ERROR	When a sensor is abnormal.
	LV.0	When a sensor is not detection.
CR SEN [FL] CR SEN [FR] CR SEN [RL]	LV.2	The distance between the corner sensor and an obstacle is 60 cm (23.6 in) or more and less then 70 cm (27.5 in).
CR SEN [RR]	LV.3	The distance between the corner sensor and an obstacle is 40 cm (15.7 in) or more and less then 60 cm (23.6 in).
	LV.4	The distance between corner sensor and an obstacle less than 40 cm (15.7 in).

#### **ACTIVE TEST**

Active test item	Function
BUZZER	This test is able to check buzzer operation.
SONAR SENSOR	This test is able to check each sonar sensor operation.

#### **WORK SUPPORT**

Work support item	Function
CORNER SEN DISTANCE SET	Corner sensor warning buzzer distance is adjustable to 4 phases.

#### CORNER SEN DISTANCE SET

Corner sensor warning buzzer distance can be set to 4 phases as follows.

Warning item	FARTHER	FAR	NORMAL	NEAR
Second warning	70 – 80 cm (27.5 – 31.4 in)	60 - 70 cm (23.6 - 27.5 in)	50 - 60 cm (19.6 - 23.6 in)	40 – 50 cm (15.7 – 19.6 in)

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# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

### < SYSTEM DESCRIPTION >

### [NAVIGATION (SINGLE MONITOR)]

Warning item	FARTHER	FAR	NORMAL	NEAR
Third warning	50 - 70 cm (19.6 - 27.5 in)	40 - 60 cm (15.7 - 23.6 in)	30 - 50 cm (11.8 - 19.6 in)	30 – 40 cm (11.8 – 15.7 in)
Fourth warning	Less than 50 cm (19.6 in)	Less than 40 cm (15.7 in)	Less than 30 cm (11.8 in)	Less than 30 cm (11.8 in)

The default of this model is "FAR".

#### **U1000 CAN COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

### DTC/CIRCUIT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

Description INFOID:0000000003826574

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

CAN Communication Signal Chart. Refer to LAN-32, "CAN Communication Signal Chart".

DTC Logic

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-III	Diagnostic item is detected when	Probable malfunction location
U1000	CAN COMM CIRCUIT	When AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system

### Diagnosis Procedure

### 1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 2. Check "Self Diagnostic Result" of "MULTI AV".

#### Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to "LAN system". Refer to LAN-22, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI section. Refer to GI-35. "Intermittent Incident".

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### **U1010 CONTROL UNIT (CAN)**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

# U1010 CONTROL UNIT (CAN)

Description INFOID:0000000038265777

Initial diagnosis of AV control unit.

DTC Logic

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-III	Diagnostic item is detected when	Probable malfunction location
U1010	CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected	AV control unit

### Diagnosis Procedure

INFOID:0000000003826579

### 1. REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit.

>> INSPECTION END

### **U1310 AV CONTROL UNIT**

### [NAVIGATION (SINGLE MONITOR)]

### **U1310 AV CONTROL UNIT**

Description INFOID:0000000003826580

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic INFOID:0000000003826581

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit

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### **U1200 AV CONTROL UNIT**

Description INFOID:0000000038265682

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1200	Cont Unit FLASH- ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	Replace AV control unit

### **U1201 AV CONTROL UNIT**

### [NAVIGATION (SINGLE MONITOR)]

### **U1201 AV CONTROL UNIT**

Description INFOID:0000000003826584

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic INFOID:0000000003826585

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1201	GYRO NO CONN [U1201]	Internal malfunction of AV control unit (gyrocompass disconnection) is detected.	Replace AV control unit

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### **U1216 AV CONTROL UNIT**

Description INFOID:000000003826586

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1216	CAN CONT [U1216]	Internal malfunction of AV control unit (CAN controller) is detected.	Replace AV control unit

### **U1217 AV CONTROL UNIT**

### [NAVIGATION (SINGLE MONITOR)]

### **U1217 AV CONTROL UNIT**

Description INFOID:0000000008826588

Replace the AV control unit if this DTC is displayed. Refer to AV-579. "Removal and Installation".

Part name	Description
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1217	BLUETOOTH MODULE CONN [U1217]	Internal malfunction of AV control unit (Bluetooth module connection malfunction) is detected.	Replace AV control unit

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### **U1218 AV CONTROL UNIT**

Description INFOID:0000000003826590

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1218	HDD-CONN [U1218]	Internal malfunction of AV control unit (HDD connection malfunction) is detected.	Replace AV control unit

### **U1219 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [NAVIGATION (SINGLE MONITOR)]

### **U1219 AV CONTROL UNIT**

Description INFOID:000000003826592

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1219	HDD-READ [U1219]	Internal malfunction of AV control unit (HDD read malfunction) is detected.	Replace AV control unit

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### **U1220 AV CONTROL UNIT**

Description INFOID:000000003826594

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1220	XM SERIAL COMM [U1220]	Internal malfunction of AV control unit (satellite radio tuner communication error) is detected.	Replace AV control unit

### **U121A AV CONTROL UNIT**

### [NAVIGATION (SINGLE MONITOR)]

### **U121A AV CONTROL UNIT**

Description INFOID:0000000008826596

Replace the AV control unit if this DTC is displayed. Refer to AV-579. "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121A	HDD-WRITE [U121A]	Internal malfunction of AV control unit (HDD write malfunction) is detected.	Replace AV control unit

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### **U121B AV CONTROL UNIT**

Description INFOID:000000003826598

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121B	HDD-COMM [U121B]	Internal malfunction of AV control unit (HDD communication error) is detected.	Replace AV control unit

### **U121C AV CONTROL UNIT**

### [NAVIGATION (SINGLE MONITOR)]

### **U121C AV CONTROL UNIT**

Description INFOID:000000003826600

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121C	HDD-ACCESS [U121C]	Internal malfunction of AV control unit (HDD access error) is detected.	Replace AV control unit

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### **U121D AV CONTROL UNIT**

Description INFOID:000000003826602

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121D	DSP CONN [U121D]	Internal malfunction of AV control unit (DSP connection error) is detected.	Replace AV control unit

### **U121E AV CONTROL UNIT**

### [NAVIGATION (SINGLE MONITOR)]

### **U121E AV CONTROL UNIT**

Description INFOID:0000000003826604

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic INFOID:0000000003826605

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121E	DSP COMM [U121E]	Internal malfunction of AV control unit (DSP communication error) is detected.	Replace AV control unit

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### **U121F AV CONTROL UNIT**

Description INFOID:0000000003826606

Replace the AV control unit if this DTC is displayed. Refer to AV-579, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121F	INTERNAL COMM [U121F]	Internal malfunction of AV control unit (internal communication error) is detected.	AV control unit power supply and ground circuit

### Diagnosis Procedure

INFOID:0000000003826608

### 1. CHECK AV CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check AV control unit power supply and ground circuit. Refer to <u>AV-372</u>, "AV CONTROL UNIT : <u>Diagnosis Procedure</u>".

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Repair malfunctioning parts.

#### [NAVIGATION (SINGLE MONITOR)]

### **U1204 GPS**

Description INFOID:000000003826609

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-579">AV-579</a>. <a href="Removal and Installation"</a>.

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1204	GPS CONN [U1204]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

### Diagnosis Procedure

INFOID:0000000003826611

# 1. PERFORM THE SELF-DIAGNOSIS

- Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- 3. Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

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### **U1205 GPS**

Description INFOID:0000000003826612

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-579">AV-579</a>. <a href="Removal and Installation"</a>.

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1205	GPS ROM [U1205]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

# Diagnosis Procedure

INFOID:0000000003826614

### 1. PERFORM THE SELF-DIAGNOSIS

- 1. Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

#### [NAVIGATION (SINGLE MONITOR)]

### **U1206 GPS**

Description INFOID:0000000003826615

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-579">AV-579</a>. <a href="Removal and Installation"</a>.

Part name	Description		
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>		

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1206	GPS RAM [U1206]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

### Diagnosis Procedure

INFOID:0000000003826617

# 1. PERFORM THE SELF-DIAGNOSIS

- Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

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### **U1207 GPS**

Description INFOID:000000003826618

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-579">AV-579</a>. <a href="Removal and Installation"</a>.

Part name	Description
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1207	GPS RTC [U1207]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

# Diagnosis Procedure

INFOID:0000000003826620

### 1. PERFORM THE SELF-DIAGNOSIS

- 1. Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

#### **U1243 FRONT DISPLAY UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

### U1243 FRONT DISPLAY UNIT

Description INFOID:000000003826621

Part name	Description	
FRONT DISPLAY UNIT	<ul> <li>Front display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal is input from AV control unit (RGB, RGB area and RGB synchronizing).</li> <li>Auxiliary image signal is input from the auxiliary input jacks.</li> <li>Camera image signal input to around view monitor control unit.</li> <li>Synchronize signal (HP, VP) is output to AV control unit.</li> <li>Touch panel function can be operated for each system by touching a display directly.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes	1
U1243	FRONT DISP CONN [U1243]	When either one of the following items is detected.  front display unit power supply and ground circuit malfunction is detected.  malfunction is detected in communication circuits between front display unit and AV control unit.  malfunction is detected in communication signal between front display unit and AV control unit.	Front display unit power supply and ground circuit.     Communication circuits between front display unit and AV control unit.	F

### Diagnosis Procedure

# 1. CHECK FRONT DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUITS

Check front display unit power supply and ground circuits. Refer to <u>AV-372</u>, "FRONT DISPLAY UNIT : <u>Diagnosis Procedure</u>".

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# 2. CHECK CONTINUITY COMMUNICATION CIRCUITS

- Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front display unit		AV control unit		Continuity
Connector Terminals		Connector	Terminals	Continuity
M75	11	M88	70	Existed
IVI75	22	IVIOO	71	LXISIEU

4. Check continuity between front display unit harness connector and ground.

Front display unit  Connector Terminals			Continuity
		Ground	Continuity
M75	11		Not existed
W/75	22		Not existed

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

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### **U1243 FRONT DISPLAY UNIT**

#### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

# $\overline{3}$ .check communication signal

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+) Front display unit		(-)	Condition	Reference value
Connector	Terminal			
M75	11	Ground	When adjusting display brightness.	(V) 6 4 2 0 → 1 ms PKIB5039J

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

### 4. CHECK COMMUNICATION SIGNAL

Check signal between front display unit harness connector and ground.

(+) Front display unit		(-)	Condition	Reference value
Connector	Terminal			
M75	22	Ground	When adjusting display brightness.	(V) 6 4 2 0 • • 1 ms

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace front display unit.

### **U1244 GPS ANTENNA**

< DTC/CIRCUIT DIAGNOSIS >

### [NAVIGATION (SINGLE MONITOR)]

### U1244 GPS ANTENNA

Description INFOID:0000000003826624

Part name	Description
GPS ANTENNA	GPS signal is received and sent to AV control unit.

**DTC** Logic INFOID:0000000003826625

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1244	GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna disconnection

## Diagnosis Procedure

## 1.GPS ANTENNA CHECK

Visually check GPS antenna and antenna feeder.

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

## 2. CHECK AV CONTROL UNIT VOLTAGE

- Disconnect GPS antenna connector.
- Turn ignition switch ON. 2.
- Check voltage between AV control unit terminal and ground.

(+) AV control unit	(-)	Voltage (Approx.)	
Terminal		,	
110	Ground	5.0 V	

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace AV control unit.

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### **U1258 SATELLITE RADIO ANTENNA**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## U1258 SATELLITE RADIO ANTENNA

Description INFOID:0000000003826633

Part name	Description
SATELLITE RADIO ANTENNA	Satellite radio signal is received and sent to AV control unit.

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1258	XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection

## Diagnosis Procedure

INFOID:0000000003826635

## 1. SATELLITE RADIO ANTENNA CHECK

Visually check satellite radio antenna and antenna feeder.

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

## $2.\mathsf{CHECK}$ AV CONTROL UNIT VOLTAGE

- 1. Disconnect satellite radio antenna connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit terminal and ground.

(+) AV control unit	(-)	Voltage (Approx.)	
Terminal			
108	Ground	5.0 V	

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace AV control unit.

### **U1300 AV COMM CIRCUIT**

[NAVIGATION (SINGLE MONITOR)]

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## U1300 AV COMM CIRCUIT

Description INFOID:000000003826638

U1300 is indicated when malfunction occurs in communication signal of multi AV system. Indicated simultaneously, without fail, with the malfunction of control units connected to AV control unit with communication line. Determine the possible malfunction cause from the table below.

### Self-diagnosis results display item

DTC	Display contents of CONSULT-III	Description	Possible malfunction factor/Action to take
U1300 U121F	AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]	When either one of the following items are detected:  AV control unit power supply and ground circuits malfunction are detected.  AV control unit malfunction are detected.	AV control unit power supply and ground circuits.     When there is no malfunction, AV control unit is malfunctioning.
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items are detected:  multifunction switch power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and multifunction switch.  malfunction is detected in the AV communication signal between AV control unit and multifunction switch.	Multifunction switch power supply and ground circuits.     AV communication circuits be- tween AV control unit and multi- function switch.
U1300 U1254	AV COMM CIRCUIT [U1300]     IPOD CONN [U1254]	When either one of the following items are detected:  iPod adapter power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and iPod adapter.  malfunction is detected in the AV communication signal between AV control unit and iPod adapter.	iPod adapter power supply and ground circuits.     AV communication circuits between AV control unit and iPod adapter.
U1300 U125B	AV COMM CIRCUIT [U1300]     AROUND CAMERA CONN [U125B]	When either one of the following items are detected: around view monitor control unit power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit.  malfunction is detected in the AV communication signal between AV control unit and around view monitor control unit.	<ul> <li>Around view monitor control unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and around view monitor control unit.</li> </ul>
U1300 U125C	AV COMM CIRCUIT [U1300]     SONAR CONN [U125C]	When either one of the following items are detected: sonar control unit power supply and ground circuit malfunction are detected. malfunction is detected in the AV communication circuits between around view monitor control unit and sonar control unit. malfunction is detected in the AV communication signal between around view monitor control unit and sonar control unit.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between around view monitor control unit and sonar control unit.</li> </ul>
U1300 U1240 U1254 U125B	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]     IPod CONN [U1254]     AROUND CAMERA CONN [U125B]	Malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit.	AV communication circuits between AV control unit and around view monitor control unit.

## **B2700 CORNER SENSOR [FL]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## B2700 CORNER SENSOR [FL]

Description INFOID:000000003826639

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2700	CORNER SENSOR [FL] [B2700]	Corner sensor front left is malfunctioning.	Replace corner sensor front LH

## **B2701 SENSOR HARNESS OPEN [CR-FL]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## B2701 SENSOR HARNESS OPEN [CR-FL]

Description INFOID:0000000008826641

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting	
B2701	SENSOR HARNESS OPEN [CR-FL] [B2701]	Corner sensor front LH harness circuit is open.	Check corner sensor front LH circuit	

## Diagnosis Procedure

INFOID:0000000003826643

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## 1. CHECK HARNESS CORNER SENSOR FRONT LH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (FL) harness connector.

Sonar control unit		Corner sensor (FL)		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M44	3	E154	1	Existed	

4. Check continuity between sonar control unit harness connector and ground.

Sonar control unit			Continuity
Connector	Terminal	Ground	Continuity
M44	3		Not existed

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.check harness corner sensor front LH ground circuit

Check continuity between sonar control unit harness connector and corner sensor (FL) harness connector.

Sonar co	Sonar control unit		ensor (FL)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M44	12	E154	2	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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## **B2702 CORNER SENSOR [FR]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## B2702 CORNER SENSOR [FR]

Description INFOID:000000003826644

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2702	CORNER SENSOR [FR] [B2702]	Corner sensor front right is malfunctioning.	Replace corner sensor front RH

## **B2703 SENSOR HARNESS OPEN [CR-FR]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## B2703 SENSOR HARNESS OPEN [CR-FR]

**Description** 

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2703	SENSOR HARNESS OPEN [CR-FR] [B2703]	Corner sensor front right harness circuit is open.	Check corner sensor front RH circuit

## Diagnosis Procedure

INFOID:0000000003826648

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## 1. CHECK HARNESS CORNER SENSOR FRONT RH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (FR) harness connector.

Sonar control unit		Corner sensor (FR)		Continuity
Connector	Terminal	Connector Terminal		Continuity
M44	4	E152	1	Existed

4. Check continuity between sonar control unit harness connector and ground.

Sonar control unit			Continuity
Connector	Terminal	Ground	Continuity
M44	4		Not existed

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.check harness corner sensor front RH ground circuit

Check continuity between sonar control unit harness connector and corner sensor (FR) harness connector.

Sonar control unit		Corner sensor (FR)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M44	12	E152	2	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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## **B2704 CORNER SENSOR [RL]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## B2704 CORNER SENSOR [RL]

Description INFOID:000000003826649

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2704	CORNER SENSOR [RL] [B2704]	Corner sensor rear left is malfunctioning.	Replace corner sensor rear LH

## **B2705 SENSOR HARNESS OPEN [CR-RL]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## B2705 SENSOR HARNESS OPEN [CR-RL]

Description INFOID:0000000003826651

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

**DTC** Logic INFOID:0000000003826652

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2705	SENSOR HARNESS OPEN [CR-RL] [B2705]	Corner sensor rear left harness circuit is open.	Check corner sensor rear LH circuit

## Diagnosis Procedure

INFOID:0000000003826653

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## 1. CHECK HARNESS CORNER SENSOR REAR LH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (RL) harness connector.

Sonar control unit		Corner sensor (RL)		Continuity
Connector	Terminal	Connector Terminal		Continuity
M44	5	B259	1	Existed

Check continuity between sonar control unit harness connector and ground.

Sonar control unit			Continuity
Connector	Terminal	Ground	Continuity
M44	5		Not existed

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.check harness corner sensor rear lh ground circuit

Check continuity between sonar control unit harness connector and corner sensor (RL) harness connector.

Sonar control unit		Corner sensor (RL)		Continuity
Connector	Terminal	Connector Terminal		Continuity
M44	12	B259	2	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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## **B2706 CORNER SENSOR [RR]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## **B2706 CORNER SENSOR [RR]**

Description INFOID:000000003826654

Component	Description	
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.	

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2706	CORNER SENSOR [RR] [B2706]	Corner sensor rear right is malfunctioning.	Replace corner sensor rear RH

## **B2707 SENSOR HARNESS OPEN [CR-RR]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## B2707 SENSOR HARNESS OPEN [CR-RR]

**Description** 

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2707	SENSOR HARNESS OPEN [CR-RR] [B2707]	Corner sensor rear right harness circuit is open.	Check corner sensor rear RH circuit

## Diagnosis Procedure

IS Procedure

## 1. CHECK HARNESS CORNER SENSOR REAR RH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (RR) harness connector.

Sonar control unit		Corner sensor (RR)		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M44	6	B256	1	Existed	

4. Check continuity between sonar control unit harness connector and ground.

Sonar control unit			Continuity
Connector	Terminal	Ground	Continuity
M44	6		Not existed

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK HARNESS CORNER SENSOR REAR RH GROUND CIRCUIT

Check continuity between sonar control unit harness connector and corner sensor (RR) harness connector.

Sonar control unit		Corner sensor (RR)		Continuity
Connector	Terminal	Connector Terminal		Continuity
M44	12	B256	2	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000003826659

### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19
Ignition switch ON or START	3

### Is inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

## 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between AV control unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
	M80	19		
Battery power supply	M87	22	OFF	Battery voltage
		24		
ACC power supply	M80	7	ACC	Battery voltage
	M87	25	ACC	Ballery Vollage
Ignition signal	M87	35	ON	Battery voltage

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Check harness between AV control unit and fuse.

## 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connectors.
- 3. Check continuity between AV control unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	Ground M87	21	OFF	Existed
Ground		23		

### Is inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

### FRONT DISPLAY UNIT

## FRONT DISPLAY UNIT: Diagnosis Procedure

INFOID:0000000003826660

### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

### < DTC/CIRCUIT DIAGNOSIS >

### [NAVIGATION (SINGLE MONITOR)]

### Is inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

## 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between front display unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M75	2	OFF	Battery voltage
ACC power supply	M75	3	ACC	Battery voltage

### Is inspection result normal?

YES >> GO TO 3.

NO >> Check harness between front display unit and fuse.

## 3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect front display unit connector. 2.
- 3. Check continuity between front display unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	Ground M75	1	OFF	Existed
Ground		13	OH	LXISIEU

### Is inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

### MULTIFUNCTION SWITCH

## MULTIFUNCTION SWITCH: Diagnosis Procedure

## 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Ignition switch ACC or ON	19

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

## 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between multifunction switch harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
ACC power supply	M72	3	ACC	Battery voltage

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between multifunction switch and fuse.

## 3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect multifunction switch connector.
- 3. Check continuity between multifunction switch harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M72	1	OFF	Existed

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INFOID:0000000003826663

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< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

BOSE AMP.

**BOSE AMP.**: Diagnosis Procedure

INFOID:0000000003826664

### 1. CHECK FUSE

Check for blown fuse.

Power source	Fuse No.
Battery	8

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

## 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between BOSE amp. harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B42	11	OFF	Battery voltage

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between BOSE amp. and fuse.

## 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BOSE amp. connector.
- 3. Check continuity between BOSE amp. harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B42	12	OFF	Existed

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

iPod ADAPTER

## iPod ADAPTER : Diagnosis Procedure

INFOID:0000000003826666

### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

## 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between iPod adapter harness connector and ground.

### < DTC/CIRCUIT DIAGNOSIS >

### [NAVIGATION (SINGLE MONITOR)]

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M111	5	OFF	Battery voltage
ACC power supply	M111	3	ACC	Battery voltage

Is the inspection result normal?

YES >> INSPECTION END

>> Check harness between iPod adapter and fuse.

### AROUND VIEW MONITOR CONTROL UNIT

### AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure

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## 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.	
Battery	34	
Ignition switch ACC	19	
Ignition switch ON	4	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2.CHECK POWER SUPPLY CIRCUITS

Check voltage between around view monitor control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B46	2	OFF	Battery voltage
ACC power supply	B46	4	ACC	Battery voltage
Ignition power supply	B46	3	ON	Battery voltage

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Check harness between around view monitor control unit and fuse.

## 3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector.
- Check continuity between around view monitor control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B46	1	OFF	Existed

#### Is inspection result normal?

YES >> INSPECTION END

>> Repair harness or connector.

## SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

## SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): Diagnosis Procedure

### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Ignition switch ACC or ON	19

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INFOID:0000000003826669

### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

## 2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch ON.
- 2. Check voltage between sonar control unit harness connector and ground.

Sonar control unit			Voltage
Connector	Terminal	Ground	(Approx.)
M44	13		Battery voltage

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace sonar control unit power supply harness.

## 3.CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector.
- 3. Check continuity between sonar control unit harness connector and ground.

Sonar control unit			Continuity
Connector	Terminal	Ground	Continuity
M44	24		Existed

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace sonar control unit ground harness.

## **RGB (R: RED) SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## RGB (R: RED) SIGNAL CIRCUIT

Description INFOID:0000000003826670

Transmit the image displayed with AV control unit with RGB signal to the front display unit.

## Diagnosis Procedure

INFOID:0000000003826671

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## 1. CHECK CONTINUITY RGB (R: RED) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M75	17	M88	61	Existed

4. Check continuity between front display unit harness connector and ground.

Front display unit			Continuity
Connector	Terminal	Ground	Continuity
M75	17		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK RGB (R: RED) SIGNAL

- Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

	+) splay unit Terminal	(-)	Condition	Reference value
M75	17	Ground	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spec- trum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 → 40µs JSNIA1029ZZ

### Is inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

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### **RGB (G: GREEN) SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## RGB (G: GREEN) SIGNAL CIRCUIT

Description INFOID:000000003826672

Transmit the image displayed with AV control unit with RGB signal to the front display unit.

### Diagnosis Procedure

INFOID:0000000003826673

## 1. CHECK CONTINUITY RGB (G: GREEN) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M75	6	M88	62	Existed

4. Check continuity between front display unit harness connector and ground.

Front display unit			Continuity
Connector	Terminal	Ground	Continuity
M75	6		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK RGB (G: GREEN) SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

	+)	( )	Canadisiana	Deference value
Front dis	splay unit	(–)	Condition	Reference value
Connector	Terminal			
M75	6	Ground	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spec- trum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 → 40µs JSNIA1030ZZ

### Is inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

## **RGB (B: BLUE) SIGNAL CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## RGB (B: BLUE) SIGNAL CIRCUIT

Description INFOID:000000003826674

Transmit the image displayed with AV control unit with RGB signal to the front display unit.

## Diagnosis Procedure

INFOID:0000000003826675

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## 1.CHECK CONTINUITY RGB (B: BLUE) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	Front display unit		trol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M75	18	M88	63	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	18		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK RGB (B: BLUE) SIGNAL

- Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

	+) splay unit	(-)	Condition	Reference value
Connector	Terminal			
M75	18	Ground	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spec- trum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 + 40µs JSNIA1031ZZ

### Is inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

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### **RGB SYNCHRONIZING SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## **RGB SYNCHRONIZING SIGNAL CIRCUIT**

Description INFOID.000000003826676

Transmit the RGB synchronizing signal to the front display unit so as to synchronize the RGB image displayed with AV control unit.

### **Diagnosis Procedure**

INFOID:0000000003826677

## 1. CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M75	19	M88	65	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	19		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK RGB SYNCHRONIZING SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+) Front display unit		(–)	Reference value
Connector	Terminal		
M75	19	Ground	(V) + *20 \(\mu\)s SKIB3603E

### Is inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

### **RGB AREA (YS) SIGNAL CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## RGB AREA (YS) SIGNAL CIRCUIT

Description INFOID:000000003826678

Transmits the display area of RGB image displayed by AV control unit with RGB area (YS) signal to front display unit.

## Diagnosis Procedure

#### INFOID:0000000003826679

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## 1. CHECK CONTINUITY RGB AREA (YS) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	Front display unit		trol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M75	9	M88	67	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	9		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK RGB SYNCHRONIZING SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+) Front display unit		(-)	Condition	Reference value (Approx.)
Connector	Terminal			, ,
			At RGB image displayed	5.0 V
M75	9	Ground	At AUX image displayed	(V) 6 4 2 0 → 200μs PKIB4948J

### Is inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

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# HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT DIAGNOSIS > [NAVIGATION (SINGLE MONITOR)]

< DTC/CIRCUIT DIAGNOSIS >

## HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Description INFOID:000000003826680

In composite image (DVD image, AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from front display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

### Diagnosis Procedure

INFOID:0000000003826681

## ${f 1.}$ CHECK CONTINUITY HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	Front display unit		trol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M75	8	M88	68	Existed

4. Check continuity between front display unit harness connector and ground.

Front display unit			Continuity
Connector	Terminal	Ground	Continuity
M75	8		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+) Front display unit		(–)	Reference value
Connector	Terminal		
M75	8	Ground	(V) + + 20 μs SKIB3603E

### Is inspection result normal?

YES >> Replace AV control unit.

NO >> Replace front display unit.

## **VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description INFOID:0000000003826682

In composite image (DVD image, AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from front display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

## Diagnosis Procedure

## 1.check continuity vertical synchronizing (VP) signal circuit

- Turn ignition switch OFF.
- Disconnect front display unit connector and AV control unit connector. 2.
- Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	splay unit	AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M75	20	M88	69	Existed

Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	20		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

- Connect front display unit connector and AV control unit connector.
- Turn ignition switch ON.
- Check signal between front display unit harness connector and ground.

(	+)		
Front display unit		(–)	Reference value
Connector	Terminal		
M75	20	Ground	(V) 4 0 + 4ms SKIB3598E

#### Is inspection result normal?

YES >> Replace AV control unit.

NO >> Replace front display unit.

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### **AUX IMAGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

### **AUX IMAGE SIGNAL CIRCUIT**

Description INFOID:000000003826684

Transmits the image signal of external device from auxiliary input jacks to front display unit.

### Diagnosis Procedure

INFOID:0000000003826685

## 1. CHECK CONTINUITY AUX IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect auxiliary input jacks connector and front display unit connector.
- Check continuity between auxiliary input jacks harness connector and front display unit harness connector.

Auxiliary input jacks		Front display unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M154	7	M75	15	Existed

4. Check continuity between auxiliary input jacks harness connector and ground.

Auxiliary input jacks			Continuity
Connector	Terminal	Ground	Continuity
M154	7		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK AUX IMAGE SIGNAL

- 1. Connect auxiliary input jacks connector and front display unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between auxiliary input jacks harness connector and ground.

(+) Auxiliary input jacks		(-)	Condition	Reference value
Connector	Terminal			
M154	7	Ground	At AUX image displayed	(V) 0. 4 0 -0. 4 → 40µs SKIB2251J

### Is inspection result normal?

YES >> Replace front display unit.

NO >> Check that there is no malfunction in the external device.

### MODE CHANGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## MODE CHANGE SIGNAL CIRCUIT

Description

- AV control unit transmits the mode change signal to BOSE amp.
- Driver's Audio Stage controls the speaker's output characteristic by BOSE amp. so that the driver's seat is to be the center of sounds.

## Diagnosis Procedure

## 1. CHECK CONTINUITY MODE CHANGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BOSE amp. connector and AV control unit connector.
- 3. Check continuity between BOSE amp. harness connector and AV control unit harness connector.

BOSE	BOSE amp.		trol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
B41	17	M87	44	Existed

4. Check continuity between BOSE amp. harness connector and ground.

BOSE amp.			Continuity
Connector	Terminal	Ground	Continuity
B41	17		Not existed

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK MODE CHANGE SIGNAL

- 1. Connect BOSE amp. connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between BOSE amp. harness connector and ground.

(+) BOSE amp.			V 16
		(–)	Voltage (Approx.)
Connector	Terminal		(11 - /
B41	17	Ground	8.5 V

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace BOSE amp.

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### **DISK EJECT SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## **DISK EJECT SIGNAL CIRCUIT**

**Description** 

The eject signal is output to AV control unit when the eject switch of multifunction switch is pressed.

### Diagnosis Procedure

INFOID:0000000003826689

## 1. CHECK CONTINUITY CD EJECT SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect multifunction switch connector and AV control unit connector.
- 3. Check continuity between multifunction switch harness connector and AV control unit harness connector.

Multifunc	Multifunction switch AV control unit		trol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M72	14	M89	85	Existed

4. Check continuity between multifunction switch harness connector and ground.

Multifunc	tion switch		Continuity
Connector	Terminal	Ground	Continuity
M72	14		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## $2.\mathsf{CHECK}$ AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector and ground.

(+)			Voltage (Approx.)
AV control unit		(–)	
Connector	Terminal		
M89	85	Ground	3.3 V

#### Is inspection result normal?

YES >> Replace preset switch.

NO >> Replace AV control unit.

### MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

### MICROPHONE SIGNAL CIRCUIT

Description

Supply power from AV control unit to microphone. The microphone transmits the sound voice to the AV control unit.

## Diagnosis Procedure

### INFOID:0000000003826691

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## 1. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND MICROPHONE CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector and microphone connector.
- 3. Check continuity between AV control unit harness connector and microphone harness connector.

AV control unit		Microphone		Continuity
Connector	Terminals	Connector Terminals		Continuity
	26		4	
M87	27	R17	2	Existed
	28		1	

4. Check continuity between AV control unit harness connector and ground.

AV control unit			Continuity
Connector	Terminals	Ground	Continuity
M07	26	Cround	Not existed
M87	28		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK VOLTAGE MICROPHONE VCC

- 1. Connect AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector.

(+)		(	<b>–)</b>	
AV cor	ntrol unit	AV control unit		Voltage (Approx.)
Connector	Terminal	Connector Terminal		, , ,
M87	26	M87	27	5.0 V

### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace AV control unit.

## 3. CHECK MICROPHONE SIGNAL

- Turn ignition switch OFF.
- 2. Connect microphone connector.
- 3. Turn ignition switch ON.
- 4. Check signal between AV control unit harness connector.

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### **MICROPHONE SIGNAL CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

## [NAVIGATION (SINGLE MONITOR)]

-	+)	(-)		0 11.1	5.4
AV cor	trol unit	AV con	trol unit	Condition	Reference value
Connector	Terminal	Connector	Terminal		
M87	28	M87	27	Give a voice.	(V) 2.5 2.0 1.5 1.0 0.5 0

### Is inspection result normal?

YES >> Replace AV control unit.

NO >> Replace microphone.

### **CAMERA IMAGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

### CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:0000000003826696

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

### Diagnosis Procedure

## 1. CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and front display unit connector.
- Check continuity between around view monitor control unit harness connector and front display unit harness connector.

Around view monitor control unit		Front display unit		Continuity
Connector	Terminal	Connector Terminal		
B46	27	M75	12	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	27		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK CAMERA IMAGE SIGNAL

- Connect around view monitor control unit connector and front display unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector and ground.

(	+)			
Around view monitor control unit		(–)	Condition	Reference value
Connector	Terminal			

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## **CAMERA IMAGE SIGNAL CIRCUIT**

B46	27	Ground	At camera image display	(V) 1 0 -1 40 μ s JSNIA0834GB
Б40	21	Glouria	Other than camera image display	(V) 1 0 -1 +40 μ s JSNIA0835GB

### Is inspection result normal?

YES

>> Replace front display unit.
>> Replace around view monitor control unit. NO

### STEERING ANGLE SENSOR SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

### STEERING ANGLE SENSOR SIGNAL CIRCUIT

Description

- Steering angle sensor signal 1, 2 detects the turning direction and quantity of the steering and transmits it to the around view monitor control unit.
- Steering angle sensor signal 3 detects the neutral position of the steering and transmits it to around view monitor control unit.
- Around view monitor control unit performs the correction of neutral position with sensor signal 1, 2, 3 and vehicle speed signal.

### Diagnosis Procedure

#### INFOID:0000000003826701

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## 1. CHECK CONTINUITY STEERING ANGLE SENSOR SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and steering angle sensor connector.
- Check continuity between around view monitor control unit harness connector and steering angle sensor harness connector.

Around view monitor control unit		Steering angle sensor		Continuity
Connector	Terminals	Connector Terminals		
	14		3	
B46	15	M37	4	Existed
	16		5	

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminals		
	14	Ground	
B46	15		Not existed
	16		

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK SIGNAL SENSOR SIGNAL

- 1. Connect around view monitor control unit connector.
- Turn ignition switch ON.
- Check voltage between around view monitor control unit harness connector and ground.

(+)			
Around view monitor control unit		(–)	Voltage (Approx.)
Connector	Terminals		
	14		
B46	15	Ground	5.0 V
	16		

### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

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## 3. CHECK SIGNAL SENSOR SIGNAL

- 1. Turn ignition switch OFF.
- 2. Connect steering angle sensor connector.
- 3. Turn ignition switch ON.
- 4. Check signal between around view monitor control unit harness connector and ground.

(-	+)				
Around view monitor control unit		(-)	Condition	Reference value	
Connector	Terminals				
	14, 15	Ground	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2	
B46			Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2	
	16	Ground	Turn the steering around the neutral position	A: Sensor signal 3 B: Sensor signal 1	

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering angle sensor.

### STEERING SWITCH SIGNAL A CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

### STEERING SWITCH SIGNAL A CIRCUIT

Description INFOID:0000000003826702

Transmits the steering switch signal to AV control unit.

## Diagnosis Procedure

### INFOID:0000000003826703

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## 1. CHECK STEERING SWITCH SIGNAL A CIRCUIT

- Disconnect AV control unit connector and spiral cable connector.
- Check continuity between AV control unit harness connector and spiral cable harness connector.

AV control unit		Spiral cable		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M80	6	M36	24	Existed	

Check continuity between AV control unit harness connector and ground.

AV control unit			Continuity	
Connector	Terminal	Ground	Continuity	
M80	6		Not existed	

### Is inspection result normal?

>> GO TO 2. YES

NO >> Repair harness or connector.

## 2. CHECK SPIRAL CABLE

Check spiral cable.

### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

## 3.CHECK AV CONTROL UNIT VOLTAGE

- Connect AV control unit connector and spiral cable connector.
- 2. Turn ignition switch ON.
- Check voltage between AV control unit harness connector.

(+)		(–)		Voltage (Approx.)	
AV control unit		AV control unit			
Connector	Terminal	Connector	Terminal	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
M80	6	M80	15	5.0 V	

### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

## 4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to AV-394, "Component Inspection".

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

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### STEERING SWITCH SIGNAL A CIRCUIT

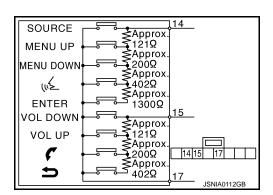
< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

INFOID:0000000003826704

## Component Inspection

Measure the resistance between the steering switch connector.



Steerin	Steering switch		g switch	Condition	Resistance value
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$
			17	ENTER switch ON	2003 – 2043
		M303		w≨ switch ON	716 – 730
	14			MENU DOWN switch ON	318 – 324
				MENU UP switch ON	120 – 122
M303				SOURCE switch ON	0
	15			switch ON	716 – 730
				switch ON	318 – 324
				VOL UP switch ON	120 – 122
				VOL DOWN switch ON	0

### STEERING SWITCH SIGNAL B CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

### STEERING SWITCH SIGNAL B CIRCUIT

Description INFOID:000000003826705

Transmits the steering switch signal to AV control unit.

## Diagnosis Procedure

#### INFOID:0000000003826706

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## 1. CHECK STEERING SWITCH SIGNAL B CIRCUIT

- 1. Disconnect AV control unit connector and spiral cable connector.
- 2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV control unit		Spira	l cable	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M80	16	M36	31	Existed	

3. Check continuity between AV control unit harness connector and ground.

AV control unit			Continuity
Connector	Terminal	Ground	Continuity
M80	16		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK SPIRAL CABLE

Check spiral cable.

### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

## 3.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector and spiral cable connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector.

(+)		(–)		
AV control unit		AV control unit		Voltage (Approx.)
Connector	Terminal	Connector Terminal		(11 - )
M80	16	M80	15	5.0 V

### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

## 4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-396</u>, "Component Inspection".

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

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### STEERING SWITCH SIGNAL B CIRCUIT

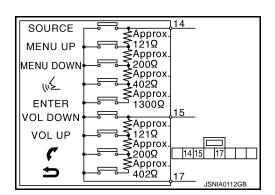
< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

INFOID:0000000003826707

## Component Inspection

Measure the resistance between the steering switch connector.



Steering switch		Steering switch		Condition	Resistance value
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$
				ENTER switch ON	2003 – 2043
			17	w≨ switch ON	716 – 730
	14			MENU DOWN switch ON	318 – 324
		M303		MENU UP switch ON	120 – 122
M303				SOURCE switch ON	0
	15			switch ON	716 – 730
				switch ON	318 – 324
				VOL UP switch ON	120 – 122
				VOL DOWN switch ON	0

## STEERING SWITCH SIGNAL GND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## STEERING SWITCH SIGNAL GND CIRCUIT

**Description** 

Transmits the steering switch signal to AV control unit.

## Diagnosis Procedure

# 1. CHECK STEERING SWITCH SIGNAL GND CIRCUIT

- 1. Disconnect AV control unit connector and spiral cable connector.
- 2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV control unit		Spiral cable		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M80	15	M36	33	Existed	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK SPIRAL CABLE

Check spiral cable.

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

## 3.CHECK GROUND CIRCUIT

- 1. Connect AV control unit connector.
- Check continuity between AV control unit harness connector and ground.

AV control unit			Continuity
Connector	Terminal	Ground	Continuity
M80	15		Not existed

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

### 4. CHECK STEERING SWITCH

- 1. Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-397</u>, "Component Inspection".

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

### Component Inspection

Measure the resistance between the steering switch connector.

SOURCE ≹Approx ≨121Ω MENU UP MENU DOWN Approx (11/2 402Ω Approx **ENTER** 1300Ω VOL DOWN <u></u>
₹Approx VOL UP 121Ω ≶Approx ₹200Ω 14 15 **S**Approx JSNIA0112GE

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## STEERING SWITCH SIGNAL GND CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

Steerin	Steering switch		g switch	Condition	Resistance value	
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$	
				ENTER switch ON	2003 – 2043	
				w≨ switch ON	716 – 730	
	14			MENU DOWN switch ON	318 – 324	
		M303	17	MENU UP switch ON	120 – 122	
M303				SOURCE switch ON	0	
				switch ON	716 – 730	
1	15			switch ON	318 – 324	
				VOL UP switch ON	120 – 122	
				VOL DOWN switch ON	0	

## FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

**Description** 

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## **Diagnosis Procedure**

#### INFOID:0000000003826712

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## 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and front camera connector.
- 3. Check continuity between around view monitor control unit harness connector and front camera harness connector.

Around view monitor control unit		Front	camera	Continuity
Connector	Terminal	Connector	Terminal	
B45	45	E155	6	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity	
Connector	Terminal	Ground	l	
B45	45		Not existed	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector and front camera connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Reference value
Connector	Terminal			
B45	45	Ground	"CAMERA" switch is ON or shift position is "R".	(V) 55 4 3 2 1 1.0 μs JSNIA0836GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace front camera.

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## FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## FRONT CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:000000003826713

 Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.

- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

### Diagnosis Procedure

INFOID:0000000003826714

## 1.CHECK CONTINUITY FRONT CAMERA POWER SUPPLY AND GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and front camera connector.
- Check continuity between around view monitor control unit harness connector and front camera harness connector.

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector Terminals		
P45		E155	2	Existed
B45	46	E133	1	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

	nonitor control nit		Continuity	
Connector	Terminal	Ground		
B45	46		Not existed	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK VOLTAGE FRONT CAMERA POWER SUPPLY

- 1. Connect around view monitor control unit connector and front camera connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit harness connector.

(+) Around view monitor control unit		(–)	Condition	Voltage (Approx.)	
Connector	Terminal				
B45	46	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V	

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

## 3.check continuity front camera image signal circuit

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and front camera connector.
- Check continuity between around view monitor control unit harness connector and front camera harness connector.

## FRONT CAMERA IMAGE SIGNAL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

## [NAVIGATION (SINGLE MONITOR)]

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector Terminals		
D45	41	E155	3	Existed
B45	42	E 133	4	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		01	Continuity	
Connector	Terminals	Ground		
B45	41, 42		Not existed	

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

## 4. CHECK FRONT CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and front camera connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector.

(	+)	(-)			
	nonitor control nit	Around view monitor control unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
B45	41	B45	42	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 + 40 μ s JSNIA0834GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace front camera.

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## REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

Description INFOID:000000003826715

 Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.

- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

### **Diagnosis Procedure**

INFOID:0000000003826716

## 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and rear camera connector.
- Check continuity between around view monitor control unit harness connector and rear camera harness connector.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector Terminal		
B46	35	D111	4	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	35		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector and rear camera connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Reference value
Connector	Terminal			
B46	35	Ground	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 + 1.0 μs JSNIA0836GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace rear camera.

### REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## REAR CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:0000000008826717

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## **Diagnosis Procedure**

#### INFOID:0000000003826718

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## 1. CHECK CONTINUITY REAR CAMERA POWER SUPPLY AND GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and rear camera connector.
- 3. Check continuity between around view monitor control unit harness connector terminals 36, 38 and rear camera harness connector terminals 8, 7.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminals	Connector	Terminals	
B46	36	D111	8	Existed
D40	38	וווט	7	LXISIGU

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	36		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK VOLTAGE REAR CAMERA POWER SUPPLY

- 1. Connect around view monitor control unit connector and rear camera connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Voltage (Approx.)
Connector	Terminal			
B46	36	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

# 3. CHECK CONTINUITY REAR CAMERA IMAGE SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and rear camera connector.
- Check continuity between around view monitor control unit harness connector and rear camera harness connector.

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## REAR CAMERA IMAGE SIGNAL CIRCUIT

[NAVIGATION (SINGLE MONITOR)]

### < DTC/CIRCUIT DIAGNOSIS >

Around view monitor control unit		Rear camera		Continuity
Connector	Terminals	Connector Terminals		
B46	39	D111	5	Existed
D40	40	וווט	1	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminals	Ground	
B46	39, 40		Not existed

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

## 4. CHECK REAR CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and rear camera connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector.

(-	+)	(-)			
Around view monitor control unit		Around view monitor control unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
B46	39	B46	40	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 +40 μ s JSNIA0834GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace rear camera.

## SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## [NAVIGATION (SINGLE MONITOR)]

## SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

Description INFOID:000000003826719

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## **Diagnosis Procedure**

#### INFOID:0000000003826720

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## 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and door mirror (driver side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

Around view monitor control unit			mirror r side)	Continuity
Connector	Terminal	Connector Terminal		
B45	47	D3	3	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B45	47		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector and door mirror (driver side) connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Reference value
Connector	Terminal			
B45	47	Ground	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 1.0 μs JSNIA0836GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace side camera LH.

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## SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

Description INFOID:000000003826721

 Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.

- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

### **Diagnosis Procedure**

INFOID:0000000003826722

## 1.check continuity side camera LH power supply and ground circuit

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and door mirror (driver side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminals	Connector Terminals		
B45	48	D3	6	Existed
D40	50	D3	18	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B45	48		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK VOLTAGE SIDE CAMERA LH POWER SUPPLY

- 1. Connect around view monitor control unit connector and door mirror (driver side) connector.
- 2. Turn ignition switch ON.
- Check voltage between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Voltage (Approx.)
Connector	Terminal			
B45	48	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

## ${f 3.}$ CHECK CONTINUITY SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and door mirror (driver side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

## SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

### [NAVIGATION (SINGLE MONITOR)]

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminals	Connector Terminals		
B45	51	D3	5	Existed
D40	52	D3	17	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		0	Continuity	
Connector	Terminals	Ground		
B45	51, 52		Not existed	

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

## 4. CHECK SIDE CAMERA LH IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and door mirror (driver side) connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector.

(-	+)	(-)			
	nonitor control nit	Around view monitor control unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
B45	51	B45	52	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μ s  JSNIA0834GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace side camera LH.

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Revision: 2009 March AV-407 2009 FX35/FX50

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# SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT [NAVIGATION (SINGLE MONITOR)]

#### < DTC/CIRCUIT DIAGNOSIS >

## SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

Description INFOID:000000003826723

 Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.

- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

### **Diagnosis Procedure**

INFOID:0000000003826724

## 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and door mirror (passenger side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

	Around view monitor control unit		mirror nger side)	Continuity
Connector	Terminal	Connector	Terminal	
B46	33	D33	3	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	33		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector and door mirror (passenger side) connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Reference value
Connector	Terminal			
B46	33	Ground	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 1 1.0 \( \mu \) JSNIA0836GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace side camera RH.

### SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

## SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

**Description** 

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## **Diagnosis Procedure**

#### INFOID:0000000003826726

## 1. CHECK CONTINUITY SIDE CAMERA RH POWER SUPPLY AND GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect control unit connector and door mirror (passenger side) connector.
- 3. Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

Around view monitor control unit		Door mirror (passenger side)		Continuity
Connector	Terminals	Connector Terminals		
B46	32	D33	18	Existed
D40	34	D33	6	LAISIEU

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	34		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK VOLTAGE SIDE CAMERA RH POWER SUPPLY

- 1. Connect around view monitor control unit connector and door mirror (passenger side) connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit harness connector and ground.

Around view r	+) nonitor control nit	(–)	Condition	Voltage (Approx.)
Connector	Terminal			
B46	34	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

## ${f 3.}$ CHECK CONTINUITY SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and door mirror (passenger side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

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## SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

	nonitor control nit		mirror nger side)	Continuity	
Connector	Terminals	Connector	Terminals		
B46	29	D33	5	Existed	
D40	30	D33	17	Existed	

4. Check continuity between around view monitor control unit harness connector and ground.

around view monitor control unit		0	Continuity	
Connector	Terminals	Ground	l	
B46	29, 30		Not existed	

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

## 4. CHECK SIDE CAMERA RH IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and door mirror (passenger side) connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector.

(+)		(-	-)			
Around view monitor control unit		Around view monitor control unit		Condition	Reference value	
Connector	Terminal	Connector	Terminal			
B46	29	B46	30	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μ s JSNIA0834GB	

### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace side camera RH.

### **BUZZER CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

#### [NAVIGATION (SINGLE MONITOR)]

## **BUZZER CIRCUIT**

Description INFOID:0000000003826727

The sonar control unit outputs the buzzer signal when the rear sonar detects the obstacle.

## Component Function Check

## 1. SONAR CONTROL UNIT ACTIVE TEST

- Select "BUZZER" of sonar control unit active test item.
- 2. Check the buzzer operation.

#### **BUZZER**

Condition **Test item** 

On : Buzzer is operation. Off : Buzzer is not operation.

>> INSPECTION END

## Diagnosis Procedure

## 1. CHECK BUZZER POWER SUPPLY

Turn ignition switch ON.

Check voltage between buzzer harness connector and ground.

(+) Buzzer			Voltago		
		(–)	Voltage (Approx.)		
Connector	Terminal		· · · · /		
B231	1	Ground	Battery voltage		

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK HARNESS BUZZER SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and buzzer connector.
- Check continuity between sonar control unit harness connector and buzzer harness connector.

Sonar co	Sonar control unit		zzer	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M44	23	B231	2	Existed

Check continuity between sonar control unit harness connector and ground.

Sonar co	ontrol unit		Continuity	
Connector	Terminal	Ground	Continuity	
M44	23		Not existed	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

## 3 . CHECK SIGNAL SONAR CONTROL UNIT

- Connect sonar control unit connector and buzzer connector.
- Check signal between sonar control unit harness connector and ground.

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## **BUZZER CIRCUIT**

## [NAVIGATION (SINGLE MONITOR)]

(+) Sonar control unit		(-)	Condition	Reference value
Connector	Terminal			
M44	23	Ground	When buzzer operation	NOTE: Waveform period changes due to the distance to an obstacle.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace sonar control unit.

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## **ECU DIAGNOSIS INFORMATION**

## AV CONTROL UNIT

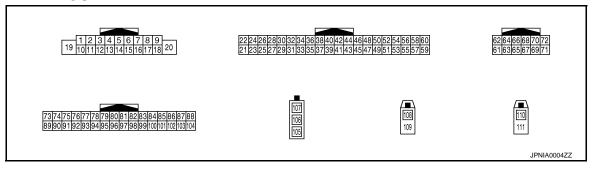
Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item		Condition	Value/Status
VHCL SPD SIG	Ignition switch	Vehicle speed > 0 km/h (0 MPH)	On
VIICE SPD SIG	ON	Vehicle speed = 0 km/h (0 MPH)	Off
DIAD CIC	Ignition switch	Parking brake is applied.	On
PKB SIG	ON	Parking brake is released.	Off
ILLUM SIG	Ignition switch	Light switch ON	On
ILLUM SIG	ON	Light switch OFF	Off
ICN SIC	Ignition switch ON	_	On
IGN SIG	Ignition switch ACC	_	Off
REV SIG	Ignition switch	Selector lever in R position	On
KEV SIG	ON	Selector lever in any position other than R	Off

## **TERMINAL LAYOUT**



### PHYSICAL VALUES

	minal e color)	Description			Condition	Reference value	_
+	_	Signal name	Input/ Output	Condition		(Approx.)	
1 (V)	Ground	Amp. ON signal	Output	Ignition switch ON	h — 12.0 V		A
2 (P)	3 (L)	Sound signal front LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 → 2ms SKiB3609E	

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	ninal color)	Description			0 101	Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
4 (V)	5 (LG)	Sound signal rear LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 *** 2ms SKIB3609E	
					Keep pressing SOURCE switch.	0 V	
					Keep pressing MENU UP switch.	1.0 V	
6 (P)	15 (B)	Steering switch signal A	Input	Ignition switch ON	Keep pressing MENU DOWN switch.	2.0 V	
					Keep pressing √ switch	3.0 V	
					Keep pressing ENTER switch.	4.0 V	
					Except for above.	5.0 V	
7 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
9	0	III t c	Input	OFF	Lighting switch is OFF.	0 V	
(R)	Ground	Illumination signal			Lighting switch is ON.	12.0 V	
10		Shield			_	_	
11 (R)	12 (G)	Sound signal front RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
13 (BR)	14 (Y)	Sound signal rear RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
15 (B)	Ground	Steering switch signal ground	_	Ignition switch ON	_	0 V	
					Keep pressing VOL DOWN switch.	0 V	
16	15	Steering switch signal B	Input	Ignition switch	Keep pressing VOL UP switch.	1.0 V	
(L)	(B)	Clooning Switch Signal D		ON	Keep pressing 🗸 switch.	2.0 V	
					Keep pressing <b>5</b> switch.	3.0 V	
					Except for above.	5.0 V	

## < ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (SINGLE MONITOR)]

Terminal (Wire color)		Description	Description		Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
21 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
22 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
23 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
24 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
25 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
26 (G)	27	Microphone VCC	Output	Ignition switch ON	_	5.0 V
27	Ground	Microphone ground	_	ON	_	0 V
28 (R)	27	Microphone signal	Input	Ignition switch ON	Give a voice	(V) 2.5 2.0 1.5 1.0 0.5 0
35 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
					Parking brake ON	0 V
36 (V)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake OFF	(V) 8 4 0 10 ms JSNIA0007GB
37	Owarra I	Dayaraa aigu -!	le · · t	Ignition	R position	12.0 V
(O)	Ground	Reverse signal	Input	switch ON	Other than R position	0 V

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	minal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
38 (R)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).	
41 (B)	Ground	Control signal 1	_	Ignition switch ON	_	0 V	
42 (B)	Ground	Control signal 2	_	Ignition switch ON	_	0 V	
43 (B)	Ground	Control signal 3	_	Ignition switch ON	_	0 V	
44 (SB)	Ground	Mode change signal	Output	Ignition switch ON	Driver's Audio Stage ON  Driver's Audio Stage OFF	0 V 8.5 V	
48 (G)	_	AV communication signal (H)	Input/ Output	_	_	_	
49 (R)	_	AV communication signal (L)	Input/ Output	_	_	_	
50 (LG)	_	AV communication signal (H)	Input/ Output	_	_	_	
51 (V)	_	AV communication signal (L)	Input/ Output	_	_	_	
52 (L)	_	CAN-H	Input/ Output	_	_	_	
53 (P)	_	CAN-L	Input/ Output	_	_	_	
61 (B)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 → 40µs JSNIA1029ZZ	
62 (W)	Ground	RGB signal (G: green)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 + 40µs JSNIA1030ZZ	

## < ECU DIAGNOSIS INFORMATION >

	minal e color)	Description			Condition	Reference value
+	-	Signal name	Input/ Output		Condition	(Approx.)
63 (R)	Ground	RGB signal (B: blue)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 +40µs JSNIA1031ZZ
64	_	Shield	_	_	_	_
65 (G)	Ground	RGB synchronizing signal	Output	Ignition switch ON	_	(V) 4 0 ++20µs SKIB3603E
66	_	Shield	_	_	_	_
					At RGB image display	5.0 V
67 (B)	Ground	RGB area (YS) signal	Output	Ignition switch ON	At camera image or AUX image display.	(V) 6 4 2 0 + + 200 \(mu\) s
68 (R)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON		(V) 4 0 → 20µs SKIB3601E
69 (W)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch ON	_	(V) 4 0 + 4ms SKIB3598E
70 (BR)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 + 1ms PKIB5039J

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	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
71 (Y)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 + 1ms PKIB5039J
72	_	Shield	_	_	_	_
79 (R)	95 (G)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
80 (BR)	96 (Y)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
81	_	Shield	_	_	_	_
85	Ground	Disk eject signal	Input	_	Pressing the eject switch	0 V
(SB)	Cround		Прис		Except for above	3.3 V
86	_	Shield	_		_	
87 (R)	88 (W)	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
102 (BR)	Ground	SW ground	_	Ignition switch ON	_	0 V
103 (B)	88 (W)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is selected.	(V) 1 0 -1 *** 2ms SKIB3609E
105	_	FM sub	Input	_	_	_
106	_	AM-FM main	Input	_	_	
107	Ground	Antenna amp. ON signal	Output	Ignition switch ACC	_	12.0 V

## < ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (SINGLE MONITOR)]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
108	Ground	Satellite antenna signal	Input	Ignition switch ACC	Not connected to satellite antenna connector.	5.0 V
109	_	Shield	_	_	_	_
110	Ground	GPS antenna signal	Input	Ignition switch ACC	Not connected to GPS antenna connector.	5.0 V
111	_	Shield		_	_	_

Wiring Diagram - BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR) -

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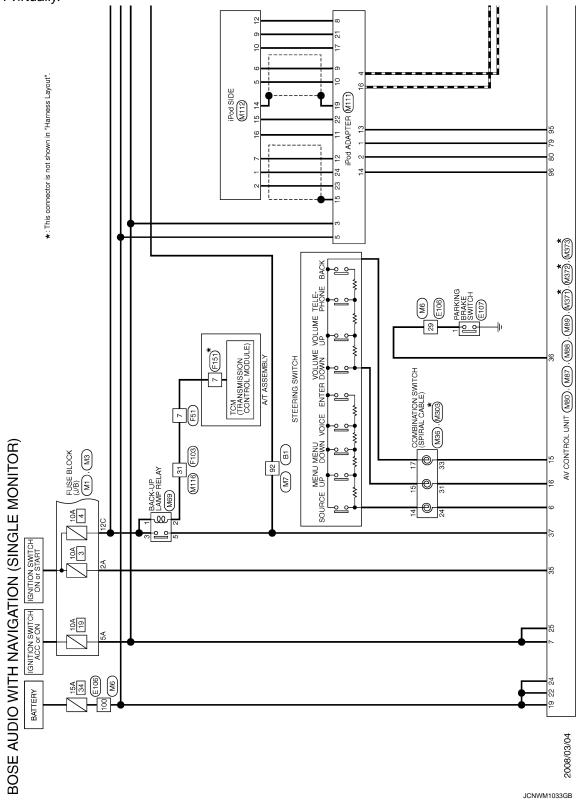
L

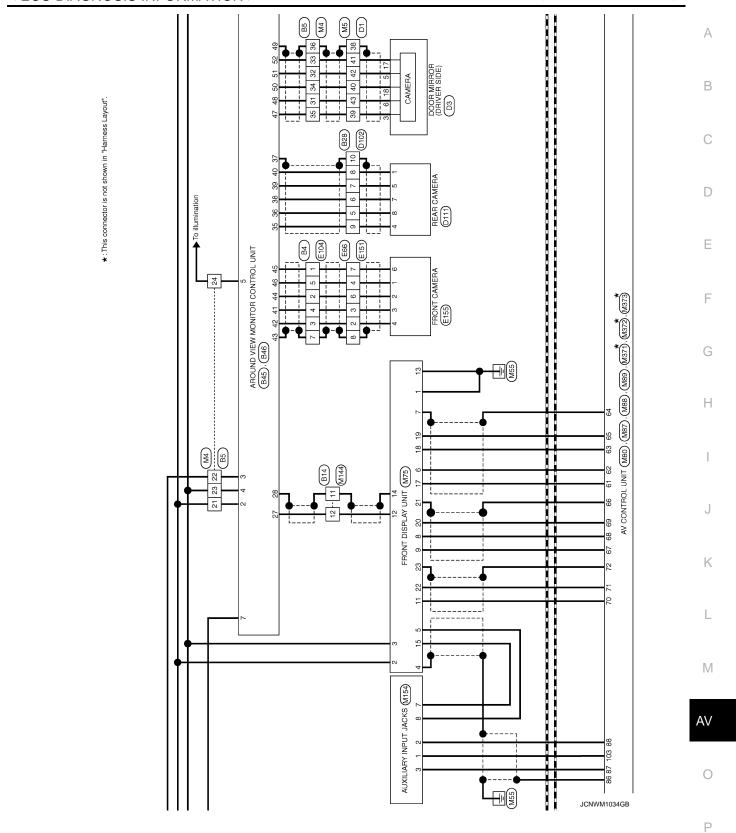
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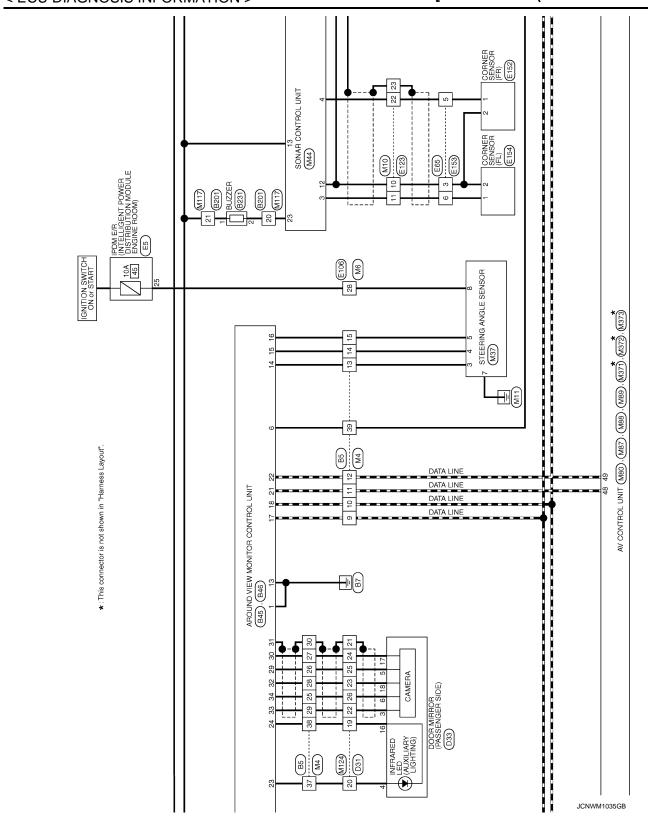
۸۱/

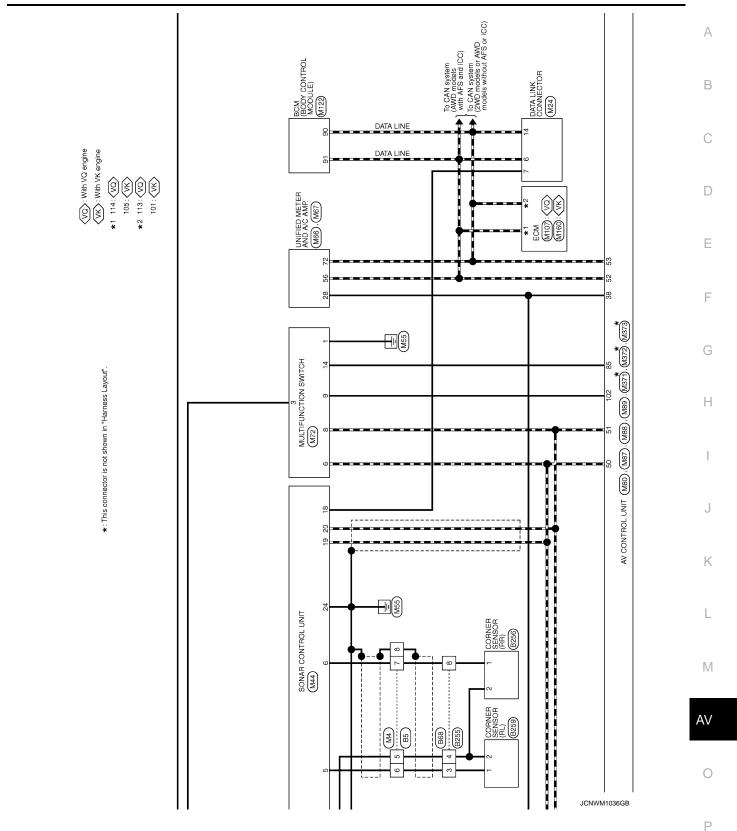
P

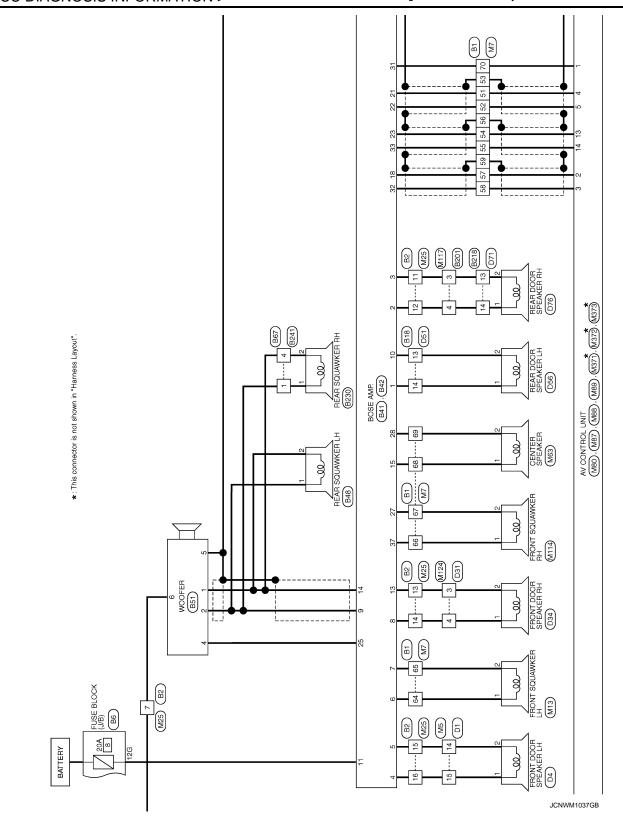
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.



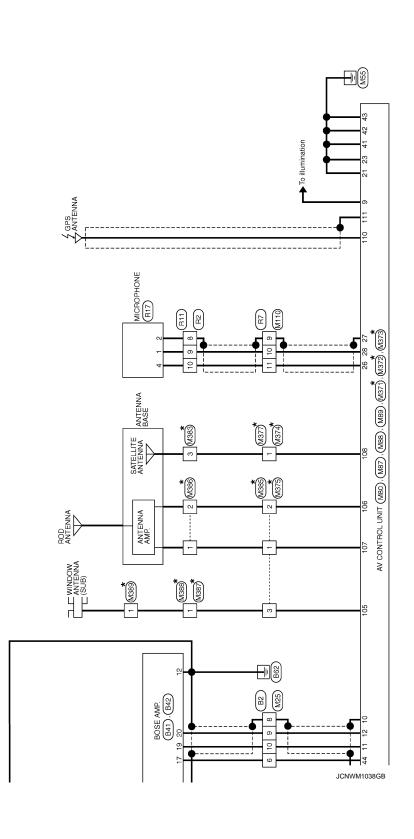








★: This connector is not shown in "Harness Layout".



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Connector No. B4 Connector Name WIFE TO WIFE Connector Type NSI 2FW-CS  H.S. 5 4	Terminal   Golor   Signal Name   Specification	Connector No. 814  Connector Name WIPE TO WIPE  Connector Type THIZEW-NH  H.S. 6 5 4 3 2 1  [2 11 10 9 8 7	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   11   SHIELD   -   -
Connector No. B2 Connector Type INSTEPA-CS  MRE TO WIRE Connector Type INSTEPA-CS  MS	Terminal   Color   Signal Name [Specification]   Color   Yes   Signal Name   Specification]   Color   Yes   Yes   Color   Yes   Yes   Color   Yes   Yes   Color   Yes   Yes	Connector No. B6 Connector Type IUSE BLOCK (J/B) Connector Type NISTPER-CS HS. DEFENCES  FG-G 36 FG-G  120 11G 10G 96 8G 7C 6G	Terminal Golor Signal Name [Specification] No. of Wire 12G GR –
4GLE MONITOR)  66		21 Y = 2 22 G = 2 24 LG = 2 25 L = 2 25 R = 2 27 Y = 2 28 W = 2 30 SHIELD = 2 31 L = 2 31 R = 2 32 R = 2 34 R = 2 35 R = 2 36 R = 2 37 R =	
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	Terminal   Color   Signal Name [Specification]     51	Connector Name WIRE TO WIRE  Connector Type TH40MW-NH  LS   1   2   4   5   6   7   6   10   11   2   3   4   5   6   7   6   10   11   2   3   4   5   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   7	Terminal Color Signal Name [Specification]  So W

JCNWM1039GB

## [NAVIGATION (SINGLE MONITOR)]

LLH (-) RH (-) WWKER RH (+)		SE GND			А
AMP. ON SIGNAL SOUND SIGNAL FRONT LH (-) SOUND SIGNAL FRONT SOUNDSIGNAL FRONT SOUNDSIGNAL FRONT SOUNMER RH (+)		SIDE CAMERA LH IMAGE GND			В
GR		OIS .			С
31 33 33 33 33 33 33 33 33 33 33 33 33 3		25			D
31 30 22 8 18 17 16 15	Signal Name (Specification)  SOUND SIGNAL CENTER (+)  MODE CHANGE SIGNAL  SOUND SIGNAL FRONT TH (+)  SOUND SIGNAL FRONT TH (+)  SOUND SIGNAL FRONT TH (+)  SOUND SIGNAL FRAR LH (+)  SOUND SIGNAL FRAR LH (+)  SOUND SIGNAL FRAR LH (+)  SOUND SIGNAL FRAR PH (+)	TOR CONTROL UNIT	IMAGE SIGNAL MAGE SIGNAL D D D D D D D D D D D D D D D D D D D		Е
BOSE AMP. SCA19FBR-SGA4 55 34 33 72 32 21 20 19	Signal Name (Specification) SOUND SIGNAL, CENTER H, MODE CHANGE SIGNAL SOUND SIGNAL FRONT TH I, SOUND SIGNAL FRAPE H C, SOUND SIGNAL FRAPE H C, SOUND SIGNAL FRAPE H C, SOUND SIGNAL FRAPE H D, SOUND SIGNAL FRONT SOUNDWEER SOUND SIGNAL FRONT S	-NH -NH 50 52 54 56 19 51 53 55	Signal Name (Specification) FRONT CAMERA MAGE SIGNAL FRONT CAMERA MAGE GND SHELD FRONT CAMERA GND FRONT CAMERA CND FRONT CAMERA LH COMM SIDE CAMERA LH COMM SIDE CAMERA LH POWER SUPPLY SHELD SIDE CAMERA LH POWER SUPPLY SHELD SIDE CAMERA LH GND SIDE CAMERA LH GND SIDE CAMERA LH GND SIDE CAMERA LH GND		F
ector No. ector Type  S 37 36  27 26	of Wire Of Wire SB SB SB CG CG CG CG CG CG CG CG CG CG CG CG CG	ector No. ector Type  42 44  41 43	Color   Color   Color   No.   Of Wie   Wie   Color   Color		G
Com	Termin No. 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 Termin No. 10 10 10 10 10 10 10 10 10 10 10 10 10		Н
8 9 1011112 2021222324	Signal Name (Specification)	GND SCUMD SIGNAL MOOFER AND REAR SQUAWKER (+)			I
OR) WIRE TO WIRE TH24AWW-NH  3 4 5 6 7 15 16 17 18 19		SOUND SIGNAL FR			J
NGLE MONITORY  Connector No. 628  Connector Nor WIRE  Connector Type 1142  H.S.  1 2 3 4  13 14 15 11 15 14 15 11	Terminal Color No. of Wire 5 5 C 6 L 7 Y 7 Y 9 W 10 SHIELD	13			K
	ह		n) LLH (+) RRH (+) RRH (-) RR LH (-) GER LH (-) GER LH (-) GER LH (-) GER H (-) LLH (-) LLH (-)		L
NAVIGATI	Signal Name (Specification)	JA2 11 10 5 4 3 2 1	Signal Name [Specification] SOUND SIGNAL REAR DOOR LH (+) SOUND SIGNAL REAR DOOR LH (+) SOUND SIGNAL REAR DOOR RH (+) SOUND SIGNAL REAR DOOR SPECKER H(-) SOUND SIGNAL REAR DOOR SPECKER H(-) SOUND SIGNAL REAR DOOR SPECKER H(-) SOUND SIGNAL REAR DOOR SERVER H(-) SOUND SIGNAL REAR DOOR SERVER H(-) SOUND SIGNAL REAR DOOR SERVER RH (-) SOUND SIGNAL REAR DOOR LH (-) SOUND SIGNAL REAR DOOR LH (-) SOUND SIGNAL REAR DOOR LH (-)		M
BOSE AUDIO WITH NAVIGATION (S)  Commetor No. 818  Commetor Name WIRE TO WIRE  Commetor Type TK10FW-NSS  TK109 8 7 6	Color Signa of Wire	B42  B60SE AMP.  B SGA12FBR-S  14 13 12 9 8 7 6	South Signa   Signa		AV
BOSE AU Connector No. Connector Type Connector Type H.S. 10 9	Terminal OC No. 13 13 0 14	Connector No. Connector Type	Terminal October 1		0
				JCNWM1040GB	Р

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BOSE	E AU	BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	NGLE N	INOL	TOR)				
Connector No.	r No.	B46	17	Μ	AV COMM (H)	Connector No.	B48	Connector No. B51	
Connector Name	- Name	AROUND VIEW MONITOR CONTROL UNIT	18	Ь	AV COMM (L)	Connector Name	REAR SQUAWKER LH	Connector Name WOOFER	
		┑	21	0	AV COMM (H)				
Connector Type	r Type	TH40FW-NH	22	>	AV COMM (L)	Connector Type	TK02FBR	Connector Type RS06FGY	
¢			23	b٦	TED (+)	¢		¢	
F			24	5	(-)	F		F	
SH/			27	Μ	CAMERA IMAGE SIGNAL	SE.			
<u> </u>	ŀ		28	SHIELD	D SHIELD				
	4 6	4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	29	В	SIDE CAMERA RH IMAGE SIGNAL		0 1		
1	0	17 19 21 23 23 27 29 31 33	30	Υ	SIDE CAMERA RH IMAGE GND				
			31	SHIELD	D SHIELD			)	
			32	Μ	SIDE CAMERA RH GND				
Terminal	Color	[	33	BR	SIDE CAMERA RH COMM	Terminal Color	50 OJ OJ	Terminal Color	
No.	of Wire		34	7	SIDE CAMERA RH POWER SUPPLY	No. of Wire	olgnar Name Lopecinication	No. of Wire Signal Name L	pecincation
-	В	GND	32	Μ	REAR CAMERA COMM	ا و		1 R SOUND SIGNAL WOOFER (-)	. WOOFER (-)
2	>	BATTERY	36	ŋ	REAR CAMERA POWER SUPPLY	2 R	-	2 G SOUND SIGNAL WOOFER (+)	. WOOFER (+)
3	5	IGNITION	37	SHIELD				4 L WOOFER AMP. ON SIGNAL	ON SIGNAL
4	re	ACC	38	_	REAR CAMERA GND			5 B GND	0
2	ч	ILLUMINATION	39	٨	REAR CAMERA IMAGE SIGNAL			6 W BATTERY	ERY
9	>	VEHICLE SPEED (8-PULSE)	40	BR	REAR CAMERA IMAGE GND				
7	0	REVERSE							
13	В	CONTROL SIGNAL							
14	A5	SENSOR SIGNAL 1							
15	BS	SENSOR SIGNAL 2							
16	٦	SENSOR SIGNAL 3							
Connector No.	r No.	B67	Connector No.	or No.	B68	Connector No.	B201	Connector No. B218	
Connector Name	r Name	WIRE TO WIRE	Connect	Connector Name	WIRE TO WIRE	Connector Name	WIRE TO WIRE	Connector Name WIRE TO WIRE	
Connector Type	r Type	NS08MW-CS	Connector Type	or Type	RS08MGY	Connector Type	TH80FW-CS16-TM4	Connector Type TK10FW-NS8	
是 H.S.			優 H.S.			哥 HS.			
		4 5 6 7 8			1 2 3 4 5 6 7 8			5 15 14	13 12 11
Terminal No.	Color of Wire	Signal Name [Specification]	Terminal No.	I Color of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Golor Signal Name [Specification]	pecification]
-	5	-	က	Χ	-	3	-	13 V	
4	æ	1	4	В	1	$\dashv$	1	- SB	
			∞	~		20 GR	- [With NAVI] - [With NAVI]		

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	Hion]	R SIDE)	tion]		А
wre 3 2 1 7 6 5 5	Signal Name (Specification)	ов (рвие 9 18 17	Signal Name [Specification]		В
F.No. B2355 F.Name WIRE TO WIRE F.Type RS38FGY  4 3 8 7	Odlor of Wire R B B	Connector No. D3 Connector Name D00R MIRROR (DRIVE Connector Type TH24MW-NH  12.11110 9 8 7 6 5 24.23.22.21 20 19 18 17	of Wife of N × × × × × × × × × × × × × × × × × ×		С
Connector No. Connector Name Connector Type	Terminal No. 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Connector Name Connector Type Management Type	Terminal No. No. 3 0 0 0 17 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18		D
	pecification)	1	pecification]		Е
B241 WIRE TO WIRE NSOBFW-CS 3	Signal Name (Specification)	r Name WIRE TO WIRE TH40FW-CS15  [15] 14] 12] 11] 10 9 0 7 6 5 4 3 2 1  [15] 14] 13] 12] 11] 10 9 0 7 6 5 4 3 2 1  [15] 14] 13] 13] 14] 15] 15] 15] 15] 15] 15] 15] 15] 15] 15	Signal Name [Specification]		F
Connector No. Bi	of Wire	Connector No. DI Connector Name Will Connector Type TH Connector T	of Wire SHELD SHELD R W W W W W W W W W W W W W W W W W W		G
Conne	Terminal No. 1	Connecto	Terminal No. 14 15 15 15 15 15 15 14 10 44 10 44 13 14 15 14 14 15		Н
	Signal Name [Specification]	(AT)	Signal Name [Specification]		I
OR) BEZZI BUZZER RKØZFBR-DGY	Signal Nar	YDXQZFB	Signal Nat		J
Connector No. B231 Connector Name BUZZI Connector Type RK0ZF	Terminal Color of Wire of Wire 2 GR	Connector No. 62 Connector Name OC Cornector Type YO H.S.	Terminal Color No. of Wire 2 W M		K
N (SING					L
BOSE AUDIO WITH NAVIGATION (SI Connector No. B230 Connector Name REAR SQUAWKER RH Connector Type TK02FBR	Signal Name (Specification)	ISON (RR)	Signal Name [Specification]	_	M
DIO WITH NAV B230 REAR SQUAWWER RH INGZFBR		EZES CORNER SENSOR (RR) VDXGZFB	Ш		AV
BOSE AUIC Connector No Connector Name Connector Type	Color   Colo	Connector None Connector Type MAS H.S.	Color   Colo		0
				JCNWM1042GB	Р

BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	GLE MONITOR)		
Connector No. D4	Connector No. D31	Connector No. D33	Connector No. D34
Connector Name FRONT DOOR SPEAKER LH	Connector Name WIRE TO WIRE	Connector Name DOOR MIRROR (PASSENGER SIDE)	Connector Name FRONT DOOR SPEAKER RH
Connector Type NS02FBR-CS	Connector Type TH40FW-CS15	Connector Type TH24MW-NH	Connector Type NS02FBR-CS
H.S.		H.S. 12 [11] [10] [10] [10] [10] [10] [10] [10]	HS.
Terminal   Golor   Signal Name [Specification]   No. of Wire   L   L     L	Terminal Color No. of Wire Signal Name [Specification]	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   4 1.0	Terminal Color No. of Wire Signal Name [Specification] 1 L 2 P
1	19 G	5 Y 6 R 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1
	25 Y = 26 R		
Connector No. D51 Connector Name WIRE TO WIRE	Connector No. D56 Connector Name REAR DOOR SPEAKER LH	Connector No. D71 Connector Name WIRE TO WIRE	Connector No. D76 Connector Name REAR DOOR SPEAKER RH
Connector Type TK10MW-NS8	Connector Type NS02FBR-CS	Connector Type TK10MW-NS8	Connector Type NS02FBR-CS
HS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	\$2. 	HS. 12345 678910 111231415 161718	EST ST
Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name   Specification]   14   SB	Terminal Color   Signal Name [Specification]   SB   -	Terminal Golor   Signal Name [Specification]   13 V   -	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1   SB   -

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WIRE PR 3 2 1 Signal Name (Specification)	BRAKE SWITCH  Signal Name [Specification]	АВ
Connector No.   E65	Cornector No.   E107	C
ES POWER POWER DISTRIBUTION MODULE ENGINE ROOM) THZOFW-CS12-M4-1V SIGNAL BESTERERS SECURES TO SECURE SECURES S	WRE CSI 6-TM4  Sgrul Name [Specification]	E
Connector No. E5 Connector Name IPDM E/R (INTELLIGENT POWE Connector Type ITP2/FW-CS12-M4-1V  Connector Type ITP2/FW-CS12-M4-1V  Signal Name (Specifical Signal S	Connector No.   E106	G
COMERA MW-NH  4 3 2 1  8 7 6 5  Signal Name [Specification]  REAR CAMERA IMAGE SIGNAL  REAR CAMERA COMM  REAR CAMERA COM	WIRE	ı
MONITOR: Coor No. Coor Name REA! Color of Wife V W W W W W W W W W W W W W W W W W W	N   N   N   N   N   N   N   N   N   N	K
	pecification]	L
AUDIO Williams WIETO Type THEAFTW-  [12] [11] [0] 9   8   8   8   8   8   8   8   8   8	SHIELD  SHIELD  SHIELD  SHIELD  SHIELD  SHIELD	AV
BOSE Commetted Commetted No. S 6 7 7 8 8 8	Commercial Terminal Towns of the state of th	O P

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BOSE AUDIO WITH NAVIGATION (SIN Connector No. 16123	INGLE MONITOR) Connector No. 1E151	Connector No. E152	Connector No. E153
e e	9	e e	l e
Connector Type TH24MW-NH	Connector Type RS08MB-PR	Connector Type YDX02FB	Connector Type RS06MB
H.S.   1   2   3   4   5   6   7   8   9   10   11   12   12   12   12   12   12	4.8 4.8 5 6 7 8	H3.	H3.
Terminal   Color   Signal Name [Specification]   No. of Wire   O. of Color   O. of Color   O. of Color   O. of Color   O.	Terminal   Golor   Signal Name [Specification]	Terminal   Color   Signal Name [Specification]   Color   No.   Cf Wire   Signal Name [Specification]	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   Signal Name [Specification]
Connector No. E154 Connector Name CORNER SENSOR (FL) Connector Town YDX/079R	Connector No. E155 Connector Name FRONT CAMERA Connector Tone RH06FR	Connector No. F51 Connector Name AT ASSEMBLY Connector Type BK/(INTG-DCY	Connector No. F103 Connector Name WIRE TO WIRE Connector Town TYGBEW-MSIR
			838
Terminal   Color   Signal Name [Specification]	Terminal   Color   Sigral Name [Specification]     No	Terminal   Color   Signal Name [Specification]   7   R   -	Terminal Color Signal Name [Specification]

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	ation]	А
	WIRE TO WIRE TH80MW-CS16-TM4  TH80MW-CS16-TM4  Signal Name (Specification)	В
	M6 o o o o o o o o o o o o o o o o o o o	С
	Connector No.	D
Specification]	1 12 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Е
M3 FUSE BLOCK (J/B) NS12FW-CS SCAC TOTO SCAC TO Signal Name (Specification)	Name   WIRE TO WIRE   TH40MW-CS15   TH40MW	F
Connector No.  Connector Name F Connector Type N H.S. Ferminal Oolor No. of Wire 12C R	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	G
		Н
OCK (J/B)  MZ  2A 1A  7A6A 5A4A  Signal Name [Specification]		I
		J
Sale Monitor  Gonnector No.  Connector Name Gonnector Type  1.5.  1.5.  2.4.	21 Y 22 R 23 R 24 P 25 R 25	K
NO (SINCE)		L
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)  Jonnector Name  Jonnector Name  Jonnector Name  Jonnector Name  Jonnector Type  Spilot  Terminal  Color Fig.  Connector Type  NS06  ALS.  Terminal  Color Fig.  ALS.  Terminal  Color Fig.  And  Terminal  Color Fig.  And  Color Fig.  Terminal  Color Fig.  And  Color Fig.  Terminal  Color Fig.  And  Color Fig.  And  Color Fig.  And  Color Fig.  And  Color Fig.  Color Fig.  And  Color Fig.  And  Color Fig.  Color Fig.  And  Color Fig.  And  Color Fig.  And  Color Fig.  Color	NH  NH	M
AUDIO WITH No.   F151   Name   TOM (TRANS)   Type   SP10FG   Type   Sign   Color   Sign   Colo	M4 WIRE TO WIRE TO TH40FW	AV
BOSE AUIC Connector No. Connector Type Connector Type No. No. 7 L.	Connector No.	0
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Connector No. MI3 Connector Name FRONT SQUAWKER LH Connector Type TK02FER  H.S.	Terminal   Color   Signal Name   Specification     1	Connector No. M37 Connector Name STEERING ANGLE SENSOR Connector Type ITH08FW-NH  M.S. T 2 3 8 1 1 4 5	Terminal   Color   Signal Name [Specification]     3
Connector No. M10 Connector Name WIRE TO WIRE Connector Type TH24FW-NH  M.S. T211110 9 8 7 6 5 4 3 2 1  24 23 22 21 20 19 18 17 16 15 14 13	Terminal   Color   Signal Mame [Specification]   No. of Wire   Signal Mame [Specification]   11   M	Connector No.         M36           Connector Name         COMBINATION SWITCH (SPIRAL CABLE)           Connector Type         TK08FGY-1V           H.S.         24 25 26           31 32 33 34	Terminal   Color   Signal Name [Specification]
MGLE MONITOR)  66 V		Connector No.         MZ5           Connector Name         WIRE TO WIRE           Connector Type         NS16MW-CS           H.S.         1 2 3	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Signal Name   Specification]   Signal Name   Specification]   Signal Name   Specification]   Signal Name   Signal Name
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)  Connector Name WIRE TO WRE  Connector Type TH80MY-CS16-TM4   Connector Type TH80MY-CS16-TM4   MAS  TH T	Terminal Color No. of Wire Signal Name [Specification] 51 V	Ocurrector No. M24  Connector Name DATA LINK CONNECTOR  Connector Type BD16FW  Connector Type BD16FW  1.2	Terminal   Coolor   Signal Name [Specification]   Of Wire

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#### **AV CONTROL UNIT**

## [NAVIGATION (SINGLE MONITOR)]

M67 TH32PW-NH TH432PW-NH	Signal Name [Specification] CAN+L CAN+L	GND SHELD MAGE SIGNAL [Win extractionent system] RGB (R. RED.) SIGNAL RGB (B. BLUE) SIGNAL RGB SNO V V SHELD COMM (DISE>>CONT) SHELD SHELD			АВ
Connector No.   M67	Terminal   Color   No. 10   Of Wire   S6   L   72   P	13 B SHIELD AUX 15 B SHIELD B SHIELD B SHIELD B SHIELD SHIELD S S SHIELD S S SHIELD S S S S S S S S S S S S S S S S S S S			C
NND A/C AMP.	Signal Name [Specification] VEHICLE SPEED (6-PULSE)	M75 FRONT DISPLAY UNIT (WITH NAVI) TH24FW-NH 10 9 8 7 6 5 4 3 2 1 22 21 20 19 18 17 16 15 14 13	Signal Name [Specification]  GND  BATERY  ACC  SHIELD  AGE GND [Willow exertament system]  KRE IG. GREEN) SIGNAL.  HP  RGB AREA (YS) SIGNAL  COMM (CONT-)DISP)  CAMERA IMAGE SIGNAL		E F
Connector No. M66  Connector Name UNIFED METER AND A/C AMP  Connector Type TH40FW-NH  H.S.  1.2 3 4 5 6 7 6 9 10 11 12 14 15 17 10 10 11 12 10 11 12 12 12 12 12 12 12 12 12 12 12 12	Calor of Wife R	23 <del>1</del> 1	of Wine of Win		G
Connector No Connector Tyl	Terminal No. 28	Connector Na. Connector Typ	Terminal No. No. 1 1 2 2 3 4 4 4 5 5 6 6 6 6 9 9 9 9 11 1 11		Н
OR) MR3 CENTER SPEAKER TROJEBR	Signal Name [Specification]	MULTIFUNCTION SWITCH THIGHW-NH  2 4 6 8 10 12 14 16 1 3 5 7 9 11 13 15	Signal Name (Specification)  GND ACC AV COAM (H) AV COAM (L) SW GND DISK EJECT SIGNAL		J
Connector Name of Connector Type The The The The The The The The The Th	Terminal Color No. 10 V V Color 2 G G G G G G G G G G G G G G G G G G	Connector No. M. Connector Type TT. Connector Type TT. M.S. H.S.	Terminal Octor 10 Mine 1 Mine 2 Mine 3 C C 6 G G G G G G G G G G G G G G G G G G G		K
					L
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	Signal Name [Specification] CORNER SENSOR FRONT EH CORNER SENSOR REAR IH CORNER SENSOR (II) AV COMM (II) RUZZER GND GND	M89 BACK-UP LAMP RELAY MS92FI-M2-LC	Signal Name (Specification)		M
AUDIO WIT  No M44  No SONAR CON  Type TH24FW-NH  T 2 3 4 5 6  13 14 15 16 17 1		MS02FL-M2-LG MS02FL-M2-LG			AV
BOSE AUIC Connector No. Connector Name Connector Type H.S. H.S.	Color	Connector No. Connector Name Connector Type H.S.	Terminal   Color     No.   of Wire     1   1     2   R   R     5   5   Color     6   Color     7   Color     8   Color     9   Color     1   Color     1   Color     1   Color     2   Color     3   Color     4   Color     5   Color     5   Color     6   Color     7   Color     7   Color     8   Color     9   Color     1		0
				JCNWM1048GB	Р
					-

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38 R   VEHICLE SPEED (8-PULSE)   VEHICLE SIGNAL 2   VEHICLE SIGNAL 3   VEHICLE SIGNAL 4   VEHICLE		Connector No.   MIO7	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   113   P   VEHCAN-L1   114   L   VEHCAN-H1
Connector No. M87 Connector Name AV CONTROL UNIT (WITH NAV) Connector Type ITH40FW-NH  TH3.  Example of the connector Street Str	Terminal Color   Signal Name (Specification)     No. of Wire   Signal Name (Specification)     21	Connector No.   M89	Terminal Color   Signal Name [Specification]     No. of Wire     No. of Wire
GLE MONITOR)   13		72 SHELD SHELD	
BOSE AUDIO WITH NAVIGATION (SINGL Connector No. M80 Connector Name AV CONTROL UNIT (WITH NAVI) Connector Type THISPW-CS2	Signal Name [Specification]  AMP ON SIGNAL SOUND SIGNAL FRONT LH (+) SOUND SIGNAL FRONT LH (+) SOUND SIGNAL FRAN LH (-) STREE SWA ACC ILLUMINATION SHIELD SOUND SIGNAL FRONT RH (-)	M88 AV CONTROL UNIT (WITH NAVI) THIZFW-NH E2 64 66 (68 70 72) 61 63 65 67 69 71	Signal Name [Specification] ROB (G. GREEN) SIGNAL RGB (G. GREEN) SIGNAL RGB (G. GREEN) SIGNAL RGB SIVIC RGB SIVIC RGB SIVIC RGB AREA (S. SIGNAL PP COMM (CONT-DISP) COMM (DISP->CONT)
BOSE AUD Connector No. Connector Name Connector Type	Terminal   Color     No. of Wire     1	Connector No. Connector Name Connector Type	Terminal   Color     No. of Wire     61   B     62   W     63   SHIELD     65   G     66   SHIELD     66   SHIELD     67   B     68   R     69   R     70   BR     71   Y

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#### **AV CONTROL UNIT**

4   5   6   14   15   6   14   15   16   16   16   16   16   16   16	DOULE) Park Na Park N		А
M112   M12	No.   M122   M122   M124   M124   M124   M125   M124   M125   M125   M126   M		В
Connector No.	Connector No. Connector Type Connector Type H.S. H.S.  Terminal No. of Wir		D
NAL RH (-)  1 (H)  PEDOGNITION PEDETECT NAL GND NAL LH (+)	Berfication]		Е
Pod SOUND SIGNAL, FRI (-)  SMELED  AV COMM (+)  GND  POD CONNECTION RECOGNITION  ACCESSORY DETECT  Pod SOUND SIGNAL, GND  FPOD SOUND SIGNAL, LH (+)	WIRE TO WIRE THEOMY-CS16-TM4  THEOMY-CS16-TM4  THE TO WIRE THE TO WIRE THE		F
14 Y Y 15 SHELD 16 SHELD 17 B SHELD 17 B SHELD 17 B SHELD 17 B SHELD 18 SHELD 18 SHELD 18 SHELD 18 SHELD 18 SHELD 18 SHELD 19 SHELD 18 SHE	ector No.  Coor Inal Coor Of Wee		G
	Connel Termin No. 2		Н
No.   MITTI   Name   Pod ADAPTER	r No. M116  r Type TK36MW-NS10  TC314 S TR36MW-NS10  E1 2 14 S TR36MW-NS10  Color Signal Name [Specification]  W		I
	MI16 WIRE TO WIRE TK38MW-NS10 EINTER GREETE BRIEFE BRIEFF		J
NGLE MONITOR)   Connector No.   MIII	Connector No. M116 Connector Name WIFE Connector Type TK338  11.2 1.2 1.2 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0		K
			L
BOSE AUDIO WITH NAVIGATION (SI Zonnector No.   Mill 0	COLOWKER RH		M
M110 WITH WIRE TO WIRE TO WIRE SIGNA	HI14 FRONT S TK02FBR		AV
BOSE AUC Connector No. Connector Name Connector Type Connector Typ	Connector No. Connector Name Connector Type Connector Type Connector Type Connector Type Taminal Color I I V I V I V L Color I V Color I		0
Oceaning Name of State of Stat	Son Son Ten	JCNWM1050GB	
			Р

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BOSE AU	BOSE AUDIO WITH NAVIGATION (SIN	INGLE MONITOR)		
Connector No.	M124	Connector No. M144	Connector No. M154	Connector No. M160
Connector Name	WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name AUXILIARY INPUT JACKS	Connector Name ECM (WITH VK ENGINE)
Connector Type	TH40MW-CS15	Connector Type TH12MW-NH	Connector Type A08FW	Connector Type RH24FGY-RZ8-R-LH-Z
<b>B</b>		4	E	
(5)	3 4 5 6 7 8 9 10 11 12 13 14 15	H.S.	E .	.S.
16 17 18	16 17 181 18 20 21 22 23 24 25 28 27 28 28 30 30 3 24 35 47 48 49 50 51 52 53 54 55	7 8 9 10 11 12	123 78	122   19   19   19   19   19   19   19
Terminal Color No. of Wire	Signal Name [Specification]	Terminal Golor Signal Name [Specification]	Terminal Golor Signal Name [Specification]	Terminal Golor Signal Name [Specification]
3	-	11 SHIELD -	1 B AUX SOUND SIGNAL RH (+)	101 P VEHCAN-L
4 LG	-	12 W –	2 W AUX SOUND SIGNAL GND	105 L VEHCAN-H
$\dashv$	-		AUX	
7	1		4	
σ̈			8 R AUX IMAGE GND	
+	1			
+	1			
24 G	1			
4	1			
26 R				
Connector No.	M303	Connector No. M371	Connector No. M372	Connector No. M373
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)	Connector Name AV CONTROL UNIT (WITH NAVI)	Connector Name AV CONTROL UNIT (WITH NAVI)	Connector Name AV CONTROL UNIT (WITH NAVI)
Connector Type	TK08FGY	Connector Type GT13SH-2/1S-HU	Connector Type FAKRA JACK	Connector Type GT5-1S-HU
E			<b>B</b>	<b>B</b>
H.S.		H.S.	HS	H.S.
	20 10 18 17 16 15 14 13	100	108	110
		<u> </u>	109	111
Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification] of Wire
14 W	1	-	108 – SAETLLITE ANTENNA	- GP:
15 L	1 1	106 – AMTENNA AMP ON SIGNAL		111 SHIELD SHIELD
_				

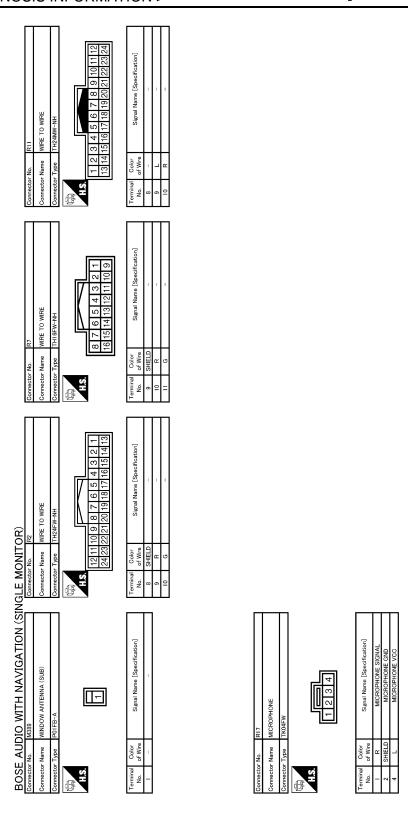
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#### **AV CONTROL UNIT**

## [NAVIGATION (SINGLE MONITOR)]

PP-HU Signal Name [Specification] SATELLITE ANTENNA	WIRE UG  Signal Name [Specification]		A B
Connector No.   M383	Connector No. M388 Connector Name WRE TO WIRE Connector Type JASO PLUIG  Connector Type JASO PLUIG  Terminal Color No. of Wire  Terminal Color No. of Wire		C D
WIRE PP-HU Signal Name [Specification]	WIRE OK Signal Name [Specification]		E
Connector No.   M377	Connector No. M387 Connector Name WRE TO WRE Connector Types JASO JACK  LAS.  Terminal Color No. of Wire  Terminal Color  Term		G H
WIRE 2/1S-HU  Signal Name [Specification]	A BASE 4-1/IPP-HU Signal Name [Specification] ANTERNA MAIN ANTENNA MAIN		I
	Connector No. M386 Connector Name ANTENNA BASE Connector Type GT135SN-1/1PP-HU  H.S. Connector Type GT135SN-1/1PP-HU  Of Wire Signal Name  I - ANTENNA A  I - ANTENNA A  AM-1		K
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)   Commercer No.   M374	WIRE TO WIRE GTI3SCN-2/1PP-HU  Signal Name [Specification]		M
BOSE AUDIO WITH Connector No. M374 Connector Name WIRE TO WIRE Connector Type GT18C-1S-HU MS. Terminal Color No. of Wire Terminal Octor No. of Wire	Connector No. M385 Connector Name WRE TO WRE Connector Type GT13SCN-2/II  H.S. Terminal Color No. of Wire  2	JOHNMAN CO.	AV
		JCNWM1052GB	Р

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Fail-Safe

When the ambiance temperature becomes extremely low or extremely high, or when HDD is malfunctioning, AV control unit displays the message and limits the AV control unit function.

#### **FAIL-SAFE CONDITIONS**

- When the ambiance temperature is -20°C (-4°F) or lower, or when it is 70°C (158°F) or higher
- when HDD is malfunctioning

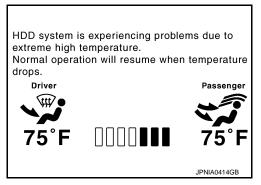
#### **AV CONTROL UNIT**

#### < ECU DIAGNOSIS INFORMATION >

#### [NAVIGATION (SINGLE MONITOR)]

Display

The messages displayed on fail-safe conditions are as shown below:



Fail-safe mode	Display (display of the fail-safe condition)
When HDD temperature is low	HDD system is experiencing problems due to extreme low temperature.  Normal operation will resume when temperature rises.
When HDD temperature is high	HDD system is experiencing problems due to extreme high temperature.  Normal operation will resume when temperature drops.
When HDD is malfunctioning	HDD system is not functioning. Please contact your dealer for assistance.

#### **DESCRIPTION OF CONTROLS**

Function	1	When Fail-safe Function is activated
	Operation	Only multifunction switch (preset switch) can be operated.
Air conditioner	Display	<ul> <li>LED of multifunction switch (preset switch) illuminates.</li> <li>Aimed temperature, blow angle, and flow rate are displayed in simplified mode.</li> </ul>
Audio		Only ON/OFF and volume control operations by multifunction switch (preset switch) are possible.
		No display ("Fail-safe mode" is displayed)
Camera		Image tone cannot be controlled.
Camera	Display	Cannot be superimposed. (warning display, tone control display)
Hands-free phone Operation Cannot be operated.		Cannot be operated.
Navigation Operation		Cannot be operated.
Self diagnosis		The display in simplified mode of fail-safe condition
CONSULT-III diagno	sis	Cannot be operated.

**Ability Operation Mode** 

There is an ability operation mode for Fail-safes due to low or high ambiance temperature.

If HDD data can be read, fail-safe is shown, then normal displays are displayed only for functions which can be operated.

#### RELEASE CONDITIONS OF FAIL-SAFE

Fail-safe is released on following conditions and normal mode is restored.

When the temperature of HDD is low or high

If the ambient temperature becomes out of fail-safe condition range, normal mode is restored.

When HDD is malfunctioning

If the malfunction disappears, normal mode is restored.

#### NOTE:

- If fail-safe mode due to HDD malfunction is seen continuously, replace AV control unit.
- If fail-safe mode due to HDD malfunction is seen temporarily, check the "Error History" of Confirmation/ Adjustment mode. If this is normal, then continue the normal operation, observing the function. (It might be a temporary malfunction of HDD.)

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## [NAVIGATION (SINGLE MONITOR)]

DTC Index

#### Self-diagnosis results display item

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-339, "Diagnosis Procedure"
U1010	CONTROL UNIT (CAN) [U1010]	AV-340, "Diagnosis Procedure"
U1310	CONTROL UNIT (AV) [U1310]	AV-341, "DTC Logic"
U1200	Control Unit FLASH-ROM [U1200]	AV-342, "DTC Logic"
U1201	Gyro NO CONN [U1201]	AV-343, "DTC Logic"
U1216	CAN CONT [U1216]	AV-344, "DTC Logic"
U1217	BLUETOOTH CONN [U1217]	AV-345, "DTC Logic"
U1218	HDD CONN [U1218]	AV-346, "DTC Logic"
U1219	HDD READ [U1219]	AV-347, "DTC Logic"
U1220	XM SERIAL COMM [U1220]	AV-348, "DTC Logic"
U121A	HDD WRITE [U121A]	AV-349, "DTC Logic"
U121B	HDD COMM [U121B]	AV-350, "DTC Logic"
U121C	HDD ACCESS [U121C]	AV-351, "DTC Logic"
U121D	DSP CONN [U121D]	AV-352, "DTC Logic"
U121E	DSP COMM [U121E]	AV-353, "DTC Logic"
U121F	INTERNAL COMM [U121F]	AV-354, "Diagnosis Procedure"
U1204	GPS COMM [U1204]	AV-355, "Diagnosis Procedure"
U1205	GPS ROM [U1205]	AV-356, "Diagnosis Procedure"
U1206	GPS RAM [U1206]	AV-357, "Diagnosis Procedure"
U1207	GPS RTC [U1207]	AV-358, "Diagnosis Procedure"
U1243	FRONT DISP CONN [U1243]	AV-359, "Diagnosis Procedure"
U1244	GPS ANTENNA CONN [U1244]	AV-361, "Diagnosis Procedure"
U1258	XM ANTENNA CONN [U1258]	AV-362, "Diagnosis Procedure"
U1300 U121F	AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]	AV-363, "Description"
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	AV-363, "Description"
U1300 U1254	AV COMM CIRCUIT [U1300]     IPod CONN [U1254]	AV-363, "Description"
U1300 U125B	AV COMM CIRCUIT [U1300]     AROUND CAMERA CONN [U125B]	AV-363, "Description"
U1300 U125C	AV COMM CIRCUIT [U1300]     SONAR CONN [U125C]	AV-363, "Description"
U1300 U1240 U1254 U125B	<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>IPod CONN [U1254]</li> <li>AROUND CAMERA CONN [U125B]</li> </ul>	AV-363, "Description"

< ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (SINGLE MONITOR)]

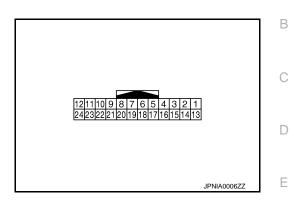
Α

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## FRONT DISPLAY UNIT

Reference Value

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

	rminal e color)	Description	-		Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
2 (P)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
3 (L)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
4	_	Shield	_	_	_	_
5 (R)	Ground	AUX image ground	_	Ignition switch ON	_	0 V
6 (W)	Ground	RGB signal (G: green)	Input	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 → 40µs
7	_	Shield	_	_	_	JSNIA1030ZZ
8 (R)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	_	(V) 4 0 → 20μs

# [NAVIGATION (SINGLE MONITOR)]

	minal e color)	Description	Condition Reference va		Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)
9 (B)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At RGB image display  At camera image display	5.0 V  (V) 6 4 2 0 ++200 μs PKIB4948J
11 (BR)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 +1ms
12 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4 -40μs SKIB2251J
13 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
14	_	Shield	_	_	_	_
15 (G)	Ground	AUX image signal	Input	Ignition switch ON	AUX image display	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 5 -0. 4
17 (B)	Ground	RGB signal (R: red)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 → 40µs JSNIA1029ZZ
18 (R)	Ground	RGB signal (B: blue)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 → 40µs JSNIA1031ZZ

#### < ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (SINGLE MONITOR)]

	minal color)	Description			Condition	Reference value	А
+	_	Signal name	Input/ Output		Condition	(Approx.)	
19 (G)	Ground	RGB synchronizing signal	Input	Ignition switch ON	_	(V) 4 0 → 20 µs SKIB3603E	B C
20 (W)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch ON	_	(V) 4 0 +-4ms SKIB3598E	E
21	_	Shield	_	_	_	_	G
22 (Y)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 + 1ms PKIB5039J	Н
23		Shield		_		_	

Wiring Diagram - BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR) -

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NOTE:

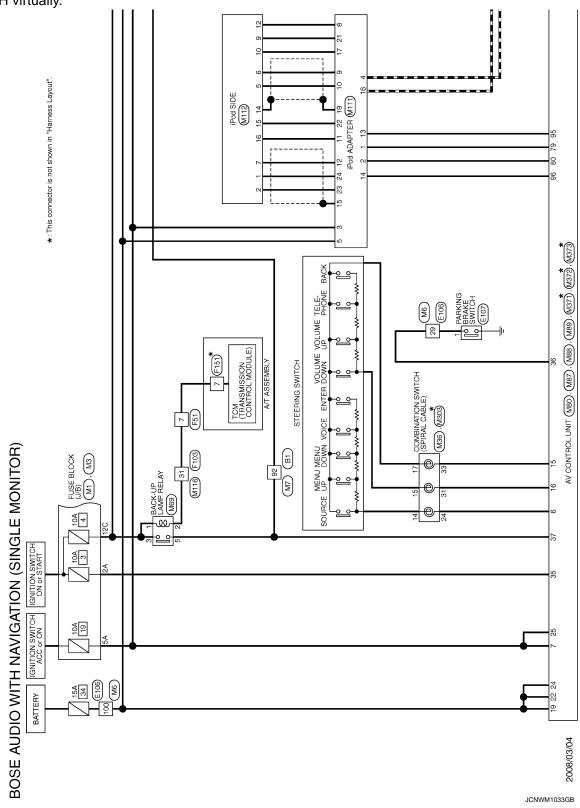
K

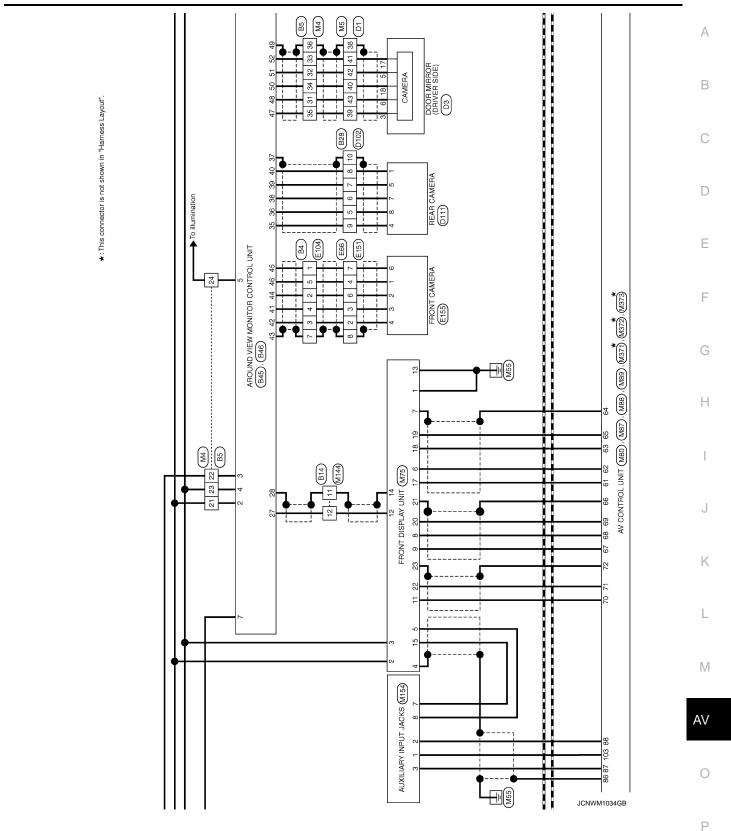
ΑV

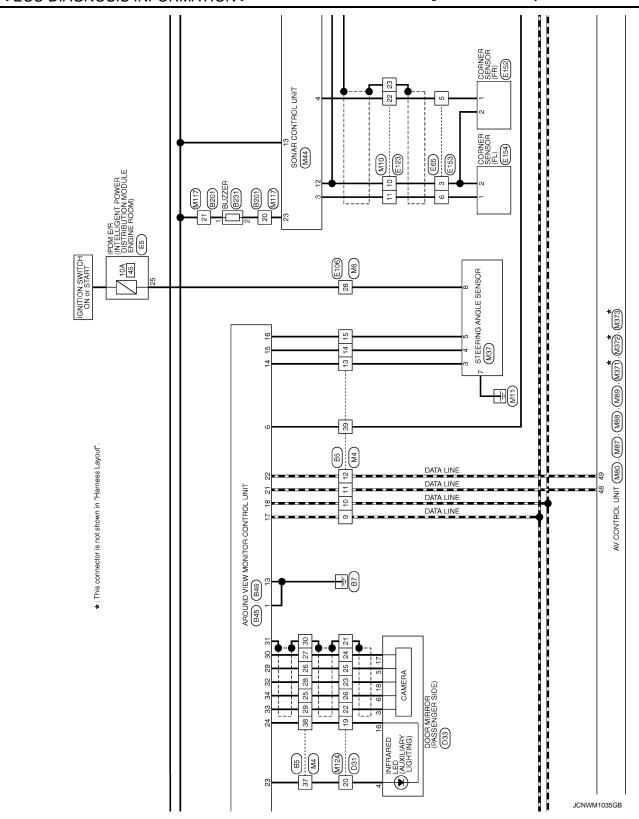
C

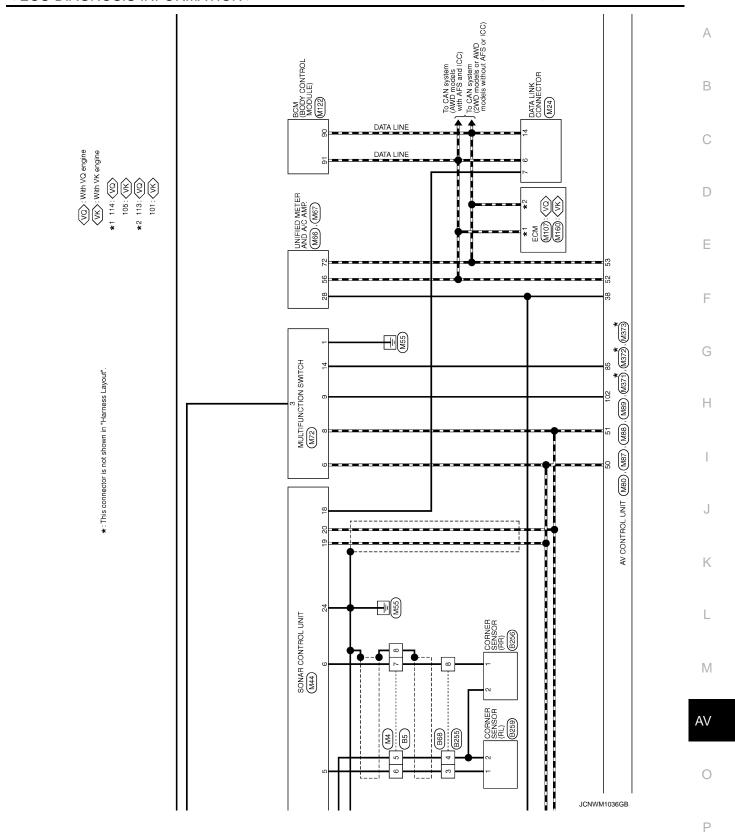
P

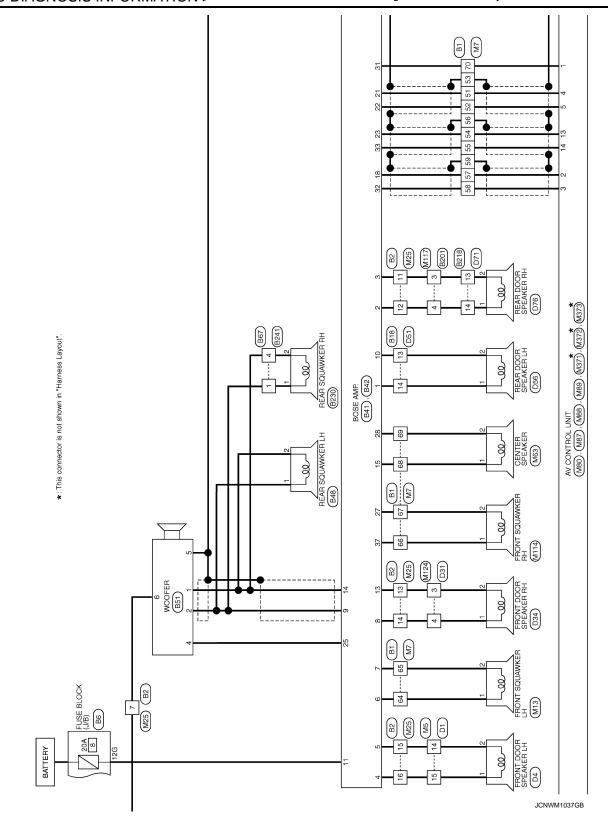
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.



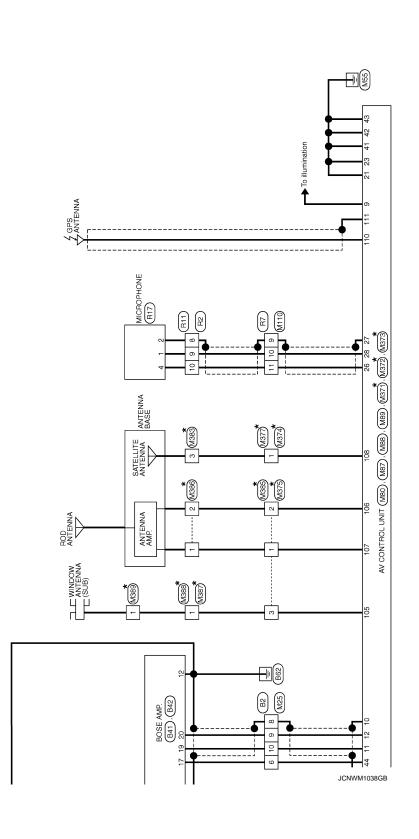








★: This connector is not shown in "Harness Layout".



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Connector No. B4 Connector Name WIFE TO WIFE Connector Type NSI 2FW-CS  H.S. 5 4	Terminal   Golor   Signal Name   Specification	Connector No. 814  Connector Name WIPE TO WIPE  Connector Type THIZEW-NH  H.S. 654321  [21110987]	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   11   SHIELD   -   -
Connector No. B2 Connector Type INSTEPA-CS  MRE TO WIRE Connector Type INSTEPA-CS  MS	Terminal   Color   Signal Name [Specification]   Color   Yes   Signal Name   Specification]   Color   Yes   Yes   Color   Yes   Yes   Color   Yes   Ye	Connector No. B6 Connector Type IUSE BLOCK (J/B) Connector Type NISTPER-CS HS. DEFENCES  FG-G-G-G-G-G-G-G-G-G-G-G-G-G-G-G-G-G-G	Terminal Golor Signal Name [Specification] No. of Wire 12G GR –
4GLE MONITOR)  66		21 Y = 2 22 G = 2 24 LG = 2 25 L = 2 25 R = 2 27 Y = 2 28 W = 2 30 SHRLD = 3 31 L = 2 31 R = 2 32 R = 2 34 R = 2 35 R = 2 36 R = 2 37 R =	
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	Terminal   Color   Signal Name [Specification]	Connector Name WIRE TO WIRE  Connector Type TH40MW-NH  LS   1   2   4   5   6   7   6   10   11   2   3   4   5   6   7   6   10   11   2   3   4   5   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   6   7   7	Terminal Color Signal Name [Specification]  So W

JCNWM1039GB

## [NAVIGATION (SINGLE MONITOR)]

SIGNAL FRONT LH (-) REAR RH (-) T SOLLAWKER RH (+)		CAMEPA LH IMAGE GND			A B
GR AMP ON SIGNAL  L SOUND SIGNAL FRONT LH (-)  Y SOUND SIGNAL FRONT SOLAWKER RH (-)  V SOUND SIGNAL FRONT SOLAWKER RH (-)		Y SIDE CAMERAL			С
31 32 32 33 33 34 34 34 34 34 34 34 34 34 34 34		25			D
31302628 18171615	CENTER (+)	11424FW-NH  TH24FW-NH  1046 50 22 54 56 58 60 62 64 45 47 49 51 53 55 57 59 61 63	MANGE SIGNAL HAAGE SIGNAL FA GND FA GND FA GND FA COMM OWER SUPPLY LH COMM OWER SUPPLY A LH GND A LH GND MAGE SIGNAL		Е
B61 BOSE AMP. SCA19FBR-SGA4 55 GA 33   32 55 GA 23 22 21 20 13	Signal Name (Specification) SOUND SIGNAL CENTER (+) MODE CHARGE SIGNAL SOUND SIGNAL FRONT RH (+) SOUND SIGNAL REAR LH (+) SOUND SIGNAL REAR LH (+) SOUND SIGNAL REAR LH (+) SOUND SIGNAL REAR RH (+) SOUND SIGNAL REAR LH (+) SOUND SIGNAL REAR RH (+) WOOFER ARM ON SIGNAL SOUND SIGNAL REAR RH (+)	No. 845 Name AROUND VIEW MONITO Type TH24FW-NH  42 44 46 48 50 52 54 56 41 43 45 47 49 51 53 55 55 55 55 55 55 55 55 55 55 55 55	Signal Name [Specification] FRONT CAMERA IMAGE SIGNAL FRONT CAMERA MAGE GND FRONT CAMERA GND FRONT CAMERA COMM FRONT CAMERA LH COMM FRONT CAMERA LH COMM SIDE CAMERA LH POWER SUPPLY SHELD SIDE CAMERA LH GND		F
999	O of Wire  Wire  Color  Color	те 444 433	Color of Wire PR SHIELD G SHIELD C SHIELD C G G G G G G G G G G G G G G G G G G		G
Connector No. Connector Type Connector Type M. S. T. S	Terminal No. 16 115 117 118 118 118 120 20 20 22 22 23 23 25 25 25 27 28 28	Connector Non Connector Type H2 42 4 414	Terminal No. No. 41 42 43 443 445 46 46 47 47 47 47 47 47 47 47 47 47 47 47 47		Н
7 8 9 1011112	Signal Name (Specification)	GND SOUND SIGNAL PROMET DOOR SPEAKER RH (-) DUND SIGNAL WOOFER AND PEAR SQUANKER (-)			I
TO WIRE WW-NH 5 6 5 17 18	Signal	SOUND SICHAL			J
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)  Sometic No. B18 Connector No. B18 Conne	Terminal Color No. of Wire 5 G 6 L 7 7 V 8 BR 9 W 10 SHELD	23 E 4 E E E E E E E E E E E E E E E E E			K
NION (SIN	Te l		m) HH (+) HH (+) HH (+) KR HH (-) KR LH (-) KR LH (-) KR LH (-) KR CH (-)		L
NAVIGAT	Signal Name (Specification)	2 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name [Specification]  SOUND SIGNAL REAR DOOR LH (+)  SOUND SIGNAL REAR DOOR RH (+)  SOUND SIGNAL REAR DOOR RH (+)  SOUND SIGNAL REAR DOOR RH (+)  SOUND SIGNAL REAR DOOR SPEAKER LH (+)  SOUND SIGNAL FRONT SOUNKER LH (+)  SOUND SIGNAL FRONT SOUNKER RH (+)  SOUND SIGNAL FRONT SOUNKER RH (+)  SOUND SIGNAL FRONT SOUNKER RH (+)  SOUND SIGNAL REAR DOOR SPEAKER RH (+)  SOUND SIGNAL REAR DOOR SPEAKER RH (+)  SOUND SIGNAL REAR DOOR LH (+)		M
WIRE TO WITE  WIRE TO WIRE  WIRE  WIRE TO WI		B42 BOSE AMP SGA12FBR-SJA2 14 13 12 9 8 7 6 5	<del></del>		AV
BOSE AL Connector No. Connector Name Connector Type	Color   Color   Color   No. of Wire   No.	Connector No. Connector Type Connector Type H.S.	Color   Colo		0
				JCNWM1040GB	Р

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BOSE,	BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	NGLE M	DINO	O.R.)			
Connector No.	o. B46	17	W	AV COMM (H)	Connector No.	B48	Connector No. B51
Connector Name	ame AROUND VIEW MONITOR CONTROL UNIT	18	Ь	AV COMM (L)	Connector Name	REAR SQUAWKER LH	Connector Name WOOFER
	Т	21	0	AV COMM (H)	1		П
Connector Type	ype TH40FW-NH	22	٧	AV COMM (L)	Connector Type	TK02FBR	Connector Type RS06FGY
¢		23	FG	(+)	¢		¢
F		24	9	(-)	F		· · · · · · · · · · · · · · · · · · ·
Ę		27	W	CAMERA IMAGE SIGNAL	Ě		
		28	SHIELD	SHIELD			
4 0		29	В	SIDE CAMERA RH IMAGE SIGNAL		2 1	(
1	0 7 8 11 13 15 17 18 21 23 23 24 25 13 33 35	30	λ	SIDE CAMERA RH IMAGE GND			13 5
		31	SHIELD	SHIELD			)
		32	W	SIDE CAMERA RH GND			
Terminal	Color	33	BR	SIDE CAMERA RH COMM	Terminal Color	[	Terminal Color
No. of	of Wire	34	٦	SIDE CAMERA RH POWER SUPPLY	No. of Wire	oignai ivame [opecification]	No. of Wire Signal Name [Specimoation]
-	B GND	35	W	REAR CAMERA COMM	-	1	1 R SOUND SIGNAL WOOFER (-)
2	Y BATTERY	36	9	REAR CAMERA POWER SUPPLY	2 R	1	2 G SOUND SIGNAL WOOFER (+)
3	G IGNITION	37	SHIELD	SHIELD			4 L WOOFER AMP. ON SIGNAL
4	LG ACC	38	L	REAR CAMERA GND			5 B GND
2	R ILLUMINATION	39	Υ	REAR CAMERA IMAGE SIGNAL			6 W BATTERY
9	V VEHICLE SPEED (8-PULSE)	40	BR	REAR CAMERA IMAGE GND			
7	O REVERSE						
13	B CONTROL SIGNAL						
14	GR SENSOR SIGNAL 1						
15	SB SENSOR SIGNAL 2						
16	L SENSOR SIGNAL 3						
Connector No.	o. B67	Connector No.	r No.	B68	Connector No.	B201	Connector No. B218
Connector Name	ame WIRE TO WIRE	Connector Name	r Name	WIRE TO WIRE	Connector Name	WIRE TO WIRE	Connector Name WIRE TO WIRE
Connector Type	ype NS08MW-CS	Connector Type	r Type	RS08MGY	Connector Type	TH80FW-CS16-TM4	Connector Type TK10FW-NS8
匮		修			優		皤
H.S.	1 2	H.S.			H.S.	69 94 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	H.S. 1000 2 18 1 1 2 2 1
	2 9			(1234) 5678)		T	0   1   0   1   3   4   3   3   3   3   3   3   3   3
				<b>⊣</b> II		9 01 99 90 90 90 90 90 90 90 90 90 90 90 90	
Terminal C No. of	Color Signal Name [Specification]	Terminal No.	Color of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color Signal Name [Specification]
-	- 5	3	W	1	3	1	13 V -
4		4	В	1	$\dashv$	1	14 SB –
		80	æ	1	20 GR	- [With NAVI] - [With NAVI]	

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E C C C C C C C C C C C C C C C C C C C	Signal Name [Specification]	D3 DOOR MIRROR (DRIVER SIDE) TH2AMW-NH  10 9 8 7 6 5 4 3 2 1 1 2 2 2 1 2 0 19 18 17 16 15 14 13	Signal Name [Specification]		A B
Connector No. B255 Connector Name WIRE TO WIRE Connector Type RS08FGY H.S. H.S. H.S. H.S. H.S. H.S. H.S. H.S.	Terminal   Color   Sign	Connector No. D3 Connector Name D0OR MIRR Connector Type THZ4MW-NH H.S. 12 11 10 9 8 7 24 23 22 12 0 1	Terminal   Color   Sign		C
CS CS 7 6 5 4	Signal Name (Specification)	No.   D1	Signal Name (Specification)		E
Connector No. 8241 Connector Name WIRE TO WIRE Connector Type NSOBPW-CS  H.S.	Terminal Color of Wire of Mine A B B B B B B B B B B B B B B B B B B	Connector No. D1 Connector Name WIRE TO WIRE Connector Type TH40FW-CS15	Terminal Color No. of Wire 14 P P P P P P P P P P P P P P P P P P		G H
\bar{\bar{\bar{\bar{\bar{\bar{\bar{	Signal Name [Specification] -	OORNIER SENSOR (RL.) YDX02FB	Signal Name [Specification] -		I
NGLE MONITOR)  Gamester No. 8231  Connector Name BUZZER  Connector Type RN0ZFBR-DGY  H.S.	Terminal Color No. 1 L. L. L. L. L. C. GR. L. C.	Connector No. B259 Connector Name CORNERS Connector Type YDX02FB H.S.	Terminal Color   S		K
	Signul Name [Specification]	100 (RR)	Signal Name [Specification]		L M
BOSE AUDIO WITH NAVIGATION (SI Connector Name REAR SQUAWKER RH Connector Type ITKOZFBR  M.S.	Terminal Color Signal 1 G	Connector No. B256 Connector Name CORNER SENSOR (RR) Connector Type YDX02FB  H.S.	Terminal Color No. of Wire 1 R R 2 B B 1		AV
ш <u>ы ө</u> м	<u></u>	[6] 6 [8] [12 🔏		JCNWM1042GB	Р

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BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	GLE MONITOR)		
Connector No. D4	Connector No. D31	Connector No. D33	Connector No. D34
Connector Name FRONT DOOR SPEAKER LH	Connector Name WIRE TO WIRE	Connector Name DOOR MIRROR (PASSENGER SIDE)	Connector Name FRONT DOOR SPEAKER RH
Connector Type NS02FBR-CS	Connector Type TH40FW-CS15	Connector Type TH24MW-NH	Connector Type NS02FBR-CS
H.S.		HS. 12[11] 10   9   7   6   5   4   3   2   1   2420  22  22  20  19  18  17  16  15  14  13	HS.
Terminal   Golor   Signal Name [Specification]   No. of Wire   L   L     L	Terminal Color No. of Wire Signal Name [Specification]	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   4 1.0	Terminal Color No. of Wire Signal Name [Specification] 1 L 2 P
1	19 G	5	1
	25 Y = 26 R		
Connector No. D51 Connector Name WIRE TO WIRE	Connector No. D56 Connector Name REAR DOOR SPEAKER LH	Connector No. D71 Connector Name WIRE TO WIRE	Connector No. D76 Connector Name REAR DOOR SPEAKER RH
Connector Type TK10MW-NS8	Connector Type NS02FBR-CS	Connector Type TK10MW-NS8	Connector Type NS02FBR-CS
12345 678910 1112 13 14 15 16 17 18	\$\frac{1}{2}\$	HS 12345 678910 111231415161718	₹. 1. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name   Specification]   14   SB	Terminal Color   Signal Name [Specification]   SB   -	Terminal Golor   Signal Name [Specification]   13 V   -	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1   SB   -

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PR 3 2 1 6 5 4 Signul Name [Specification]	FIO7 TBOIPW  Cland Mane [Scaroffcation]	A B
Connector No.   E65	Connector No. E107 Connector Name PARKING E Connector Type TE01FW  TH.S.  Terminal Color	
E5 IPON E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) TH20PW-CS12-M4-1V TH20PW-CS12-M4-1V Signal Name (Specification) Signal Name (Specification)	TO WRE	E
Connector No.   E5   Connector Powe	Connector No. E106 Connector Name WRE TO WIFE Connector Type TH80FW-CS16  LLS  EVEN 10 10 10 10 10 10 10 10 10 10 10 10 10	e <sub>M<sub>N</sub></sub> = 0 0 A
NW-NH  4 3 2 1  8 7 6 5  Signal Name (Specification)  REAR CAMERA MACE GND  REAR CAMERA COMB  REAR COMB  REAR COMB  REAR COMB  REAR COMB  REAR CAMERA COMB  REAR COMB  R	PEAR CAMERA DOWER SUPPLY  TO WIRE  MV-CS  2 3	
LE MONITOR)   Connector None   REAR CAMERA   Connector Type   TH081MN-NH     Connector Type   TH081MN-NH     H.S	Gometor No.   E104	A High
WIRE NH  Signal Name (Specification)	and Reservitional	
AUDIO W Name WIRE TO Type TH2AFW  [12] [11] [10] [2] [24] [23] [22] [2] [2] [24] [25] [2] [2] [24] [25] [2] [2] [2] [25] [25] [2] [2] [26] [26] [26] [26] [26] [26] [27] [27] [27] [27] [27] [28] [29] [29] [29] [29] [29] [29] [29] [29] [29] [29] [29] [29] [29]	SHELD  SHELD  Type RS06FB  Golor	AV  SHEID N ~ L ~ L  SHEID N ~ L
BOSE Commercial Commercial No. 17	Connector Connector Connector Connector	JCNWM1044GB

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BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR) Commerce No.   E123	IGLE MONITOR) Generator No F151	Connector No F152	Connector No   F153
e	e	ē	e e
Connector Type TH24MW-NH	Connector Type RS08MB-PR	Connector Type YDX02FB	Connector Type RS06MB
H.S. 1 2 3 4 5 6 7 8 9 1011112 131415161718192021222324	HS 12 3 4 5 6 7 8	H3.	H3.
Terminal   Color   Signal Name [Specification]   No. of Wire   O   C	Terminal   Color   Signal Name [Specification]   Color   No.   Color   Color	Terminal   Color   Signal Name [Specification]   1   R     2   B	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   S
Connector No. E154 Connector Name CORNER SENSOR (FL) Connector Type YDX/02FB	Connector No. E155 Connector Name FRONT CAMERA Connector Type RH06FB	Connector No. F51 Connector Name A/T ASSEMBLY Connector Type RK10FG-DGY	Connector No. F103 Connector Name WIRE TO WIRE Connector Type TK36FW-NS10
HS.	123456	H.S. (5 4 3 2 1) (10 9 8 7 6)	Springspin representation 5 4 3 2 1 8 4 3 2 1 9
Terminal   Color   Signal Name [Specification]   No. of Wire   T   W   -	Terminal   Color   Signal Name [Specification]	Terminal Color   Signal Name [Specification]   7 R R   -	Terminal Color No. of Wire 31 R -

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	WIRE TO WIRE THEOMW-CSIG-TMA  THEOMW-CSIG-TMA  Signal Name [Specification]	A B C
	Connector No.   Management	D
BC B	2   2   2   2   2   2   2   2   2   2	Е
Signal Name [Ss	No.   M5	F
Connector No. M3 Connector Name FUJ Connector Type NS LLS Terminal Color No. of Wire 12C R	Connector No.   MS	G
		H
NSOGEW-M2  NSOGEW-M2  Signal Name [Specification]		J
MONITG ector No.  Establishment of Wire  A A C G A A V	No.   No.	K
MODULE)  Somm  MODULE  Somm  No N		L
100 WITH NAVIGATION (SFIS)   TOM (TRANSMISSION CONTROL MODULE)     SPIUFG	WIRE  NH  NH    NH	M
AUDIO WITH   Name   TOM (TRANS)   Type   SPI0FG	M4   M4   M4   M4   M4   M4   M4   M4	AV
BOSE ALConnector No. Connector No. Connector Type Connector Type Terminal Color No.	Connector Na   Connector Na   Connector Na   Connector Ty   Conn	0
	JCNWM1046GB	Р

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Connector No. MI3 Connector Name FRONT SQUAWKER LH Connector Type TK0ZFBR H.S.	Color   Signal Name [Specification]   Of Wire   Signal Name [Specification]	Connector No. M37 Connector Name STEERING ANGLE SENSOR Connector Type TH08FW-NH  H.S. 7 2 3 8	Color
Connector No. MIO Connector Name WIRE TO WIRE Connector TH24FW-NH  M.S. T2 11 110 9 8 7 6 5 4 3 2 11 24 23 22 21 20 19 18 17 16 15 14 13	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   10 B	Connector No. M36 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TKOBFGY-IV  M.S. 24 25 26 31 32 33 34	Terminal   Color   Signal Name   Specification
MGLE MONITOR)    66		Connector No. M25 Connector Type NS16MW-CS  M4.8  1 2 3	Termitral   Color   Signal Name [Specification]     No. of Wire   Signal Name [Specification]     S   SHELD   -   -     S   SHELD   -   -     10   R   -       11   V   -     12   SB   -       13   Y   -     14   LG   -     16   L   -
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	Terminal Coolor Signal Mane (Specification) of Wire of Wire Signal Mane (Specification) of Mane (Specificatio	Connector No. M24  Connector Name DATA LINK CONNECTOR  Connector Type BD16FW  LS. 9 10 1112 13 14 15 16 7 8	Terminal   Codior   Signal Name [Specification]

JCNWM1047GB

## [NAVIGATION (SINGLE MONITOR)]

Connector No.   M67	Terminal Color   Signal Name [Specification]   No.   of Wire   CANH	13   B   GND     14   SHIELD     15   R   AUX MAGE SIGNAL [With current system]     17   B   ROB (R. PLUE) SIGNAL     19   C   ROB SYNG     20   W   VP     21   SHIELD   SHIELD     22   SHIELD   SHIELD     23   SHIELD   SHIELD     24   SHIELD     25   SHIELD   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     29   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     22   SHIELD     23   SHIELD     24   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     29   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     22   SHIELD     23   SHIELD     24   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     29   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     22   SHIELD     23   SHIELD     24   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     29   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     22   SHIELD     23   SHIELD     24   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     29   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     22   SHIELD     23   SHIELD     24   SHIELD     25   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     29   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     22   SHIELD     23   SHIELD     24   SHIELD     25   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     28   SHIELD     29   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     22   SHIELD     23   SHIELD     24   SHIELD     25   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     28   SHIELD     28   SHIELD     28   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     21   SHIELD     22   SHIELD     23   SHIELD     24   SHIELD     25   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     28   SHIELD     28   SHIELD     28   SHIELD     28   SHIELD	A B C
Connector No. M66  Connector Name UNIFED METER AND A/O AMP.  Connector Type TH40PW-NH  H.S.  1 2 3 4 5 6 7 6 5 00 11 2 13 14 15 17 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 15 18 19 20 11 12 13 14 18 18 18 18 18 18 18 18 18 18 18 18 18	Terminal Color Signal Name (Specification) 28 R VEHICLE SPEED (8-PULSE)	Cornector Na.   M75	E F G
GLE MONITOR)  Connector No. M63  Connector Name GENTER SPEAKER  Connector Type TROZFBR  M.S.	Terminal Color Signal Name [Specification]  1 Y 2 G	Connector No.   M72   Connector Name   MULTIFUNCTION SWITCH	J K
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)  Connector No. M44  Connector No. M44  Connector No. M45  Connector No. M63  Connec	Terminal   Color   Signal Name (Specification)	Connector No. M69 Connector Name BACK-UP LAMP RELAY Connector Type MSOZFI-M2-LC  Terminal Color No. of Wire  Signal Name [Specification]  T R  S R  S R  S R  S R  S R  S R  S R	AV O
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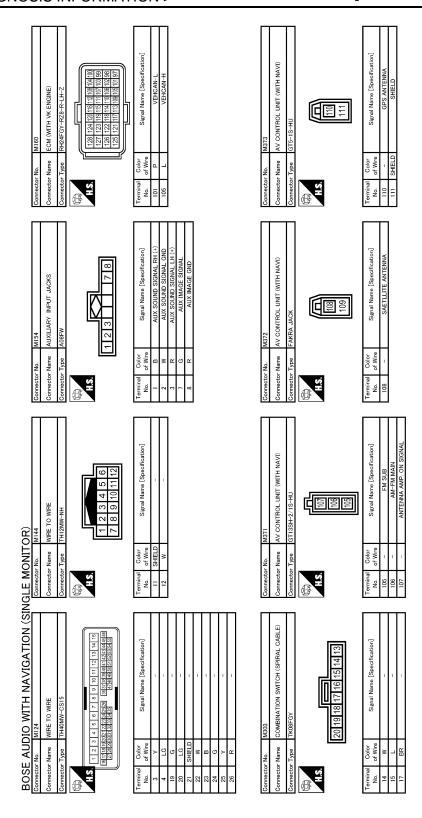
Θ Θ	SE AUI	BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	IGLE M	ONITO				ŀ		г
Conne	Connector No.	M80	13	æ	SOUND SIGNAL REAR RH (+)	Connector No.	M87		VEHICLE SPEED (8-PULSE)	_
Connec	Connector Name	AV CONTROL UNIT (WITH NAVI)	14	> 1	SOUND SIGNAL REAR RH (-)	Connector Name	AV CONTROL UNIT (WITH NAVI)	+	CONTROL SIGNAL 1	_
d	- 1	- 1	0 9	<u>n</u> .	SIRG SW GND	H	THE WOOM	+	CONTROL SIGNAL 2	_
2000	connector 13be	HIGHWOOD	0 9	7	SIRG SW B	odillector Type	LIN MILITARIA	$^{+}$	CONTROL SIGNAL 3	_
Œ.			D.	_	BALIERY	1		+	MUDE CHANGE SIGNAL	_
45						在一		+	AV GOMM (H)	_
H.S.	vi	7				H.S.		+	AV COMM (L)	_
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	,	3456/89				22 24 26 28	30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60	51 V	AV COMM (L)	_
	<u></u>	10 11 12 13 14 15 16 17 18 20				3	31 33 33 37 38 41 43 43 47 47	52 L	CAN-H	
								53 P	CAN-L	
Terminal	_	Signal Name [Specification]				lal	Signal Name [Specification]			
No.	of Wire					No. of Wire				
-	>	AMP. ON SIGNAL				21 B	GND			
2	۵	SOUND SIGNAL FRONT LH (+)				22 Y	BATTERY			
3	_	SOUND SIGNAL FRONT LH (-)				23 B	GND			
4	>	SOLIND SIGNAL BEAR LH (+)				H	RATTERV			
· u		COLIND SIGNAL DEAD LH (=)				26				
	3 (	SOOND SIGNAC INCANA				╀	CON LINCOLOR			
9	1	STRG SW A				26 G	MICROPHONE VCC			
7	SB	ACC				27 SHIELD	MICROPHONE GND			
6	~	ILLUMINATION				28 R	MICROPHONE SIGNAL			
9	ł	CHELD				╀	NOILINGI			
;	+	SOURCE CHOCK PRODUCT				+	NOTING!			
=	4	SOUND SIGNAL FRONT RH (+)				+	PARKING BRAKE			
12	ŋ	SOUND SIGNAL FRONT RH (-)				37 0	REVERSE			
			ı							ı
Conne	Connector No.	M88	72	SHIELD	SHIELD	Connector No.	M89	Connector No. M107	07	_
Connec	Connector Name	AV CONTROL UNIT (WITH NAVI)				Connector Name	AV CONTROL UNIT (WITH NAVI)	Connector Name EC	ECM (WITH VQ ENGINE)	
		_						П		_
Conne	Connector Type	TH12FW-NH				Connector Type	TH32FW-NH	Connector Type RH	RH24FGY-RZ8-R-LH-Z	_
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		61 63 65 67 69 71				89 90 91	90 91 92 93 94 95 96 97 98 99 100 101 102 103 104	-13	124 117 119 119 100 102	
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								J		
Terminal	_	Signal Name [Specification]				nal	Signal Name [Specification]	lal	Signal Name [Specification]	
No.	ot Wire					No. of Wire		No. of Wire		_
19	В	RGB (R: RED) SIGNAL				79 R	iPod SOUND SIGNAL LH (+) [Without entertainment system]	113 P	VEHCAN-L1	
62	М	RGB (G: GREEN) SIGNAL				80 BR	Pod SOUND SIGNAL FH (+) [Without entertainment system]	114 L	VEHCAN-H1	
8	~	RGB (B: BLUE) SIGNAL				85 SB	DISK EJECT SIGNAL			1
64	ď.					į.	SHED			
98	t					t	(±) H I IVIDIS GINIOS XIIV			
3 8	t					╀	VOV SCOIND SIGNAL LIT (1)			
g	7					+	AUX SOUND SIGNAL GND			
67	+	RGB AREA (YS) SIGNAL				95 G	IPod SOUND S(GNAL LH (÷) [Without entertainment system]			
89	œ	웊				. ∀	[Pod SOUND SIGNAL RH (-) [Without entertainment aystem]			
69	_					102 BR	SW GND			
70	BR					103 B	AUX SOUND SIGNAL RH (+)			
71	>	COMM (DISP->CONT)								

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## [NAVIGATION (SINGLE MONITOR)]

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M112   Plot SIDE	r No. M122  or Name BCM (BODY CONTROL MODULE)  or Type TH40FB-NH  TH0FB-NH		С
Connector No.	Connector No. Connector Name Connector Type H.S. H.S. H.S. Onload Terminal Color No. of Wr. 91 L.		D
NAL RH (-)  1 (H)  PECOGNITION  PETECT  STALL GND  NAL LH (+)	ooification]		Е
Pod SOUND SIGNAL PH (-)  SHIELD  AV COMM (+)  GND  POD CONNECTION RECOGNITION  ACCESSORY DETECT  Pod SOUND SIGNAL LH (+)  FPOD SOUND SIGNAL LH (+)	WIRE TO WIRE THBOMW-CSI 6-TM4  THBOMW-CSI 6-TM4  Signal Name [Specification]  - With NAVI]		F
14 SHELD 16 SHELD 17 SHELD 17 SHELD 17 SHELD 17 SHELD 17 SHELD 18	Connector No.   MII.		G
			Н
Nume   Pool ADAPTER	r No. Mil 6  or Name WIRE TO WIRE  Trashwa-NS10  12 2 1 4 5 University and Particular Color Signal Name [Specification]]		I
	WITE TO WIRE TO WIRE TRABAWA-NS IO TRABAWA-NS IO ELIZING GREEN TRABAMBAN IN Signal N. Signal N.		J
NGLE MONITOR)   Connector No.   MIII   Connector No.   MIII   Connector Type   H424     12   3   4   V     5   7   V     6   7   V     7   7   V     8   7   V     9   7   V     10   8   R     11   12   13     13   14   15   14     14   15   14     15   16   17     16   17     17   18   18     18   19   19     19   10   10     11   12   13     11   12   13     12   13   14     13   15   15     14   15   15     15   15   15     16   17   17     17   18   18     18   18   18     19   19   18     10   18     11   12   13     12   13   14     13   15   15     14   15   15     15   15   15     16   15   15     17   17   17     18   18   18     18   18   18     19   18   18     19   18   18     10   18     11   18   18     12   18     13   18     14   18     15   18     15   18     16   18     17   18     18   18     18   18     18   18	Connector No.   M116		K
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BOSE AUDIO WITH NAVIGATION (SI Zameetor No.   Mill 0	COJAWKER RH  Signal Name [Specification]	_	M
M10 WITH WIRE TO WIRE TO WIRE SIgna	M114 FRONT S TK02FBF		AV
BOSE AUC Gomecter No. Connector Types Connector Types No. of Wire 9 SHELD 10 R 11 G	Connector Name Connector Type Connector Type M.S. Of Wire No. Of Wire 1 0 V		0
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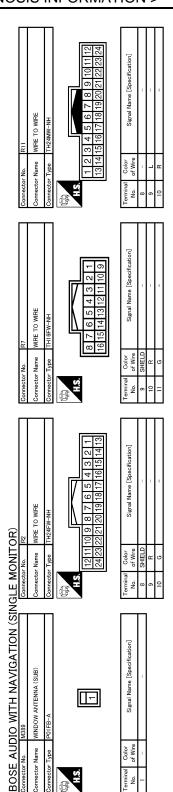
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JCNWM1051GB

Connector No. M383  Connector Name ANTENNA BASE  Connector Type GT16C-IPP-HU  LLS  Terminal Color No. of Wire Signal Name [Specification]  SATELLITE ANTENNA	Connector No. MSSB Connector Name WIPE TO WIPE Connector Type JASO PLUG  H.S. A. Or Wire Signal Name [Specification]  No. of Wire Signal Name [Specification]	A B C
ame [Specification]	Ownector  CK  Connector  Character  Connector  Connecto	D E F
Connector No. M377 Connector Name WIRE TO WIRE Connector Type GT16C-1PD-HU  H.S. Terminal Color No. of Wire 1	Connector No. M387 Connector Name WIRE TO WIRE Connector Type JASO JACK  H.S.  Terminal Color No. of Wire  1	G H
2/IS-HU  2/IS-HU  Signal Name [Specification]	A BASE 1-1/IPP-HU Signal Name [Specification] ANTENNA AMFON SIGNAL AM-FM MAIN	J
GLE MONITOR) Gomector None WIRE TO Connector Type GT13SC- Connector Type GT13SC- MS G Wire No of Wire 1 1 - 2 2 - 3 3 -	Connector No. M386 Connector Name ANTENNA BASE Connector Type GT13SSN-1/IPP H.S. H.S. Terminal Color Signal No. of Wire Signal No. of Wire 1 ANTENN	К
BOSE AUDIO WITH NAVIGATION (SIN Connector No. M374  Connector Name WIRE TO WIRE  Connector Type GT16C-1S-HU  LS. Color  No. of Wire  Signal Name [Specification]	WRE N-2/IPP-HU  Signal Name [Specification]	L M
BOSE AUDIO WITH Connector Name WIRE TO WIRE Connector Type GT16C-1S-HU  Terminal Color No. of Wire Signal	Connector No.   M385	AV O JCNWM1052GB
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	MICROPHONE	TK04FW	1234	Signal Name [Specification]	MICROPHONE SIGNAL	MICROPHONE GND	MICROPHONE VCC
	r Name	r Type		Color of Wire	œ	SHIELD	٦
200000	Connector Name	Connector Type	是 H.S.	Terminal No.	1	2	4

JCNWM1053GB

#### [NAVIGATION (SINGLE MONITOR)]

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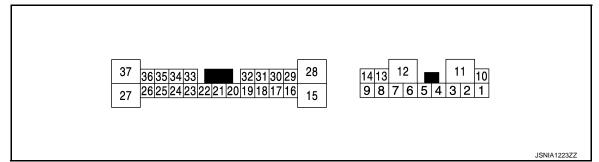
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## BOSE AMP.

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

Terminal (Wire color) + -		Description		Condition		Reference value	
		Signal name	Input/ Output	Input/		(Approx.)	
1 (Y)	10 (G)	Sound signal rear door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
2 (SB)	3 (V)	Sound signal rear door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 ********************************	
4 (L)	5 (P)	Sound signal front door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
6 (O)	7 (W)	Sound signal front squawk- er LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	

## [NAVIGATION (SINGLE MONITOR)]

Terminal (Wire color)		Description			Condition	Reference value (Approx.)	
+	_	Signal name	Input/ Output	Condition			
8 (LG)	13 (Y)	Sound signal front door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
9 (G)	14 (R)	Sound signal woofer and rear squawker (LH and RH)	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
11 (GR)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
12 (B)	Ground	Ground	ı	Ignition switch ON	_	0 V	
15 (Y)	28 (G)	Sound signal center speaker	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
17 (O)	Ground	Mode change signal	Input	Ignition switch ON	Driver's Audio Stage ON  Driver's Audio Stage OFF	0 V 8.5 V	
18 (P)	32 (L)	Sound signal front LH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
19 (R)	20 (G)	Sound signal front RH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	

### **BOSE AMP.**

### < ECU DIAGNOSIS INFORMATION >

### [NAVIGATION (SINGLE MONITOR)]

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
21 (V)	22 (SB)	Sound signal rear LH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
23 (BR)	33 (Y)	Sound signal rear RH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 2ms SKiB3609E
25 (L)	Ground	Woofer amp. ON signal	Output	Ignition switch ACC	_	12.0 V
37 (V)	27 (LG)	Sound signal front squawker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 2ms SKIB3609E
31 (GR)	Ground	Amp. ON signal	Input	Ignition switch ACC	_	12.0 V

Wiring Diagram - BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR) -

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NOTE:

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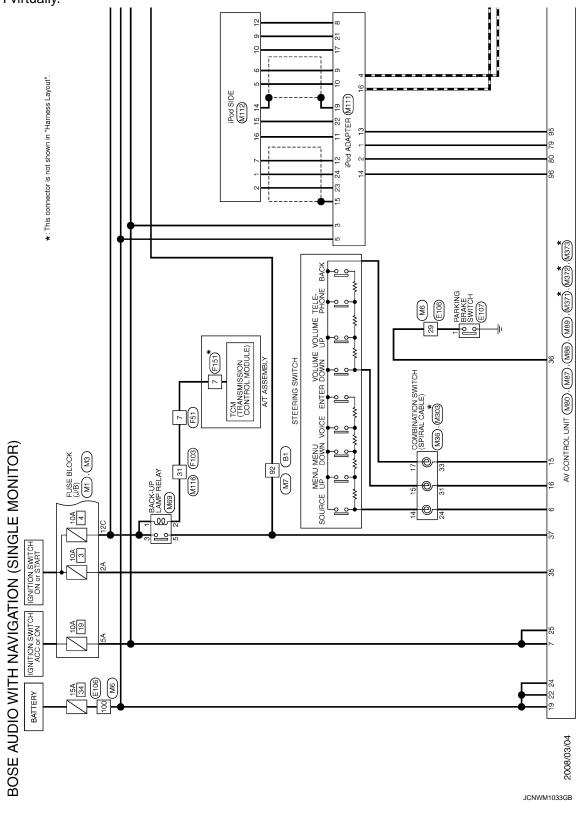
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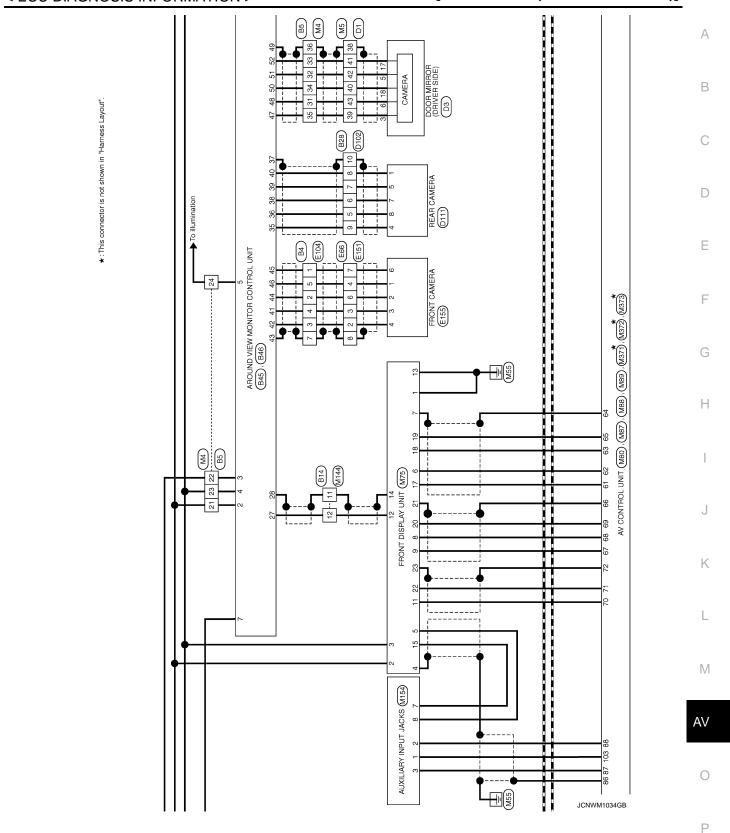
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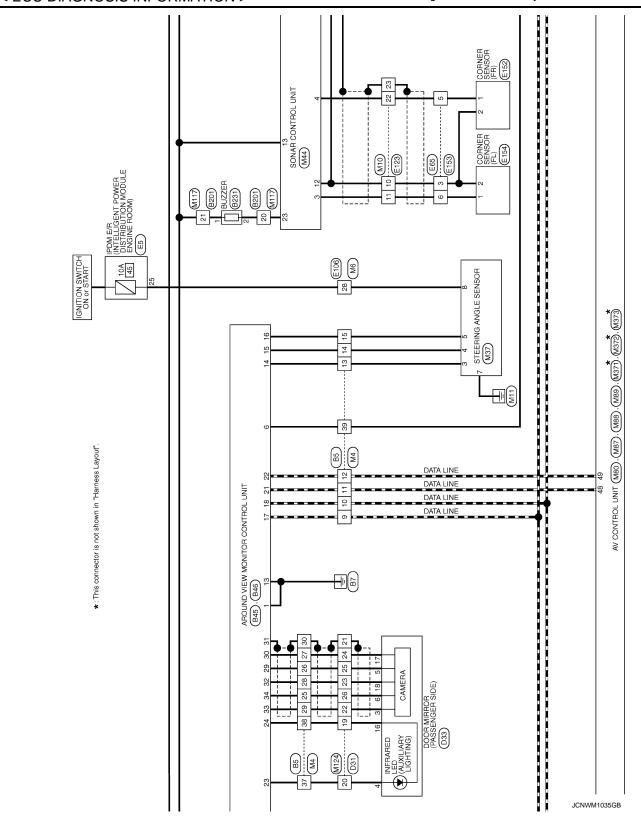
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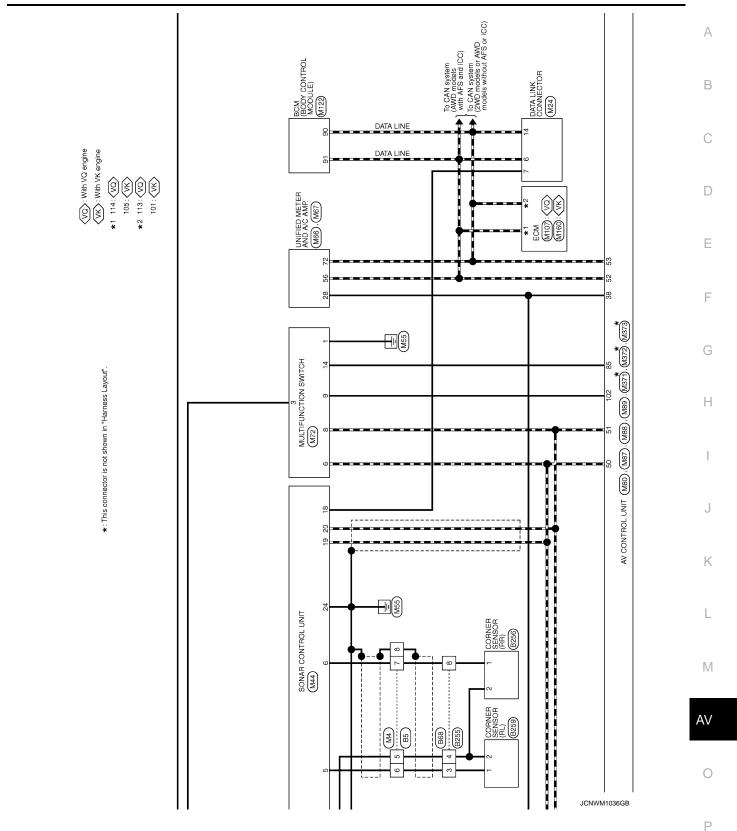
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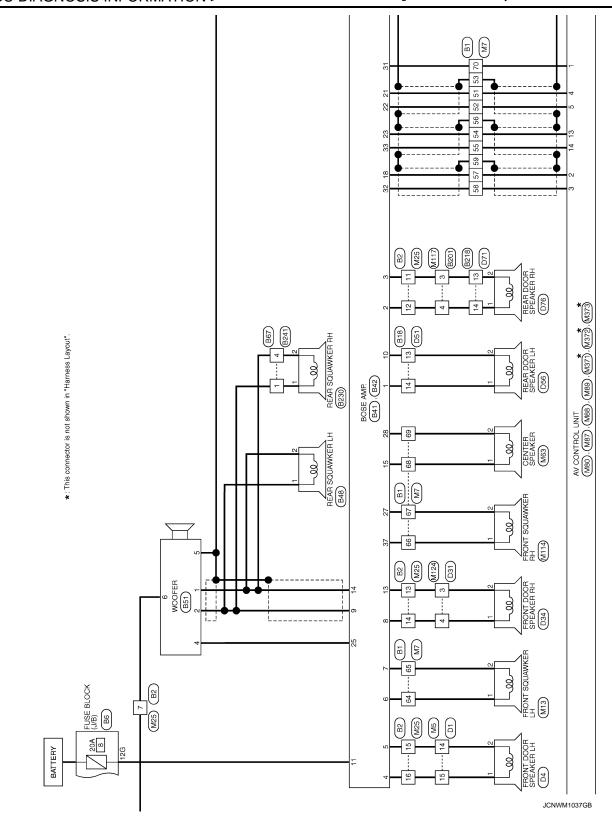
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.



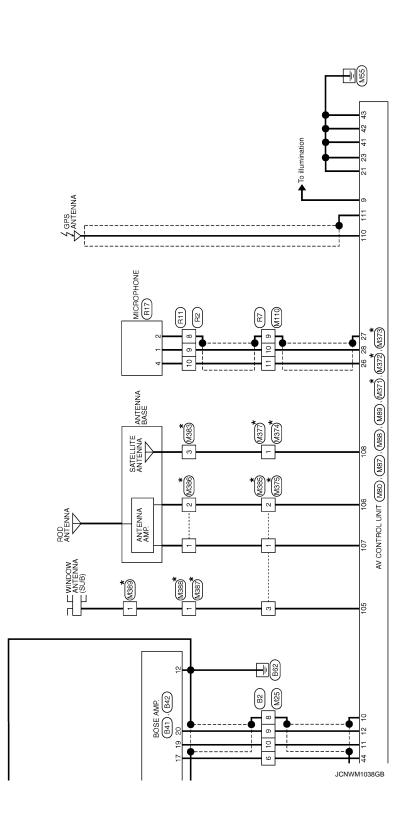








\*: This connector is not shown in "Harness Layout".



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Connector No. 84 Connector Name WIRE TO WIRE Connector Type NSIZFW-CS  LS. 5 4	Terminal   Color   Signal Name [Specification]   No.	Connector Name WIRE TO WIRE  Connector Type THIZFW-NH  M.S.  6 5 4 3 2 1  12 111 10 9 8 7	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   11   SHELD   -   -
Connector No. B2 Connector Name WIRE TO WIRE  Connector Type NS16FW-CS  H.S.  7 6 5 4  3 2 1  16 15 14 13 12 11 10 9 8	Terminal   Color   Signal Name [Specification]	Connector No. B8 Commector Name FUSE BLOCK (J/B) Commector Type NSI2FBR-CS  LSC COMMECTOR (J/B)  COMMECTOR (J/B)	Terminal Color No. of Wire 12G GR
GLE MONITOR)   66			33 Y 7
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	Terminal         Color         Signal Name (Specification)           No.         of Wire         -           51         V         -           52         SW         -           54         BR         -           56         SHIELD         -           56         SHIELD         -           57         P         -           58         SHIELD         -           59         SHIELD         -           64         O         -           65         W         -	Connector No.  WIRE TO WIRE  Connector Type TH40MM-NH  LS 1 LS 6 LT 8 D IN	Terminal   Color   Signal Name [Specification]

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NT CH (-) R RH (-) JAWKER RH (+)		GE GND			А
AMP: ON SIGNAL SOUND SIGNAL FRONT LH (-) SOUND SIGNAL FRAN RH (-) SOUND SIGNAL FRONT SOUAWKER RH (+)		SIDE CAMERA LH IMAGE			В
GR SCIND SC V SOUND S		) ×			С
31 32 33 33 33 34		25			D
22 31 30 22 28 18 17 16 15 1	Signal Name [Specification] SQUIND SIGNAL CENTER (+) MODE CHANGE SIGNAL SQUIND SIGNAL FRONT TH (+) SQUIND SIGNAL FRONT RH (-) SQUIND SIGNAL FRONT RH (-) SQUIND SIGNAL REAR LH (-) SQUIND SIGNAL REAR LH (-) SQUIND SIGNAL REAR RH (-)	P45 AROUND VIEW MONITOR CONTROL UNIT TH24FW-NH 46 48 50 52 54 56 58 60 62 64 45 47 49 51 53 55 57 59 61 63	Signal Name [Specification] FRONT CAMERA IMAGE SIGNAL FRONT CAMERA IMAGE GND FRONT CAMERA GND FRONT CAMERA GND FRONT CAMERA COMM FRONT CAMERA LH COMM SIDE CAMERA LH POWER SUPPLY SIDE CAMERA LH POWER SIDE CAMERA LH POWER SIDE CAMERA LH POWER SIDE CAMERA LH MAGE SIGNAL		Е
-SGA4	Signal Name (Sp. Signal Name (Sp. Signal Name (Sp. Signal Name (Sp. Signal P. Sound Signal F. Sound	No. 845  Name AROUND VIEW MONITO  Type TH24FW-NH  42 44 46 48 50 52 54 56  41 43 45 47 49 51 53 55	Signal Name FRONT CAMER, FRONT CAMER FRONT CAMER FRONT CAMERA IN SIDE CAMERA IN S		F
292 39 30 30 30 30 30 30	O O O O O O O O O O O O O O O O O O O	e e 44 44 43 43 44 44 44 44 44 44 44 44 44	Oolor of Wire BR BR SHIELD G W W W W W W W W W W W W W W W W W W		G
Connector No Connector The Con	Terminal 16 11 18 18 18 20 21 21 21 22 22 22 22 22 22 23 26 27 28	Commetter No. Commetter Tyr. H.S. H.S. H.42	7 deminal No. 1 No		Н
8 9 1011112 2021 22 23 24	Signal Name (Specification)	GND SIGNAL FRONT DOOR SPEAKER RH (~) CRAL WOOFER AND FEAR SQUAWKER (~			ı
TO WIRE WW-NH 5 6 7 5 17 18 19	Signal Nam	SOUND SIGNAL FRE			J
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)   Sometor No.   B18   Commetter No.   B28	Terminal Color No. of Wire of G G G G G G G G G G G G G G G G G G	2 2 2 4 0 > 0 0			К
NOI. I I I I I I I I I I I I I I I I I I	G.		fination]  DOOR IH (+)  DOOR RH (-)  DOOR RH (-)  STEAKER IH (+)  STEAKER IH (-)		L
NAVIGATI	Signal Name (Specification)	2 4 3 1 1 1 1 1 1 1	Vame [Speci NAL REAR] NAL REAR NAL REAR FRONT DOOR FRONT SO FRONT		M
AUDIO WITH NA Me. B18 WRE TO WIRE TO W	Ш	BOSE AMP.  SGA1/2FBR-SJAZ  14 13 12	<del></del>		AV
Connector No. Connector Name Connector Type H.S. 10 9	Color   Color   Color	Connector No. Connector Name Connector Type	Color   Colo		0
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Gennector No B51	T		Connector Type RS06FGY	J.	MIT		(2 4 6)	(135)			lal	No. of Wire Ogna Name Lapecincation	1 R SOUND SIGNAL WOOFER (-)	2 G SOUND SIGNAL WOOFER (+)	4 L WOOFER AMP. ON SIGNAL	5 B GND	6 W BATTERY							Connector No. B218	Connector Name WIRE TO WIRE	Connector Type TK10FW-NS8	18 17 16 15 14 13 12 11	Terminal Color Signal Name [Specification]	Н	14 SB –	
Gonnector No. 1848	T		Connector Type TK02FBR	d)	MATA	HS		2.1			lal	No. of Wire Signal Name Capecinication	C	2 R –										Connector No. B201	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS16-TM4	\$ 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Terminal Color   Signal Name [Specification]   No.   of Wire	3 V =	SB	20 GR – [With NAVI] 21 L – [With NAVI]
IGLE MONITOR)		21 O AV COMM (H)	22 V AV COMM (L)	LG	9	W CAMER/	28 SHIELD SIDE CAMEDA DE MACE SIGNAL	+	SHIELD	W	33 BR SIDE CAMERA RH COMM	34 L SIDE CAMERA RH POWER SUPPLY	35 W REAR CAMERA COMM	REAR CAME	SHIELD	7	_	40 BR REAR CAMERA IMAGE GND						Connector No. B68	Connector Name WIRE TO WIRE	Connector Type RS08MGY	H.S. (5 6 7 8)	Terminal Color Signal Name [Specification]	3 W =	4 B –	8
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	Connector Name ADDIND VIEW MONITOD CONTEDITINIT		Connector Type TH40FW-NH	a a	MAT	HS	2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39			lei	No. of Wire Olgnar Marine Lopecinication	1 B GND	2 Y BATTERY	3 G IGNITION	4 LG ACC	5 R ILLUMINATION	VEHICLE	7 0 REVERSE	В	æ	SB	16 L SENSOR SIGNAL 3	Connector No. B67	Connector Name WIRE TO WIRE	Connector Type NS08MW-CS	H.S. 12 12 14 5 6 7 8	Terminal Color Signal Name [Specification]	T	4 R -	

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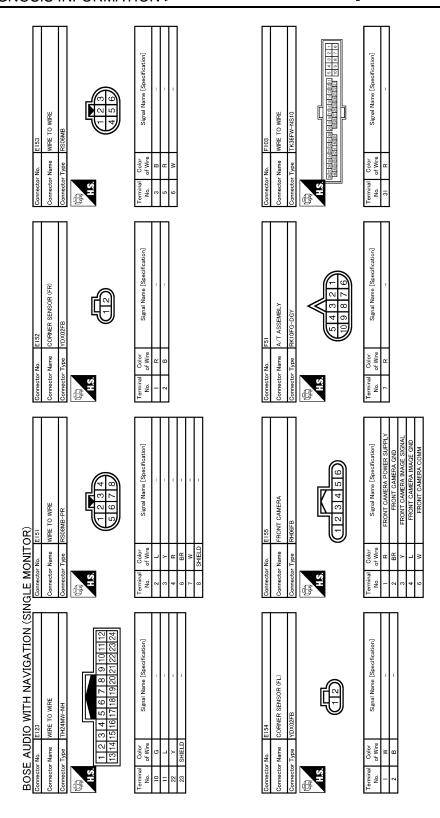
## [NAVIGATION (SINGLE MONITOR)]

	aution]	R SIDE) 4 3 2 1 16 15 14 13	cation]		А
у W МРЕ 4 3 2 1 8 7 6 5	Signal Name [Specification]	17 2	Signal Name [Specification]		В
Connector No. 6255 Connector Name WIRE TO WIRE Connector Type RS08FGY MAS  H.S.	Color of Wire B B W	Connector No. D3 Connector Name DOOR MIRROR (OR Connector Type TH2AMW-NH  12 11 10 9 8 7 6 24 23 22 21 20 19 18	Color of Wings		С
Conne	Terminal No. 3 3 4 4 8	Conne	Terminal No. 7 5 5 6 6 17 117 118		D
	eoification]		eoification)		Е
MIRE TO WIRE NISOBEW-CS 3	Signal Name [Specification]	Name   WIRE TO WIRE   TH40FW-CS15	Signal Name [Specification]		F
ector No. ector Type	Color   Colo	ecto S S	Celor   Celo		G
Commen		Conn	<u> </u>		Н
	Signal Name [Specification]	(at.)	Signal Name [Specification]		I
OR) BE231 BUZZER RWOZFBR-DGY	Signal Mar	CORNER SENSOR (RL.)  TOXAGER  TOXAGER	Signal Nat		J
NGLE MONITOR)  Commettor No. 8231  Commettor Name 8UZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ	Color   Colo	Connector No. Connector Name Connector Type	Calor   Calo		K
		ПП			L
BOSE AUDIO WITH NAVIGATION (SI Commetor No. 8230 Commetor Name REAR SOUAWKER RH Commetor Type TK02FBR  H.S.	Signal Name [Specification]	NSOR (RR)	Signal Name [Specification] -		M
IO WITH NAV B230 REAR SOUAWKER RH TK02FBR	। ।	CONNER SENSOR (RR)  TOXAZER  12			AV
BOSE AUDI Connector Name RR Connector Type TT	Terminal Color No. 1 G Wire 2 R R R	Connector No B	Terminal Color No. of Wire 2 B B B B B B B B B B B B B B B B B B		0
				JCNWM1042GB	Б
					Р

BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	GLE MONITOR)		
Connector No. D4	Connector No. D31	Connector No. D33	Connector No. D34
Connector Name FRONT DOOR SPEAKER LH	Connector Name WIRE TO WIRE	Connector Name DOOR MIRROR (PASSENGER SIDE)	Connector Name FRONT DOOR SPEAKER RH
Connector Type NS02FBR-CS	Connector Type TH40FW-CS15	Connector Type TH24MW-NH	Connector Type NS02FBR-CS
番		<b>E</b>	鹭
E.S.	15   14   13   12   11   10   8   7   6   5   4   3   2   1	1211110 9 8 7 6 5 4 3 2 1 242322212019181716151413	
Terminal Color Signal Name [Specification] No. of Wire	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]
	3 P	3 W -	
2 P –	4 L	4 LG -	2 P –
	Н	5 Y	
	1	$\dashv$	
	21 SHIELD -		
	$\dashv$	┨	
	23 BR –	18 BR -	
	24 L –		
	+		
	26 R = _		
Connector No. D51	Connector No. D56	Gonnector No. D71	Connector No. D76
	Т	MIDE TO MIDE	Т
	.		ヿ
Connector Type TK10MW-NS8	Connector Type NS02FBR-CS	Connector Type TK10MW-NS8	Connector Type NS02FBR-CS
匮	摩	修	香
	HS		HS.
1 2 3 4 5 - 6 7 8 9 10	<u> </u>	112345 - 678910	<u></u>
2		2	
<u>_e</u>	<u>_e</u>	<u></u>	<u>-a</u>
No. of Wire	No. of Wire	No. of Wire	No. of Wire
14 SB -	2 v -	Ĥ	2 \

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or No.  or Name  or No.  or Name  or Type  or Type  or Type	D
Connector Name Las	
F POWER ROOM)  E ENGINE ROOM)  Peoffcation]  peoffcation]	Е
Signal Name [S	F
	G
To our our our our our our our our our ou	Н
	I J
	K
	L
BOSE AUDIO WITH NAVIGATION (SIN Democtor No.   Dio2   Di	M
Name   WIRE TO WIRE   Type   TH24FW-NH   Name   Type   TH24FW-NH   Name   Nam	V
	0
JCNWM1044GB	Р



JCNWM1045GB

	Connector No. M6 Connector Name WIRE TO WIRE Connector Type TH80MV-CS16-TM4  Terminal Color No. of Wire Signal Name (Specification)  28 CR 29 V	АВС
	Connector Commetto No. 28 100 100	D
CS  CS  (A/B)  (B)  (B)  (CS)	No.   M5	Е
COK (J/B) -CS -CS -CS Signal Name [Sp	15 5 1 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1	F
M3 NS12FW-CS NS12FW-CS 1/20[110](100]0C 0C  Signal Nan	WIRE TO WIRE THUMW-0515 THUMW-0515 Signal	
No. Type Color R R	Name	G
Connector No. Connector Name Connector Type HS. HS.  Terminal Color No. of Wire	Connector No.   Connector Name   Connector Name   Connector Type   Connector Type   No. of Wife	Н
ification]		1
00K (J/B) M2 7A6A5A4A Signal Name [Specification]		
ॼ  ≱      ⊈   ⊈		J
ONITOR Nome FUS Type Object		K
Connector No. Connector No. Connector Type Connector Type No. Terminal No. Of Wire SA SA V SA V	3 3 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	TX.
		L
ATION IOL MODUL		
ANSMISSION CONTROL MCANSMISSION CONTROL MCANSMISSION CONTROL MCANSMISSION CONTROL MCANSMISSION Signal Name [Specification]	NH  NH    NH   NH   NH   NH   NH   NH	M
Signal Name [Specification]  Signal Name [Specification]  FIST  TOM (TRANSMISSION CONTROL MODULE)  Signal Name [Specification]  FEV LAMP RLY	WIRE TO WIRE THE STATE OF THE S	
		AV
BOSE AUI Connector Name Connector Na	Wetch Name of the	0
B Common	JCNWM1046GB	
		Р

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Connector No. MI3 Connector Name FRONT SQUAWKER LH Connector Type TKOZFBR H.S.	Terminal Color No. of Wire Signal Name [Specification]	Connector No. M37 Connector Name STEERING ANGLE SENSOR Connector Type ITHOSPW-NH  H.S. T 2 3 8 T 4 5	Terminal Color   Signal Name [Specification]     No. of Wire   Signal Name [Specification]     1
Connector Name WIRE TO WIRE  Connector Type TR4FW-NH  12  12  11  11  10  11  10  11  10  11  10  11  11  11  11  11  12  13  14  15  16  17  18  18  18  18  18  18  18  18  18	Terminal   Codor   Signal Name [Specification]   No. of Wire   B	Connector No.         M36           Connector Name         COMBINATION SWITCH (SPIRAL CABLE)           Connector Type         TK08FGY-IV           H3         24 25 26           23 33 34	Terminal   Color   Signal Name [Specification]   Color   Col
MGLE MONITOR)    67    V		Connector No. M25 Connector Type WIST TO WIRE  Connector Type NS I BAWY-CS  H.S. T 2 3	Terminal   Color   Signal Name [Specification]   Signal Name   Specification]   Signal Name   S
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)  Connector No. MT  Connector Nume WIRE TO WIRE  Connector Type TH80NW-CS16-TM4  Connector Type TH80NW-CS16-TM4  M.S.  Language Connector Type	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   S.	Connector No. M24  Connector Name DATA LINK CONNECTOR  Connector Type BD16FW  M.S. M.S. M.S. M.S. M.S. M.S. M.S. M.S	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]

JCNWM1047GB

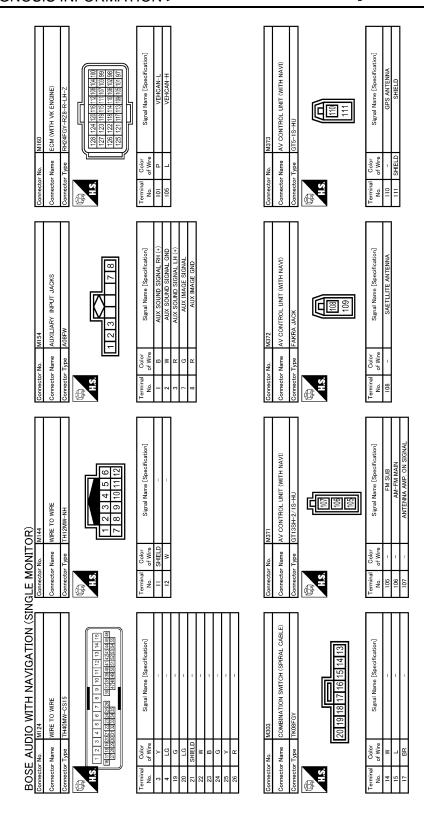
Connector No. M67  Connector Name UNIFED METER AND A/C AMP.  Connector Type IH3ZPW-NH  (A.S. 12. 10. 10. 44. 45. 67. 77. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   S	13   B   GND     14   SHELD	A B C
M66 UNIFIED METER AND A/C AMP. TH40FW-NH  S S 7 8 9 0 0 11 2 3 4 15 16 17 16 17 16 17 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 17 17 17 17 17 17 17 17 17 17 17 17	Signal Name [Specification] VEHICLE SPEED (8-PULSE)	FRONT DISPLAY UNIT (WITH NAVI)   TH24FW-NH	E F
SPEAKER Connector Nun Connector Nan Connector Nan Connector Type	Signal Name [Specification]  Terminal Color No. of Wire  28 R  -	MULTPLINCTION SWITCH   Connector Name   Connector Name   Connector Type   Connector Type	H
NGLE MONITI Connector No Connector Name Connector Type	Terminal Color   No. of Wire     1	Connector No   MT2	K
Connector No.   M44   Connector No.   M44   Connector Name   SONAR CONTROL UNIT   Connector Type   Th24FW-NH     1 2 3 4 5 6 7 8 9 10 111   2   14 15 16 17 18 19 20 21 22 23 24	Terminal   Color   Signal Name [Specification]   A   W   CORNER SENSOR FROWT IN H   S   L   CORNER SENSOR FROWT IN H   S   L   CORNER SENSOR FRAR IN H   S   CORNER SENSOR FRAR IN H   S   CORNER SENSOR FAR FR FH   S   CORNER SENSOR FAR FR FH   S   S   C   CORNER SENSOR FAR FR FH   S   S   CORNER SENSOR FAR FR FH   S   S   CORNER SENSOR FAR FR FH   S   CORNER SENSOR FAR FR FH   S   CORNER SENSOR FAR FR FH   S   CORNER (L)   CORNER SENSOR FAR FR FH   S   CORNER (L)   CO	Connector No.   M69	AV O JCNWM1048GB

NAVI)	ification]  VCC GND SIGNAL ARE	Connector No.   MIO7	Terminal Color   Signal Name [Specification]     No. of Wire   Signal Name [Specification]     11.3
Connector No. M87 Connector Type TH40FW-NH  MS  EZE EXE EXE EXE EXE EXE EXE EXE EXE EXE	Terminal   Color   Signal Name   Specification     No. of Wire   Signal Name   Specification     21	Connector Name AV CONTROL UNIT (WITH NAVI) Connector Type TH32PW-NH  M.S.  Th32PW-NH  Th32PW-NH  Th32PW-NH  Th32PW-NH  Th32PW-NH  Th32PW-NH	Terminal Color   Signal Name (Specification)     No.
FOR) SOUND SIGNAL REAR RH (+) SOUND SIGNAL REAR RH (-) STRG SW GND STRG SW B BATTERY		SHELD	
(SINGLE MONIT		SHIELD SHIELD	
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)  Commetter No. M80  Commetter Name Av CONTROL UNIT (WITH NAV)  Commetter Type THISPW-CS2  Commetter Type Thispw-	Signal Name [Specification]  AMP: ON SIGNAL SOUND SIGNAL FRONT LH (+) SOUND SIGNAL FRONT LH (-) SOUND SIGNAL FRAR LH (-) SOUND SIGNAL FRONT RH (+) SOUND SIGNAL FRONT RH (+) SOUND SIGNAL FRONT RH (+)	MBB AV CONTROL UNIT (WITH NAVI) THIZPW-NH 62 64 66 68 70 72 61 63 65 67 69 71	Signal Name (Specification)  RGB (R RED) SIGNAL  RGB (G GREBN) SIGNAL  RGB (B EULD) SIGNAL  SHELD  RGB SYNC  SHIELD  RGB AREA (VS) SIGNAL  HP  COMM (CONT-NISP)
BOSE AUD Connector No. Connector Type H.S. H.S.	Ocion of Wire	Connector No. Connector Name Connector Type	Of Wire Of
Comme Comme	Terminal No. No. 1 2 2 3 3 4 4 4 4 4 5 5 6 6 9 9 9 110 112	Conne	Terminal No. No. 62 63 64 64 64 65 65 65 65 65 65 67 67 70 70 70

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4   5   6   14   15   16   14   15   16   14   15   16   14   15   16   14   15   16   14   15   16   16   16   16   16   16   16	А
Signal Name [ Total 112   13   13   15   15   15   15   15   15	В
Cornector No.   M112	C
AAL LH (-)  (H)  (H)  (H)  (H)  (H)  (H)  (H)	Е
MIT?  WIRE TO WIRE THEOMOSIGNAL TH (+) GND	F
14   Y   16   16   17   16   17   18   19   19   19   19   19   19   19	G H
10 11 12 12 23 24 12 23 24 12 23 24 12 23 24 12 23 24 12 23 24 12 24 24 24 24 24 24 24 24 24 24 24 24 24	1
CONITOR	J
Connector No.   Mili   Connector No.   Mili   Connector No.   Mili   M	К
7	L
BOSE AUDIO WITH NAVIGATION (SIT   Domector No.   Milio   Domector No.   Milio   Domector No.   Milio   Domector Type   THISMW-NH	M
MI 10 WITH NAN WIRE TO WIRE THE TROOPER THE TROOPE	AV
BOSE AUC Connector Name Connector Name Connector Type 10 of Wire 11 G Connector Type 10 of Wire 11 of V Connector Type 11 of V Connector Type 12 of Wire 12 of Wire 13 of Wire 14.5	0
JCNWM1	050GB

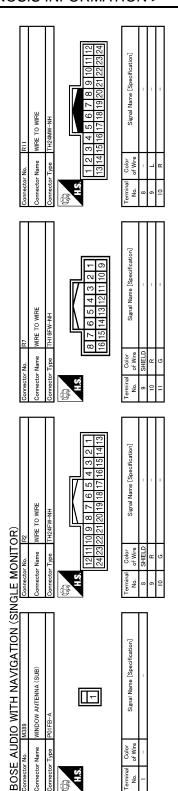
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JCNWM1051GB

## [NAVIGATION (SINGLE MONITOR)]

PP-HU  SATELLITE ANTENNA	WIRE UG Signal Name [Specification]		A B
Connector No. M383 Connector Name ANTENNA BASE Connector Type GT18CIPP-HU HS. Golor Signal No. of Wire	Connector No. M388 Connector Name WIRE TO WIRE Connector Type JASO PLUG  HS  Terminal Color Signu No. of Wire  No. of Wire		C D
feation)	feation		Е
MS77 WIRE TO WIRE GTI 6C-IPP-HU  Signal Name [Specification]	WIRE TO WIRE  JASO JACK  Signal Name [Specification]		F
ector No ector Type ector Type inal Color	ector No. ector Name ector Types  S. S		G
Common Terminal Termi	Common Tram Tram Tram Tram Tram Tram Tram Tram		Н
WIPE 2/15-HU 2   Signal Name [Specification]	A BASE 4-1/IPP-HU  Signal Name (Specification) ANTENNA AMF. ON SIGNAL  AAL-FM MAIN		I
			J
Gomector No. M375 Connector Name WIRE Connector Type GT13  Terminal Color No. of Wire  1	Connector No.   M386		К
			L
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)  Connector No. M374  Connector No. M374  Connector Name WIRE  Connector Name GTISS  ALS.  A.S.  A	WRE 1-2/19P-HU 2 3 Signal Name (Specification)		M
Signal	M385 WIRE TO WIRE GTT3SCN-2./IPD-HU Signal Name		AV
BOSE AUDI Commetter Name Commetter Type Gonnetter Type Terminal Color Terminal Termi	Connector No. No. Connector Type Gomestor Type Gomestor Type Gomestor Type Gomestor Type Gomestor Type Goldon No. Color No. 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	OWN 11-2-2-2-2	0
		JCNWM1052GB	Р



R17	MICROPHONE	TK04FW	1234	Signal Name [Specification]	MICROPHONE SIGNAL	MICROPHONE GND	MICROPHONE VCC
r No.	r Name	r Type		Color of Wire	۳	SHIELD	-
Connector No.	Connector Name	Connector Type	H.S.	Terminal No.	-	2	4

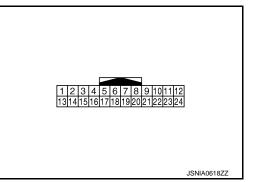
JCNWM1053GB

### [NAVIGATION (SINGLE MONITOR)]

### **IPOD ADAPTER**

Reference Value

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

Terminal (Wire color)		Description		O litter		Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
1 (R)	13 (G)	iPod sound signal LH	Output	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E	
2 (BR)	14 (Y)	iPod sound signal RH	Output	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 → 2ms SKIB3609E	
3 (O)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
4 (V)	_	AV communication signal (L)	Input/ Output	_	_	_	
5 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
8 (W)	Ground	iPod battery charge	Output	Ignition switch ON	Connected to iPod <sup>®</sup>	12.0 V	

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В

INFOID:0000000003826754

Α

С

D

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F

G

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K

L

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AV

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Р

### **IPOD ADAPTER**

### [NAVIGATION (SINGLE MONITOR)]

Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output	Containon		(Approx.)	
9 (Y)	Ground	Communication signal (iPod adapter→iPod <sup>®</sup> )	Output	Ignition switch ON	The wave pattern is displayed just after iPod connection.	NOTE:  After the wave pattern display, the value continues Approx 3.3 V	
10 (BR)	Ground	Communication signal (iPod <sup>®</sup> →iPod adapter)	Input	Ignition switch ON	Connected to iPod <sup>®</sup>	(V) 3 2 1 0 ++2ms JPNIA0462GB	
11 (L)	Ground	ACCESSORY-IDENTIFY	_	Ignition switch ON	Connected to iPod <sup>®</sup>	0 V	
12 (R)	23 (W)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 → 2ms SKIB3609E	
15	_	Shield	_	_	_	_	
16 (LG)	_	AV communication signal (H)	Input/ Output	_	_	_	
17 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
19	_	Shield	_	_	_	_	
21 (SB)	Ground	iPod connection recognition signal	Input	Ignition switch ON	Not connected to iPod <sup>®</sup> Connected to iPod <sup>®</sup>	4.0 V 0 V	
22 (W)	Ground	ACCESSORY-DETECT	_	Ignition switch ON	Connected to iPod <sup>®</sup>	0 V	
24 (B)	23 (W)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 ***2ms SKIB3609E	

Α

В

C

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ΑV

0

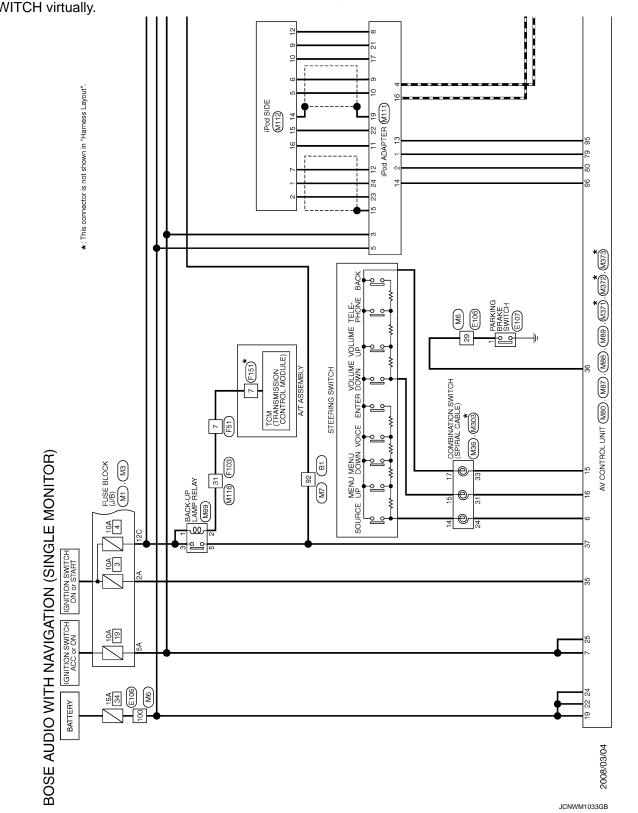
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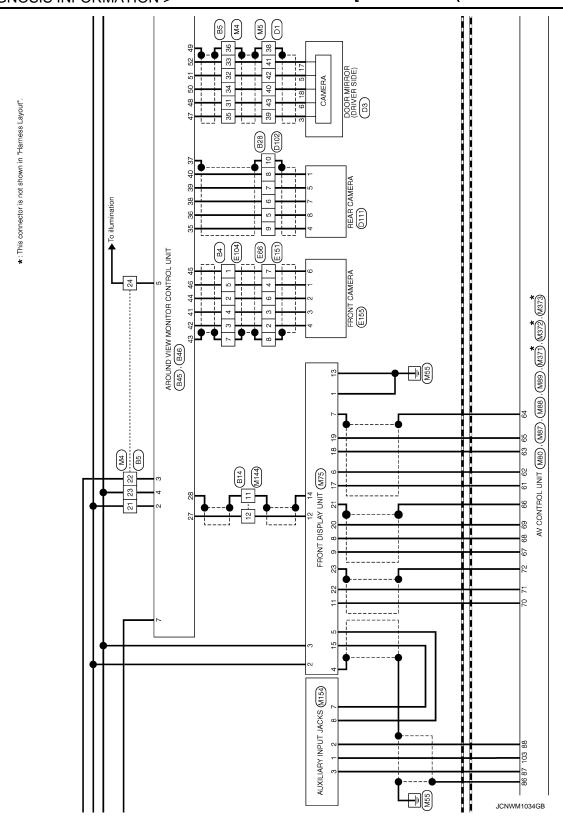
Wiring Diagram - BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR) -

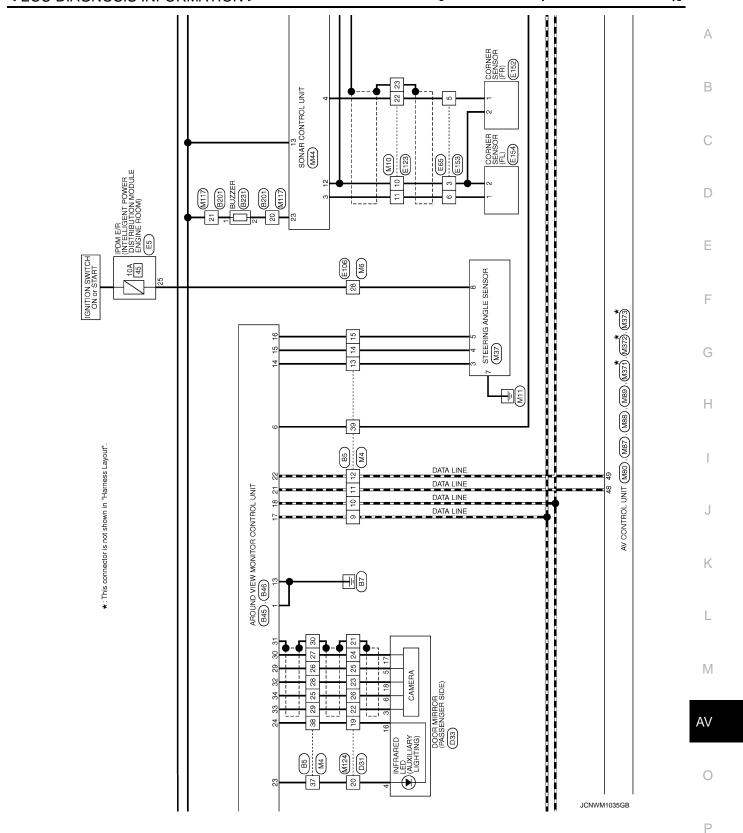
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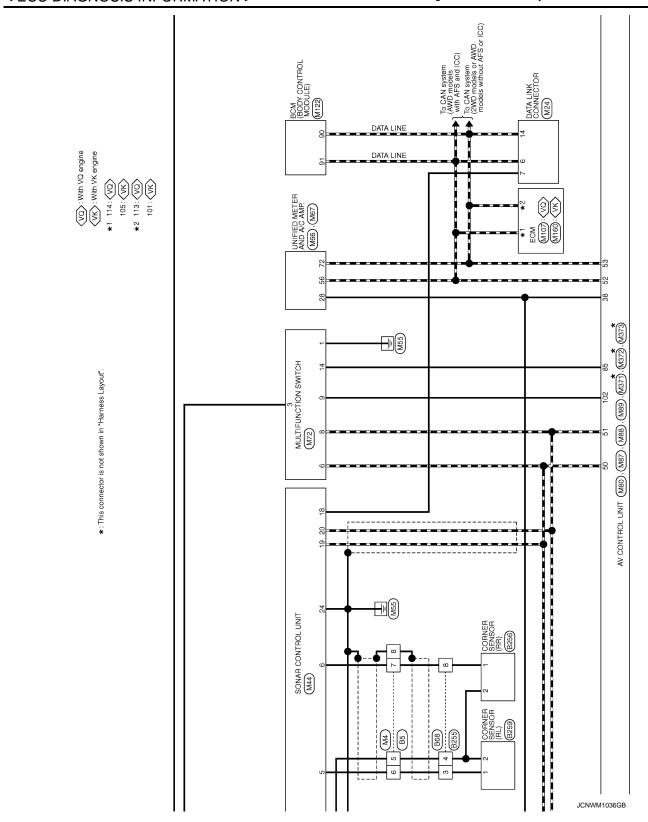
#### NOTE:

The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

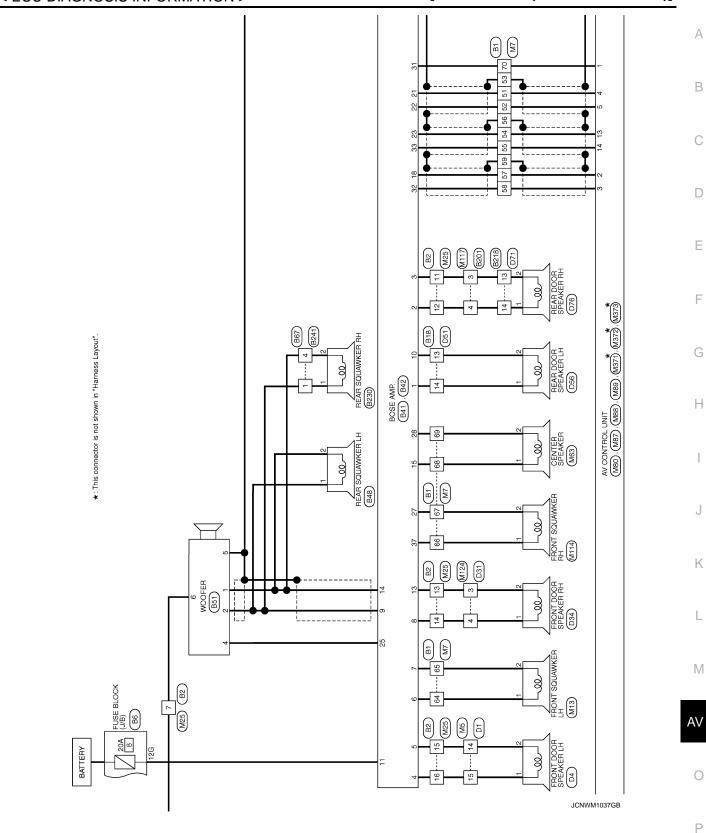




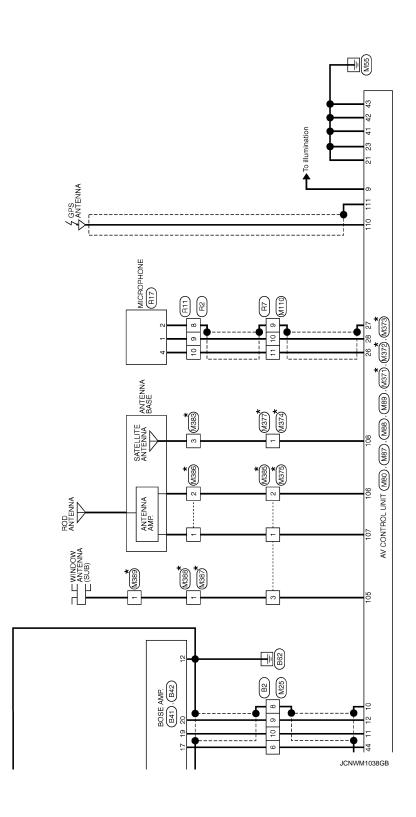




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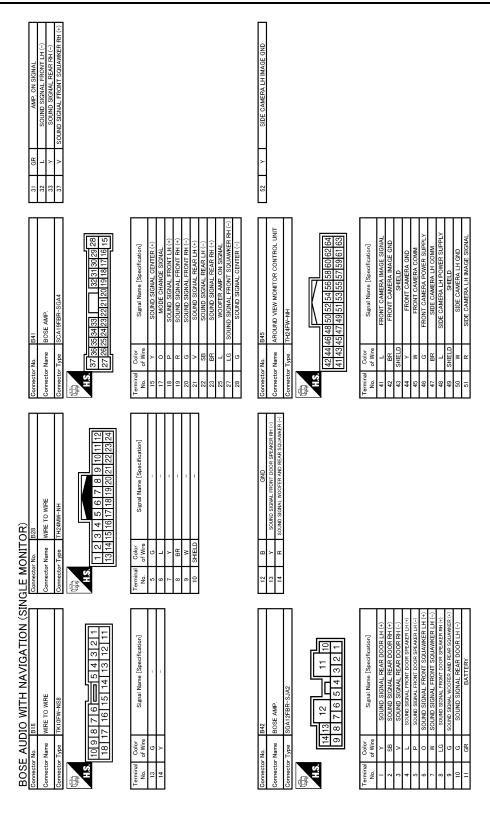
\*: This connector is not shown in "Harness Layout".



### [NAVIGATION (SINGLE MONITOR)]

Connector No.   E4   Connector Name   WIFE TO WIFE	Connector No.   514   Connector Name   WIRE TO WIRE   Connector Type   TH12PW-NH	A B C
		E
B2   WIRE TO WIRE	B6  NS12FBR-CS  NS12FBR-CS  G4G	F
Connector No.   B2	Connector No.   B6   Connector Name   FUSE BLOCK   Connector Type   NS12FBR-GS   NS17FBR-GS	G
		Н
		I
		J
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	21	К
		L
TO WITH NAVIGATIO TO WIFE TW-CS 16-TM4 THE	WIRE NIH NIH Signal Name [Specification]	М
IO WITH NATH NATH NATH NATH NATH NATH NATH NA	184 TH40MW TH40M	AV
Connector Numerocon Nume	Connector No.   B   Connector Name   M   Connector Type   T   Connecto	0
		JCNWM1039GB
		I I

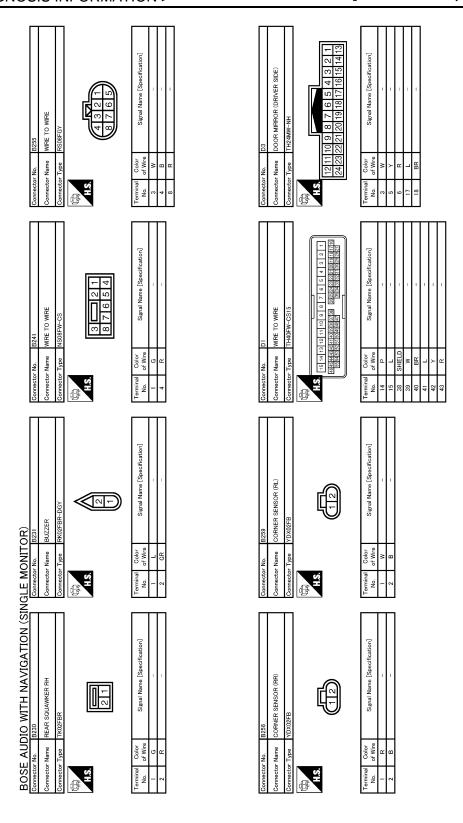
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ER  (2 4 6) (1 3 5) (2 8 4 6) (2 8 4 6) (3 50 8 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8 E TO WIRE  OFW-NSS  7 6	АВ
Connector No.   BS1	Connector No. 8218 Connector Nume WIRE TO WIRE Connector Type TK10FW-NS8  10 9 8 7 6 11 14 15 14 15 14 15 14 15 14 15 14 15 14 15 15 14 15 15 14 15 15 15 15 15 15 15 15 15 15 15 15 15	C
UAWKER LH Signal Name [Specification]	WIPE  CSIG-TMA  CSIG-TMA  Signal Name (Specification)	E F
Connector No. B48 Connector Name REAR SQUAWKER LH Connector Type TK02FBR  Terminal Color Signal Name No. of Wire 2 R	Connector No. 6201  Connector Name WIRE TO WIRE  Connector Type TH60FW-CS16-TMA  H.S. (*	G
AV COMM (H)  AV COMM (L)  AV COMM (L)  AV COMM (L)  LED (+)  LED (+)  LED (+)  LED (+)  LED (+)  SIDE CAMERA BH MAGE SIGNAL  SIDE CAMERA RH COMM  REAR CAMERA RH COMM  REAR CAMERA RH COMM  REAR CAMERA INAGE GND  REAR CAMERA INAGE GND	WIRE    2 3 4     6 7 8     6 7 8     7 8     7 8     7 8     8     7 8     8     9     1	H
MONITOR   A   A   A   B   B   B   B   B   B   B	ector No. B88 ector Name WIRE TO ector Name Wire TO ector Type RSD8MG)  In W W B B B B B B B B B B B B B B B B B	J K
MTION (SINGLE MINIT MINI		L
Connector No.   E46	WIRE TO WIRE NSOBMW-CS  1 2	M
BOSE AUDIO   Connector No.   GMG   Connector Name   ARO   Connector Type   THM   Color   Col	Connector No. B67 Connector Name WIRN Connector Type NSO H.S.  Terminal Color Of Wire 1 of Wire 1 A R	0
		JCNWM1041GB

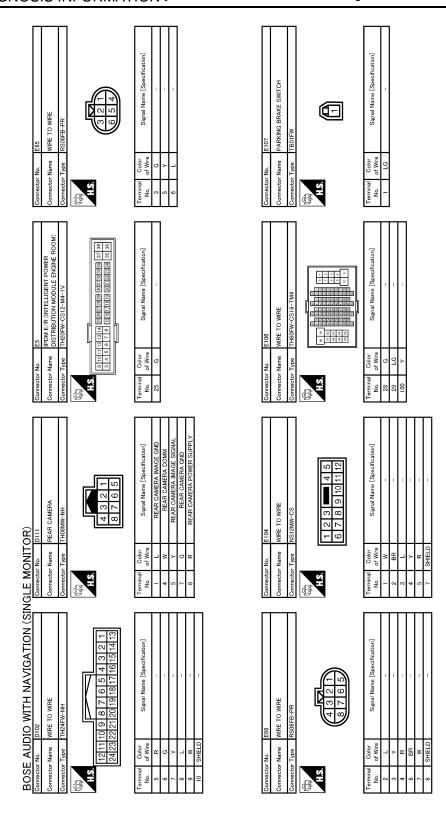
Revision: 2009 March AV-501 2009 FX35/FX50



JCNWM1042GB

Connector No. D34 Connector Name FRONT DOOR SPEAKER RH Connector Type NS02FBR-CS H3.	Terminal   Calor   Signal Name [Specification]	Connector No. D78 Connector Name REAR DOOR SPEAKER RH Connector Type NS0ZFBR-CS  ALS.	Terminal   Color   Signal Name [Specification]		A B C
Connector No.         D33           Connector Name         DOOR MIRROR (PASSENGER SIDE)           Connector Type         TH24MW-NH           M.S.         T [2] [1] [10] 9 8 7 6 5 4 3 2 1           [12] [13] [10] 9 8 7 6 5 4 3 2 1           [24] 23 [22] [21] [20] [18] [17] [16] [15] [14] [13	Terminal   Color   Signal Name [Specification]   Color   No. of Wire   Signal Name [Specification]   A 4   A   Cl   C   C   C   C   C   C   C   C	Connector No.         D71           Connector Name         WIRE TO WIRE           Connector Type         TK10MW-NSB           IX 1 2 3 4 5 6 7 8 9 10           11 12 13 14 15 16 17 18	Terminal   Color   Signal Name (Specification)   No. of Wire   Signal Name (Specification)   13   V   -		E F G
NGLE MONITOR	Terminal   Color   Signal Name   Specification]   No. of Wire   Signal Name   Specification]   4	Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NSQZEBR-CS  ALS	Terminal   Color   Signal Name (Specification)		J K
BOSE AUDIO WITH NAVIGATION (SIN Connector No. D4 Connector Name FRONT DOOR SPEAKER LH Connector Type INSOZFBR-CS H.S.	Terminal Color   No. of Wire   Signal Name [Specification]   1	Connector No. D51 Connector Name WIRE TO WIRE Connector Type TK10MM-NS8  TK2 3 4 5 6 7 8 910  TK2 1 1 2 3 4 5 6 7 8 910	Terminal Color   Signal Name [Specification]   No.   Of Wire   S   Signal Name [Specification]   13   V	JCNWM1043GB	M AV

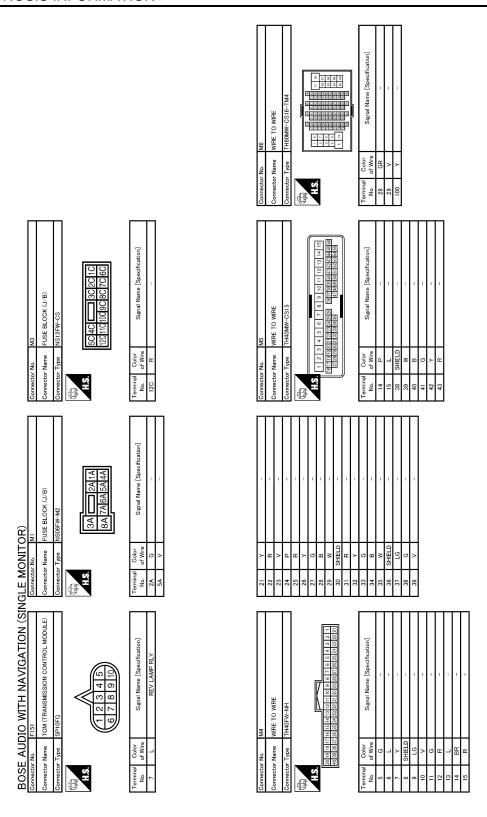
Revision: 2009 March AV-503 2009 FX35/FX50



JCNWM1044GB

Connector No. E153 Connector Name WIRE TO WIRE Connector Type RSJ0MB	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Signal	Connector No. F103 Connector Name WIRE TO WIRE Connector Type TK38FW-NS10  H.S. STATE CONTROLLED CO	Terminal Color Signal Name [Specification] 31 R -		A B C
Connector No. E152 Connector Name CORNER SENSOR (FR) Connector Type YDX0ZFB	Terminal   Color   Signal Name [Specification]   No. of Wire	Connector No. FS1  Connector Name A/T ASSEMBLY  Connector Type RK10FG-DGY  H.S. FS1  FR 10FG-DGY  FS1  FS 1 S 2 T S S S S S S S S S S S S S S S S S	Terminal   Color   Signal Name   Specification		E F G
GLE MONITOR)  Connector Name WIRE TO WIRE  Connector Type RSUSMB-PR  H.S.  T. 2 3 4	Terminal Color   No.   Signal Name [Specification]   No.   Color   C	Connector No. E155 Connector Name FRONT CAMERA Connector Type RH06FB H.S.	Terminal   Color   Signal Name [Specification]		J
BOSE AUDIO WITH NAVIGATION (SING Connector Name WIFE TO WIFE Connector Type TH24MW-NH	Terminal   Color   Signal Name [Specification]   No.   of Wire     O   O   C   C   C   C   C   C   C	Connector No. E154 Connector Name CORNER SENSOR (FL.) Connector Type YDX02FB  H.S.	Terminal   Color   Signal Name [Specification]	JCNWM1045GB	M AV

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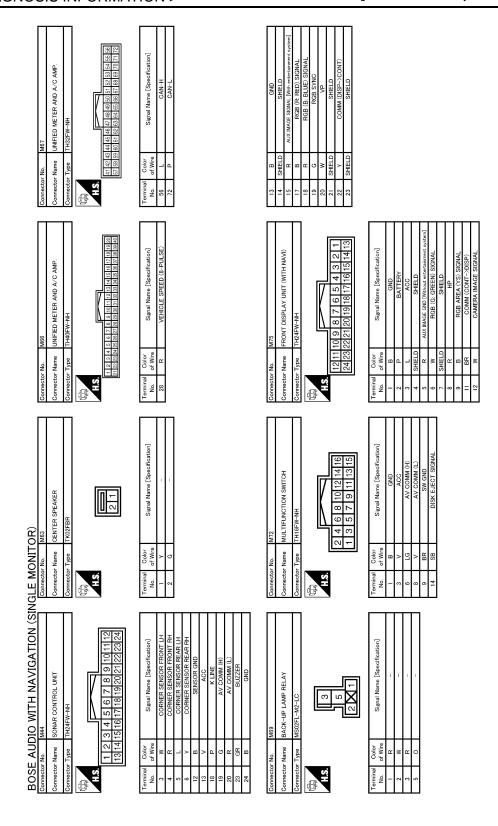


JCNWM1046GB

# [NAVIGATION (SINGLE MONITOR)]

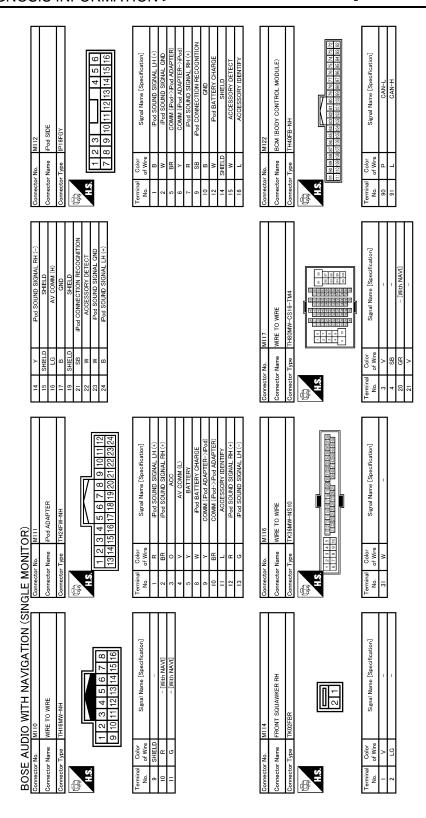
anton]	cation.]	А
FRONT SOLAWKER LH TKOZFBR  Signal Name [Specification]	THOSPW-NH THOSPW-NH Signal Name (Specification) Signal Name (Specification) SENSORI SENSORI SENSORI SENSORI SENSORI GROOPE SENSORI GROOPE GROO	В
No. Name Type Color L W	No. Name Type  Color of Wire L L L B R R R R	$\vdash$
Connector Connector Connector Terminal No. 1 2	Connector Connector Connector Ro. Ro. 3 4 4 5 7	D
4 3 2 1 16 15 14 13 Specification]	SPIRAL CABLE)	Е
ETO WIRE FW-NH STREET SIGNAL NAME (Signal Name (	M36 COMBINATION SWITCH (SPIRAL CABLE) TKOBFGY-1V  24 25 26 31 32 33 34  Signal Name [Specification]	F
inal inal	ector No. ector Name ector Type inal Golor D. of Wire D. of Wire D. D. Of Wire D. D. Of Wire D. D. D. D. Of Wire D. D. D. D. D. D. Of Wire D. D	G
Tem Community Tem	Part Services Service	Н
OR)	1816 MWPE TO 151 161 161 161 161 161 161 161 161 161	J
GLE MONITO	Ctor No.  Ctor Type  Ctor Type  Ctor Type  Street  Street  Street  Street  GG  GG  GG  GG  GG  GG  GG  GG  GG	N
		L
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	M. CONNECTOR  12[13]14[15]16  14[5]67[8]  Signal Name [Specification]	М
AUDIO WITH NAV.   Na.   Name   WIRE TO WIRE	M24 DATA LIN BD16FW 1 2 3	AV
Color	S	0
		JCNWM1047GB
		Р

Revision: 2009 March AV-507 2009 FX35/FX50



JCNWM1048GB

VEHICLE SPEED (8-PULSE) CONTROL SIGNAL 2 CONTROL SIGNAL 2 CONTROL SIGNAL 2 ANDE CHANGE SIGNAL 1 AV COMM (1-) AV COMM (1-) AV COMM (1-) AV COMM (1-) CAN-H CAN-H	MIOT  FR24FGY-RZ9-R-LH-Z  FR2 122 123 124 114 116 106 102 98 122 124 114 116 106 102 98 125 124 114 116 106 102 98 125 124 114 116 106 102 98 125 124 114 116 106 102 98 125 124 114 116 106 102 98 125 124 114 116 106 102 98 125 124 114 116 106 102 98 125 124 114 116 106 102 98 125 124 124 124 124 124 124 124 124 124 124	A B
28 44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Commector Name E Commerctor Type R H& Commerctor Type R H& H& D H H& D D H H& D D H H& D D D H H& D D D H H& D D D D	D
ATTH NAVI)  ATTH NAVI)  FEED SEED SEED SEED SEED SEED SEED SEED	TH NAVI)	Е
NTROL UNIT (W P-NH)  Signal Name Signal Name Signal Name A MICROPH ICAN ICAN REVENENCE ICAN REVE	H	F
Connector No.   M87	Commector Name Commector Type  Commector Type  1.5.  Commector Type  1.6.  Commector Name  1.6.  Commercior Name  1.6.  Commector Na	G H
SOUND SIGNAL REAR RH (+) SOUND SIGNAL REAR RH (-) STRG SW GAD STRG SW B BATTERY	O SHELD	I
		J
NGLE MONITOR)	22 SHIELD	K
	erification] Signal  S	L
NOW THE NAVIGATION	Signal Name (Spe Street)  Signal Name (Spe Street)  Signal Name (Spe Street)  Roa (R. RED)  COMM (CONT)  COMM (CONT)	AV
Connector No.   M80   Connector No.   M80   Connector No.   M80   Connector Type   TH18FW-CS2	Marctor No. 1	0
mlQl Q  Q  (程) 【	JCNWM1049GB	Р



JCNWM1050GB

MI 50  FOR ANY OF ENGINE)  RH24FGY-R28-R-LH-Z  128 124 121 121 121 131 141 101 101 103 103 113 114 114 101 101 103 103 113 114 114 101 101 103 103 103 113 114 101 101 101 103 103 103 103 103 103 103	Signal Name [Specification] VEHCAN+L VEHCAN+H	AV CONTROL UNIT (WITH NAVI)  GITS-IS-HU  Signal Name [Specification]  GIPS ANTENNA SHIELD		A B
Oomrector No. M160 Connector Name ECM (WIT Connector Type RH24FGY H.S. 128	Terminal Color No. 101 Pr 105 L	Connector No.   M373		C
wpur JACKS	Signal Name (Specification) AUX SOUND SIGNAL RH (+) AUX SOUND SIGNAL CH (+) AUX SOUND SIGNAL LH (+) AUX MAGE SIGNAL AUX IMAGE GND	AV CONTROL UNIT (WITH NAV)  FAREA JACK    109     Signal Name [Specification]   SAFTLLITE ANTENNA		E
Connector No. M154 Connector Name AUXILLARY INPUT JACKS Connector Type A08FW H.S.	Color   Color   Sign	Connector No. M372 Connector Name AV CONTROI Connector Type FARRA JACK H.S. Terminal Color Sign 108 - 8		G
10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name [Specification] -	AV CONTROL UNIT (WITH NAVU) GT13SH-Z-1S-HU  FINAL Signal Name (Specification) FM SUB FM SUB AM-FM MANN AMFINAL AMP. ON SIGNAL		ı
TO WIRE WW-NH 8 9	Color   Signal   No.   Signal     Signal	Connector No.   M371		J K
SING	Signal Name (Specification)	COMBINATION SWITCH (SPIRAL CABLE)  TKOBFGY  Signal Name [Specification]  TSignal Name [Specification]		L
Connector Name   M124   Connector Name   M124   Connector Name   M184   Connector Name   M187   Connector Type   TH40MM-CS15   Connector Type   TH40MM-CS15   Connector Type   TH40MM-CS15   Connector Type   TH40MM-CS15   Connector Type   Conne	Color Odor Odor Color Co			AV
BOSE A Connector No Connector To Connector Ty	Terminal No. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	Oomestor No. Connector Type No. of V 15 15 17 18	JCNWM1051GB	O

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Connector No. M383	Connector Name		HAS.	Signal Name [Specification]  Terminal Color No. of Wire 3 - SATELLITE ANTENNA	Commector No. M388	Connector Name	Connector Type JASO PLUG	(1) (1) (1) (1)	Signal Name [Specification] Terminal Color Signal Name [Specification] No. of Wire		
Gonnector No. M377		Connector Type GT16C-1PP-HU	E S	Terminal Color Signs No. of Wire	Connector No. M387	Connector Name WIRE TO WIRE	Connector Type JASO JACK	H.S.	Terminal Color Signs No. of Wire	1 -	
NGLE MONITOR) [Connector No.   M375		Connector Type GT13SC-2/1S-HU	H.S.	Terminal   Color   Signal Name   Specification	Connector No. M386	Connector Name ANTENNA BASE	Connector Type GT13SSN-1/1PP-HU	E IN	Terminal Color Signal Name [Specification] No. of Wire	1 - ANTENNA AMP. ON SIGNAL	
BOSE AUDIO WITH NAVIGATION (SIN		G716C-1S-HU		Signal Name [Specification]	M385		GT13SCN-2/1PP-HU		Signal Name [Specification]	1	
BOSE AL	Connector Name	Connector Type	H.S.	Terminal Color No. of Wire 1	Connector No.	Connector Name	Connector Type	H.S.	Terminal Color No. of Wire	-	

JCNWM1052GB

	tion]				А
ате 6 7 8 9 101 8 19 20 21 22 22	Signal Name [Specification]				В
No. RII   Name   WIRE TO WIRE   TH24MW-NH	Color of Wine Sign				С
Connector No. Connector Name Connector Type  13 14	No. 0 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9				D
T   C   C   C   C   C   C   C   C   C	hoffication]				Е
MYRE TO WIRE THISEW-NH	Signal Name [Specification]				F
r No. R7	Color of Wire SHELD G				G
Connecto Connecto Connecto	Terminal No. 9 10 10 11 11				Н
716151413	Signal Name [Specification]				I
Nutrory No. R2 Type Intz4FW-NH    1711   10   9   8   7   6   5   4   3   2   1	Signal Name				J
Commercer Type   POLFB-A	Color   Color   No. of Wire   S   SHIELD   9   R   No. of Wire   10   G   October   10   Octob				K
NCS) NC	$\Box$				L
NAVIGATI	Signal Name [Specification]	4	Signal Name [Specification] MICROPHONE SIGNAL MICROPHONE GND MICROPHONE VCC		M
UDIO WITH NAVIG		RI7 MICROPHONE TK04FW			AV
BOSE AU Connector No. Connector Type Connector Type H.S.	Terminal Color No. 1	Connector No. Connector Type	Terminal   Color		0
				JCNWM1053GB	Р

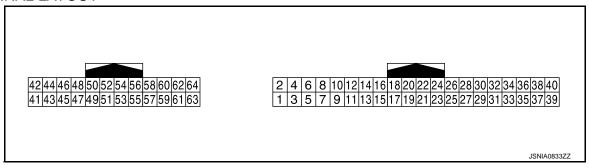
< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]

## AROUND VIEW MONITOR CONTROL UNIT

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
2 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
3 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
4 (LG)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
5	0	III	1	Ignition	Lighting switch is OFF.	0 V
(R)	Ground	Illumination signal	Input	switch OFF	Lighting switch is ON.	12.0 V
6 (V)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).  (V)  6  4  2  0  ***20ms  SKIA6649J
7				Ignition	R position	12.0 V
(O)	Ground	Reverse signal	Input	switch ON	Other than R position	0 V
13 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V

< ECU DIAGNOSIS INFORMATION >

	rminal e color)	Description			Condition	Reference value								
+	_	Signal name	Input/ Output		Condition	(Approx.)								
14	0	Consequent 4		Ignition	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2								
(GR)	Ground	Sensor signal 1	Input	switch - ON	Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2								
15				Ignition	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2								
(SB)	Ground	Sensor signal 2	input	input	input	input	input	Input	input	Input	Input switch ON		Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2
16 (L)	Ground	Sensor signal 3	Input	Ignition switch ON	Turn the steering around the neutral position	A: Sensor signal 3 B: Sensor signal 1								
17 (W)	_	AV communication signal (H)	Input/ Output	_	_	_								
18 (P)	_	AV communication signal (L)	Input/ Output	_	_	_								

#### < ECU DIAGNOSIS INFORMATION >

Terminal (Wire color)		Description			Condition	Reference value				
+	_	Signal name	Input/ Output		Condition	(Approx.)				
21 (O)	_	AV communication signal (H)	Input/ Output	_	_	_				
22 (V)	_	AV communication signal (L)	Input/ Output	_	_	_				
23 (LG)	24 (G)	Auxiliary infrared LED power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	5.5 V				
27	Ground	Camera image signal	Output	Ignition	At camera image display	(V) 1 0 -1 40 μ s JSNIA0834GB				
(W)	Glound	Camera image signal				out switch ON		ON	Other than camera image display	(V) 1 0 -1 40 μ s  JSNIA0835GB
28	_	Shield	_	_	_	_				
29 (R)	30 (Y)	Side camera passenger side image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 + 40 μ s JSNIA0834GB				
31	_	Shield	_	_	_	_				
32 (W)	Ground	Side camera passenger side ground	_	Ignition switch ON	_	0 V				
33 (BR)	Ground	Side camera passenger side communication signal	Input/ Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1.0 μ s JSNIA0836GB				
34 (L)	Ground	Side camera passenger side power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V				

#### < ECU DIAGNOSIS INFORMATION >

	rminal e color)	Description			0 10	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
35 (W)	Ground	Rear camera communication signal	Input/ Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 1 0  JSNIA0836GB
36 (G)	Ground	Rear camera power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V
37		Shield	_		_	_
38 (L)	Ground	Rear camera ground	_	Ignition switch ON	_	0 V
39 (Y)	40 (BR)	Rear camera image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μ s JSNIA0834GB
41 (L)	42 (BR)	Front camera image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μs JSNIA0834GB
43	_	Shield	_	_	_	_
44 (Y)	Ground	Front camera ground	_	Ignition switch ON	_	0 V
45 (W)	Ground	Front camera communication signal	Input/ Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 10 (V)
46 (G)	Ground	Front camera power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	JSNIA0836GB 6.0 V
47 (BR)	Ground	Side camera driver side communication signal	Input/ Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 1 0  JSNIA0836GB

#### < ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (SINGLE MONITOR)]

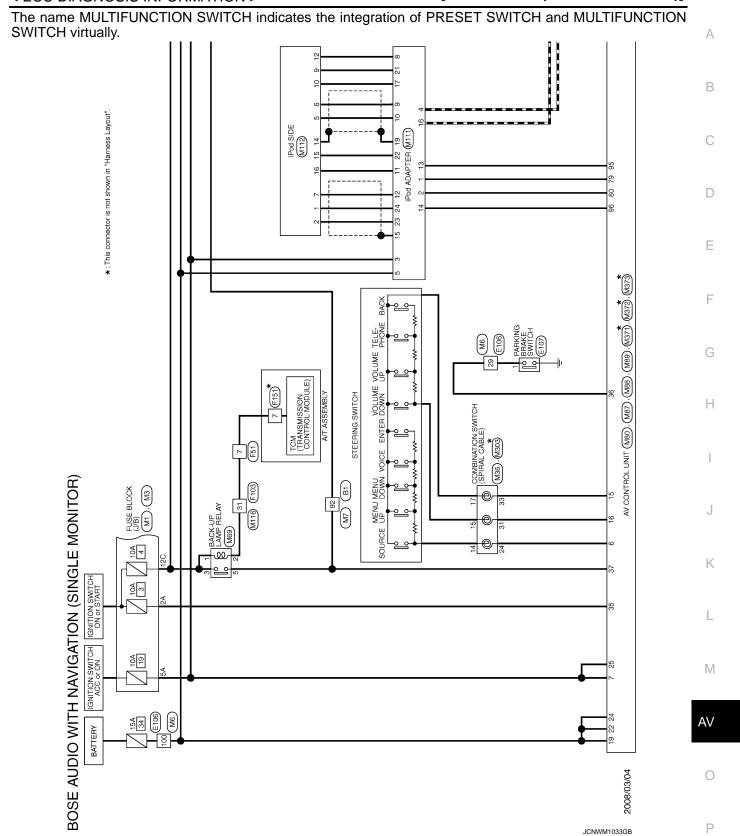
Terminal (Wire color)		Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
48 (L)	Ground	Side camera driver side power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V	
49	_	Shield	_		_	_	
50 (W)	Ground	Side camera driver side ground	_	Ignition switch ON	_	0 V	
51 (R)	52 (Y)	Side camera driver side image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μ s JSNIA0834GB	

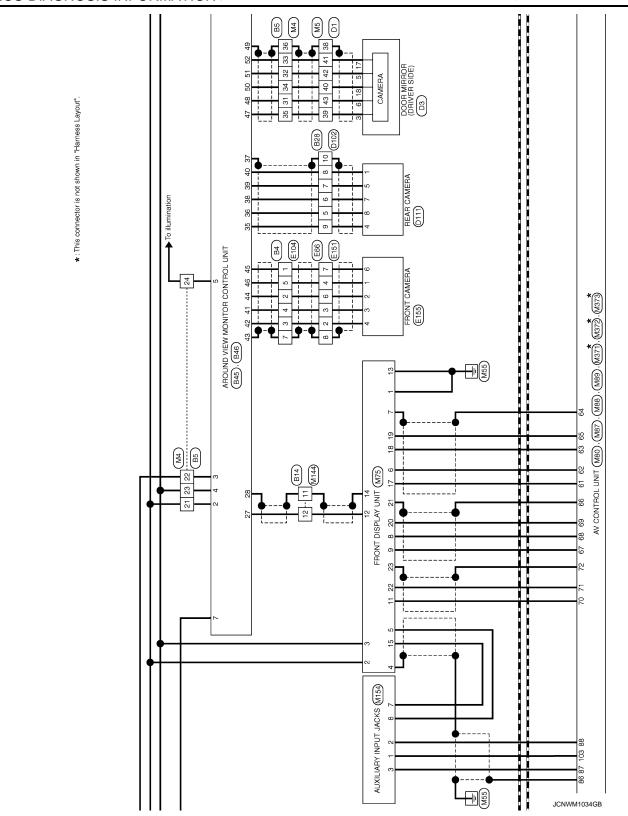
Wiring Diagram - BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR) -

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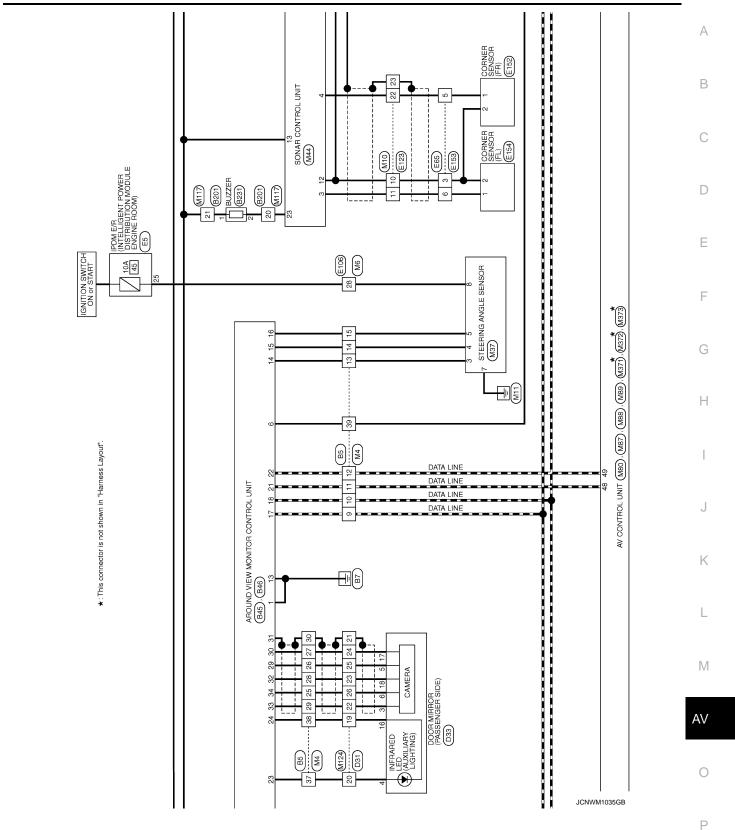
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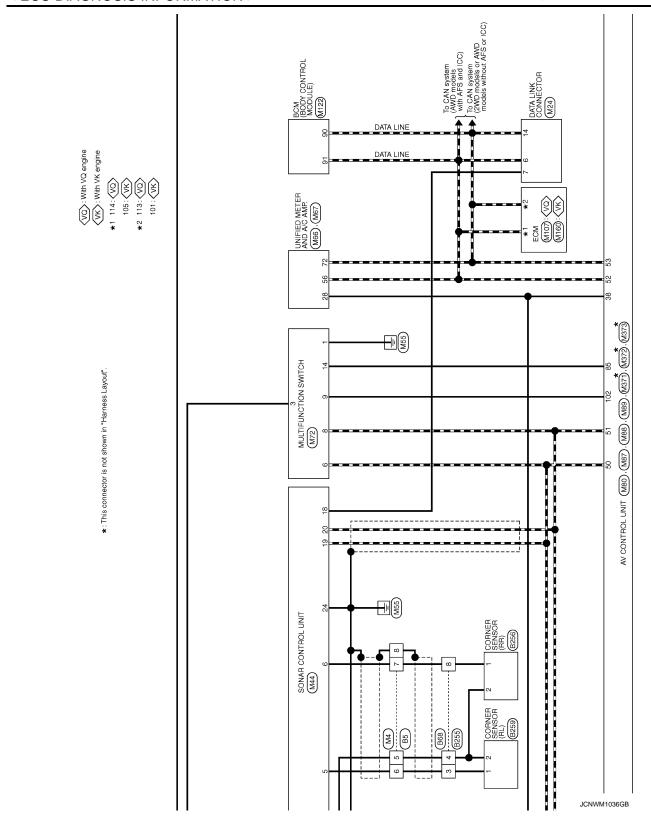
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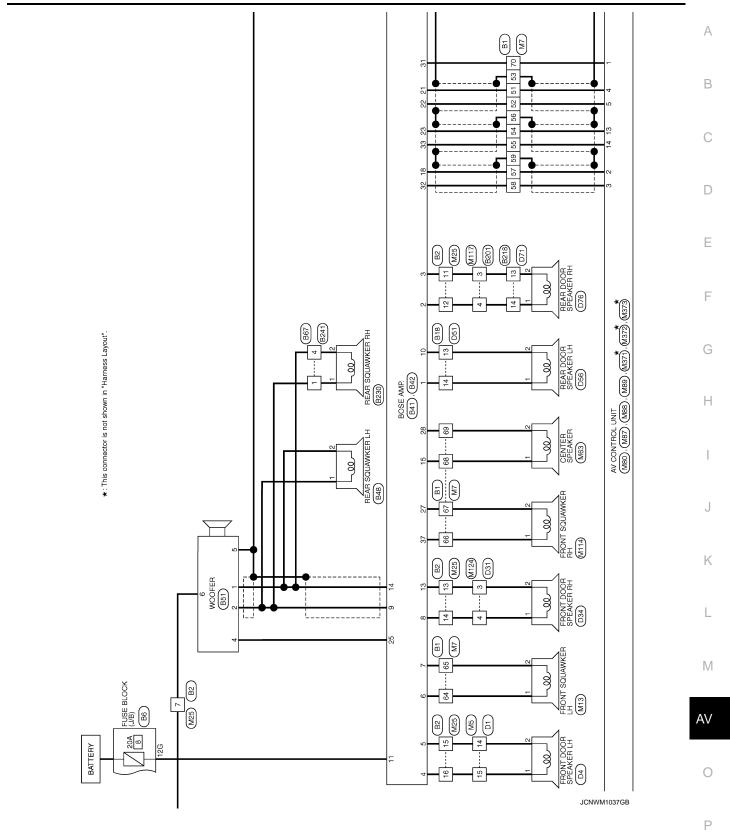


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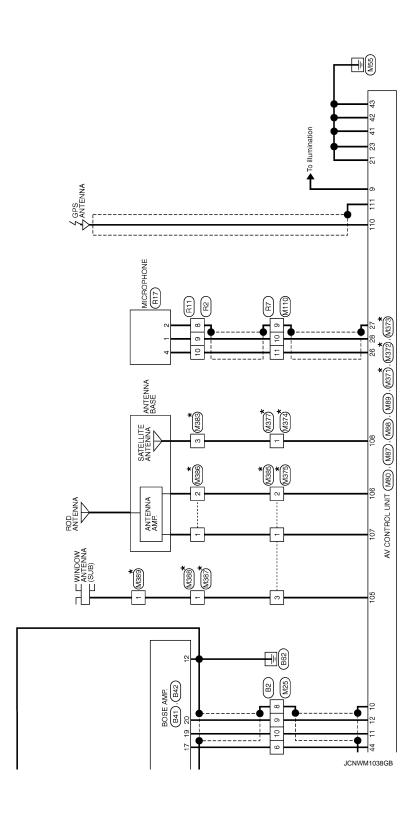




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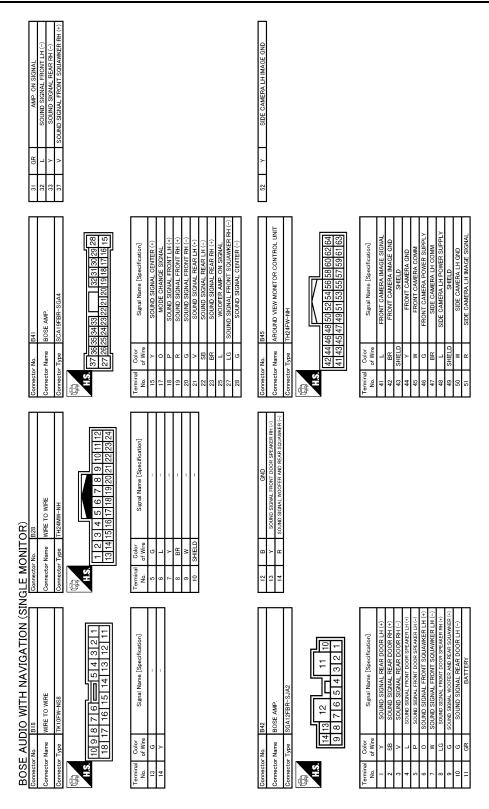
< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]

WIPE -CSS 1098 2 1 1098 7 6 Signal Name (Specification)	1/2PV-NNFE 1/2PV-NNFE 6 5 4 3 2 1 1/2 1/1 1/0 9 8 7  Signal Name [Specification]	АВ
Connector No.   B4	Connector No.   B14	C D
CS  4		E
tor No.  10	120 10	G
		H
		J
INGLE MONITOR)    61	2 1	К
NOIT   Cioni	10 10 10 10 10 10 10 10 10 10 10 10 10 1	L
WITH NAVIGATIC		М
Mure TH80FW-	B   B   B   B   B   B   B   B   B   B	AV
BOSE AU  Connector No.  Connector Type  Connector Type  A.S.  H.S.  H.S.  See SHELL  See SHELL  See SHELL  See SHELL  See SHELL  See SHELL		O JCNWM1039GB
		Р

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[NAVIGATION (SINGLE MONITOR)]



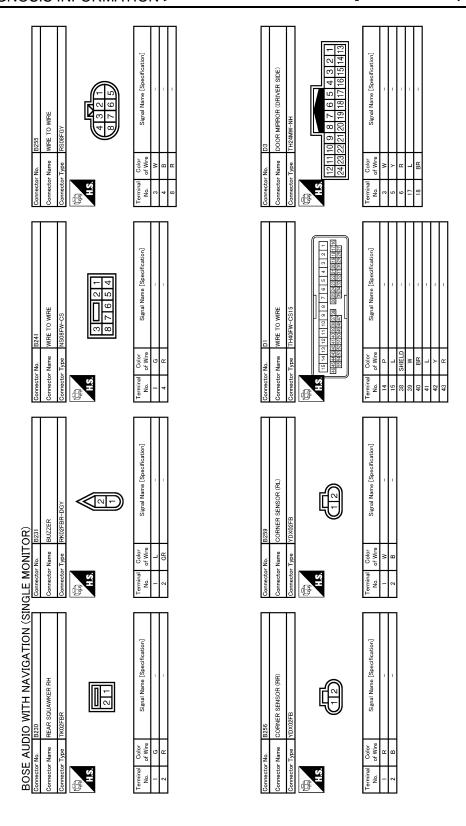
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< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]

Connector No.   B51	Connector No.   8218   Connector Name   WIRE TO WIRE   Connector TK10FW-NS8   TK10FW-NS8   TK10FW-NS8   TR   TK10FW-NS8   TR   TK10FW-NS8   TR   TK10FW-NS8   TR   TK10FW-NS8   TR   TK10FW-NS8   TK10FW	(	A B C
		1	Е
EH48 TK02FBR Signal Name [Specification]	WRE TO WIRE THBOFW-CS16-TM4  IN HOLD THE THBOFW-CS16-TM4  IN HOLD THE THBOFW-CS16-TM4  Signal Name [Specification]  - [With NAVI] - [With NAVI]		F
ector No.  ector Name ector Type  or of Wire  or of Wire  R  R	ector No. B201  WIRE  Cettor Type TH807  Color Color  Of Wire  Of Wire  Color	(	G
Conne Conne Termi No.	Conner Termin No. 20		Н
AV COMM (H)  AV COMM (L)  AV COMM (L)  AV COMM (L)  LED (+)  LED (+)  CAMERA IMAGE SIGNAL  SIDE CAMERA RI MAGE SIGNAL  SIDE CAMERA RI MAGE CND  SIDE CAMERA RI GND  REAR CAMERA IMAGE SIGNAL  REAR CAMERA IMAGE SIGNAL  REAR CAMERA IMAGE GND	888 WIRE TO WIRE RS08MGY  1 2 3 4 5 6 7 8  Signal Name [Specification]		l J
3LE MONITORY  15	Connector No.   B88	I	K
			L
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)	WIRE  2	1	M
Sis	WIRE TO NSOBMW.	A	V
BOSE AUC   Connector Name   Connector Type   Connector	Connector No. Connector Name Connector Type  Terminal Color No. of Wire  1 G 4 R		0
		JCNWM1041GB	Р
			4

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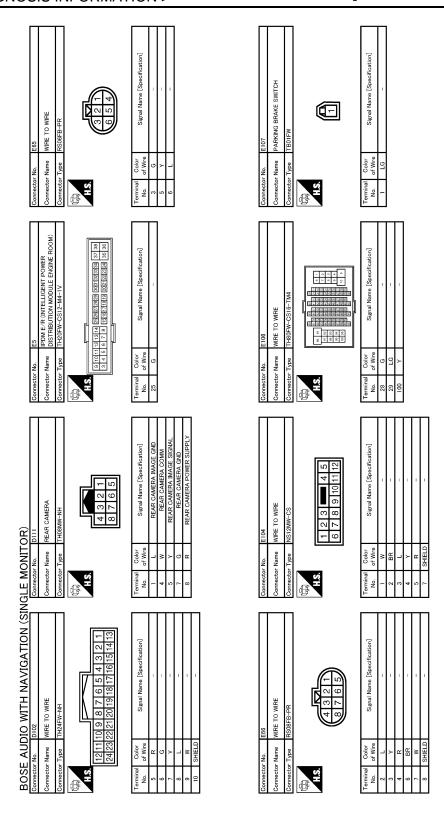
JCNWM1042GB

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]

Connector No. D34 Connector Name FRONT DOOR SPEAKER RH Connector Type NS02FBR-CS  H.S.	Terminal Color No. of Mire  1 L 2 P	Connector No. D76 Connector Name REAR DOOR SPEAKER RH Connector Type NS02FBR-CS  H.S.	Terminal Color Signal Name [Specification]  1 SB	A B C
Connector No.         D33           Connector Name         DOOR MIRROR (PASSENGER SIDE)           Connector Type         TH24MW-NH           T.S.         12 [11 10] 9 8 7 6 5 4 3 2 11           24 23 22 [21 20 19] 18 17 16 15 14 13	Terminal Color No. of Wire 3 W - 4 LG - 5 Y - 16 G R - 17 L - 18 BR - 18 BR -	Connector No. D71 Connector Name WIRE TO WIRE Connector Type TK10MW-NS8  H.S. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Terminal   Color   Signal Name [Specification]   No. of Wire	E F G
Connector Name   WIRE TO WIRE	Terminal Color No. of Wire Signal Name [Specification]  4 L	Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NS02FBR-CS  H.S.	Terminal   Color   Signal Name [Specification]	J K
BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)  Connector Name FRONT DOOR SPEAKER LH  Connector Type NSIZEBR-OS  H.S.  H.S.  L.S.  L.S.	Terminal   Color   Signal Name [Specification]	Connector No. D51  Connector Name WIRE TO WIRE  Connector Type TK10MW-NS8  WAS 1 2 3 4 5 6 6 7 8 9 10  11 2 3 4 5 6 7 8 9 10	Terminal   Color   No.   Signal Name [Specification]	AV O

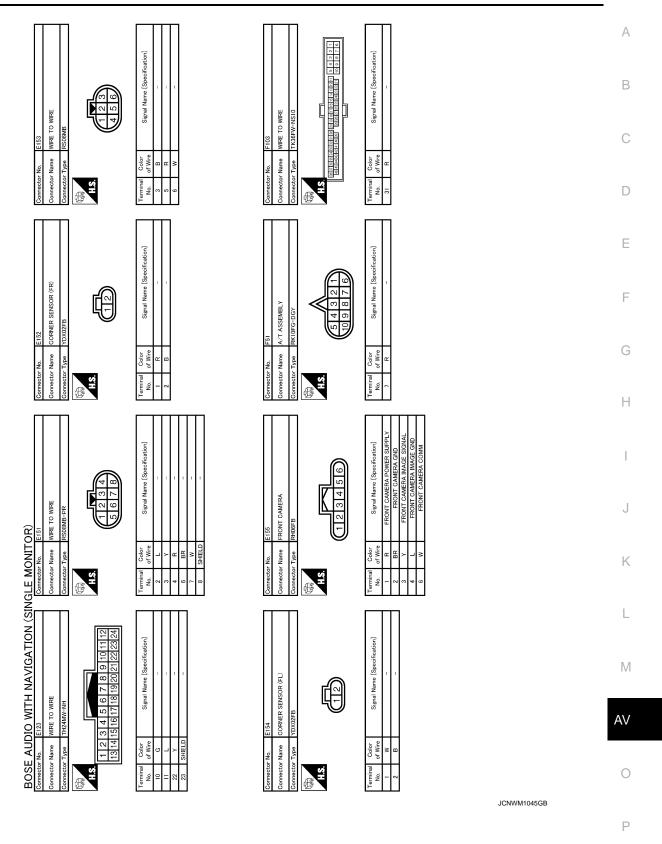
Revision: 2009 March AV-529 2009 FX35/FX50



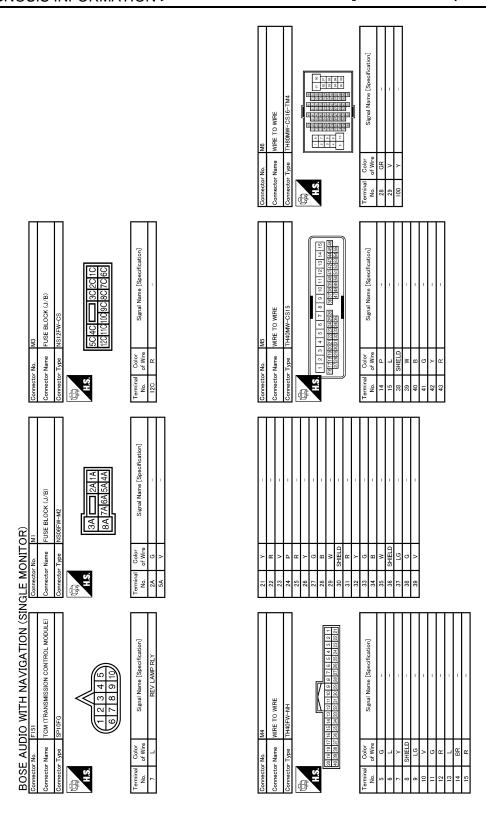
JCNWM1044GB

< ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (SINGLE MONITOR)]



Revision: 2009 March AV-531 2009 FX35/FX50



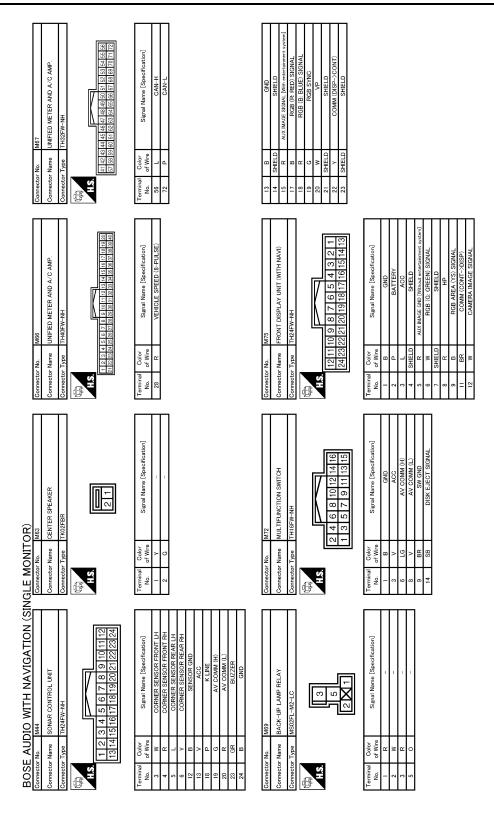
JCNWM1046GB

< ECU DIAGNOSIS INFORMATION >

# [NAVIGATION (SINGLE MONITOR)]

Connector No.   M13	Cornector No. M37 Connector Name STEERING ANGLE SENSOR Connector Type TH08FW-NH  T 2 3 8 T 4 5	No.   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   SENSOR!   SENSOR    SENS	A B C
ctor No. M10 ctor Name WIRE TO WIRE  Local Type TH24FW-NH  Local Type TH24FW-NH  Local Type TH24FW-NH  Color Signal Name [Specification]  W  Local Name Signal Name [Specification]	(SPIRAL CABLE)	Terminal   Color   Signal Name [Specification]   Terminal   24   P   P	E F G
NGLE MONITOR)  66	Connector No. MZ5 Connector Type NS18MW-CS  MASS	Terminal Color No. of Wire  6 SB 7 V	J K
MITH NAVIGATION (S) WIRE THROMW-CSIB-TMA  THROMW-CSIB-TMA  THE COMPANION (S) Signal Name (Specification)	S4 SHELD	Terminal Color   No.   Go   Or Wire   Signal Name [Specification]   Or Wire   Color   Color	L  M  AV  O  JCNWM1047GB

Revision: 2009 March AV-533 2009 FX35/FX50



JCNWM1048GB

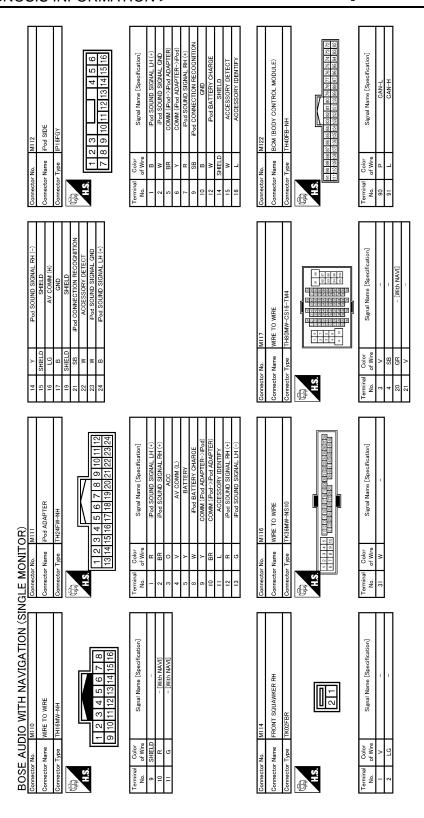
< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]

VEHICLE SPEED (8-PULSE) CONTROL SIGNAL 1 CONTROL SIGNAL 2 CONTROL SIGNAL 2 AN COMM (1) AV COMM (1) AV COMM (1) AV COMM (1) CAN-I CAN-I CAN-I CAN-I	WITH VO ENGINE	АВ
38 R VEH 41 B B 43 B B 44 B B B B B B B B B B B B B	Connector No.   MIOT	C D
AV CONTROL UNIT (WITH NAVI) TH40FW-NH  SECTIONS OF THE SECTION OF	MASS	E
Connector No.   M87	Connector No.   M89	G
SOUND SIGNAL REAR RH (+) SOUND SIGNAL REAR RH (-) STRO SW B BATTERY	SHELD	1
NGLE MONITOR)  14 Y SOUNT  15 B B SOUNT  16 L C C C C C C C C C C C C C C C C C C	32 SHELD	J K
	TROL LUNIT (WITH NAV!)	L M
AND   AND	Nestor No.   Mess	AV
	JCNWM1049GB	Р

Revision: 2009 March AV-535 2009 FX35/FX50

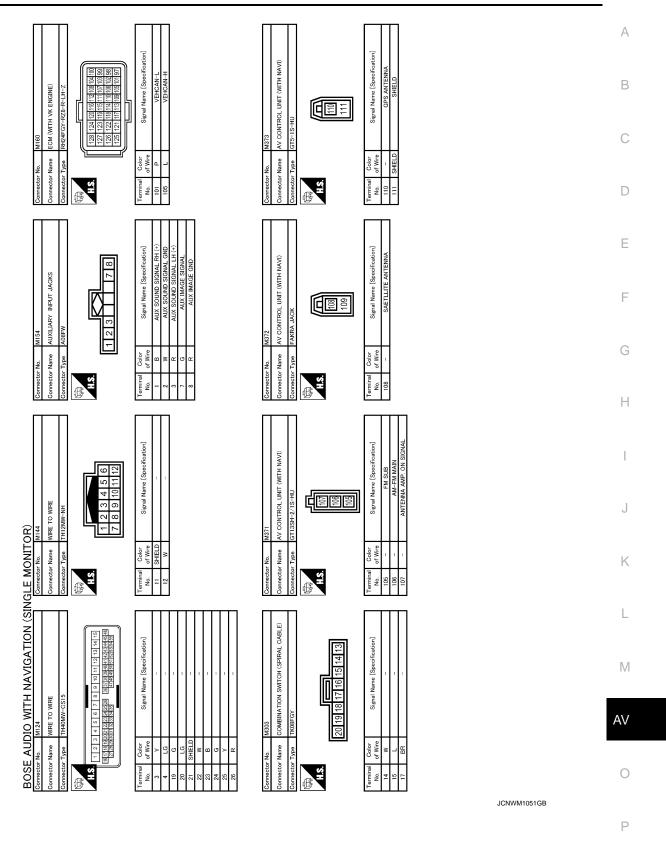
[NAVIGATION (SINGLE MONITOR)]



JCNWM1050GB

< ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (SINGLE MONITOR)]



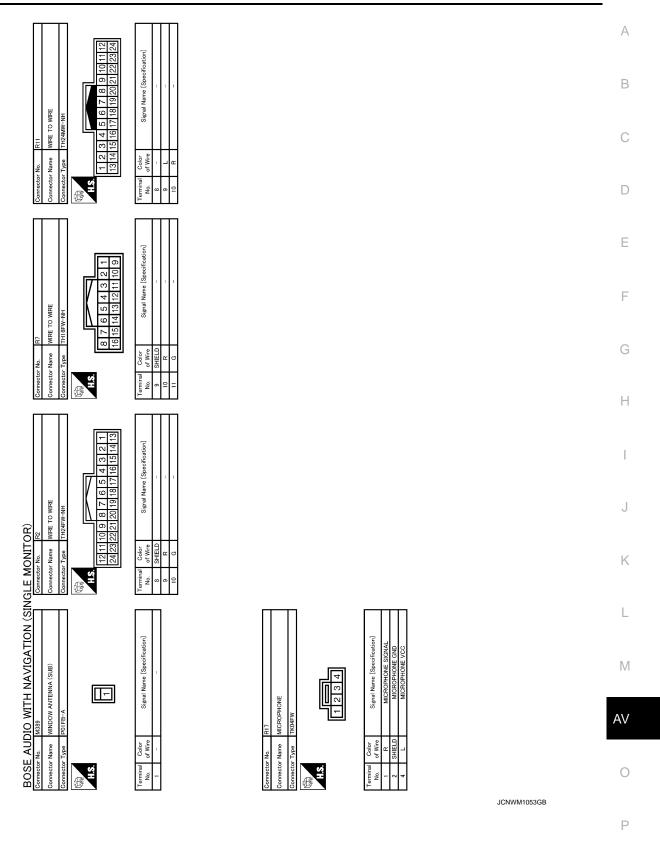
Revision: 2009 March AV-537 2009 FX35/FX50

BOSE AU	BOSE AUDIO WITH NAVIGATION (SIN	INGLE MONITOR)		
Connector No.	M374	Connector No. M375	Connector No. M377	Connector No. M383
Connector Name	WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name ANTENNA BASE
Connector Type	GT16C-1S-HU	Connector Type GT13SC-2/1S-HU	Connector Type GT16C-1PP-HU	Connector Type GT16C-IPP-HU
H.S.		H.S.	H.S.	TE SH
Terminal Color No. of Wire	Signal Name (Specification)	Terminal   Color   Signal Name [Specification]   1	Terminal Oolor Signal Name (Specification) No. of Wire 1	Terminal   Color   Signal Name [Specification]   No.   of Wire   SateLLITE ANTENNA   SATELLITE ANTENNA
Connector No.	M385	Connector No. M386	Connector No. M387	Connector No. M388
Connector Name	WIRE TO WIRE	Connector Name ANTENNA BASE	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE
Connector Type	GT13SCN-2/1PP-HU	Connector Type GT13SSN-1/1PP-HU	Connector Type JASO JACK	Connector Type JASO PLUG
H.S.		SH SH	E S	(F)
Terminal Color No. of Wire	r Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color   Signal Name [Specification]   No.	ation] Terminal Color Signal Name [Specification]
- 0	-	1 - ANTENNA AMP. ON SIGNAL		
7 0				

JCNWM1052GB

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]



Revision: 2009 March AV-539 2009 FX35/FX50

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

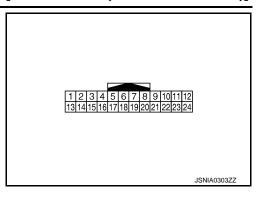
Monitor Item		Condition	Value/Status
	Ignition switch	Around view monitor operating (sonar operating).	On
SONAR OPE	Ignition switch ON	Around view monitor non-operating (sonar non-operating).	Off
BUZZER OUTPUT	Ignition switch	Buzzer is output condition.	On
BOZZEN OUTFUT	ON	Buzzer is not output condition.	Off
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV.0
CR SEN [FL]	Ignition switch	The distance between the corner sensor and an obstacle is 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
CR SEIV [FL]	ON	The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4
		When a sensor is abnormal.	ERROR
	Ignition switch ON	When a sensor is not detection.	LV.0
CR SEN [FR]		The distance between the corner sensor and an obstacle is 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
		The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4
	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV.0
CR SEN [RL]		The distance between the corner sensor and an obstacle is 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
		The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4
CR SEN [RR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV.0
		The distance between the corner sensor and an obstacle is 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
		The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]

TERMINAL LAYOUT



Α

В

D

Е

F

G

Н

K

0

Р

### PHYSICAL VALUES

	inal No. e color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
3 (W)	12 (B)	Corner sensor signal front LH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0 +10ms JSNIA0837GB
4 (R)	12 (B)	Corner sensor signal front RH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0 +
5 (L)	12 (B)	Corner sensor signal rear LH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0  → 10ms  JSNIA0837GB
6 (Y)	12 (B)	Corner sensor signal rear RH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0 +10ms JSNIA0837GB
12 (B)	Ground	Sensor ground	_	Ignition switch ON	_	0 V
13 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	12.0 V
18 (P)		K-line (CONSULT-III)	_	_	_	_

## < ECU DIAGNOSIS INFORMATION >

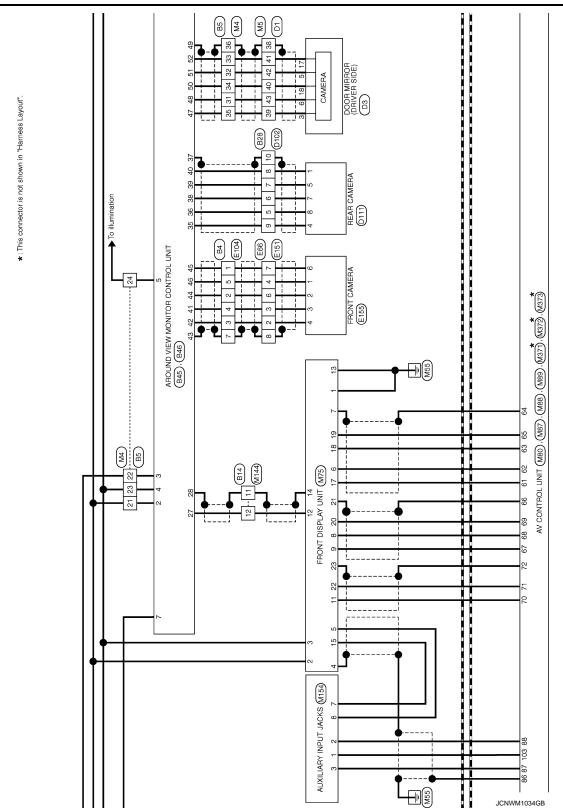
	nal No. color)	Description			Condition	Value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
19 (G)	_	AV communication (H)	Input/ Output	_	_	_	
20 (R)	_	AV communication (L)	Input/ Output	_	_	-	
23 (GR)	Ground	Buzzer drive signal	Output	Ignition switch ON	When buzzer operation	NOTE: Waveform period changes due to the distance to an obstacle.	
24 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	

Wiring Diagram - BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR) -

INFOID:0000000003826898

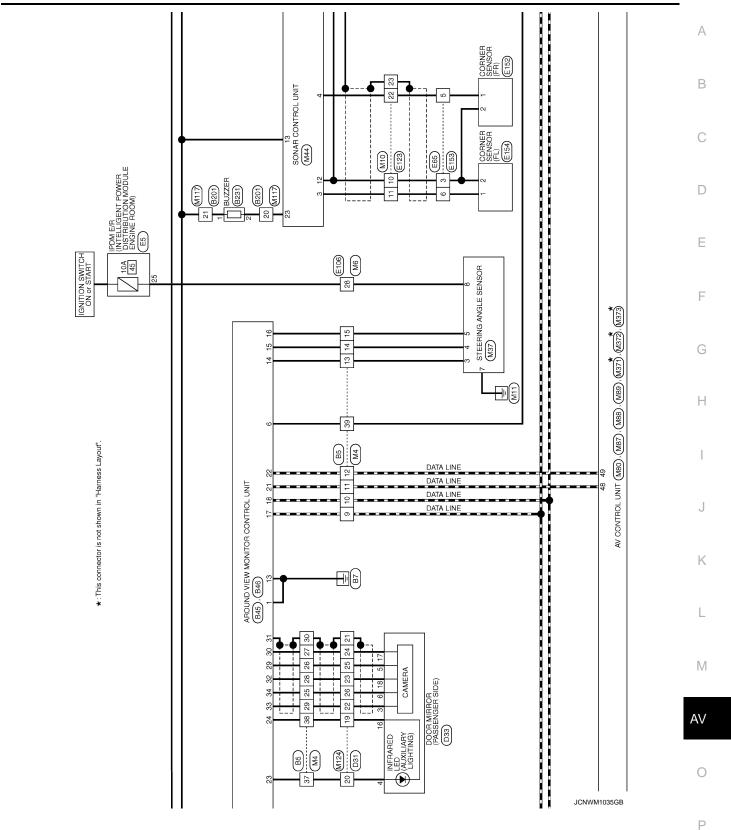
## NOTE:

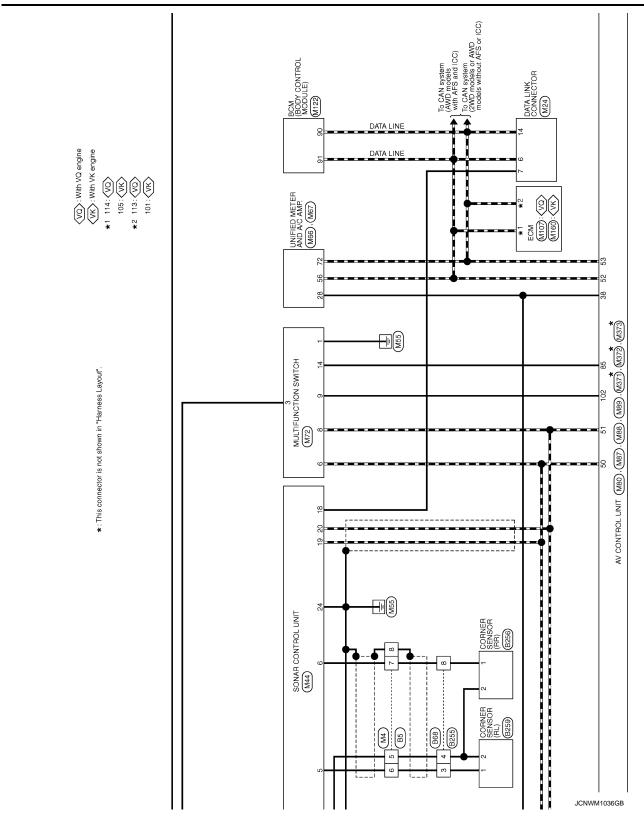
**SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)** [NAVIGATION (SINGLE MONITOR)] < ECU DIAGNOSIS INFORMATION > The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually. Α В This connector is not shown in "Harness Layout". iPod SIDE M112 C 12 11 22 iPod ADAPTER ( D Е **₩**323 F **₩**372),( **\***(M371),( G (M89) VOLUME , M88 TCM (TRANSMISSION CONTROL MODULE) STEERING SWITCH , (M87) Н AV CONTROL UNIT (M80) F51 M36) MENU MENU FUSE BLOCK (J/B) (M1), (M3) <u>[</u> 92 J 4 A K IGNITION SWITCH ON or START 10A L 10A M



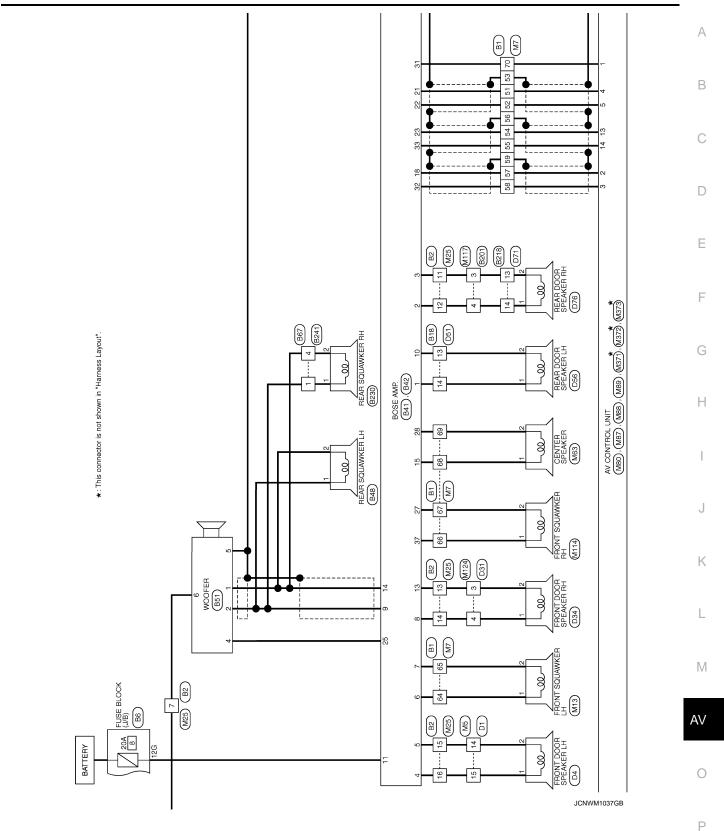
# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

[NAVIGATION (SINGLE MONITOR)]

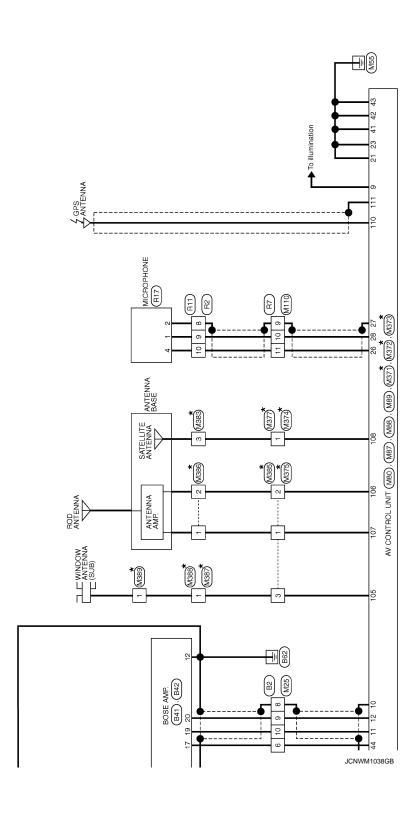




< ECU DIAGNOSIS INFORMATION >







# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

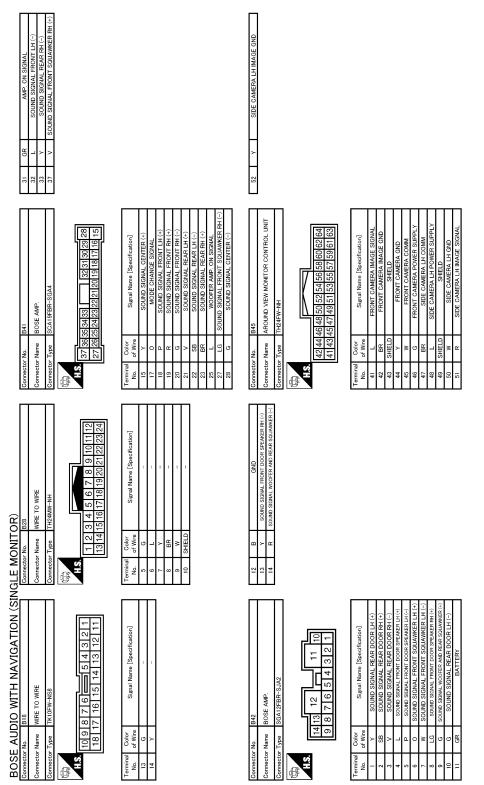
< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]

Name	D E
Connector No.   B4	Е
edification]	
(J/B)	F
16145   16145	G
Connector No.   Connector Name   Connector Type   Connector Type   Connector Type   Connector No.   Connecto	
	Н
	I
	J
	K
Z C C C C C C C C C C C C C C C C C C C	
Co	L
WIRE  CSIE-TMA  CSIE-TMA  CSIE-TMA  Signal Name [Specification]  Signal Name [Specification]	M
Some content of Name   Specification   Signal Name   Specificati	٨V
Color   Colo	
Commetter Type   Comm	0
JCNWM1039GB	Р

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< ECU DIAGNOSIS INFORMATION >



JCNWM1040GB

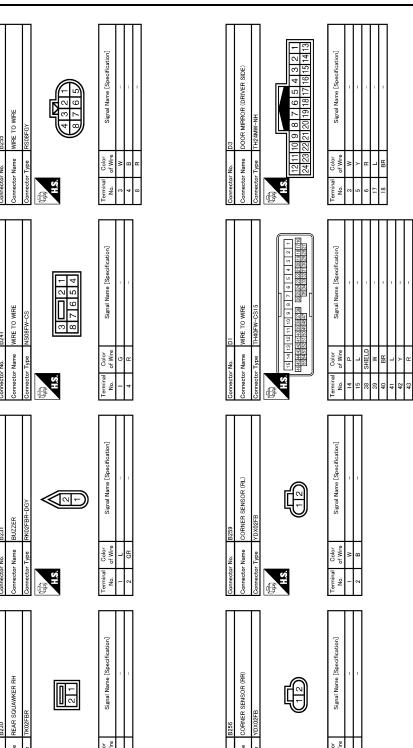
< ECU DIAGNOSIS INFORMATION >

FER CATALON SIGNAL WOOFER (-) WOOFER AMP. ON SIGNAL WOOFER (-) WOO	Signal Name [Specification]	АВ
Connector No.   B51	Connector No.   B218	C D
FEAR SOLAWKER LH TROPERR Signal Name [Specification]	WIRE TO WIRE THEOFW-CS16-TMA  In the state of the state o	E
Connector No. Connector Type Connector Type  Terminal Color No. T G G Z Z R	Connector No.   B201	G H
AV COMM (H)  AV COMM (L)  AV COMM (L)  AV COMM (H)  AV COMM (H)  LED (+)  LED (+)  LED (+)  LED (+)  CAMERA IMAGE SIGNAL  SIDE CAMERA RH DAMAGE SIGNAL  SIDE CAMERA RH COMM  SIDE CAMERA RH COMM  SIDE CAMERA RH COMM  SIDE CAMERA RH COMM  FEAR CAMERA MAGE SIGNAL  FEAR CAMERA FEAR MAGE SIGNAL  FEAR CAMERA	WIRE RSOBMOY  Signal Name [Specification]	J
SINGLE MONITOR)  17	Connector No. B68 Connector Name WIR Connector Type RS0  Terminal Color No. or Wire 4 B B 8 R R	K
Convector Name	O WIRE  W-CS  2	M
Connector No.   B46	Connector No. B67 Connector Type MS08N Connector Type MS08N  HS. Connector Type October Octobe	AV O JCNWM1041GB
		Р

**AV-551** Revision: 2009 March 2009 FX35/FX50

< ECU DIAGNOSIS INFORMATION >

BOSE AUDIO WITH NAVIGATION (SINGLE MONITOR)



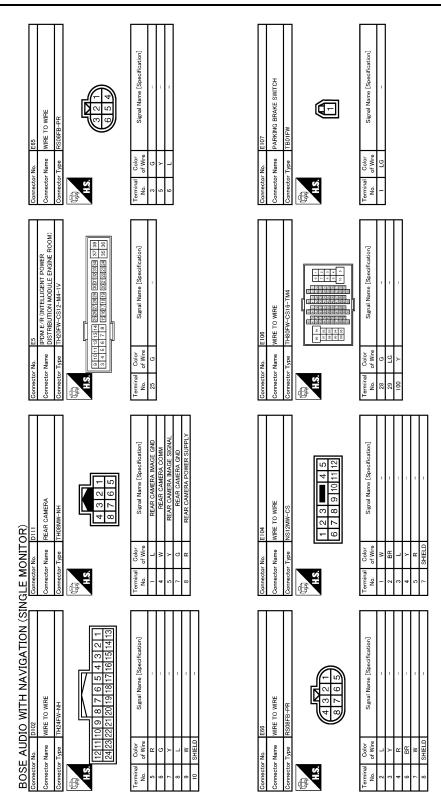
JCNWM1042GB

## < ECU DIAGNOSIS INFORMATION >

Connector No. D34 Connector Name FRONT DOOR SPEAKER RH Connector Type NSOZFBR-CS H.S.	Terminal   Color   Signal Name   Specification]   1	Connector No. D76 Connector Type NSQPERR-CS  H.S.	Terminal Color Signal Name [Specification]  1 SB		A B C
Connector No. D33  Connector Name DOOR MIRROR (PASSENGER SIDE)  Connector Type TH24MVF-NH  H.S. T11110 9 8 7 6 5 4 3 2 1  [24] 23 [22] 21 [20] 19] 18 17 16 15 14 13	Terminal   Color   Signal Name   Specification   Color   No.   Of Wire   S   W	Connector No. 071  Connector Name WIFE TO WIFE  Connector Type ITK10MV-NS8  M.S. 1 2 3 4 5 6 7 8 9 10  11 12 13 14 15 16 17 18	Terminal   Color   Signal Name (Specification)     13   V		E F G
NGLE MONITOR	Terminal   Color   Signal Name   Specification   No.   Of Wire   Signal Name   Specification	Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NS02FBR-CS H.S.	Terminal   Color   Signal Name [Specification]		J K
BOSE AUDIO WITH NAVIGATION (SIN Gamector No. D4 Connector Name FRONT DOOR SPEAKER LH Connector Type NSIZFBR-CS	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]	Connector No. DSI Connector Name WIRE TO WIRE Connector Type TKIOMN-NS3  1.1.	Terminal   Color   No. of Wire   Signal Name [Specification]   13   V	JCNWM1043GB	M AV

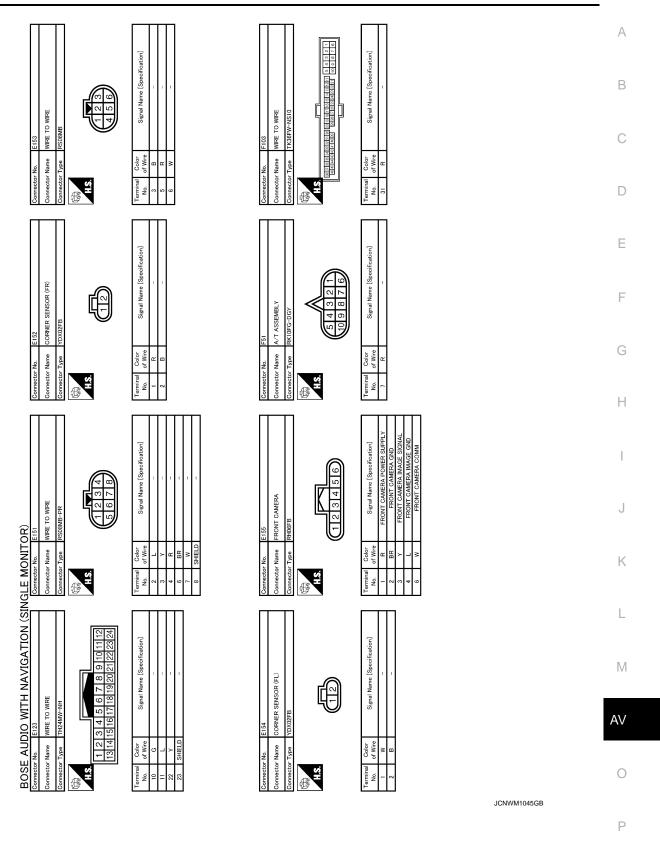
**AV-553** Revision: 2009 March 2009 FX35/FX50

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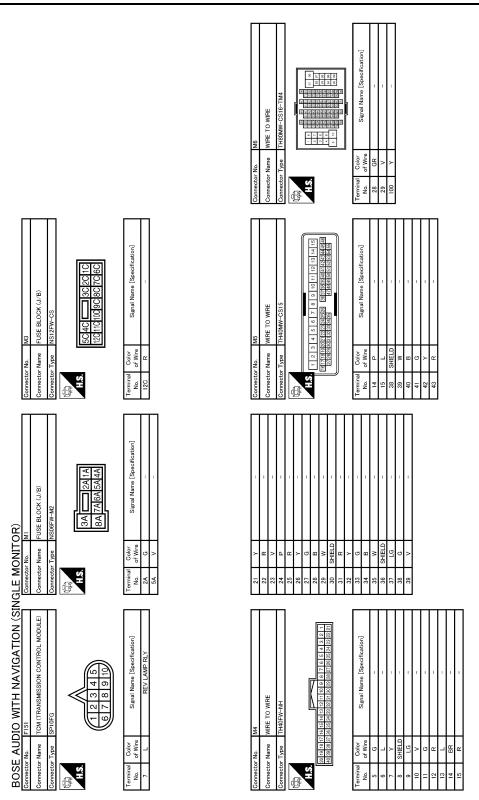


JCNWM1044GB

< ECU DIAGNOSIS INFORMATION >



**AV-555** Revision: 2009 March 2009 FX35/FX50



JCNWM1046GB

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

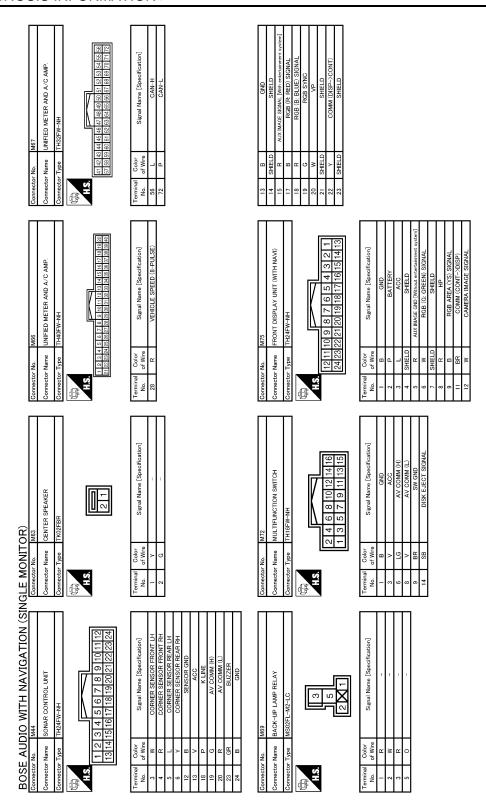
< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]

OUAWKER LH  2 1  Signal Name [Specification]	S S SENSOR	Signal Name (Specification) SENSORT SENSORZ SENSORZ SENSORZ GND IGN	АВ	
Commetor No. M13 Commetor Name FRONT SOUAWKER LH Commetor Type TK02FBR  LH.S. FRONT SOUAWKER LH Commetor Type TK02FBR  Terminal Color Signal Name [5] 1 L 2 1 2 W	No. M37 Name STEERIN Type THOSPW	No. of Wife Signal	C	
NH NH 1 7 6 5 4 3 2 1 0 19 18 17 16 15 14 13 Signal Name [Specification]	M36 COMBINATION SWITCH (SPIRAL CABLE) TROBEGY-IV  24 25 26 31 32 33 34	Signal Name (Specification)	E	
Connector No.   MIO	No. Name Type	No. of Wire Signa 24 P P P P P P P P P P P P P P P P P P	G	
	13 14 15 16	Signal Name (Specification)	H	
NGLE MONITOR)  66 V 68 V 68 C 70 O 70 O	No. M25 Type WIRE TO Type NS16MW 8 9 10	No. of Wive Signal N. of Wive No. of Wive	J K	
NO I I I I I I I I I I I I I I I I I I I			L	
WRE CSI6-TM4  CS	NNNECTOR 13 14 15 16   5   6   7   8	Signal Name (Specification)	М	
DIO W WRE TO TH80MW-	M24 DATA LIN BD16FW 9 10 11		AV	
BOSE AUC Gennector Name Connector Type Connector Type Terminal Color No. of Wire 51 U 52 LG 52 LG 53 SHELD 54 BR		No. 0 (With Mine) of Wings (Wings )	JCNWM1047GB	
			P	

Revision: 2009 March AV-557 2009 FX35/FX50

< ECU DIAGNOSIS INFORMATION >



JCNWM1048GB

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

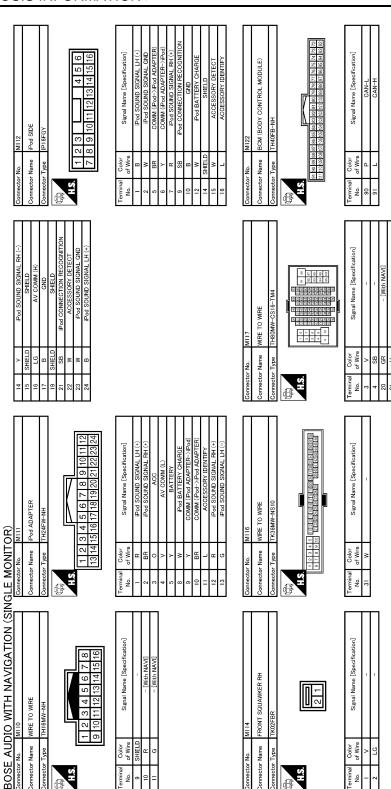
< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]

R		No.   MIO7   Nume   ECOM (WITH VO ENGINE)	Color of Wire P VEHCAN-L1 L VEHCAN-H1		A B C
38 41 42 43 43 48 48 48 49 50 50 50 53		Connector No. Connector Type Connector Type H.S.	Terminal No. 113 114		D
H NAVV)	peofication)	H NAVI)  H 65 80 87 88  M 65 80 87 88	Signal Name [Specification] Ped 50M5 Signal, Lis (Nother energinemen system) Ped 50M5 Signal, Lis (Nothers energinemen system) Ped 50M5 SIGNAL, Lis (Nothers energinemen system) SHEED AUX SOUND SIGNAL, LH (+) AUX SOUND SIGNAL, LH (+) Ped 50M5 SIGNAL LH (Nothers energinemen system) SW GND AUX SOUND SIGNAL, RH (-) (Nothers energinemen system) SW GND AUX SOUND SIGNAL, RH (-)		Е
MB7 TH40FW-NH TH40FW-NH TH30FW-NH TH	Signal Name (Specification)  GND  BATTERY GND  BATTERY ACC  MICROPHONE GND  MICROPHONE SIGNAL  IGNITION  MICROPHONE SIGNAL  GNATTION  FARMING BRAKE  REVERSE	M89 AV CONTROL UNIT (WITH NAV) TH32PW-NH TR32PW-NH TR 77 78 88 81 82 82 82 82 82 82 82 82 82 82 82 82 82	Signal Manne [Specification] Ped stouls Signal, Lt. o.   Minney anneximent Ped stouls Signal, Lt. o.   Minney anneximent Ped stouls Signal, Lt. o.   Minney anneximent SHELD AUX SOUND SIGNAL, Lt. (4) AUX SOUND SIGNAL Lt. (4) Ped stouls Signal, Lt. (4)   Minney anneximent Ped stouls Signal, Lt. (4)   Minney anneximent Ped stouls Signal, Rt. (5)   Minney anneximent Ped stouls Signal, Rt. (4)   Minney anneximent Ped stouls Signal, Rt. (5)   Minney anneximent Ped Stouls Signal, Rt. (6)   Minney		F
AV CONT TH40FW TH0FW Z 2 2 2 2 3 3 2 4 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		1			G
	No.   of Wire	Connector No. Connector Name Connector Type H.S. RES 000	Color   Color   No.   of Wire   No.   of		
					Н
TEAR RH (+) TEAR RH (-) GND GND W B RY					1
SOUND SIGNAL REAR RH (- SOUND SIGNAL REAR RH (- STRG SW GND STRG SW B BATTERY		SHIELD			J
					0
NGLE MONITOR)		72 SHIELD			K
					L
ATION O	freation]  NT LH (+)  NT LH (-)  NT LH (-)  NR LH (-)  AR LH (-)  NR LH (-)  NR LH (-)  NN RH (-)	Av.)	ification] IGNAL SIGNAL SIGNAL D SIGNAL CONT)		
H NAVIG. UNIT (WITH IN. 15 16 17 18 16 17 18 16 17 18 16 17 18 16 17 18 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Signal Name (Specification)  AMP. ON SIGNAL  SOUND SIGNAL FRONT LH (+)  SOUND SIGNAL FRONT LH (+)  SOUND SIGNAL REAR LH (+)  SOUND SIGNAL ROW RH (+)  SOUND SIGNAL ROW RH (+)	UNIT (WITH N 68 70 72 67 69 71	Signal Name [Specification] RGB (R RED) SIGNAL RGB (R BLUE) SIGNAL RGB (R BLUE) SIGNAL SHELD RGB SYNC SHELD RGB AREA (YS) SIGNAL HD COMM (CONT->DISP) COMM (CONT->DISP)		M
10 W. CONT	dinios  dinios  dinios  mos  mos  dinios  dinios  dinios  dinios  dinios	M88 AV CONTROL UNIT (WITH NAV) THIZEW-NH 62 64 66 68 70 72 61 63 65 67 69 71	Signa RGB		AV
BOSE AUDI Connector Name A Connector Type 1 (19 10)	of Wire Wire SB S P P C C C C C C C C C C C C C C C C C	or No.	Color of Wire SHIELD SH		
BOSE Gonnecto Connecto Connecto H.S. H.S.	No. No. 1	Connect Connect	Terminal No.	JCNWM1049GB	0
					Р

Revision: 2009 March AV-559 2009 FX35/FX50

< ECU DIAGNOSIS INFORMATION >

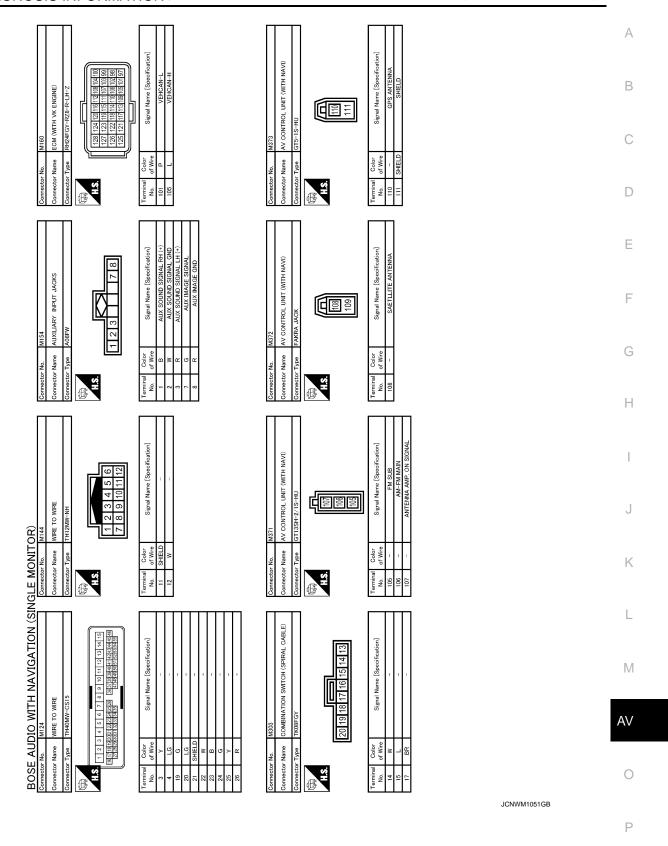


JCNWM1050GB

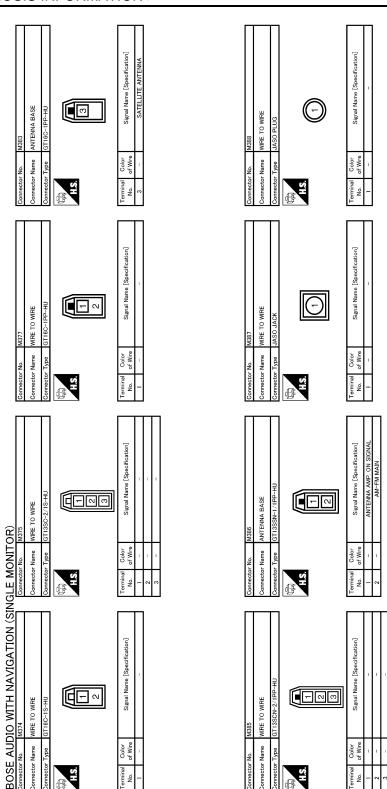
# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (SINGLE MONITOR)]

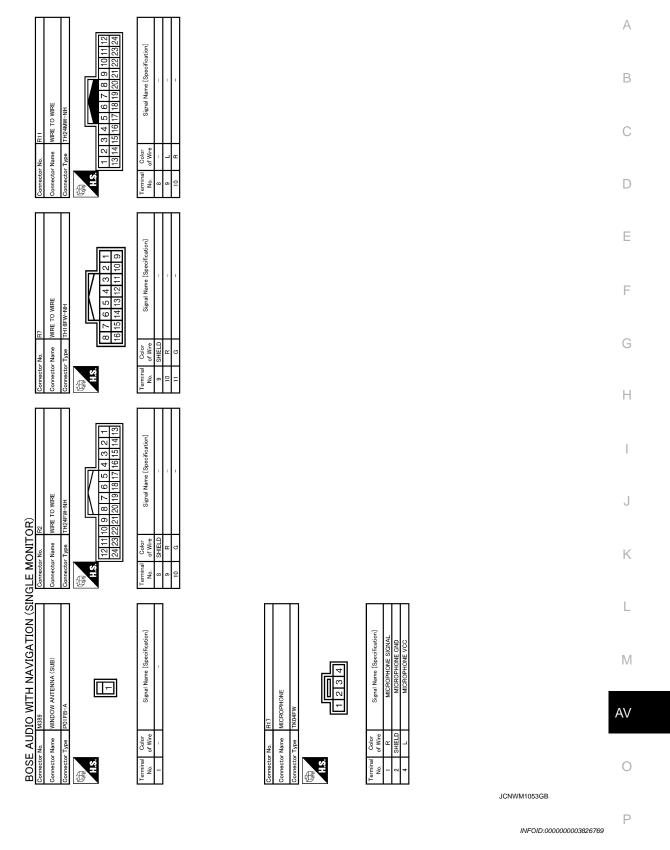


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JCNWM1052GB

#### < ECU DIAGNOSIS INFORMATION >



## Fail-Safe

• Sonar control unit has diagnosis function which can detect corner sensor malfunction and sensor harness disconnection.

• It transmits the malfunction status to around view monitor control unit and informs the malfunction to the user by displaying continuously red sonar indicator.

< ECU DIAGNOSIS INFORMATION >

**DTC Index** INFOID:0000000003826770

DTC	Dianlassitana	Malfunation is data at a duule on	Deference
DTC	Display item	Malfunction is detected when	Reference
B2700	CORNER SENSOR [FL] [B2700]	Corner sensor front left is malfunctioning.	AV-364, "DTC Logic"
B2701	SENSOR HARNESS OPEN [CR-FL] [B2701]	Corner sensor front left harness circuit is open.	AV-365, "Diagnosis Procedure"
B2702	CORNER SENSOR [FR] [B2072]	Corner sensor front right is malfunctioning.	AV-366, "DTC Logic"
B2703	SENSOR HARNESS OPEN [CR-FR] [B2703]	Corner sensor front right harness circuit is open.	AV-367, "Diagnosis Procedure"
B2704	CORNER SENSOR [RL] [B2704]	Corner sensor rear left is malfunctioning.	AV-368, "DTC Logic"
B2705	SENSOR HARNESS OPEN [CR-RL] [B2705]	Corner sensor rear left harness circuit is open.	AV-369, "Diagnosis Procedure"
B2706	CORNER SENSOR [RR] [B2706]	Corner sensor rear right is malfunctioning.	AV-370, "DTC Logic"
B2707	SENSOR HARNESS OPEN [CR-RR] [B2707]	Corner sensor rear right harness circuit is open.	AV-371, "Diagnosis Procedure"

#### NOTE:

"TIME" means the following.

0: Means detected malfunction at present. (From malfunction detection to turning ignition switch OFF)
1–39: Means detected malfunction in past.

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# SYMPTOM DIAGNOSIS

## MULTI AV SYSTEM SYMPTOMS

Symptom Table

#### RELATED TO NAVIGATION

Symptoms	Check items	Possible malfunction location / Action to take
	All switches cannot be operated.     "MULTI AV" is displayed on system selection screen when the CONSULT-III is started.	<ul> <li>Multifunction switch power supply and ground circuit.</li> <li>AV communication circuit between AV control unit and multifunction switch.</li> <li>Perform CONSULT-III self-diagnosis. Refer to AV-330.</li> <li>"CONSULT-III Function (MULTI AV)".</li> </ul>
Multifunction switch and preset switch operation does not work.	All switches cannot be operated.     "MULTI AV" is not displayed on system selection screen when the CONSULT-III is initialized.	AV control unit power supply and ground circuit malfunction. Refer to AV-372, "AV CONTROL UNIT : Diagnosis Procedure".
	Only specified switch cannot be operated.	Multifunction switch or preset switch malfunction.  Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-317, "Diagnosis Description".
Fuel economy display, vehicle set-	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis. Refer to AV-330, "CONSULT-III Function (MULTI AV)".
ting operation is abnormal.	There is no malfunction in the self-diagnosis results.	Ignition signal circuit malfunction (AV control unit).  Refer to AV-372, "AV CONTROL UNIT : Diagnosis Procedure".
Guide sound is not heard.	On the setting display select "system sound (guide sound volume, etc.)," and confirm that guide sound is ON.	AV control unit malfunction.  Replace AV control unit. Refer to AV-579, "Exploded View".

#### RELATED TO HANDS-FREE PHONE

- Check that the cellular phone is corresponding type (Bluetooth<sup>™</sup> correspond) when the hands-free related malfunction vehicle is in service before performing a diagnosis.
- There is a case that malfunction occurs due to the version change of the phone type, etc. even though it is a
  corresponding type. Therefore, confirm it by changing the cellular phone to another corresponding type
  phone, and check that it operates normally. It is necessary to distinguish whether the cause is the vehicle or
  cellular phone.

# Simple Check for $Bluetooth^{TM}$ Communication

If cellular phone and AV control unit cannot be connected with Bluetooth $^{\text{\tiny TM}}$  communication, following procedure allows the technician to judge which device has malfunction.

- 1. Turn on a cellular phone, not connecting Bluetooth<sup>™</sup> communication.
- Start CONSULT-III, then start Windows<sup>®</sup>.
- 3. Set CONSULT-III near a cellular phone.
- 4. When operated Bluetooth<sup>™</sup> registration by cellular phone, check if CONSULT-III<sup>\*</sup> would be displayed on the device name. (If other Bluetooth<sup>™</sup> device is located near cellular phone, a name of the device would be displayed also.)
  NOTE:
  - \*:Displayed device name is "NISSAN-\*\*\*\*\*."
- If no device name is displayed, cellular phone is malfunctioning.
   Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.

Source Is:

CONSULT-III

JPNIA0441GB

Trouble Diagnosis Chart by Symptom

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# [NAVIGATION (SINGLE MONITOR)]

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection. (no connection is displayed on the display at the guide.)	Repeat the registration of cellular phone.	AV control unit malfunction.  Replace AV control unit. Refer to AV-579, "Exploded View".
Hands-free phone cannot be established.	<ul> <li>Hands-free phone operation can be made, but the communication cannot be established.</li> <li>Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.</li> </ul>	AV control unit malfunction.  Replace AV control unit. Refer to AV-579, "Exploded View".
The other party's voice cannot be heard by hands-free phone.	_	AV control unit malfunction.  Replace AV control unit. Refer to AV-579, "Exploded View".
Originating sound is not heard by the other party with hands-	Sound operation function is normal.	AV control unit malfunction.  Replace AV control unit. Refer to AV-579, "Exploded View".
free phone communication.	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-387, "Diagnosis Procedure".

## RELATED TO AROUND VIEW MONITOR

Symptoms	Check items	Probable malfunction location / Action to take
It does not switch to camera im-	"Camera Cont." of "Confirmation/Adjustment" can be selected.	Ignition signal circuit (around view monitor control unit).  Refer to AV-375, "AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure".
age even when the "CAMERA" switch is pressed or the selector lever is in the reverse position.	"Camera Cont." of "Confirmation/Adjustment" cannot be selected.	<ul> <li>Around view monitor control unit power supply and ground circuits.     Refer to AV-375, "AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure".</li> <li>AV communication circuits.     Refer to AV-330, "CONSULT-III Function (MULTI AV)".</li> </ul>
The screen switches when	Only superimposing is displayed. (Only the image displayed by AV control unit is displayed)	<ul> <li>Camera image signal circuit. Refer to <u>AV-389</u>, "<u>Diagnosis Procedure</u>".</li> <li>RGB (YS) area signal circuit. Refer to <u>AV-381</u>, "<u>Diagnosis Procedure</u>".</li> </ul>
pressing the "CAMERA" switch or shifting the selector lever to the reverse position, however, all views are not displayed.	Superimposing is not displayed.	<ul> <li>Communication circuit between AV control unit and front display unit.     Refer to AV-330, "CONSULT-III Function (MULTI AV)".</li> <li>Horizontal synchronizing (HP) signal circuit malfunction.     Refer to AV-382, "Diagnosis Procedure".</li> </ul>
Camera image is rolling.	AUX image is rolling	Vertical synchronizing (VP) signal circuit malfunction between AV control unit and front display unit.  Refer to AV-383. "Diagnosis Procedure".
It cannot be switched to rear view monitor even when the selector lever is in the reverse position.	The front view is displayed normally.	Reverse signal circuit. (AV control unit)
The predicted course line display in front view and rear view is malfunctioning.	The "Steer. Angle Sensor" is not turned ON at "Connection Confirmation" of "Camera Cont."	Steering angle sensor signal circuits. Refer to AV-391, "Diagnosis Procedure".

## < SYMPTOM DIAGNOSIS >

# [NAVIGATION (SINGLE MONITOR)]

Symptoms	Che	eck items	Probable malfunction location / Action to take
<ul> <li>The front view screen is not displayed.</li> <li>The front of Birds-Eye view</li> </ul>	Check the item Front Camera in "Connection Confirmation" mode of	Image Output Signal: NG     COMM Status: NG     COMM Line: NG	Front camera image signal circuit.     Front camera power supply and ground circuits.  Refer to AV-400, "Diagnosis Procedure"
screen is not displayed.	"Camera Cont."	Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Front camera communication signal circuit. Refer to AV-399, "Diagnosis Procedure".
<ul> <li>The rear view screen is not displayed.</li> <li>The rear of Birds-Eye view</li> </ul>	Check the item Rear Camera in "Connection Confirmation" mode of	Image Output Signal: NG     COMM Status: NG     COMM Line: NG	Rear camera image signal circuit.     Rear camera power supply and ground circuits.  Refer to AV-403, "Diagnosis Procedure".
screen is not displayed.	Confirmation" mode of "Camera Cont."	Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Rear camera communication signal circuits. Refer to AV-402, "Diagnosis Procedure".
<ul> <li>The front-side screen is not displayed.</li> <li>The side RH of Birds-Eye</li> </ul>	Check the item Pass- Side Camera in "Con- nection Confirmation"	Image Output Signal: NG     COMM Status: NG     COMM Line: NG	Side camera RH image signal circuit.     Side camera RH power supply and ground circuits.  Refer to AV-409, "Diagnosis Procedure".
The side RH of Birds-Eye view screen is not displayed.	mode of "Camera Cont."	Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Side camera RH communication circuit. Refer to AV-408, "Diagnosis Procedure".
The side LH of Birds-eye view screen is not displayed.	Check the item Dr-Side Camera at "Connection Confirmation" mode of	Image Output Signal: NG     COMM Status: NG     COMM Line: NG	Side camera LH image signal circuit.     Side camera LH power supply and ground circuits.  Refer to AV-406, "Diagnosis Procedure".
solven is not displayed.	"Camera Cont."	Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Side camera LH communication circuit. Refer to AV-405, "Diagnosis Procedure".
When shift position is other than "R" the front-side and front screen or the Birds-Eye view and front screen remain displaying even if the vehicle speed increases.			Vehicle speed signal (around view monitor control unit).
Around view monitor does not start other than shift position "R"	_		Certain States restrict the operation so that around view monitor does not start other than at shift position "R".

### RELATED TO CAMERA ASSISTANCE SONAR

Symptoms	Check items	Probable malfunction location / Action to take
	The malfunction is detected in only 1 indicator (Always displayed in red)	Corner sensor malfunction in corresponding area     Corner sensor harness circuit in corresponding area     Perform CONSULT-III self-diagnosis of sonar system.     Refer to AV-337, "CONSULT-III Function (SONAR)".
The malfunction is detected in the sonar indicator (Always displayed in red)	The malfunction is detected in all 4 indicators (Always displayed in red)	<ul> <li>Corner sensor ground circuit.</li> <li>Perform CONSULT-III self-diagnosis of sonar system.</li> <li>Refer to AV-337, "CONSULT-III Function (SONAR)".</li> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits.</li> <li>Perform CONSULT-III self-diagnosis of multi AV system.</li> <li>Refer to AV-330, "CONSULT-III Function (MULTI AV)".</li> </ul>
The sonar indicator is normal, but the buzzer does not sound	The buzzer is turned ON when performing "Buzzer" in "Active test" of "Sonar".	Replace sonar control unit. Refer to AV-603, "Exploded View"
	The buzzer is not turned ON when performing "Buzzer" in "Active test" of "Sonar".	Replace buzzer. Refer to AV-606, "Exploded View".

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### **RELATED TO RGB IMAGE**

Symptoms	Check items	Possible malfunction location / Action to take
RGB image is not shown.	All RGB images are not shown.     "MULTI AV" is displayed on system selection screen when the CONSULT-III is started.	Perform CONSULT-III self-diagnosis. Refer to AV-330, "CONSULT-III Function (MULTI AV)".
	All RGB images are not shown.     "MULTI AV" is not displayed on system selection screen when the CONSULT-III is started.	AV control unit power supply and ground circuit.  Refer to AV-372, "AV CONTROL UNIT: Diagnosis Procedure".
Color of RGB image is not proper.	Light blue (Cyan) tint.	RGB signal (R: red) circuit malfunction. Refer to AV-377, "Diagnosis Procedure".
	Purple (Magenta) tint.	RGB signal (G: green) circuit malfunction. Refer to AV-378, "Diagnosis Procedure".
	Screen looks yellowish.	RGB signal (B: blue) circuit malfunction. Refer to AV-379, "Diagnosis Procedure".
RGB screen is rolling.	_	RGB synchronizing signal circuit malfunction. Refer to AV-380, "Diagnosis Procedure".

## RELATED TO VOICE CONTROL

Symptoms	Check items	Probable malfunction location
The voice cannot be controlled even if the voice control screen is displayed.	Voice sounds at "Voice Microphone Test" of Confirmation/Adjustment mode.	AV control unit malfunction.  Replace AV control unit. Refer to AV-579, "Exploded View".
	Voice does not sound at "Voice Micro- phone Test" of Confirmation/Adjustment mode.	Microphone circuit malfunction.  Refer to AV-387, "Diagnosis Procedure".
The voice cannot be controlled (Voice control screen is not displayed).	Steering switch "SOURCE", "MENU UP", "MENU DOWN" operates, but ""  ""  ""  ""  ""  ""  ""  ""  ""  ""	Steering switch malfunction. Replace steering switch.
	Steering switch's "SOURCE", "MENU UP", "MENU DOWN", " does not operate.	Steering switch signal A circuit malfunction. Refer to AV-393, "Diagnosis Procedure".
	All steering switches do not work.	Steering switch signal GND circuit malfunction. Refer to AV-397, "Diagnosis Procedure".

### **RELATED TO AUDIO**

Symptoms	Check items	Possible malfunction location / Action to take
The disk cannot be removed.	Disk eject signal circuit malfunction.  Refer to <u>AV-386</u> , " <u>Diagnosis Procedure</u> ".	
Audio sound is not heard.	No sound from all speakers.	Amp. ON signal circuit.     BOSE amp. power supply and ground circuits.     Refer to AV-374, "BOSE AMP.: Diagnosis Procedure".
	Sound is not heard from woofer.	<ul><li>Woofer power supply and ground circuits.</li><li>Sound signal (woofer) circuits.</li><li>Woofer amp. ON signal circuit.</li></ul>
	Sound is not heard from center speaker.	Sound signals center speaker circuit.
	Sound is heard only from specific places.	Sound signal circuits of suspect system.
It does not change to "Driver's Audio Stage" mode.	_	Mode change signal circuit. Refer to AV-385, "Diagnosis Procedure".

#### < SYMPTOM DIAGNOSIS >

### [NAVIGATION (SINGLE MONITOR)]

Symptoms	Check items	Possible malfunction location / Action to take
	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-330, "CONSULT-III Function (MULTI AV)".
Satellite radio is not received.	There is no malfunction in the CON-SULT-III self-diagnosis result.	Perform the following inspection procedure.  1. Check satellite radio antenna (antenna base) mounting nut for looseness.  NOTE:  Tightening torque: 6.5 N·m (0.66 kg-m, 58 in-lb)  2. Visually check for satellite radio antenna feeder.  3. Replace the satellite radio antenna (antenna base). Refer to AV-588, "Exploded View".  4. Replace the AV control unit. Refer to AV-579, "Exploded View".
AM/FM radio is not received.	Other audio sounds are normal.	Antenna amp. ON signal circuit.     Antenna feeder.

## RELATED TO iPod®

Connect another  $iPod^{\mathbb{R}}$  and check if the symptom is reproduced or not. If the symptom is reproduced, diagnose the vehicle. If no malfunction is detected, replace the iPod harness.

#### NOTE:

It is unable to check that between iPod  $^{\! (\! R \!)}$  and iPod harness.

Symptoms	Check items	Possible malfunction location / Action to take
The sound of iPod <sup>®</sup> is not heard.	Other audio sounds are normal.	<ul> <li>iPod sound signal circuits between AV control unit and iPod adapter.</li> <li>iPod sound signal circuits between iPod<sup>®</sup> and iPod adapter.</li> </ul>
It does not change to iPod mode.	There is malfunction in the CONSULT-III self-diagnosis.	Perform CONSULT-III self-diagnosis.  Refer to AV-330, "CONSULT-III Function (MULTI AV)".
"iPod is not connected" is dis- played when it comes to iPod mode.	Connected to iPod <sup>®</sup> .	iPod connection recognition signal circuit.
iPod <sup>®</sup> cannot charge the battery.	_	iPod battery charge circuit between iPod <sup>®</sup> and iPod adapter.
The title of music file in the iPod $^{\mbox{\scriptsize (B)}}$ is not indicated.		Communication circuit between iPod® and iPod adapter.
Accessing the iPod <sup>®</sup> is unavailable from the vehicle.	<del></del>	Communication circuit between IPod* and IPod adapter.

### RELATED TO STEERING SWITCH

Symptoms	Probable malfunction location	_
None of the steering switch operations work.	Steering switch signal GND circuit malfunction.  Refer to AV-397, "Diagnosis Procedure".	
Only specified switch cannot be operated.	Steering switch malfunction. Replace steering switch.	
Steering switch's "SOURCE", "MENU UP", "MENU DOWN" and " $\sqrt{2}$ " switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-393, "Diagnosis Procedure".	
Steering switch's "VOL UP", "VOL DOWN", " " and " switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-395. "Diagnosis Procedure".	

#### RELATED TO AUXILIARY INPUT

#### NOTE

Check that there is no malfunction of AUX equipment main body before performing a diagnosis.

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## < SYMPTOM DIAGNOSIS >

# [NAVIGATION (SINGLE MONITOR)]

Symptoms	Check items	Probable malfunction location
No vocal sound is heard when AUX mode is selected.	Vocal sound is heard when other modes are selected.	AUX sound signal circuit malfunction between auxiliary input jacks and AV control unit.
Image is not displayed when AUX mode is selected.	Camera image is displayed.	AUX image signal circuit malfunction. Refer to AV-384, "Diagnosis Procedure".

< SYMPTOM DIAGNOSIS >

[NAVIGATION (SINGLE MONITOR)]

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## NORMAL OPERATING CONDITION

Description INFOID:0000000008826772

- For Navigation system operation information, refer to Navigation system Owner's Manual.
- Vehicle operation information, refer to Owner's Manual.

#### **BASIC OPERATIONS**

Symptom	Possible cause	Possible solution
	The brightness is at the lowest setting.	Adjust the brightness of the display.
No image is displayed.	The system in the video mode.	Press <disc-aux> to change the mode.</disc-aux>
	The display is turned off.	Press <day night=""> to turn on the display.</day>
No voice guidance is available. Or	The volume is not set correctly, or it is turned off.	Adjust the volume of voice guidance.
No voice guidance is available. Or The volume is too high or too low.	Voice guidance is not provided for certain streets (roads displayed in gray).	This is not a malfunction.
No map is displayed on the screen.	A screen other than map screen is displayed.	Press <map>.</map>
The screen is too dim. The movement is slow.	The temperature in the interior of the vehicle is low.	Wait until the interior of the vehicle has warmed up.
Some pixels in the display are darker or brighter than others.	This condition is an inherent characteristic of liquid crystal displays.	This is not a malfunction.
Some menu items cannot be selected.	Some menu items become unavailable while the vehicle is driven.	Park the vehicle in a safe location, and then operate the navigation system.

#### NOTE:

Locations stored in the Address Book and other memory functions may be lost if the vehicle's battery is disconnected or becomes discharged. If this occurs, service the vehicle's battery as necessary and re-enter the information in the Address Book.

#### RELATED TO VOICE RECOGNITION

Related to basic operation

Symptom	Possible cause	Possible solution
	The interior of the vehicle is too noisy.	Close the windows or have other occupants quiet.
	The volume of your voice is too low.	Speak louder
	The volume if your voice is too loud.	Speak softer
	Your pronunciation is unclear	Speak clearly
The system does not recognize your com-	You are speaking before the voice recognition made is ready	Press and release ""> 2" switch on the steering switch, and speak a command after the tone sounds
The eventors recommisses	8 seconds or more have passed after you pressed and released "√∠" switch on the steering switch.	Make sure to speak a command within 8 seconds after you press and release "
rectly	Only a limited range of voice commands is usable for each screen.	Use a correct voice command appropriate for the current screen
	The second of the fan od the air conditioner is too loud.	If the air conditioner is set to "Auto", the fan speed is automatically lowered and voice commands can be recognized more easily.  Lower the fan speed as necessary or set the air conditioner to "Auto".

#### Related to item choice

The system should respond correctly to all voice commands without difficulty. If problems are encountered, follow the solutions given in this guide for the appropriate error.

Where the solutions are listed b number, try each solution in turn, starting with number one, until the problem is resolved.

#### [NAVIGATION (SINGLE MONITOR)]

Symptom/ error message	Solution
	Ensure that the command format is valid.
	2. Speak clearly without pausing between words and at a level appropriate to the ambient noise level.
Displays "COMMAND NOT REC- OGNIZED" or the system fails to in- terpret the command correctly.	3. Ensure that the ambient noise level is not excessive, for example, windows open or defrost on. <b>NOTE:</b> If it is too noisy to use the phone, it is likely that voice commands will not be recognized.
	4. If optional words of the command have been omitted, then command should be tried with these in place.
The system consistently selects the wrong voicetag	1.Ensure that the voicetag requested matches what was originally stored. This can be confirmed by giving the Addressbook Directory or Phone Directory command.
	2. Replace one of the voicetags being confused with a different voicetag.

#### Related to telephone

The system should respond correctly to all voice commands without difficulty. If problems are encountered, try the following solutions.

Where the solutions are listed by number, try each solution in turn, starting with number 1, until the problem is resolves.

Symptom	Solution
	Ensure that the command is valid.
	2. Ensure that the command is spoken after the tone.
System fails to interpret the command correctly.	3. Speak clearly without pausing between words and at level appropriate to the ambient noise level in the vehicle.
	4.Ensure that the ambient noise level is not excessive (for example, windows open or defroster on),  NOTE:  If it is too noisy to use the phone, it is likely that the voice commands will be recognized.
	5. If more than one command was said at a time, try saying the commands separately.
	6. If the system consistently fails to recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker. See "Speaker adaptation (SA) mode" earlier in this section. Refer to "OWNER'S MANUAL".
The system consistently selects the wrong voicetag	1.Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the "List Names" command.
	2. Replace one of the names being confused with a new name.

#### RELATED TO AUDIO

- The majority of the audio malfunctions are the result of outside causes (bad CD/cassette, electromagnetic interference, etc.). Check the symptoms below to diagnose the malfunction.
- The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning.
   Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and then determine the cause.

#### NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA) or could be incorrectly mastered by the customer on a computer.
- Check if the CDs carry the Compact Disc Logo. If not, the disc is not mastered to the "red book" Compact Disc Standard and may not play.

## [NAVIGATION (SINGLE MONITOR)]

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Symptom	Cause and Counter measure	
	Check if the CD/CF was inserted correctly.	
	Check if the CD/CF is scratched or dirty.	
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.	
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.	
Cannot play	If there is a mixture of music CD files (CD-DA data) and MP3/WMA files on a CD, only the music CD files (CD-DA data) will be played.	
	Files with extensions other than ".MP3", ".WMA", ".mp3", or ".wma" cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.	
	Check if the disc or the file is generated in an irregular format, This may occur depending on the variation or the setting of MP3/WMA writing applications or other text editing applications.	
	Check if the finalization process, such as session close and disc close, is done for the disc.	
	Check if the CD/CF is protected by copyright.	
Poor sound quality	Check if the CD/CF is scratched or dirty.	
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA CD/CF, or if it is a multi session disc, some time may be required before the music starts playing.	
Music cuts off or skips	The writing software and hardware combination might not match, or the writing speed, writing depth, writing width might not match the specifications. Try using the slowest writing speed.	
Skipping with high bit rate files	Skipping may occur with large quantities if data such as for high bit rate data.	
Move immediately to the next song when playing	When a non-MP3/WMA file has been given an extension of ".MP3", ".WMA", ".mp3", or ".wma", or when play is prohibited by copyright protection, the player will skip to the next song.	
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.	

Noise resulting from variations in field strength, such as fading noise and multi-path noise, or external noise from trains and other sources, is not a malfunction.

#### NOTE:

- Fading noise: This noise occurs because of variations in the field strength in a narrow range due to mountains or buildings blocking the signal.
- Multi-path noise: This noise results from a time difference between the broadcast waves directly from the station arriving at the antenna and the waves reflected by mountains or buildings.

#### RELATED TO VEHICLE ICON

Symptom	Possible cause	Possible solution
Names of roads differ between Plan View and Birdview <sup>™</sup> .	This is because the quantity of the displayed information is reduced so that the screen does not become too crowded. There is also a chance that names of the roads may be displayed multiple times, and the names appearing on the screen may be different because of a processing procedure.	This is not a malfunction.
The vehicle icon is not displayed in the correct position.	The vehicle was transported after the ignition switch was pressed off, for example, by a ferry or car transporter.	Drive the vehicle for a while on a road where GPS signals can be received.
	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is traveling on a new road, the vehicle icon is located on another road nearby.	Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available.	Updated road information will be included in the next version of the map data.

### < SYMPTOM DIAGNOSIS >

# [NAVIGATION (SINGLE MONITOR)]

Symptom	Possible cause	Possible solution
The screen does not switch to the night screen even after turning on the headlights.	The daytime screen was set the last time the headlights were turned on.	Set the screen to the night screen mode using <day night=""> when you turn on the headlights.</day>
The map does not scroll even when the vehicle is moving.	The current location map screen is not displayed.	Press <map>.</map>
The vehicle icon is not displayed.	The current location map screen is not displayed.	Press <map>.</map>
The location of the vehicle icon is misaligned from the actual position.	When using tire chains or replacing the tires, speed calculations based on the speed sensor may be incorrect.	Drive the vehicle for a while (at approximately 19 MPH for about 30 minutes) to automatically correct the vehicle icon position.  If this does not correct the vehicle icon position, contact an INFINITI dealer.
	The map data has a mistake or is incomplete (the vehicle icon position is always misaligned in the same area).	Updated road information will be included in the next version of the map data.

### RELATED TO ROUTE CALCULATION AND VISUAL GUIDANCE

Symptom	Possible cause	Possible solution
Waypoints are not included in the auto reroute calculation.	Waypoints that you have already passed are not included in the auto reroute calculation.	If you want to go to that waypoint again, you need to edit the route.
	Route calculation has not yet been performed.	Set the destination and perform route calculation.
Route information is not dis-	You are not driving on the suggested route.	Drive on the suggested route.
played.	Route guidance is set to off.	Turn on route guidance.
	Route information is not provided for certain types of roads (roads displayed in gray).	This is not a malfunction.
The auto reroute calculation (or detour calculation) suggests the same route as the one previously suggested.	Route calculations took priority conditions into consideration, but the same route was calculated.	This is not a malfunction.
A waypoint cannot be added.	Five waypoints are already set on the route, including ones that you have already passed.	A maximum of 5 waypoints can be set on the route. If you want to go to 6 or more waypoints, perform route calculations multiple times as necessary.
	Roads near the destination cannot be calculated.	Reset the destination to a main or ordinary road, and recalculate the route.
	The starting point and destination are too close.	Set a more distant destination.
The suggested route is not displayed.	The starting point and destination are too far away.	Divide your trip by selecting one or two intermediate destinations, and perform route calculations multiple times.
	There are time restricted roads (by the day of the week, by time) near the current vehicle location or destination.	Set [Use Time Restricted Roads] to off.
The part of the route that you have already passed is deleted.	A route is managed by sections between waypoints. If you passed the first waypoint, the section between the starting point and the waypoint is deleted. (It may not be deleted depending on the area.)	This is not a malfunction.
An indirect route is suggested.	If there are restrictions (such as one-way streets) on roads close to the starting point or destination, the system may suggest an indirect route.	Adjust the location of the starting of the starting point or destination.
	The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets (gray roads.)	Reset the destination to a main or ordinary road, and recalculate the route.

## < SYMPTOM DIAGNOSIS >

# [NAVIGATION (SINGLE MONITOR)]

Symptom	Possible cause	Possible solution
The landmark information does not correspond to the actual information.	This may be caused by insufficient or incorrect map data.	Updated information will be included in the next version of the data.
The suggested route does not exactly connect to the starting point, waypoints, or destination.	There is no data for route calculation closes to these locations.	Set the starting point, waypoints and destination on a main road, and perform route calculation.

### RELATED TO VOICE GUIDANCE

Symptom	Possible cause	Possible solution
Voice guidance is not available	Voice guidance is only available at certain intersections marked with? In some case, voice guidance is not available even when the vehicle should make a turn.	This is not a malfunction.
	The vehicle has deviated from the suggested route.	Go back to the suggested route or request route calculation again
	Voice guide is set to off.	Turn on voice guidance.
	Route guidance is set to off.	Turn on voice guidance.
The guidance contact does not correspond to the actual condition.	The contact of voice guidance may vary, depending on the types of intersections at which turn are made.	Follow all traffic rules and regulations.

### RELATED TO TRAFFIC INFORMATION

Symptom	Possible cause	Possible solution
The traffic information is not displayed	The traffic information is not set to on.	Set the traffic information to on.
	You are in an area where traffic information is not available	Scroll to an area where traffic information is available
	You have not subscribed to XM NavTraffic or, your subscription to XM NavTraffic has expired.	Check your subscription status of XM NavTraffic.
	The map scale is set at a level where the display of icons is impossible.	Check that the map scale is set at a level in which the display of icons is possible.
With the automatic detour route search ON, no detour route is set to avoid congested areas.	There is no faster route compared to the current route, based on the road network and traffic information.	The automatic detour search is not intended for avoiding traffic jams. It searches for the fasted rote taking into consideration such things as traffic jams.
The route does not avoid road section with traffic information stating it is closed due to road construction.	The navigation system is designed not to avoid this event because the actual period of closure may differ from the declared roadwork period.	Observe the actual road condition and follow the instructions on road for detour when necessary. If the road closure is for certain, use detour function and set the detour distance to avoid the closed road section.
Traffic information dis- played differs from in- formation from other media (e.g. radio).	Other media may use different information sources.	Observe the actual road conditions and regulations. Always observe safe driving practices and follow all traffic regulations.

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# **PRECAUTION**

## **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIR BAG".
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
  ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s)
  with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly
  causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution for Trouble Diagnosis

INFOID:0000000003826774

#### AV COMMUNICATION SYSTEM

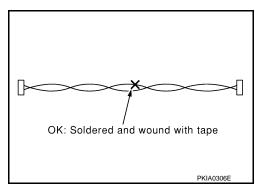
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

INFOID:0000000003826775

#### AV COMMUNICATION SYSTEM

• Solder the repaired parts, and wrap with tape. [Frays of twisted line must be within 110 mm (4.33 in).]

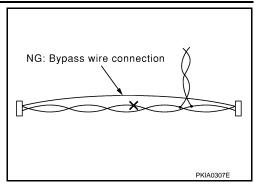


## **PRECAUTIONS**

### < PRECAUTION >

### [NAVIGATION (SINGLE MONITOR)]

• Do not perform bypass wire connections for the repair parts. (The spliced wire will become separated and the characteristics of twisted line will be lost.)



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## **PREPARATION**

< PREPARATION >

[NAVIGATION (SINGLE MONITOR)]

# **PREPARATION**

## **PREPARATION**

## **Commercial Service Tools**

INFOID:0000000003826776

Tool name		Description
Power tool	PBIC0191E	Loosening screws

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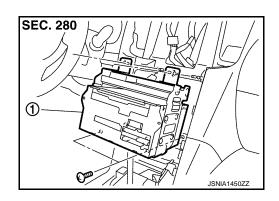
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# REMOVAL AND INSTALLATION

## AV CONTROL UNIT

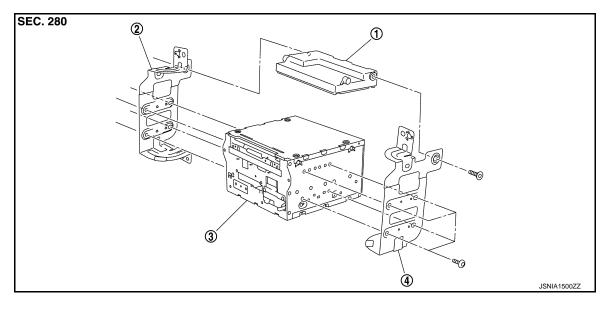
**Exploded View** 

**REMOVAL** 



1: AV control unit

#### DISASSEMBLY



- 1. Unified meter and A/C amp.
- 2. Bracket LH

3. AV control unit

4. Bracket RH

#### Removal and Installation

#### **REMOVAL**

- Remove front display unit. Refer to <u>AV-580, "Removal and Installation"</u>.
- 2. Remove AV control unit with a unified meter and A/C amp. as a single unit from the body.
- 3. Remove bracket screws, and then remove AV control unit.

#### **INSTALLATION**

Installation is the reverse order of removal.

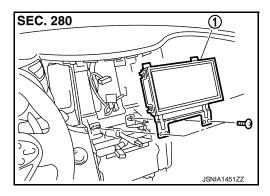
#### **CAUTION:**

Since AV control unit connector and unified meter and A/C amp. connector have the same form, be careful not to insert them wrongly.

## FRONT DISPLAY UNIT

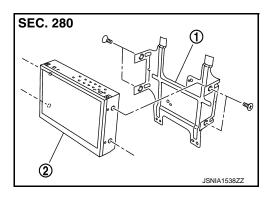
Exploded View

**REMOVAL** 



1. Front display unit

#### **DISASSEMBLY**



- 1. Bracket
- 2. Front display unit

### Removal and Installation

INFOID:0000000003928747

#### **REMOVAL**

- 1. Remove cluster lid D. Refer to IP-12, "Removal and Installation".
- 2. Remove front display unit mounting screws.
- 3. Disconnect connector, and remove front display unit.

#### **INSTALLATION**

Installation is the reverse order of removal.

## **FRONT DOOR SPEAKER**

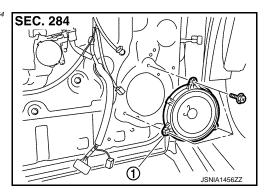
< REMOVAL AND INSTALLATION >

[NAVIGATION (SINGLE MONITOR)]

## FRONT DOOR SPEAKER

**Exploded View** 

INFOID:0000000003928754



Front door speaker

### Removal and Installation

REMOVAL

- 1. Remove front door finisher. Refer to <a href="INT-11">INT-11</a>, "Removal and Installation".
- 2. Remove front door speaker mounting bolts.
- 3. Disconnect connector and remove front door speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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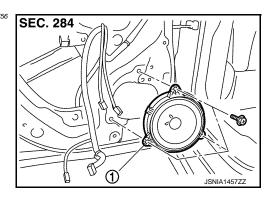
### **REAR DOOR SPEAKER**

[NAVIGATION (SINGLE MONITOR)]

## **REAR DOOR SPEAKER**

**Exploded View** 

INFOID:0000000003928756



Rear door speaker

### Removal and Installation

INFOID:0000000003928757

#### **REMOVAL**

- 1. Remove rear door finisher. Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".
- 2. Remove rear door speaker mounting bolts.
- 3. Disconnect connector and remove rear door speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

## **FRONT SQUAWKER**

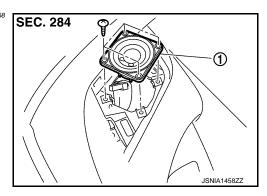
#### < REMOVAL AND INSTALLATION >

## [NAVIGATION (SINGLE MONITOR)]

## FRONT SQUAWKER

**Exploded View** 

INFOID:0000000003928758



Front squawker

### Removal and Installation

REMOVAL

- 1. Remove speaker grille. Refer to IP-12, "Removal and Installation".
- 2. Remove front squawker mounting screws.
- 3. Disconnect connector and remove front squawker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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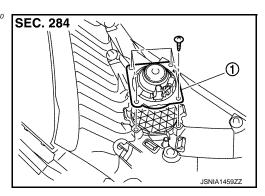
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## **REAR SQUAWKER**

**Exploded View** 

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Rear squawker

## Removal and Installation

INFOID:0000000003928761

#### **REMOVAL**

- 1. Remove luggage side finisher upper. Refer to <a href="INT-28">INT-28</a>, "Exploded View".
- 2. Remove rear squawker mounting screws.
- 3. Remove rear squawker.

#### **INSTALLATION**

Installation is the reverse order of removal.

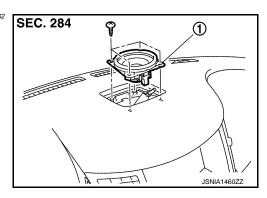
### **CENTER SPEAKER**

### [NAVIGATION (SINGLE MONITOR)]

## **CENTER SPEAKER**

**Exploded View** 

INFOID:0000000003928762



Center speaker

### Removal and Installation

#### **REMOVAL**

- 1. Remove center speaker grille. Refer to IP-11, "Exploded View".
- 2. Remove center speaker mounting screws, lift up the center speaker and disconnect connector.
- 3. Remove center speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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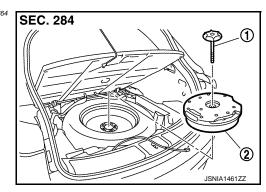
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## **WOOFER**

# **Exploded View**

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- 1. Woofer clamp
- 2. Woofer

## Removal and Installation

INFOID:0000000003928765

### **REMOVAL**

- 1. Pull up luggage finisher cover and hang the strap to upper body.
- 2. Remove woofer clamp.
- 3. Remove harness clip and connector.
- 4. Remove woofer.

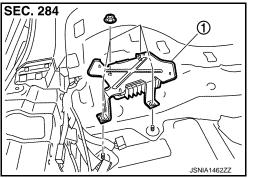
#### **INSTALLATION**

Installation is the reverse order of removal.

## BOSE AMP.

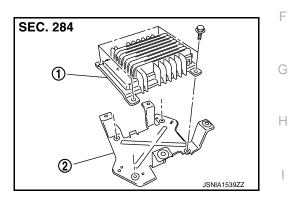
**Exploded View** 

**REMOVAL** 



1. BOSE amp.

#### **DISASSEMBLY**



- 1. BOSE amp.
- Bracket

## Removal and Installation

#### **REMOVAL**

- Remove luggage floor spacer (LH). Refer to <a href="INT-28">INT-28</a>, "Exploded View".
- Remove BOSE amp. mounting nuts.
- Disconnect connector and remove BOSE amp.

#### **INSTALLATION**

Installation is the reverse order of removal.

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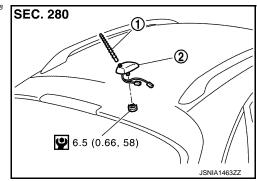
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## **ANTENNA BASE**

# **Exploded View**

INFOID:0000000003928768



- 1. Antenna rod
- 2. Antenna base

Refer to GI-4, "Components" for symbols in the figure.

#### Removal and Installation

INFOID:0000000003928769

#### **REMOVAL**

- 1. Remove headlining (rear). Keep a service area. Refer to <a href="INT-23">INT-23</a>, "Exploded View".
- 2. Remove antenna base mounting nut.
- 3. Disconnect connector and remove antenna base.

#### **INSTALLATION**

Installation is the reverse order of removal.

Antenna base mounting nut 
9: 6.5 N·m (0.66 kg-m, 58 in-lb)

#### **CAUTION:**

Be careful about tightening torque. Antenna sensitivity becomes poor, and when it is excessive, roof panel may be deformed, when roof antenna mounting nut tightening torque is loose.

## **MULTIFUNCTION SWITCH**

#### < REMOVAL AND INSTALLATION >

### [NAVIGATION (SINGLE MONITOR)]

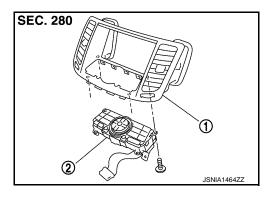
## **MULTIFUNCTION SWITCH**

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

DISASSEMBLY



- 1. Cluster lid D
- 2. Multifunction switch

### Removal and Installation

INFOID:0000000003928771

#### **REMOVAL**

- 1. Remove cluster lid D. Refer to IP-11, "Exploded View".
- 2. Remove multifunction switch mounting screws.
- 3. Disconnect connector and remove multifunction switch.

#### **INSTALLATION**

Installation is the reverse order of removal.

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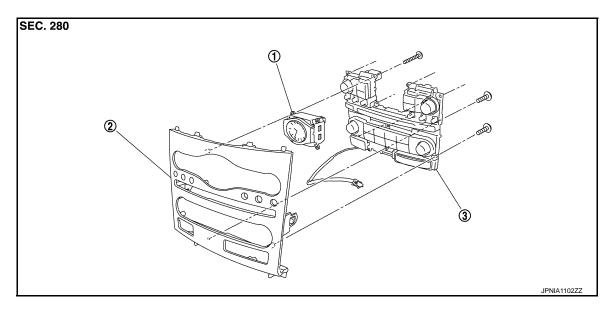
## PRESET SWITCH

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

#### DISASSEMBLY



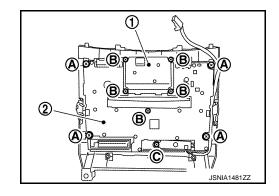
1. Clock 2. Cluster lid C 3. Preset switch

### Removal and Installation

INFOID:0000000003928773

#### **REMOVAL**

- Remove cluster lid C. Refer to <u>IP-11, "Exploded View"</u>.
- 2. Remove preset switch mounting screws.
- 3. Disconnect connector and remove preset switch.
  - 1. Clock
  - 2. Preset switch
  - A. Screw
  - B. Screw
  - C. Screw



#### **INSTALLATION**

Installation is the reverse order of removal.

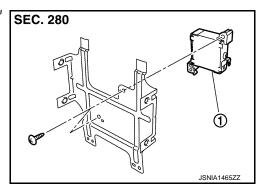
#### NOTE:

When installing preset switch, do not allow the print wire that connects preset switch and multifunction switch to get caught in between AV control unit and preset switch.

## **IPOD ADAPTER**

# **Exploded View**

INFOID:0000000003928774



1. iPod adapter

### Removal and Installation

INFOID:0000000003928775

#### **REMOVAL**

- 1. Remove front display unit with bracket. Refer to AV-580, "Removal and Installation".
- 2. Remove front display from display bracket.
- 3. Remove iPod adapter mounting screws.
- 4. Disconnect connector and remove iPod adapter.

### **INSTALLATION**

Install in the reverse order of removal.

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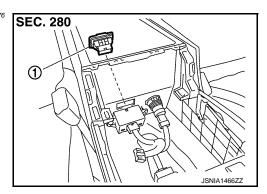
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## **IPOD CONNECTOR**

**Exploded View** 

INFOID:0000000003928776



iPod connector

## Removal and Installation

INFOID:0000000003928777

#### **REMOVAL**

- Remove console box assembly. Refer to <u>IP-22, "Exploded View"</u>.
- 2. Press pawl from the back of console finisher to remove iPod connector.

#### **INSTALLATION**

Install in the reverse order of removal.

### **AUXILIARY INPUT JACKS**

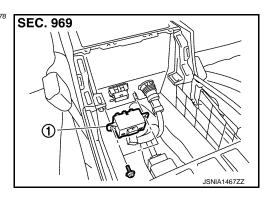
< REMOVAL AND INSTALLATION >

[NAVIGATION (SINGLE MONITOR)]

## **AUXILIARY INPUT JACKS**

**Exploded View** 

INFOID:0000000003928778



Auxiliary input jacks

### Removal and Installation

REMOVAL

- 1. Remove console box assembly. Refer to IP-22, "Exploded View".
- 2. Remove auxiliary mounting screws.
- 3. Disconnect connector and remove auxiliary input jacks.

#### **INSTALLATION**

Installation is the reverse order of removal.

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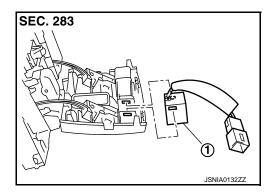
## **MICROPHONE**

Exploded View

**REMOVAL** 

Refer to INT-23, "Exploded View".

**DISASSEMBLY** 



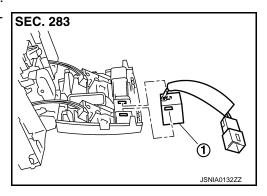
1. Microphone

### Removal and Installation

INFOID:0000000003928781

#### **REMOVAL**

- 1. Remove map lamp assembly. Refer to INT-23, "Exploded View".
- 2. Remove microphone (1), stretching pawls of map lamp assembly.



### **INSTALLATION**

Installation is the reverse order of removal.

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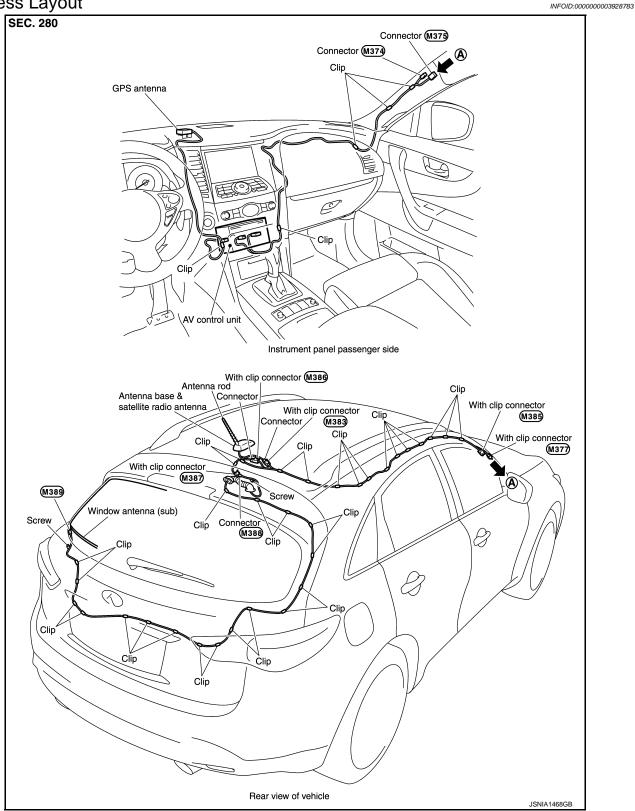
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## **GPS ANTENNA**

Exploded View

Harness Layout



## **GPS ANTENNA**

### < REMOVAL AND INSTALLATION >

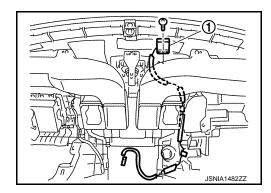
## [NAVIGATION (SINGLE MONITOR)]

## Removal and Installation

#### INFOID:0000000003928784

#### **REMOVAL**

- 1. Remove instrument panel. Refer to IP-11, "Exploded View".
- 2. Remove GPS antenna mounting screw.
- 3. Remove GPS antenna (1).



#### **INSTALLATION**

Installation is the reverse order of removal.

### AROUND VIEW MONITOR CONTROL UNIT

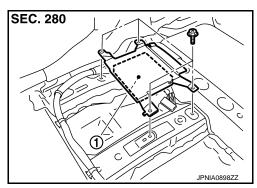
< REMOVAL AND INSTALLATION >

[NAVIGATION (SINGLE MONITOR)]

## AROUND VIEW MONITOR CONTROL UNIT

**Exploded View** 

INFOID:0000000003928785



. Around view monitor control unit

#### Removal and Installation

#### REMOVAL

- 1. Remove front seat (LH side). Refer to MIR-91, "DOOR MIRROR ASSEMBLY: Exploded View".
- Remove floor carpet. Keep a service area.
- 3. Remove around view monitor control unit mounting screws.
- Disconnect connector and remove around view monitor control unit.

#### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- Perform camera image calibration. Refer to <u>AV-279</u>, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement".
- Perform predicted course line center position adjustment. Refer to <u>AV-278</u>, "<u>PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT</u>: Special Repair Requirement".

#### **CAUTION:**

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

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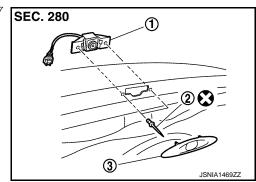
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## **FRONT CAMERA**

## **Exploded View**

INFOID:0000000003928787



- 1. Front camera
- 2. Rivet
- 3. Front camera finisher

Refer to GI-3, "Contents" for symbols in the figure.

#### Removal and Installation

INFOID:0000000003928788

#### **REMOVAL**

- 1. Remove front camera finisher.
- 2. Remove front camera mounting rivet.
- 3. Remove front camera.

#### **INSTALLATION**

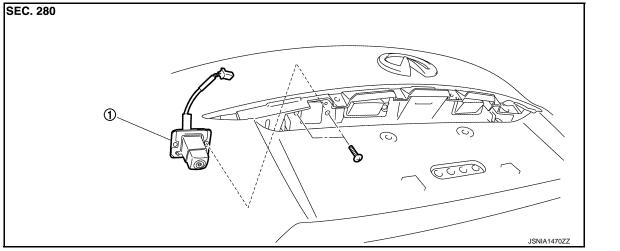
- 1. Installation is the reverse order of removal.
- Perform camera image calibration. Refer to <u>AV-279</u>, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement".

#### **CAUTION:**

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

## **REAR CAMERA**

## **Exploded View**



1. Rear camera

#### Removal and Installation

#### **REMOVAL**

- 1. Remove back door outside finisher upper. Refer to <a href="EXT-49">EXT-49</a>, "Exploded View".
- 2. Remove door handle cover. Refer to EXT-49, "Exploded View".
- 3. Remove rear camera mounting screws and rear camera harness connector.
- 4. Remove rear camera.

#### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- 2. Perform camera image calibration. Refer to <u>AV-279</u>, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement".

#### **CAUTION:**

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

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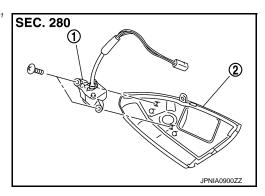
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INFOID:0000000003928790

## SIDE CAMERA LH

## **Exploded View**

INFOID:0000000003928791



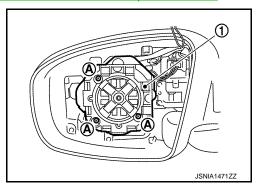
- 1. Side camera (LH)
- 2. Side camera finisher assembly

#### Removal and Installation

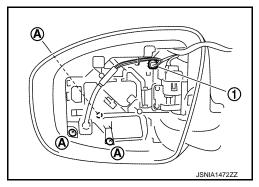
INFOID:0000000003928792

#### **REMOVAL**

- Remove glass mirror (driver side). Refer to MIR-91, "DOOR MIRROR ASSEMBLY: Exploded View".
- 2. Remove screws (A), and actuator connector, and then actuator (1).



- 3. Remove door mirror cover. Refer to MIR-91, "DOOR MIRROR ASSEMBLY: Exploded View".
- 4. Remove screws (A) and connector (1), and then remove side camera finisher assembly (LH).



- 5. Remove side camera (LH) mounting screws
- 6. Remove side camera (LH).

#### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- 2. Perform camera image calibration. Refer to <u>AV-279</u>, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement".

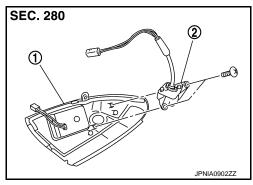
#### **CAUTION:**

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

## SIDE CAMERA RH

## **Exploded View**

INFOID:0000000003928793



- 1. Side camera finisher assembly [infrared LED (auxiliary lighting)]
- 2. Side camera (RH)

### Removal and Installation

INFOID:0000000003928794

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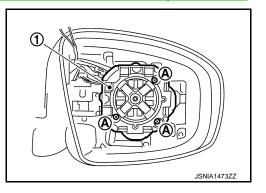
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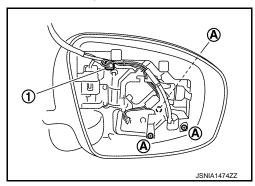
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# REMOVAL

- 1. Remove glass mirror (passenger side). Refer to MIR-91, "DOOR MIRROR ASSEMBLY: Exploded View".
- 2. Remove screws (A) and actuator connector, and then actuator (1).



- 3. Remove door mirror cover. Refer to MIR-91, "DOOR MIRROR ASSEMBLY: Exploded View".
- 4. Remove screws (A) and connector (1), and then remove Side camera finisher assembly (RH).



- 5. Remove side camera (RH) screws.
- 6. Remove side camera (RH).

#### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- 2. Perform camera image calibration. Refer to <u>AV-279</u>, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement".

#### **CAUTION:**

### **SIDE CAMERA RH**

#### < REMOVAL AND INSTALLATION >

[NAVIGATION (SINGLE MONITOR)]

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

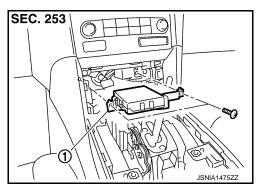
< REMOVAL AND INSTALLATION >

[NAVIGATION (SINGLE MONITOR)]

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

**Exploded View** 

INFOID:0000000003928795



1. Sonar control unit

### Removal and Installation

#### REMOVAL

- 1. Remove AV control unit. Refer to AV-579, "Removal and Installation".
- 2. Remove screws and connector, and then sonar control unit.

#### **INSTALLATION**

Install in the reverse order of removal.

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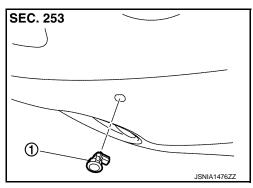
#### < REMOVAL AND INSTALLATION >

## **SONAR SENSOR**

**FRONT** 

FRONT: Exploded View

INFOID:0000000003928797



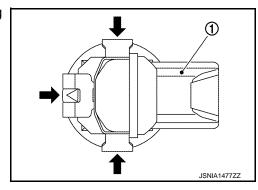
1. Sonar sensor (front)

## FRONT: Removal and Installation

INFOID:0000000003928798

#### **REMOVAL**

- 1. Remove fender protector. Keep a service area. Refer to <a href="EXT-25">EXT-25</a>, "FENDER PROTECTOR: Exploded View".
- 2. Remove sonar sensor connector.
- 3. Press the sonar sensor (1) outside the front bumper, pressing the metal clips on the back to the direction of black arrows.



#### **INSTALLATION**

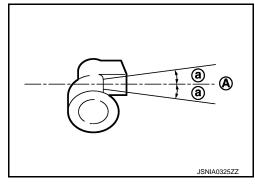
Install the bumper when the pawl engages.

#### **CAUTION:**

The connector direction is within  $\pm 10^{\circ}$  from the horizontal position when assembling the bumper.

A : Horizontal position

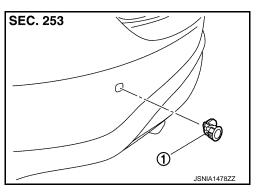
a : 10°



#### **REAR**

**REAR**: Exploded View

INFOID:0000000003928799

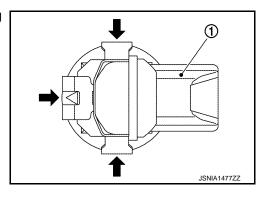


1. Sonar sensor (rear)

### **REAR**: Removal and Installation

REMOVAL

- 1. Remove sonar sensor connector.
- 2. Press the sonar sensor (1) outside the front bumper, pressing the metal clips on the back to the direction of black arrows.



#### **INSTALLATION**

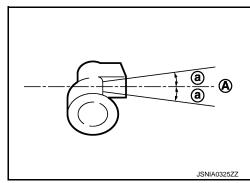
Install the bumper when the pawl engages.

#### **CAUTION:**

The connector direction is within  $\pm 10^\circ$  from the horizontal position when assembling the bumper.

A : Horizontal position

a :10°



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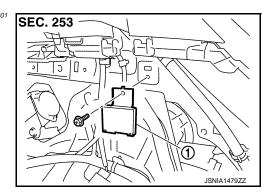
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## **BUZZER**

# **Exploded View**

INFOID:0000000003928801



1. Buzzer

## Removal and Installation

INFOID:0000000003928802

#### **REMOVAL**

- 1. Remove luggage side lower finisher (RH). Refer to <a href="INT-28">INT-28</a>. "Exploded View".
- 2. Remove buzzer mounting bolt.
- 3. Disconnect connector and remove buzzer.

#### **INSTALLATION**

Install in the reverse order of removal.

#### STEERING ANGLE SENSOR

< REMOVAL AND INSTALLATION >

[NAVIGATION (SINGLE MONITOR)]

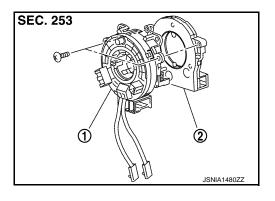
## STEERING ANGLE SENSOR

Exploded View

**REMOVAL** 

Refer to SR-8, "Exploded View".

DISASSEMBLY



- 1. Spiral cable
- 2. Steering angle sensor

## Removal and Installation

INFOID:0000000003928804

#### **REMOVAL**

- Remove spiral cable. Refer to <u>SR-8, "Exploded View"</u>.
- 2. Remove steering angle sensor mounting screws.
- 3. Remove steering angle sensor.

#### **INSTALLATION**

Installation is the reverse order of removal.

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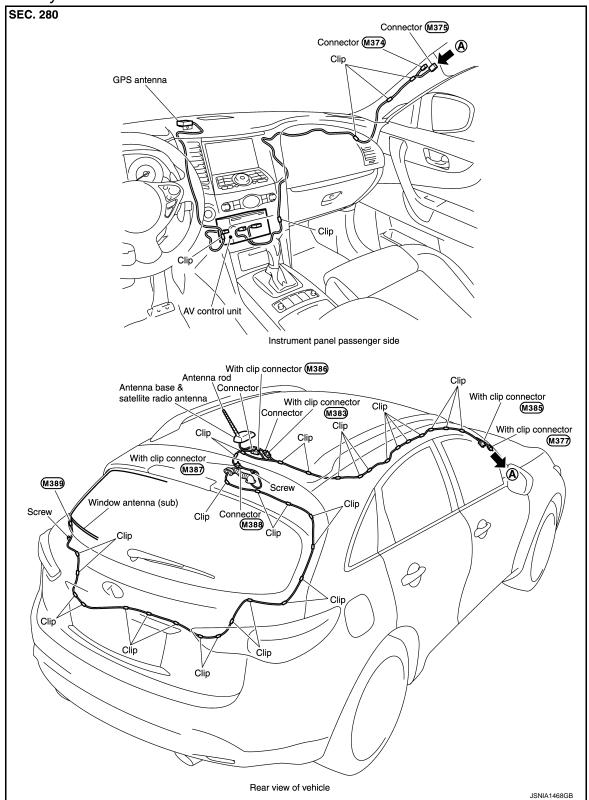
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## ANTENNA FEEDER

Harness Layout



# **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORKFLOW

Work Flow (Multi AV)

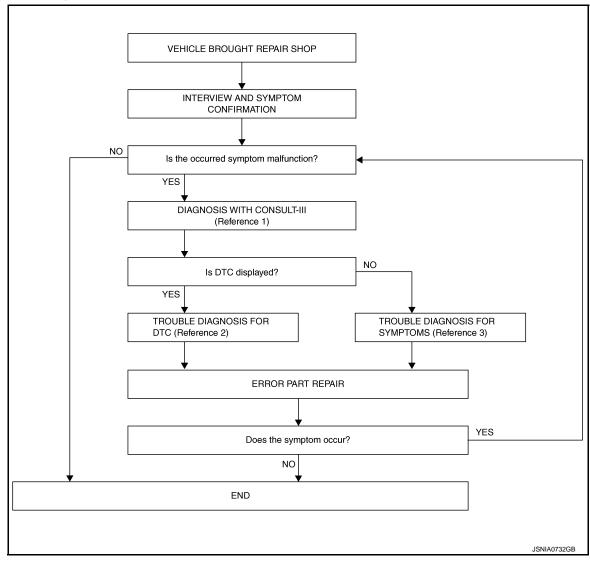
#### INFOID:0000000003940607

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#### **OVERALL SEQUENCE**



- Reference 1... Refer to AV-671, "CONSULT-III Function (MULTI AV)".
- Reference 2··· Refer to <u>AV-801</u>, "<u>DTC Index</u>".
- Reference 3... Refer to AV-1028, "Symptom Table".

#### **DETAILED FLOW**

## 1.INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

- Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred).
- Check the symptom.

#### Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

2.DIAGNOSIS WITH CONSULT-III

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#### DIAGNOSIS AND REPAIR WORKFLOW

#### < BASIC INSPECTION >

[NAVIGATION (TWIN MONITOR)]

Connect CONSULT-III and perform a self-diagnosis for "MULTI AV". Refer to <u>AV-671, "CONSULT-III Function (MULTI AV)"</u>.

#### NOTE:

Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed.

2. Check if any DTC is displayed in the self-diagnosis results.

#### Is DTC displayed?

YES >> GO TO 3. NO >> GO TO 4.

# 3. TROUBLE DIAGNOSIS FOR DTC

- 1. Check the DTC indicated in the self-diagnosis results.
- Perform the relevant diagnosis referring to the DTC Index. Refer to <u>AV-801, "DTC Index"</u>.

>> GO TO 5.

## 4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to <u>AV-1028</u>, "Symptom <u>Table"</u>.

>> GO TO 5.

## 5. ERROR PART REPAIR

- 1. Repair or replace the identified malfunctioning parts.
- 2. Perform a self-diagnosis for "MULTI AV" with CONSULT-III.

#### NOTE:

Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC has been indicated in the self-diagnosis results.

3. Check that the symptom does not occur.

#### Does the symptom occur?

YES >> GO TO 1.

NO >> INSPECTION END

Work Flow (Sonar)

#### INFOID:0000000003940608

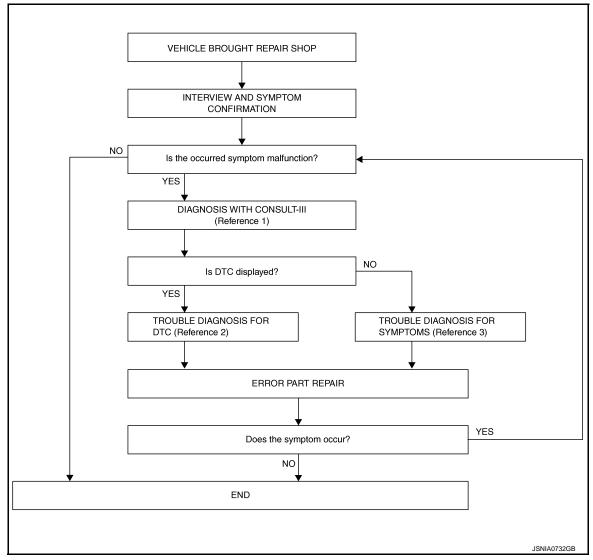
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#### **OVERALL SEQUENCE**



- Reference 1... Refer to AV-678, "CONSULT-III Function (SONAR)".
- Reference 2··· Refer to AV-1027, "DTC Index".
- Reference 3... Refer to AV-1028, "Symptom Table".

#### **DETAILED FLOW**

## 1.INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

- Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred).
- · Check the symptom.

#### Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

## 2.DIAGNOSIS WITH CONSULT-III

1. Connect CONSULT-III and perform a self-diagnosis for "SONAR". Refer to AV-678, "CONSULT-III Function (SONAR)".

#### NOTE:

Skip to step 4 of the diagnosis procedure if "SONAR" is not displayed.

Revision: 2009 March AV-611 2009 FX35/FX50

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### **DIAGNOSIS AND REPAIR WORKFLOW**

#### < BASIC INSPECTION >

[NAVIGATION (TWIN MONITOR)]

Check if any DTC is displayed in the self-diagnosis results.

#### Is DTC displayed?

YES >> GO TO 3. NO >> GO TO 4.

# 3.trouble diagnosis for dtc

- 1. Check the DTC indicated in the self-diagnosis results.
- 2. Perform the relevant diagnosis referring to the DTC Index. Refer to AV-1027, "DTC Index".

>> GO TO 5.

## 4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to <u>AV-1028</u>, "Symptom <u>Table"</u>.

>> GO TO 5.

#### 5. ERROR PART REPAIR

- 1. Repair or replace the identified malfunctioning parts.
- 2. Perform a self-diagnosis for "SONAR" with CONSULT-III.

#### NOTE:

Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC has been indicated in the self-diagnosis results.

3. Check that the symptom does not occur.

#### Does the symptom occur?

YES >> GO TO 1.

NO >> INSPECTION END

**INSPECTION AND ADJUSTMENT** [NAVIGATION (TWIN MONITOR)] < BASIC INSPECTION > INSPECTION AND ADJUSTMENT Α ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: De-В scription Always correct the center position of the predicted course line after disconnecting the battery negative termi-ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement INFOID:0000000003825408 D 1.CORRECTION OF CENTER POSITION OF PREDICTED COURSE LINE Refer to the following for details. Е >> Refer to AV-613, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Special F Repair Requirement". ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description INFOID:0000000003825409 When around view monitor control unit is replaced, the center position of predicted course line shall be corrected. Н ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement INFOID:0000000003825410 1.CORRECTION OF CENTER POSITION OF PREDICTED COURSE LINE Refer to the following for details. >> Refer to AV-613, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Special Repair Requirement". PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Description INFOID:0000000003825411

Adjust the center position of the predicted course line of the around view monitor if it is shifted.

PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Special Repair Requirement

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1.STEERING OPERATION

Steer the steering wheel to the leftmost and rightmost ends.

>> GO TO 2.

2.DRIVING

Drive the vehicle straight ahead 100 m (328.1 ft) or more at a speed of 30 km/h (18.6 MPH) or more.

>> END
CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

# CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Description

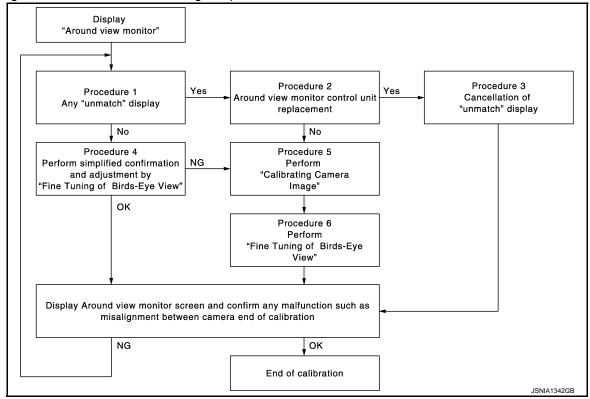
INFOID:0000000003825413

- Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.
- Align the white lines on the road near the vehicle at the boundary of each camera image by this camera calibration. The white lines far from the vehicle may not be aligned at the boundary of each camera image. The farther the line, the greater the difference is.

# CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement

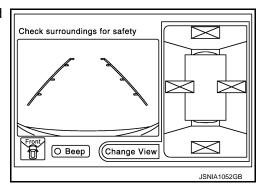
#### Calibration flowchart

Following the flowchart shown in the figure, perform the calibration.



#### NOTE:

In the un-match display, the un-match camera position is indicated as "\sum "" on the birds-eye view.



#### Calibration procedure

1. AROUND VIEW MONITOR SCREEN CONFIRMATION

#### **INSPECTION AND ADJUSTMENT**

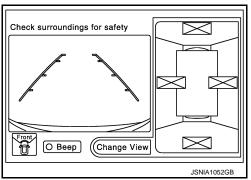
#### < BASIC INSPECTION >

#### [NAVIGATION (TWIN MONITOR)]

Check that there is the un-match display in any camera.

#### Is the un-match display visible?

YES >> GO TO 2. NO >> GO TO 4.



# 2. CHECK THAT AROUND VIEW MONITOR CONTROL UNIT IS REPLACED

Check that the around view monitor control unit is replaced.

Is the around view monitor control unit replaced?

YES >> GO TO 3. NO >> GO TO 5.

3. Release un-match display (perform only when the around view monitor control unit is replaced)

- 1. Select "Camera Cont." of Confirmation/ Adjustment mode, and then set to "Calibrating Camera Image"
- Press the "ENTER" switch of the multifunction switch on each screen of "Rear Camera", "Front Camera", "Dr-Side Camera", "Pass-Side Camera".

#### **CAUTION:**

- Do never operate the center dial and up/down/left/right switches. Only press the "ENTER" switch.
- Never perform "Initialize Camera Image Calibration".
- 3. Display the around view monitor screen, and check that there is no malfunction such as a difference between each camera image.

# 

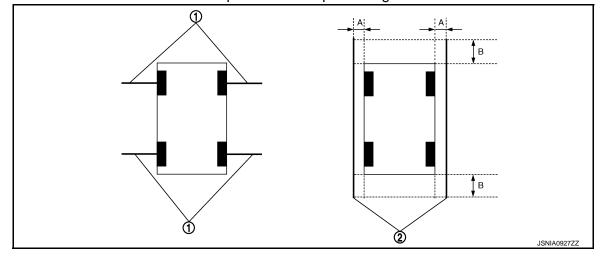
#### Is there a malfunction?

YES >> Calibration end NO >> GO TO 1.

#### 4. PERFORM SIMPLIFIED CONFIRMATION/ADJUSTMENT BY "FINE TUNING OF BIRDS-EYE VIEW"

- 1. Put target line 1 on the ground beside each axle using packing tape, etc.
- Put target lines 2 equal to the vehicle total length + approximately 1.0 m (39.3 in) from the vehicle side (right and left) at approximately 30 cm (11.8 in) away from the vehicle (make the line as parallel with the vehicle as possible).

#### Preparation of simplified target line



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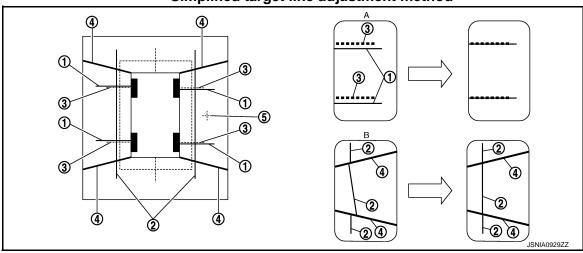
Marker for target line 1

- 1. Target lines 1
- A. Approx. 30 cm (11.8in)
- Target lines 2
- B. Approx. 1.0 m (39.3 in)
- Select "Camera Cont." of Confirmation/ Adjustment mode, and then set to "Fine Tuning of Birds-Eye Viewmode.
- 4. Select left and right cameras by pressing the "CAMERA" switch, and perform the following confirmation.
- Check that target line 1 is aligned with the marker on the screen. Overlap the line aligned to the marker with the upper/lower switches if necessary.
- Check if there is a difference between target lines 2 between cameras. Adjust target lines 2 to be straight lines by operating the center dial and left/right switches if necessary.

#### CAUTION:

- Never adjust the front camera and rear camera. Only adjust the right and left cameras.
- Operate the center dial slowly because the changing of the screen takes approximately 1 second.

#### Simplified target line adjustment method



- 1. Target lines 1
- 4. Boundary between cameras
- A. Adjustment method for target lines 1 (right)
- 2. Target lines 2
- 5. Crosshairs cursor (mark indicated the selected camera)
- B. Adjustment method for target lines 2 (right)
- Adjust left and right cameras. Check that the difference between target line 1 and the marker on the screen, and between target lines 2 is solved.

#### NOTE:

- It can be initialized to the NISSAN factory default condition with "Initialize Camera Image Calibration" of "Calibrating Camera Image".
- The adjustment value is cancelled on this mode by performing "Initialize Camera Image Calibration".

#### Is the difference corrected?

YES >> Finish the writing to around view monitor control unit by pressing "ENTER" switch.

NO >> GO TO 5.

#### **5.**PERFORM "CALIBRATING CAMERA IMAGE"

#### Preparation of target line

- 1. Hang a string with a weight as shown in the figure. Put the points FM0, RM0 (mark) on the ground at the center of the vehicle front end and rear end with white packing tape or a pen.
- 2. Route the vinyl string under the vehicle, and then pull and fix it on the point approximately 1.0 m (39.9 in) to the front and rear of the vehicle through the points FM0 and RM0 using packing tape.

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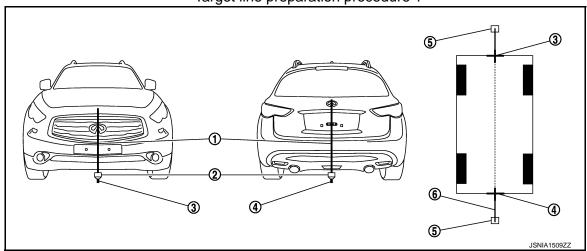
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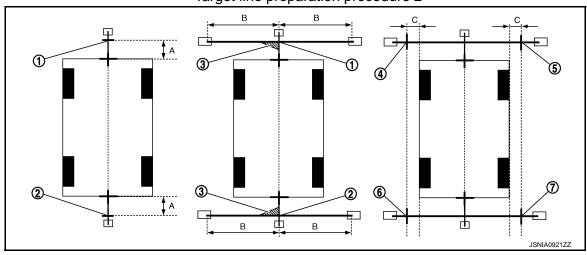
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#### Target line preparation procedure 1



- Thread 1.
- Point RM0 (mark)
- Weight 2.
- Packing tape (to fix the vinyl string)
- Point FM0 (mark) 3.
- 6. Vinyl string
- Put the points FM and RM (mark) 75 cm (29.5 in) from the points FM0 and RM0 individually.
- Route the vinyl string through the points FM and RM using a triangle scale, and then fix it at approximately 1.5 m (59 in) on both sides with packing tape.
- Put the points FL, FR, RL, and RR (mark) to both right and left [vehicle width / 2 + 30 cm (11.8 in)] from the points FM and RM.

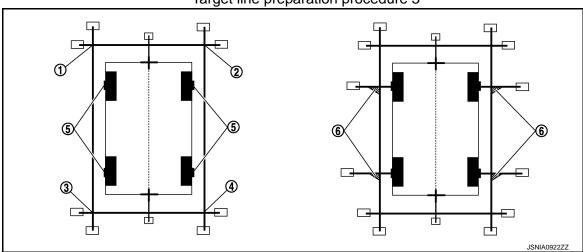
#### Target line preparation procedure 2



- Point FM
- Point FL (mark) 4.
- 7. Point RR (mark)
- 75 cm (29.5 in)

- Point RM 2.
- Point FR (mark)
- Approx. 1.5 m (59 in)
- Triangle scale 3.
- Point RL (mark)
  - 30 cm (11.8 in)
- [Vehicle width/ 2 + 30 cm (11.8 in) from the points FM and RM]
- Draw the lines of the points FL RL and FR RR with vinyl string, and fix it with packing tape.
- Put a mark on the center of each axle, draw vertical lines to the lines of the points FL RL and FR RR from the marks on the center of the axle using a triangle scale, and then fix the lines using packing tape.

#### Target line preparation procedure 3



Point FL
 Point RR

- 2. Point FR
- 5. Center position of axle
- Point RL
- 6. Triangle scale

Perform "Calibrating Camera Image"

- Select "Camera Cont." of "Confirmation/ Adjustment" mode, and then set to "Calibrating Camera Image" mode.
- Overlap the target lines drawn on the ground with the calibration marker on the screen by operating the center dial and upper/ lower/left/right switches of multifunction switch on each screen of "Rear Camera", "Pass-Side Camera", "Front Camera", "Dr-Side Camera".

Adjustment range

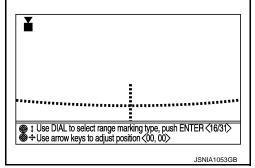
Rotation direction (Center : 31 patterns (16 on the dial) center)

Upper/lower direction (up- : -99 - 99

per/lower switch)

Left/right direction (left/right : -99 - 99

switch)



"Writing..." is displayed by pressing the "ENTER" switch, and then the adjustment result is written to the around view monitor control unit.

#### **CAUTION:**

Check that "Writing..." is displayed. Do never perform other operations while "Writing..." is displayed.

>> GO TO 6.

# 6. PERFORM "FINE TUNING OF BIRDS-EYE VIEW"

This mode is designed to align the boundary between each camera image that could not be aligned in the "Calibrating Camera Image" mode.

1. Select "Camera Cont." of "Confirmation/ Adjustment" mode, and then set to "Fine Tuning of Birds-Eye View" mode.

#### **INSPECTION AND ADJUSTMENT**

The adjustment value is cancelled on this mode by performing "Initialize Camera Image Calibration".

#### < BASIC INSPECTION >

#### [NAVIGATION (TWIN MONITOR)]

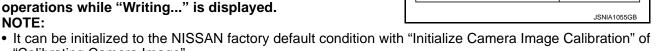
Operate the center dial and upper/lower/left/right switch to overlap the marker on the screen and the target lines on the ground.

Move the "+"- mark on the camera position to adjustment by pressing the "CAMERA" switch.

3. When the target line is overlapped on the marker, press the "ENTER" switch to write the adjustment result to the around view monitor control unit.

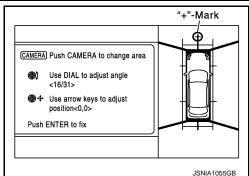
#### **CAUTION:**

Check that "Writing..." is displayed. Do never perform other operations while "Writing..." is displayed.



>> Calibration end

"Calibrating Camera Image".



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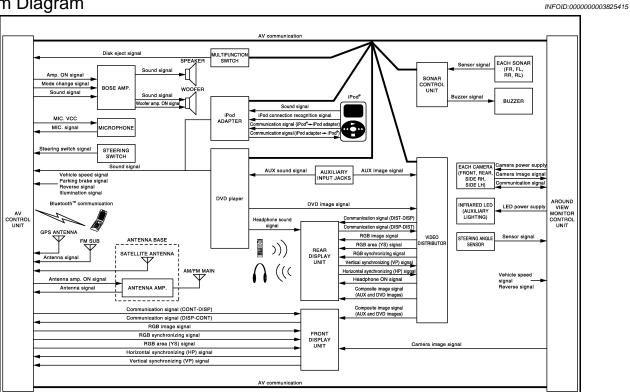
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# SYSTEM DESCRIPTION

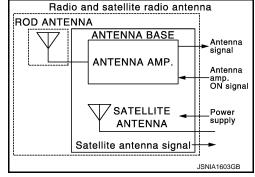
#### **MULTI AV SYSTEM**

System Diagram



#### NOTE:

- The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.
- A radio antenna base integrated with radio antenna and satellite radio antenna is adopted.



JSNIA1383GB

# System Description

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Multi AV system means that the following systems are integrated.

System name	System explanation
AUDIO SYSTEM	AV-627, "System Description"
NAVIGATION SYSTEM	AV-632, "System Description"
MOBILE ENTERTAINMENT SYSTEM	AV-637, "System Description"
AROUND VIEW MONITOR SYSTEM	AV-641, "System Description"
CAMERA ASSISTANCE SONAR SYSTEM	AV-651, "System Description"

#### [NAVIGATION (TWIN MONITOR)]

System name	System explanation			
VEHICLE INFORMATION SYSTEM	<ul> <li>Status of audio, climate control system, fuel economy, maintenance and navigation are displayed.</li> <li>AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM, unified meter and A/C amp.</li> <li>AV control unit is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> </ul>			
HANDS-FREE PHONE SYSTEM	Refer to the following "HANDS-FREE PHONE SYSTEM".			
AUXILIARY INPUT SYSTEM	Refer to the following "AUXILIARY INPUT SYSTEM".			
VOICE RECOGNITION SYSTEM	Refer to the following "VOICE RECOGNITION SYSTEM".			
TOUCH PANEL SYSTEM	Refer to the following "TOUCH PANEL SYSTEM".			

- AV control unit function by transmitting/receiving data one by one with each unit (slave unit) that configures them completely as a master unit by connecting between units that configure MULTI AV system with two AV communication lines (H, L).
- Around view monitor control unit transmits/receives the data signal with sonar control unit and controls sonar control unit. Around view monitor control unit transmits the information received from sonar control unit to AV control unit.
- Two AV communication lines (H, L) adopt a twisted pair line that is resistant to noise.
- AV control unit is connected by CAN communication, and it receives data signals from ECM, unified meter and A/C amp. It computes and displays fuel economy information value with the obtained information. The transmitting/receiving of data signal is performed by BCM. In addition, it transmits the required signal of vehicle setting and receives the response signal.
- AV control unit is connected with front display unit and serial communication, and it transmits the required signal of display and display control and receives the response signal from front display unit.

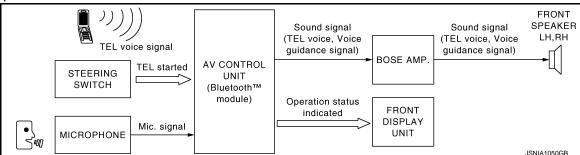
#### NOTE:

AV control unit can perform CONSULT-III self-operating function and on board self-diagnosis.

- CONSULT-III self diagnosis: Refer to AV-671, "CONSULT-III Function (MULTI AV)".
- On board self diagnosis: Refer to AV-656, "Diagnosis Description".

#### HANDS-FREE PHONE SYSTEM

- Hands-free communication can be operated by connecting using Bluetooth<sup>™</sup> with cellular phone.
- Operation is performed by steering switch, and operating condition is indicated on display.
- Guide sound that is heard during operation is input from AV control unit to BOSE amp. and is output from front speakers.



#### When a Call is Originated

Spoken voice sound output from the microphone (Mic. Signal) is input into AV control unit. AV control unit outputs to cellular phone with Bluetooth<sup>™</sup> communication as a TEL voice signal. Voice sound is then heard by the other party.

#### When Receiving a Call

Voice sound is input to one's own cellular phone from the other party. TEL voice signal is output to front speakers, and the signal is input to BOSE amp. via AV control unit by establishing Bluetooth<sup>™</sup> communication from cellular phone.

#### AUXILIARY INPUT SYSTEM

Image and sound can be output from an external device by connecting a device with auxiliary input jacks.

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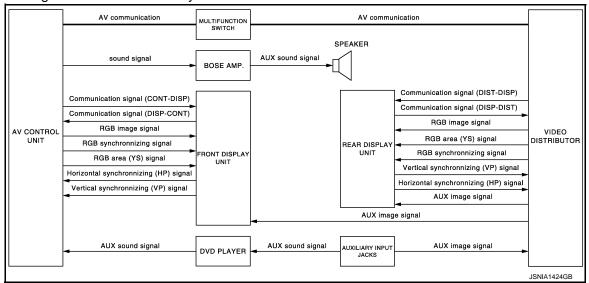
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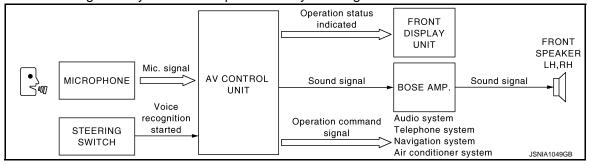
#### [NAVIGATION (TWIN MONITOR)]

• Operation can be performed with multifunction switch and steering switch. Multifunction switch transmits operation signal to AV control unit by AV communication.



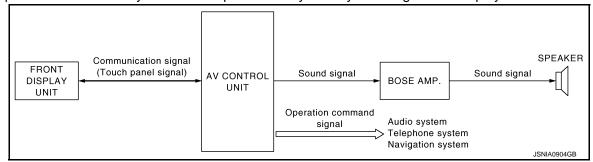
#### **VOICE RECOGNITION SYSTEM**

- Each operation of multi AV system can be performed by inputting sound to microphone.
- Start of sound recognition system can be performed by steering switch.



#### **TOUCH PANEL SYSTEM**

Each operation of multi AV system can be performed by directly touching a front display unit.



# **Component Parts Location**

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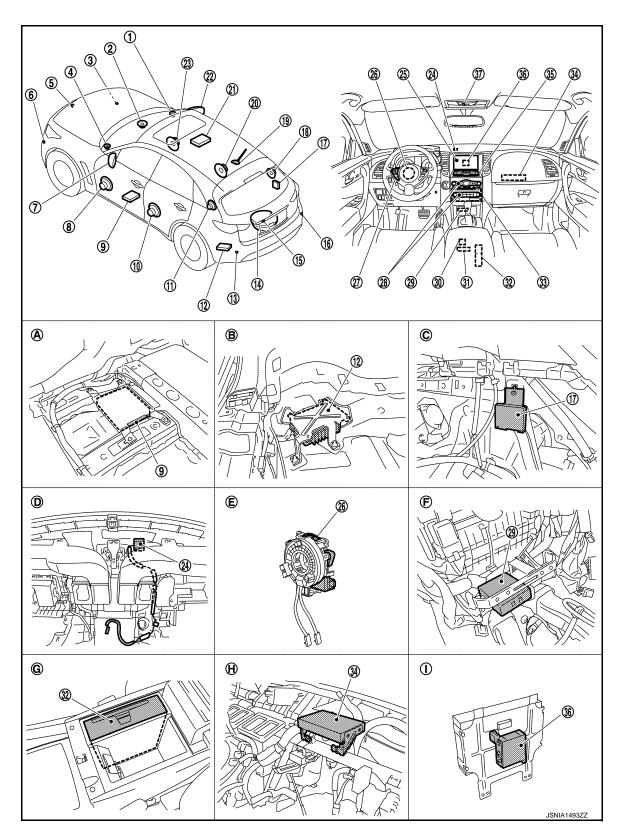
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- 1. Front squawker RH
- 4. Front squawker LH
- 7. Side camera LH
- 10. Rear door speaker LH
- 2. Center speaker
- 5. Front camera
- 8. Front door speaker LH
- 11. Rear squawker LH
- 3. Corner sensor front RH
- 6. Corner sensor front LH
- 9. Around view monitor control unit
- 12. BOSE amp.

#### **MULTI AV SYSTEM**

# < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

<u> </u>	512m 5200m 110m			_	· ·-
13.	Corner sensor rear LH	14.	Woofer	15.	Rear camera
16.	Corner sensor rear RH	17.	Buzzer	18.	Rear squawker RH
19.	Antenna base (antenna amp. and satellite antenna)	20.	Rear door speaker RH	21.	Rear display unit
22.	Side camera RH and infrared LED (auxiliary lighting)	23.	Front door speaker RH	24.	GPS antenna
25.	Front display unit	26.	Steering angle sensor	27.	Steering switch
28.	Preset switch	29.	Sonar control unit (with around view monitor)	30.	iPod connector
31.	Auxiliary input jacks	32.	DVD player	33.	AV control unit
34.	Video distributor	35.	Multifunction switch	36.	iPod adapter
37.	Microphone				
A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
D.	Instrument panel rear side	E.	Spiral cable part	F.	Console pocket assembly removed condition
G.	In center console	H.	Instrument panel assembly removed condition	I.	Rear view of the front display unit

# **Component Description**

INFOID:0000000003825418

Part name	Description				
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>				
FRONT DISPLAY UNIT	<ul> <li>Front display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal is input from AV control unit (RGB, RGB area and RGB synchronizing).</li> <li>Composite image signal (DVD and auxiliary images) is input from the video distributor.</li> <li>Camera image signal input to around view monitor control unit.</li> <li>Synchronize signal (HP, VP) is output to AV control unit.</li> <li>Touch panel function can be operated for each system by touching a display directly.</li> </ul>				
REAR DISPLAY UNIT	<ul> <li>Rear display image is controlled by the serial communication from video distributor.</li> <li>RGB image signal is input from video distributor (RGB image and RGB area).</li> <li>Composite image signal (DVD and auxiliary images) is input from the video distributor.</li> <li>Synchronize signal (HP, VP) is output to video distributor.</li> <li>It receives the DVD/AUX sound signal from the DVD player, and then transmits it to the headphones.</li> <li>It operates by receiving the headphone ON signal from the video distributor.</li> </ul>				
VIDEO DISTRIBUTOR	<ul> <li>It receives the image signal from the DVD player, and auxiliary input jack, and then transmits it to the front display unit and rear display unit.</li> <li>It transmits headphone ON signal to rear display unit.</li> </ul>				

#### **MULTI AV SYSTEM**

#### < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

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Part name	Description
DVD PLAYER	It transmits the playback DVD image signal to the video distributor. It also transmits the input AUX sound signal to the AV control unit.
BOSE AMP.	<ul> <li>Inputs power (amp. ON) and sound signal from AV control unit, and outputs sound signal to woofer and each speaker.</li> <li>Input "Driver's Audio Stage" mode change signal from AV control unit.</li> <li>Woofer amp. ON signal is transmitted to woofer.</li> </ul>
FRONT DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>
REAR DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>
FRONT SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
REAR SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
CENTER SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
WOOFER	<ul> <li>Inputs power (amp. ON) and sound signal from BOSE amp.</li> <li>Outputs low-frequency sound.</li> </ul>
MULTIFUNCTION SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio, auxiliary input and navigation operations are integrated.</li> <li>Connected with preset switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> </ul>
PRESET SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio and air conditioner operations are integrated.</li> <li>Connected with multifunction switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> <li>The disk ejection operating signal is performed by hardwire.</li> </ul>
AROUND VIEW MONITOR CONTROL UNIT	<ul> <li>It supplies power to front camera, rear camera, and side camera. And then it superimposes the images from each camera and outputs them to front display unit.</li> <li>Superimpose the guiding line, predicted course line and sonar indicator to the camera image that outputs to front display unit.</li> <li>It performs the reception/transmission of communication signal with each camera.</li> <li>Inputs the sensor signal from steering angle sensor, and then controls the predicted course line.</li> <li>It transmits the sonar operation signal from sonar control unit and receives the sonar information from sonar control unit via AV communication.</li> <li>It transmits the information received/transmitted with sonar control unit via AV communication to AV control unit.</li> </ul>
FRONT CAMERA	It inputs the power supply from around view monitor control unit and outputs the image of the vehicle front to around view monitor control unit.     It performs the reception/transmission of the communication signal with around view monitor control unit.
REAR CAMERA	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle rear to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
SIDE CAMERA LH	It inputs the power supply from around view monitor control unit and outputs the image of the vehicle LH to around view monitor control unit.     It performs the reception/transmission of the communication signal with around view monitor control unit.
SIDE CAMERA RH	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle RH to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>

Revision: 2009 March AV-625 2009 FX35/FX50

#### **MULTI AV SYSTEM**

#### < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

Part name	Description
INFRARED LED (AUXILIARY LIGHTING)	<ul> <li>It illuminates around the front RH wheel by the power supply from around view monitor control unit to improve nighttime visibility of Front-Side view.</li> <li>The infrared LED is an invisible light ray.</li> </ul>
STEERING SWITCH	<ul> <li>Operations for audio, hands-free phone, audio response and navigation, etc. are possible.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>
STEERING ANGLE SENSOR	Steering signal necessary for predicted course line control is transmitted to camera control unit or around view monitor control unit.
MICROPHONE	<ul> <li>Used for hands-free phone operation and voice recognition.</li> <li>Mic signal is transmitted to AV control unit.</li> <li>Power (Mic VCC) is supplied from AV control unit.</li> </ul>
AUXILIARY INPUT JACKS	Image signal of auxiliary input is output to video distributor, and sound signal is output to DVD player.
GPS ANTENNA	GPS signal is received and transmitted to AV control unit.
ANTENNA BASE	<ul> <li>A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted. ANTENNA AMP.</li> <li>Radio signal received by rod antenna is amplified and transmitted to AV control unit.</li> <li>Power (antenna amp. ON signal) is supplied from AV control unit. SATELLITE RADIO ANTENNA</li> <li>Receives satellite radio waves and outputs it to AV control unit.</li> </ul>
iPod ADAPTER	<ul> <li>Inputs iPod sound signal from iPod<sup>®</sup>, and outputs iPod sound signal to AV control unit.</li> <li>Receiving/transmitting of iPod<sup>®</sup> operation signals are performed as follows:         <ul> <li>between AV control unit and iPod adapter: AV communication.</li> <li>between iPod<sup>®</sup> and iPod adapter: serial communication.</li> </ul> </li> </ul>
SONAR CONTROL UNIT	<ul> <li>It is connected with around view monitor control unit via AV communication and receives the sonar operation signal from around view monitor control unit.</li> <li>It transmits the sonar detection status to around view monitor control unit via AV communication.</li> <li>It judges the warning level according to the signal from corner sensor and outputs the buzzer drive signal.</li> <li>Trouble diagnosis is supported with CONSULT-III (K-LINE).</li> </ul>
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to sonar control unit
BUZZER	The warning buzzer outputs with the signal from sonar control unit.

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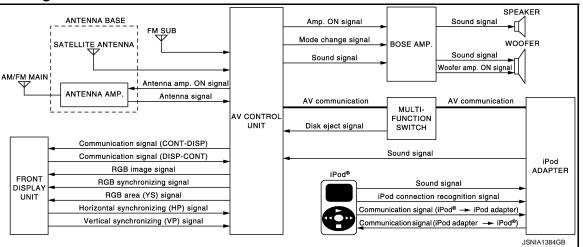
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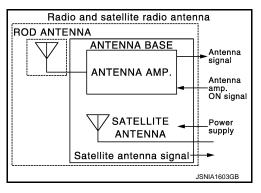
#### **AUDIO SYSTEM**

System Diagram



#### NOTE:

A radio antenna base integrated with radio antenna and satellite radio antenna is adopted.



# System Description

The audio system is equipped with the following functions. Each function is operated by multifunction switch, preset switch, touch panel, steering switch or audio recognition. Operation status of AUDIO is indicated at display.

Function
AM/FM radio
Satellite radio
CD
Music Box (Hard Disk Drive)
CF (Compact Flash)
iPod connection
Driver's Audio Stage

#### **FUNCTION DESCRIPTION**

#### Operating Signal

Audio system operation can be performed with multifunction switch, preset switch, steering switch, touch panel function or voice recognition function.

- Operating signal is transmitted to AV control unit with AV communication when it is operated by multifunction switch or preset switch. The disk ejection operating signal is performed by hardwire.
- Operating signal is transmitted to AV control unit with steering switch signal when it is operated by steering switch.
- Refer to AV-620, "System Description" for explanation of voice recognition function and touch panel function.

Screen Display

#### AUDIO SYSTEM

#### < SYSTEM DESCRIPTION >

#### [NAVIGATION (TWIN MONITOR)]

- The display is switched by communication signal between front display unit and AV control unit.
- The image signal that displays operating status is performed by the RGB image signal, RGB area signal and RGB synchronizing signal.

#### AM/FM Radio Mode

- AM/FM radio tuner is built into AV control unit.
- Audio signal is received by rod antenna, next it is amplified by antenna amp., and finally it is input into AV
  control unit. The FM sub antenna is installed on the back door window glass and AV control unit receives
  audio signal.
- Audio signal is input to BOSE amp. and BOSE amp. outputs to woofer and each speaker for AV control unit.

#### Satellite Radio Mode

- Satellite radio tuner is built into AV control unit.
- Audio signal (satellite radio) is received by satellite antenna, and it is input to AV control unit. AV control unit outputs audio signal to BOSE amp. The signal is also outputted from BOSE amp. to both woofer and each speaker.

#### CD Mode

- CD function is built into AV control unit.
- AV control unit outputs audio signals to BOSE amp. and BOSE amp. outputs to woofer and each speaker when CD is inserted to AV control unit.

#### Music Box Mode

- Music CD data is stored on HDD that is built into AV control unit, and it can be played.
- AV control unit outputs music (audio signal) that is stored on HDD to BOSE amp., and BOSE amp. outputs to woofer and each speaker.

#### CF Mode

- AV control unit has built in CF replay function.
- Music (audio signal) that is stored in CF outputs to BOSE amp. and BOSE amp. outputs to woofer and each speaker when CF is inserted into AV control unit.

#### iPod Connection

- Connect iPod<sup>®</sup> and iPod adapter with wire harness and iPod adapter inputs iPod sound signal from iPod<sup>®</sup>.
   When iPod mode is selected, iPod adapter outputs iPod sound signal to AV control unit. AV control unit outputs sound signal to BOSE amp., and BOSE amp. output sound signal to woofer and each speaker.
- Receiving/transmitting of iPod® operation signals are performed as follows:
- between AV control unit and iPod adapter: AV communication.
- between iPod® and iPod adapter: serial communication.
- The iPod<sup>®</sup> connection status can be recognized whether iPod adapter receives iPod connection recognition signal.
- The iPod adapter can charge iPod<sup>®</sup>.

#### Driver's Audio Stage Mode

- Driver's Audio Stage controls the speaker's output characteristics by BOSE amp. so that the driver seat is the center of sound.
- ON/OFF signals of Driver's Audio Stage are transmitted from AV control unit to BOSE amp. using mode change signal.

# **Component Parts Location**

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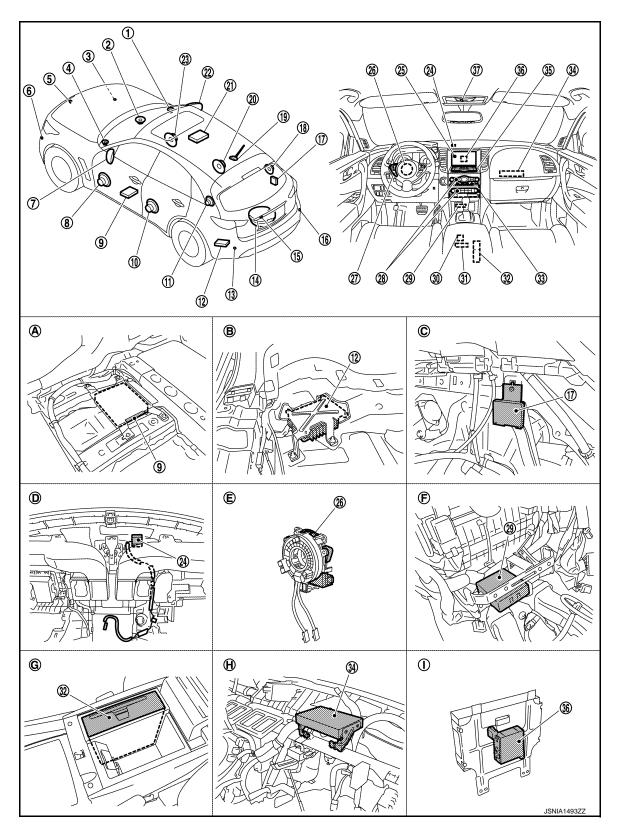
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- Front squawker RH
- 4. Front squawker LH
- 7. Side camera LH
- 10. Rear door speaker LH
- 2. Center speaker
- 5. Front camera
- 8. Front door speaker LH
- 11. Rear squawker LH
- 3. Corner sensor front RH
- 6. Corner sensor front LH
- 9. Around view monitor control unit
- 12. BOSE amp.

#### **AUDIO SYSTEM**

# < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

` • •	512m 5200m 110m				· · · · · · · · · · · · · · · · · · ·
13.	Corner sensor rear LH	14.	Woofer	15.	Rear camera
16.	Corner sensor rear RH	17.	Buzzer	18.	Rear squawker RH
19.	Antenna base (antenna amp. and satellite antenna)	20.	Rear door speaker RH	21.	Rear display unit
22.	Side camera RH and infrared LED (auxiliary lighting)	23.	Front door speaker RH	24.	GPS antenna
25.	Front display unit	26.	Steering angle sensor	27.	Steering switch
28.	Preset switch	29.	Sonar control unit (with around view monitor)	30.	iPod connector
31.	Auxiliary input jacks	32.	DVD player	33.	AV control unit
34.	Video distributor	35.	Multifunction switch	36.	iPod adapter
37.	Microphone				
A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
D.	Instrument panel rear side	E.	Spiral cable part	F.	Console pocket assembly removed condition
G.	In center console	H.	Instrument panel assembly removed condition	I.	Rear view of the front display unit

# **Component Description**

INFOID:0000000003825422

Part name	Description
AV CONTROL UNIT	<ul> <li>Receiving function of AM/FM/satellite radio, replaying function of CD, replaying/saving functions of music box (HDD), replaying function of CF and voice recognition function are integrated.</li> <li>Audio signal is output to BOSE amp. from each function.</li> </ul>
FRONT DISPLAY UNIT	<ul> <li>Front display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal (audio operation condition) is input from AV control unit.</li> <li>Touch panel function can be operated for each system by touching the display directly.</li> </ul>
iPod ADAPTER	<ul> <li>Inputs iPod sound signal from iPod<sup>®</sup>, and outputs iPod sound signal to AV control unit.</li> <li>Receiving/transmitting of iPod<sup>®</sup> operation signals are performed as follows:</li> <li>between AV control unit and iPod adapter: AV communication.</li> <li>between iPod<sup>®</sup> and iPod adapter: serial communication.</li> </ul>
BOSE AMP.	<ul> <li>Inputs power (amp. ON) and sound signal from AV control unit, and outputs sound signal to woofer and each speaker.</li> <li>Input "Driver's Audio Stage" mode change signal from AV control unit.</li> <li>Woofer amp. ON signal is transmitted to woofer.</li> </ul>
MULTIFUNCTION SWITCH	<ul> <li>Each audio operation can be operated.</li> <li>Connected with preset switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> </ul>
PRESET SWITCH	<ul> <li>Each audio operation can be operated.</li> <li>Connected with multifunction switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> <li>The disk ejection operating signal is performed by hardwire.</li> </ul>
STEERING SWITCH	<ul> <li>Each audio operation can be operated.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>
FRONT DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>
REAR DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>
FRONT SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
REAR SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>

#### **AUDIO SYSTEM**

#### < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

Part name	Description		
CENTER SPEAKER	Outputs sound signal from BOSE amp.     Outputs sound (high and mid range).		
WOOFER	Inputs power (amp. ON) and sound signals from BOSE amp.     Outputs low-frequency sound.		
ANTENNA BASE	A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.     ANTENNA AMP.     Radio signal received by rod antenna is amplified and transmitted to AV control unit.     Power (antenna amp. ON signal) is supplied from AV control unit.     SATELLITE RADIO ANTENNA     Receives satellite radio waves and outputs it to AV control unit.		

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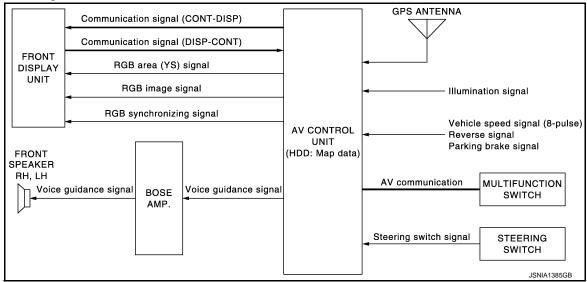
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#### NAVIGATION SYSTEM

#### System Diagram

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#### System Description

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#### DESCRIPTION

- AV control unit controls navigation function while GPS tuner has built-in map data, GYRO (angle speed sensor), on the HDD (Hard Disk Drive).
- AV control unit inputs operation signals with communication signals, through display (touch panel), multifunction switch and steering switch.
- Guide sound is output to front speaker through BOSE amp. from AV control unit when operating navigation system.
- The vehicle position is calculated through the GYRO (angle speed sensor), vehicle sensor, signal from GPS satellite and map data stored on HDD (Hard Disk Drive), and transmits the map image signal (RGB image, RGB area, RGB synchronizing) to display.

#### POSITION DETECTION PRINCIPLE

The navigation system periodically calculates the current vehicle position according to the following three types of signals.

- Travel distance of the vehicle as determined by the vehicle speed sensor
- Vehicle turning angle determined by the gyroscope (angular speed sensor)
- The travel direction of the vehicle determined by the GPS antenna (GPS information)

The current position of the vehicle is then identified by comparing the calculated vehicle position with map data, which is stored in the HDD (Hard Disk Drive) (map-matching), and indicated on the screen with the current location mark. More accurate data is used by comparing position detection results from GPS to map-matching.

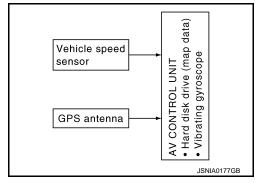
The current position is calculated by detecting the travel distance from the previous calculation point, and its direction change.

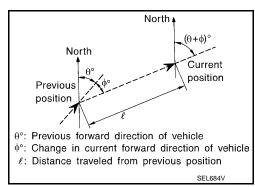
Travel distance

The travel distance is generated from the vehicle speed sensor input signal. The automatic distance correction function is adopted for preventing a miss-detection of the travel distance because of tire wear etc.

Travel direction

The gyroscope (angular velocity sensor) and GPS antenna (GPS information) detect a change in travel direction. Both have advantages and disadvantages as per the following descriptions.





#### [NAVIGATION (TWIN MONITOR)]

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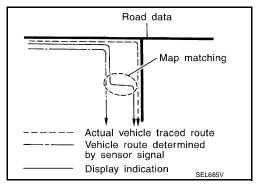
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Туре	Advantage	Disadvantage			
Gyroscope (angular velocity sensor)	The turning angle is precisely detected.	Errors are accumulated when driving a long distance without stopping.			
GPS antenna (GPS information)	The travel direction (North/South/East/West) is detected.	The travel direction is not precisely detected when driving slowly.			

Input signals are prioritized in each situation. However, this order of priority may change in accordance with more detailed travel conditions so that the travel direction is detected more accurately.

#### MAP-MATCHING

Map-matching repositions the vehicle on the road map when a new location is judged to be more accurate. This is done by comparing the current vehicle position (calculated by the normal position detection method) from the map data stored in the HDD (Hard Disk Drive).

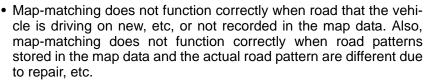


There is a possibility that the vehicle position may not be corrected in the following case, or when vehicle is driven over a certain distance or time in which GPS information is hard to receive. Manually correct the current location mark on the screen.

 In map-matching, several alternative routes are prepared and prioritized in addition to the road detected as currently being driven on.

Therefore, due to errors in the distance and/or direction, an incorrect road may be prioritized, and the current location mark may be repositioned to the incorrect road.

If two roads are running parallel, they are of the same priority. Therefore, the current location mark may appear on either of them alternately, depending on steering wheel movement and road configuration, etc.



Therefore, the map-matching function judges an other road as currently being driven on road if the road is not on the map, and displays the current location mark on it. Later, the current location mark may be repositioned if the correct road is detected.

• Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data is limited. Therefore, correction by map-matching is not possible when there is an excessive gap between current vehicle position and the position on the map.

Actual vehicle traced route
 Vehicle route indicated on map display
 Road data

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Actual vehicle traced route
 Vehicle route indicated on map display
 Road data
--- Newly constructed road
 (Road data not registered)

 JSNIA0180GB

GPS (GLOBAL POSITIONING SYSTEM)

Revision: 2009 March AV-633 2009 FX35/FX50

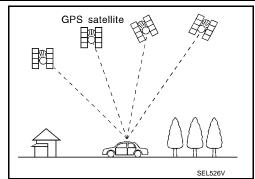
#### NAVIGATION SYSTEM

#### < SYSTEM DESCRIPTION >

#### [NAVIGATION (TWIN MONITOR)]

GPS (Global Positioning System) is developed for and is controlled by the US Department of Defense. The system utilizes GPS satellites (NAVSTAR), transmitting out radio waves while flying on an orbit around the earth at an altitude of approximately 21,000 km (13,048 mile).

The receiver calculates the travel position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves that four or more GPS satellites transmit (three-dimensional positioning). The GPS receiver calculates the travel position in two dimensions (latitude/longitude) with the previous altitude data if the GPS receiver receives only three radio waves (two-dimensional positioning). GPS position correction is not performed while the vehicle is stopped.



Accuracy of the GPS will deteriorate under the following conditions:

- In two-dimensional positioning, GPS accuracy will deteriorate when altitude of the vehicle position changes.
- The position of GPS satellite affects GPS detection precision. The position detection may not be precisely performed.
- The position detection is not performed if GPS receiver does not receive radio waves from GPS satellites.
   (Inside a tunnel, parking in a building, under an elevated highway etc.) GPS receiver may not receive radio waves from GPS satellites if any object is placed on the GPS antenna.

#### NOTE:

- The detection result has an error of approximately 10 m (32.8 ft) even with a high-precision three dimensional positioning.
- There may be cases when the accuracy is lowered and radio waves are stopped intentionally because the GPS satellite signal is controlled by the US trace control center.

# **Component Parts Location**

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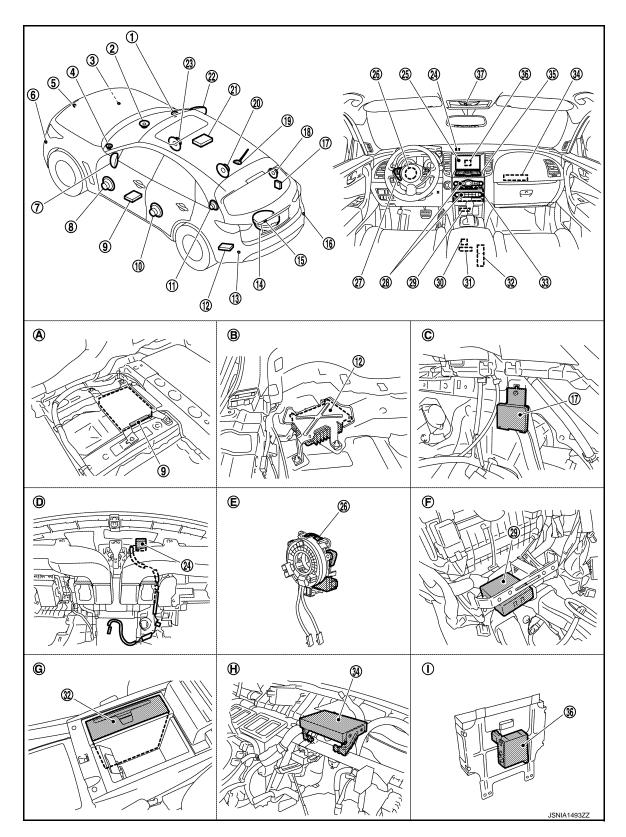
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- I. Front squawker RH
- 4. Front squawker LH
- 7. Side camera LH
- 10. Rear door speaker LH
- 2. Center speaker
- 5. Front camera
- 8. Front door speaker LH
- 11. Rear squawker LH
- 3. Corner sensor front RH
- Corner sensor front LH
- 9. Around view monitor control unit
- 12. BOSE amp.

#### **NAVIGATION SYSTEM**

# < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

_	0	STEW BEGORN HORY			-	· /-
	13.	Corner sensor rear LH	14.	Woofer	15.	Rear camera
	16.	Corner sensor rear RH	17.	Buzzer	18.	Rear squawker RH
	19.	Antenna base (antenna amp. and satellite antenna)	20.	Rear door speaker RH	21.	Rear display unit
	22.	Side camera RH and infrared LED (auxiliary lighting)	23.	Front door speaker RH	24.	GPS antenna
	25.	Front display unit	26.	Steering angle sensor	27.	Steering switch
	28.	Preset switch	29.	Sonar control unit (with around view monitor)	30.	iPod connector
	31.	Auxiliary input jacks	32.	DVD player	33.	AV control unit
	34.	Video distributor	35.	Multifunction switch	36.	iPod adapter
	37.	Microphone				
	A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
	D.	Instrument panel rear side	E.	Spiral cable part	F.	Console pocket assembly removed condition
	G.	In center console	H.	Instrument panel assembly removed condition	I.	Rear view of the front display unit

# **Component Description**

INFOID:0000000003825426

Part name	Description			
AV CONTROL UNIT	<ul> <li>It is the master unit that controls each operation of the Navigation system.</li> <li>The HDD (Hard Disk Drive) is built in, and the map data is stored in HDD.</li> <li>The RGB image signal (map information) is output to front display unit.</li> <li>The voice guidance signal is output to BOSE amp.</li> </ul>			
FRONT DISPLAY UNIT	<ul> <li>RGB image signal (map information) is input from AV control unit, and it is indicated on front display unit.</li> <li>Each operation of navigation can be performed by the touch panel function.</li> </ul>			
BOSE AMP.	Voice guidance signal is input from AV control unit, and it is output to front LH/RH speakers.			
FRONT DOOR SPEAKER	Value milder as almost from DOCF area is autout			
FRONT SQUAWKER	Voice guidance signal from BOSE amp. is output.			
MULTIFUNCTION SWITCH	<ul> <li>Each operation of navigation can be performed.</li> <li>Connected with preset switch via cables and operation signal is transmitted to AV control unit via AV communication.</li> </ul>			
STEERING SWITCH	<ul><li>Each operation of navigation, etc. can be performed.</li><li>Switch operating signal is output to AV control unit.</li></ul>			
GPS ANTENNA	GPS signal is received and is output to AV control unit.			

#### MOBILE ENTERTAINMENT SYSTEM

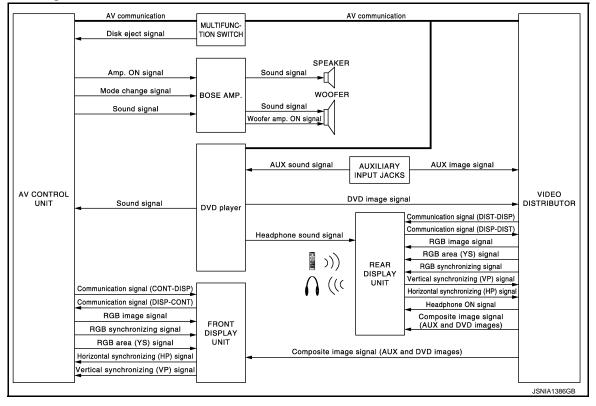
System Diagram

INFOID:0000000003825731

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# System Description

INFOID:0000000003825732

The passengers can enjoy watching DVD in the rear seat with the rear display unit. They can also listen to a DVD and AUX in the rear seat independently by cordless headphones.

#### **FUNCTION DESCRIPTION**

#### Operating Signal

The mobile entertainment system can be controlled by the rear seat remote controller.

It receives the operation signal of the rear seat remote controller by the remote control receiver and rear display unit, and then transmits it to the video distributor.

#### Screen Rear Display

- Switching of display is performed with serial communication between rear display unit and video distributor.
- The rear display unit receives the DVD/AUX image signal and RGB image signal from the video distributor.

#### Screen Front Display

- Switching of display is performed with serial communication between front display unit and AV control unit.
- The front display unit receives the DVD/AUX image signal from the video distributor.
- The front display unit receives the RGB image signal from the AV control unit.

#### **DVD Mode**

- The DVD player is connected to the AV control unit via AV communication and controlled by the AV control
- The DVD player sound signal is output to the AV control unit. The AV control unit outputs DVD player sound signal to BOSE amp. The BOSE amp. outputs it to each speaker.
- The DVD image signal is output to the video distributor. The video distributor outputs it to front display unit and rear display unit.

#### **AUX Mode**

Refer to AV-620, "System Description".

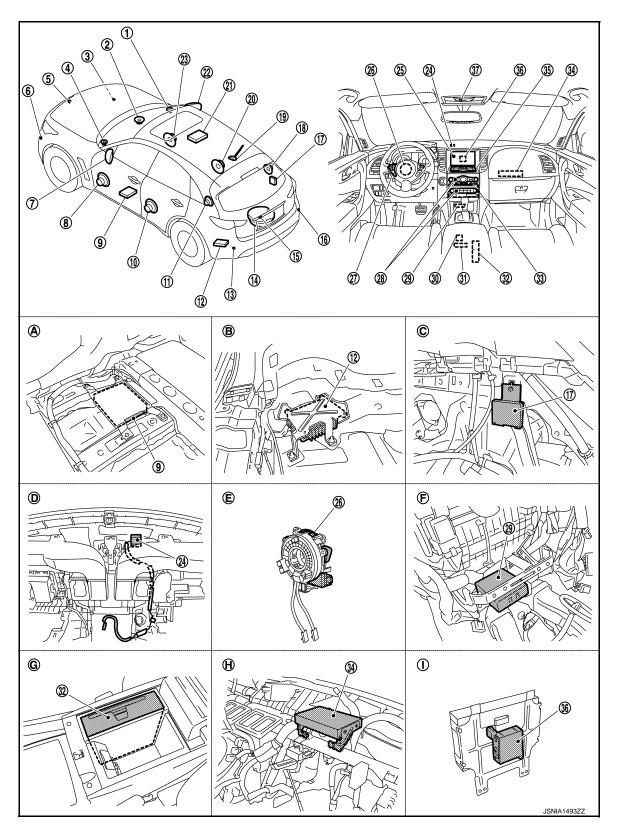
**AV-637** Revision: 2009 March 2009 FX35/FX50

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#### **Component Parts Location**

INFOID:0000000003931413



- 1. Front squawker RH
- 4. Front squawker LH
- 7. Side camera LH
- 10. Rear door speaker LH
- 2. Center speaker
- 5. Front camera
- 8. Front door speaker LH
- 11. Rear squawker LH
- 3. Corner sensor front RH
- 6. Corner sensor front LH
- 9. Around view monitor control unit
- 12. BOSE amp.

#### **MOBILE ENTERTAINMENT SYSTEM**

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SYSTEM I	DESCRIPTION >	

# [NAVIGATION (TWIN MONITOR)]

13.	Corner sensor rear LH	14.	Woofer	15.	Rear camera
16.	Corner sensor rear RH	17.	Buzzer	18.	Rear squawker RH
19.	Antenna base (antenna amp. and satellite antenna)	20.	Rear door speaker RH	21.	Rear display unit
22.	Side camera RH and infrared LED (auxiliary lighting)	23.	Front door speaker RH	24.	GPS antenna
25.	Front display unit	26.	Steering angle sensor	27.	Steering switch
28.	Preset switch	29.	Sonar control unit (with around view monitor)	30.	iPod connector
31.	Auxiliary input jacks	32.	DVD player	33.	AV control unit
34.	Video distributor	35.	Multifunction switch	36.	iPod adapter
37.	Microphone				
A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
D.	Instrument panel rear side	E.	Spiral cable part	F.	Console pocket assembly removed condition
G.	In center console	H.	Instrument panel assembly removed condition	I.	Rear view of the front display unit

# **Component Description**

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Part name	Description		
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>		
FRONT DISPLAY UNIT	<ul> <li>Front display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal is input from AV control unit (RGB, RGB area and RGB synchronizing).</li> <li>Composite image signal (DVD and auxiliary images) is input from the video distributor.</li> <li>Camera image signal input to around view monitor control unit.</li> <li>Synchronize signal (HP, VP) is output to AV control unit.</li> <li>Touch panel function can be operated for each system by touching a display directly.</li> </ul>		
REAR DISPLAY UNIT	<ul> <li>Rear display image is controlled by the serial communication from video distributor.</li> <li>RGB image signal is input from video distributor (RGB image and RGB area).</li> <li>Composite image signal (DVD and auxiliary images) is input from the video distributor.</li> <li>Synchronize signal (HP, VP) is output to video distributor.</li> <li>It receives the DVD/AUX sound signal from the DVD player, and then transmits it to the headphones.</li> <li>It operates by receiving the headphone ON signal from the video distributor.</li> </ul>		
VIDEO DISTRIBUTOR	<ul> <li>It receives the image signal from the DVD player, and auxiliary input jack, and then transmits it to the front display unit and rear display unit.</li> <li>It transmits headphone ON signal to rear display unit.</li> </ul>		

Revision: 2009 March AV-639 2009 FX35/FX50

#### **MOBILE ENTERTAINMENT SYSTEM**

#### < SYSTEM DESCRIPTION >

### [NAVIGATION (TWIN MONITOR)]

Part name	Description
DVD PLAYER	It transmits the playback DVD image signal to the video distributor. It also transmits the input AUX sound signal to the AV control unit.
BOSE AMP.	<ul> <li>Inputs power (amp. ON) and sound signal from AV control unit, and outputs sound signal to woofer and each speaker.</li> <li>Input "Driver's Audio Stage" mode change signal from AV control unit.</li> <li>Woofer amp. ON signal is transmitted to woofer.</li> </ul>
FRONT DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>
REAR DOOR SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (mid and low range).</li></ul>
FRONT SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
REAR SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
CENTER SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>
WOOFER	<ul><li>Inputs power (amp. ON) and sound signal from BOSE amp.</li><li>Outputs low-frequency sound.</li></ul>
MULTIFUNCTION SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio, auxiliary input and navigation operations are integrated.</li> <li>Connected with preset switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> </ul>
PRESET SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio and air conditioner operations are integrated.</li> <li>Connected with multifunction switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> <li>The disk ejection operating signal is performed by hardwire.</li> </ul>
AUXILIARY INPUT JACKS	Image signal of auxiliary input is output to video distributor, and sound signal is output to DVD player.

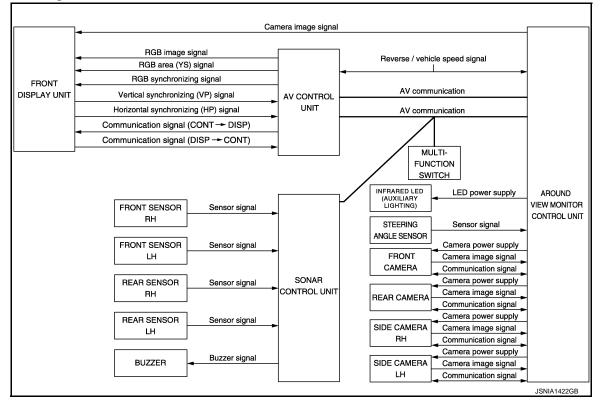
#### AROUND VIEW MONITOR SYSTEM

System Diagram

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# System Description

INFOID:0000000003825432

- This system is equipped with wide-angle high-resolution cameras on the front and rear of the vehicle and on both right and left door mirrors. The images from front view, rear view, front-side view (RH side), and birdseye view that shows the view from the top of the vehicle are displayed to monitor the vehicle surroundings.
- Around view monitor control unit cuts out and expands the image received from each camera to create each view.
- The sonar indicator is displayed on display (superimposed on the camera image) in combination with the camera assistance sonar system to warm of the approach of an obstacle.
- In front view and rear view, the vehicle width, distance lines and predicted course lines are superimposed and displayed. In front-side view, the vehicle distance guiding line and vehicle width guiding line are displayed.
- The Birds-Eye view converts the images from 4 cameras into the overhead view and displays the status of the vehicle on display. The vehicle icon and sonar indicator that are displayed on the Birds-Eye view display are rendered by around view monitor control unit.

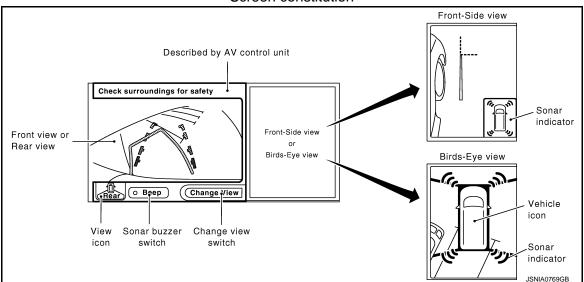
#### AROUND VIEW MONITOR SCREEN

- Around view monitor combines and displays the travel direction view and "Birds-Eye view", "Front-Side view", and then it displays the sonar indicator on the "Birds-Eye view", "Front-Side view".
- AV control unit renders the "Change View", "BEEP" switch, view icon, warning message on display.

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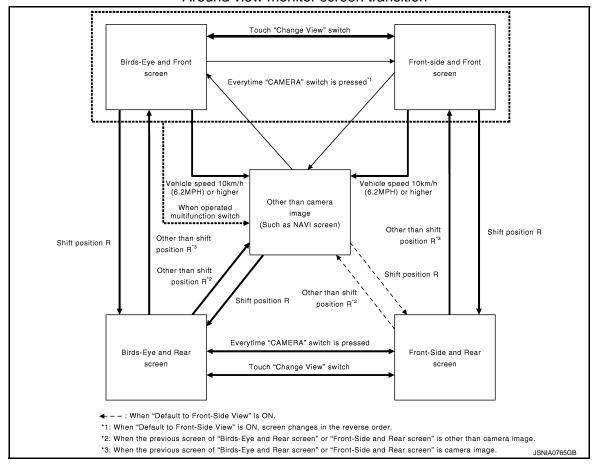
#### Screen constitution



#### OPERATION DESCRIPTION

- Around view monitor operates by pressing the "CAMERA" switch of multifunction switch and shifting the selector switch to the reverse position.
- When the selector lever is in any position other than the reverse position, the screen is switched to the around view monitor by pressing the "CAMERA" switch.
- The screen is switched to the around view monitor by shifting the selector lever to the reverse position.
- In the around view monitor, Birds-Eye view and Front-side view can be switched by pressing the "CAMERA" switch or the touch switch of display.
- The "Front-Side and Front screen" are displayed as a priority when turning "Default to Front-Side View" ON.
- The around view monitor is cancelled 3 minutes after pressing the "CAMERA" switch, and then the screen returns to the screen before displaying the around view monitor when selector lever is in a position other than the "R" position.
- ON/OFF setting of sonar indicator display on the Front-Side view screen can be performed.
- In the Birds-Eye view, the invisible area is displayed on the image to specify the boundary of the 4 cameras. The invisible area is displayed in yellow in the Birds-Eye view after turning the ignition switch ON.
- The sonar (both of buzzer and indicator) operates only when the camera screen is displayed.

#### Around view monitor screen transition



#### FRONT VIEW

- The front view image is from the front camera.
- · When the selector lever is in any position other than the reverse position, the front view is displayed by pressing the "CAMERA" switch. It improves the visibility of obstacles in front of the vehicle and helps driving by the images displayed from Birds-Eye view and Front-Side view.
- Display the vehicle width guiding line and vehicle distance guiding line in front view and display the predicted course line according to the steering angle.
- If the steering angle is within approximately 90 degrees, the predicted course lines on the left/right side are displayed. If the steering angle is exceeding approximately 90 degrees, only the predicted course line on the outside (in the opposite side of steering direction) is displayed.
- Around view monitor control unit controls the direction and distance of the predicted course line according to the sensor signal from steering angle sensor.

**AV-643** Revision: 2009 March 2009 FX35/FX50

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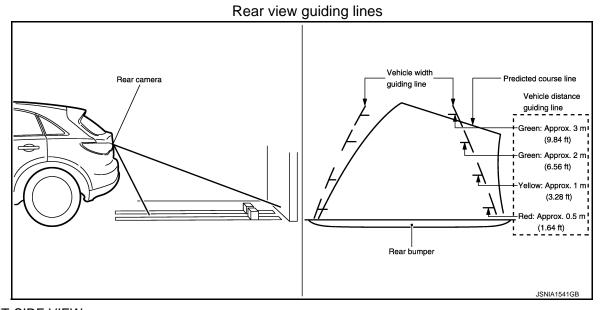
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# Predicted course line Vehicle width guiding line Green: Approx. 3 m (9.84 ft) Green: Approx. 1 m (3.28 ft) Red: Approx. 0.5 m (1.64 ft) Front bumper Front bumper

#### **REAR VIEW**

- The rear view image is from the rear camera.
- When the selector lever is in the reverse position, the rear view is displayed. Backing and parking are improved by the images from Birds-Eye view and Front-Side view.
- Display the vehicle width guiding line and vehicle distance guiding line in Rear view and display the predicted course line according to the steering angle.
- The predicted course line is not displayed at the steering neutral position. The predicted course line is displayed and the vehicle width guiding line is not displayed by turning the steering wheel.
- Around view monitor control unit controls the direction and distance of predicted course line according to the sensor signal from steering angle sensor.



#### FRONT-SIDE VIEW

- The front-side view image is from the side camera RH.
- In Front-Side view, display the vehicle distance guiding line and vehicle width guiding line.
- The infrared LED illumination is installed on the door mirror RH to illuminate around the front wheels.

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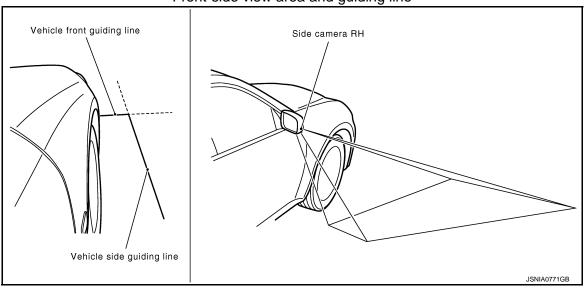
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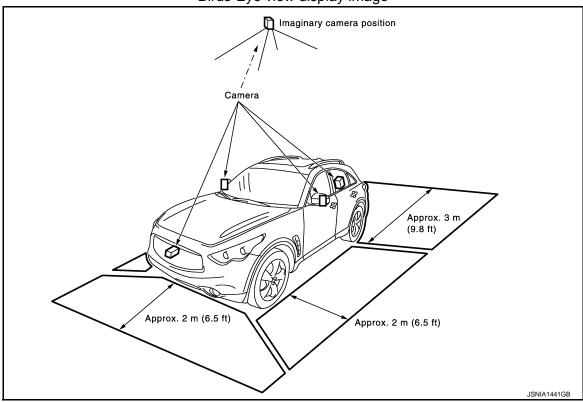
#### Front-side view area and guiding line



#### **BIRDS-EYE VIEW**

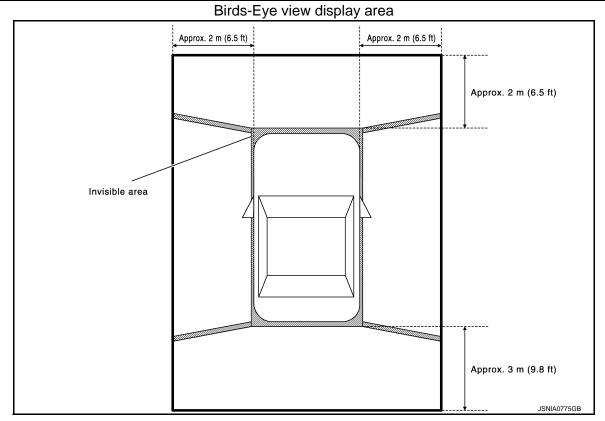
- The image from the 4 cameras is cut out and converted into the overhead view, and the surroundings of the vehicle is displayed in birds-eye view.
- In Birds-Eye view, the invisible area is displayed on the image to specify the boundary of the 4 cameras.
- The invisible area is displayed in yellow in the Birds-Eye view after turning the ignition switch ON as an information for the user. (OFF setting can be performed)

#### Birds-Eye view display image



**AV-645** 

2009 FX35/FX50



#### CAMERA IMAGE OPERATION PRINCIPLE

- If the information writing to around view monitor control unit and the information from the camera are not matched, the applicable camera position is indicated as an error on the Birds-Eye view display. (Calibration operation is necessary when replacing each camera or when replacing around view monitor control unit.)
- Around view monitor control unit receives the camera switch signal from AV control unit via AV communication by pressing the "CAMERA" switch of multifunction switch.
- Around view monitor control unit that receives the camera switch signal supplies the power to each camera and inputs the camera image from each camera.
- When the selector lever is in the reverse position, around view monitor control unit receives the reverse signal from AV control unit via AV communication, supplies the power to each camera, and inputs the camera image from each camera.
- Around view monitor control unit that receives the camera image signal from each camera cuts out the required screen for each view, superimposes the camera image, vehicle icon, guiding lines, sonar indicator, and outputs them to the display unit.

#### PREDICTED COURSE LINE OPERATION PRINCIPLE

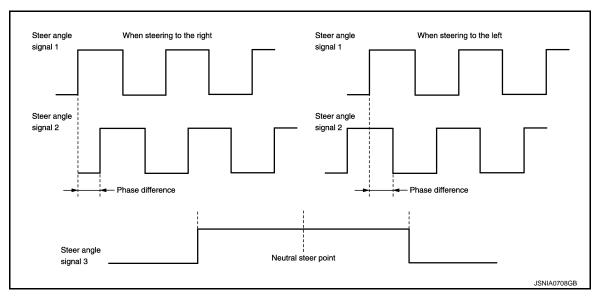
Detection of steering rotation direction

Around view monitor control unit detects the rotation direction of steering according to the phase difference of two pairs of pulse signals (sensor signal 1 and sensor signal 2) input from steering angle sensor.

Detection of steering neutral position

The sensor signal 3 input from the steering angle sensor is generated at 1 pulse per 1 rotation of the steering wheel. Around view monitor control unit detects the steering neutral position from this pulse.

#### **AROUND VIEW MONITOR SYSTEM**



Correction of steering neutral position

Around view monitor control unit corrects the steering neutral position during driving according to the vehicle speed signal and steering angle sensor signal.

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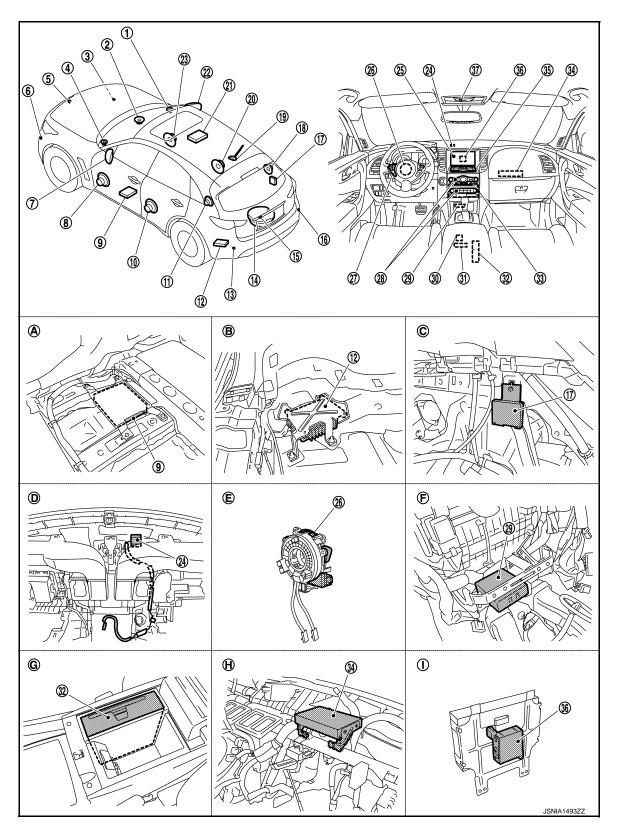
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#### **Component Parts Location**

INFOID:0000000003931414



- 1. Front squawker RH
- 4. Front squawker LH
- 7. Side camera LH
- 10. Rear door speaker LH
- 2. Center speaker
- 5. Front camera
- 8. Front door speaker LH
- 11. Rear squawker LH
- 3. Corner sensor front RH
- 6. Corner sensor front LH
- 9. Around view monitor control unit
- 12. BOSE amp.

# **AROUND VIEW MONITOR SYSTEM**

< SYSTEM	DESCD	IDTION -
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# [NAVIGATION (TWIN MONITOR)]

13.	Corner sensor rear LH	14.	Woofer	15.	Rear camera
16.	Corner sensor rear RH	17.	Buzzer	18.	Rear squawker RH
19.	Antenna base (antenna amp. and satellite antenna)	20.	Rear door speaker RH	21.	Rear display unit
22.	Side camera RH and infrared LED (auxiliary lighting)	23.	Front door speaker RH	24.	GPS antenna
25.	Front display unit	26.	Steering angle sensor	27.	Steering switch
28.	Preset switch	29.	Sonar control unit (with around view monitor)	30.	iPod connector
31.	Auxiliary input jacks	32.	DVD player	33.	AV control unit
34.	Video distributor	35.	Multifunction switch	36.	iPod adapter
37.	Microphone				
A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
D.	Instrument panel rear side	E.	Spiral cable part	F.	Console pocket assembly removed condition
G.	In center console	H.	Instrument panel assembly removed condition	I.	Rear view of the front display unit

# **Component Description**

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Part name	Description
AV CONTROL UNIT	<ul> <li>Image on display is switched to around view monitor by serial communication between AV control unit and front display unit.</li> <li>Warning displayed in around view monitor image is illustrated.</li> </ul>
FRONT DISPLAY UNIT	<ul> <li>Camera image signal is transmitted from around view monitor control unit, and RGB image signal for warning display is transmitted from AV control unit.</li> <li>Around view monitor image is switched by serial communication between AV control unit and front display unit.</li> </ul>
MULTIFUNCTION SWITCH	It transmits the CAMERA switch signal via AV communication to AV control unit.
AROUND VIEW MONITOR CONTROL UNIT	<ul> <li>It supplies power to front camera, rear camera, and side camera, superimposes the images from each camera, and then outputs them to front display unit.</li> <li>It receives the CAMERA switch signal and reverse signal from AV control unit via AV communication.</li> <li>Superimpose the guiding line, predicted course line and sonar indicator to the camera image that outputs to front display unit.</li> <li>It performs the reception/transmission of communication signal with each camera.</li> <li>Input the sensor signal from steering angle sensor, and then control the predicted course line.</li> <li>It transmits the information received/transmitted with sonar control unit via AV communication to AV control unit.</li> </ul>
FRONT CAMERA	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle front to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
REAR CAMERA	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle rear to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
SIDE CAMERA LH	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle LH to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>
SIDE CAMERA RH	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle RH to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>

Revision: 2009 March AV-649 2009 FX35/FX50

# **AROUND VIEW MONITOR SYSTEM**

# < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

Part name	Description
INFRARED LED (AUXILIARY LIGHTING)	It illuminates around the front RH wheel by the power supply from around view monitor control unit to improve nighttime visibility of Front-Side view.
SONAR CONTROL UNIT	<ul> <li>It is connected with around view monitor control unit via AV communication and receives the sonar operation signal from around view monitor control unit.</li> <li>It transmits the sonar detection status to around view monitor control unit via AV communication.</li> </ul>
STEERING ANGLE SENSOR	Steering signal necessary for predicted course line control is transmitted to around view monitor control unit.

# CAMERA ASSISTANCE SONAR SYSTEM

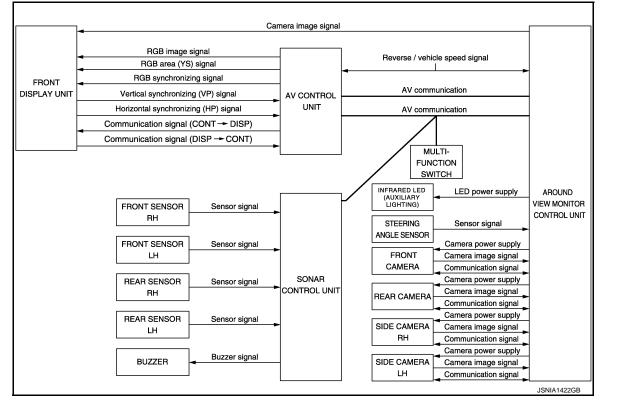
# System Diagram

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# System Description

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#### DESCRIPTION

- Install the corner sensor on the front bumper and rear bumper. It detects the obstacles around the vehicle when the around view monitor is displayed. It warns of the approach to the obstacles with the buzzer and indicator in the display linked with the around view monitor system.
- It displays the distance between the bumper and obstacle with the color of sonar indicator in the display and the blinking cycle of indicator in 3 stages.
- The buzzer warns of the distance to the obstacles with the cycle in 3 stages.

#### SYSTEM OPERATION DESCRIPTION

- Around view monitor control unit transmits the sonar operation signal via AV communication to sonar control unit to control the operation of sonar indicator and sonar buzzer.
- Sonar control unit that receives the sonar operation signal from around view monitor control unit transmits the detection signal and detection distance signal according to the signal from corner sensor via AV communication to around view monitor control unit. around view monitor control unit operates the applicable sonar indicator.
- Sonar control unit that receives the sonar operation signal from around view monitor control unit outputs the buzzer signal to other buzzers based on the detection distance signal from corner sensor to operate the buzzer.
- Sonar control unit has the diagnosis function. It can detect the corner sensor malfunction or sensor harness open circuit. It transmits the diagnosis results to around view monitor control unit and always displays the sonar indicator in red to inform the user.

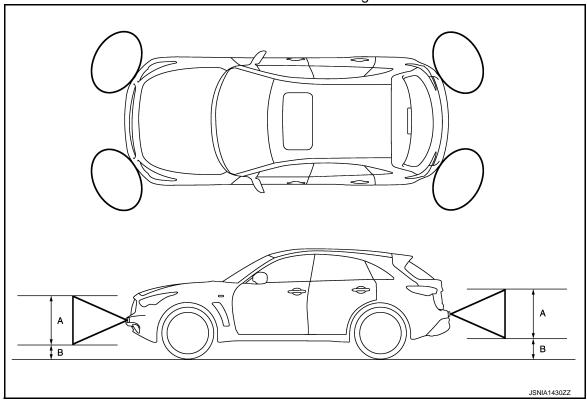
#### **OBSTACLE DETECTION DISTANCE**

- Sonar control unit changes the outputs of the sonar indicator and warning buzzer in 3 stages according to the obstacle detection distance from the corner sensor.
- The sonar control unit can change the setting of obstacle detection distance in 4 stages.

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# Obstacle detection image



A. Approx. 50 cm (19.6 in)

B. Approx. 15 cm (5.9 in)

#### Detection distance

Warning item	Sensitivity level 1 (Faster warning)	Sensitivity level 2 (Default value)	Sensitivity level 3 (Slower warning)	Sensitivity level 4 (Slowest warning)
First stage warning	70 – 80 cm (27.5 – 31.4 in)	60 - 70 cm (23.6 - 27.5 in)	50 - 60 cm (29.6 - 23.6 in)	40 – 50 cm (15.7 – 19.6 in)
Second stage warning	50 – 70 cm (19.6 – 27.5 in)	40 – 60 cm (15.7 – 23.6 in)	30 – 50 cm (11.8 – 19.6 in)	30 – 40 cm (11.8 – 15.7 in)
Third stage warning	Less than 50 cm (19.6 in)	Less than 40 cm (15.7 in)	Less than 30 cm (11.8 in)	Less than 30 cm (11.8 in)

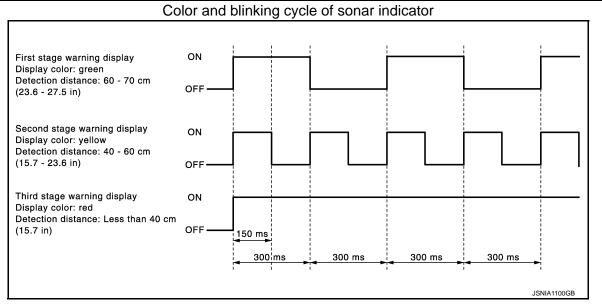
## SONAR INDICATOR DISPLAY

- Around view monitor control unit that receives the detection signal and detection distance signal from sonar control unit displays the sonar indicator on display.
- Around view monitor control unit changes the color or blinking cycle of the indicator according to the detection distance.

# **CAMERA ASSISTANCE SONAR SYSTEM**

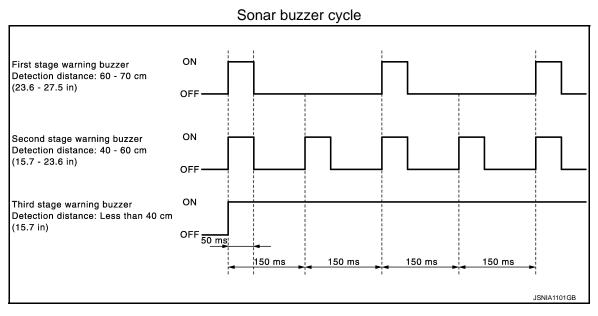
< SYSTEM DESCRIPTION >

[NAVIGATION (TWIN MONITOR)]



#### SONAR BUZZER OPERATION

- Sonar control unit outputs the buzzer signal to other buzzers and operates the buzzer when the detection signal is input from the corner sensor.
- It changes the buzzer cycle in 3 stages according to the detection distance.



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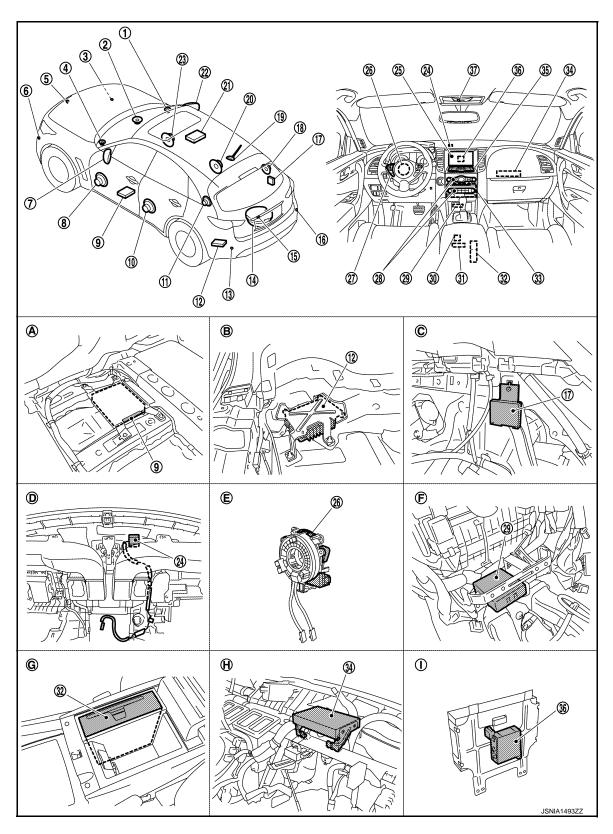
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# **Component Parts Location**

INFOID:0000000003931415



- 1. Front squawker RH
- 4. Front squawker LH
- 7. Side camera LH
- 10. Rear door speaker LH
- 2. Center speaker
- 5. Front camera
- 8. Front door speaker LH
- 11. Rear squawker LH
- 3. Corner sensor front RH
- 6. Corner sensor front LH
- 9. Around view monitor control unit
- 12. BOSE amp.

# **CAMERA ASSISTANCE SONAR SYSTEM**

# < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

13.	Corner sensor rear LH	14.	Woofer	15.	Rear camera
16.	Corner sensor rear RH	17.	Buzzer	18.	Rear squawker RH
19.	Antenna base (antenna amp. and satellite antenna)	20.	Rear door speaker RH	21.	Rear display unit
22.	Side camera RH and infrared LED (auxiliary lighting)	23.	Front door speaker RH	24.	GPS antenna
25.	Front display unit	26.	Steering angle sensor	27.	Steering switch
28.	Preset switch	29.	Sonar control unit (with around view monitor)	30.	iPod connector
31.	Auxiliary input jacks	32.	DVD player	33.	AV control unit
34.	Video distributor	35.	Multifunction switch	36.	iPod adapter
37.	Microphone				
A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
D.	Instrument panel rear side	E.	Spiral cable part	F.	Console pocket assembly removed condition
G.	In center console	H.	Instrument panel assembly removed condition	I.	Rear view of the front display unit

# **Component Description**

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Part name	Description
AROUND VIEW MONITOR CONTROL UNIT	<ul> <li>It supplies power to front camera, rear camera, and side camera. And then it superimposes the images from each camera and outputs them to front display unit.</li> <li>Superimposes the guiding line, predicted course line and sonar indicator to the camera image that outputs to front display unit.</li> <li>It performs the reception/transmission of communication signal with each camera.</li> <li>Inputs the sensor signal from the steering angle sensor, and then controls the predicted course line.</li> <li>It transmits the sonar operation signal from sonar control unit and receives the sonar information from the sonar control unit via AV communication.</li> <li>It transmits the information received/transmitted with the sonar control unit via AV communication to AV control unit.</li> </ul>
SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)	<ul> <li>It is connected with around view monitor control unit via AV communication and receives the sonar operation signal from around view monitor control unit.</li> <li>It transmits the sonar detection status to around view monitor control unit via AV communication.</li> <li>It judges the warning level according to the signal from corner sensor and outputs the buzzer drive signal.</li> <li>Trouble diagnosis is supported with CONSULT-III (K-LINE).</li> </ul>
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to sonar control unit.
BUZZER	The warning buzzer outputs with the signal from sonar control unit.

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< SYSTEM DESCRIPTION >

[NAVIGATION (TWIN MONITOR)]

# DIAGNOSIS SYSTEM (AV CONTROL UNIT)

# **Diagnosis Description**

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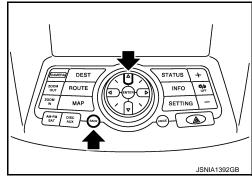
## MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

The ON/OFF operation (continuity) of each switch in multifunction switch and preset switch can be checked.

#### Self-diagnosis Mode

- Press the "BACK" switch and the "UP" switch of the 8-direction switches within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 seconds or more. Then the buzzer sounds, all indicators of the preset switch illuminate, and the self-diagnosis mode starts.
- The continuity of each switch in the ON position can be checked by pressing the switch. The buzzer sounds if the switch is normal.
   NOTE:

The hazard switch and disk eject switch cannot be checked.



#### Finishing Self-diagnosis Mode

Self-diagnosis mode is canceled when turning the ignition switch OFF.

#### MULTI AV SYSTEM ON BOARD DIAGNOSIS FUNCTION

- AV control unit diagnosis function starts up with multifunction switch operation and AV control unit performs a
  diagnosis for each unit in the system during the on board diagnosis.
- Perform a CONSULT-III diagnosis if the on board diagnosis does not start, e.g., the screen does not display anything, multifunction switch does not function, etc.

#### ON BOARD DIAGNOSIS

#### Description

- The trouble diagnosis function has a self-diagnosis mode for conducting trouble diagnosis automatically and a confirmation/adjustment mode for operating manually.
- The self-diagnosis mode performs diagnoses on AV control unit, connections between system components, AV control unit and GPS antenna and between AV control unit and satellite radio antenna. Then it displays the diagnosis results on display.
- The confirmation/adjustment mode allows the technician to check, modify or adjust the vehicle signals and set values, as well as to monitor the system error records and system communication status. The checking, modifying or adjusting generally require human intervention and judgment (the system cannot make a judgment automatically).

#### On Board Diagnosis Item

Mode	Description
Self Diagnosis	<ul> <li>AV control unit diagnosis</li> <li>Diagnoses the connections across system components, between AV control unit and GPS antenna and between AV control unit and satellite radio antenna.</li> </ul>

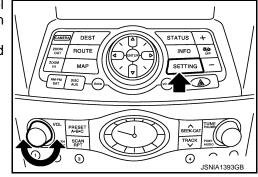
#### < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

Mode			Description	
	Display Diagnosis		The following check functions are available: color tone check by color bar display, light and shade check by gray scale display and touch pane calibration response check.	
	Vehicle Signals		Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse.	
	Speaker Test		The connection of a speaker can be confirmed by test tone.	
	Climate Control		Start auto air conditioner system self-diagnosis.	
		Steering Angle Adjustment	When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted.	
	Navigation	Speed Calibration	When there is a difference between the current location mark and the actual location, it can be adjusted.	
		XM SAT Subscription Status	The XM NavTraffic subscription status can be checked.	
Confirmation/	Error History		The system malfunction and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.	
Adjustment	Vehicle CAN Diagn	osis	The transmitting/receiving of CAN communication can be monitored.	
	AV COMM Diagnos	sis	The communication condition of each unit of Multi AV system can be monitored.	
	Handsfree Phone		The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.	
	Camera Cont.		It can perform the confirmation of a signal connection to around view monitor control unit, the calibration of each camera, Correct Draw Line of Camera Image, and Fine Tuning of Birds-Eye View. Refer to <a href="AV-675">AV-675</a> . "Diagnosis Description".	
	Bluetooth		The passkey and the device name can be checked and changed.	
		Change Channel	Any necessary channels required to receive traffic information from the satellite radio system can be set.	
	SAT	Change Application ID	Any application IDs required to receive traffic information from the satellite radio system can be set.	
		Diag	Not used.	
	Delete Unit Connec	ction Log	Erase the connection history of unit and error history.	
	Initialize Settings		Initializes AV control unit memory.	

## STARTING PROCEDURE

- 1. Start the engine.
- 2. Turn the audio system OFF.
- While pressing the "SETTING" button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. (When the self-diagnosis mode is starts, a short beep will sound.)
  - · Shifting from current screen to previous screen is performed by pressing the "BACK" button.



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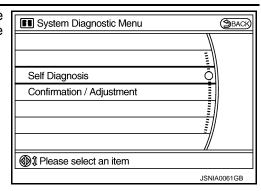
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## < SYSTEM DESCRIPTION >

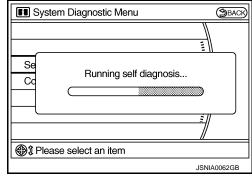
## [NAVIGATION (TWIN MONITOR)]

 The trouble diagnosis initial screen is displayed, and then the items of "Self Diagnosis" and "Confirmation/Adjustment" can be selected.

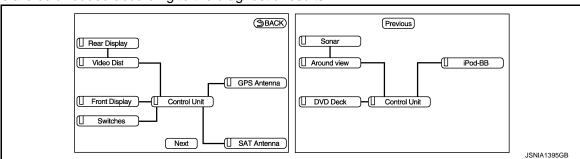


#### **SELF-DIAGNOSIS MODE**

- 1. Start the self-diagnosis function and select "Self Diagnosis".
- Self-diagnosis subdivision screen is displayed, and the selfdiagnosis mode starts.
- The bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.



Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.



Diagnosis results	Unit	Con- nection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction Note	Red	Green

#### NOTE:

- · Only the control unit (AV control unit) is displayed in red.
- Replace AV control unit if "Self-Diagnosis did not run because of a control unit malfunction" is indicated. The symptom is an AV control unit internal error. Refer to <u>AV-1045</u>, "<u>Exploded View</u>".
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.

#### < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

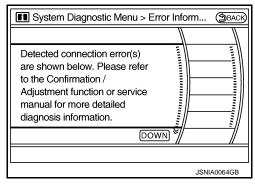
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- The comments of the self-diagnosis results can be viewed with a component in the diagnosis result screen.



Detection Range Of Self-diagnosis Mode

- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between AV control unit and each unit and the internal operation of AV control unit.
- Because the start condition of diagnosis function is switch operated, the on board diagnosis function cannot be started up if any malfunction is detected in the communication circuit between AV control unit and multifunction switch.

#### **SELF-DIAGNOSIS RESULTS**

Check the applicable display in the following table, and then repair the malfunctioning parts.

Area with yellow connection lines	Detection logic	Possible malfunction location / Action to take	(
Rear Display  Video Dist  Front Display  Control Unit  Switches  Previous  Front Display  Control Unit  Switches  Previous  Front Display  Control Unit  Front Display  Control Unit  Switches  Previous  Front Display  Front Display  Control Unit  SAT Antenna  Previous  Front Display  Spack  Front Display  Control Unit  Front Display  Spack  Spa	When either one of the following items are detected:  • AV control unit power supply or ground circuits malfunction are detected.  • AV control unit malfunction is detected.	<ul> <li>AV control unit power supply and ground circuits.</li> <li>When there is no malfunction, AV control unit is malfunctioning.</li> </ul>	H AV

# [NAVIGATION (TWIN MONITOR)]

Area with yellow connection lines	Detection logic	Possible malfunction location / Action to take
Rear Display  Video Dist  GPS Antenna  Switches  Next  SAT Antenna  JSNIA1398GB	GPS antenna connection malfunction is detected.	GPS antenna.
Rear Display  Video Dist  GPS Antenna  Switches  Next  SAT Antenna  JSNIA1399GB	Poor connection is detected in satellite radio antenna.	<ul> <li>Satellite radio antenna feeder.</li> <li>Satellite radio antenna.</li> </ul>
Rear Display  Video Dist  Front Display  Control Unit  Switches  Next  SAT Antenna  JSNIA1400GB	When either one of the following items are detected:  communication circuit between AV control unit and front display unit are malfunctioning.  communication signal between AV control unit and front display unit are malfunctioning.	Communication circuits between AV control unit and front display unit.
Previous  Sonar  Around view  iPod-BB  I : Gray : Yellow  JSNIA1401GB	When either one of the following items are detected:  • iPod adapter power supply and ground circuits are malfunctioning.  • AV communication circuits between AV control unit and iPod adapter are malfunctioning.  • AV communication signal between AV control unit and iPod adapter are malfunctioning.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>

# < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

Area with yellow connection lines	Detection logic	Possible malfunction location / Action to take
Previous  Sonar  Around view  I DVD Deck  Control Unit  Sonar  JSNIA1403GB	When either one of the following items are detected:     around view monitor control unit power supply and ground circuits are malfunctioning.     AV communication circuits between AV control unit and around view monitor control unit are malfunctioning.     AV communication signal between AV control unit and around view monitor control unit are malfunctioning.	<ul> <li>Around view monitor control unit power supply and ground circuits</li> <li>AV communication circuits between AV control unit and around view monitor control unit.</li> </ul>
Previous  Sonar  Around view  DVD Deck  Control Unit  Gray  JSNIA1404GB	When either one of the following items are detected:  sonar control unit power supply and ground circuits are malfunctioning.  AV communication circuits between around view monitor control unit and sonar control unit are malfunctioning.  AV communication signal between around view monitor control unit and sonar control unit are malfunctioning.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between around view monitor control unit and sonar control unit.</li> </ul>
Rear Display  Video Dist  GPS Antenna  Switches  Next  SAT Antenna  SSNIA1405GB	When either one of the following items are detected:  rear display unit power supply and ground circuits are malfunctioning  communication circuits between AV control unit and rear display unit are malfunctioning.  communication signal between AV control unit and rear display unit are malfunctioning.	<ul> <li>Rear display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and rear display unit.</li> </ul>

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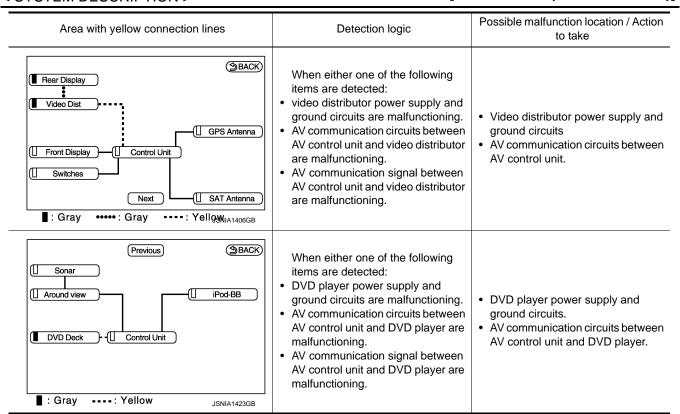
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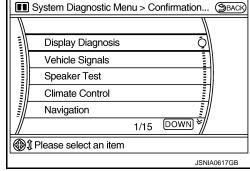
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## [NAVIGATION (TWIN MONITOR)]



#### CONFIRMATION/ADJUSTMENT MODE

- Start the diagnosis function and select "Confirmation/Adjustment". The confirmation/adjustment mode indicates where each item can be checked or adjusted.
- 2. Select each switch on the "Confirmation/Adjustment Mode" screen to display the relevant trouble diagnosis screen. Press the "BACK" switch to return to the initial Confirmation/Adjustment Mode screen.



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[NAVIGATION (TWIN MONITOR)]

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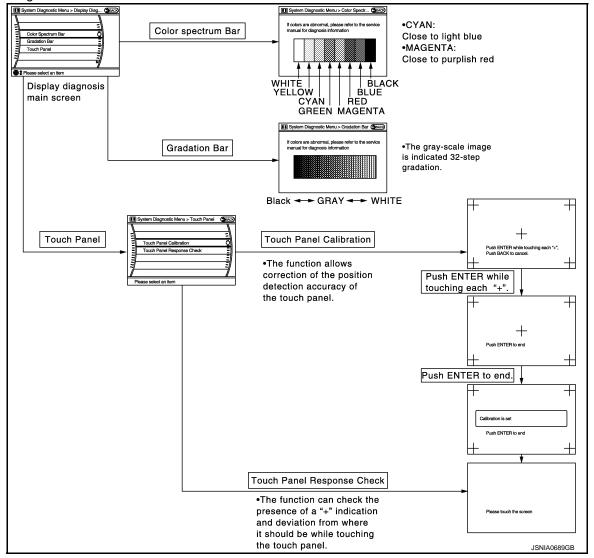
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#### Display Diagnosis



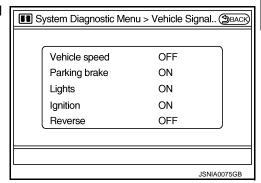
The tint of the color bar indication is as per the following list if a RGB signal error is detected.

R (red) signal error : Light blue (Cyan) tint G (green) signal error : Purple (Magenta) tint

B (blue) signal error : Yellow tint

# Vehicle Signals

A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



## < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

Diagnosis item	Display	Vehicle status	Remarks	
Vehicle speed	ON	Vehicle speed > 0 km/h (0 MPH)		
verlicie speed	OFF	Vehicle speed = 0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.	
Darking broke	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.	
Parking brake	OFF	Parking brake is released.		
Lights	ON	Light switch ON		
Lights	OFF	Light switch OFF	<del></del>	
Ignition	ON	Ignition switch ON		
ignition	OFF	Ignition switch in THE ACC position	<del></del>	
Reverse	ON	Shift the selector lever to the "R" position	Changes in indication may be delayed. This is normal.	
Kevelse	OFF	Shift the selector lever to a position other than the "R" position	Changes in indication may be delayed. This is normal.	

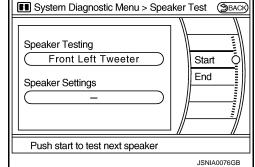
#### Speaker Test

Select "SPEAKER DIAGNOSIS" to display the Speaker Diagnosis screen. Press "START and NEXT" to generate a test tone in a speaker. Press "Start" to generate a test tone in the next speaker. Press "End" to stop the test tones.

#### NOTE:

The frequency of test tone emitted from each speaker is as follows.

Tweeter\* : 3 kHz
Front speaker : 300 Hz
Rear speaker : 1 kHz



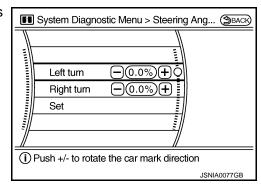
#### Climate Control

Refer to "HEATER & AIR CONDITIONING CONTROL SYSTEM" for details.

#### Navigation

#### STEERING ANGLE ADJUSTMENT

The steering angle output value detected with the gyroscope is adjusted.



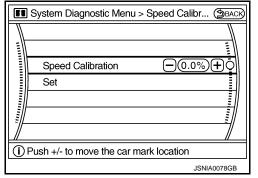
**SPEED CALIBRATION** 

<sup>\*:</sup> Squawker

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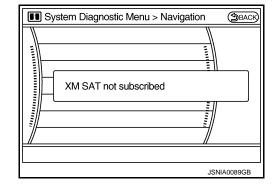
## [NAVIGATION (TWIN MONITOR)]

During normal driving, distance error caused by tire wear and tire pressure change is automatically adjusted for by the automatic distance correction function. This function, on the other hand, is for immediate adjustment, in cases such as driving with tire chains fitted on tires.



#### XM SAT SUBSCRIPTION STATUS

The XM NavTraffic subscription status can be checked.



#### **Error History**

The self-diagnosis results are judged depending on whether any error occurs from when "Self-diagnosis" is selected until the self-diagnosis results are displayed.

However, the diagnosis results are judged normal if an error has occurred before the ignition SW is turned ON and then no error has occurred until the self-diagnosis start. Check the "Error Record" to detect any error that may have occurred before the self-diagnosis start because of this condition.

The error record displays the time and place of the most recent occurrence of that error. However, take note of the following points.

- If there is a malfunction with the GPS antenna circuit board in AV control unit, the correct date and time of occurrence may not be displayed.
- Place of the error occurrence is represented by the position of the current location mark at the time an error occurred. If current location mark has deviated from the correct position, then the place of the error occurrence cannot be located correctly.
- The frequency of occurrence is displayed in a count up manner. The actual count up method differs depending on the error item.

#### Count up method A

- The counter resets to 0 if an error occurs when IGN switch is turned ON. The counter increases by 1 if the condition is normal at a next IGN ON cycle.
- The counter upper limit is 39. Any counts exceeding 39 are ignored. The counter can be reset (no error record display) with the "Delete log" switch or CONSULT-III.

#### Count up method B

- The counter increases by 1 if an error occurs when IGN switch is ON. The counter will not decrease even if the condition is normal at the next IGN ON cycle.
- The counter upper limit is 50. Any counts exceeding 50 are ignored. The counter can be reset (no error record display) with the "Delete log" switch or CONSULT-III.

Display type of occur- rence frequency	Error history display item
Count up method A	CAN communication line, control unit (CAN), AV communication line, control unit (AV communication)
Count up method B	Other than the above

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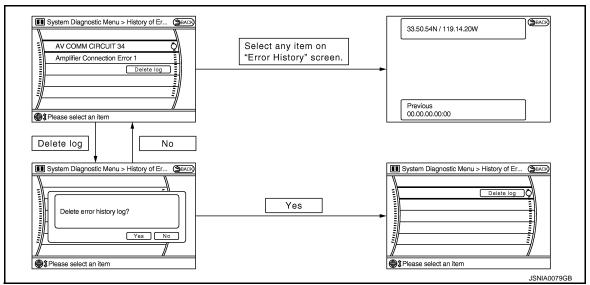
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# [NAVIGATION (TWIN MONITOR)]



Error item

Some error items may be displayed simultaneously according to the cause. If some error items are displayed simultaneously, the detection of the cause can be performed by the combination of display items.

Error item	Detection logic	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results.  Refer to AV-671, "CONSULT-III Function (MULTI AV)".
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit		
Connection Of Gyro		
XM SERIAL COMM Error		Replace AV control unit.
CAN Controller Memory Error		
Bluetooth Module Connection Error		
HDD CONN Error	AV control unit malfunction is detected.	
HDD READ Error	Av control unit mailunction is detected.	
HDD WRITE Error		
HDD COMM Error		
HDD ACCESS Error		
DSP CONN Error		
DSP COMM Error		
Internal Communication Error	When either one of the following items are detected:  • malfunction is detected in AV control unit power supply and ground circuits.  • AV control unit malfunction is detected.	<ul> <li>AV control unit power supply and ground circuits.</li> <li>When there is no malfunction, AV control unit is malfunctioning.</li> </ul>
GPS Communication Error		An intermittent error caused by strong radio
GPS ROM Error		interference may be detected unless any symptom (GPS reception error, etc.) oc-
GPS RAM Error	GPS malfunction is detected.	curs.
GPS RTC Error		Replace AV control unit if the malfunction occurs constantly.

< SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

Error item	Detection logic	Possible malfunction factor/Action to take
GPS Antenna Error	GPS antenna connection malfunction is detected.	GPS antenna
Front Display Connection Error	When either one of the following items are detected:  • front display unit power supply and ground circuits malfunction are detected.  • malfunction is detected in the communication circuits between AV control unit and front display unit.  • malfunction is detected in the communication signal between AV control unit and front display unit.	<ul> <li>Front display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and front display unit.</li> </ul>
Rear Display Connection Error	When either one of the following items are detected:  • rear display unit power supply and ground circuits malfunction are detected.  • malfunction is detected in the communication circuits between video distributor and rear display unit.  • malfunction is detected in the communication signal between video distributor and rear display unit.	Rear display unit power supply and ground circuits.     Communication circuits between video distributor and rear display unit.
XM Antenna Connection Error	Poor connection is detected in satellite radio antenna.	Satellite radio antenna feeder.     Satellite radio antenna.
AV COMM CIRCUIT     Internal Communication Error	When either one of the following items are detected:  AV control unit power supply or ground circuits malfunction are detected.  AV control unit malfunction is detected.	AV control unit power supply and ground circuits.     When there is no malfunction, AV control unit is malfunctioning.
AV COMM CIRCUIT     Switches Connection Error	When either one of the following items are detected:  • multifunction switch power supply and ground circuits malfunction are detected.  • malfunction is detected in the AV communication circuits between AV control unit and multifunction switch.  • malfunction is detected in the AV communication signal between AV control unit and multifunction switch.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>
AV COMM CIRCUIT     iPod Connection Error	<ul> <li>When either one of the following items are detected:</li> <li>iPod adapter power supply and ground circuits malfunction are detected.</li> <li>malfunction is detected in the AV communication circuits between AV control unit and iPod adapter.</li> <li>malfunction is detected in the AV communication signal between AV control unit and iPod adapter.</li> </ul>	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>
AV COMM CIRCUIT     Video Distributor Connection Error	When either one of the following items are detected:  video distributor power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and video distributor.  malfunction is detected in the AV communication signal between AV control unit and video distributor.	<ul> <li>Video distributor power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and video distributor.</li> </ul>

Revision: 2009 March AV-667 2009 FX35/FX50

## < SYSTEM DESCRIPTION >

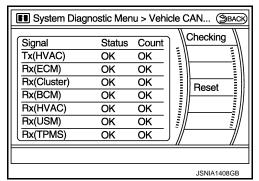
# [NAVIGATION (TWIN MONITOR)]

Error item	Detection logic	Possible malfunction factor/Action to take
AV COMM CIRCUIT     DVD Deck Connection Error	When either one of the following items are detected:  DVD player power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and DVD player.  malfunction is detected in the AV communication signal between AV control unit and DVD player.	<ul> <li>DVD player power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and DVD player.</li> </ul>
AV COMM CIRCUIT     AVM Connection Error	When either one of the following items are detected:  around view monitor control unit power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit.  malfunction is detected in the AV communication signal between AV control unit and around view monitor control unit and around view monitor control unit.	<ul> <li>Around view monitor control unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and around view monitor control unit.</li> </ul>
AV COMM CIRCUIT     AVM Sonar Connection Error	When either one of the following items are detected:  sonar control unit power supply or ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between around view monitor control unit and sonar control unit.  malfunction is detected in the AV communication signal between around view monitor control unit and sonar control unit.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between around view monitor control unit and sonar control unit.</li> </ul>
AV COMM CIRCUIT     Switches Connection Error     Video Distributor Connection Error     iPod Connection Error     DVD Deck Connection Error     AVM Connection Error	Malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit.	AV communication circuits between AV control unit and around view monitor control unit.

## Vehicle CAN Diagnosis

- CAN communication status and error counter is displayed.
- The error counter displays "OK" if any malfunction was not detected in the past and displays "0" if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle. The upper limit of the counter is 39.
- The error counter is erased if "Reset" is pressed.

Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / UNKWN	OK / 0 – 39
Rx(ECM)	OK / UNKWN	OK / 0 – 39
Rx(Cluster)	OK / UNKWN	OK / 0 – 39
Rx(BCM)	OK / UNKWN	OK / 0 – 39
Rx(HVAC)	OK / UNKWN	OK / 0 – 39
Rx(USM)	OK / UNKWN	OK / 0 – 39
Rx(TPMS)	OK / UNKWN	OK / 0 – 39



**AV COMM Diagnosis** 

#### < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

- Displays the communication status between AV control unit (master unit) and each unit.
- The error counter displays "OK" if any malfunction was not detected in the past and displays "0" if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle. The upper limit of the counter is 39.
- The error counter is erased if reset.

Items	Status	Counter
nems	(Current)	(Past)
C Tx(ITM-PrimarySW)	OK / UNKWN	OK / 0 - 39
C Rx(PrimarySW-ITM)	OK / UNKWN	OK / 0 – 39
C Rx(STRG SW-ITM)	OK / UNKWN	OK / 0 – 39
C Rx(Audio–ITM)	OK / UNKWN	OK / 0 – 39
C Rx(Amp–ITM)	OK / UNKWN	OK / 0 – 39
C Rx(DVD-ITM)	OK / UNKWN	OK / 0 – 39
C Rx(XM–ITM)	OK / UNKWN	OK / 0 – 39
C Rx(iPod–ITM)	OK / UNKWN	OK / 0 – 39
C RX(AVM–ITM)	OK / UNKWN	OK / 0 – 39
C Rx(Video Dist-ITM)	OK / UNKWN	OK / 0 – 39
C Rx(Remote Cont–ITM)	OK / UNKWN	OK / 0 – 39
C Rx(Amp-Audio)	_	_
C Rx(DVD-Audio)	OK / UNKWN	OK / 0 – 39
C Rx(iPod-Audio)	OK / UNKWN	OK / 0 – 39
C Rx(Sonar–AVM)	OK / UNKWN	OK / 0 – 39
C Tx(Audio–ITM)	OK / UNKWN	OK / 0 – 39

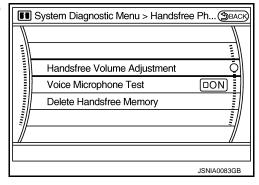
System Diagnostic Menu > AV COMM Diagnosis				
Signal	Status	Count.	\\Checking \\	
CTx(ITM-PrimarySW)	OK	OK		
C Rx(PrimarySW-ITM)	OK	OK		
C Rx(STRG SW-ITM)	OK	OK		
C Rx(Audio-ITM)	OK	OK	Reset	
C Rx(Amp-ITM)	OK	OK		
C Rx(DVD-ITM)	OK	OK	***************************************	
C Rx(XM-ITM)	OK	OK		
			JSNIA1409GB	

# NOTE:

- "Audio" and "Amp" indicate the same status because "Amp" indicates the status of the amplifier integrated in AV control unit.
- "STRG SW", "Amp" and "XM" indicate the same status as "Audio".

#### Hands-Free Phone

The hands-free phone reception volume adjustment, microphone and speaker test, and memory erase functions are also available.



Camera Cont.

Refer to AV-675, "Diagnosis Description".

Bluetooth

Confirm / Change Passkey

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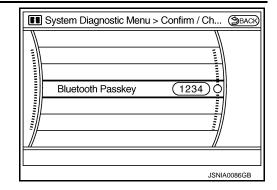
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## < SYSTEM DESCRIPTION >

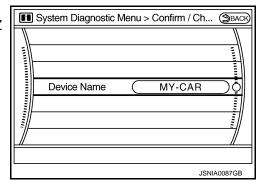
# [NAVIGATION (TWIN MONITOR)]

- The passkey of Bluetooth can be confirmed and changed.
- The passkey can be changed by four digits within 0 to 9.



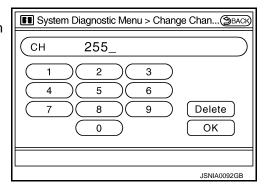
# Confirm / Change Device Name

- The device name of Bluetooth can be confirmed and changed.
- The device name can be changed by sixteen digits within A to Z (small character can be used) and - (hyphen).

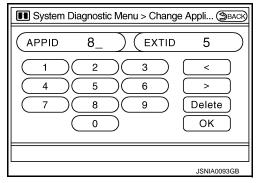


#### SAT

- Change Channel
- Any necessary channels required to receive traffic information from the satellite radio system can be set.



- Change Application ID
- Any application IDs required to receive traffic information from the satellite radio system can be set.

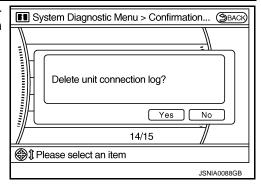


**Delete Unit Connection Log** 

## < SYSTEM DESCRIPTION >

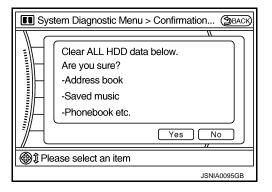
# [NAVIGATION (TWIN MONITOR)]

Deletes any unit connection records and error records from AV control unit memory. (Clear the records of the unit that has been removed.)



Initialize Settings

Deletes data stored in HDD.



# CONSULT-III Function (MULTI AV)

#### CONSULT-III FUNCTIONS

CONSULT-III performs the following functions via the communication with AV control unit.

Diagnosis mode	Description
Ecu Identification	The part number of AV control unit can be checked.
Self Diagnostic Result	Performs a diagnosis on AV control unit, a connection diagnosis for the communication circuit of the Multi AV system, and displays the current and past malfunctions collectively.
Data Monitor	The diagnosis of vehicle signal that is input to AV control unit can be performed.

#### AV COMMUNICATION

When "AV communication" of "CAN Diag Support Monitor" is selected, the following function will be performed.

AV communication	AV&NAVI C/U	Displays the communication status from AV control unit to each unit as well as the error counter.
	AUDIO	Displays AV control unit communication status and the error counter.

#### **ECU IDENTIFICATION**

The part number of AV control unit is displayed.

#### SELF DIAGNOSIS RESULT

- In CONSULT-III self-diagnosis, self-diagnosis results and error history are displayed simultaneously.
- The timing is displayed as "0" if any of the error codes [U1000], [U1010], [U1300] or [U1310] are detected. The counter increases by 1 if the condition is normal at the next ignition switch ON cycle.

Self-diagnosis results display item

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT[U1000]	CAN communication malfunction is detected.	Refer to AV-680, "Diagnosis Procedure".

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# < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

Error item	Description	Possible malfunction factor/Action to take
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	
Control Unit FLASH-ROM [U1200]		
Gyro NO CONN [U1201]		
CAN CONT [U1216]		
BLUETOOTH CONN [U1217]		
HDD CONN [U1218]		Replace AV control unit.
HDD READ [U1219]		
XM SERIAL COMM [U1220]	AV control unit malfunction is detected.	
HDD WRITE [U121A]		
HDD COMM [U121B]		
HDD ACCESS [U121C]		
DSP CONN [U121D]		
DSP COMM [U121E]		
INTERNAL COMM [U121F]	When either one of the following items are detected:  malfunction is detected in AV control unit supply or ground circuit.  AV control unit malfunction are detected.	<ul> <li>AV control unit power supply and ground circuits.</li> <li>When there is no malfunction, AV control unit is malfunctioning.</li> </ul>
GPS COMM [U1204]		An intermittent error caused by strong radio
GPS ROM [U1205]		interference may be detected unless any symptom (GPS reception error, etc.) occurs.
GPS RAM [U1206]	GPS malfunction is detected.	
GPS RTC [U1207]		Replace AV control unit if the malfunction occurs constantly.
FRONT DISP CONN [U1243]	When either one of the following items are detected:  • front display unit power supply and ground circuits malfunction are detected.  • malfunction is detected in the communication circuits between AV control unit and front display unit.  • malfunction is detected in the communication signal between AV control unit and front display unit.	<ul> <li>Front display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and front display unit.</li> </ul>
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna.
REAR DISP CONN [U1247]	When either one of the following items are detected:  rear display unit power supply and ground circuits malfunction are detected.  malfunction is detected in the communication circuits between AV control unit and rear display unit.  malfunction is detected in the communication signal between AV control unit and rear display unit.	Rear display unit power supply and ground circuits. Communication circuits between AV control unit and rear display unit.
XM ANTENNA CONN [U1258]	Poor connection is detected in satellite radio antenna.	Satellite radio antenna feeder.     Satellite radio antenna.
AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]	When either one of the following items are detected:  AV control unit power supply and ground circuits malfunction are detected.  AV control unit malfunction are detected.	AV control unit power supply and ground circuits.     When there is no malfunction, AV control unit is malfunctioning.

< SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

Error item	Description	Possible malfunction factor/Action to take
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items are detected:  multifunction switch power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and multifunction switch.  malfunction is detected in the AV communication signal between AV control unit and multifunction switch.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>
AV COMM CIRCUIT [U1300]     VIDEO DIST CONN [U1246]	When either one of the following items are detected:  video distributor power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and video distributor.  malfunction is detected in the AV communication signal between AV control unit and video distributor.	<ul> <li>Video distributor power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and video distributor.</li> </ul>
AV COMM CIRCUIT [U1300]     DVD DECK CONN [U1248]	When either one of the following items are detected:  DVD player power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and DVD player.  malfunction is detected in the AV communication signal between AV control unit and DVD player.	<ul> <li>DVD player power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and DVD player.</li> </ul>
AV COMM CIRCUIT [U1300]     IPod CONN [U1254]	When either one of the following items are detected:  • iPod adapter power supply and ground circuits malfunction are detected.  • malfunction is detected in the AV communication circuits between AV control unit and iPod adapter.  • malfunction is detected in the AV communication signal between AV control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>
AV COMM CIRCUIT [U1300]     AROUND CAMERA CONN [U125B]	When either one of the following items are detected:  around view monitor control unit power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit.  malfunction is detected in the AV communication signal between AV control unit and around view monitor control unit and around view monitor control unit.	<ul> <li>Around view monitor control unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and around view monitor control unit.</li> </ul>

## < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

Error item	Description	Possible malfunction factor/Action to take
AV COMM CIRCUIT [U1300]     SONAR CONN [U125C]	When either one of the following items are detected:  sonar control unit power supply or ground circuit malfunction are detected.  malfunction is detected in the AV communication circuits between around view monitor control unit and sonar control unit.  malfunction is detected in the AV communication signal between around view monitor control unit and sonar control unit.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between around view monitor control unit and sonar control unit.</li> </ul>
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>IPod CONN [U1254]</li> <li>DVD DECK CONN [U1248]</li> <li>VIDEO DIST CONN [U1246]</li> <li>AROUND CAMERA CONN [U125B]</li> </ul>	Malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit.	AV communication circuits between AV control unit and around view monitor control unit.

#### **DATA MONITOR**

#### **ALL SIGNALS**

- Displays the status of the following vehicle signals inputted into AV control unit.
- For each signal, actual signal can be compared with the condition recognized on the system.

Display Item	Display	Vehicle status	Remarks
VHCL SPD SIG	On	Vehicle speed > 0 km/h (0 MPH)	
VHCL SPD SIG	Off	Vehicle speed = 0 km/h (0 MPH)	Changes in indication may be delayed. This is
PKB SIG	On	Parking brake is applied.	normal.
PND SIG	Off	Parking brake is released.	
ILLUM SIG	On	Block the light beam from the auto light optical sensor when the light SW is ON.	
	Off	Expose the auto light optical sensor to light when the light SW is OFF or ON.	_
IGN SIG	On	Ignition switch ON	
IGN SIG	Off	Ignition switch in the ACC position	
REV SIG	On	Shift the selector lever to the "R" position	Changes in indication may be delayed. This is
	Off	Shift the selector lever to a position other than the "R" position	normal.

## **SELECTION FROM MENU**

Allows the technician to select which vehicle signals should be displayed and displays the status of the selected vehicle signals.

Item to be selected	Description
VHCL SPD SIG	
PKB SIG	
ILLUM SIG	The same as when "ALL SIGNALS" is selected.
IGN SIG	
REV SIG	

# **DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)** [NAVIGATION (TWIN MONITOR)]

< SYSTEM DESCRIPTION >

# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

# **Diagnosis Description**

The diagnosis function of around view monitor control unit is displayed when selecting "Camera Cont." of Confirmation/Adjustment mode in the multi AV system.

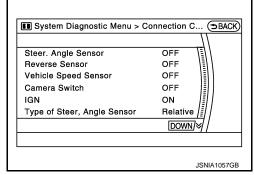
Around view monitor control unit diagnosis item

AV control unit Confirmation/Adjustment mode		djustment mode	Function
Connection Confirma		ation	The status of signals input to around view monitor control unit can be checked.
		Rear Camera	Performs the calibration of rear camera.
		Pass-Side Camera	Performs the calibration of side camera LH.
	Calibrating Cam-	Front Camera	Performs the calibration of front camera.
Camera Cont.  Correct Draw Line of Camera Image  Fine Tuning of Birds	Dr-Side Camera	Performs the calibration of side camera.	
	Initialize Camera Image Calibration*	The calibration can be initialized to NISSAN factory shipment condition.	
	Rear View	The position of rear view guiding line can be changed.	
	Front-Side View	The position of Front-Side view guiding line can be changed.	
	Front View	The position of front view guiding line can be changed.	
	-Eye View	<ul> <li>The confirmation and adjustment of the difference between each camera can be performed.</li> <li>The system changes to the ZOOM function by the operation of shift and the ZOOM ratio of each camera can be changed</li> </ul>	

#### **CAUTION:**

#### **Connection Confirmation**

The status of signals inputted to around view monitor control unit can be checked.



Connection Confirmation item list

Diagnosis item	Display	Description
Steer. Angle Sensor	ON/OFF	<ul> <li>Input status of steering angle sensor is displayed by ON/OFF.</li> <li>When all of steering signals 1, 2, and 3 are input, it is turned ON. It remains ON until connection confirmation mode is stopped.</li> </ul>
Reverse Sensor	ON/OFF	Input status of reverse signal inputted to around view monitor control unit is displayed by ON/OFF in real time.
Vehicle Speed Sensor	ON/OFF	<ul> <li>Input status of vehicle speed signal inputted to around view monitor control unit is displayed by ON/OFF.</li> <li>When the vehicle speed signal is input, it is turned ON. It remains ON until connection confirmation mode is stopped.</li> </ul>
Camera Switch	ON/OFF	<ul> <li>The status of camera switch signal received via AV communication from AV control unit is displayed by ON/OFF.</li> <li>When the camera switch signal is received once, it is turned ON. It remains ON until connection confirmation mode is stopped.</li> </ul>
IGN	ON/OFF	Input status of ignition signal inputted to around view monitor control unit is displayed by ON/OFF in real time.

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<sup>\*:</sup> Never perform other operations for approximately 10 seconds after performing "Initialize Camera Image Calibration".

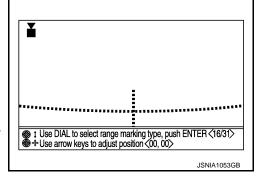
# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT) < SYSTEM DESCRIPTION > [NAVIGATION (TWIN MONITOR)]

Diagnosis item	Display	Description
Type of Steer. Angle Sensor	Relative	The input type of steering angle sensor is displayed. ("Relative" is displayed on this model.)
Type of Steer. Gear ratio	1	The type of steering gear ratio is displayed. ("1" is displayed on this model.)
Left or Right Steer.	Left	The steering position is displayed. ("Left" is displayed on this model.)
Rear Camera Image Output signal	OK / NG	The input status of rear camera image signal is displayed by OK/NG in real time.
Rear Camera COMM Status	OK / NG	The communication status with rear camera is displayed by OK/NG in real time.
Rear Camera COMM Line	OK / NG	The status of communication line with rear camera is displayed by OK/NG in real time.
Front Camera Image Output signal	OK / NG	The input status of front camera image signal is displayed by OK/NG in real time.
Front Camera COMM Status	OK / NG	The communication status with front camera is displayed by OK/NG in real time.
Front Camera COMM Line	OK / NG	The status of communication line with front camera is displayed by OK/NG in real time.
Pass-Side Camera Image Output signal	OK / NG	The input status of side camera RH image signal is displayed by OK/NG in real time.
Pass-Side Camera COMM Status	OK / NG	The communication status with side camera RH is displayed by OK/NG in real time.
Pass-Side Camera COMM Line	OK / NG	The status of communication line with side camera RH is displayed by OK/NG in real time.
Dr-Side Camera Image Output signal	OK / NG	The input status of side camera LH image signal is displayed by OK/NG in real time.
Dr-Side Camera COMM Status	OK / NG	The communication status with side camera LH is displayed by OK/NG in real time.
Dr-Side Camera COMM Line	OK / NG	The status of communication line with side camera LH is displayed by OK/NG in real time.

#### Calibrating Camera Image

- Perform the calibration of camera image caused by the incorrect mounting position of each camera, etc. Always perform calibration after performing the following work.
- When each camera or each camera mount (door mirror, front grille, etc.) is removed
- When replacing around view monitor control unit
- When performing the calibration initialization, it can be set to the NISSAN factory shipment condition.

Refer to AV-614, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement" for the calibration procedure.



**Adjustment range** 

Rotating direction : 31 patterns (16 on the

center)

Upper/lower direction : -99 - 99 Left/right direction : -99 - 99

Calibrating Camera Image item

Items	Description
Rear Camera	Performs the calibration of rear camera.
Pass-Side Camera	Performs the calibration of side camera RH.
Front Camera	Performs the calibration of front camera.
Dr-Side Camera	Performs the calibration of side camera LH.
Initialize Camera Image Calibration*	The calibration can be initialized to the factory shipment setting.

#### **CAUTION:**

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<sup>\*:</sup> Never perform other operations for approximately 10 seconds after performing "Initialize Camera Image Calibration".

# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT) [NAVIGATION (TWIN MONITOR)]

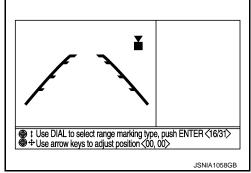
#### < SYSTEM DESCRIPTION >

## Correct Draw Line of Camera Image

The display position of guiding lines when displayed on the rear view, front view, and front-side view can be changed.

Adjustment range

Rotating direction : 31 patterns **Upper/lower direction** = -25 - 25**Left/right direction** : -25 - 25



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Correct Draw Line of Camera Image item

Items	Description
Rear View	The position of rear view guiding line can be changed.
Front-Side View	The position of Front-Side view guiding line can be changed.
Front View	The position of Front view guiding line can be changed.

### Fine Tuning of Birds-Eye View

- The fine adjustment function of camera calibration can check and adjust the difference between each camera.
- Fine adjustments can be performed for each camera. Move the "+"-mark to select the camera by pressing the "CAMERA" switch.
- Perform the adjustment with the center dial and upper/lower/left/ right switches.

#### **CAUTION:**

Operate the center dial slowly because the changing of the screen takes approximately 1 second.

#### NOTE:

- It can be initialized to the NISSAN factory shipment setting with "Initialize Camera Image Calibration" of "Calibrating Camera
- The adjustment value is cancelled in this mode by performing "Initialize Camera Image Calibration".



**Rotating direction** : 31 patterns (16 on the

center)

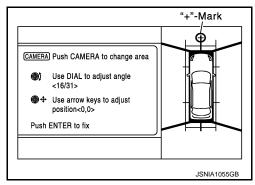
**Upper/lower direction** : -99 - 99 Left/right direction : -99 - 99

## **ZOOM** function

- The ZOOM ratio of camera can be changed when calibrating the camera.
- It shifts to ZOOM function mode by shifting the selector lever to a position other than the "R" position  $\rightarrow$  "R" position  $\rightarrow$  other than "R" position in the "Fine Tuning of Birds-Eye View" mode.
- The changing of ZOOM ratio can be performed for each camera. Move the "+"-mark to select the camera by pressing "CAMERA" switch and press the left/right switch to change the ZOOM ratio.

#### NOTE:

- When the position is not correct in "Fine Tuning of Birds-Eye View" mode, use this "ZOOM" function to adjust it.
- If this function is used, always adjust the upper/lower/left/right position again on the "Fine Tuning of Birds-Eye View" screen.



700M [CAMERA] Push CAMERA to change area Use DIAL to adjust angle <15/31> Use arrow keys to adjust position<0.0> Push ENTER to fix H 405 (DEF 405) V 603 (DEF 609) JSNIA1059GB

# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

< SYSTEM DESCRIPTION >

[NAVIGATION (TWIN MONITOR)]

# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

CONSULT-III Function (SONAR)

INFOID:0000000003825442

#### **DESCRIPTION**

CONSULT-III can display each diagnostic item using the diagnostic test modes shown as follows:

Test mode	Function
Ecu Identification	Sonar control unit part number can be read.
Self Diagnostic Result	Sonar control unit checks the conditions and displays memorized error.
Data Monitor	Sonar control unit input/output data in real time.
Active Test	Gives a drive signal to a load to check the operation.
Work support	Changes setting of each function.

#### **ECU IDENTIFICATION**

Displays the part number of sonar control unit.

#### SELF-DIAGNOSTIC RESULTS

For details, refer to AV-1027, "DTC Index".

#### **DATA MONITOR**

Monitor Item	Display	Description	
SONAR OPE	On	Around view monitor is ON. (sonar system is ON)	
SONAIX OF L	Off	Around view monitor is OFF. (sonar system is OFF)	
BUZZER OUTPUT	On	Buzzer is output condition.	
BOZZEN GOTFOT	Off	Buzzer is not output condition.	
	ERROR	When a sensor is abnormal.	
00 00 11 10 1	LV.0	When a sensor is not detection.	
CR SEN [FL] CR SEN [FR] CR SEN [RL] CR SEN [RR]	LV.2	The distance between the corner sensor and an obstacle is 60 cm (23.6 in) or more and less then 70 cm (27.5 in).	
	LV.3	The distance between the corner sensor and an obstacle is 40 cm (15.7 in) or more and less then 60 cm (23.6 in).	
	LV.4	The distance between corner sensor and an obstacle less than 40 cm (15.7 in).	

#### **ACTIVE TEST**

Active test item	Function
BUZZER	This test is able to check buzzer operation.
SONAR SENSOR This test is able to check each sonar sensor operation.	

### **WORK SUPPORT**

Work support item	Function
CORNER SEN DISTANCE SET Corner sensor warning buzzer distance is adjustable to 4 phases.	

#### CORNER SEN DISTANCE SET

Corner sensor warning buzzer distance can be set to 4 phases as follows.

Warning item	FARTHER	FAR	NORMAL	NEAR
Second warning	70 – 80 cm (27.5 – 31.4 in)	60 - 70 cm (23.6 - 27.5 in)	50 - 60 cm (19.6 - 23.6 in)	40 – 50 cm (15.7 – 19.6 in)

# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

# < SYSTEM DESCRIPTION >

# [NAVIGATION (TWIN MONITOR)]

Warning item	FARTHER	FAR	NORMAL	NEAR
Third warning	50 – 70 cm (19.6 – 27.5 in)	40 - 60 cm (15.7 - 23.6 in)	30 - 50 cm (11.8 - 19.6 in)	30 – 40 cm (11.8 – 15.7 in)
Fourth warning	Less than 50 cm (19.6 in)	Less than 40 cm (15.7 in)	Less than 30 cm (11.8 in)	Less than 30 cm (11.8 in)

The default of this model is "FAR".

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## **U1000 CAN COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# DTC/CIRCUIT DIAGNOSIS

# U1000 CAN COMM CIRCUIT

Description INFOID:000000003825735

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

CAN Communication Signal Chart. Refer to LAN-32, "CAN Communication Signal Chart".

DTC Logic

### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-III	Diagnostic item is detected when	Probable malfunction location
U1000	CAN COMM CIRCUIT	When AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system

# Diagnosis Procedure

INFOID:0000000003825737

# 1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 2. Check "Self Diagnostic Result" of "MULTI AV".

### Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to "LAN system". Refer to LAN-22, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI section. Refer to GI-35, "Intermittent Incident".

# **U1010 CONTROL UNIT (CAN)**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

U1010 CONTROL	UNIT	(CAN)	ļ
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Description INFOID:000000003825738

Initial diagnosis of AV control unit.

DTC Logic

## DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-III	Diagnostic item is detected when	Probable malfunction location
U1010	CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected	AV control unit

# Diagnosis Procedure

1. REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit.

>> INSPECTION END

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# U1310 AV CONTROL UNIT

Description INFOID:000000003825741

Replace the AV control unit if this DTC is displayed. Refer to AV-1045, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit

# **U1200 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# **U1200 AV CONTROL UNIT**

Description INFOID:000000003825743

Replace the AV control unit if this DTC is displayed. Refer to AV-1045, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1200	Cont Unit FLASH- ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	Replace AV control unit

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Revision: 2009 March AV-683 2009 FX35/FX50

# **U1201 AV CONTROL UNIT**

Description INFOID:0000000003825745

Replace the AV control unit if this DTC is displayed. Refer to AV-1045, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1201	GYRO NO CONN [U1201]	Internal malfunction of AV control unit (gyrocompass disconnection) is detected.	Replace AV control unit

### **U1216 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# **U1216 AV CONTROL UNIT**

Description INFOID:000000003825747

Replace the AV control unit if this DTC is displayed. Refer to AV-1045. "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1216	CAN CONT [U1216]	Internal malfunction of AV control unit (CAN controller) is detected.	Replace AV control unit

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## **U1217 AV CONTROL UNIT**

Description INFOID:0000000003825749

Replace the AV control unit if this DTC is displayed. Refer to AV-1045. "Removal and Installation".

Part name	Description
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1217	BLUETOOTH MODULE CONN [U1217]	Internal malfunction of AV control unit (Bluetooth module connection malfunction) is detected.	Replace AV control unit

### **U1218 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# **U1218 AV CONTROL UNIT**

Description INFOID:000000003825751

Replace the AV control unit if this DTC is displayed. Refer to AV-1045. "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1218	HDD-CONN [U1218]	Internal malfunction of AV control unit (HDD connection malfunction) is detected.	Replace AV control unit

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## **U1219 AV CONTROL UNIT**

Description INFOID:0000000003825753

Replace the AV control unit if this DTC is displayed. Refer to AV-1045, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1219	HDD-READ [U1219]	Internal malfunction of AV control unit (HDD read malfunction) is detected.	Replace AV control unit

### **U1220 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# **U1220 AV CONTROL UNIT**

Description INFOID:000000003825755

Replace the AV control unit if this DTC is displayed. Refer to AV-1045, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1220	XM SERIAL COMM [U1220]	Internal malfunction of AV control unit (satellite radio tuner communication error) is detected.	Replace AV control unit

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## **U121A AV CONTROL UNIT**

Description INFOID:000000003825757

Replace the AV control unit if this DTC is displayed. Refer to AV-1045, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121A	HDD-WRITE [U121A]	Internal malfunction of AV control unit (HDD write malfunction) is detected.	Replace AV control unit

### **U121B AV CONTROL UNIT**

## [NAVIGATION (TWIN MONITOR)]

# **U121B AV CONTROL UNIT**

Description INFOID:0000000003825759

Replace the AV control unit if this DTC is displayed. Refer to AV-1045, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic INFOID:0000000003825760

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121B	HDD-COMM [U121B]	Internal malfunction of AV control unit (HDD communication error) is detected.	Replace AV control unit

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## **U121C AV CONTROL UNIT**

Description INFOID:000000003825761

Replace the AV control unit if this DTC is displayed. Refer to AV-1045, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121C	HDD-ACCESS [U121C]	Internal malfunction of AV control unit (HDD access error) is detected.	Replace AV control unit

### **U121D AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

## **U121D AV CONTROL UNIT**

Description INFOID:000000003825763

Replace the AV control unit if this DTC is displayed. Refer to AV-1045, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121D	DSP CONN [U121D]	Internal malfunction of AV control unit (DSP connection error) is detected.	Replace AV control unit

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### **U121E AV CONTROL UNIT**

[NAVIGATION (TWIN MONITOR)]

## **U121E AV CONTROL UNIT**

Description INFOID:000000003825765

Replace the AV control unit if this DTC is displayed. Refer to AV-1045, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121E	DSP COMM [U121E]	Internal malfunction of AV control unit (DSP communication error) is detected.	Replace AV control unit

### **U121F AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

### **U121F AV CONTROL UNIT**

Description INFOID:000000003825767

Replace the AV control unit if this DTC is displayed. Refer to AV-1045, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121F	INTERNAL COMM [U121F]	Internal malfunction of AV control unit (internal communication error) is detected.	AV control unit power supply and ground circuit

# **Diagnosis Procedure**

INFOID:0000000003825769

# 1. CHECK AV CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check AV control unit power supply and ground circuit. Refer to <u>AV-716, "AV CONTROL UNIT : Diagnosis Procedure"</u>.

Is inspection result normal?

YES >> INSPECTION END

NO >> Repair malfunctioning parts.

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### **U1204 GPS**

Description INFOID:0000000003825770

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-1045">AV-1045</a>. <a href="Removal and Installation"</a>.

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1204	GPS CONN [U1204]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

# Diagnosis Procedure

INFOID:0000000003825772

# 1. PERFORM THE SELF-DIAGNOSIS

- 1. Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

#### [NAVIGATION (TWIN MONITOR)]

### **U1205 GPS**

Description INFOID:000000003825773

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-1045">AV-1045</a>. <a href="Removal and Installation"</a>.

Part name	Description		
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>		

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1205	GPS ROM [U1205]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

# Diagnosis Procedure

INFOID:0000000003825775

# 1. PERFORM THE SELF-DIAGNOSIS

- Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

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### **U1206 GPS**

Description INFOID:0000000003825776

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-1045">AV-1045</a>. "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1206	GPS RAM [U1206]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

# Diagnosis Procedure

INFOID:0000000003825778

# 1. PERFORM THE SELF-DIAGNOSIS

- 1. Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

#### [NAVIGATION (TWIN MONITOR)]

### **U1207 GPS**

**Description** 

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-1045">AV-1045</a>. <a href="Removal and Installation"</a>.

Part name	Description		
AV CONTROL UNIT	<ul> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes the audio, hands-free phone, voice control, navigation, satellite radio, and vehicle information functions.</li> <li>It is connected to ECM, unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Update of map data is performed with the CONSULT-III and the applicable cable.</li> </ul>		

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1207	GPS RTC [U1207]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

# Diagnosis Procedure

INFOID:0000000003825781

# 1. PERFORM THE SELF-DIAGNOSIS

- Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

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### U1243 FRONT DISPLAY UNIT

Description INFOID:000000003825782

Part name	Description		
FRONT DISPLAY UNIT	<ul> <li>Front display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal is input from AV control unit (RGB, RGB area and RGB synchronizing).</li> <li>Composite image signal (DVD and auxiliary images) is input from the video distributor.</li> <li>Camera image signal input to around view monitor control unit.</li> <li>Synchronize signal (HP, VP) is output to AV control unit.</li> <li>Touch panel function can be operated for each system by touching a display directly.</li> </ul>		

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1243	FRONT DISP CONN [U1243]	When either one of the following items is detected.  front display unit power supply and ground circuit malfunction is detected.  malfunction is detected in communication circuits between front display unit and AV control unit.  malfunction is detected in communication signal between front display unit and AV control unit.	<ul> <li>Front display unit power supply and ground circuit.</li> <li>Communication circuits between front display unit and AV control unit.</li> </ul>

# Diagnosis Procedure

INFOID:0000000003825784

# 1. CHECK FRONT DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUITS

Check front display unit power supply and ground circuits. Refer to <u>AV-716</u>, "FRONT DISPLAY UNIT : Diagnosis Procedure".

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# $2. \mathsf{CHECK}$ CONTINUITY COMMUNICATION CIRCUITS

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front display unit		AV control unit		Continuity
Connector	Terminals	Connector	Terminals	Continuity
M75	11	M88	70	Existed
IVI75	22	IVIOO	71	Existed

4. Check continuity between front display unit harness connector and ground.

Front display unit			Continuity
Connector	Terminals	Ground	Continuity
M75	11	Giodila	Not existed
C / IVI	22		Not existed

#### Is inspection result normal?

YES >> GO TO 3.

### **U1243 FRONT DISPLAY UNIT**

### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

NO >> Repair harness or connector.

# $3. \mathsf{CHECK}$ COMMUNICATION SIGNAL

1. Connect front display unit connector and AV control unit connector.

2. Turn ignition switch ON.

3. Check signal between front display unit harness connector and ground.

(+) Front display unit		(-)	Condition	Reference value
Connector	Terminal			
M75	11	Ground	When adjusting display brightness.	(V) 6 4 2 0

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

## 4. CHECK COMMUNICATION SIGNAL

Check signal between front display unit harness connector and ground.

(+) Front display unit		(-)	Condition	Reference value
Connector	Terminal			
M75	22	Ground	When adjusting display brightness.	(V) 6 4 2 0  PKIB5039J

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace front display unit.

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### **U1244 GPS ANTENNA**

#### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

## U1244 GPS ANTENNA

Description INFOID:000000003825785

Part name	Description
GPS ANTENNA	GPS signal is received and sent to AV control unit.

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1244	GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna disconnection

# Diagnosis Procedure

INFOID:0000000003825787

# 1.GPS ANTENNA CHECK

Visually check GPS antenna and antenna feeder.

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# $2.\mathsf{CHECK}$ AV CONTROL UNIT VOLTAGE

- 1. Disconnect GPS antenna connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit terminal and ground.

(+) AV control unit	(-)	Voltage (Approx.)
Terminal		
110	Ground	5.0 V

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace AV control unit.

#### **U1247 REAR DISPLAY UNIT**

< DTC/CIRCUIT DIAGNOSIS >

#### [NAVIGATION (TWIN MONITOR)]

### U1247 REAR DISPLAY UNIT

**Description** 

Part name Description	
REAR DISPLAY UNIT	<ul> <li>Rear display image is controlled by the serial communication from video distributor.</li> <li>RGB image signal is input from video distributor (RGB and RGB area).Composite image signal (DVD and AUX images) is input from the video distributor.</li> <li>Synchronize signal (HP, VP) is output to video distributor.</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1247	REAR DISP CONN [U1247]	When either one of the following items is detected:  rear display unit power supply and ground circuits are malfunctioning.  serial communication circuits between video distributor and rear display unit are malfunctioning.  serial communication signal between video distributor and rear display unit is malfunctioning.	Rear display unit power supply and ground circuits. Serial communication circuits between AV control unit and rear display unit.

### Diagnosis Procedure

# 1. CHECK REAR DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check rear display unit power supply and ground circuits. Refer to <u>AV-717, "REAR DISPLAY UNIT : Diagnosis Procedure"</u>.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# 2.check continuity serial communication circuit

- Turn ignition switch OFF.
- 2. Disconnect rear display unit connector and video distributor connector.
- 3. Check continuity between rear display unit harness connector and video distributor harness connector.

Rear display unit		Video distributor		Continuity	
Connector	Terminals	Connector Terminals		Continuity	
B26	9	MOZ	39	Existed	
D20	B26 M97		40	LAISIEU	

4. Check continuity between rear display unit harness connector and ground.

Rear display unit			Continuity
Connector	Terminals	Ground	Continuity
Pae	9	Giouna	Not existed
B26	10		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

# 3.CHECK SERIAL COMMUNICATION SIGNAL

- 1. Connect rear display unit connector and video distributor connector.
- 2. Turn ignition switch ON.

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#### **U1247 REAR DISPLAY UNIT**

#### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

3. Check signal between rear display unit harness connector and ground.

(+)					
Rear display unit		(-)	Condition		Reference value
Connector	Terminal				
B26	9	Ground	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear displayed.	(V) 6 4 2 0  + 1ms  PKIB5039J

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace rear display unit.

4. CHECK SERIAL COMMUNICATION SIGNAL

Check signal between rear display unit harness connector and ground.

Rear dis	(+)  Rear display unit (–) Condition		Rear display unit		Condition	Reference value
Connector	Terminal					
B26	10	Ground	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear displayed.	(V) 6 4 2 0 ++1ms PKIB5039J	

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace video distributor.

### **U1258 SATELLITE RADIO ANTENNA**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

### U1258 SATELLITE RADIO ANTENNA

Description INFOID:0000000008825791

Part name	Description
SATELLITE RADIO ANTENNA	Satellite radio signal is received and sent to AV control unit.

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1258	XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection

# Diagnosis Procedure

1. SATELLITE RADIO ANTENNA CHECK

Visually check satellite radio antenna and antenna feeder.

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# 2.CHECK AV CONTROL UNIT VOLTAGE

- 1. Disconnect satellite radio antenna connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit terminal and ground.

(+) AV control unit	(-)	Voltage (Approx.)
Terminal		(11 - 7
108	Ground	5.0 V

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace AV control unit.

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### **U1300 AV COMM CIRCUIT**

Description INFOID:000000003825796

U1300 is indicated when malfunction occurs in communication signal of multi AV system. Indicated simultaneously, without fail, with the malfunction of control units connected to AV control unit with communication line. Determine the possible malfunction cause from the table below.

#### SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display contents of CONSULT-III	Description	Possible malfunction factor/Action to take
U1300 U121F	AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]	When either one of the following items are detected:  AV control unit power supply and ground circuits malfunction are detected.  AV control unit malfunction are detected.	AV control unit power supply and ground circuits.     When there is no malfunction, AV control unit is malfunctioning.
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items are detected:  multifunction switch power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and multifunction switch.  malfunction is detected in the AV communication signal between AV control unit and multifunction switch.	Multifunction switch power supply and ground circuits.     AV communication circuits between AV control unit and multifunction switch.
U1300 U1254	AV COMM CIRCUIT [U1300]     IPod CONN [U1254]	When either one of the following items are detected:  iPod adapter power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and iPod adapter.  malfunction is detected in the AV communication signal between AV control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>
U1300 U1246	AV COMM CIRCUIT [U1300]     VIDEO DIST CONN [U1246]	When either one of the following items are detected:  video distributor power supply and ground circuits malfunction are detected.  malfunction is detected in the AV communication circuits between AV control unit and video distributor.  malfunction is detected in the AV communication signal between AV control unit and video distributor.	Video distributor power supply and ground circuits.     AV communication circuits between AV control unit and video distributor.
U1300 U1248	AV COMM CIRCUIT [U1300]     DVD DECK CONN [U1248]	<ul> <li>When either one of the following items are detected:</li> <li>DVD player power supply and ground circuits malfunction are detected.</li> <li>malfunction is detected in the AV communication circuits between AV control unit and DVD player.</li> <li>malfunction is detected in the AV communication signal between AV control unit and DVD player.</li> </ul>	<ul> <li>DVD player power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and DVD player.</li> </ul>
U1300 U125B	AV COMM CIRCUIT [U1300]     AROUND CAMERA CONN [U125B]	When either one of the following items are detected: around view monitor control unit power supply and ground circuits malfunction are detected. malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit. malfunction is detected in the AV communication signal between AV control unit and around view monitor control unit.	Around view monitor control unit power supply and ground circuits.     AV communication circuits between AV control unit and around view monitor control unit.

### **U1300 AV COMM CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

# [NAVIGATION (TWIN MONITOR)]

DTC	Display contents of CONSULT-III	Description	Possible malfunction factor/Action to take
U1300 U125C	AV COMM CIRCUIT [U1300]     SONAR CONN [U125C]	When either one of the following items are detected: sonar control unit power supply or ground circuit malfunction are detected. malfunction is detected in the AV communication circuits between around view monitor control unit and sonar control unit. malfunction is detected in the AV communication signal between around view monitor control unit and sonar control unit.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between around view monitor control unit and sonar control unit.</li> </ul>
U1300 U1240 U1248 U1246 U1254 U125B	<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>DVD DECK CONN [U1248]</li> <li>VIDEO DIST CONN [U1246]</li> <li>IPOD CONN [U1254]</li> <li>AROUND CAMERA CONN [U125B]</li> </ul>	Malfunction is detected in the AV communication circuits between AV control unit and around view monitor control unit.	AV communication circuits between AV control unit and around view monitor control unit.

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# **B2700 CORNER SENSOR [FL]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# B2700 CORNER SENSOR [FL]

Description INFOID.000000003825797

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2700	CORNER SENSOR [FL] [B2700]	Corner sensor front left is malfunctioning.	Replace corner sensor front LH

### **B2701 SENSOR HARNESS OPEN [CR-FL]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# B2701 SENSOR HARNESS OPEN [CR-FL]

**Description** 

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2701	SENSOR HARNESS OPEN [CR-FL] [B2701]	Corner sensor front LH harness circuit is open.	Check corner sensor front LH circuit

# Diagnosis Procedure

# 1. CHECK HARNESS CORNER SENSOR FRONT LH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (FL) harness connector.

Sonar control unit		Corner sensor (FL)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M44	3	E154	1	Existed

4. Check continuity between sonar control unit harness connector and ground.

Sonar control unit			Continuity
Connector	Terminal	Ground	Continuity
M44	3		Not existed

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.check harness corner sensor front LH ground circuit

Check continuity between sonar control unit harness connector and corner sensor (FL) harness connector.

Sonar co	Sonar control unit		ensor (FL)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M44	12	E154	2	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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# **B2702 CORNER SENSOR [FR]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# B2702 CORNER SENSOR [FR]

Description INFOID:000000003825802

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2702	CORNER SENSOR [FR] [B2702]	Corner sensor front right is malfunctioning.	Replace corner sensor front RH

## **B2703 SENSOR HARNESS OPEN [CR-FR]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

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# B2703 SENSOR HARNESS OPEN [CR-FR]

Description INFOID:0000000003825804

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

**DTC** Logic INFOID:0000000003825805

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2703	SENSOR HARNESS OPEN [CR-FR] [B2703]	Corner sensor front right harness circuit is open.	Check corner sensor front RH circuit

# Diagnosis Procedure

INFOID:0000000003825806

# 1. CHECK HARNESS CORNER SENSOR FRONT RH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (FR) harness connector.

Sonar co	ontrol unit	Corner se	ensor (FR)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M44	4	E152	1	Existed

Check continuity between sonar control unit harness connector and ground.

Sonar control unit		Continuity	
Connector	Terminal	Ground	Continuity
M44	4		Not existed

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.check harness corner sensor front RH ground circuit

Check continuity between sonar control unit harness connector and corner sensor (FR) harness connector.

Sonar control unit		Corner se	ensor (FR)	Continuity
Connector Terminal		Connector	Terminal	Continuity
M44	12	E152	2	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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# **B2704 CORNER SENSOR [RL]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# B2704 CORNER SENSOR [RL]

Description INFOID:000000003825807

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2704	CORNER SENSOR [RL] [B2704]	Corner sensor rear left is malfunctioning.	Replace corner sensor rear LH

# **B2705 SENSOR HARNESS OPEN [CR-RL]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

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# B2705 SENSOR HARNESS OPEN [CR-RL]

Description INFOID:0000000003825809

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

**DTC Logic** INFOID:0000000003825810

#### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2705	SENSOR HARNESS OPEN [CR-RL] [B2705]	Corner sensor rear left harness circuit is open.	Check corner sensor rear LH circuit

# Diagnosis Procedure

INFOID:0000000003825811

# 1. CHECK HARNESS CORNER SENSOR REAR LH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (RL) harness connector.

Sonar co	ontrol unit	Corner se	ensor (RL)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M44	5	B259	1	Existed

Check continuity between sonar control unit harness connector and ground.

Sonar co	Sonar control unit Continuity		Continuity
Connector	Terminal	Ground	Continuity
M44	5		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.check harness corner sensor rear lh ground circuit

Check continuity between sonar control unit harness connector and corner sensor (RL) harness connector.

Sonar control unit		Corner se	ensor (RL)	Continuity
Connector	Connector Terminal		Terminal	Continuity
M44	12	B259	2	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connecto

or (RL)	Continuity
Terminal	Continuity
2	Existed
or.	

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# **B2706 CORNER SENSOR [RR]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# **B2706 CORNER SENSOR [RR]**

Description INFOID:000000003825812

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2706	CORNER SENSOR [RR] [B2706]	Corner sensor rear right is malfunctioning.	Replace corner sensor rear RH

## **B2707 SENSOR HARNESS OPEN [CR-RR]**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

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# B2707 SENSOR HARNESS OPEN [CR-RR]

Description INFOID:0000000003825814

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

**DTC** Logic INFOID:0000000003825815

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2707	SENSOR HARNESS OPEN [CR-RR] [B2707]	Corner sensor rear right harness circuit is open.	Check corner sensor rear RH circuit

### Diagnosis Procedure

INFOID:0000000003825816

# 1. CHECK HARNESS CORNER SENSOR REAR RH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (RR) harness connector.

Sonar co	Sonar control unit		ensor (RR)	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M44	6	B256	1	Existed	

Check continuity between sonar control unit harness connector and ground.

Sonar co	ontrol unit		Continuity
Connector	Terminal	Ground	Continuity
M44	6		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.check harness corner sensor rear rh ground circuit

Check continuity between sonar control unit harness connector and corner sensor (RR) harness connector.

Sonar control unit		Corner se	ensor (RR)	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M44	12	B256	2	Existed	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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**AV-715** Revision: 2009 March 2009 FX35/FX50

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000003825817

### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19
Ignition switch ON or START	3

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between AV control unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
	M80			
Battery power supply	M87	22	OFF	Battery voltage
	IVIO7	24		
ACC power cumply	M80	7	ACC	Battery voltage
ACC power supply	M87	25	ACC	Ballery Vollage
Ignition signal	M87	35	ON	Battery voltage

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Check harness between AV control unit and fuse.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect AV control unit connectors.
- 3. Check continuity between AV control unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M87	21	OFF	Existed
Ground	IVIO7	23	OH	LXISTEG

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

### FRONT DISPLAY UNIT

# FRONT DISPLAY UNIT: Diagnosis Procedure

INFOID:0000000003825818

### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

# 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between front display unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M75	2	OFF	Battery voltage
ACC power supply	M75	3	ACC	Battery voltage

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Check harness between front display unit and fuse.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector.
- 3. Check continuity between front display unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M75	1	OFF	Existed
	Ground M75	13	OH	

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

#### REAR DISPLAY UNIT

## REAR DISPLAY UNIT: Diagnosis Procedure

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

# 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between rear display unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply B2	B26	3	OFF	Battery voltage
	D20	4		Battery Voltage
ACC power supply	B26	6	ACC	Battery voltage

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between rear display unit and fuse.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect rear display unit connector.
- 3. Check continuity between rear display unit harness connector and ground.

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#### < DTC/CIRCUIT DIAGNOSIS >

#### [NAVIGATION (TWIN MONITOR)]

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B26	1	OFF	Existed
Ground	520	2	OII	LAISICU

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

#### VIDEO DISTRIBUTOR

### VIDEO DISTRIBUTOR: Diagnosis Procedure

INFOID:0000000003825902

INFOID:0000000003825819

## 1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19
Ignition switch ON or START	3

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

# 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between video distributor harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M99	54	OFF	Battery voltage
ACC power supply	M99	55	ACC	Battery voltage
Ignition signal	M99	56	ON	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between video distributor and fuse.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect video distributor connector.
- 3. Check continuity between video distributor harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M99	53	OFF	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

#### MULTIFUNCTION SWITCH

### MULTIFUNCTION SWITCH: Diagnosis Procedure

### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Ignition switch ACC or ON	19

#### < DTC/CIRCUIT DIAGNOSIS >

#### [NAVIGATION (TWIN MONITOR)]

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

# 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between multifunction switch harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
ACC power supply	M72	3	ACC	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between multifunction switch and fuse.

### ${f 3.}$ CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect multifunction switch connector.
- 3. Check continuity between multifunction switch harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M72	1	OFF	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

BOSE AMP.

# **BOSE AMP.**: Diagnosis Procedure

### 1.CHECK FUSE

Check for blown fuse.

Power source	Fuse No.
Battery	8

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

# 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between BOSE amp. harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B42	11	OFF	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

>> Check harness between BOSE amp. and fuse. NO

# 3.CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BOSE amp. connector.
- Check continuity between BOSE amp. harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B42	12	OFF	Existed

#### Is the inspection result normal?

>> INSPECTION END YES

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< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

NO >> Repair harness or connector.

**DVD PLAYER** 

**DVD PLAYER**: Diagnosis Procedure

INFOID:0000000003825903

### 1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between DVD player harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M182	2	OFF	Battery voltage
ACC power supply	M182	4	ACC	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between DVD player and fuse.

### CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect DVD player connector.
- 3. Check continuity between DVD player harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M182	1	OFF	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

iPod ADAPTER

## iPod ADAPTER: Diagnosis Procedure

INFOID:0000000003825821

## 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between iPod adapter harness connector and ground.

## POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

### [NAVIGATION (TWIN MONITOR)]

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M111	5	OFF	Battery voltage
ACC power supply	M111	3	ACC	Battery voltage

Is the inspection result normal?

YES >> INSPECTION END

>> Check harness between iPod adapter and fuse.

## AROUND VIEW MONITOR CONTROL UNIT

## AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure

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## 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC	19
Ignition switch ON	4

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

## 2.CHECK POWER SUPPLY CIRCUITS

Check voltage between around view monitor control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B46	2	OFF	Battery voltage
ACC power supply	B46	4	ACC	Battery voltage
Ignition power supply	B46	3	ON	Battery voltage

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Check harness between around view monitor control unit and fuse.

# 3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector.
- Check continuity between around view monitor control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B46	1	OFF	Existed

#### Is inspection result normal?

YES >> INSPECTION END

>> Repair harness or connector.

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): Diagnosis Procedure

### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Ignition switch ACC or ON	19

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#### POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

# 2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch ON.
- 2. Check voltage between sonar control unit harness connector and ground.

Sonar co	ontrol unit		Voltage
Connector	Terminal	Ground	(Approx.)
M44	13		Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace sonar control unit power supply harness.

# 3.CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector.
- 3. Check continuity between sonar control unit harness connector and ground.

Sonar co	ontrol unit		Continuity
Connector	Terminal	Ground	Continuity
M44	24		Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace sonar control unit ground harness.

# RGB (R: RED) SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# RGB (R: RED) SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

Description INFOID:000000003825825

Transmit the image displayed with AV control unit with RGB signal to the front display unit.

# Diagnosis Procedure

# 1. CHECK CONTINUITY RGB (R: RED) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	17	M88	61	Existed

4. Check continuity between front display unit harness connector and ground.

Front display unit			Continuity
Connector	Terminal	Ground	Continuity
M75	17		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (R: RED) SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+) Front display unit		(-)	Condition	Reference value
Connector	Terminal			
M75	17	Ground	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spec- trum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 → 40µs JSNIA1029ZZ

#### Is inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

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# RGB (G: GREEN) SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# RGB (G: GREEN) SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DIS-PLAY UNIT)

Description INFOID:000000003825827

Transmit the image displayed with AV control unit with RGB signal to the front display unit.

## Diagnosis Procedure

INFOID:0000000003825828

# 1. CHECK CONTINUITY RGB (G: GREEN) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	6	M88	62	Existed

4. Check continuity between front display unit harness connector and ground.

Front display unit			Continuity
Connector	Terminal	Ground	Continuity
M75	6		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (G: GREEN) SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+)				
Front display unit		(–)	Condition	Reference value
Connector	Terminal			
M75	6	Ground	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spec- trum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 • • 40μs JSNIA1030ZZ

#### Is inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

## RGB (B: BLUE) SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# RGB (B: BLUE) SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DIS-PLAY UNIT)

Description INFOID:0000000003825829

Transmit the image displayed with AV control unit with RGB signal to the front display unit.

# Diagnosis Procedure

- 1. CHECK CONTINUITY RGB (B: BLUE) SIGNAL CIRCUIT
- Turn ignition switch OFF. Disconnect front display unit connector and AV control unit connector.
- Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	Front display unit		trol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	18	M88	63	Existed

Check continuity between front display unit harness connector and ground.

Front display unit			Continuity
Connector	Terminal	Ground	Continuity
M75	18		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (B: BLUE) SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- Turn ignition switch ON.
- Check signal between front display unit harness connector and ground.

(+)			0 - 150	D. (
Front dis	splay unit	(-)	Condition	Reference value
Connector	Terminal			
M75	18	Ground	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spec- trum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 → 40µs JSNIA1031ZZ

#### Is inspection result normal?

Revision: 2009 March

YES >> Replace front display unit.

NO >> Replace AV control unit.

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## RGB SYNCHRONIZING SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DIS-PLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# RGB SYNCHRONIZING SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

Description INFOID:00000000382583

Transmit the RGB synchronizing signal to the front display unit so as to synchronize the RGB image displayed with AV control unit.

## Diagnosis Procedure

INFOID:0000000003825832

# 1. CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	splay unit	AV con	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M75	19	M88	65	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	19		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK RGB SYNCHRONIZING SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+)		(–)	
Front dis	Front display unit		Reference value
Connector	Terminal		
M75	19	Ground	(V) 4 0 → 20 µs SKIB3603E

#### Is inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

## RGB AREA (YS) SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# RGB AREA (YS) SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DIS-PLAY UNIT)

Description INFOID:0000000003825833

Transmits the display area of RGB image displayed by AV control unit with RGB area (YS) signal to front display unit.

## Diagnosis Procedure

# 1. CHECK CONTINUITY RGB AREA (YS) SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect front display unit connector and AV control unit connector. 2.
- Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	splay unit	AV cor	trol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	9	M88	67	Existed

Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	9		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB SYNCHRONIZING SIGNAL

- Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- Check signal between front display unit harness connector and ground.

(+) Front display unit Connector Terminal		(-)	Condition	Reference value (Approx.)
			At RGB image displayed	5.0 V
M75	9	Ground	At AUX image displayed	(V) 6 4 2 0 → +200 μ s PKIB4948J

#### Is inspection result normal?

YES >> Replace front display unit.

NO >> Replace AV control unit.

**AV-727** Revision: 2009 March 2009 FX35/FX50

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# HORIZONTAL SYNCHRONIZING SIGNAL CIRCUIT (FRONT DISPLAY UNIT TO AV CONTROL UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# HORIZONTAL SYNCHRONIZING SIGNAL CIRCUIT (FRONT DISPLAY UNIT TO AV CONTROL UNIT)

Description INFOID:0000000003825838

In composite image (DVD image, AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from front display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

## Diagnosis Procedure

INFOID:0000000003825836

# 1.check continuity horizontal synchronizing (HP) signal circuit

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	splay unit	AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	8	M88	68	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	8		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.check horizontal synchronizing (hp) signal

- 1. Connect front display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

-	+)		
Front dis	Front display unit		Reference value
Connector	Terminal		
M75	8	Ground	(V) 4 0 → 20 µs SKIB3603E

#### Is inspection result normal?

YES >> Replace AV control unit.

NO >> Replace front display unit.

# VERTICAL SYNCHRONIZING SIGNAL CIRCUIT (FRONT DISPLAY UNIT TO AV CONTROL UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# VERTICAL SYNCHRONIZING SIGNAL CIRCUIT (FRONT DISPLAY UNIT TO AV CONTROL UNIT)

Description

In composite image (DVD image, AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from front display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

# Diagnosis Procedure

# 1. CHECK CONTINUITY VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front display unit connector and AV control unit connector.
- 3. Check continuity between front display unit harness connector and AV control unit harness connector.

Front dis	Front display unit		trol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	20	M88	69	Existed

4. Check continuity between front display unit harness connector and ground.

Front display unit			Continuity
Connector	Terminal	Ground	Continuity
M75	20		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

- 1. Connect front display unit connector and AV control unit connector.
- Turn ignition switch ON.
- 3. Check signal between front display unit harness connector and ground.

(+) Front display unit		( )	Deference value
Front dis	spiay unit	(–)	Reference value
Connector	Terminal		
M75	20	Ground	(V) 4 0 • + 4ms SKIB3598E

#### Is inspection result normal?

YES >> Replace AV control unit. NO >> Replace front display unit.

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## COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO FRONT DIS-PLAY UNIT)

### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO FRONT DISPLAY UNIT)

**Description** 

Video distributor receives the image signal from the DVD player and auxiliary input jack and then transmits it to the front display unit and rear display unit.

## **Diagnosis Procedure**

INFOID:0000000003867752

# 1. CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect video distributor connector and front display unit connector.
- 3. Check continuity between video distributor harness connector and front display unit harness connector.

Video d	istributor	Front display unit		Continuity
Connector	Terminals	Connector Terminals		Continuity
M98	8	MZE	15	Eviatod
IVI90	6	M75	5	Existed

4. Check continuity between front display unit harness connector and ground.

Front dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	15		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK COMPOSITE IMAGE SIGNAL

- Connect video distributor connector and front display unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front display unit harness connector using an oscilloscope.

(-	+)	(-	<b>–</b> )		
Front dis	splay unit	Front display unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
M75	15	M75	5	When AUX, DVD or camera image is displayed on front display unit.	(V) 0. 4 0 -0. 4 → 40µs SKIB2251J

#### Is the inspection result normal?

YES >> Replace front display unit.

NO >> Replace video distributor.

## RGB (R: RED) SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO REAR DISPLAY UNIT)

### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# RGB (R: RED) SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO REAR DIS-PLAY UNIT)

Description INFOID:0000000003867223

Transmit the image displayed with video distributor with RGB signal to the rear display unit.

## Diagnosis Procedure

#### INFOID:0000000003867224

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# 1. CHECK CONTINUITY RGB (R: RED) SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect rear display unit connector and video distributor connector.
- Check continuity between rear display unit harness connector and video distributor harness connector.

Rear display unit		Video distributor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B26	22	M97	25	Existed

Check continuity between rear display unit harness connector and ground.

Rear display unit			Continuity
Connector	Terminal	Ground	Continuity
B26	22		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (R: RED) SIGNAL

- 1. Connect rear display unit connector and video distributor connector.
- Turn ignition switch ON.
- Check signal between rear display unit harness connector and ground using an oscilloscope.

·	+) splay unit	(-)	Condition	Reference value
Connector	Terminal			
B26	22	Ground	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 0.8 0.4 0 → 40μs JSNIA1029ZZ

#### Is the inspection result normal?

YES >> Replace rear display unit.

NO >> Replace video distributor. ΑV

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**AV-731** 

# RGB (G: GREEN) SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO REAR DISPLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# RGB (G: GREEN) SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO REAR DISPLAY UNIT)

Description INFOID:000000003867225

Transmit the image displayed with video distributor with RGB signal to the rear display unit.

## Diagnosis Procedure

INFOID:0000000003867226

# 1. CHECK CONTINUITY RGB (G: GREEN) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect rear display unit connector and video distributor connector.
- 3. Check continuity between rear display unit harness connector and video distributor harness connector.

Rear dis	Rear display unit		istributor	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B26	21	M97	26	Existed

4. Check continuity between rear display unit harness connector and ground.

Rear display unit			Continuity
Connector	Terminal	Ground	Continuity
B26	21		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (G: GREEN) SIGNAL

- 1. Connect rear display unit connector and video distributor connector.
- 2. Turn ignition switch ON.
- 3. Check signal between rear display unit harness connector and ground using an oscilloscope.

(+) Rear display unit		(-)	Condition	Reference value	
Connector	Terminal				
B26	21	Ground	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 0.8 0.4 0 +40µs JSNIA1030ZZ	

#### Is the inspection result normal?

YES >> Replace rear display unit.

NO >> Replace video distributor.

# RGB (B: BLUE) SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO REAR DISPLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# RGB (B: BLUE) SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO REAR DISPLAY UNIT)

Description

Transmit the image displayed with video distributor with RGB signal to the rear display unit.

## Diagnosis Procedure

## INFOID:0000000003867228

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# $\hbox{\bf 1.} \text{CHECK CONTINUITY RGB (B: BLUE) SIGNAL CIRCUIT}$

- 1. Turn ignition switch OFF.
- 2. Disconnect rear display unit connector and video distributor connector.
- 3. Check continuity between rear display unit harness connector and video distributor harness connector.

Rear display unit		Video d	istributor	Continuity
Connector	Terminal	Connector Terminal		Continuity
B26	20	M97	28	Existed

4. Check continuity between rear display unit harness connector and ground.

Rear dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
B26	20		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (B: BLUE) SIGNAL

- 1. Connect rear display unit connector and video distributor connector.
- Turn ignition switch ON.
- 3. Check signal between rear display unit harness connector and ground using an oscilloscope.

(+) Rear display unit		(-)	Condition	Reference value
Connector	Terminal			
B26	20	Ground	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 0.8 0.4 0 + 40μs JSNIA1031ZZ

#### Is the inspection result normal?

YES >> Replace rear display unit.

NO >> Replace video distributor.

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2009 FX35/FX50

Revision: 2009 March

**AV-733** 

# RGB AREA (YS) SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO REAR DISPLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# RGB AREA (YS) SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO REAR DISPLAY UNIT)

Description INFOID:000000003867614

Transmits the display area of RGB image displayed by video distributor with RGB area (YS) signal to rear display unit.

## Diagnosis Procedure

INFOID:0000000003867615

# 1. CHECK CONTINUITY RGB AREA (YS) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect rear display unit connector and video distributor connector.
- 3. Check continuity between rear display unit harness connector and video distributor harness connector.

Rear dis	Rear display unit		istributor	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B26	15	M97	32	Existed

Check continuity between rear display unit harness connector and ground.

Rear dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
B26	15		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB AREA (YS) SIGNAL

- 1. Connect rear display unit connector and video distributor connector.
- 2. Turn ignition switch ON.
- 3. Check signal between rear display unit harness connector and ground using an oscilloscope.

(+) Rear display unit		(–)	Condition	Reference value
Connector	Terminal	Terminal		
			When AUX or DVD image is displayed on rear display unit.	0 V
B26	15	Ground	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 6 4 2 0 → + 200 \(\mu\) s PKIB4948J

#### Is the inspection result normal?

YES >> Replace rear display unit.

NO >> Replace video distributor.

## VERTICAL SYNCHRONIZING SIGNAL CIRCUIT (REAR DISPLAY UNIT TO VID-EO DISTRIBUTOR)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# VERTICAL SYNCHRONIZING SIGNAL CIRCUIT (REAR DISPLAY UNIT TO VIDEO DISTRIBUTOR)

Description INFOID:0000000003867616

In composite image (DVD and AUX images), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from rear display unit to video distributor so as to synchronize the RGB images displayed with video distributor such as the image quality adjusting menu, etc.

# Diagnosis Procedure

INFOID:0000000003867617

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# 1. CHECK CONTINUITY VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect rear display unit connector and video distributor connector.
- Check continuity between rear display unit harness connector and video distributor harness connector.

Rear display unit		Video d	istributor	Continuity
Connector	Terminal	Connector Terminal		Continuity
B26	17	M97	29	Existed

4. Check continuity between rear display unit harness connector and ground.

Rear dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
B26	17		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.check vertical synchronizing (vp) signal

- 1. Connect rear display unit connector and video distributor connector.
- 2. Turn ignition switch ON.
- 3. Check signal between rear display unit harness connector and ground using an oscilloscope.

	+) splay unit	(-)	Condition	Reference value
Connector	Terminal			
B26	17	Ground	_	(V) 4 0 ++4ms SKIB3598E

#### Is the inspection result normal?

YES >> Replace video distributor.

NO >> Replace rear display unit.

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# HORIZONTAL SYNCHRONIZING SIGNAL CIRCUIT (REAR DISPLAY UNIT TO VIDEO DISTRIBUTOR)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# HORIZONTAL SYNCHRONIZING SIGNAL CIRCUIT (REAR DISPLAY UNIT TO VIDEO DISTRIBUTOR)

Description INFOID:000000003867618

In composite image (DVD and AUX images), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from rear display unit to video distributor so as to synchronize the RGB images displayed with video distributor such as the image quality adjusting menu, etc.

## Diagnosis Procedure

INFOID:0000000003867619

# 1. CHECK CONTINUITY HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect rear display unit connector and video distributor connector.
- 3. Check continuity between rear display unit harness connector and video distributor harness connector.

Rear display unit		Video distributor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B26	18	M97	30	Existed

4. Check continuity between rear display unit harness connector and ground.

Rear dis	splay unit		Continuity
Connector	Terminal	Ground	Continuity
B26	18		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

- 1. Connect rear display unit connector and video distributor connector.
- 2. Turn ignition switch ON.
- 3. Check signal between rear display unit harness connector and ground using an oscilloscope.

	+) splay unit	(-)	Condition	Reference value
Connector	Terminal			
B26	18	Ground	_	(V) 4 0 → 20µs SKIB3601E

#### Is the inspection result normal?

YES >> Replace video distributor.

NO >> Replace rear display unit.

# COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO REAR DISPLAY UNIT)

### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO REAR DISPLAY UNIT)

Description INFOID:000000003867749

Video distributor receives the image signal from the DVD player and auxiliary input jack and then transmits it to the front display unit and rear display unit.

## Diagnosis Procedure

# 1. CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect video distributor connector and rear display unit connector.
- 3. Check continuity between video distributor harness connector and rear display unit harness connector.

Video d	istributor	Rear dis	splay unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M97	34	B26	14	Existed

4. Check continuity between rear display unit harness connector and ground.

Rear display unit			Continuity
Connector	Terminal	Ground	Continuity
B26	14		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK COMPOSITE IMAGE SIGNAL

- 1. Connect video distributor connector and rear display unit connector.
- 2. Turn ignition switch ON.
- Check signal between rear display unit harness connector using an oscilloscope.

	+) splay unit	(-)	Condition	Reference value
Connector	Terminal			
B26	14	Ground	When AUX or DVD image is displayed on rear display unit.	(V) 0. 4 0 -0. 4 + 40μs SKIB2251J

#### Is the inspection result normal?

YES >> Replace rear display unit.

NO >> Replace video distributor.

Revision: 2009 March AV-737 2009 FX35/FX50

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INFOID:0000000003867750

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## **AUX IMAGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

## **AUX IMAGE SIGNAL CIRCUIT**

Description INFOID.000000003825839

Transmits the image signal of external device from auxiliary input jacks to video distributor.

## Diagnosis Procedure

INFOID:0000000003825840

2009 FX35/FX50

# 1. CHECK CONTINUITY AUX IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect auxiliary input jacks connector and video distributor connector.
- Check continuity between auxiliary input jacks harness connector and video distributor harness connector.

Auxiliary input jacks		Video d	istributor	Continuity
Connector	Terminal	Connector Terminal		Continuity
M183	7	M98	19	Existed

4. Check continuity between auxiliary input jacks harness connector and ground.

Auxiliary	input jacks		Continuity
Connector	Terminal	Ground	Continuity
M183	7		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK AUX IMAGE SIGNAL

- 1. Connect auxiliary input jacks connector and video distributor connector.
- 2. Turn ignition switch ON.
- 3. Check signal between auxiliary input jacks harness connector and ground.

(+) Auxiliary input jacks		(-)	Condition	Reference value
Connector	Terminal			
M183	7	Ground	At AUX image displayed	(V) 0. 4 0 -0. 4 → 40µs SKIB2251J

#### Is inspection result normal?

YES >> Replace video distributor.

NO >> Check that there is no malfunction in the external device.

#### **DVD IMAGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

## DVD IMAGE SIGNAL CIRCUIT

Description INFOID:0000000003867918

The DVD player transmits the playback DVD image signal to the video distributor. The video distributor receives the image signal from the DVD player, and auxiliary input jack, and then transmits it to the front display unit and rear display.

# **Diagnosis Procedure**

# 1. CHECK CONTINUITY DVD IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect DVD player connector and video distributor connector.
- 3. Check continuity between DVD player harness connector and video distributor harness connector.

DVD	player	Video distributor		Continuity
Connector	Terminals	Connector Terminals		Continuity
M182	7	M98	23	Existed
IVITOZ	5	IVISO	22	Existed

4. Check continuity between video distributor harness connector and ground.

Video d	istributor		Continuity
Connector	Terminal	Ground	Continuity
M98	23		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK DVD IMAGE SIGNAL

- 1. Connect DVD player connector and video distributor connector.
- 2. Turn ignition switch ON.
- 3. Check signal between video distributor harness connector and ground using an oscilloscope.

-	+) istributor	(-) Video distributor		Condition	Reference value
Connector	Terminal	Connector	Terminal		
M98	23	M98	22	When DVD image is displayed.	(V) 0. 4 0 -0. 4 → 40μs SKIB2251J

#### Is the inspection result normal?

YES >> Replace video distributor.

NO >> Replace DVD player.

Revision: 2009 March AV-739 2009 FX35/FX50

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INFOID:0000000003867919

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#### **MODE CHANGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

## MODE CHANGE SIGNAL CIRCUIT

**Description** 

• AV control unit transmits the mode change signal to BOSE amp.

 Driver's Audio Stage controls the speaker's output characteristic by BOSE amp. so that the driver's seat is to be the center of sounds.

### Diagnosis Procedure

INFOID:0000000003825842

# 1. CHECK CONTINUITY MODE CHANGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BOSE amp. connector and AV control unit connector.
- Check continuity between BOSE amp. harness connector and AV control unit harness connector.

BOSE amp.		AV con	trol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
B41	17	M87	44	Existed

4. Check continuity between BOSE amp. harness connector and ground.

BOSE amp.			Continuity
Connector	Terminal	Ground	Continuity
B41	17		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK MODE CHANGE SIGNAL

- 1. Connect BOSE amp. connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between BOSE amp. harness connector and ground.

(+) BOSE amp.		(-)	Voltage (Approx.)	
Connector	Terminal	( )	(Approx.)	
B41	17	Ground	8.5 V	

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace BOSE amp.

#### **DISK EJECT SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# **DISK EJECT SIGNAL CIRCUIT**

Description INFOID:0000000003825843

The eject signal is output to AV control unit when the eject switch of multifunction switch is pressed.

## Diagnosis Procedure

# INFOID:0000000003825844 1. CHECK CONTINUITY CD EJECT SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect multifunction switch connector and AV control unit connector.
- Check continuity between multifunction switch harness connector and AV control unit harness connector.

Multifunc	Multifunction switch		trol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M72	14	M89	85	Existed

Check continuity between multifunction switch harness connector and ground.

Multifunc	ion switch		Continuity
Connector	Terminal	Ground	Continuity
M72	14		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK AV CONTROL UNIT VOLTAGE

- Connect AV control unit connector.
- 2. Turn ignition switch ON.
- Check voltage between AV control unit harness connector and ground.

	+) ntrol unit	(-)	Voltage (Approx.)	
Connector	Terminal		, , ,	
M89	85	Ground	3.3 V	

#### Is inspection result normal?

YES >> Replace preset switch.

NO >> Replace AV control unit.

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**AV-741** Revision: 2009 March 2009 FX35/FX50

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#### MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

## MICROPHONE SIGNAL CIRCUIT

Description INFOID:000000003825845

Supply power from AV control unit to microphone. The microphone transmits the sound voice to the AV control unit.

## Diagnosis Procedure

INEOID:0000000003825846

# 1. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND MICROPHONE CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector and microphone connector.
- 3. Check continuity between AV control unit harness connector and microphone harness connector.

AV control unit		Microphone		Continuity
Connector	Terminals	Connector Terminals		Continuity
	26		4	
M87	27	R17	2	Existed
	28		1	

4. Check continuity between AV control unit harness connector and ground.

AV cor	ntrol unit		Continuity
Connector	Terminals	Ground	Continuity
M87	26	- Ground -	Not existed
IVIO7	28		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK VOLTAGE MICROPHONE VCC

- 1. Connect AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector.

(+)		(–)		
AV cor	ntrol unit	AV control unit		Voltage (Approx.)
Connector	Terminal	Connector Terminal		(11 - )
M87	26	M87	27	5.0 V

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace AV control unit.

# ${f 3.}$ CHECK MICROPHONE SIGNAL

- 1. Turn ignition switch OFF.
- Connect microphone connector.
- 3. Turn ignition switch ON.
- 4. Check signal between AV control unit harness connector.

# **MICROPHONE SIGNAL CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

# [NAVIGATION (TWIN MONITOR)]

(	+)	(-	-)		
AV cor	trol unit	AV control unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
M87	28	M87	27	Give a voice.	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0 • • • 2ms

Is inspection result normal?

YES >> Replace AV control unit.

NO >> Replace microphone.

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#### **CAMERA IMAGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:000000003825851

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

### Diagnosis Procedure

INFOID:0000000003825852

# 1. CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and front display unit connector.
- Check continuity between around view monitor control unit harness connector and front display unit harness connector.

	nonitor control nit	Front display unit		Continuity
Connector	Terminal	Connector Terminal		
B46	27	M75	12	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	27		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK CAMERA IMAGE SIGNAL

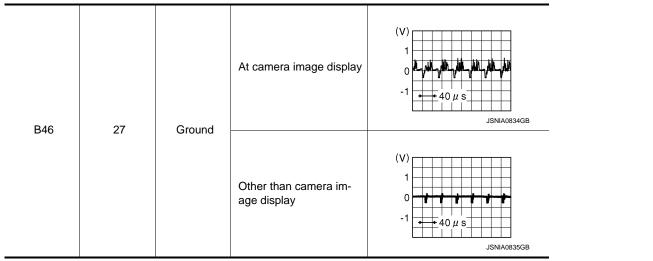
- 1. Connect around view monitor control unit connector and front display unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector and ground.

(-	+)			
Around view monitor control unit		(–)	Condition	Reference value
Connector	Terminal			

## **CAMERA IMAGE SIGNAL CIRCUIT**

## < DTC/CIRCUIT DIAGNOSIS >

## [NAVIGATION (TWIN MONITOR)]



Is inspection result normal?

YES >> Replace front display unit.

NO >> Replace around view monitor control unit.

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## STEERING ANGLE SENSOR SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# STEERING ANGLE SENSOR SIGNAL CIRCUIT

Description INFOID:000000003825855

• Steering angle sensor signal 1, 2 detects the turning direction and quantity of the steering and transmits it to the around view monitor control unit.

- Steering angle sensor signal 3 detects the neutral position of the steering and transmits it to around view monitor control unit.
- Around view monitor control unit performs the correction of neutral position with sensor signal 1, 2, 3 and vehicle speed signal.

### **Diagnosis Procedure**

INFOID:0000000003825856

# 1. CHECK CONTINUITY STEERING ANGLE SENSOR SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and steering angle sensor connector.
- Check continuity between around view monitor control unit harness connector and steering angle sensor harness connector.

Around view monitor control unit		Steering angle sensor		Continuity
Connector	Terminals	Connector	Terminals	
	14		3	
B46	15	M37	4	Existed
	16		5	

4. Check continuity between around view monitor control unit harness connector and ground.

	nonitor control nit		Continuity
Connector	Terminals		
	14	Ground	
B46	15		Not existed
	16		

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK SIGNAL SENSOR SIGNAL

- Connect around view monitor control unit connector.
- 2. Turn ignition switch ON.
- Check voltage between around view monitor control unit harness connector and ground.

(+)			
Around view monitor control unit		(–)	Voltage (Approx.)
Connector	Terminals		
	14		
B46	15	Ground	5.0 V
	16		

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

# STEERING ANGLE SENSOR SIGNAL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# 3. CHECK SIGNAL SENSOR SIGNAL

- 1. Turn ignition switch OFF.
- 2. Connect steering angle sensor connector.
- 3. Turn ignition switch ON.
- 4. Check signal between around view monitor control unit harness connector and ground.

(-	+)				
Around view monitor control unit		(–)	Condition	Reference value	
Connector	Terminals				
	14, 15	Ground	Turn the steering to the right	(V) 4 2 0 4 2 0 SKIB3827E  A: Sensor signal 1  B: Sensor signal 2	
B46			Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2	
	16	Ground	Turn the steering around the neutral position	A: Sensor signal 3 B: Sensor signal 1	

Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering angle sensor.

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## STEERING SWITCH SIGNAL A CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# STEERING SWITCH SIGNAL A CIRCUIT

Description INFOID:000000003825857

Transmits the steering switch signal to AV control unit.

## Diagnosis Procedure

INFOID:0000000003825858

# 1. CHECK STEERING SWITCH SIGNAL A CIRCUIT

- 1. Disconnect AV control unit connector and spiral cable connector.
- 2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV cor	AV control unit		cable	Continuity
Connector	Terminal	Connector Terminal		
M80	6	M36	24	Existed

3. Check continuity between AV control unit harness connector and ground.

AV cor	trol unit		Continuity
Connector	Terminal	Ground	Continuity
M80	6		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK SPIRAL CABLE

Check spiral cable.

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

# 3.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector and spiral cable connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector.

(+)		(–)		V 16
AV cor	ntrol unit	AV control unit		Voltage (Approx.)
Connector	Terminal	Connector	Terminal	(11 - )
M80	6	M80	15	5.0 V

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

## 4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-749</u>, "Component Inspection".

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

## STEERING SWITCH SIGNAL A CIRCUIT

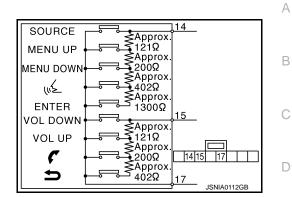
< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

INFOID:0000000003825859

# Component Inspection

Measure the resistance between the steering switch connector.



Steering	Steering switch		g switch	Condition	Resistance value	
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$	
				ENTER switch ON	2003 – 2043	
				w≨ switch ON	716 – 730	
	14			MENU DOWN switch ON	318 – 324	
		M303	MENU UP switch ON		MENU UP switch ON	120 – 122
M303			17	SOURCE switch ON	0	
				switch ON	716 – 730	
	15			switch ON	318 – 324	
	-			VOL UP switch ON	120 – 122	
				VOL DOWN switch ON	0	

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## STEERING SWITCH SIGNAL B CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# STEERING SWITCH SIGNAL B CIRCUIT

Description

Transmits the steering switch signal to AV control unit.

## Diagnosis Procedure

INFOID:0000000003825861

# 1. CHECK STEERING SWITCH SIGNAL B CIRCUIT

- 1. Disconnect AV control unit connector and spiral cable connector.
- 2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV cor	AV control unit		cable	Continuity
Connector	Terminal	Connector Terminal		Continuity
M80	16	M36	31	Existed

3. Check continuity between AV control unit harness connector and ground.

AV cor	trol unit		Continuity
Connector	Terminal	Ground	Continuity
M80	16		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK SPIRAL CABLE

Check spiral cable.

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

# 3.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector and spiral cable connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector.

(+)		(–)		V 16
AV cor	ntrol unit	AV control unit		Voltage (Approx.)
Connector	Terminal	Connector	Terminal	(     - /
M80	16	M80	15	5.0 V

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

## 4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-751</u>, "Component Inspection".

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

## STEERING SWITCH SIGNAL B CIRCUIT

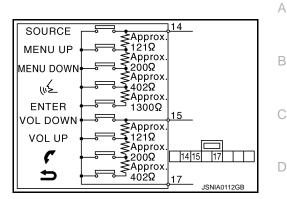
< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

INFOID:0000000003825862

# Component Inspection

Measure the resistance between the steering switch connector.



Steerin	Steering switch		g switch	Condition	Resistance value			
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$			
				ENTER switch ON	2003 – 2043			
				w≨ switch ON	716 – 730			
	14			MENU DOWN switch ON	318 – 324			
				MENU UP switch ON	120 – 122			
M303		M303	17	SOURCE switch ON	0			
							switch ON	716 – 730
	15			switch ON	318 – 324			
				VOL UP switch ON	120 – 122			
				VOL DOWN switch ON	0			

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## STEERING SWITCH SIGNAL GND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# STEERING SWITCH SIGNAL GND CIRCUIT

Description INFOID:000000003825863

Transmits the steering switch signal to AV control unit.

## Diagnosis Procedure

INFOID:0000000003825864

# 1. CHECK STEERING SWITCH SIGNAL GND CIRCUIT

- 1. Disconnect AV control unit connector and spiral cable connector.
- 2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV cor	AV control unit		Spiral cable		
Connector	Terminal	Connector Terminal		Continuity	
M80	15	M36	33	Existed	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK SPIRAL CABLE

Check spiral cable.

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

## 3.CHECK GROUND CIRCUIT

- Connect AV control unit connector.
- 2. Check continuity between AV control unit harness connector and ground.

AV control unit			Continuity
Connector	Terminal	Ground	Continuity
M80	15		Not existed

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

## 4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- 2. Check steering switch. Refer to AV-752, "Component Inspection".

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

## Component Inspection

INFOID:0000000003825865

Measure the resistance between the steering switch connector.

# STEERING SWITCH SIGNAL GND CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

# [NAVIGATION (TWIN MONITOR)]

Steerin	Steering switch		g switch	Condition	Resistance value
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$
			ENTER switch ON	2003 – 2043	
				w≨ switch ON	716 – 730
	14		MENU DOWN switch ON	318 – 324	
		M303	17	MENU UP switch ON	120 – 122
M303	M303			SOURCE switch ON	0
				switch ON	716 – 730
	15			switch ON	318 – 324
				VOL UP switch ON	120 – 122
				VOL DOWN switch ON	0

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# FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

# FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

Description INFOID:000000003825866

 Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.

- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## Diagnosis Procedure

INFOID:0000000003825867

# 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and front camera connector.
- Check continuity between around view monitor control unit harness connector and front camera harness connector.

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector Terminal		
B45	45	E155 6		Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B45	45		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector and front camera connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(-)	Condition	Reference value
Connector	Terminal			
B45	45	Ground	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 + 1.0 μs JSNIA0836GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace front camera.

# FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

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## FRONT CAMERA IMAGE SIGNAL CIRCUIT

Description

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## **Diagnosis Procedure**

## INFOID:0000000003825869

# 1. CHECK CONTINUITY FRONT CAMERA POWER SUPPLY AND GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and front camera connector.
- 3. Check continuity between around view monitor control unit harness connector and front camera harness connector.

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector	Terminals	
B45		E155	2	Existed
D40	46	L 133	1	LXISIGU

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B45	46		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VOLTAGE FRONT CAMERA POWER SUPPLY

- 1. Connect around view monitor control unit connector and front camera connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit harness connector.

(+) Around view monitor control unit (-)		(–)	Condition	Voltage (Approx.)	
Connector	Terminal				
B45	46	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V	

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

# ${f 3.}$ CHECK CONTINUITY FRONT CAMERA IMAGE SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and front camera connector.
- Check continuity between around view monitor control unit harness connector and front camera harness connector.

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# FRONT CAMERA IMAGE SIGNAL CIRCUIT [NAVIGATION (TWIN MONITOR)]

#### < DTC/CIRCUIT DIAGNOSIS >

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector	Terminals	
B45	A1		3	Existed
D40	42	E155	4	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminals	Ground	
B45 41, 42			Not existed

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

## 4. CHECK FRONT CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and front camera connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector.

(+) (-)					
Around view monitor control unit		Around view monitor control unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
B45	41	B45	42	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 +40 μ s JSNIA0834GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace front camera.

## REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

## REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

Description INFOID:0000000003825870

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

### Diagnosis Procedure

#### INFOID:0000000003825871

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## 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and rear camera connector.
- Check continuity between around view monitor control unit harness connector and rear camera harness connector.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector Terminal		
B46	35	D111	4	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity	
Connector	Terminal	Ground		
B46	35		Not existed	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector and rear camera connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Reference value
Connector	Terminal			
B46	35	Ground	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0  JSNIA0836GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace rear camera.

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### REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

## REAR CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:000000003825872

 Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.

- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

### Diagnosis Procedure

INFOID:0000000003825873

## 1. CHECK CONTINUITY REAR CAMERA POWER SUPPLY AND GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and rear camera connector.
- 3. Check continuity between around view monitor control unit harness connector terminals 36, 38 and rear camera harness connector terminals 8, 7.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminals	Connector Terminals		
B46	36	D111	8	Existed
D40	38	וווט	7	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	36		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VOLTAGE REAR CAMERA POWER SUPPLY

- 1. Connect around view monitor control unit connector and rear camera connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Voltage (Approx.)
Connector	Terminal			
B46	36	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

# ${f 3.}$ CHECK CONTINUITY REAR CAMERA IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and rear camera connector.
- Check continuity between around view monitor control unit harness connector and rear camera harness connector.

### **REAR CAMERA IMAGE SIGNAL CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

## [NAVIGATION (TWIN MONITOR)]

Around view monitor control unit		Rear camera		Continuity
Connector	Terminals	Connector Terminals		
B46	39	D111	5	Existed
D40	40	וווט	1	LAISIEU

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		One will	Continuity	
Connector	Terminals	Ground		
B46	39, 40		Not existed	

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

### 4. CHECK REAR CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and rear camera connector.
- 2. Turn ignition switch ON.

3. Check signal between around view monitor control unit harness connector.

(	+)	(-)			
	monitor control nit	Around view monitor control unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
B46	39	B46	40	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 + 40 μ s JSNIA0834GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace rear camera.

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## SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

## SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

Description INFOID:000000003825874

 Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.

• Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.

Around view monitor control unit performs the reception/transmission of communication signal with each camera.

### Diagnosis Procedure

INFOID:0000000003825875

## 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and door mirror (driver side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

Around view monitor control unit			mirror r side)	Continuity
Connector	Terminal	Connector Terminal		
B45	47	D3	3	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B45	47		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector and door mirror (driver side) connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(-)	Condition	Reference value
Connector	Terminal			
B45	47	Ground	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 1.0 μs JSNIA0836GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace side camera LH.

## SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

### SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

Description INFOID:000000003825876

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

### **Diagnosis Procedure**

#### INFOID:0000000003825877

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## 1.check continuity side camera LH power supply and ground circuit

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and door mirror (driver side) connector.
- 3. Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminals	Connector Terminals		
B45	48	D3	6	Existed
D40	50	טט	18	LAISIEU

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B45	48		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VOLTAGE SIDE CAMERA LH POWER SUPPLY

- 1. Connect around view monitor control unit connector and door mirror (driver side) connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit harness connector and ground.

Around view r	+) monitor control nit	(–)	Condition	Voltage (Approx.)
Connector	Terminal			
B45	48	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

## ${f 3.}$ CHECK CONTINUITY SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and door mirror (driver side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

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## SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminals	Connector Terminals		
B45	51	D3	5	Existed
D45	52	D3	17	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		_	Continuity
Connector	Terminals	Ground	
B45	51, 52		Not existed

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

### 4. CHECK SIDE CAMERA LH IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and door mirror (driver side) connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector.

(-	+)	(-)			
	nonitor control nit	Around view monitor control unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
B45	51	B45	52	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 + 40 μ s JSNIA0834GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace side camera LH.

### SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT [NAVIGATION (TWIN MONITOR)]

#### < DTC/CIRCUIT DIAGNOSIS >

## SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

Description INFOID:0000000003825878

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## Diagnosis Procedure

# INFOID:0000000003825879 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and door mirror (passenger side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

	Around view monitor control unit		mirror nger side)	Continuity
Connector	Terminal	Connector Terminal		
B46	33	D33	3	Existed

Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	33		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK COMMUNICATION SIGNAL

- Connect around view monitor control unit connector and door mirror (passenger side) connector.
- Turn ignition switch ON. 2.
- Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Reference value
Connector	Terminal			
B46	33	Ground	"CAMERA" switch is ON or shift position is "R".	(V) 55 4 3 2 1 1.0 μs JSNIA0836GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

>> Replace side camera RH. NO

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## SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

## SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

Description INFOID:000000003825880

 Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.

- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

### **Diagnosis Procedure**

INFOID:0000000003825881

## 1. CHECK CONTINUITY SIDE CAMERA RH POWER SUPPLY AND GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect control unit connector and door mirror (passenger side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

Around view monitor control unit		Door mirror (passenger side)		Continuity
Connector	Terminals	Connector Terminals		
B46	32	D33	18	Existed
D40	34	DSS	6	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

	nonitor control nit		Continuity
Connector	Terminal	Ground	
B46	34		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# $2.\mathsf{CHECK}$ VOLTAGE SIDE CAMERA RH POWER SUPPLY

- 1. Connect around view monitor control unit connector and door mirror (passenger side) connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Voltage (Approx.)
Connector	Terminal			
B46	34	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

# 3.CHECK CONTINUITY SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and door mirror (passenger side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

## SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

Around view monitor control unit			mirror nger side)	Continuity
Connector	Terminals	Connector	Terminals	
B46	29	D33	5	Existed
D40	30	DSS	17	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

around view monitor control unit		01	Continuity	
Connector	Terminals	Ground		
B46	29, 30		Not existed	

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

### 4. CHECK SIDE CAMERA RH IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and door mirror (passenger side) connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector.

(+)		(-	<b>-</b> )			
Around view monitor control unit		Around view monitor control unit		Condition	Reference value	
Connector	Terminal	Connector	Terminal			
B46	29	B46	30	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 + 40 μ s JSNIA0834GB	

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace side camera RH.

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### **BUZZER SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

## **BUZZER SIGNAL CIRCUIT**

Description INFOID:000000003825882

The sonar control unit outputs the buzzer signal when the rear sonar detects the obstacle.

## Component Function Check

INFOID:0000000003825883

## 1. SONAR CONTROL UNIT ACTIVE TEST

- 1. Select "BUZZER" of sonar control unit active test item.
- 2. Check the buzzer operation.

BUZZER

Test item Condition

On : Buzzer is operation.
Off : Buzzer is not operation.

>> INSPECTION END

## Diagnosis Procedure

INFOID:0000000003825884

## 1. CHECK BUZZER POWER SUPPLY

- Turn ignition switch ON.
- 2. Check voltage between buzzer harness connector and ground.

	+) zzer	(-)	Voltage (Approx.)	
Connector	Terminal		(11 - )	
B231	1	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK HARNESS BUZZER SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and buzzer connector.
- 3. Check continuity between sonar control unit harness connector and buzzer harness connector.

Sonar co	ontrol unit	Bu	zzer	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M44	23	B231	2	Existed

4. Check continuity between sonar control unit harness connector and ground.

Sonar control unit			Continuity
Connector	Terminal	Ground	Continuity
M44	23		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

## 3. CHECK SIGNAL SONAR CONTROL UNIT

- Connect sonar control unit connector and buzzer connector.
- 2. Check signal between sonar control unit harness connector and ground.

### **BUZZER SIGNAL CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

## [NAVIGATION (TWIN MONITOR)]

(+) Sonar control unit		(–)	Condition	Reference value
Connector	Terminal			
M44	23	Ground	When buzzer operation	NOTE: Waveform period changes due to the distance to an obstacle.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace sonar control unit.

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# **ECU DIAGNOSIS INFORMATION**

# AV CONTROL UNIT

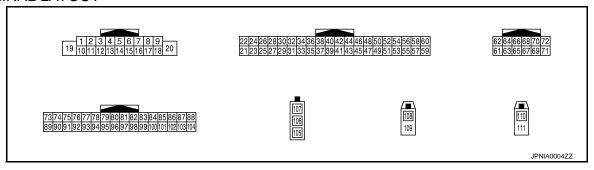
Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

#### CONSULT-III MONITOR ITEM

Monitor Item		Condition	Value/Status
VHCL SPD SIG	Ignition switch	Vehicle speed > 0 km/h (0 MPH)	On
VHCL SPD SIG	ON	Vehicle speed = 0 km/h (0 MPH)	Off
DIAD CIC	Ignition switch	Parking brake is applied.	On
PKB SIG	ON	Parking brake is released.	Off
	Ignition switch	Light switch ON	On
ILLUM SIG	ON	Light switch OFF	Off
IGN SIG	Ignition switch ON	_	On
IGN SIG	Ignition switch ACC	_	Off
DEV/SIC	Ignition switch	Selector lever in R position	On
REV SIG	ON	Selector lever in any position other than R	Off

## **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal color)	Description		Condition Reference va (Approx.)		Reference value
+	_	Signal name	Input/ Output			(Approx.)
1 (V)	Ground	Amp. ON signal	Output	Ignition switch ON	_	12.0 V
2 (P)	3 (L)	Sound signal front LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E

## < ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (TWIN MONITOR)]

Terminal Descripti		Description		Condition		Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
4 (V)	5 (LG)	Sound signal rear LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 **2ms SKIB3609E	
					Keep pressing SOURCE switch.	0 V	
					Keep pressing MENU UP switch.	1.0 V	
6 (P)	15 (B)	Steering switch signal A	Input	Ignition switch ON	Keep pressing MENU DOWN switch.	2.0 V	
				ON	Keep pressing √ switch	3.0 V	
					Keep pressing ENTER switch.	4.0 V	
					Except for above.	5.0 V	
7 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
9 (R)	Ground	Illumination signal	Input	OFF	Lighting switch is OFF. Lighting switch is ON.	0 V 12.0 V	
10	_	Shield	_			_	
11 (R)	12 (G)	Sound signal front RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
13 (BR)	14 (Y)	Sound signal rear RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
15 (B)	Ground	Steering switch signal ground	_	Ignition switch ON	_	0 V	
	16 15				Keep pressing VOL DOWN switch.	0 V	
16		Stooring quitab size of D	lnn::4	Ignition	Keep pressing VOL UP switch.	1.0 V	
(L)	(B)	Steering switch signal B	Input	switch ON	Keep pressing  switch.	2.0 V	
					Keep pressing <b>S</b> switch.	3.0 V	
					Except for above.	5.0 V	

# [NAVIGATION (TWIN MONITOR)]

	minal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
21 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
22 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
23 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
24 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
25 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
26 (G)	27	Microphone VCC	Output	Ignition switch ON	_	5.0 V	
27	Ground	Microphone ground	_	ON	_	0 V	
28 (R)	27	Microphone signal	Input	Ignition switch ON	Give a voice	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0 + 2ms	
35 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage	
					Parking brake ON	0 V	
36 (V)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake OFF	(V) 8 4 0 10 ms JSNIA0007GB	
37				Ignition	R position	12.0 V	
(O)	Ground	Reverse signal	Input	switch ON	Other than R position	0 V	

## < ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (TWIN MONITOR)]

	minal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
38 (R)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).	
41 (B)	Ground	Control signal 1	_	Ignition switch ON	_	0 V	
42 (B)	Ground	Control signal 2		Ignition switch ON	_	0 V	
43 (B)	Ground	Control signal 3	_	Ignition switch ON	_	0 V	
44 (SB)	Ground	Mode change signal	Output	Ignition switch ON	Driver's Audio Stage ON Driver's Audio Stage OFF	0 V 8.5 V	
48 (G)	_	AV communication signal (H)	Input/ Output	_	_	_	
49 (R)	_	AV communication signal (L)	Input/ Output	_	_	_	
50 (LG)	_	AV communication signal (H)	Input/ Output	_	_	_	
51 (V)	_	AV communication signal (L)	Input/ Output	_	_	_	
52 (L)	_	CAN-H	Input/ Output	_	_	_	
53 (P)	_	CAN-L	Input/ Output	_	_	_	
61 (B)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 → 40µs JSNIA1029ZZ	
62 (W)	Ground	RGB signal (G: green)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 +40µs JSNIA1030ZZ	

## [NAVIGATION (TWIN MONITOR)]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
63 (R)	Ground	RGB signal (B: blue)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0
64	_	Shield	_	_	_	_
65 (G)	Ground	RGB synchronizing signal	Output	Ignition switch ON	_	(V) 4 0 → 20 µs SKIB3603E
66	_	Shield	_	_	_	_
					At RGB image display	5.0 V
67 (B)	Ground	RGB area (YS) signal	Output	Ignition switch ON	At camera image or AUX image display.	(V) 6 4 2 0  +-200 \( \mu \) S  PKIB4948J
68 (R)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON	_	(V) 4 0 → 20µs SKIB3601E
69 (W)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch ON	_	(V) 4 0 ** 4ms SKIB3598E
70 (BR)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 1ms

## [NAVIGATION (TWIN MONITOR)]

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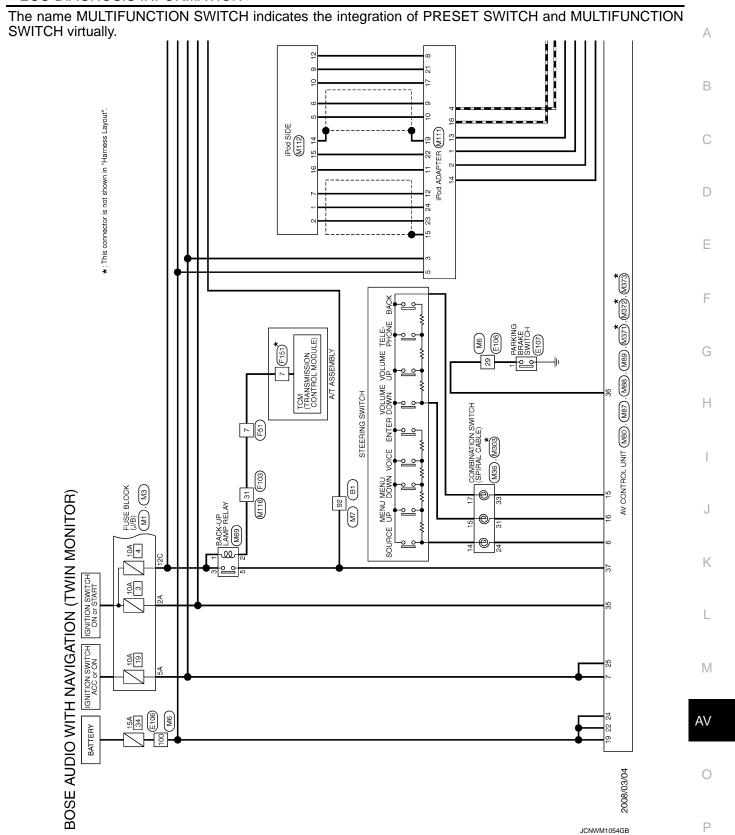
	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
71 (Y)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 • • • 1ms
72	_	Shield	_	_	_	_
79 (Y)	95 (BR)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
80 (R)	96 (G)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKiB3609E
81	_	Shield	_	_	_	<del>-</del>
85	Ground	Disk eject signal	Input	_	Pressing the eject switch	0 V
(SB)					Except for above	3.3 V
86 87 (R)	88 (W)	Shield  AUX sound signal LH	Input	Ignition switch ON	When AUX mode is selected.	(V) 1 0 -1 ***2ms SKIB3609E
102 (BR)	Ground	SW ground	_	Ignition switch ON	_	0 V
103 (B)	88 (W)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is selected.	(V) 1 0 -1 + + 2ms SKIB3609E
105	_	FM sub	Input	_	_	_
106	_	AM-FM main	Input	_	_	_
107	Ground	Antenna amp. ON signal	Output	Ignition switch ACC	_	12.0 V

### < ECU DIAGNOSIS INFORMATION >

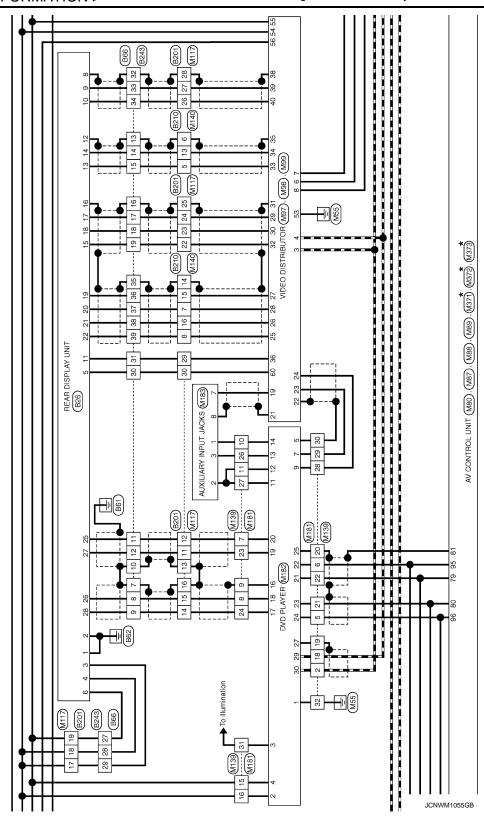
## [NAVIGATION (TWIN MONITOR)]

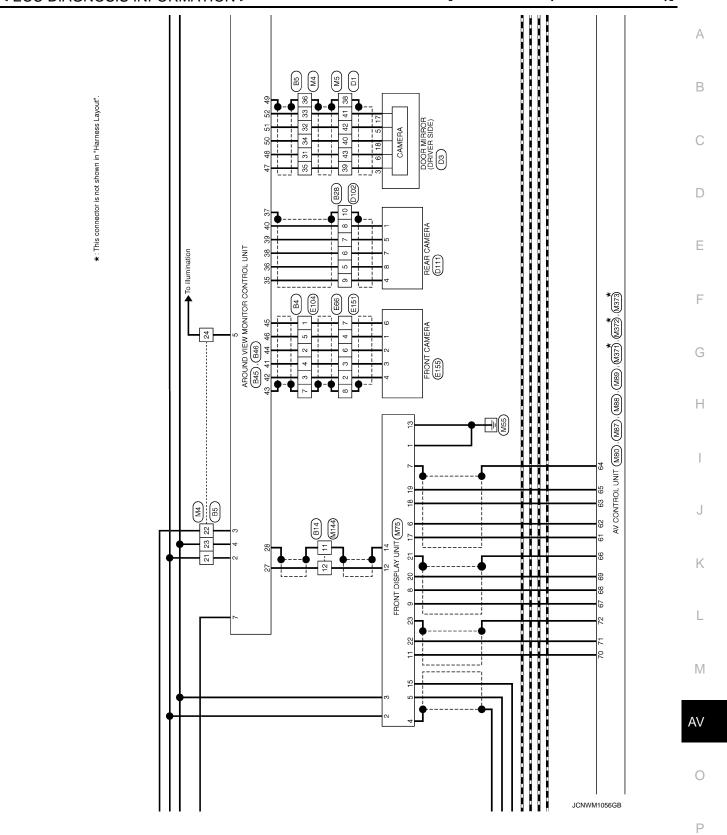
	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
108	Ground	Satellite antenna signal	Input	Ignition switch ACC	Not connected to satellite antenna connector.	5.0 V
109	_	Shield	_		_	_
110	Ground	GPS antenna signal	Input	Ignition switch ACC	Not connected to GPS antenna connector.	5.0 V
111	_	Shield	_	_	_	_

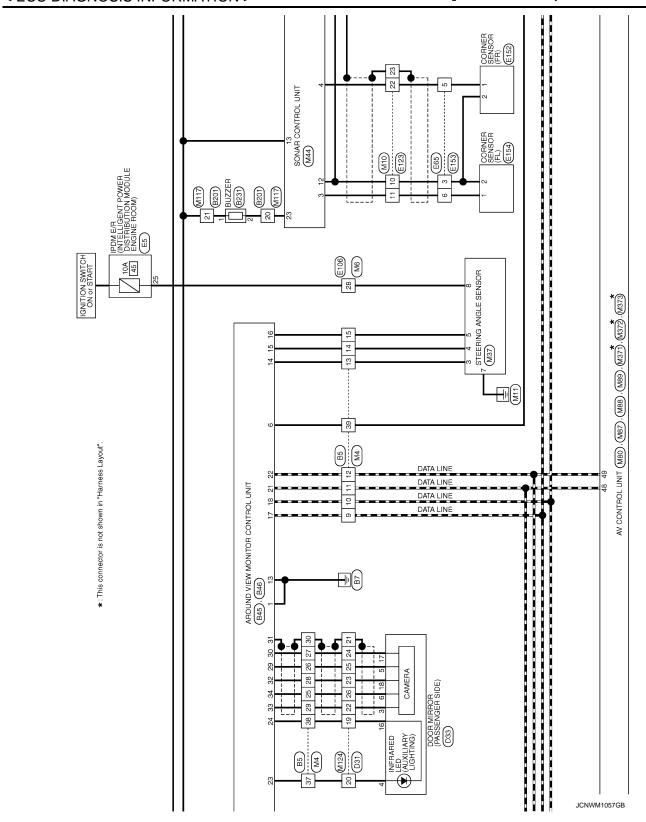
Wiring Diagram - BOSE AUDIO WITH NAVIGATION (TWIN MONITOR) - INFOID: NOTE:

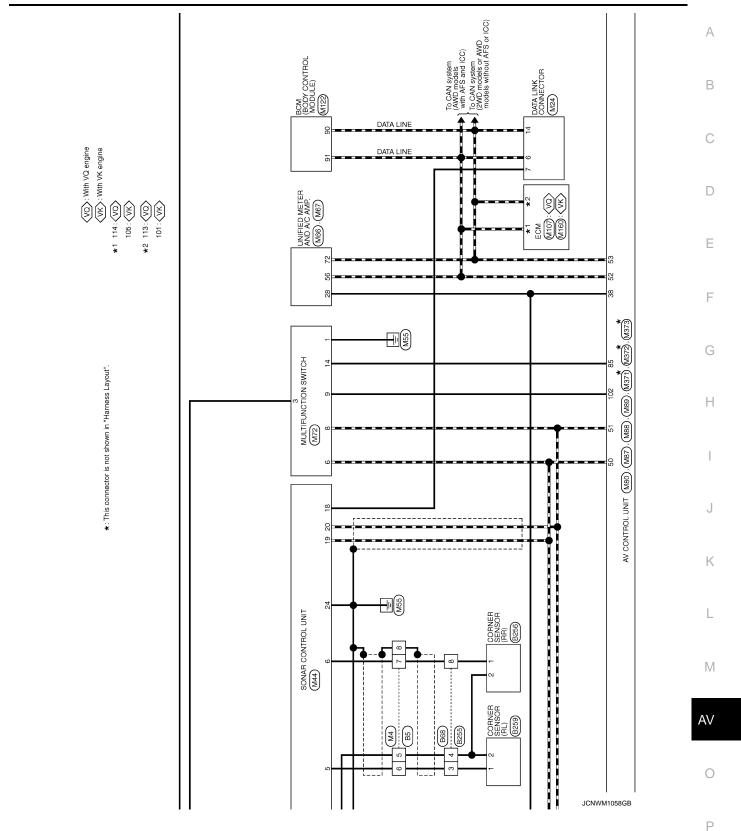


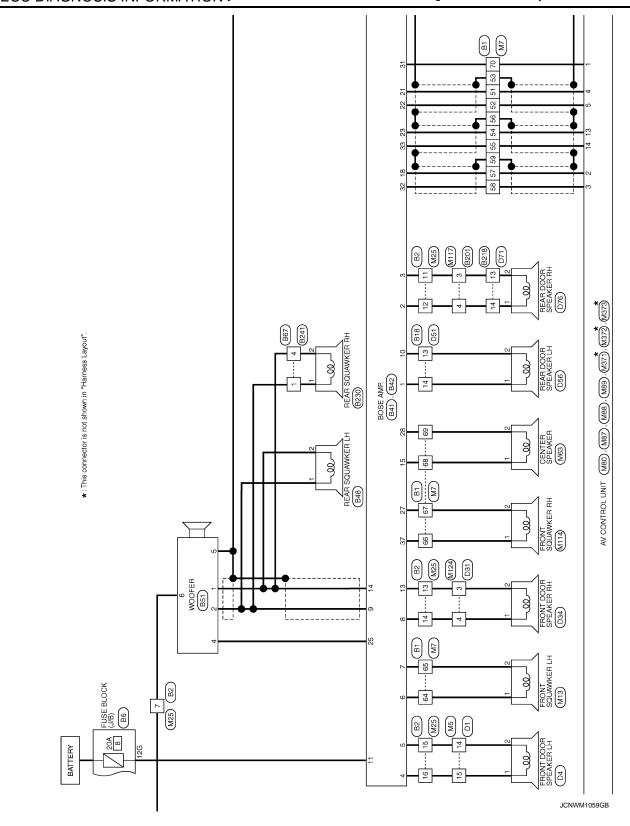
\*: This connector is not shown in "Harness Layout".



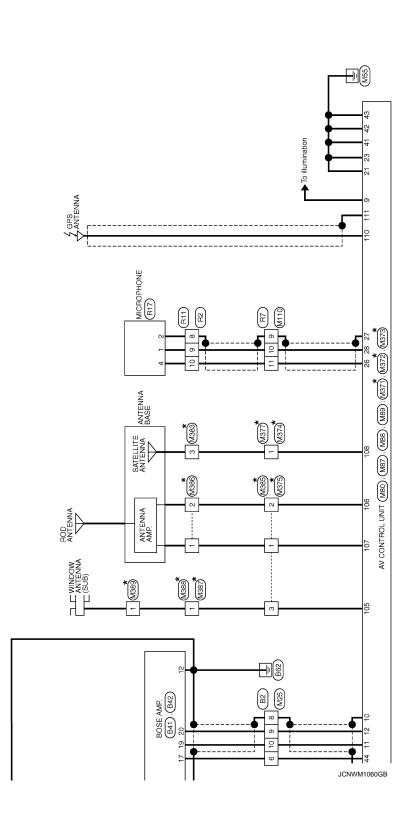








\*: This connector is not shown in "Harness Layout".



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BOS	E AUL	BOSE AUDIO WITH NAVIGATION (TW	WIN MONITOR)	TINC	OR)		
Connector No.	tor No.	B1	99	+	_	Connector No. B2	Connector No. B4
Connec	Connector Name	WIRE TO WIRE	68	+	- F	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE
Connec	Connector Type	TH80FW-CS16-TM4	69	Н	- 5	Connector Type NS16FW-CS	Connector Type NS12FW-CS
Œ			02	+	GR -		
HS		20 20 20 20 20 20 20 20 20 20 20 20 20 2	3	┨		6	6
		x				7 6 5 4	5 4  3 2 1 121110 9 8 7 6
Termina	Color					Terminal Color	Terminal Color
No.	_	Signal Name [Specification]				_	_
51	> 5						+
25	SB					- M 1	2
3 45	H H					S G	á –
22	>	-				10 R -	2
99	SHIELD						7 SHIELD -
22	Ь	1				12 SB –	
28	_					Α.	
29	SHIELD					LG	
65	> ≥					T -	
Connector No.	Т	B5	51	+		Connector No. B6	Connector No. B14
Connec	Connector Name	WIRE TO WIRE	23 22	+	5 5	Connector Name FUSE BLOCK (J/B)	Connector Name WIRE TO WIRE
Connec	Connector Type	TH40MW-NH	24	H		Connector Type NS12FBR-CS	Connector Type TH12FW-NH
ą			25	Н		ą́	ą́
事			26	+	ω>	Chity)	
Ź		- 1	28	╀		5646 362616	į
	1 2 3 4	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	29	H	BR -	28 2000	6 5 4 3 2 1
	27 22 23 24	22	30	П	SHIELD -	Dob / Dobobolo   Dol	12 11 10 9 8 7
			E 8	+	-		
Terminal	al Color	2	33 8	╀	-	Color	Terminal Color
No.	_	Signal Name [Specification]	34	Н	- M	No. of Wire Signal Name [Specification]	
2	В	1	32	П	BR -	12G GR –	11 SHIELD -
φ r	≥ (	1	36	┪	SHIELD -		12 W –
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=	0	1					
12	>	1					
€ ;	R (	1					
15	SB						

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-NH   6   7   8   9   10   11   12   12   12   12   12   12	GNID SIGNAL, PRONT DOOR SPEARER RH (-) SOUND SIGNAL, WOOFER AND PEAR SOULAWKER (-)		АВ
Cornector No.   B28   Cornector Name   WIRE TO WIRE	12 B SOUND SIGNAL 13 Y SOUND SIGNAL 14 R SOUND SIGNAL 14 R SOUND SIGNAL 15 R SOUND S		C
COMPOSITE INAGE SIGNAL RGB AREA (1'S) SIGNAL CHD TO	1 1 10 4 3 2 1 10 10 10 10 10 10 10 10 10 10 10 10 1	Signal Name [Specification] SOUND SIGNAL REAR DOOR LH (+) SOUND SIGNAL REAR DOOR RH (+) SOUND SIGNAL REAR DOOR RH (-) SOUND SIGNAL REAR DOOR RH (-) SOUND SIGNAL REONT DOOR SPEARER LH (-) SOUND SIGNAL REONT SOUNAMER LH (-) SOUND SIGNAL REONT SOUNAMER LH (-) SOUND SIGNAL REONT SOUNAMER (-)	E
13	Connector No. B42 Connector Name BOSE AMP. Connector Type SGA12FBR-SJA2 H.S. 14 13 12 14 13 12 14 13 12 14 13 12 14 13 12 14 15 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Color   Signal	G
Signal Name [Specification]   Signal Name [Specification]   CMD   CMD	SOUND SIGNAL FRONT LH (-) SOUND SIGNAL FRONT LH (-) SOUND SIGNAL FRONT SQUAWKER RH (-) SOUND SIGNAL FRONT SQUAWKER RH (-)	<u>                                      </u>	H
26 H32FW- 10 12 11 11 12 12 13 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15	GR AMP. OI L SOUND SIGNAL FRO Y SOUND SIGNAL FRO V SOUND SIGNAL FRO		J K
Connector Name   Connector Type   Conn	29 29 10 10 11 11 12 13 13 14 15 15 16 17	Section	L
WITH NAVIGA	me BOSE AMP. pp SCA19FBR-SGA4 26 25 24 23 22 21 20 19 18 17	Signal Name [Specification] SOUND SIGNAL CENTER (+) MODE CHANGE SIGNAL SOUND SIGNAL FRONT TH (+) SOUND SIGNAL FRONT TH (+) SOUND SIGNAL FRONT TH (+) SOUND SIGNAL FRAP IT (+) SOUND SIGNAL CENTER (+) SOUND SIGNAL CENTER (+)	AV
Connector Name   Wild Connector Name   Wild Connector Name   Wild Connector Type   Tarminal   Color   Tarm	Connector No. B Connector Name B Connector Type S  37 36 35  27 26 25	Terminal Color No. of Wire 15 Y 17 O O 18 P 20 G 21 V 21 V 22 SB 23 SB 25 L 25 L 26 5 26 5 27 L 26 5	JCNWM1062GB

17 W AV COMM (H)		21 0 AV COMM (H)	\ \	ΓG	9	W CAMERA	28 SHIELD SHIELD	29 R SIDE CAMERA RH IMAGE SIGNAL	30 Y SIDE CAMERA RH IMAGE GND	SHIELD	32 W SIDE CAMERA RH GND	33 BR SIDE CAMERA RH COMM	34 L SIDE CAMERA RH POWER SUPPLY	35 W REAR CAMERA COMM	36 G REAR CAMERA POWER SUPPLY	37 SHIELD SHIELD	38 L REAR CAMERA GND	Y REAF	40 BR REAR CAMERA IMAGE GND					18	F	┝	H	29 Y	30 P	31 0 -	32 SHIELD -	33 V –	T	ς	36 B –	$\dashv$	38 R -	39 W –											
Connector No. B46	THE LOCATION COTTINGES WITH COLORS		Connector Type TH40FW-NH	ą			7	2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	11 13 15 17 19 21 23 25 27 29 31 33 35 37			Terminal Color Signal Name [Specification]	No. of Wire olginal manie Lopecinication	1 B GND	2 Y BATTERY	3 G IGNITION	4 LG ACC	5 R ILLUMINATION	6 V VEHICLE SPEED (8-PULSE)	0 @	GR G		16 L SENSOR SIGNAL 3	Connector No. B66	Γ	Connector Name   WIRE TO WIRE	Connector Type TH40MW-NH					1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	42 52 22		Ŀ	la	No. of Wire	7 SHIELD -	- d 8	- T 6	10 SHIELD -		12 BR –	S	T	15 G	동	T	
WIN MONITOR)    52   Y   SIDE CAMERA LH IMAGE GND																								Connector No. B51	Т	Connector Name WOOFER	Connector Type RS06FGY									Ja.	No. of Wire	1 R SOUND SIGNAL WOOFER (-)	2 G SOUND SIGNAL WOOFER (+)	4 L WOOFER AMP. ON SIGNAL	5 B GND	6 W BATTERY							
BOSE AUDIO WITH NAVIGATION (TW Connector No. 1845	THE COTTINGS OF THE PARTY OF TH		Connector Type TH24FW-NH	ą́.	The state of the s	7		42 44 46 48 50 52 54 56 58 60 62 64	41 43 45 47 49 51 53 55 57 59 61 63			Terminal Color Simpl Name [Specification]	No. of Wire Signal Marine Lopechication	1 T	П	43 SHIELD SHIELD	<b>*</b>	45 W FRONT CAMERA COMM	G FRO	BR -	49 SHIELD SHIELD	W	51 R SIDE CAMERA LH IMAGE SIGNAL	Connector No. B48	Γ	Connector Name REAR SQUAWKER LH	Connector Type TK02FBR	ı			_	1 0			ŀ	Terminal Color Signal Name [Specification]			2 R -										

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## [NAVIGATION (TWIN MONITOR)]

- [With NAVI] - [With NAVI] - [With entertainment system]		Signal Name [Specification] -		A B
20 GR	Connector No. B231 Connector Name BUZZER Connector Type RKQZFBR-DGY MA.S. H.S.	Terminal Color Signal N		C
ation)				E
WRE TO WIRE THBOPW-CSIG-TM4  Signal Name [Specification]	REAR SOUAWKER RH TKOJFBR	Signal Name [Specification]		F
S   S   S   S   S   S   S   S   S   S	ector No. ector Name ector Type	Terminal Color 1. O Wire 2 R R R		G
O O O O O O O O O O O O O O O O O O O	Comm	ret z		Н
WIPE  2 3 4  6 7 8  Signal Name (Specification)	No. B218  Type ITK10FW-NS8  10 9 8 7 6 6 6 1 14 13 12 11  18 17 16 15 14 13 12 11	Signal Name (Specification)		I
BEGE WIRE TO WIRE TO WIRE SIGNALLY SIGNALLY SIGNALLY	B218 WIRE TO WIRE TK10FW-NS8	Signal P		J
Connector No. B88 Connector Name WIRE TO Connector Type RS208MGY Connector Typ	Connector No. B218  Connector Name WIFE  Connector Type TY(10)  H.S.  18 17 1	Terminal   Color   No.   13.   Very   14   SB		K
				L
BOSE AUDIO WITH NAVIGATION (T Connector No. B67 NINE DOWNER WIRE TO WIRE DOWNER NINE NINE NINE NINE NINE NINE NINE N	WIRE 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name [Specification]		M
DDO WITH BB7 WIRE TO WIRE NSOBMW-CS  1 2 6  4 5 6	WIRE TO WIRE THIGHW-NH  8 7 6 5 16 15 14 13			AV
BOSE AUIC Connector Name Connector Type Terminal Color No. of Wire 1 of Wire 1 d A A R	Connector No. Connector Type Connector Type (NA)	Terminal   Color		0
			JCNWM1064GB	Р

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Connector No. B255	e e	Connector Type RS08FGY	晤	THS.	8785	<b>⊣</b> ।	- 0	Terminal   Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]	3 W –	В	ac 80								Connector No. D3	Connector Name DOOR MIRROR (DRIVER SIDE)	Connector Type TH24MW-NH	1	HS 1211110 9 8 7 6 5 4 3 2 1 1 24 23 22 27 20 19 118 17 16 15 14 13	Terminal Color Signal Name [Specification]	м	> (	α -	17 L =	ł		
- M	₩	GR	LG P	31 0 = =	> 5	꺙	30 B	3/ G	39 W										Connector No. D1	Connector Name WIRE TO WIRE	Connector Type TH40FW-CS15	1	H.S. [15] 41 [12] [13] 10 [13] [14] [15] [14] [15] [14] [15] [14] [15] [15] [15] [15] [15] [15] [15] [15	Terminal Color Signal Name [Specification]	14 P	Г	SHIELD	39 W = -	Н	42 Y –	43 R
WIN MONITOR) Connector No. 18243	Connector Name WIRE TO WIRE	Connector Type TH40FW-NH	臣	H.S.	20 19 18 17 16 15 14 13 12 11 10 S 8 7 6 5 4 3 2 1 1 40 39 88 57 86 55 42 22 22 21		-	erminal Color   Signal Name [Specification]   No.   of Wire	7 SHIELD –	Œ	5	10 SHIELD -	12 BR -	S	Н	Ħ	Ġ	17 R	Connector No. B259	Connector Name CORNER SENSOR (RL)	Connector Type YDX02FB	d	HS HS	Terminal Color Signal Name [Specification]	- W	2 B –					
BOSE AUDIO WITH NAVIGATION (TW Connector No. 1824)	ne	Connector Type NS08FW-CS	<b>E</b>	HS.	9 2		-	Ferminal Golor   Signal Name [Specification]   No.   of Wire		4 R –									Connector No. B256	Connector Name CORNER SENSOR (RR)	Connector Type YDX02FB	1	∰ Hs.	Terminal Color Signal Name [Specification] of Wire	α	2 B –					

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## [NAVIGATION (TWIN MONITOR)]

Connector No. D34 Connector Name FRONT DOOR SPEAKER RH Connector Type NSIZEBR-CS	Signal Name (Specification)	Connector No. D76 Connector Name REAR DOOR SPEAKER RH Connector Type NS0ZFBR-CS  H.S.	Signal Name [Specification]		A B
Connector No. Connector Name F Connector Type M.S.	Terminal Color No. of Wire 1 2 P P	Connector No. Connector Name F Connector Type P H.S.	Terminal   Color   No.   Of Wire   1   SB     2   V		D
NGER SIDE)	[16] 15 [14] 13 Specification]	17 8 9 10 16 17 18	Specification]		Е
MIRROR (PASSE W-NH 8 7 6 5	21 20 19 18 17 Signal Name [	No. D71  Name WIRE TO WIRE  Type ITK10MW-NS8  1 2 3 4 5 6 7  11 12 13 14 15 16	Signal Name [Specification]		F
Connector No. D33 Connector Name DOOR Connector Type   TH24M	Terminal Color No. of Wire 3 Terminal Color No. of Wire 3 Terminal Color 1	Connector No.	Terminal   Color   No.   13   Vir.   14   SB     14   SB     14   SB     14   SB     15   SB     16   SB     17   SB     17   SB     18   SB   SB     18   SB		G H
	<u>खोग (बां क्यां क्यां)</u>		pecification)		I
ITOR	Signal Name   Specification	D66 REAR DOOR SPEAKER LH NS02FBR-C5  2 1	Signal Name [Specification]		J
WIN MONITOR) Connector Name M Connector Type II  M Signatural Sign	Terminal Color No. of Wire 3 3 4 P P P P P P P P P P P P P P P P P	Connector No. Connector Name F Connector Type h	Terminal Color No. 1 SB 1 C SB 2 C C C C C C C C C C C C C C C C C C		K
	offication.]	8 9 10 17 18	offication.]		L
DIO WITH NAVIG, DIA FRONT DOOR SPEAKER LH INSOFRENCE	Signal Name (Specification)	DSI WIRE TO WIRE TIKTIOMW-NSS  3 4 5 6 7 6 7 6 7 13 14 15 16	Signal Name (Specification)		AV
BOSE AUDIO WITH NAVIGATION (T Connector No. D4 Connector Name FRONT DOOR SPEAKER LH CONNECTOR Name RISZEBR-CS	Terminal Color No. of Wire 2 1 P L 1	Connector Name WIRN Connector Type TKII	Color   Color   No.   Color   No.     Color		0
			<u></u>	JCNWM1066GB	Р

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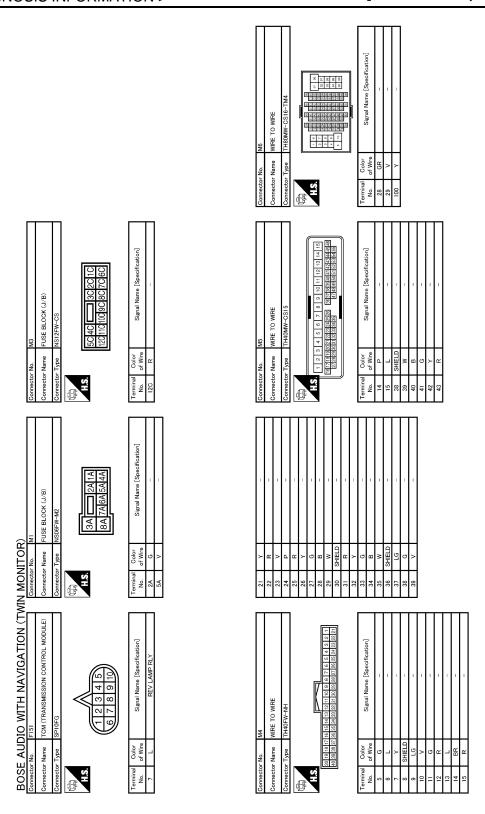
BOSE A	E AUDI	BOSE AUDIO WITH NAVIGATION (TW	TIN MONIT	띪	()	ON response	<u> </u>	Occupation No.		
Connect	Connector Name WI	WIRE TO WIRE	Connect	ne	REAR CAMERA	Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	Je	WIRE TO WIRE	
Connec	Connector Type TH24FW-NH	TH24FW-NH	Connect	Connector Type Th	TH08MW-NH	Connector Type	TH20FW-CS12-M4-1V	Connector Type RS06FB-PR	3-РК	
€ SH			·····································			· · ·		唇 SH	Ę	
		12 11 10 9 8 7 6 5 4 3 2 1 24 23 22 21 20 19 18 17 16 15 14 13		•	8 4 3 2 1 8 7 6 5	0 E	। । । । । । । । । । । । । । । । । । ।		<u>3 2 1</u> <u>6 5 4</u>	
Terminal No.	of Wire	Signal Name [Specification]	Terminal No.	Color of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	
20	-	1		_	REAR CAMERA IMAGE GND	25 G	1	5 5	1	
0 ~	5 >	1 1	5	<b>&gt;</b>	REAR CAMERA COMM REAR CAMERA IMAGE SIGNAL			- T 9	1 1	
ω σ	_   3		r 8	υ a	REAR CAMERA GND REAR CAMERA POWER SLIPPLY					
9	SHIELD	1	<u>,</u>							
	Γ	223	1		1013	N.	2012	1010		
	_			Т	AND TO LAND			Г	Common Triangle Common	
Connec		WIRE TO WIRE	Connect	┑	IRE TO WIRE	Connector Name	WIRE TO WIRE		NG BRAKE SWITCH	
Connec	Connector Type R	RS08FB-PR	Connect	Connector Type NS	NS12MW-CS	Connector Type	TH80FW-CS16-TM4	Connector Type TB01FW	N	
Œ		[	Œ			匮		唇		
Š		32	2	<u> </u>	5 3	χ. Έ	0 2 2 2 3	N.	<b>(</b>	
		8765		<u> </u>	0 / 8 9 10 11 12					
Terminal No.	al Color of Wire	Signal Name [Specification]	Terminal No.	Color of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	
2	_	-	-	*	1	28 G	-	1 LG	1	
e .	>	-	2	땳.	П	29 LG	1			
4 (	œ 8		e .	<b>-</b>  ;	1	100 Y				
9 ~	¥ ≥		4 10	> @	1 1					
α	SHIFLD	1	_	SHELD						

JCNWM1067GB

## [NAVIGATION (TWIN MONITOR)]

Connector No. E153 Connector Name WIRE TO WIRE Connector Type RS108MB	al Color Signal Name [Specification] of Wire	Connector No. F103 Connector Name WRE TO WRE Connector Type TX3FW-NS10  ILS ENDERGREDIATION OF THE STATE OF T	al Color Signal Name [Specification] of Wre R		A B C
Connector No.	Offication) Terminal No. 3 5 6 6	Connecte Con	Terminal No. 31		D E
No. E152  Name OORNER SENSOR (FR)  Type YDX02/FB	Color Of Wire Signal Name [Specification]	No. F51  Name A/T ASSEMBLY  Type RK10FG-DGY  5 4 3 2 1  6 4 3 2 7  6 8 7 6	Color Of Wire Signal Name [Specification]		F G
Connector No. Connector Name Connector Type H.S.	Terminal No.	Connector No. Connector Name Connector Type H.S.	Terminal No. 7		Н
(5) E151 WIRE TO WIRE RS08MB-PR	Signal Name [Specification]	FRONT CAMERA RHOGEB	Signal Name [Specification] FRONT CAMERA BOWER SUPPLY FRONT CAMERA GND FRONT CAMERA IMAGE SIGNAL FRONT CAMERA IMAGE GND FRONT CAMERA COMM		J
Connector No. Connector Name Connector Type H.S.	No.   Odor   No.   Odor   No.   Odor   No.   Odor   No.   Odor   No.   Odor   Odor	Connector No. Connector Name Connector Type	Color   Colo		K
TION (TWIN					L
NAVIGA 7 8 9 10 19 20 21 22	Signal Name (Specification)	CORNER SENSOR (FL.) VDXQ2FB	Signal Name (Specification)		M
EL23  Name WIRE TO WITH  Type ITHZAWN-NH  TT 2 3 4 5 6 6 13 14 15 16 17 18	Galor of Wire of Wire SHIELD	<del></del>	Oolor Wire		AV
BOSE AU Connector Name Connector Type H.S. H.S. H.S.	Terminal O No. 10 of 10 12 22 23 SF	Connector No. Connector Name Connector Type	Torminal of No. 1		0
				JCNWM1068GB	Р

Revision: 2009 March AV-789 2009 FX35/FX50

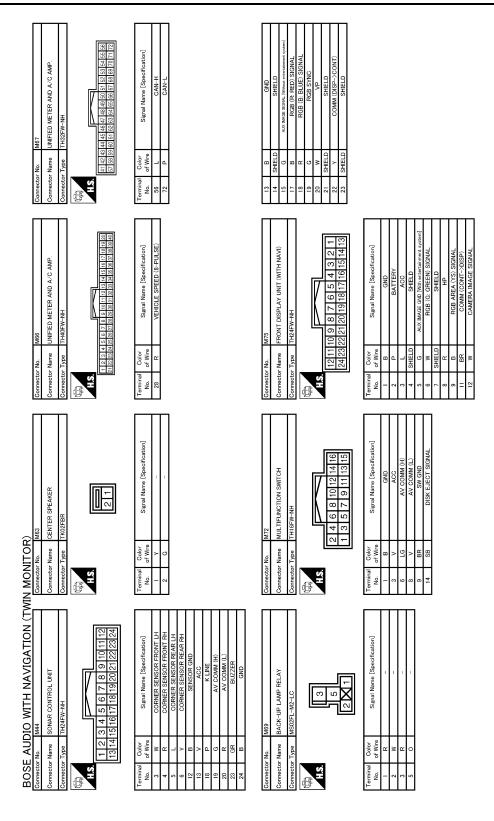


JCNWM1069GB

## [NAVIGATION (TWIN MONITOR)]

[luojac		ation]	F	Δ
FRONT SOUAWKER LH TK02FBR  Signal Name [Specification]	STEERING ANGLE SENSOR THOSEW-NH  7 2 3 8 1 4 5	Signal Name [Specification] SENSORI SENSORI SENSORI GND IGN	Е	3
Sor Nire		Color of Wiles	C	0
Connector Name Connector Name Connector Type I Ferminal Colo I Colo I U I U I U I U I U I U I U I U I U I U	Connector No. Connector Name Connector Type	Terminal No. 3 3 3 4 4 4 7 7 7 7 8 8		)
16 15 14 13 Specification)	(SPIRAL CABLE)	pecification]	Е	
Signal Name [	M36 COMBINATION SWITCH (SPIRAL CABLE) TK08FGY-IV  24 25 26 31 32 33 34	Signal Name [Specification]	F	=
Connector No. MIO Connector Name WIRR Connector TRE Connector TRE Connector Tree Connector Tree Connector Tree Connector Tree Color No. or Wive 10 B 11 W 11 W 11 W 12 2 2 R 12 2 2 2 R 13 2 2 2 R	Connector No. M36 Connector Name COM Connector TYGE  TYGE  1.5	Color   Colo		
			ŀ	-
	4 5 6 7 13 14 15 16	Signal Name [Specification]	1	l
	MRE TO WIRE 1316MW-CS   3			J
WIN MONITOR)	Connector No.  Connector Name  Connector Type  H.S.	Terminal Color No. of Wiles No.	k	<
			L	
WRE CSI6-TM4  CS	NNECTOR 13 14 15 16 5 6 7 8	Signal Name [Specification]	N	√l
DIO W	M24 me DATA LINK CONNECTOR DE BD16FW  9 10 111 12 13 14 5 6 7	Color Signal of Wire P	AV	V
Connector Name   Connector Name   Connector Name   Connector Type   Conn	Connector No. Connector Name Connector Type	Terminal Co No. of 6 0 1 1 4 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1	C	)
			JCNWM1070GB	0

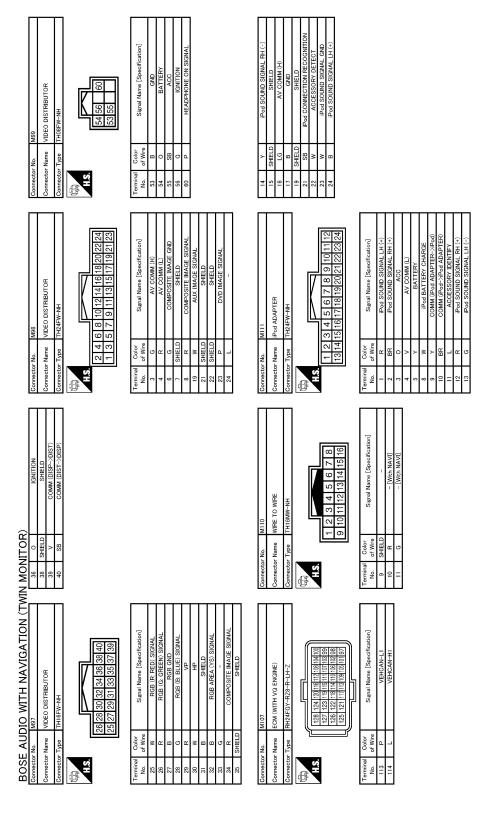
Revision: 2009 March AV-791 2009 FX35/FX50



JCNWM1071GB

11.5E)	А
VEHICLE SPEED (8-PULSE CONTROL SIGNAL 1 CONTROL SIGNAL 2 CONTROL SIGNAL 3 MODE CHANGE SIGNAL AV COMM (1) AV COMM (1) AV COMM (1) AV COMM (1) CAN-H CAN-H CAN-L	В
	С
8 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	D
H NAVI)  H NAVI)  H NAVI)  H NAVI)  P P P P P P P P P P P P P P P P P P P	Е
Signal Name (St. St. St. St. St. St. St. St. St. St.	F
Name	G
Connecto   Connecto	Н
SOUND SIGNAL REAR PH (+) SOUND STROS SIN GAN STROS SW GAN STROS SW B BATTERY	I
SOUND SIGN. SOUND SIGN. SITH SITH SITH SITH SITH SITH SITH SITH	J
MIN MONITOR)  13 BR Y 1 BR	K
	L
Connector No.   M80	M
AUDIO WITH NAVIGAT	AV
Connector Name   Conn	0
JCNWM1072GB	Р

Revision: 2009 March AV-793 2009 FX35/FX50

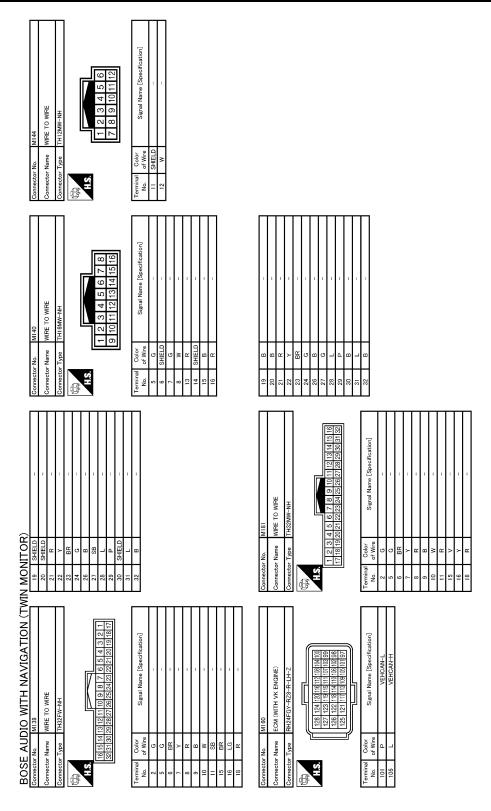


JCNWM1073GB

# [NAVIGATION (TWIN MONITOR)]

		Connector No.   M124   Connector Nome   WIRE TO WIRE   Connector Type   TH40MW-CS15   TH40MW-CS15		A B C
	Terminal Golor No of Wire Signal Name [Specification] 31 W	Connector No.   MI22		E F G
	Terminal   Color   C	20   GR		J K
AUDIO WITH NAVIGATION Name Pod SIDE Type   P10FGV	Terminal   Color   Signal Name [Specification]	Connector Name   WIRE TO WIRE	JCNWM1074GB	M AV
				Р

Revision: 2009 March AV-795 2009 FX35/FX50

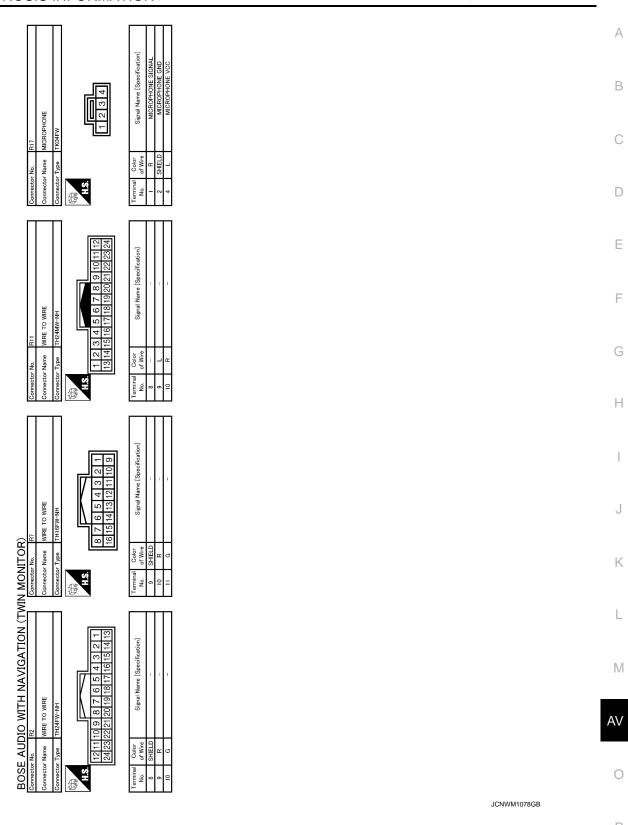


JCNWM1075GB

Control of the property of t	AVIGATION (TWIN MONITOR)	Connector No.   M303	Connector No. M374 Connector Name WIRE TO WIRE Connector Type GT16C-1S-HU  Terminal Color Signal Name [Specification]  Terminal Color Signal Name [Specification]	A B C	
MINISTER   MAYIGATION (TWIN MONITOR)   MINISTER   MIN	AVIGATION (TWIN MONITOR)   10	AUXILLA AUSEW D	M973  M973  M974  M975  M976  M166  M167  M167	F	
MISC	MAVIGATION (TW    20   22   24   26   28   30   28		M372 A CONI	J	
JCNWM1076GB	DOSE   Connector   Connector	MI182	M371  M371  M371  Miler  Miler	AV	

UDIO WITH NAVIGATION (TV	VIN MONITOR)		
Connector No. M375	Connector No. M377	Connector No. M383	Connector No. M385
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name ANTENNA BASE	Connector Name WIRE TO WIRE
Connector Type GT13SC-2/1S-HU	Connector Type GT16C-1PP-HU	Connector Type GT16C-1PP-HU	Connector Type GT13SCN-2/1PP-HU
H.S.	H.S.	H.S.	#38 H.S.
Terminal Color   Signal Name [Specification]	Terminal Golor Signal Name [Specification] No. of Wire 1	Terminal Color Signal Name [Specification] No. of Wire 3 - SATELLITE ANTENNA	Terminal   Color   Signal Name [Specification]
Connector No. M386	Connector No. M387	Connector No. M388	Connector No. M389
Connector Name ANTENNA BASE	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name WINDOW ANTENNA (SUB)
Connector Type GT13SSN-1/1PP-HU	Connector Type JASO JACK	Connector Type JASO PLUG	Connector Type P01FB-A
HS HS	<b>₹</b>	#8 	SH SH
Terminal Color Signal Name [Specification]	Terminal Golor Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]
1 – ANTENNA AMP. ON SIGNAL	1		-

JCNWM1077GB



Fail-Safe

When the ambiance temperature becomes extremely low or extremely high, or when HDD is malfunctioning, AV control unit displays the message and limits the AV control unit function.

#### **FAIL-SAFE CONDITIONS**

- When the ambiance temperature is -20°C (-4°F) or lower, or when it is 70°C (158°F) or higher
- when HDD is malfunctioning

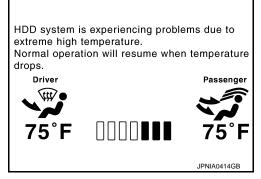
Revision: 2009 March AV-799 2009 FX35/FX50

#### **AV CONTROL UNIT**

#### [NAVIGATION (TWIN MONITOR)]

Display

The messages displayed on fail-safe conditions are as shown below:



Fail-safe mode	Display (display of the fail-safe condition)
When HDD temperature is low	HDD system is experiencing problems due to extreme low temperature.  Normal operation will resume when temperature rises.
When HDD temperature is high	HDD system is experiencing problems due to extreme high temperature.  Normal operation will resume when temperature drops.
When HDD is malfunctioning	HDD system is not functioning. Please contact your dealer for assistance.

#### **DESCRIPTION OF CONTROLS**

Function		When Fail-safe Function is activated			
Operation		Only multifunction switch (preset switch) can be operated.			
Air conditioner	Display	<ul> <li>LED of multifunction switch (preset switch) illuminates.</li> <li>Aimed temperature, blow angle, and flow rate are displayed in simplified mode.</li> </ul>			
Audio Operation Display		Only ON/OFF and volume control operations by multifunction switch (preset switch) are possible.			
		No display ("Fail-safe mode" is displayed)			
Camera		Image tone cannot be controlled.			
Camera	Display	Cannot be superimposed. (warning display, tone control display)			
Hands-free phone	Operation	Cannot be operated.			
Navigation	Operation	Cannot be operated.			
Self diagnosis	•	The display in simplified mode of fail-safe condition			
CONSULT-III diagno	sis	Cannot be operated.			

#### **Ability Operation Mode**

There is an ability operation mode for Fail-safes due to low or high ambiance temperature.

If HDD data can be read, fail-safe is shown, then normal displays are displayed only for functions which can be operated.

#### RELEASE CONDITIONS OF FAIL-SAFE

Fail-safe is released on following conditions and normal mode is restored.

When the temperature of HDD is low or high

If the ambient temperature becomes out of fail-safe condition range, normal mode is restored.

#### When HDD is malfunctioning

If the malfunction disappears, normal mode is restored.

#### NOTE:

- If fail-safe mode due to HDD malfunction is seen continuously, replace AV control unit.
- If fail-safe mode due to HDD malfunction is seen temporarily, check the "Error History" of Confirmation/ Adjustment mode. If this is normal, then continue the normal operation, observing the function. (It might be a temporary malfunction of HDD.)

## **AV CONTROL UNIT**

# [NAVIGATION (TWIN MONITOR)]

Α

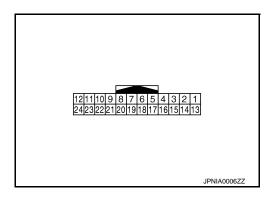
DTC Index

## Self-diagnosis results display item

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-680, "Diagnosis Procedure"
U1010	CONTROL UNIT (CAN) [U1010]	AV-681, "Diagnosis Procedure"
U1310	CONTROL UNIT (AV) [U1310]	AV-682, "DTC Logic"
U1200	Control Unit FLASH-ROM [U1200]	AV-683, "DTC Logic"
U1201	Gyro NO CONN [U1201]	AV-684, "DTC Logic"
U1216	CAN CONT [U1216]	AV-685, "DTC Logic"
U1217	BLUETOOTH CONN [U1217]	AV-686, "DTC Logic"
U1218	HDD CONN [U1218]	AV-687, "DTC Logic"
U1219	HDD READ [U1219]	AV-688, "DTC Logic"
U1220	XM SERIAL COMM [U1220]	AV-689, "DTC Logic"
U121A	HDD WRITE [U121A]	AV-690, "DTC Logic"
U121B	HDD COMM [U121B]	AV-691, "DTC Logic"
U121C	HDD ACCESS [U121C]	AV-692, "DTC Logic"
U121D	DSP CONN [U121D]	AV-693, "DTC Logic"
U121E	DSP COMM [U121E]	AV-694, "DTC Logic"
U121F	INTERNAL COMM [U121F]	AV-695, "Diagnosis Procedure"
U1204	GPS COMM [U1204]	AV-696, "Diagnosis Procedure"
U1205	GPS ROM [U1205]	AV-697, "Diagnosis Procedure"
U1206	GPS RAM [U1206]	AV-698, "Diagnosis Procedure"
U1207	GPS RTC [U1207]	AV-699, "Diagnosis Procedure"
U1243	FRONT DISP CONN [U1243]	AV-700, "Diagnosis Procedure"
U1244	GPS ANTENNA CONN [U1244]	AV-702, "Diagnosis Procedure"
U1247	REAR DISP CONN [U1247]	AV-703, "Diagnosis Procedure"
U1258	XM ANTENNA CONN [U1258]	AV-705, "Diagnosis Procedure"
U1300 U121F	AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]	AV-706, "Description"
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	AV-706, "Description"
U1300 U1246	AV COMM CIRCUIT [U1300]     VIDEO DIST CONN [U1246]	AV-706, "Description"
U1300 U1248	AV COMM CIRCUIT [U1300]     DVD DECK CONN [U1248]	AV-706, "Description"
U1300 U1254	AV COMM CIRCUIT [U1300]     IPod CONN [U1254]	AV-706, "Description"
U1300 U125B	AV COMM CIRCUIT [U1300]     AROUND CAMERA CONN [U125B]	AV-706, "Description"
U1300 U125C	AV COMM CIRCUIT [U1300]     SONAR CONN [U125C]	AV-706, "Description"
U1300 U1240 U1254 U1248 U1246 U125B	<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>IPod CONN [U1254]</li> <li>DVD DECK CONN [U1248]</li> <li>VIDEO DIST CONN [U1246]</li> <li>AROUND CAMERA CONN [U125B]</li> </ul>	AV-706, "Description"

Reference Value

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

	minal color)	Description		Condition		Reference value
+	_	Signal name	Input/ Output			(Approx.)
1 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
2 (P)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
3 (L)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
4	_	Shield	_	_	_	<del>-</del>
5 (G)	Ground	AUX image ground	_	Ignition switch ON	_	0 V
6 (W)	Ground	RGB signal (G: green)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 • 40µs JSNIA1030ZZ
7	_	Shield	_	_	_	_
8 (R)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	_	(V) 4 0 → 20µs SKIB3601E

### < ECU DIAGNOSIS INFORMATION >

# [NAVIGATION (TWIN MONITOR)]

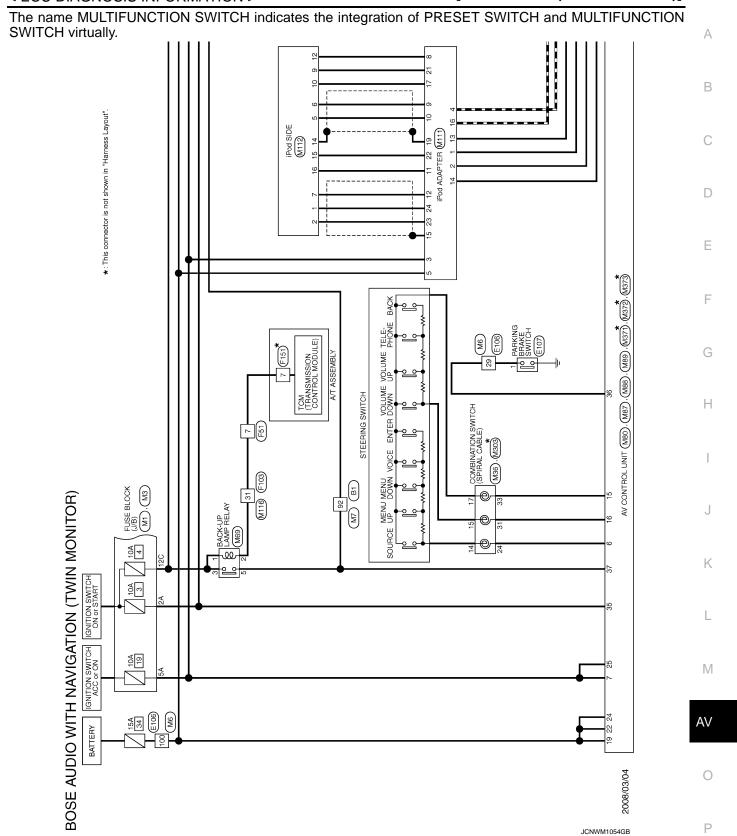
	rminal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
					At RGB image display	5.0 V
9 (B)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At camera image display	(V) 6 4 2 0 • + 200 \(mu\) S PKIB4948J
11 (BR)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 ++1ms PKIB5039J
12 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4 → 40μs SKIB2251J
13 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
14	_	Shield	_	_	_	_
15 (R)	Ground	AUX image signal	Input	Ignition switch ON	AUX image display	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
17 (B)	Ground	RGB signal (R: red)	Input	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 → 40μs JSNIA1029ZZ
18 (R)	Ground	RGB signal (B: blue)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.8 0.4 0 + 40µs JSNIA1031ZZ

### < ECU DIAGNOSIS INFORMATION >

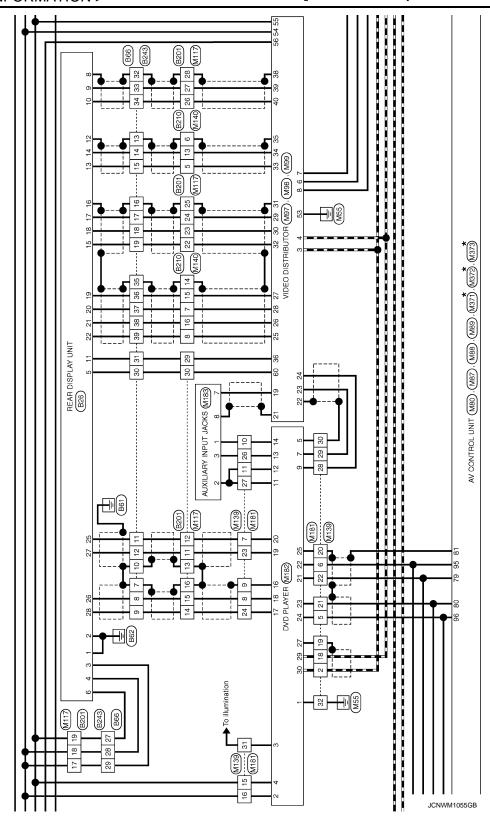
## [NAVIGATION (TWIN MONITOR)]

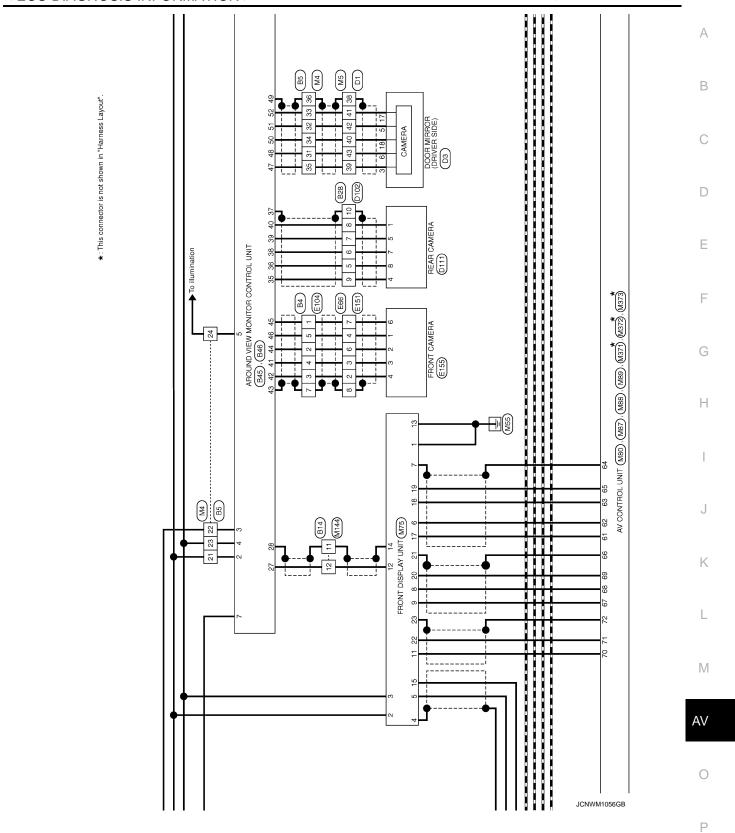
	minal color)	Description		Condition		Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
19 (G)	Ground	RGB synchronizing signal	Input	Ignition switch ON	_	(V) 4 0 → 20 µs SKIB3603E	
20 (W)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch ON	_	(V) 4 0 → 44ms SKIB3598E	
21	_	Shield		_	_	_	
22 (Y)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 ++1ms PKIB5039J	
23	_	Shield		_	_	_	

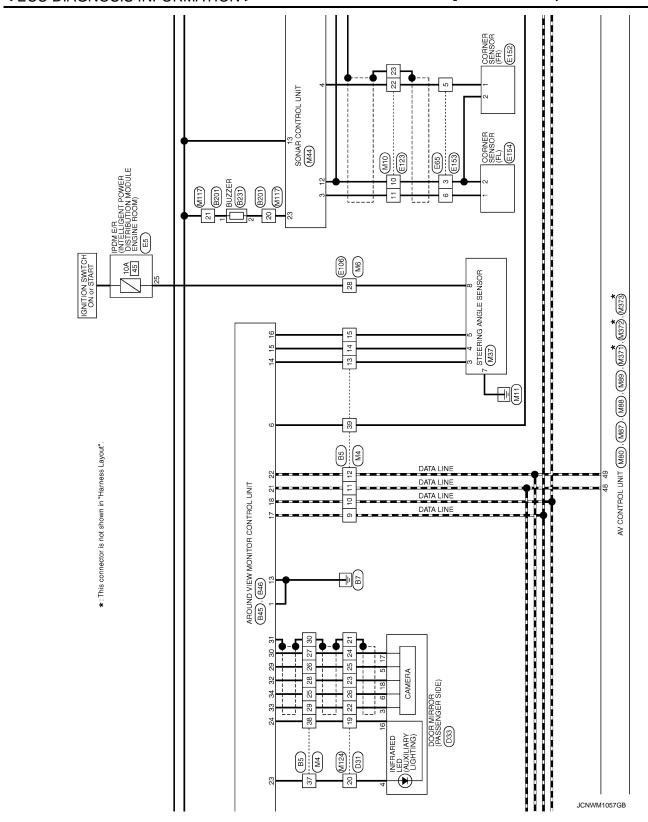
Wiring Diagram - BOSE AUDIO WITH NAVIGATION (TWIN MONITOR) - NATIONAL NOTE:



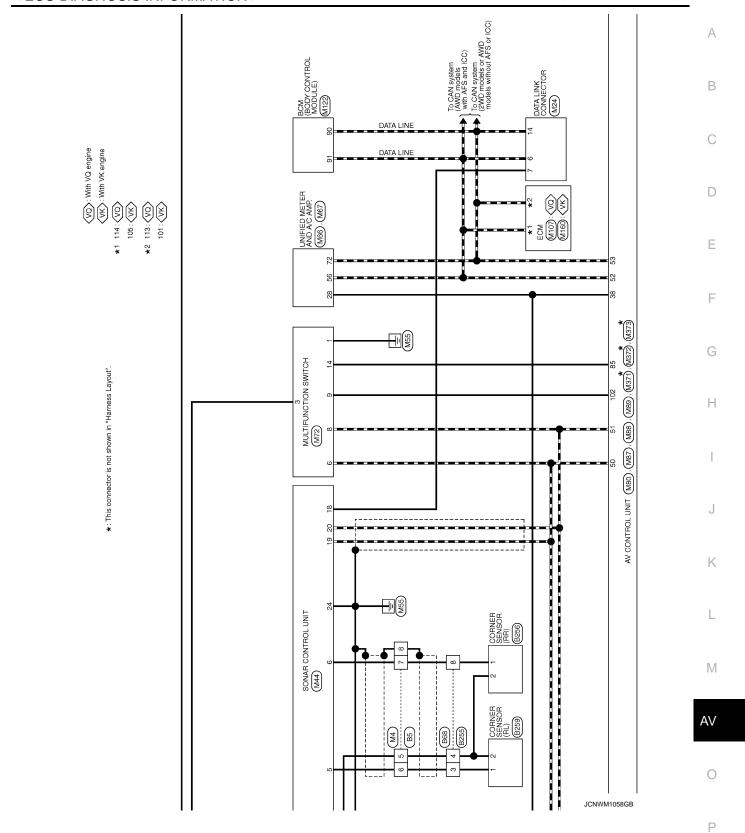
★: This connector is not shown in "Harness Layout"

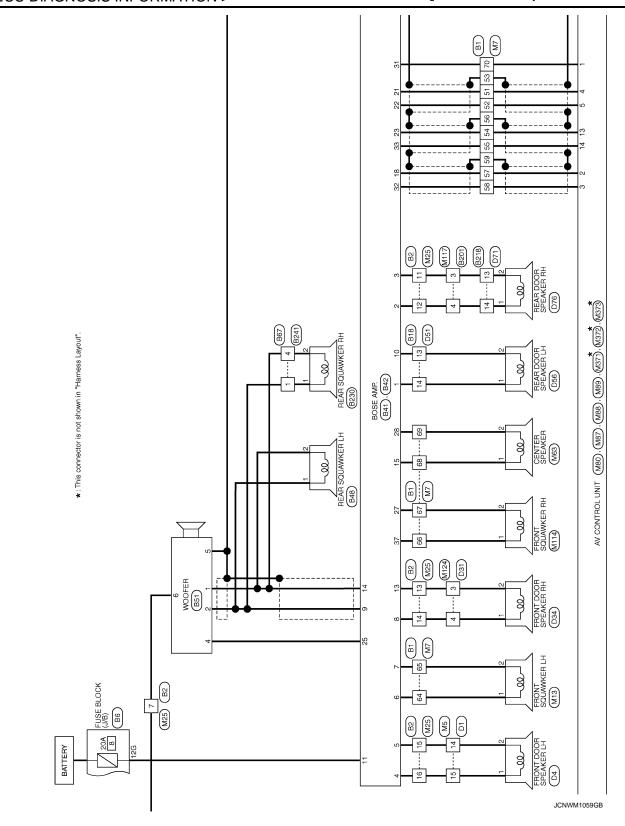




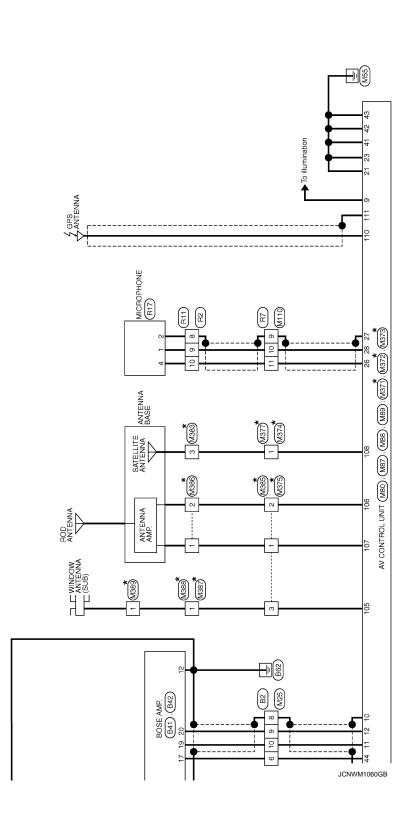


# [NAVIGATION (TWIN MONITOR)]





\*: This connector is not shown in "Harness Layout".



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Connector No.  Connector Name WIRE TO WIRE  Connector Type  NIST/ZFNY-CS  12 11 10 9 8 7 6	Color   No. of Wire   Signal Name [Specification]   No. of Wire   No.	Signal Name   Signal Name   Signal Name   Specification   Specification   Specification   Specification   Specification   Sp	
Connector No. B2 Connector Name WIRE TO WIRE Connector Type NS16FW-CS  ##\$    7 6 5 4     1   3   2   1   16   15   14   13   12   11   10   9   8   16   15   14   13   12   11   10   9   8   16   15   14   13   12   11   10   9   8   16   15   16   15   14   13   12   11   10   9   8   16   16   16   16   16   16   16	Terminal   Color     No. of Wire     No. of Wire     O     7	Connector No.   66   Connector No.   66   Connector Name   FUSE BLOCK (J/B)	
MIN MONITOR)  66 V		21 Y	>
BOSE AUDIO WITH NAVIGATION (TW Connector No. Bit Connector Name WIRE TO WIRE Connector Type THREFW-CSIG-TM4	Terminal   Color   Signal Name [Specification]   Color   Signal Name   Specification]   Signal Name   Specification]   Signal Name   Signal	Connector Name   WIRE TO WIRE	<del>                                     </del>

JCNWM1061GB

# [NAVIGATION (TWIN MONITOR)]

< ECU DIAGNOSIS INFORMATION >

23 24 11 12 2 2 24 11 12 2 2 2	SQLAWWER (-)	А
7 8 9 10 19 20 21 22 1 22 21 22 1 2 2 21 22	GND SOUND STOWN, INCOFER AND REAR SOLUWINGER (*)	В
1 H24MW WIRE TO 1 5 1 6 1 5 1 6 1 6 1 6 1 6 1 6 1 6 1 6	B SOUND SIGNA	С
Connector No.   Connector Name   Connector Name   Connector Type   Conne	2 2 7	D
E SIGNAL.  S	SGA12FBR-SJA2	Е
COMPOSITE INAGE SIGNAL  RGB AREA (YS) SIGNAL  VP VP HP RGB (G RGE) SIGNAL RGB (C GREEI) SIGNAL RGB (C GREEI) SIGNAL HEADPHONE SOURDSTALK SIGNAL HEADPHONE SOURDSTALK SIGNAL HE HEADPHONE SOURDSTANK SIGNAL H (+) HEADPHONE SOURDSTANK SIGNAL H (+) HEADPHONE SOURDSTANK RH (+) HEADPHONE SOURDSTANK RH (+)	SGA12FBR-SJA2  SGA12FBR-SJA2  Signal Name [Specification]  Signal Name [Specification]  SOUND SIGNAL REAR DOOR EH (+)  SOUND SIGNAL REAR DOOR EH (+)  SOUND SIGNAL REAR DOOR SHE (+)  SOUND SIGNAL REAR DOOR SHE (+)  SOUND SIGNAL REAR DOOR SEARCE H (+)  SOUND SIGNAL REAR DOOR EH (+)  SOUND SIGNAL REAR DOOR EH (+)  SOUND SIGNAL REAR DOOR EH (+)  SOUND SIGNAL REAR DOOR SEARCE H (+)  SOUND SIGNAL REAR DOOR SEARCE H (+)  SOUND SIGNAL REAR DOOR EH (+)  SOUND SIGNAL REAR DOOR EH (+)  SOUND SIGNAL REAR DOOR EL (+)	F
a     a </td <td></td> <td>G</td>		G
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Н
Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]  GND  GND  GND  GND  GND  GND  GND  GN	SOUND SIGNAL FRONT LH (~) SOUND SIGNAL FRONT H (~) SOUND SIGNAL FRONT SOUAWKER FH (~)	I
NITOR	SOUND SIGNAL FROM SIGNAL PROPERTY OF THE PROPE	J
Connector No.   B   Connector No.   Connector Name   R   Connector Type   T   3   7   T   3   5   7   Connector Type   T   3   7   T   3   7   T   3   7   T   4   Connector Type   T   5   7   T   5   7   T   5   7   T   5   7   T   5   7   T   5   T	33 32 4	K
	日本 1	L
WIRE NSS NSS NSS NSS NSS Signal Name [Specification]	ame [Specification 20] 19[18] [7] 16 [20] 19[18] [7] 16 [20] 19[18] [7] 16 [20] 19[18] [7] 16 [20] 19[20] 1	M
B18   WIRE TO   WIRE TO   TK10FW-		AV
BOSE AUI Connector No Connector Type	Connector No.  Connector Name Connector Type  13 37 36  14 3 7 36  15 7 7 26  16 7 7 17  17 7 26  18 8 25  19 7 7 7 26  22 8 8 25  23 8 8 25  24 25  25 8 8 25  27 26  28 25  28 25  29 8 8 25  20 0 G  20 0 G	0
	JCNWM1062GB	Р

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BOSE AUDIO WITH NAVIGATION (TW	WIN MONITOR) SIDE CAMERA I HIMAGE GND	Connector No. B46	17 W	AV COMM (H)	
Т		Г	ŀ		
Connector Name AROUND VIEW MONITOR CONTROL UNIT		Connector Name AROUND VIEW MONITOR CONTROL UNIT	╀		
Connector Type TH24FW-NH		Connector Type TH40FW-NH	22 V		
Q		Q	$\exists$		
A MATTI		THAT	+		
HS.		HS	+	CAMER	
42 44 46 48 50 52 54 56 58 60 62 64		2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	7	SHELD SHELD	
44 40 45 47 40 51 50 55 57 50 51 50		9 11 13 15 17 19 21 23 25 27 29 31 33 35 37	Z9 20	+	
61 45 45 45 5 6 5 6 5 6 5 6 6 6 6 6 6 6 6			30	1	
			t	SIDF C	
Terminal Color		Terminal Color	H		
of Wire		_	H	SIDE	
41 L FRONT CAMERA IMAGE SIGNAL		1 B GND	35 W	Н	
		2 Y BATTERY	36	REAR CAMERA POWER SUPPLY	
43 SHIELD SHIELD		3 G IGNITION	37 SHIELD	SHIELD SHIELD	
Y		4 LG ACC	38	. REAR CAMERA GND	
45 W FRONT CAMERA COMM		5 R ILLUMINATION	39	REAR CAMERA IMAGE SIGNAL	
G FRO		6 V VEHICLE SPEED (8-PULSE)	40 BR	REAR CAMERA IMAGE GND	
BR		0			
L SIDE CAMER.					
SHIELD		GP.			
+		SB			
51 R SIDE CAMERA LH IMAGE SIGNAL		16 L SENSOR SIGNAL 3			
Connector No. B48	Connector No. B51	Connector No. B66	18	1	
N	dillocom N	OF BOWN	19 BR	- 1	
Connector Name   KEAK SQUAWKEK LH	Connector Name WOUTER	Connector Name WIRE I U WIRE	H		
Connector Type TK02FBR	Connector Type RS06FGY	Connector Type TH40MW-NH	H	1	
Ó	Ó	1	۲ 29	1	
F	唐	野	30 P	1	
		תפ	31	1	
		•	32 SHIELD		
10		8 9 10 11 12 13 14 15	33	-	
	(13 5)	22 23 24 25 26 27 28 29 30 31 32 33	34 SB		
	)		S		
			36 B	1	
lal	Terminal Color	Terminal Color	37 G	1	
No. of Wire Signal Name [Specimoauon]		No. of Wire Signal Name [Specification]	38 R	1	
- 5	1 R SOUND SIGNAL WOOFER (-)	7 SHIELD -	F		
2 R -	2 G SOUND SIGNAL WOOFER (+)	- d 8			
	4 L WOOFER AMP, ON SIGNAL	- 1 6			
	5 B GND	10 SHIELD –			
	Α	· -			
		12 BB -			
		0.			
		T			
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		<u>P</u>			
		t			
		-			

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# [NAVIGATION (TWIN MONITOR)]

GR	Corrector No. 6231 Connector Name BUZZER Connector Types RROZFBR-DGY  Connector Types RROZFBR-DGY  This Color Signal Name (Specification)  1	В
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Connection	D
Ntien)	tion)	Е
WIRE TO WIRE THEOFW-CS16-TIMA  Signal Name (Specification)	REAR SOUAWKER RH TKOZ-BR Signal Name [Specification]	F
	ر ها	G
Commettor No.	Connector No. Commercer Name Commercer Types Connector Types  H.S.  H.S.  Golor No. of Wire  O Wire  O S.  R.  Golor No. of Wire  O S.  R.  R.  R.  R.  R.  R.  R.  R.  R.	Н
Terminal Color  Terminal Color	Connector No. 5218 Connector Name WIRE TO WIRE Connector Type ITK10FW-NS8  10 9 8 7 6 = 5 4 3 2 1 1  Terminal Color Signal Name [Specification]  13	I J K
	Connector No.	
BOSE AUDIO WITH NAVIGATION (TV Connector No.   B67	Connector No.   B210   Connector Name   WIRE TO WIRE   Connector Type   THI 6 PV-NH	M AV
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BOSE AUDIO WITH NAVIGATION (TW	WIN MONITOR)		
Connector No. B241	Connector No. B243	$\dashv$	Connector No. B255
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	19 B –	Connector Name WIRE TO WIRE
Connector Type NS08FW-CS	Connector Type TH40FW-NH	28 GR –	Connector Type RS08FGY
Q	Q	Н	ą́
(ANT)	(A)ATA)	30 P	Muta
<u> </u>	S.		
] ;	18 17 16	>	4 3 2 1
8 7 9 9	40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21	34 SB –	8 7 6 5
		ά	)
-	L	30 8	ŀ
I erminal Golor   Signal Name [Specification]	Signal Name [Specification]	3/ 6	Specification   Signal Name [Specification]
T	t	- W	t
4 B	- 8	┨	ł
ł	9		α
	10 SHIELD -		
	П		
	13 SHIELD –		
	$\dashv$		
	┪		
	Ġ		
	17 R –		
Connector No. B256	Connector No. B259	Connector No. D1	Connector No. D3
т	Т	Т	Т
	Connector Name CURNER SENSUR (RL)		
Connector Type YDX02FB	Connector Type YDX02FB	Connector Type TH40FW-CS15	Connector Type TH24MW-NH
	会	Ľ	
		15 14 13 12 11 10 9 8 7 6 5 4 3	12[11[10] 9 8 7 6 5 4 3 2 1
		525150494847	22 21 20 19 18 17 16
Terminal Color Signal Name [Specification]	<u></u>	<u>a</u>	<u>_a</u>
	e.	or wire	or Wire
2	+	۵.	M
2 B –	2 B -	7	> 1
		SHIELD	α.
		39 W	17 -
		Y0 -	NO
		42 Y	
		43 R -	

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# [NAVIGATION (TWIN MONITOR)]

Connector No. D34 Connector Name FRONT DOOR SPEAKER RH Connector Type INSIGHER-CS  H.S.	Color   Signal Name [Specification]   1   L   -   -   -	Connector No. D76 Connector Name REAR DOOR SPEAKER RH Connector Type NSGZPBR-CS  TLS.	Color   Color   Signal Name [Specification]     SB	A B C
Connector No. D33 Connector Name DOOR MIRROR (PASSENGER SIDE) Connector Type Tht2AMV-NH  12 [1] [10] 9 8 7 6 5 4 3 2 1  24 23 22 21 20 [19] 18 17 16 15 14 13	No. of Wire   Signal Name [Specification]   All Color   Signal Name [Specification]   All Color   Al	Connector Name WIRE TO WIRE  Connector Type TKI IDMW-NSS  TKI DAW-1 1 2 3 4 1 5 6 7 8 9 10  11 12 13 14 15 16 17 18	Terminal   Calor   Signal Name [Specification]	E F G
Connector No.   D3    Connector No.   D3    Connector Name   WIRE TO WIRE   Connector Type   TH40PVP-CS15   TS   12   11   10   9   2   6   4   9   2   1   1   10   9   2   6   4   9   2   1   1   1   1   1   1   1   1   1	Terminal   Color   Signal Name   Specification   Color   No. of Wire   Signal Name   Specification   Color	Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NS0ZFBR-CS  H.S.	Terminal   Color   Signal Name   Specification	J K
BOSE AUDIO WITH NAVIGATION (TWI Commetter No. 104 Commetter Name FRONT DOOR SPEAKER LH Commetter Type INSIZEBR-CS	Terminal Color Signal Name [Specification]  1 L 2 P	Connector No. D51 Connector Name WIRE TO WIRE Connector Type TKIDMW-NSS  H.S. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   13   V	AV O www1066GB

- 1 W - 28 G - 1	WIN MONITOR)	BOSE ALIDIO WITH NAVIGATION (TWIN MONITOR)
_ 2 BR _ 29	Connector No.   Connector No	Connector Name   Connector Name   EAA CAMERA   Connector Name
	Convector No.   Convector No	Digitary 1991   Connector No.   Connector No
>		Fig.   Connector Name   Connector Name
, 4t	Connector Name   Secondario	Connector Nume   Connector Nume   EAST CAMERY   Connector Nume   Connect
	Connector Name   Conn	Director Name   Connector Name   Conne
ı	Connector Name   Conn	December No.   Dece
× 7	Connector Name   Conn	Mile TO WHE   Connector No.   Early Challed   Connector No.
,		Figure 10 wife   Connector No.   Connector N
		Digitary National Connector Name   Con
2 BK - 23 L - 100	Connector Name   Conn	Digitary 1991   Connector No.   Connector No
- 2 BR - 29 29 29 100 100 100 100 100 100 100 100 100 10	Connector Number   Connector N	Convector Name   Conv
- 2 BW - 29 G - 100 Y	Connector No.   Connector No	Convector Name   Conv
- 28 G - 1 W - 28 G - 1	Connector Name   Conn	Connector Name   Conn
Signal Name (Specification)         Terminal Color         Signal Name (Specification)         Color Name (Specification)         Terminal Name (Specification)         Color Name (Specification)         Terminal Name (Specification)         Color Name (Specification)         No. of Mire	Connector No.   Connector No	Figure 2   Connector No.   C
Signal Name [Specification]         Terminal Anne [Specification]         Color of Wire Processing and Name [Specification]         Terminal Anne [Specification] </td <td>  Dig 2   Connector Name   FEAST CAMERA   Connector Name   C</td> <td>  Connector Name   Conn</td>	Dig 2   Connector Name   FEAST CAMERA   Connector Name   C	Connector Name   Conn
Signal Name (Specification)   Terminal Color   Terminal	Connector Name   Connector Name   REAR CAMERA   Connector Name   POWER   Connector Name   POWE	Commetter Name   EAR CAMERA   Commetter Name   EAR CAMERA   Commetter Name   Commetter Na
1   2   3   2   1	Dig 2   Connector No.   Dil   Di	Connector Name   EAR CAMERA   Connector Name   EAR CAMERA   Connector Name   Connector Na
1   2   3   4   5   5   5   5   5   5   5   5   5	Dig 2   Connector No.   Dil 1   Connector No.   Dil 1   Connector No.   Dil 2   Dil 2   Dil 3   Dil 3   Dil 4   Dil	Connector Name   Conn
1   2   3   4   5   6   7   8   9   10   11   12   3   12   13   14   5   15   14   14   5   15   14   14	Dig 2   Cornector Name   Connector Nam	Corrector Name   Corr
H.S.	DIGZ   Cornector Name   Connector Name	
H.S.	Dig 2   Dig	
FSUBE SHAPE	Connector Name   Connector Name   EAR CAMERA   Connector Name   Connecto	Connector Name   Conn
RS08FB-PR   Cornector Type   NS12MW-CS   Cornector Type   TH80FW-CS16-TM4   Cornector Type   TB01FW   Cornector Type   Cornector Type   TB01FW   C	Connector No.   Connector No	Connector Name   Conn
WRE TO WRE   Connector Name   PARKING   Connector Name   PARKING   Connector Name   PARKING   Connector Type   NS12MW-CS   Connector Type   NS12MW-CS   Connector Type   NS12MW-CS   Connector Type   TB01FW   Connector Type	Connector No.   ES   Connector No.   Connector No.	Connector Name   FEAR CAMERA   Connector Name   Connect
WIRE TO WIRE   Connector Name   WIRE TO WIRE   Connector Name   PARKING   Connector Name	Connector No.   Dilit   Connector No.   Dilit   Connector No.   Dilit   Connector No.   Esta   Esta   Connector No.   Esta   Esta   Connector No.   Esta   Est	Cornector Name   PEAR CAMERA   Connector Name   PEAR CAMERA NAMES   PEAR CAMERA NAMES SIGNAL NAME   Specification   Name   Specification   Ferminal   Color   Ferminal   Color   Ferminal   Color   PEAR CAMERA NAMES SIGNAL   Color   PEAR CAMERA NAMES SIGNAL   PEAR CA
Connector Name   MIRE TO WIRE	Connector No.   Dilit   Connector No.   Dilit   Connector No.   Dilit   Connector No.   Es   Es   Es   Es   Es   Es   Es   E	Connector Name   FEAR CAMERA   Connector Name   FEAR CAMERA
FEST   FORTH	Connector No.   Dilit   Connector No.   Dilit   Connector No.   Dilit   Connector No.   Conn	Connector No.   Eds.
ESS   Connector No.   E104   Connector No.   E104   Connector No.   E104   Connector No.   E104   Connector Name   WIRE TO WIRE   Connector Name   Connector	Connector Name   Pack RAMERA   Connector Name   Pack RAMERA	Dig 2   Dig 2   Dig 2   Dig 3   Dig 4   Dig 5   Dig 5   Dig 5   Dig 5   Dig 6   Dig
FSORTER	Connector No.   Connector No	Figure   Commercer No.   Est   Commercer No.   Commercer N
Fig.     WIRE TO WIRE     Connector No.   E104   Connector No.   E	Connector Name   Pick Reserved	Connector No.   E5   Connect
FSORTH STORTH   FORTH   FORT	Connector Name   Paper   Pap	10   10   10   10   10   10   10   10
E66	Connector Name   PDM   FR (NITELLICENT POWER)   Connector Name   WIRE TO WIRE THEATH POWER PROMINE   Connector Name   PDM   FR (NITELLICENT POWER   PDM   FR (NITELLICENT POWER   PDM   FR (NITELLICENT POWER   PDM   FR (NITELLICENT POWER   PDM   PDM   FR (NITELLICENT POWER   PDM   PDM   FR (NITELLICENT POWER   PDM	Figure 1   Figure 1   Figure 1   Figure 1   Figure 1   Figure 2   Figure 1   Figure 2   Figure 1   Figure 1
Fig.	Connector No.   Dital	Connector No.   Estate   English Room   English Room   Estate   English Room   English Room   Estat
FSORTH STORTH	Connector No.   Connector No.   Dital   Connector No.   Dital   Connector No.   Distribution	Fig. 22   21   20   19   18   7   6   5   7   6   7
Fig.	Connector No.   Dital   Connector No.   Dital   Connector No.   Connector No	10102   1010
E66     Connector No.   E104   Connector No.   E104   Connector Name   C	Connector No.   Dital	Did   Did
E86   Connector No.   E104   Connector No.   E104   Connector No.   E106   Connector No.   E107   Connector No.   E106   Connector No.   E106   Connector No.   E106   Connector No.   E106   Connector No.   E107   Connector No.   E106   Connector No.   E107   E107	Connector No.   Connector No.   Dilitarian   Connector No.   Dilitarian   Connector No.   Co	Figure   Commerciar Name   Face   Commerciar Name   Face   Commerciar Name   Comme
EB	Dig 2   Cornector No.   Dig 2   Cornector No.   Dig 2   Cornector No.   Dig 2   Cornector No.   Dig 3   Dig 2   Cornector No.   Dig 3   Dig 3   Dig 3   Dig 4   Dig 4   Dig 4   Dig 6   Dig 3   Dig 6   Dig	Connector No.   E5   Connector No.   E6   Connector No.   E6   Connector No.   E6   Connector No.   E6   E4   E7   E7   E7   E7   E7   E7   E7
Fig.	Dig 2   Connector Name   EAR CAMERA   Connector Name	Figure 2   Figure 1   Figure 2   Figure 2   Figure 3   Figure 3
Fig. 10   Fig.	Dig 2   Cornector No.   Dill	Dig 2   Dig 2   Dig 3   Dig 4   Dig 5   Dig 5   Dig 5   Dig 5   Dig 5   Dig 6   Dig
Fig. 4	Dig 2   Cornector No.   Dili	Figure 2   Figure 1   Figure 2   Figure 2   Figure 2   Figure 2   Figure 3   Figure 3
Fig. 10   Fig.	Dig 2   Connector No.   Dig 11   Connector No.   Dig 11   Connector No.   Dig 11   Connector No.   Dig 11   Dig 12   D	10122   1012
1	Dig 2   Dig 2   Dig 2   Dig 3   Dig 3   Dig 4   Dig 6   Dig 5   Dig 6   Dig	DITECT   Connector No.   E5   Connector No.   E5
1	Dig 2   Connector No.   Dig 11   Connector No.   Dig 12   Connector No.   E.S.	TRZ4FW-NH   Connector No.   E5   Connector No.   E5   Connector No.   E5   Connector No.   E5   Connector No.   E6   Connector No.
1	Connector No.   Dilitary   Connector No.   Dilitary   Connector No.   E5   Connector No.   E65   E65   Connector No.   E65   E65   Connector No.   E65   E	Did   Did
Figure   Signal Name   Specification   Figure   Figu	Connector No.   Dilitary   Connector No.   Dilitary   Connector No.   E65   E6	Dig 2   Dig 2   Dig 3   Dig 4   Dig 4   Dig 6   Dig 7   Dig
Terminal   Color   Terminal   Terminal   Terminal   Terminal   Terminal   Color   Terminal   Terminal   Terminal   Terminal	Dig 2   Connector No.   Dill	Did
Terminal Color   Term	Dig 2   Dig 2   Dig 3   Dig 4   Dig 6   Dig	Did 2   Did 2   Did 3   Did 3   Did 4   Did 4   Did 4   Did 4   Did 5   Did 5   Did 5   Did 5   Did 6   Did
Signal Name (Specification)   No.   First Activation   Color   First Activation   First Activation   Color   First Activation	Dig 2   Connector No.   Dili 1   Connector No.   Dili 2   Connector No.   E3   Connector No.   E65   Connect	Dig
Signal Name (Specification)   No. of Wive   No. of Wiv	Dig 2   Connector No.   Dilli   Connector No.   Dilli   Connector No.   Dilli   Connector No.   E5   Connector No.   E65   Connect	Dig 2   Dig 2   Dig 2   Dig 3   Dig 3   Dig 3   Dig 4   Dig 6   Dig 7   Dig 8   Dig 7   Dig
Signal Name (Specification)   Terminal Color   Signal Name (Specification)   Terminal Color   Signal Name (Specification)   No. of Wise   No. of W	Dilo2   Connector No.   Dili1   Connector No.   Dili1   Connector No.   ES   Connector No.	DIOZ   Commetter Name   Commetter Name   DIOZ   Commetter Name   MIRE TO WIRE   Commetter Name   Commetter Name   MIRE TO WIRE   Commetter Name   Commetter Na
Signal Name   Specification   Terminal   Color   Signal Name   Specification   Color   Signal Name   Speci	Dig 2   Connector No.   Dili 1   Connector No.   Dili 2   Connector No.   E	DITE
Signal Name (Specification)   No. of Wive   Signal Name (Specifi	Diligation   Commercior No.   Diligation   Commercior No.   Esame   C	Dig
110   9   17   6   5   1   1   1   1   1   1   1   1   1	Dig2   Connector No.   Dill	Dility   Connector No.   E5   Connector No.   E5   Connector No.   E5   Connector No.   E6   Connector No.   E6   Connector No.   E7   Connector No.   Conne
10   9   8   7   6   5   4   3   2   1	D102         Connector No.         E5         Connector No.         E5         Connector No.           WIRE TO WIRE         Connector Name         PEAR CAMERA         Connector Name         IPDM E/R (INTELLIGENT POWER Ownercor Name         Connector Name           THZ4FW-NH         Connector Type         THOBMW-NH         Connector Type         THZ0FW-CS12-M4-1V         Connector Type	DIOZ   Connector No.   DI 11   Connector No.   DI 12   Connector No.   DI 12   Connector No.   DI 13   Connector No.   DI 142   Connector No.   DI 152   Connector Type   TH20HW-NH   Connector Type   TH20HW-CS12-M4-IV   Connector Ty
10   8   7   6   5   4   3   2   1	Dition	D102   Commettor No.   E3   Commettor No.   E1   Commettor No.   E3   Commettor No.   E3   Commettor No.   C
100   8   7   6   5   4   9   2   1	Dig2   Connector No.   Dill   Connector No.   E5   Connector No.   E6   Connector No.   E7   Connector No.	Dilitical Commercian No.   Dilitical Commercia
10   0   0   0   0   0   0   0   0   0	D102   Connector No.   D111   Connector No.   E5   Connector No.   E6   Connector No.   E7   Connector No.   E7   Connector No.   E7   Connector No.   E7   Connector No.   Connector No.   Connector No.   Connector No.   Connector Type   TH20FW-LNI   Connector Type   TH20FW-CS12-M4-IV   Connector Type   T	DIDIZ   Connector No.   DITI   Connector No.   E5   Connector No.   E5   Connector No.   E5   Connector No.   Connector No.   DITI   Connector No.   Connect
10   9   8   7   6   5   4   3   2   1     2   2   2   2   3   3   3   4   3   5   4     3   2   2   3   3   3   4   3   5   4     4   3   2   3   3   4     5   2   2   3   3   3     5   2   3   3   3     5   5   5   5   5   5     5   5   5	D102         Connector No.         D111         Connector No.         E5         Connector No.         Connector No.         Connector Name	D102   Commettor No.   E5   Commettor No.
110   8   7   6   5   4   3   2   1	D102         Connector No.         E5         Connector No.         E5         Connector No.         Connector Type	Diliza   Connector No.   E5   Connector No.   E5   Connector No.   E5   Connector No.   E5   Connector No.   Connector Type   TH2BFW-CSI 2-MA-IV   Connector Type   Co
100   87   10   10   10   10   10   10   10   1	Di02   Connector No.   Di11   Connector No.   E5   Connector No.   E5   Connector No.   Connector No.   E5   Connector No.	10102   Connector No.   E5   Connector No.   E1   Connector No.   E5   Connector No.   E5   Connector No.   C
Figure 10 wire	D102         Connector No.         D111         Connector No.         E5         Connector No.         Connector No.           WIRE TO WIRE         Connector Name         PPGAR         CAMERA         Connector Name         Connector Name         Connector Name         Connector Name	D102   Connector No.   D111   Connector No.   E5   Connector No.   Connector
Third Principle   Third Prin	D102   Connector No.   D111   Connector No.   E5   Connector No.   Connector	
Tright Writer   Tright   Tri	D102   Connector No.   D111   Connector No.   E5   Connector No.   Connector	Connector No.   D111   Connector No.   D112   Connector No.   D112   Connector No.   D114   Connector No.   D115   Connector No.   D15   Connector
Figure 19-14-14	Connector No.   D112   Connector No.   Ed.   Connector No.	Comector No. E5 Comector No. Ontil Comector No.
Mile TO WHEE   Connector Name   REAR CAMERA   Connector Name   Connector	D102   Connector No.   D111   Connector No.   E5   Connector No.	
Figure 10 Wild   Figu		
Connector Name   Conn	():0::0::0::0::0::0::0::0::0::0::0::0::0:	
Note to Wise   Convector Name   EAA CAMERA   Convector Name   Convector Nam		(COHINOM INTEL INCH INCH INCH INCH INCH INCH INCH INCH

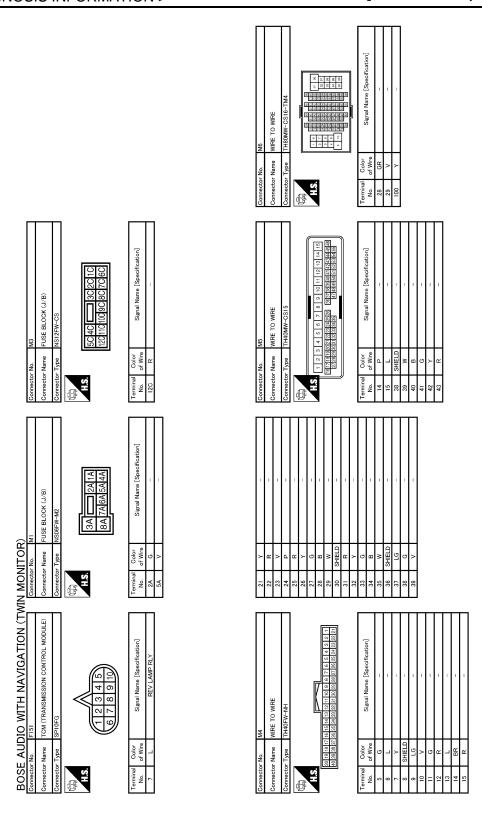
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# [NAVIGATION (TWIN MONITOR)]

Connector No. E153 Connector Name WIRE TO WIRE Connector Type RS08MB  H.S.  (4 5 6	of Wire Signal Name [Specification]	Connector No. F103  Connector Name WIRE TO WIRE  Connector Type ITX3FW-NS10  H.S.  H.S.  Exercise of the second of	of Wire Signal Name [Specification]		В
Connector No.	Terminal No. No. 9 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Connector No.	Terminal No. 31		D
E152 CORNER SENSOR (FR) YDX0ZFB	Signal Name [Specification]	F51  A.7 ASSEMBLY  RK10FG-DGY  5 4 3 2 7  10 9 8 7 6	Signal Name [Specification]		E
Connector No. E152 Connector Name CORNER Connector Type YOXOZFE	Terminal Color No. of Wire 2 B B	Connector No.  Connector Name A T A Connector Type RKI06	Terminal Color No. of Wire 7 R		G
					Н
EISI WIRE TO WIRE RSJONAG-PR	Signal Name [Specification]	E155 FRONT CAMERA. RH06FB  (123456	Signal Name [Specification] FRONT CAMERA POWER SUPPLY FRONT CAMERA INAGE GND FRONT CAMERA INAGE GND FRONT CAMERA COMM FRONT CAMERA COMM		J
MIN MONITOR) Connector None Connector Name Connector Type H.S.	Color   No.   Color   No.   Color   No.   Color   Co	Connector No. E Connector Type R H.S.	Color   Color   No.   Color   Color   No.   Color   No.   Color   Co		K
					L
NAVIGATI:	Signal Name [Specification]	#@ #@ #@	Signal Name (Specification)		M
DIO WITH E123 WIRE TO WIRE TH24MW-NH 3 4 5 6 115 16 17 18		CORNER SENSOR (FL.) VDX02FB	Ш		AV
BOSE AU Connector Nu. Connector Name Connector Type H.S. 1 2 1 2 1 3 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 1 3 1 1 1 1 3 1 1 1 1 3 1 1 1 1 1 3 1	Color   Color	Connector No. Connector Name Connector Type	Color   Colo		0
				JCNWM1068GB	Р

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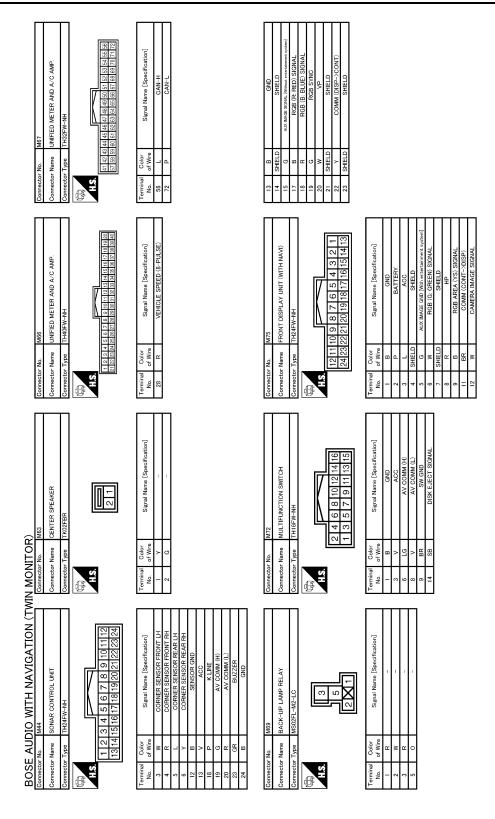


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# [NAVIGATION (TWIN MONITOR)]

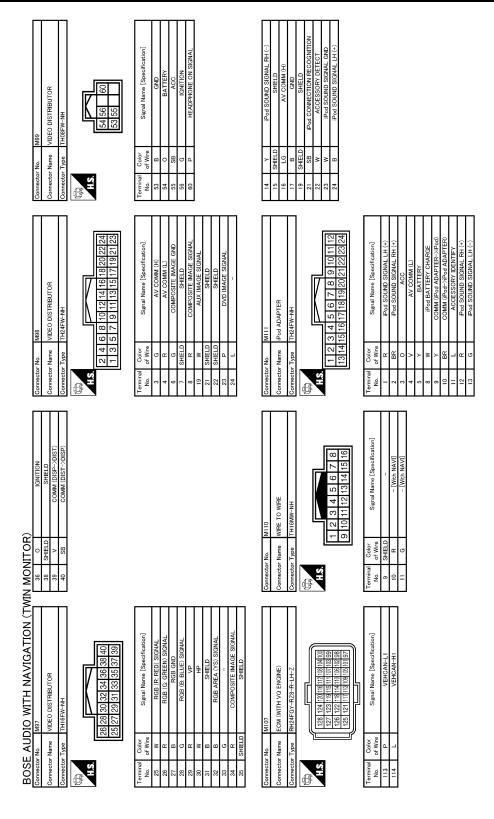
Connector No. M13 Connector Name FRONT SOUAWKER LH Connector Type TKOZFBR  TROZFBR  Terminal Color No. of Wire Z W. L Z W. L Z W. L	Connector No. M37  Connector Name STEERING ANGLE SENSOR  Connector Type THOSPN-NH  TAS  7 2 3 8  1 4 5	Color   Signal Name (Specification)   Color   Signal Name (Specification)   Color		В
Connecton Connecton Terminal No. 1 2	Conne	Terminal No. 3 3 4 4 7 7 7 7 7 7 8 8		D
Specification]	M36 COMBINATION SWTCH (SPIRAL CABLE) TK08FGY-1V  24 25 26 31 32 33 34	pecification]		Е
Name B 17   1   1   1   1   1   1   1   1   1	1V 1V 25 26 32 33 34	Signal Name (Specification)		F
MINE TO 10 9 8 12 12 12 12 12 12 12 12 12 12 12 12 12				G
Prector Normal Color of W	Connector No. Connector Name Connector Type	Color   Colo		
	Com			Н
	5 6 7	Signal Name (Specification)		I
	MISE TO WIRE INSTIGMAY-CS  2 3 4 4 9 10 11 12 13	Signal Nam		J
S		Color of Wire SB SB SHIELD G C C C C C C C C C C C C C C C C C C		K
WIN MONITOR)	Connector No. Connector Name Connector Type	Terminal No. No. 10 10 10 11 11 11 11 11 11 11 11 11 11		
				L
AUDIO WITH NAVIGATION (T  lone WIRE TO WIRE  THEOMY-CS16-TM4  THEOMY-CS16-	NANECTOR 13 14 15 16 5 6 7 8	Signul Name (Specification)		M
WIRE TO WIRE THE SIGNAL AND A SIGNAL NAME (Signal Name (S	M24 DATA LINK CONNECTOR BD16FW 9 10 11 12 13 14 11	r gill		AV
Connector Name   Value   Connector Name   Value   Connector Name   Value   Connector Type   Terminal   Color   Value   Color   Value   Color	r No.	of Wire of Wire P P P P		
Aconnector IX Connector IX Conn	Connecto Connecto Connecto	Terminal No. 6 7 7 14	100000000000000000000000000000000000000	0
			JCNWM1070GB	Р

Revision: 2009 March AV-821 2009 FX35/FX50



JCNWM1071GB

(6-PULSE) GWAL 2 GWAL 2 GWAL 2 ESGNAL 3 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (	А
VEHICLE SPEED (8-PULSE CONTROL SIGNAL 1 CONTROL SIGNAL 2 CONTROL SIGNAL 2 CONTROL SIGNAL 3 AV COMM (1) AV COMM (1) AV COMM (1) CAN-H CAN-H CAN-H CAN-H	В
	С
38 23 23 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25	D
TITH NAVI)  THE NAVI)  Specification    OD  ONE GND  ONE	Е
NUTROL UNIT (W W-NH)	F
Name	G
Commetted Commetted No. 21 22 22 23 23 23 36 Commetted Commetted No.	Н
SIGNAL PEAR PH (+) STRAG SW GND STROG SW B BATTERY SHIELD	I
SOUND SIGNAL REAR RH (+) SOUND SIGNAL REAR RH (-) STRO SW B BATTERY SHELD	J
MIN MONITOR)  13 BR	К
	L
BOSE AUDIO WITH NAVIGATION (Townstor No.   M80	M
MITH NAVIGAT	AV
Colorector Name   AV CO	
BOST   Commercior Name   Com	0
	Р

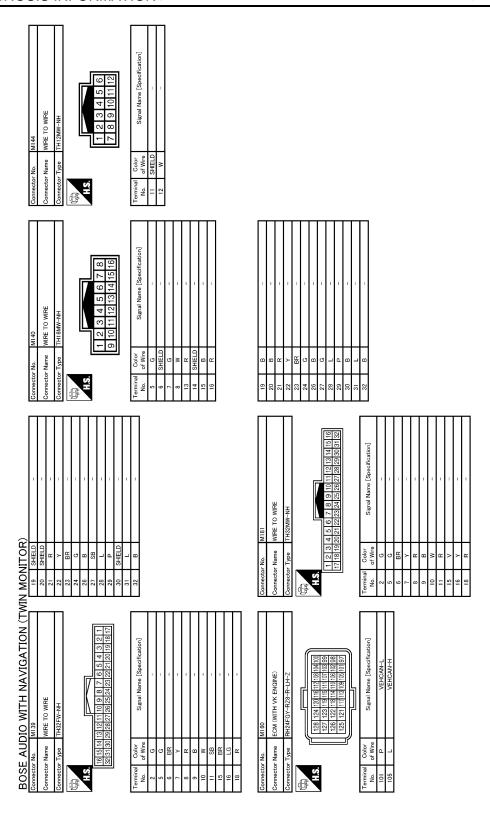


JCNWM1073GB

# [NAVIGATION (TWIN MONITOR)]

		Military   Military		A B C
Connector No. M116 Connector Name WIRE TO WIRE Connector Type ITK38MV-NS10  H.S.  ILS  ILS 1 & INDICATOR IN THE INDICATOR IN	Terminal Color No. of Wire Signal Name [Specification] 31 W -	Connector No. MI22 Connector Name BCM (BODY CONTROL MODULE) Connector Type TH407E-NH  Linguish Book Book Book Book Book Book Book Boo		E F G
(TWIN MONITOR)  Connector No. M114 Connector Nype TROOPT SOUAWKER RH Connector Type TROOPER  LLS.	Terminal   Color   Signal Name [Specification]   V	20 GR		J K
BOSE AUDIO WITH NAVIGATION (TWI Connector Name   Pod SIDE	Terminal   Color   Signal Mane [Specification]     1	Connector Name   WIRE TO WIRE	JCNWM1074GB	M AV
				Р

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JCNWM1075GB

< ECU DIAGNOSIS INFORMATION >

# [NAVIGATION (TWIN MONITOR)]

M503 COMBINATION SWITCH (SPIRAL CABLE) TK08FGY  20 19 18 17 16 15 14 13 Signal Name [Specification]	WIRE S-HU Signal Name (Specification)		АВ
Connector No.   M303	Connector No. M374 Connector Name WIRE TO WIRE Connector Type GT16C-1S-HUI  H.S.  Terminal Color No. of Wire  1		C D
ARY INPUT JACKS  3 T 7 8  3 Signal Name [Specification]  AUX SOUND SIGNAL RH (+)  AUX SOUND SIGNAL LH (+)  AUX SUUND SIGNAL LH (+)	MA373 AV CONTROL UNIT (WITH NAVI) GT5-15-HU  GT6-15-HU  GT7-15-HU  GT7-15-HU  GT7-15-HU  GT7-15-HU  Signal Name [Specification]  GT7-15-HU  SHELD		E F
Connector No.   M183	Connector No.   M373		G
SHELD  HEADPHONE SCUNDSSIGNAL SIGNAL LH (-)  SOUND SIGNAL LH (-)  SUBJECT  SHELD  AV COMM (1)  AV COMM (1)  AV COMM (1)			H
MIN MONITOR)  10 B HEADPHONE S  17 G HEADPHONE S  18 BR HEADPHONE S  20 V HEADPHONE S  20 V HEADPHONE S  21 V SOUN  22 BR SOUN  23 BR SOUN  24 G SOUN  25 B B SOUN  26 B B SOUN  27 B B SOUN  28 B SOUN  29 B B SOUN  29 B B SOUN  20 C	ector No. M372 ector Name AV CONTI		J K
	NALL OO!]		L
MITH NAVIGATIOI  LAYER  W-NH  W-NH  [1/3] 1/4   1/6   1/6   2/6   2/6   2/6   2/6      1/3   1/4   1/4   1/6   2/6   2/6   2/6      1/3   1/4   1/4   2/4   2/6   2/6   2/6      1/4   1/4   1/4   2/6   2/6   2/6      1/4   1/4   1/4   1/4      1/4   1/4   1/4      1/4   1/4   1/4      1/4   1/4   1/4      1/4   1/4	M371 AV CONTROL UNIT (WITH NAVI) GT13SH-2/1S-HU  GT13SH-2/1S-HU  GT13SH-2/1S-HU  FM SUB  AM-FM MAIN  ANTENNA AMP. ON SIGNAL		M
BOSE AUDIO WITH NAVIGATION (Tonnector Name   DVD PLAYER	Connector No. M371 Connector Name AV COI Connector Type GT13SI MS. Of Wire No. of Wire 107		AV O
		JCNWM1076GB	D

Commector No.   M385	HS.	Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1   2   -	Connector No. M389 Connector Name WINDOW ANTENNA (SUB) Connector Type POITE-A  H.S.	Signal Name [Specification] Terminal Color Signal Name [Specification]
Connector No. M383 Connector Name AVITENNA BASE Connector Type GT16C-1PP-HU	H3.	Terminal Color Signal No. of Wire Sattle	Connector No. M388 Connector Name WIRE TO WIRE Connector Type JASO PLUG H.S.	Terminal Color Signal No. of Wire
VIN MONITOR)  Connector No. M377  Connector Name WiRE TO WIRE  Connector Type GT16C-1PP-HU	4.8	Terminal Color Signal Name (Specification)	Connector No. M387 Connector Name WIRE TO WIRE Connector Type JASO JACK  H.S.	Terminal Odor Signal Name [Specification]
BOSE AUDIO WITH NAVIGATION (TW Commetor No. M075 Connector Name WIRE TO WIRE Connector Type GTISSC-2/1S-HU	#3.	Terminal   Color   Signal Name (Specification)	Connector No. M386 Connector Name ANTENNA BASE Connector Type GT13SSN-1/IPP-HU	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification]

JCNWM1077GB

### **FRONT DISPLAY UNIT**

## [NAVIGATION (TWIN MONITOR)]

	ion]			А
2 3 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Signal Name [Specification] MICROPHONE SIGNAL MICROPHONE GND MICROPHONE VCC			В
Connector No. R17 Connector Name MICROPHONE Connector Type TXG4FW  MAS.	Color Sig			С
Connector No. Connector Type H.S.	Terminal No. 6			D
10 11 12 22 23 24	ooification]			Е
WIRE TO WIRE TH24MM-NH  3 4 5 6 7 8 9 15 16 17 18 19 20 21	Signal Name [Specification]			F
14 2 4 T	of Wire			G
Connector No.	Terminal No. No. 8 8 9 9 9 10			Н
100 T	Signal Name [Specification]			I
4 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Signal Name			J
J MONITOR)  Connector Name WIRE TO WIR  Connector Type THISPW-NH  H.S.  R. Z.	Terminal Color No. of Wire 9 SHIELD 10 R 11 G			K
NO FEE				L
NAVIGATÍ	Signal Name [Specification]			M
피   #				AV
BOSE AUDIO WIT Connector Name WIRE TO WIE Connector Type   IT/24/PV-HH    12   11   10   9   8       24   23   22   21   20   1	Terminal Golor No. of Wire 8 SHIELD 9 R 10 G			0
			JCNWM1078GB	Р

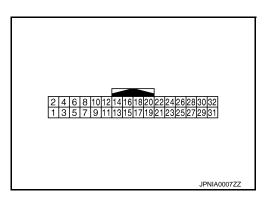
Revision: 2009 March AV-829 2009 FX35/FX50

INFOID:0000000003825970

## **REAR DISPLAY UNIT**

Reference Value

**TERMINAL LAYOUT** 



### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
2 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
3 (Y)	Ground	Battery power supply	Input	Ignition switch ON	_	Battery voltage
4 (LG)	Ground	Battery power supply	Input	Ignition switch ON	_	Battery voltage
5	01	Haralda a ONI da da	1	Ignition	Headphone mode is ON.	4.0 V
(P)	Ground	Headphone ON signal	Input	switch ON	Headphone mode is OFF.	0 V
6 (GR)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
8		Shield	_	_	_	_
9 (V)	Ground	Communication signal (DISP→DIST)	Output	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear displayed.	(V) 6 4 2 0 + 1ms PKIB5039J
10 (SB)	Ground	Communication signal (DIST→DISP)	Input	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear displayed.	(V) 6 4 2 0 ++1ms PKIB5039J

### < ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (TWIN MONITOR)]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
11	Ground	Ignition signal	Input	Ignition switch ON	_	0 V
(O)	Cround	igililon olgital	mpat	Ignition switch ACC	_	5.0 V
12	_	Shield	_	_	_	_
13 <sup>*</sup> (G)	_	_	_	_	_	_
13 (G)	Ground	Composite image synchro- nizing signal	Input	Ignition switch ON	When AUX or DVD image is displayed on rear display unit.	(V) 4 0 + 20μs SKIB0825E
14 (R)	Ground	Composite image signal	Input	Ignition switch ON	When AUX or DVD image is displayed on rear display unit.	(V) 0. 4 0 -0. 4 *** *** *** *** *** *** *** *** *** *
					When AUX or DVD image is displayed.	0 V
15 (BR)	Ground	RGB area (YS) signal	Input	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear display.	(V) 6 4 2 0 PKIB4948J
16 (B)	_	Ground	_	Ignition switch ON	_	0 V
17 (Y)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch ON	_	(V) 4 0 ++4ms SKIB3598E
18 (O)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	_	(V) 4 0 + 20µs SKIB0825E

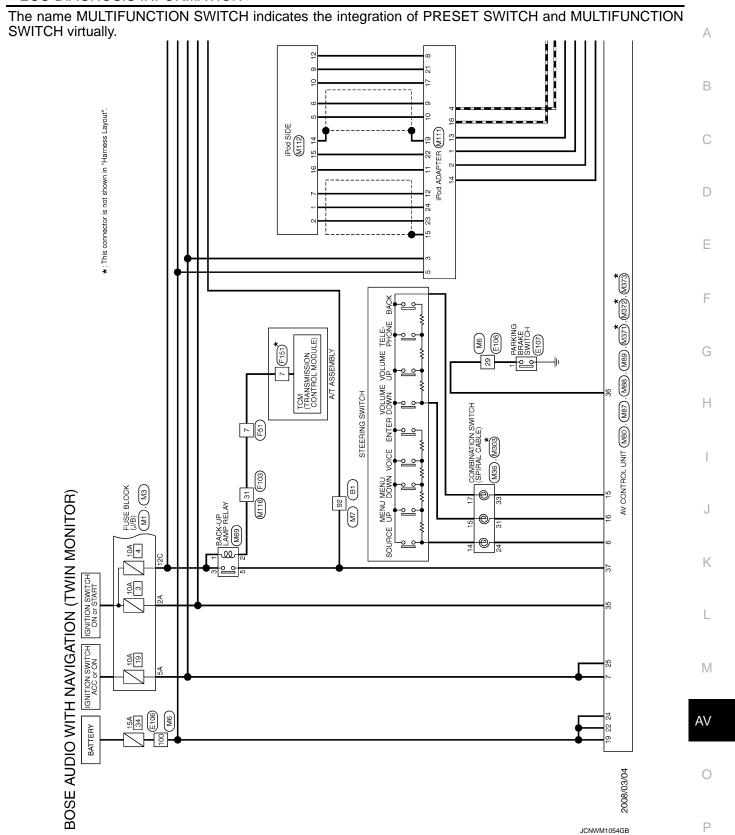
### [NAVIGATION (TWIN MONITOR)]

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
19 (B)	Ground	RGB ground	_	Ignition switch ON	_	0 V
20 (G)	Ground	RGB signal (B: blue) for rear display unit	Input	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 0.8 0.4 0 → +40µs JSNIA1031ZZ
21 (R)	Ground	RGB signal (G: green)	Input	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 0.8 0.4 0 40µs JSNIA1030ZZ
22 (W)	Ground	RGB signal (R: red)	Input	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 0.8 0.4 0 + 40µs JSNIA1029ZZ
27 (BR)	25 (Y)	Headphone sound signal RH	Input	Ignition switch ON	Headphone sound output	(V) 1 0 -1 + 2ms SKIB3609E
28 (L)	26 (P)	Headphone sound signal LH	Input	Ignition switch ON	Headphone sound output	(V) 1 0 -1 *** 2ms SKIB3609E

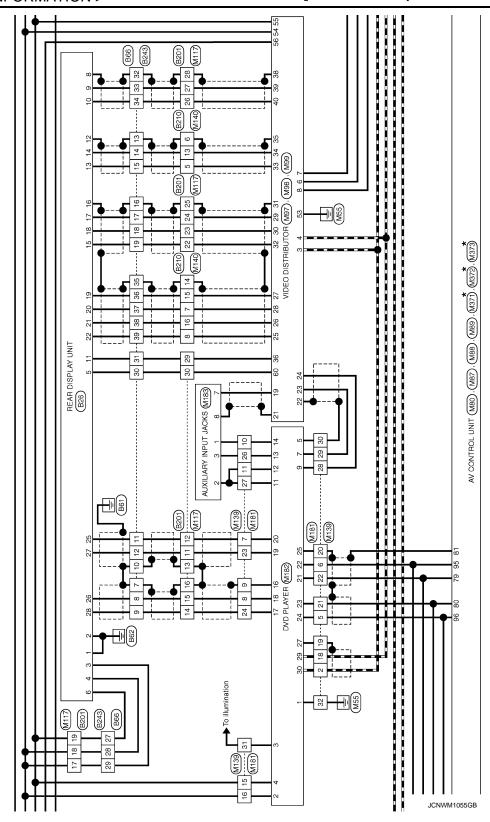
#### NOTE:

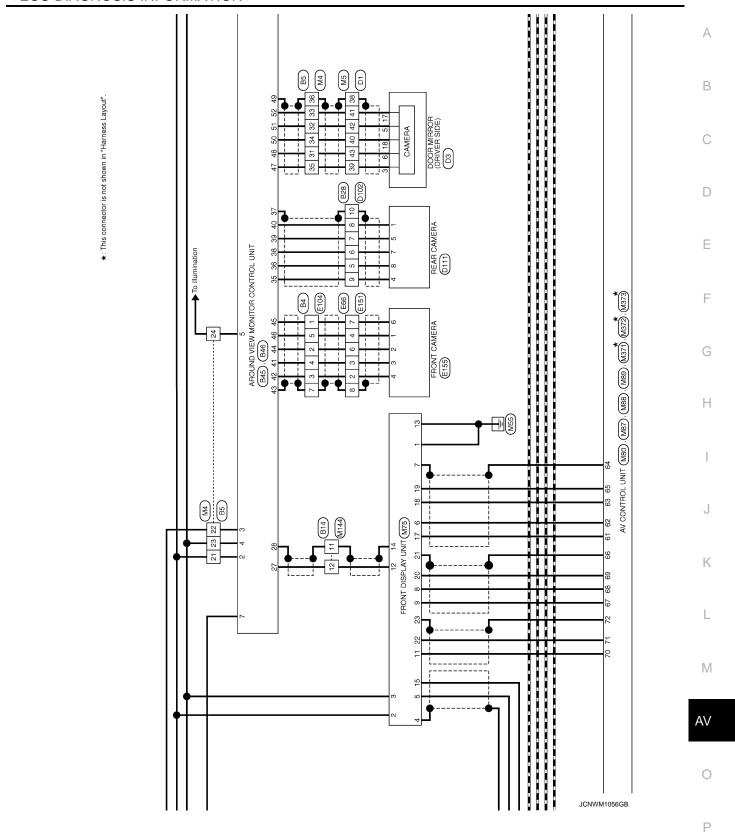
Wiring Diagram - BOSE AUDIO WITH NAVIGATION (TWIN MONITOR) - INFOID:

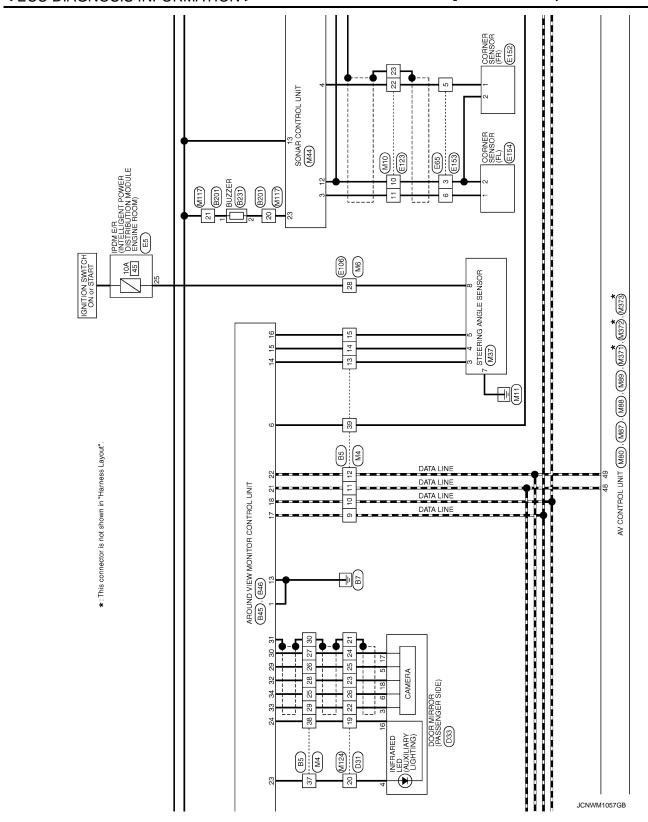
<sup>\*:</sup> This harness is not used.

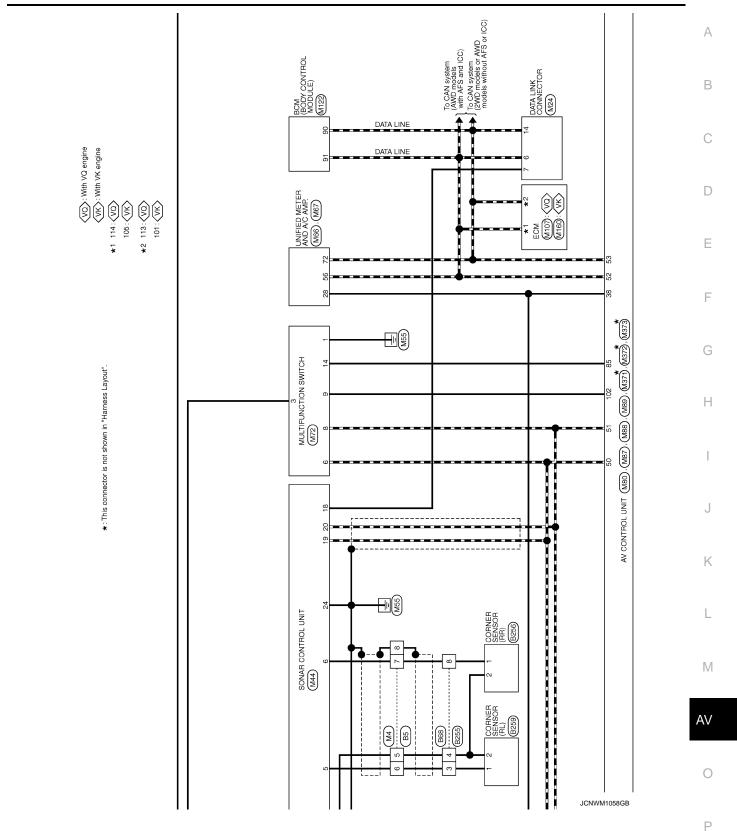


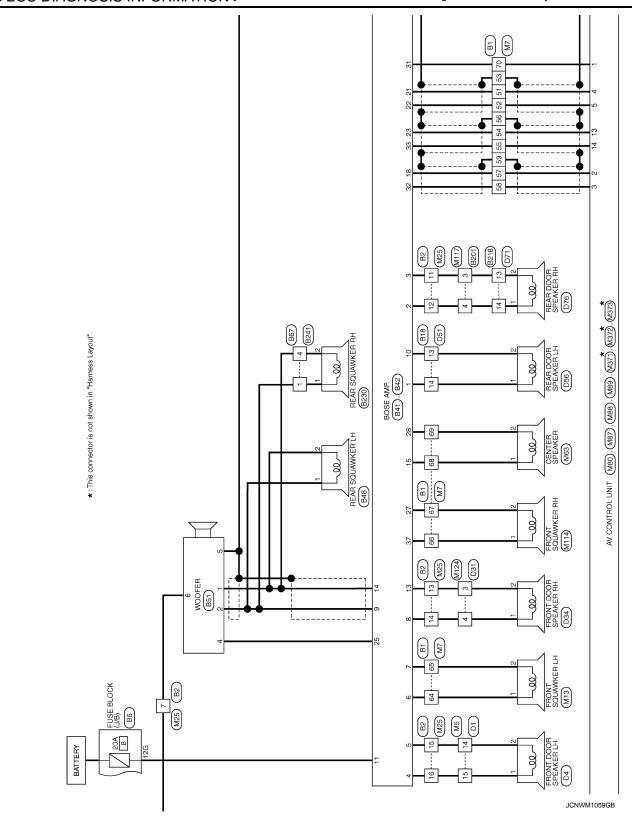
\*: This connector is not shown in "Harness Layout".



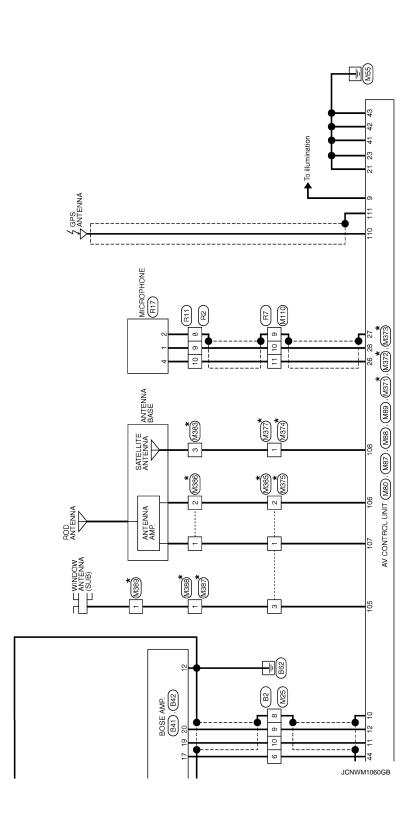








\*: This connector is not shown in "Harness Layout".



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Commetor No.   B4	Terminal Color   Signal Name [Specification]	Connector No. 814  Connector Name WIRE TO WIRE  Connector Type THISPW-NH  H.S. 6 5 4 3 2 1  12 11 10 9 8 7	Terminal Color   Signal Mame [Specification]   No. of Wire   Signal Mame [Specification]   11   SHIELD   -
Connector No.         B2           Connector Type         WIRE TO WIRE           Connector Type         NS18FW-CS           Th.S.         T 6 5 4	Terminal Color   Col	Connector No. 98 Connector Name FUSE BLOCK (J/B) Connector Type NSIZFBR-CS  M.S. FOR THE STATE S	Terminal Color No. of Wire Signal Name [Specification]
WIN MONITOR)  66 V 68 V 68 C 70 GR 70 GR 72 O		7 V C C C C C C C C C C C C C C C C C C	33 Y N
BOSE AUDIO WITH NAVIGATION (TW Connector No. Bil Connector Type ITH80FW-CS16=TM4	Terminal   Color   Signal Name (Specification)   Color   Signal Name (Specification)   Signal	Connector No. 65 Connector Name WIRE TO WIRE Connector Type TH40MV-NH  TEST STEED ST	Terminal Color No. of Wire 5 W

JCNWM1061GB

## [NAVIGATION (TWIN MONITOR)]

< ECU DIAGNOSIS INFORMATION >

23 24   23   24   24   24   24   24   24	SQLAWER (-)	А
RE 1920 21 22 20 21 22 2 2 2 2 2 2 2 2 2 2 2	CIND SIGNAL WOOFER AND REAR SQLAWREE HI-C	В
828 WIRE TO 1712 AMY TO 1712	B SOUND SIGNAL	С
Connector No.  Connector Name  Connector Type  13 1 2 1 3 1 1 2 1 3 1 1 1 2 1 1 1 1 1 1	27 27 47	D
AGE SIGNAL  S) SIGNAL  NID  NID  NID  NID  NID  NID  NID  NI	BM2	Е
COMPOSITE IMAGE SIGNAL RGB AREA IVS) SIGNAL OND OND VP HP RGB (B. BLUE) SIGNAL RGB (B. BLUE) SIGNAL RGB (B. BLUE) SIGNAL RGB (B. RED) SIGNAL HEADPHONE SOUNDSIGNAL SIGNAL INFORME SOUNDSIGNAL SIGNAL INFORME SOUNDSIGNAL SIGNAL INFORME SOUNDSIGNAL SIGNAL INFORME SOUNDSIGNAL SIGNAL INFORMENCE SIGNAL INFORMENCE SOUNDSIGNAL SIGNAL INFORMENCE SOUNDSIGNAL SIGNAL INFORMENCE	BOSE AMP. SGALZEBR-S.JAZ    12	F
		G
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Н
Signal Name   Specification	AMP. ON SIGNAL SOUND SIGNAL FRONT LH (-) SOUND SIGNAL FRONT SOUAWKER PH (+) D SIGNAL FRONT SOUAWKER PH (+)	I
1   1   2   2   2   2   2   2   2   2	SOUND SIGNAL FRE SOUND	J
MIN MONITOR	31 CR	K
		L
Connector No.   Bit   Connector TKIOFFV-NSS   TO 9   8   7   6   7   6   7   11   12   11	10   10   10   10   10   10   10   10	M
UDIO WITH   B118   B1		AV
Connector Name   Connector Name   Connector Name   Connector Name   Connector Type   Conn	Connector No.  Connector Name Connector Type  13	0
	JCNWM1062GB	

**AV-841** Revision: 2009 March 2009 FX35/FX50

BOSE AUDIO WITH NAVIGATION (TW	WIN MONITOR) SIDE CAMERA I HIMAGE GND	Connector No. B46	17 W	AV COMM (H)	
Т		Г	ŀ		
Connector Name AROUND VIEW MONITOR CONTROL UNIT		Connector Name AROUND VIEW MONITOR CONTROL UNIT	╀		
Connector Type TH24FW-NH		Connector Type TH40FW-NH	22 V		
Q		ą	$\exists$		
A STATE OF THE STA		THAT	+		
		HS	+	CAMER	
42 44 46 48 50 52 54 56 58 60 62 64		2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	7	SHELD SHELD	
44 40 45 47 40 51 50 55 57 50 51 50		9 11 13 15 17 19 21 23 25 27 29 31 33 35 37	Z9 20	+	
61 45 45 45 5 6 5 6 5 6 5 6 6 6 6 6 6 6 6			30	1	
			t	SIDF C	
Terminal Color		Terminal Color	H		
of Wire		_	H	SIDE	
41 L FRONT CAMERA IMAGE SIGNAL		1 B GND	35 W	Н	
		2 Y BATTERY	36	REAR CAMERA POWER SUPPLY	
43 SHIELD SHIELD		3 G IGNITION	37 SHIELD	SHIELD SHIELD	
Y		4 LG ACC	38	. REAR CAMERA GND	
45 W FRONT CAMERA COMM		5 R ILLUMINATION	39 Y	REAR CAMERA IMAGE SIGNAL	
G FRO		6 V VEHICLE SPEED (8-PULSE)	40 BR	REAR CAMERA IMAGE GND	
BR		0			
L SIDE CAMER.					
SHIELD		GP.			
+		SB			
51 R SIDE CAMERA LH IMAGE SIGNAL		16 L SENSOR SIGNAL 3			
Connector No. B48	Connector No. B51	Connector No. B66	18	1	
N	dillocom N	OF BOWN	19 BR	- 1	
Connector Name   KEAK SQUAWKEK LH	Connector Name WOUTER	Connector Name   WIRE   U WIRE	H		
Connector Type TK02FBR	Connector Type RS06FGY	Connector Type TH40MW-NH	H	1	
Ó	Ó	1	29 Y	1	
F	唐	野	30 P	1	
		תפ	31	1	
		•	32 SHIELD		
10		8 9 10 11 12 13 14 15	33 ^	-	
	(13 5)	22 23 24 25 26 27 28 29 30 31 32 33	34 SB		
	)		S		
			36 B	1	
lal	Terminal Color	Terminal Color	37 G	1	
No. of Wire Signal Name [Specimoauon]		No. of Wire Signal Name [Specification]	38 R	1	
- 5	1 R SOUND SIGNAL WOOFER (-)	7 SHIELD -	F		
2 R -	2 G SOUND SIGNAL WOOFER (+)	- d 8			
	4 L WOOFER AMP, ON SIGNAL	- 1 6			
	5 B GND	10 SHIELD –			
	Α	· -			
		12 BB -			
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		<u>P</u>			
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JCNWM1063GB

< ECU DIAGNOSIS INFORMATION >

# [NAVIGATION (TWIN MONITOR)]

Control of the cont	[With NAVI]	- [With NAVI] - [With entertainment system] - [With entertainment system] - [With entertainment system] - [With entertainment system]			Signal Name [Specification] -		АВ
Control William   Control Wi		B B SHELD SB SB SB C O O O O O O		B231 He BUZZER RK02FBR-D	Color of Wine GR		
BOSE AUDIO WITH NAVIGATION (TWIN MONTO R)			lu				Е
Conceiler Name   Conc		TO WIRE	Signal Name (Specification)	DO AR SOUAWKER RH	Signal Name (Specification		F
Connector files   Connector			Color   Color				G
BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)	<u>[</u>			8 8 8 5	F III		Н
BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)  Connector Name Wite TO Wite  Connector Name Wite TO		m	al Name [Specification]	5 4 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	lal Name [Speeification]		l
BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)	_	RE TO WIRE	igi	16 15	S I I I I I I I I I I I I I I I I I I I		J
Connector Name   NST   NAME	IN MONITOR)	e ue		9 8 17 17 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 18 18 18 18 18 18 18 18 18 18 18 18	Color   Color   No.   13   V     14   SB		К
JCNWM1064GB	E N						L
JCNWM1064GB	TH NAVIGATIO	WRE 5 6 7 8	Signal Name (Specification)	121110	Signal Name (Specification)		M
JCNWM1064GB	NO WI	NSO8MW-		MRE TO 1 THIGEW-1 THIGEW-1 6 15 14			AV
	BOSE AUD	Connector Name Connector Type H.S.			Terminal   Color	IONNAMOCA OF	0
						JCNWM1064GB	Р

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Connector No. 8255 Cornector Name WIRE TO WIRE Connector Type RS08FGY	H.S. (4 3 2 1) (8 7 6 5)	Terminal Color Signal Name [Specification] 3 W	Corrector No. D3 Corrector Name DOOR MIRROR (DRIVER SIDE) Corrector Type TH24MV-NH  H.S.	Terminal   Color   Signal Name [Specification]     No.
× 8 × 8 ×	30 P	+++	Cornector Name   D1	Terminal   Color   Signal Name [Specification]     No. of Wire   P.       14   P.         15   IL         23   SHELD         40   BR         41   L         42   Y         43   R         44   R   R         45   R
IN MONITOR	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Terminal   Color   Signal Name [Specification]   2 HELLD   2 HELLD   2 HELLD   2 HELLD   3 HELLD   4 L L   4 L L   5 HELLD   5 HELLD	Connector No. B259 Connector Name CORNER SENSOR (RL.) Connector Type YDX027EB  TILS  TILS	Terminal   Golor   Signal Name [Specification]
BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)	HS 3 2 1 8 7 6 5 4	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]     C	Connector No. 8256 Connector Name CORNER SENSOR (RR) Connector Type YDX02FB	Terminal   Collor   Signal Name [Specification]

JCNWM1065GB

## [NAVIGATION (TWIN MONITOR)]

Connector No. D34 Connector Name FRONT DOOR SPEAKER RH Connector Type NSIZEBR-CS	Signal Name (Specification)	Connector No. D76 Connector Name REAR DOOR SPEAKER RH Connector Type NS0ZFBR-CS  H.S.	Signal Name [Specification]		A B
Connector No. Connector Name F Connector Type M.S.	Terminal Color No. of Wire 1 2 P P	Connector No. Connector Name F Connector Type P H.S.	Terminal   Color   No.   Of Wire   1   SB     2   V		D
NGER SIDE)	[16] 15 [14] 13 Specification]	17 8 9 10 16 17 18	Specification]		Е
MIRROR (PASSE W-NH 8 7 6 5	21 20 19 18 17 Signal Name (	No. D71  Name WIRE TO WIRE  Type ITK10MW-NS8  1 2 3 4 5 6 7  11 12 13 14 15 16	Signal Name [Specification]		F
Connector No. D33 Connector Name DOOR Connector Type   TH24M	Terminal Color No. of Wire 3 Terminal Color No. of Wire 3 Terminal Color 1	Connector No.	Terminal   Color   No.   13   Vir.   14   SB     14   SB     14   SB     14   SB     15   SB     16   SB     17   SB     17   SB     18   SB   SB     18   SB		G H
	<u>खोग (बां क्यां क्यां)</u>		pecification)		I
ITOR	Signal Name   Specification	D66 REAR DOOR SPEAKER LH NS02FBR-C5  2 1	Signal Name [Specification]		J
WIN MONITOR) Connector Name M Connector Type II  M Signal	Terminal Color No. of Wire 3 3 4 P P P P P P P P P P P P P P P P P	Connector No. Connector Name F Connector Type h	Terminal Color No. 1 SB 1 C SB 2 C C C C C C C C C C C C C C C C C C		K
	offication.]	8 9 10 17 18	offication.]		L
DIO WITH NAVIG, DIA FRONT DOOR SPEAKER LH INSOFRENCE	Signal Name (Specification)	DSI WIRE TO WIRE TIKTIOMW-NSS  3 4 5 6 7 6 7 6 7 13 14 15 16	Signal Name (Specification)		AV
BOSE AUDIO WITH NAVIGATION (T Connector No. D4 Connector Name FRONT DOOR SPEAKER LH CONNECTOR Name RISZEBR-CS	Terminal Color No. of Wire 2 1 P L 1	Connector Name WIRN Connector Type TKII	Color   Color   No.   Color   No.     Color		0
			<u></u>	JCNWM1066GB	Р

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Connec	BOSE AUD	BOSE AUDIO WITH NAVIGATION (TW Connector No. B102 Connector Name WIRE TO WIRE	VIN MONIT Connector No.	<u>ЕП.</u>	D111 REAR CAMERA	Connector No.	E5 IPDM E/R (INTELLIGENT POWER	Connector No.	E65 WRE TO WRE	_
Connec	tor Type	Connector Type TH24FW-NH	Connect	Connector Type T	TH08MW-NH	Connector Type	TH20FW-CS12-M4-1V	Connector Type	RS06FB-PR	_
H.S.		242322212019181716151413	₽ H.S		8 4 3 2 1 8 7 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	H.S.	তি শান বাব ভিন্ত হৈছে জনত ক্ষেত্ৰ জনত জনত কৰিছে । ব   S   7   ব   ভাষাবেশাক জনত ভাষ্ট্ৰ জনত	H.S.	8 2 1 8 5 4 1	
Terminal No. 5 5 6 7 7 7 9 9 9 10	of Wire W	Signal Name (Specification)	Terminal No. 1 1 4 4 5 7 7 8 8	of Wire W W W W W W W W W W W W W W W W W W W	Signal Name [Specification] REAR CAMERA MAGE GND REAR CAMERA COMM REAR CAMERA MAGE SIGNAL REAR CAMERA GND REAR CAMERA POWER SUPPLY	Terminal Color No. of Wire 25 G	Signal Name [Specification]	Terminal   Color   No.   0 Wire   3   G   5   Y   6   L	Signal Name [Specification]	
Connec	Connector No.	E66	Connector No.		E104	Connector No.	E106	Connector No.	E107	
Connec		WIRE TO WIRE	Connect		WIRE TO WIRE	Connector Name	WIRE TO WIRE	Connector Name	PARKING BRAKE SWITCH	
Connec	Connector Type	RS08FB-PR	Connect	Connector Type N	NS12MW-CS	Connector Type	TH80FW-CS16-TM4	Connector Type	TB01FW	
是 H.S.		8 7 6 5 8 7 6 5	₽ H		1 2 3 <b>1 4</b> 5 6 7 8 9 10 11 12	₽ H.S.		H.S.	<b>(</b> -	
Terminal No.	al Color of Wire	Signal Name [Specification]	Terminal No.	I Color of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	_
2	_	-	-	*	1	28 G	1	1 LG	1	_
ღ ₹	> 0		2	BR -	1	29 LG	1			
4 (0	¥ #		η 1	<u>-</u> - >	1 1	8				
, _	ź×	-	2	- ~	ı					
۵	SHELD	1	_	CHIE	1					

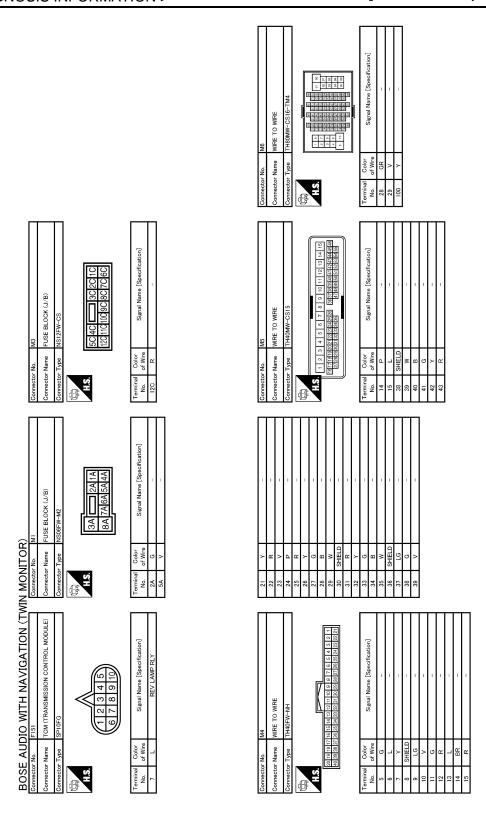
JCNWM1067GB

< ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (TWIN MONITOR)]

Connector No. E153 Connector Name WIRE TO WIRE Connector Type RS08MB  H.S.	of Wire Signal Name [Specification]  B	Connector No. F103  Connector Name WHE TO WHE  Connector Type ITX3FW-NS10  H.S.  Extended the State of	of Wire Signal Name [Specification]  R		В
Connector No. Connector Na. Connector Typ.	Terminal No. No. 9 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6	Connector No.	Terminal No. 31		D
E152 CORNER SENSOR (FR) YDX0ZFB	Signal Name [Specification]	F51  A.7 ASSEMBLY  RK10FG-DGY  5 4 3 2 7  10 9 8 7 6	Signal Name [Specification]		E
Connector No. E152 Connector Name CORNER Connector Type YDX02FB	Terminal Color No. of Wire 2 B B	Connector No.  Connector Name A T A Connector Type RKI06	Terminal Color No. of Wire 7 R		G
					Н
FEISI WIRE TO WIRE RSJONAG-PR	Signal Name [Specification]	E155 FRONT CAMERA. RH06FB  (123456	Signal Name (Specification) FRONT CAMERA POWER SUPPLY FRONT CAMERA INAGE GND FRONT CAMERA INAGE GND FRONT CAMERA COMM FRONT CAMERA COMM		J
MIN MONITOR) Connector No. Connector Name Connector Type H.S.	Color   No.   Color   No.   Color   No.   Color   Co	Connector No. E Connector Type R LLS.	Color   Color   No.   Color		K
					L
NAVIGATI:	Signal Name [Specification]	#@ #@ #@	Signal Name (Specification)		M
DIO WITH E123 WIRE TO WIRE TH24MW-NH 3 4 5 6		CORNER SENSOR (FL.)  YDX02FB	Ш		AV
BOSE AU Connector Name Connector Type H.S. 1121	Terminal   Color	Connector No. Connector Name Connector Type	Color   Colo		0
				JCNWM1068GB	Р

Revision: 2009 March AV-847 2009 FX35/FX50



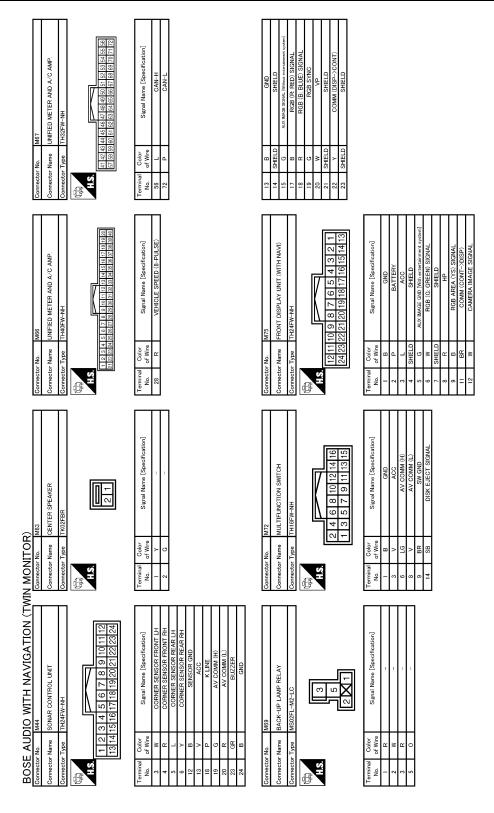
JCNWM1069GB

< ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (TWIN MONITOR)]

Connector No. M13 Connector Name FRONT SOUAWKER LH Connector Type TKOZFBR  TROZFBR  Terminal Color No. of Wire  I L  Z M  L L  Z W	Connector No. M37 Connector Name STEERING ANGLE SENSOR Connector Type THOSPN-NH  TAS  7 2 3 8 1 4 5	Color   Signal Name (Specification)   Color   Signal Name (Specification)   Color		В
Connecton Connecton Terminal No. 1 2	Conne	Terminal No. 3 3 4 4 7 7 7 7 7 7 8 8		D
Specification]	M36 COMBINATION SWTCH (SPIRAL CABLE) TK08FGY-1V  24 25 26 31 32 33 34	pecification]		Е
Name B 17   1   1   1   1   1   1   1   1   1	1V 1V 25 26 32 33 34	Signal Name (Specification)		F
MINE TO 10 9 8 12 12 12 12 12 12 12 12 12 12 12 12 12				G
Prector No. of W.	Connector No. Connector Name Connector Type	Color   Colo		
	Com			Н
	5 6 7	Signal Name (Specification)		I
	MRE TO WIRE NISTBARY-CS  2 3 4 4 9 10 11 12 13	Signal Nam		J
S		Color of Wire SB SB SHIELD G C C C C C C C C C C C C C C C C C C		K
WIN MONITOR)	Connector No. Connector Name Connector Type	Terminal No. No. 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
				L
AUDIO WITH NAVIGATION (T  lone WIRE TO WIRE  THEOMY-CS16-TM4  THEOMY-CS16-	NANECTOR 13 14 15 16 5 6 7 8	Signul Name (Specification)		M
WIRE TO WIRE THE SIGNAL AND A SIGNAL NAME (Signal Name (S	M24 DATA LINK CONNECTOR BD16FW 9 10 11 12 13 14 11	r gi		AV
Connector Name   Value   Connector Name   Value   Connector Name   Value   Connector Type   Terminal   Color   Value   Color   Value   Color	r No.	of Wire of Wire P P P P		
Aconnector IX Connector IX Conn	Connecto Connecto Connecto	Terminal No. 6 7 7 14	100000000000000000000000000000000000000	0
			JCNWM1070GB	Р

Revision: 2009 March AV-849 2009 FX35/FX50

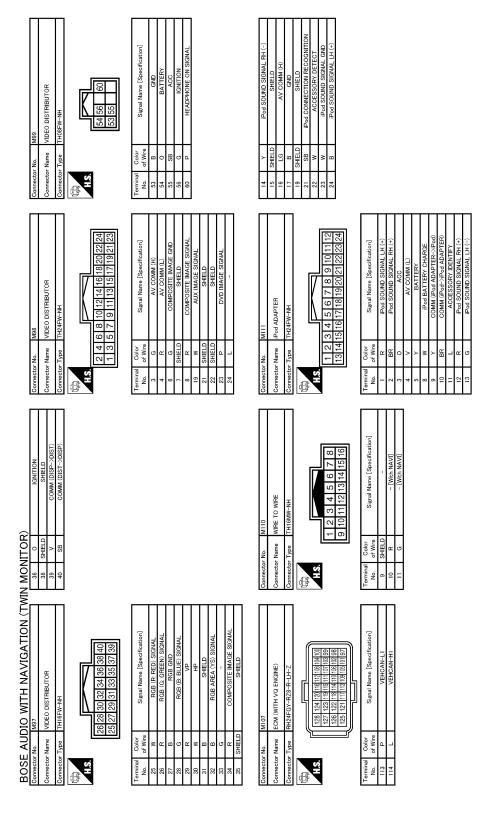


JCNWM1071GB

# [NAVIGATION (TWIN MONITOR)]

VEHICLE SPEED (8-PULSE) CONTROL SIGNAL 1 CONTROL SIGNAL 2 CONTROL SIGNAL 2 CONTROL SIGNAL 2 AV COMM (1) AV COMM (1) AV COMM (1) AV COMM (1) COMM (1) COMM (1) AV COMM (1) COMM (1) AV COMM (1) C	АВ
CONTINUE   B B   B   B   B   B   B   B   B   B	С
38 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	D
Signal Name (Specification)  BATTERY  ACC  MICROPHONE VCC  MICROPHONE SIGNAL  IGNITION  BATTERY  ACC  MICROPHONE SIGNAL  IGNITION  BATTERY  ACC  MICROPHONE SIGNAL  IGNITION  FEVERSE  REVERSE  Signal Name (Specification)  Signal Name (Specification)	Е
AV CONTROL UNIT (WITH NAVI)  TH40FW-NH  Signal Name (Specification)  Signal Name (Specification)  Signal Name (Specification)  BATTERY  ACO  MICROPHONE COD  MICROPHONE SIGNAL  MICROPHONE SIGNAL  PARKING BEAKE  REVERSE  REVERSE  REVERSE  REVERSE  FREED  DISS. ELECT SIGNAL  PARKING BEAKE  REVERSE  REVERSE  REVERSE  REVERSE  Signal Name (Specification)  Signal Name (Specification)  Ped 50000 590AL Let (1) fine mentalement system  Ped 50000 590AL Let (2) fine mentalement system  Ped 50000 590AL Let (2) fine mentalement system  Red 50000 590AL Let (2) fine mentalement system  Red 50000 590AL Let (2) fine mentalement system  Signal Let (2) fine mentalement system  Red 50000 590AL Let (2) fine mentalement system  Signal Name (Specification)	F
	G
Connector Na   Conn	Н
REAR RH (+) REAR RH (-) W GIND SW B FRY	I
SOUND SIGNAL REAR RH (+) SOUND SIGNAL REAR RH (+) STRE SW B BATTERY SHELD	J
WIN MONITOR)    13   8   8   14   4   4   4   4   4   4   4   4	К
5	L
AUDIO WITH NAVIGATION     Aum	М
M800   MTH N.     M800   AV CONTROL UNIT    M800   AMP   AMP     1	AV
Connector Name   Conn	0
JCNWM1072G	В

Revision: 2009 March AV-851 2009 FX35/FX50

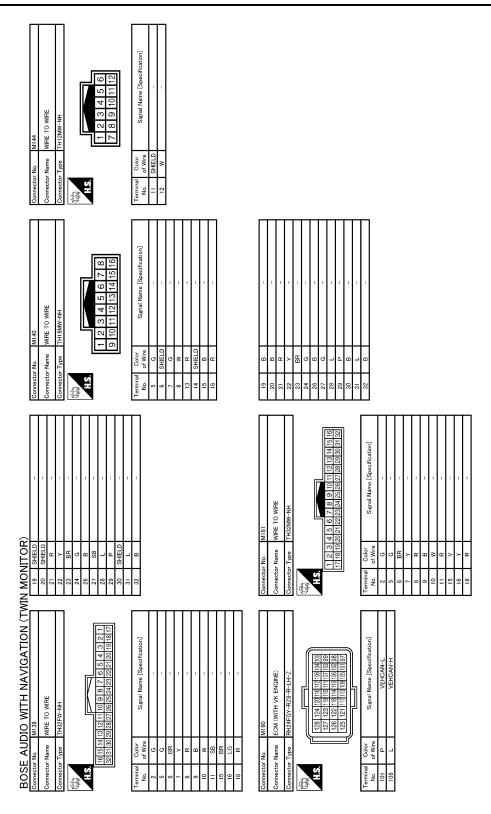


JCNWM1073GB

# [NAVIGATION (TWIN MONITOR)]

		Miles   Mile		A B C
Connector No. M116  Connector Name WIRE TO WIRE  Connector Type TX38MW-NS10  LS	Terminal Color Signal Name [Specification] 31 W Signal Name [Specification]	Miss   Connector No.   Miss   Connector Name   BCM (BODY CONTROL MODULE)		E F G
(TWIN MONITOR)  Connector No. MI114  Connector Name FRONT SOUAWKER RH  Connector Type TK02FBR  TK02FBR	Terminal Color  No. Glor  1 V V  2 LG -	20 GR		J K
BOSE AUDIO WITH NAVIGATION (TWI Connector No. M112 Connector Name Pod SIDE Connector Type IP18FGY  M.S.  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Terminal   Color   Signal Name [Specification]   No.   1   8   Prod SOUND SiGNAL LH (+)   1   8   Prod SOUND SiGNAL LH (+)   1   8   Prod SOUND SiGNAL LH (+)   1   9   S   Prod COLMM (Pera-)-Prod ADAPITER)   1   1   1   1   1   1   1   1   1	Connector No   Mi17	JCNWM1074GB	M AV
				Р

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JCNWM1075GB

# [NAVIGATION (TWIN MONITOR)]

No.   M303	No. M374 Name WIRE TO WIRE Type GTIGC-1S-HU  Color Signal Name [Specification]  of Wire  Signal Name [Specification]		A B
Connector No. Connector Name Connector Type No. of Wife 14 W 15 L 17 BR	Connector No. Connector Type Connector Type ILS. ILS.  Terminal Color No. of With		D
ecification] INAL RH (+) ONAL CND SMAL LH (+) SIGNAL.	H NAVI)  eoffication]  D  D		Е
AUXLILARY INPUT JACKS A08FW  Sigrul Name [Specification] AUX SOUND SIGNAL RH (+) AUX SOUND SIGNAL HH AUX SOUND SIGNAL HH SHELD SHELD	AV CONTROL UNIT (WITH NAVI) GT5-1S-HU GT6-1S-HU Signal Name [Specification] GPS ANTENNA SHIELD SHIELD		F
Name AUXILL Type A08FW  O Glor  W W W W SHIELD	Name AV CONT.  Type GIT-15-1  Color  SHIELD		G
Connecto Con	Connector Connector Connector Into		Н
SHIELD HEADPHONE SOLUBISIONAL SHOWL LH (+) SOUND SHOWL SHOWL HH (+) SOUND SHOWL HH (+) SO	MATZ AV CONTROL UNIT (WITH NAVI) FAKFA JACK  [109] Signal Name [Specification] SAFILLITE ANTENNA		J
(A)  HEADPH HEADPH HEADPH HEADPH HEADPH HEADPH	AV CONT FAKRA J		0
WIN MONITOR)  16 B B B B B B B B B B B B B B B B B B B	Connector Name Connector Type  Connector Type  H.S.  H.S.  Inc.  Terminal Codor  No. of Wire  108  108		K
			L
MAVIGAT  The state of the state	AV CONTROL UNIT (WITH NAVI) GT13SH-2/1S-HU  GT13SH-2/1S-HU  GT13SH-2/1S-HU  Signal Name [Specification]  Signal Name [Specification]  ANTENNA AMP. ON SIGNAL	_	M
AUDIO WITH N    Inne	AV CON		AV
Connector Name   Connector Name   Connector Type   Conn	Connector Name Connector Type Terminal Color No of Wire 105 - 107 - 107	_	0
		JCNWM1076GB	P

Commettor No.         M383         Commettor No.         M585           Connector Name         ANTENNA BASE         Connector Name         WIRE TO WIRE	Connector Type   GT16C-IPP-HU   Connector Type   GT13SCN-2/IPP-HU	Color   Signal Name   Specification   Color   Signal Name   Specification   No. of Wire   Signal Name   Specification   Spec	Connector No. M388  Connector No. M389  Connector Name WINDOW ANTENNA (SUB)  Connector Type JASO PLUG  Connector Type POITB-A  Connector Type POITB-A	Color   Signal Name [Specification]   Terminal   Color   Signal Name [Specification]   No. of Wire   Signal
WIN MONITOR)  Connector No. M377  Connector Name WIRE TO WIRE	Connector Type GT16C-iPP-HU  H.S.	Terminal Color Signal Name [Specification]	Connector No. M387 Connector Name WIRE TO WIRE Connector Type JASO JACK  H.S.	Terminal Color Signal Name [Specification]
BOSE AUDIO WITH NAVIGATION (TW Connector No. M375 Connector Name WIRE TO WIRE	Connector Type GT13SC-2/1S-HU  H.S.	Terminal Color   Signal Name [Specification]	Connector No. M386 Connector Name ANTENNA BASE Connector Type GTI3SSN-I/IPD-HU  H.S.	Terminal Color Signal Name [Specification] No. of Wire ATTERMA AND ON STORM

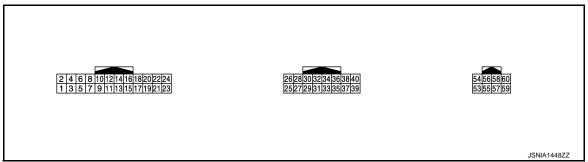
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# [NAVIGATION (TWIN MONITOR)]

	[roj			А
4	Signal Name (Specification) MICROPHONE SIGNAL MICROPHONE GND MICROPHONE VCC			В
Connector No. R17 Connector Name MICROPHONE Connector Type TXG4FW  M.S. H.S.	Octor Signature			С
Connector No. Connector Typ	Cerminal			D
10 11 12 22 23 24	offication]			Е
THZ4MM-NH  THZ4MM-NH  3 4 5 6 7 8 9  15 16 17 18 19 20 21	Signal Name (Specification)			F
e e e	al Color of Wire			G
Connector No. Connector Na. H.S. H.S.	Terminal No.			Н
100 100 100 100 100 100 100 100 100 100	Signal Name [Specification]			I
3 12 7	Signal Name			J
Connector Name   WIFE TO WIFE CONNECTOR Name   WIFE TO WIFE CONNECTOR Type   THISFW-NH   WAS   WAS	Terminal Color No. of Wire 9 SHIELD 10 R 11 G			K
M				L
NAVIGATIC	Signal Name [Specification]			M
DIO WITH P2 WIRE TO WIRE TH24FW-NH   10 9 8 7				AV
BOSE AUDIO WIT  Connector Name WIRE TO WIR  Connector Type INZ4FV-NH  H.S.  12 11 10 9 8 1  Z42 22 21 20 11	Terminal Color No. of Wire 8 SHIELD 9 R 10 G			0
			JCNWM1078GB	Р

Reference Value

### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	minal color)	Description		Condition		Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
3 (G)	_	AV communication signal (H)	Input/ Output	_	_	_
4 (R)	_	AV communication signal (L)	Input/ Output	_	_	_
7	_	Shield	_		_	_
8 (R)	6 (G)	Composite image signal for front display unit	Output	Ignition switch ON	When AUX or DVD image is displayed on front display unit.	(V) 0. 4 -0. 4 -0. 4 SKIB2251J
19 (W)	21	AUX image signal	Input	Ignition switch ON	When AUX image is displayed.	(V) 0. 4 0 -0. 4 •••40μs SKIB2251J
21	_	Shield	_	_	_	_
22	_	Shield	_	_	_	_
23 (P)	22	DVD image signal	Input	Ignition switch ON	When DVD image is displayed.	(V) 0. 4 0 -0. 4 -0. 4 -0. 8 SKIB2251J
24 <sup>*</sup> (L)	_	_	_	_	_	_

### < ECU DIAGNOSIS INFORMATION >

# [NAVIGATION (TWIN MONITOR)]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
25 (W)	Ground	RGB signal (R: red) for rear display unit	Output	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 0.8 0.4 0 → 40μs JSNIA1029ZZ
26 (R)	Ground	RGB signal (G: green) for rear display unit	Output	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 0.8 0.4 0 → 40µs JSNIA1030ZZ
27 (B)	Ground	RGB ground for rear display unit	_	Ignition switch ON	_	0 V
28 (G)	Ground	RGB signal (B: blue) for rear display unit	Output	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 0.8 0.4 0  ••40μs JSNIA1031ZZ
29 (R)	Ground	Vertical synchronizing (VP) signal for rear display unit	Input	Ignition switch ON	_	(V) 4 0 → 4ms SKIB3598E
30 (W)	Ground	Horizontal synchronizing (HP) signal for rear display	Input	Ignition switch ON	_	(V) 4 0 ++20µs SKIB0825E
31 (B)	_	Shield	_	_	_	_

Ρ

### [NAVIGATION (TWIN MONITOR)]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
					When AUX or DVD image is displayed on rear display unit.	0 V
32 (B)	Ground	RGB area (YS) signal for rear display	Output	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 6 4 2 0 → + 200 µ s PKIB4948J
33 <sup>*</sup> (G)	_	_	_	_	_	_
34 (R)	Ground	Composite image signal for rear display unit	Output	Ignition switch ON	When AUX or DVD image is displayed on rear display unit.	(V) 0. 4 0 -0. 4 -0. 4 SKIB2251J
35	_	Shield	_	_	_	_
36 (O)	Ground	Ignition signal	Output	Ignition switch ON Ignition switch ACC	_	0 V 5.0 V
38	_	Shield		ACC		
39 (V)	Ground	Communication signal (DISP→DIST)	Input	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 6 4 2 0 +-1ms
40 (SB)	Ground	Communication signal (DIST→DISP)	Output	Ignition switch ON	Rear seat remote controller operation when AUX or DVD image is displayed on rear display unit.	(V) 6 4 2 0 •••1ms
53 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
54 (O)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage

### < ECU DIAGNOSIS INFORMATION >

### [NAVIGATION (TWIN MONITOR)]

	minal e color)	Description		Condition		Condition		Reference value
+	_	Signal name	Input/ Output	(Approx.)				
55 (SB)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage		
56 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage		
60				Ignition	Headphone mode is ON.	4.0 V		
(P)	Ground	Headphone ON signal	Output	switch ON	Headphone mode is OFF.	0 V		

#### NOTE:

Wiring Diagram - BOSE AUDIO WITH NAVIGATION (TWIN MONITOR) - INFOID-00000003826928

#### NOTE:

G

Α

В

D

Е

F

Н

J

K

L

M

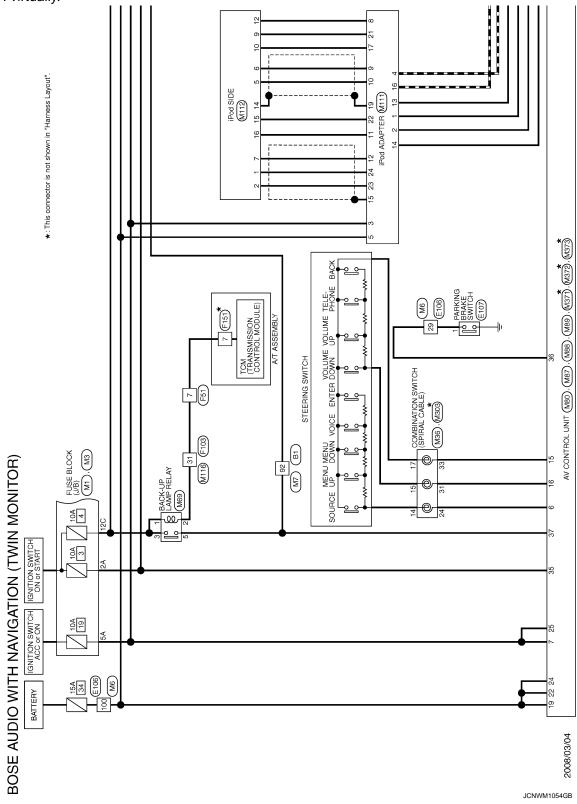
#### ΑV

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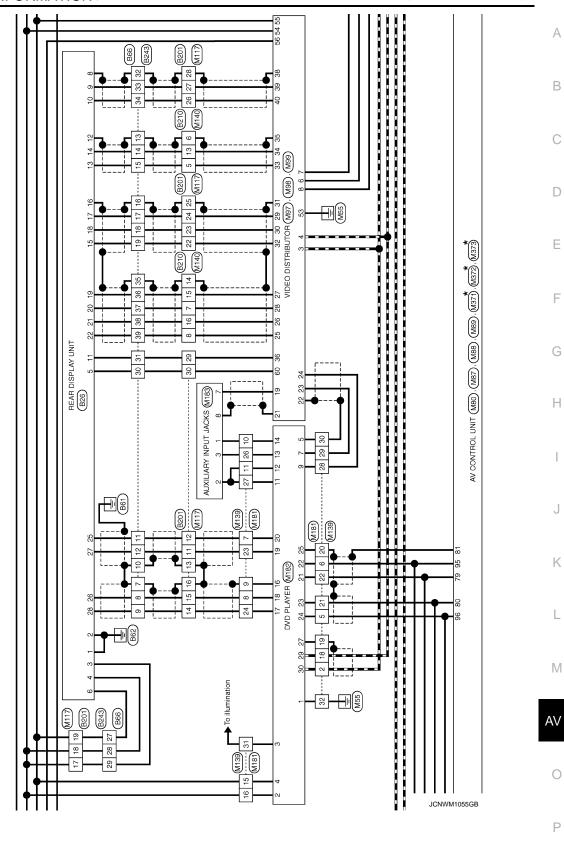
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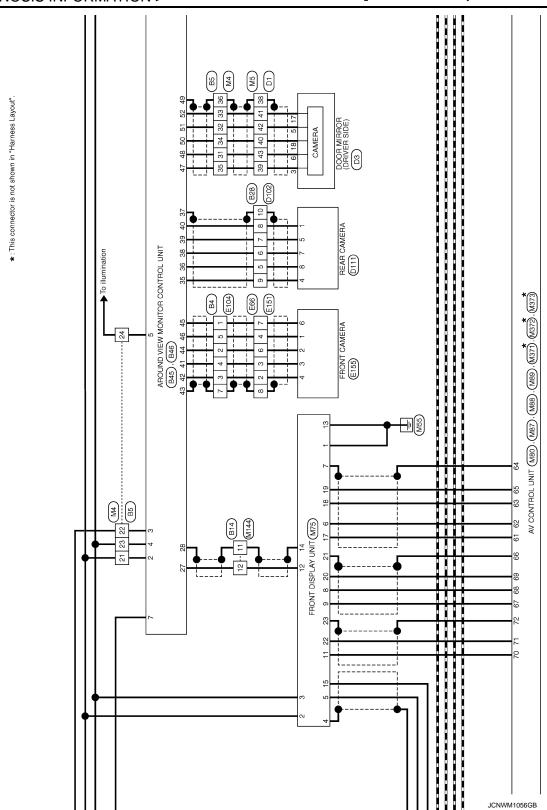
<sup>\*:</sup> This harness is not used.

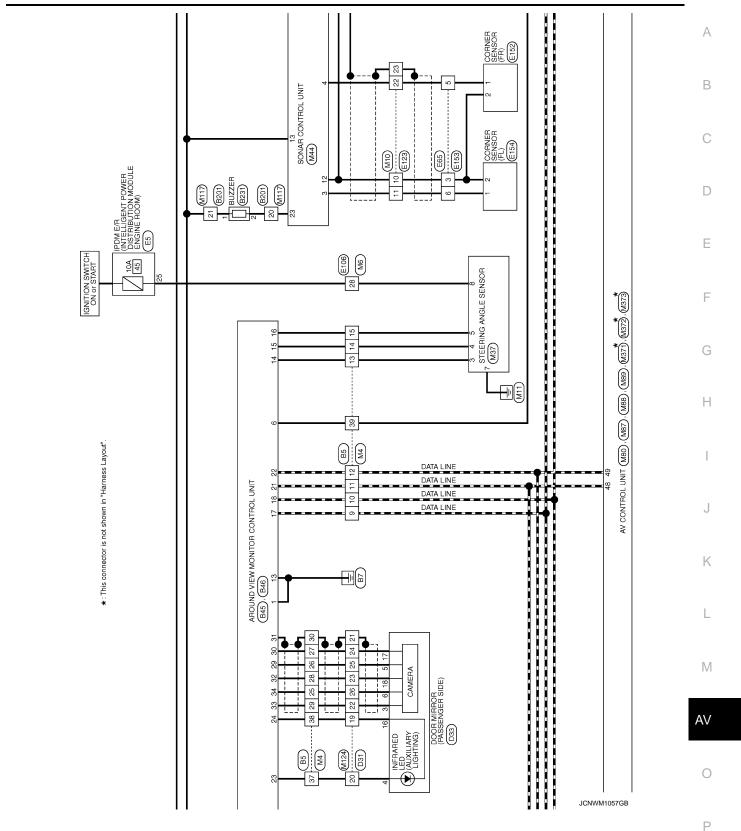
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

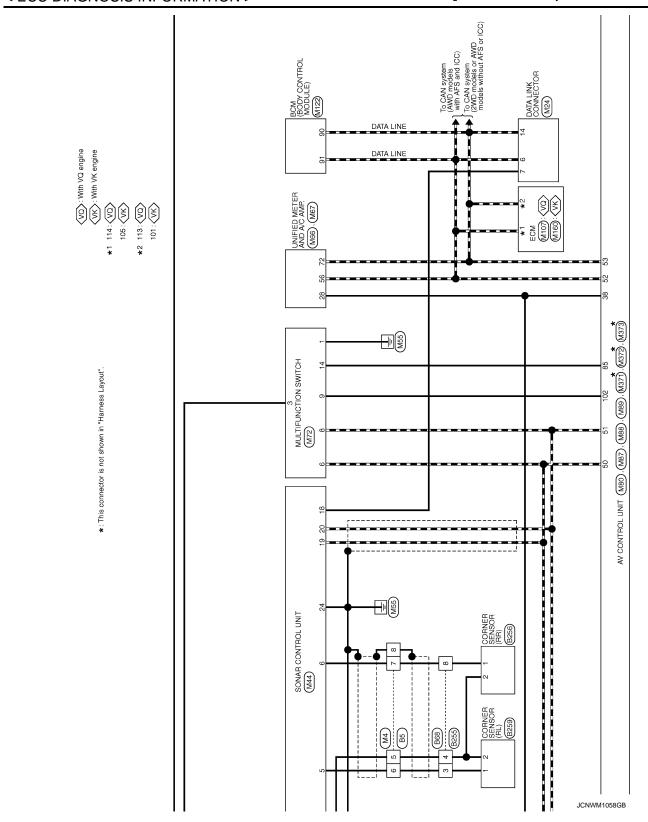


\*: This connector is not shown in "Harness Layout".

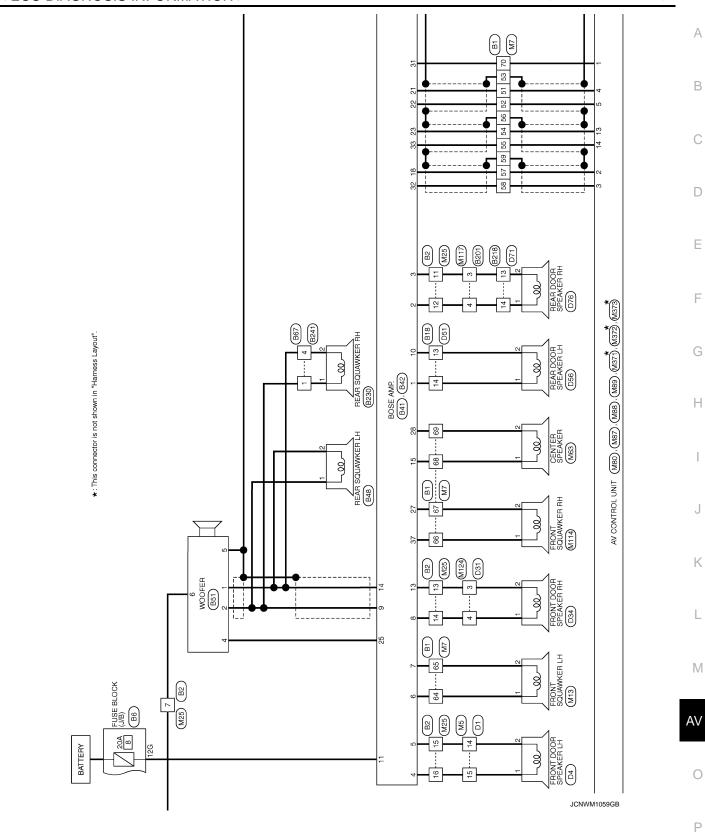




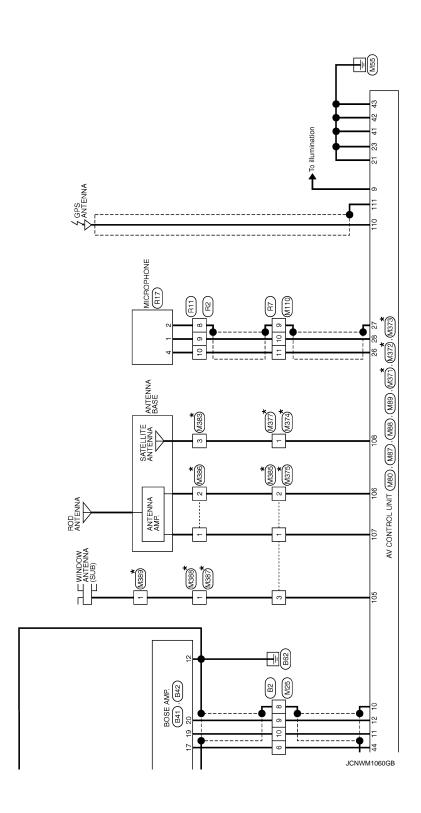




J



\*: This connector is not shown in "Harness Layout".

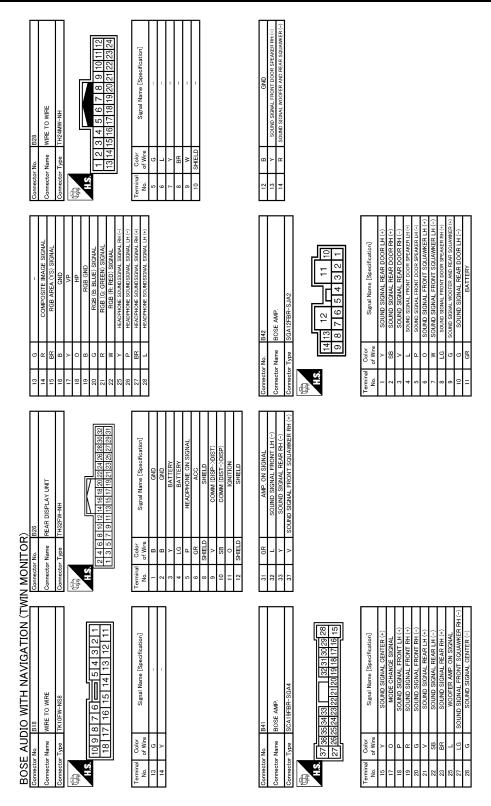


< ECU DIAGNOSIS INFORMATION >

# [NAVIGATION (TWIN MONITOR)]

Cornector No.   E4   Cornector Name   WIRE TO WIRE   Cornector Name   NSIZFW-CS   Signal Name   Specification	Connector Name   E14	A B C
Connector No.   E2   Connector Name   WIRE TO WIRE   Connector Type   NSI 16FW-CS   Connector Type   Conn	Commettor No.   B6	E F G
WIN MONITOR)    66	21 Y 22 G 24 B C 25 B C 26 B C 26 B C 26 B C 27 B C	J K
Connector No.   BI   Connector No.   BI   Connector No.   BI   Connector Name   WIRE TO WIRE	Connector No.   B5	L  M  AV  O  JCNWM1061GB
		Р

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JCNWM1062GB

< ECU DIAGNOSIS INFORMATION >

# [NAVIGATION (TWIN MONITOR)]

(H) (L) (L) (L) (L) (L) (L) (L) (L) (L) (L	А
AV COMM (H) AV COMM (L) AV COMM (L) AV COMM (L) LED (L) LED (L) CAMERA IMAGE SIGNAL SIDE CAMERA RH IMAGE SIGNAL SIDE CAMERA RH IMAGE SIGNAL SIDE CAMERA RH GND SIDE CAMERA RH GND SIDE CAMERA RH COMM SIDE CAMERA RH COMM REAR CAMERA RH COMM REAR CAMERA RH GND REAR CAMERA RH COMM REAR CAMERA RH COMM REAR CAMERA RH GND REAR CAMERA IMAGE SIGNAL	В
17 W W BR W BR W C C C C C C C C C C C C C C C C C C	D
CONTROL UNIT   CONTROL   CONTROL UNIT   CONTROL   CON	Е
Color   Colo	F
Connector No.   E46	G H
H MAGE GND  WOOFER (-) WOOFER (-) WOOFER (-) ON SIGNAL ERY	I
SIDE CAMERA LH IMAGE GND SIDE CAMERA LH IMAGE GND SIGNAL MODER (-) SIGNAL WOOFER (-) SOUND SIGNAL WOOFER (-)	J
MIN MONITOR   S2   Y   Y   S2   Y   Y   S2   Y   Y   S2   S3   S4   S4   S4   S4   S4   S4   S4	К
GATION (TW CONTROL UNIT  CONTROL UNIT  STORING  BAGE SIGNAL  MAGE SIGNAL  HI COMM  WER SUPPLY  WER SUPPLY  OF COMM  WER SUPPLY  OF COMM  WER SUPPLY  OF COMM  WAGE SIGNAL  MAGE SIGNAL	L
BOSE AUDIO WITH NAVIGATION (Tabenetic No.   B45	M
Connector Name   B45	0
	NWM1063GB

Revision: 2009 March AV-871 2009 FX35/FX50

BOSE AUDIO WITH NAVIGATION (TV	WIN MONITOR)	Connector No 8201	20 CB - Math MAVI	_
	Т	Т	<u> </u>	_
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	- [With	_
Connector Type NS08MW-CS	Connector Type RS08MGY	Connector Type TH80FW-CS16-TM4	*	_
			۳	_
			SHIELD	_
		ď	SB	_
1 2		97 92 82 73 83 84 84 84 84 84 84 84 84 84 84 84 84 84	27 V –	
4 5 6 7 8	ų (	n 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	SHIELD	_
ᆌ	1/9 c)	82 62 63 68 68 68 68 68 68 68 68 68 68 68 68 68	4	_
			30 P -	_
Terminal Color Signal Name [Specification] No of Wire 1 G	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification]	Terminal Color Signal Name [Specification] No of Wire 3 v		
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		18 GR		
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Connector No. B210	Connector No. B218	Connector No. B230	Connector No. B231	_
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name REAR SQUAWKER RH	Connector Name BUZZER	
Connector Type TH16FW-NH	Connector Type TK10FW-NS8	Connector Type TK02FBR	Connector Type RK02FBR-DGY	_
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8 7 6 5 4 3 2 1 16 15 14 13 12 11 10 9	17 16 15 14 13 12	21	7 -	
Terminal Color Signal Name [Specification]	Terminal Golor Signal Name [Specification]	Terminal Golor Signal Name [Specification]	Terminal Color Signal Name [Specification]	_
+	t	t		_
ģ	SB	2 R –	2 GR –	_
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14 SHFID -				
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# [NAVIGATION (TWIN MONITOR)]

Connector No.   B255	Connector No. D3  Connector Name DOOR MIRROR (DRIVER SIDE)  Connector Type Tht24MW-NH  L2 [11] 10 9 8 7 6 5 4 3 2 1  [24 23 22 21 20 19 18 17 16 15 14 13	Terminal Color No. of Wire 3 W - 5 Y - 6 R R - 17 L - 18 BR - 18 BR -		A B C
18 W	Connector Nune WIRE TO WIRE  Connector Type TH40FW-CS15  WAS 16 14 13 12 11 10 9 8 7 6 5 4 3 2 1  MANUAL RESIDENCE OF THE TO THE TO THE	Terminal Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   C		E F G
MIN MONITOR	Connector No. 6259 Connector Name CORNER SENSOR (RL) Connector Type YDX02FB  LAS	Terminal   Color   Signal Name [Specification]   O   V   V   Color     V   V   Color     Color   Col		J K
BOSE AUDIO WITH NAVIGATION (TW Connector No. B241 Connector Name WIRE TO WIRE Connector Type NS08FW-CS  ALS  Terminal Color No. of Wire  1	Connector No. 8256 Connector Name CORNER SENSOR (RR) Connector Type YDX02FB  M.S.	Terminal Color No. of Wire Signal Name [Specification]	JCNWM1065GB	M AV

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BOSE AUDIO WITH NAVIGATION (TM Connector No. D4 FRONT DOOR SPEAKER LH	WIN MONITOR)  Commetor No.   D31  Commetor Name   WIRE TO WIRE	Connector No. D33 Connector Name DOOR MIRROR (PASSENGER SIDE)	Connector No. D34 Connector Name FRONT DOOR SPEAKER RH
	$\neg$	ector Type	$\neg$
	H.S. [15] 14   13   12   11   10   9   8   7   6   5   4   3   2   1    Legislate depth in consisting to the consistency of the	H.S. 1211109 8 7 6 5 4 3 2 1 242322212019181716151413	HS.
Signal Name [Specification]	Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   No. o	Terminal Color No. of Wire Signal Mane [Specification] 1 L L 2 P
010	Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NS02FBR-CS H.S.	Connector No. D71  Connector Name WIRE TO WIRE  Connector Type TK10MW-NS8  H.S. 1 2 3 4 5 6 7 8 9 10  11 1 2 3 4 5 6 7 8 9 10	Connector No. 076 Connector Name REAR DOOR SPEAKER RH Connector Type NS02FBR-CS
Signal Name [Specification]	Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1   SB   2   V   -	Terminal   Color   Signal Name   Specification   1   1   2   2   2   2   2   2   2   2	Terminal Color   Signal Name [Specification]   1   S   S   S   S   S   S   S   S   S

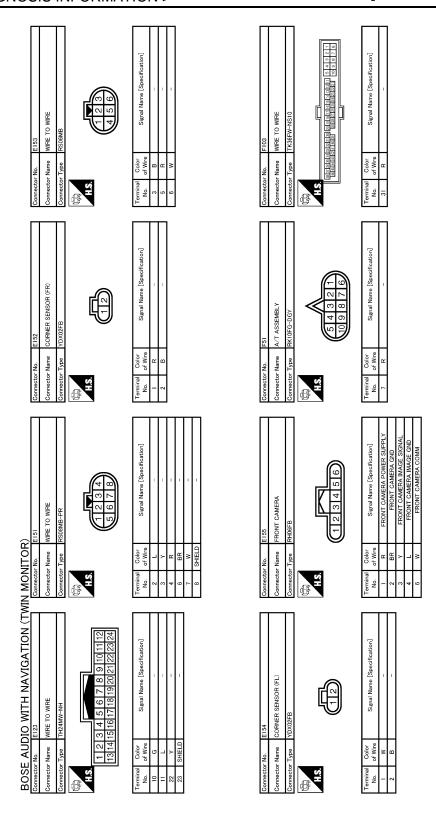
JCNWM1066GB

< ECU DIAGNOSIS INFORMATION >

# [NAVIGATION (TWIN MONITOR)]

	tien)		tion]		А
RE 1	Signal Name [Specification]	PARKING BRAKE SWITCH TBOILW	Signal Name [Specification]		В
lone WIRE TO WIRE  YPP RISUBEB-PR	O O or O		Odlor of Wire LG		С
Connector No. Connector Name Connector Type H.S.	Terminal No. 10 5 5 5 5 6 6 6 6 6 7 10 10 10 10 10 10 10 10 10 10 10 10 10	Connector No. Connector Name Connector Type H.S.	Terminal No.		D
POWER POWER POMER	boification]		ooffication]		Е
PDM E-K (WITELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) PDM E-K (WITELLIGENT POWER THEORY-CS12-M4-1V    THZOFW-CS12-M4-1V	Signal Name [Specification]	E106 WRE TO WIFE TH80FW-CS16-TM4	Signal Name [Specification]		F
90 e 4 10 11 10 11 10 11 11 11 11 11 11 11 11	al Color of Wire	9 p	al Color of Wire C G C Y		G
Connector Na	Terminal No. 25	Connector No. Connector Typ	Terminal No. 28 28 29 29 29 29 29 29 29 29 29 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20		Н
	Signal Name (Specification) REAR CAMERA INAGE GND REAR CAMERA MAGE SIGNAL REAR CAMERA GNU REAR CAMERA GNU REAR CAMERA POWER SUPPLY	4 E E I I I E E I I I E E I I E E I E I	Signal Name [Specification]		I
PEAR CAMERA THOSIANY-NH  4 3 2 8 7 6	Signal Namera Rear CaMER	E104 WRE TO WIRE NST2MW-CS  1 2 3 • • • • • • • • • • • • • • • • • •	Signal Nam		J
WIN MONITOR) Connector Name RR Connector Type TT	Color   Colo	onnector No.	Color   Color   No. of Wire   Of W		K
					L
BOSE AUDIO WITH NAVIGATION (Tonnector No.   1012   102   102   103   1	Signal Name [Specification]		Signal Name [Specification]		M
AUDIO WITH  Name WIRE TO WIRE  Type THZ4FW-NH  12   11   10   9   8   7    24   23   22   22   12   19   19		WIRE TO WIRE RSOBFB-PR			AV
BOSE AU Connector No. Connector Type Connector Type 12 12 12 12 12 12 12 12 12 12 12 12 12 1	Color   No.   Color   No.   Color   No.   Color   No.   Color   Colo	Connector No. Connector Name Connector Type H.S.	No. of Wire   No. of		0
				JCNWM1067GB	Р
					1

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WIRE TO WIRE TH80MW-CS16-TM4  TH80MW-CS16-TM4  Signal Name (Specification)	3
Connector No. Connector Name Connector Type Connect	)
Pecification]	Ξ
No.   M3	=
Connector No.   M3   Connector No.   M3   Connector No.   M3   Connector Type   No.   Connector No.   M5   Connector No.   C	9
Commetton  Commetton  No. 114  114  115  114  41  41  42  43  43  43  43  43  43  44  43  44  43  44  43  44	-
Signal Name [Specification]	
1	J
MIN MONITORP   Connector Name   FU   Connector Type   NS   Connec	<
	-
Connector Name   Color   Connector Name   Color   Co	/I
Color   Colo	/
Connector Name   Connector Name   Connector Name   Connector Type   Connector Name   Conn	)
JCNWM1069GB	)

Connector No. MI3 Connector Name FRONT SQUAWKER LH Connector Type TKWPFBR  H.S.	Terminal   Color   Signal Nane [Specification]   No. of Wire   L   L   L   L   L   L   L   L   L	Connector No. M37  Connector Name STEERING ANGLE SENSOR  Connector Type THOSFW-NH  H.S. T 2 3 8	Color   Signal Name [Specification]     No. of Wire   Signal Name [Specification]     3
Connector Name WIRE TO WIRE  Connector Type   TH24FW-NH  WIRE 10 WIRE  TH24FW-NH  WIRE 10 WIRE 10 WIRE  TH24FW-NH  WIRE 10 WIRE  WIRE 10 WIRE 10 WIRE  WIRE 10 WIRE 10 WIRE  WIRE 10 WIRE 10 WIRE 10 WIRE  WIRE 10 WIRE	Terminal   Color   Signal Name [Specification]   No. of Wire   B	Connector No. M36 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TXGBFGY-IV  132 23 34	Terminal   Color   Signal Name [Specification]
WIN MONITOR)  67 V 67 LG 67 Y 68 Y 68 G 70 V 70 V 70 V		Connector No. M25 Connector Name WIFE TO WIRE  Connector Type NS104M*-C5  H.S. 1 2 3	Terminal Color   No. of Wire   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   No. of
BOSE AUDIO WITH NAVIGATION (TW Connector Name WIRE TO WIRE Connector Type THBOMW-CSIB-TM4  WAS TO WITH THBOMW-CSIB-TM4  WITH THBOMW-CSIB-TM4  WAS TO WITH THBOMW-CSIB-TM4	Terminal Coolor No. of Wire Signal Name [Specification] 51	Connector No. M24 Connector Name DATA LINK CONNECTOR Connector Type BD16FW  WAS TO	Terminal   Coolor   Signal Name [Specification]   No. of Wire   Signal Name [Specification]

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# [NAVIGATION (TWIN MONITOR)]

MAST THREE METER AND A/C AMP. THREE AND A/C AMP. THREE AND A/C AMP. THREE AND A/C AMP. THREE AND A/C AMP.	Signal Name [Specification] CAN-H CAN-L	GND SHELD  SHELD  KIMCE SHOAL (Whose, extraction system)  RGB (R. RED) SIGNAL  RGB (B. BLUE) SIGNAL  FROB SYNC  VP  VP  SHELD  COMM (DISP->CONT)  SHELD		АВ
Connector No. M67 Connector Type IH32PW-NH  M.S. L.	Terminal Color Sign Sign S 72 P	13 B SHELD ANY INDICATE OF THE SHELD		C D
M66 TH40FW-NH TH40FW-NH	Signal Name [Specification] VEHICLE SPEED (8-PULSE)	FRONT DISPLAY UNIT (WITH NAVI)  TH24FW-NH  10 9 8 7 6 5 4 3 2 1  22 21 20 19 18 17 16 15 14 13  Signal Name (Specification)  GND  BATTERY  ACC  SHELD  AXX MAGG GND (With extensionment system)  RGB (G. GREEN) SIGNAL.  SHELD  HGB AREL (YS) SIGNAL.  SHELD  HGB AREL (YS) SIGNAL.  COMM (CONIT-) DISP)	OAMFRA IMAGE SIGNAL	E F
Corrector No. M65 Corrector Name UNIFIED ME Corrector Type TH40FW-NH H.S.	Terminal Color No. 28 R	Or Type		G H
M63 CENTER SPEAKER TKG2FBR	Signal Name [Specification]	MULTIFUNCTION SWITCH THIGFW-NH THIGFW-NH    1		I
WIN MONITOR Connector No. Connector Name Connector Type H.S.	Terminal Color No. of Wire 1 Y 1 Z G	Connector No.   M72		K
BOSE AUDIO WITH NAVIGATION (T Connector No. M44 Sonnector Name SONAR CONTROL UNIT Connector Type TH24FW-NH  M.S. T 2 3 4 5 6 7 8 9 10 1112  1 2 3 4 5 6 7 8 9 10 1112  1 3 4 5 6 7 8 9 10 23 24  1 3 14 15 16 17 18 19 20 21 22 23 24	Signal Name (Specification) CORNER SENSOR REANT LH CORNER SENSOR REAR ACC ACC ACC ACC ACC ACC ACC ACC ACC A	MSGZFL-MZ-LC MSGZFL-MZ-LC  Signal Name [Specification]	Ī	M
BOSE AUDIO WIT Connector No. M44 Connector Name SONAR CON Connector Type TH24TW-NH	Terminal Color No. of Wire 3 W W C 3 W W 4 A B B C 12 B B C 13 V C 18 C 19 C 20 C 20 C 24 B 24 C 24 C 24 C 25 C 26 C 26 C 27 C 26 C 27 C 28 C 29 C 29 C 20	Connector No. M69 Connector Name BACK-UP-LAMF Connector Types MSSQFI-M2-LC MSSQFI-M2-LC MSSQFI-M2-LC Terminal Color No. of Wire 1 No. of Wire 2 N N 2 N N 5 O	JCNWM1071GB	AV
			SCHWINTOT ISB	Р

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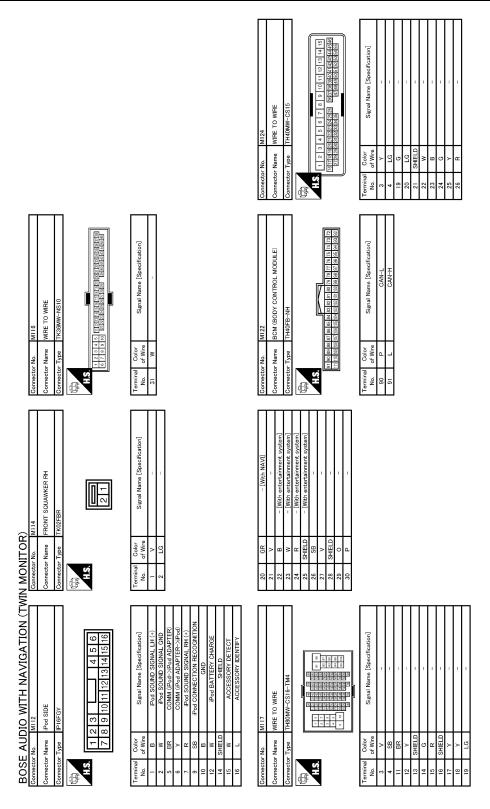
BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)	VIN MONITOR)	Connector No	38 P VEHICI E SPEED (8-DIII SE)
Connector Name AV CONTROL UNIT (WITH NAVI)	> a	Connector Name AV CONTROL UNIT (WITH NAVI)	a0 a
Connector Type TH18FW-CS2	╁	Connector Type TH40FW-NH	n @
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Connector No. M88	72 SHIELD SHIELD	Connector No. M89	
Connector Name AV CONTROL LINIT (WITH NAVI)		Connector Name AV CONTROL LINIT (WITH NAV.)	
Connector Type TH12FW-NH		Connector Type TH32FW-NH	
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62 64 88 87 72		_=	
61 63 65 67 69 71		94 95 96 97 98 99 100 101 102	
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Terminal Color Signal Name [Specification]		Terminal Color Signal Name [Specification]	
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70 BR COMM (CONT->DISP) 71 Y COMM (DISP->CONT)			

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[NAVIGATION (TWIN MONITOR)]

	sifeation)	1)  1)  1)  1)  1)  1)  1)  1)  1)  1)		А
M99 VIDEO DISTRIBUTOR THOSFW-NH 54 56 60 53 55	Signal Name [Specification]  GND  BATTERY ACC IGNITION  HEADPHONE ON SIGNAL	Ped SOUND SIGNAL RH (*) SHELD AV COMM (H) GND SHELD Ped COMNETION RECOGNITION ACCESSORY DETECT Ped SOUND SIGNAL LH (*) Pod SOUND SIGNAL LH (*)		В
Connector No. M99 Connector Name (VIDE Connector Type   TH00	Terminal Color   No. of Wire   S4   S6   S6   S6   S6   S6   S6   S6	14 Y 15 SHELD 16 SHELD 19 SHELD 22 W W 24 B B 24 B B SHELD 19 SHELD 22 W W W W W W W W W W W W W W W W W W		D
18 20 22 24 17 19 21 23	preofication) M (H) M (L) M (L) M AGE SIGNAL SIGNAL D SIGNAL SIGNAL	21/22/23/24 21/22/23/24 21/22/23/24 21/22/23/24 100AL LH (+)		Е
24FW-NH  24FW-NH  8 10 12 14 16  7 9 11 13 15	Signal Name [Specification]  AV COMM (H)  COMPOSITE IMAGE GND  SHELD  COMPOSITE IMAGE SIGNAL  AUX IMAGE SIGNAL  SHELD  DVD IMAGE SIGNAL  SHELD  DVD IMAGE SIGNAL	Signal Name		F
Connector No. M98 Connector Name VIDE Connector Type TH2.      2   4   6   1   1   3   5   7   5   5   5   5   5   5   5   5	Terminal Golor No. of Wire 3 of Wire 4 4 R R G 7 SHELD 21 SHELD 22 SHELD 24 L P	Connector No.  Connector Name Pod J  Connector Type TH24  TH24  TH24  Terminal Color No. Terminal Color No. Terminal Solution No. Te		G
				Н
IGNITION SHIELD COMM (DIST->DIST) COMM (DIST->DIST)		WIRE NH  4 5 6 7 8  112 13 14 15 16  Signal Name [Specification] - [With NAVI]		I
		MIRE TO THISIMY 10 1 1 2 3 1 1 2 3 1 1 1 1 1 1 1 1 1 1 1 1		J
VIN MONITOR) 36 0 38 8440 SB		Connector Name Connector Name Connector Type 10 8 SHELD 11 G		K
NIMT) NOI	14r			L
ВОSE AUDIO WITH NAVIGATION (ТV	Signal Name (Specification) ROB (G. GREEN) SIGNAL ROB (G. GREEN) SIGNAL ROB GND ROB (SHUE) SIGNAL PH HP HP SHIELD ROB SHEA IYS) SIGNAL COMPOSITE MAGE SIGNAL SHIELD	H VO ENGINE) -RZ8-R-L1H-Z		M
M97 VIDEO WITH NA VIDEO DISTRIBUTOR THISFW-NH THISFW-NH TEE 28 23 23 34 33 25 25 27 29 31 33 33		ECM (WIT) 128 12 128 12 128 12 128 12 128 12 128 12 128 12 128 12 128 12 128 12 128 12 128 12 128 12 128 12 128 12 128 12 128 12 128 128		AV
BOSE AL Connector No.	Terminal   Color   No. of Wire   No. of Wire   2.6   W   2.7   B   2.7   B   2.9   R   3.1   B   3.3   G   3.4   R   R   3.5   B   3.4   R   R   3.5   B   3.5   B	Connector Name Connector Type Connector Type H.S. H.S. 113 Color 114 L.		0
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# [NAVIGATION (TWIN MONITOR)]

Name WRE TO WRE  Type THIZMW-NH    1 2 3 4 5 6		В
Connector No. Connector Name Connector Type H.S. H.S. I SHELL I SHELL I SHELL		D
7 8 7 15 16 15 16 Peeification]		Е
Name (3)		F
MI400 THIBMW 10 1 2 3 10 1 1 3 3 10 10 10 10 10 10 10 10 10 10 10 10 10		
No. Color Color W W RELL RELL	22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	G
Connecto Con	3 3 8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Н
	WINE -NH -NH 28   9   10   11   12   13   4   15   16   29   24   25   26   27   28   29   31   32	I
	MIB1 WIPE TO WIPE TH32MW-NH  4 5 6 7 8 9 20[21]22[23]4[25] Signal Na	J
SHELD		K
(TWIN MONITOR)  19 SHIELD  20 SHIELD  21 Y R  22 Y R  24 B B  26 B B  26 B B  27 SB  28 B B  29 P P  30 SHIELD  31 B B  31 B B  32 SHIELD  32 SHIELD  33 SHIELD  34 SHIELD  35 SHIELD  36 SHIELD  37 SHIELD  38 SHIELD  38 SHIELD  39 SHIELD  30 SHIELD  30 SHIELD  30 SHIELD  31 B B	Connector No.	Λ.
		L
Connector No.   M.139	H. VK. ENGINE	M
M139 WIRE TO WIRE TH32FW-NH  13 12 11 10 9 29 28 27 26 25	MISO PRIZATE VY ENGINE) PRIZATE VY ENGINE) 122 123 124 141 141 141 141 141 141 141 141 141	AV
Connector Name   M139   Connector Name   M139   Connector Name   M18E TG   Connector Type   TH32FW   Connector Type   TH32FW   Connector Type   TH32FW   Connector Type   TH32FW   Connector Type   Connector Ty	S S S S S S S S S S S S S S S S S S S	_
Terminal   1   1   1   1   1   1   1   1   1	Connector Na Connector Typ Connector Typ LLS LOG No of V 101 106 106 106 107 106 107 107 107 108 108 109 100 100 100 100 100 100 100 100 100	JCNWM1075GB
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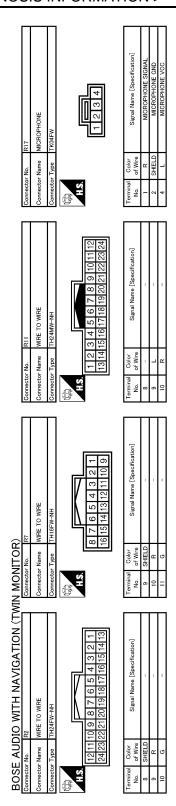
Connector No. M303  Connector Name COMBINATION SWITCH (SPIRAL CABLE)  Connector Type ITX08FGY  M.S.  [2019]18]17]16[15]4[13]	Terminal Color   Signal Name [Specification]	Connector No. M374 Connector Name WIRE TO WIRE Connector Type GT16C-1S-HU	Terminal Color No. of Wire 1 - Signal Name [Specification]
Connector No. MI83 Connector Name AUXILLARY INPUT JACKS Connector Type A08FW  WH.S.	Terminal   Color   Signal Name [Specification]     No. of Wire   Signal Name [Specification]     1	Connector No. M373 Connector Name AV CONTROL UNIT (WITH NAVI) Connector Type GIF-IS-HU  M.S.	Terminal   Color   Signal Name [Specification]     No.   of Wire   GPS ANTENNA     110   - GPS ANTENNA     SHIELD   SHIELD
MIN MONITOR    16	. 0	Connector No.  Connector Name AV CONTROL UNIT (WITH NAVI) Connector Type FAKEA JACK  H.S.  (109)	Terminal Color Signal Name [Specification] No. of Wire SAETLLITE ANTENNA
UDIO WITH NAVIGATION (This   Miss   Miss	Color   Signal Name [Specification]   Orl Wire   B   GND     Y   BATTERY     V   AGG     P   DVD IMAGE SIGNAL I.H (-)     C   AUX SOUND SIGNAL I.H (-)     R   AUX SOUND SIGNAL I.H (-)     W   AUX SOUND SIGNAL I.H (-)	Connector No. M371 Connector Name AV CONTROL UNIT (WITH NAVI) Connector Type GT13SH-2/1S-HU  M3  M4.S. [10] [10]	of Wire Signal Name [Specification]  - FM SUB - AMTENNA MAIN - ANTENNA MAIP. ON SIGNAL
BOSE A Connector Na Connector Typ	Terminal No. No. 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Connector No. Connector Typ	Terminal No. 105 106

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# [NAVIGATION (TWIN MONITOR)]

[hookes]	sation]	А
WRE TO WRE GTI3SCN-2/IPP-HU  Signal Name [Specification]	MA389 WINDOW ANTENNA (SUB) POIFE-A  Signal Name [Specification]	В
5 6 7 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	No. Name Type	С
Connector No. Connector Name Connector Type  H.S. H.S.  2 2 2 2 2 2 2 2 2 2 3 3 2 2 2 2 2 2 2	Commector No.	D
ocification]	ecification]	Е
ANTENNA BASE GT16C-IPP-HU  Signal Name [Specification] SATELLITE ANTENNA	WIRE TO WIRE JASO PLUG  Signal Name [Specification]	F
No. Name Type Color of Wire	No. Name Type	G
Commettor Commettor No. No. No. 3	Connector No.	Н
WIRE PP-HU Signal Name [Specification]	WIRE  OK  Signal Name [Specification]	1
1877   IRE TO   TIGG-1	WIRE TO WIRE JASO JACK Signal Name	J
MIN MONITOR)  Connector Name  Connector Type  A.S.  H.S.  Terminal  Color  No.  Of Wire	Connector No. No. Connector No. No. Ornector Type 1 Connector Type 1 Conne	K
NEW TOTAL TO		L
BOSE AUDIO WITH NAVIGATION (TY Connector Name (WIE TO WIRE Connector Type (T13SC-2/1S-HU  MAS  Terminal Color No. of Wire  1	ANTENNA ANP. ON SIGNAL AM-FM MAIN	М
MA375 WINE TO WINE GT183C-2/1S-H  GT Signal IN	M386 ANTENN GT13SSN	AV
BOSE AUC Connector Nane Connector Nane Connector Type ILS ILS I Color No of Wire 2 2	Connector No.  Connector Name Connector Type Connector Type Connector Type Color No. of Wire 1 2 2 - 2	0
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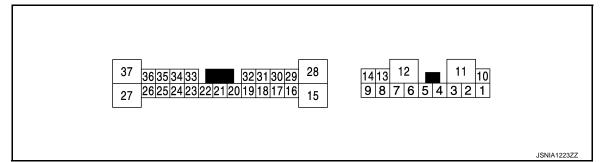
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## BOSE AMP.

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal e color)	Description		Condition		Reference value
+	-	Signal name	Input/ Output		Condition	(Approx.)
1 (Y)	10 (G)	Sound signal rear door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
2 (SB)	3 (V)	Sound signal rear door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 → +2ms SKIB3609E
4 (L)	5 (P)	Sound signal front door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 → 2ms SKIB3609E
6 (O)	7 (W)	Sound signal front squawk- er LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E

# [NAVIGATION (TWIN MONITOR)]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
8 (LG)	13 (Y)	Sound signal front door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
9 (G)	14 (R)	Sound signal woofer and rear squawker (LH and RH)	Output	Ignition switch ON	Audio output	(V) 1 0 -1 → 2ms SKIB3609E
11 (GR)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
12 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
15 (Y)	28 (G)	Sound signal center speaker	Output	Ignition switch ON	Audio output	(V) 1 0 -1 ** 2ms SKIB3609E
17 (O)	Ground	Mode change signal	Input	Ignition switch	Driver's Audio Stage ON	0 V
(0)				ON	Driver's Audio Stage OFF	8.5 V
18 (P)	32 (L)	Sound signal front LH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 → +2ms SKIB3609E
19 (R)	20 (G)	Sound signal front RH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E

#### **BOSE AMP.**

#### < ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (TWIN MONITOR)]

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
21 (V)	22 (SB)	Sound signal rear LH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
23 (BR)	33 (Y)	Sound signal rear RH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
25 (L)	Ground	Woofer amp. ON signal	Output	Ignition switch ACC	_	12.0 V
37 (V)	27 (LG)	Sound signal front squawk- er RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
31 (GR)	Ground	Amp. ON signal	Input	Ignition switch ACC	_	12.0 V

Wiring Diagram - BOSE AUDIO WITH NAVIGATION (TWIN MONITOR) - INFOID:000000003826946

NOTE:

M

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В

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Е

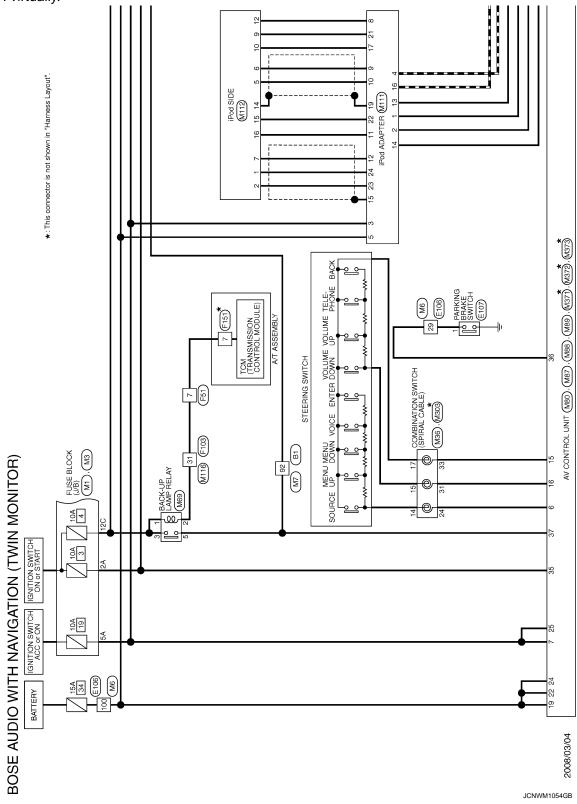
F

ΑV

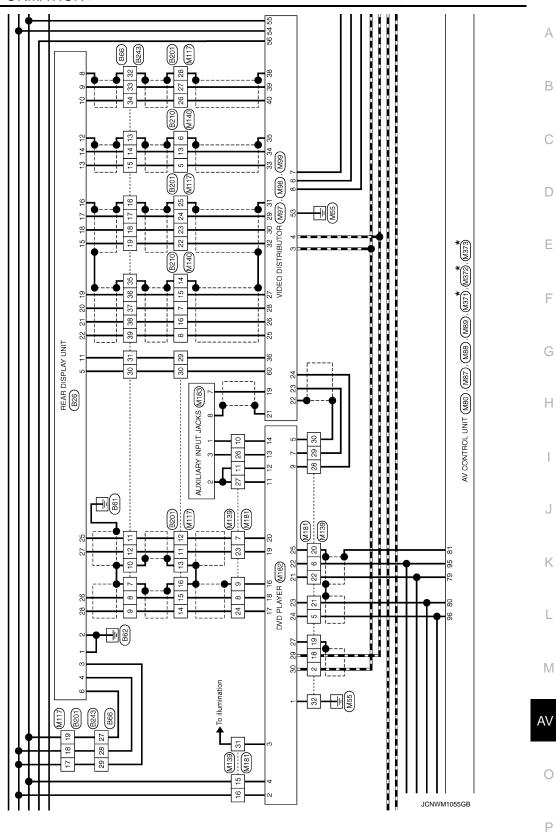
C

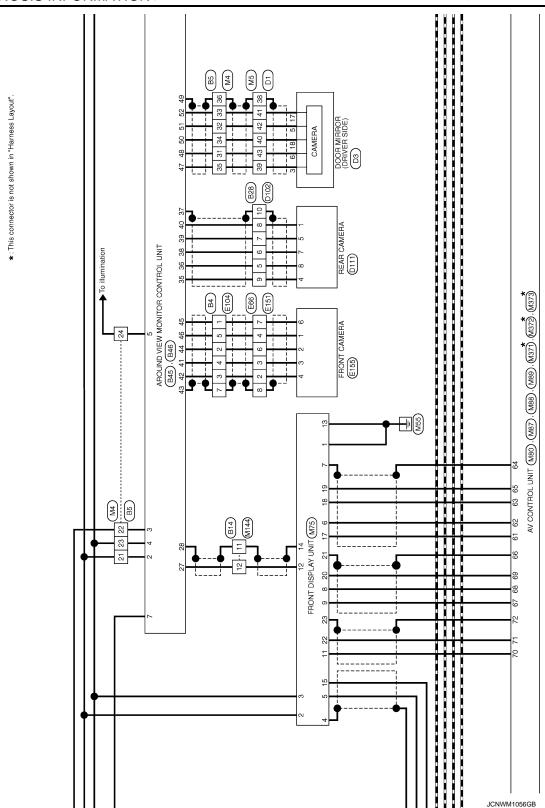
P

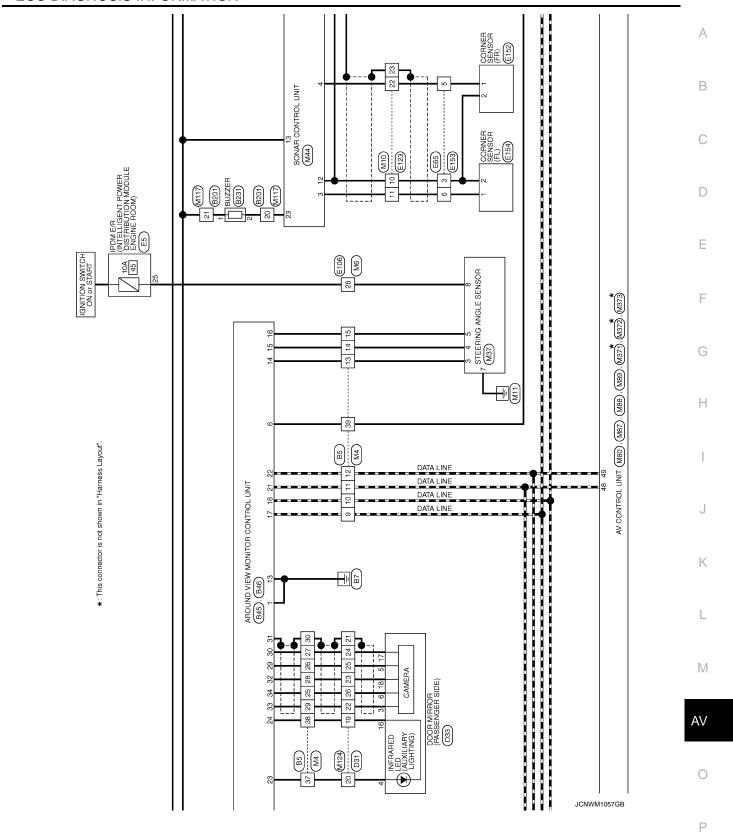
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

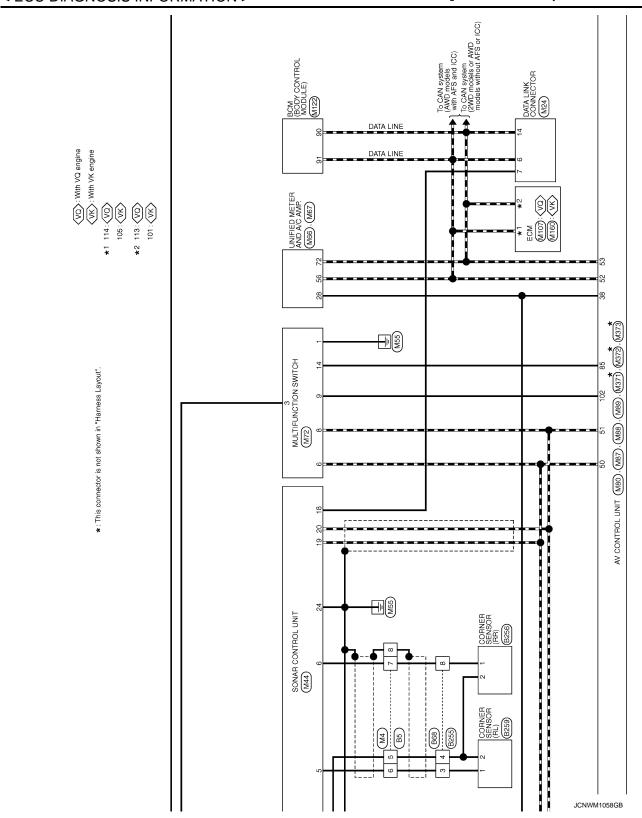


\*: This connector is not shown in "Harness Layout".









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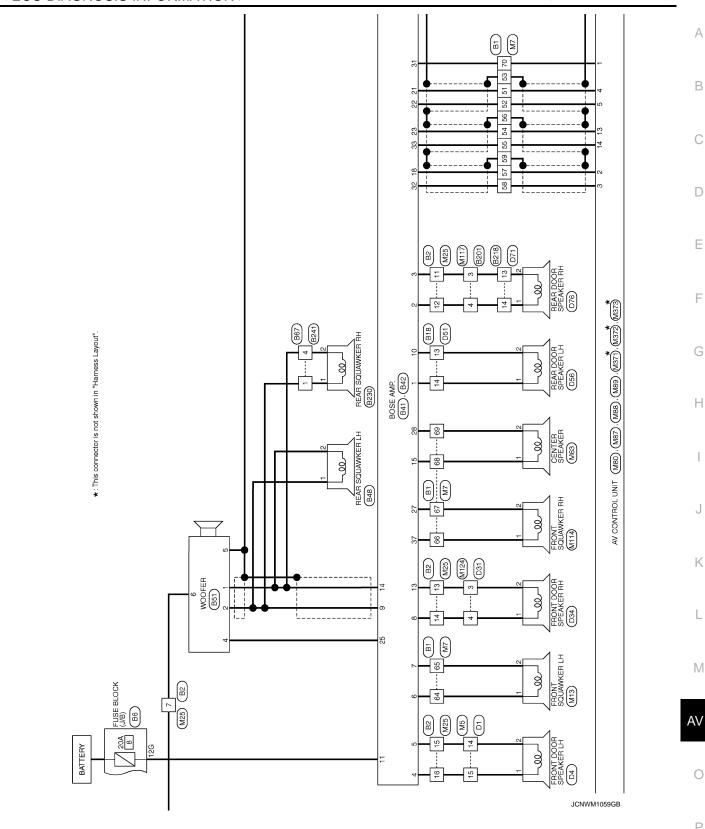
K

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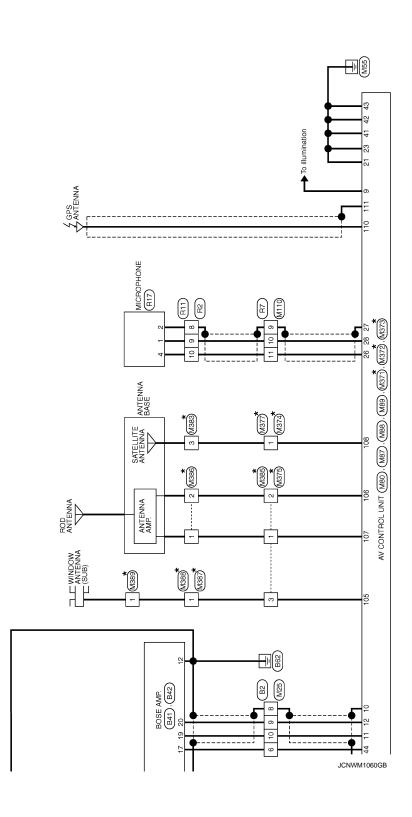
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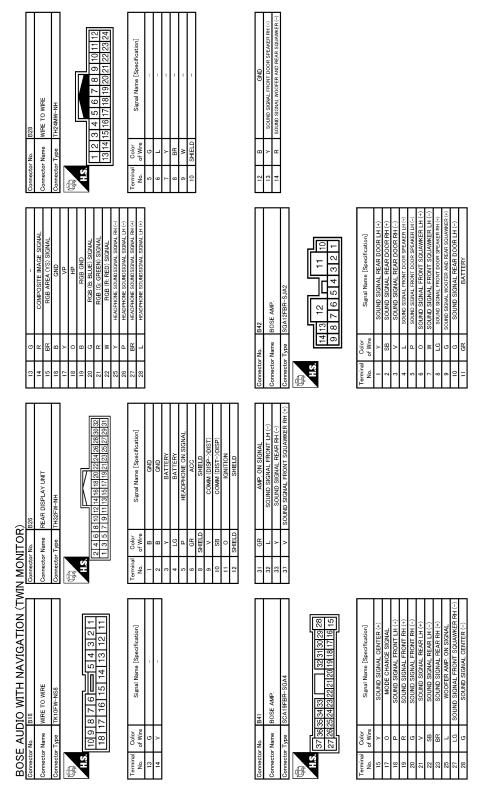


\*: This connector is not shown in "Harness Layout".



Signal Name [Specification]   Sign	A B C
Connector No.   B4	D
eoification]	Е
Signal Name (Sp. Signal	F
Connector No.   B2	G
	Н
	I
	J
MIN MONITOR)    66	K
	ı
	L
Connector Name   BI   Connector Name	M
Color   Colo	AV
Connector Name   Colorector Type   Connector Name   Con	0
四周888 (45 M 上 )	
	Р

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MM (H)  MM (L)  MM (L)  MM (L)  MM (L)  (+)  (+)  (+)  (+)  (+)  (+)  (+)		A
W	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	С
1	3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	D
CONTROL UNIT		Е
Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]  CND  BATTERY  IGNITION  CND  BATTERY  IGNITION  CND  ENTERSE  CONTROL SIGNAL  SENSOR SIGNAL 2  SENSOR SIGNAL 2  SENSOR SIGNAL 2	WINE NH HH NH Sign and NH HH Sign and NH Sign and NH HH Sign and NH Sign and NH HH Sign and NH Sign and NH HH Sign and NH Sign and NH HH Sign and NH Sign and NH HH Sign and NH Sign and NH HH Sign and NH Sign and NH HH Sign and NH Sign and NH HH Sign and NH Sign and NH HH Sign and NH Sign and NH HH Sign and NH HH Sign an	F
Connector No.   B46	Connector No.   B66	G H
I IMAGE GND	WOOFER (-) WOOFER (-) WOOFER (-) WOOFER (-) ON SIGNAL PR	I
SIDE CAMERA LH IMAGE GND	RSOBECY SOUND SIGNAL WOOFER (-) SOUND SIGNAL WOOFER (-) SOUND SIGNAL WOOFER (-) WOOFER AND WOOFER (-) MOOFER AND SIGNAL WOOFER (-) SOUND SIGNAL WOOFER	J
IIN MONITOR)	Connector No.  Connector Type F  Terminal  Color  No.  Of Wire  Color  So.  So.  B.  B.  Color  No.  Of Wire  Color  Of Wire	К
ON (TWITT NO		L
Connector Name	Signal Name [Specification]	M
UDIO WIT   B45	REAF SG TROZFER	AV
BOSE AUC Connector Name Connector Type Connector Type 14.143 14.143 14.143 15.144 16.143 17.144 17.143 18.145 18.145 19.144 19.1	Connector No.  Connector Name Connector Type Connec	0
	JCNWM1063GB	<u></u>
		Р

BOSE AUDIO WITH NAVIGATION (TW	WIN MONITOR)						
Connector No. B67	Connector No. B68	Connector No.	B201	20	GR	- [With NAVI]	_
O	A WILDER TO MAIDE	N.	SOM OF SOM	21	7	- [With NAVI]	
Connector Name Wirk 10 Wirk		Connector Name	WIRE TO WIRE	22	В	- [With entertainment system]	
Connector Type NS08MW-CS	Connector Type RS08MGY	Connector Type	TH80FW-CS16-TM4	23	M	<ul> <li>[With entertainment system]</li> </ul>	
¢	¢	¢		24	В	<ul> <li>[With entertainment system]</li> </ul>	_
19	修	厚		25	SHIELD	<ul><li>[With entertainment system]</li></ul>	
I S		S.		26	SB	-	
1 2 3	10 31		92 84 74 84 54 84 54 54 54	27	>	1	
4 5 6 7 8	1 0		n 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	28	SHIELD	1	
1	8/196			29	0	1	
				8	۵	1	_
<u>_</u>	<u>_</u>	-g	Signal Name [Specification]				
No. of Wire	No. of Wire	No. of Wire					
+	M	┨	_				
4 R -	8	+	-				
	- C	7	1				
		+	1				
		13 SHIELD					
		+	1				
		+	1				
		ñ	1				
		+	1				
		+	-				
		٧ 61	1				
Connector No. B210	Connector No. B218	Connector No.	B230	Connector No.	or No. B231	31	_
	т				Т		_
Connector Name   WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name	REAR SQUAWKER RH	Connector Name		BUZZER	
Connector Type TH16FW-NH	Connector Type TK10FW-NS8	Connector Type	TK02FBR	Connector Type	П	RK02FBR-DGY	
Į.	4	þ		þ			
李打	まず	李		李		≪	
] /         		H.S.		H.S.			
8 7 6 5 4 3 2 1	10 9 8 7 6 6 6 5 4 3 2 1		Į.			2	
16 15 14 13 12 11 10 9						<b>-</b>	
Torminal	Toursing	Tominac		Tormina	1000		_
	_		Signal Name [Specification]	No.	_	Signal Name [Specification]	
T	t	t	-	-	-	1	_
6 SHIELD –	SB	2 R	Т	2	æ	1	
- 0 2							
- M 8							
П							
14 SHIELD –							
88 1							
- L							

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Connector No.   P.255   Connector Name   WIRE TO WIRE	Connector Name DOOR MIRROR (DRIVER SIDE)  Connector Name DOOR MIRROR (DRIVER SIDE)  Connector Type TH24MW-NH  1.2  1.2  1.2  1.2  1.2  1.2  1.3  1.3	No of Wire   Signal Name [Specification]   No of Wire   Signal Name   Specification]   No of Wire   No of W		A B C
Come Come No.				E
18 W 27 CR	Connector Name   WIRE TO WIRE	Color   Color   Name [Specification]   Color   No.   Of Wire   Signal Name [Specification]   14   P   P   P   P   P   P   P   P   P		F G
다 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전				Н
243 HRE TO WIRE H40FW-NH Signal Name (Specific	PESSO CORNER SENSOR (RL.) YDX02FE	Signal Name [Specification]		J
Connector No.   Connector Type   NS06FW-CS	Connector No.  Connector Name Connector Type  H.S.	Color   Color   No.   Of Wire   T   W		K
NOL (NOL) NOL (N				L
WIRE CS T 6 5 4 Signal Name [Specification]	SOR (RR)	Signal Name [Specification]		M
AUDIO WITH   No.   6241   No.   6241   No.   6241   No.   6241   No.	B256 TO CONVER SENSOR (RR) TO YOXOZFE	Color Sign B B		AV
BOSE AU Commetter Name Commetter Type  Terminal Color No. of Wire  1 G	Connector No. Connector Type	Terminal   Col   No.		0
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UDIO WITH NAVIGATION (T	띘		
Connector No. D4	Connector No. D31	Connector No. D33	Connector No. D34
Connector Name FRONT DOOR SPEAKER LH	Connector Name WIRE TO WIRE	Connector Name DOOR MIRROR (PASSENGER SIDE)	Connector Name FRONT DOOR SPEAKER RH
Connector Type NS02FBR-CS	Connector Type TH40FW-CS15	Connector Type TH24MW-NH	Connector Type NS02FBR-CS
4		香	響
HS.	11.5 14 13 12 11 10 9 8 7 6 5 4 3 2 1 1 8 15 14 13 12 11 13 13 13 13 13 13 13 13 13 13 13 13	1.S 121110 9 8 7 6 5 4 3 2 1	HS.
	20010048948947	[24[23[22]21]20[19[18]17[16[15]14[13]	
Terminal Color Signal Name [Specification] No.	Terminal Color Signal Name [Specification] No.	Terminal Golor   Signal Name [Specification]   No.   of Wire	Terminal Color Signal Name [Specification]
H	3 В	Н	
2 P = =	- L L		2 P
	Tree Tree Tree Tree Tree Tree Tree Tree	æ	
	21 SHIELD =	16 G	
	$\vdash$	18 BR –	
	24 L –		
	25 Y –		
	26 R = _		
Gonnector No. D51	Connector No. D56	Gonnector No. D71	Connector No. D76
Connector Name WIRE TO WIRE	Connector Name REAR DOOR SPEAKER LH	Connector Name WIRE TO WIRE	Connector Name REAR DOOR SPEAKER RH
Connector Type TK10MW-NS8	Connector Type NS02FBR-CS	Connector Type TK10MW-NS8	Connector Type NS02FBR-CS
髩	香	香	鹭
HS 12345 678910	HS.	HS 1 2 3 4 5 6 7 8 9 10	HS.
11 12 13 14 15 16 17 18	2 1	11 12 13 14 15 16 17 18	2 1
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color   Signal Name [Specification]   No.   of Wire	Terminal Color Signal Name [Specification]
Н	1 SB -	Н	1 SB -
14 SB –	2 V =	14 SB –	2 V =

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2 C C C C C C C C C C C C C C C C C C C	Signal Name [Specification]	Signal Name [Specification]	АВ
Connector No. E65 Connector Name WIRE TO WIRE Connector Type RSOBFB-PR H.S.	No.   Color   Signa   No.   Signa	Cornector Name PARKING BRAKE SWITCH Cornector Type TB01FW Cornector Type TB01FW Cornector Type Signal Name Spening of Vince Terminal Color Signal Name Spening of Vince Terminal Color Signal Name Spening Spe	C
ES POME EN (NTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) THEOFW-CS12-M4-1V THEOFW-CS12-M4-1V TRIGHT RESERVATION RECOGNIZATION OF 100 100 100 100 100 100 100 100 100 10	Signal Name [Specification]	WIRE  CSI 6-TM  CSI 6-TM  Signal Name [Specification]	E
Connector No. E5 Connector Name IDDM E-R (INTELLIGENT POWE DISTRBUTION MODULE ENGING Connector Type IT-R20FW-CS12-M4-IV  M.S. IT-R20FW-CS12-M4-IV  M	Terminal Color Sign	Connector No. E106 Connector Name WIRE TO WIRE Connector Type TH80FW-C516-TM4  Line Connector Type TH80FW-C516-TM4  Line Color	G
ERA H H H H T S S S S S S S S S S S S S S S	Signal Name (Specification) REAR CAMERA INAGE GND REAR CAMERA COMM REAR CAMERA GNOAL REAR CAMERA GNORE REAR CAMERA POWER SUPPLY	WIRE 3	I
VIN MONITOR)  Connector No. DIII  Connector Name REAR CAMERA  Connector Type THOBMW-NH  M.S. 4 3	Terminal Color Sig No. of Wire 1 L RE 4 W R 5 Y REAR 8 R REAR	Connector No.   E104	J K
NAVIGATION (TWI	Signal Name [Specification]	WIRE PR Signal Name [Specification]	L
BOSE AUDIO WITH NAVIGATION (TV Connector Name WIRE TO WIRE  Connector Type THZ4FW-NH  Connector Type THZ4FW-NH  TI2 11 1 10 9 8 7 6 5 4 3 2 1 1  Z4 23 22 21 20 19 18 17 16 15 14 13	Color   Signal   No.   Signal   No	Connector No.   E66	AV
m©l 오 ©l (윤 🔏		JCNWM1067GB	Р

BOSE AUDIO WITH NAVIGATION (TWI	WIN MONITOR)  Gomestor No.   E151	Gomector No. E152	Connector No.   E153
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	e.	Connector Name WIRE TO WIRE
Connector Type TH24MW-NH	Connector Type RS08MB-PR	Connector Type YDX02FB	Connector Type RS06MB
12 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	18 5 6 7 8 5 6 7 8	HS HS	H.S.
Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   11	Terminal   Color   Signal Name [Specification]   Color   Signal Name   Specification]	Terminal Color   Signal Name [Specification]	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   S
Connector No. E154 Connector Name CORNER SENSOR (FL) Connector Type YDX02FB	Connector No. E155 Connector Name FRONT CAMERA Connector Type RH06FB  (123456)	Connector No. F51  Connector Type RK10FG-DGY  1.1.5  (5 4 3 2 1)  (10 9 8 7 6)	Connector No. F103 Connector Name WRE TO WRE Connector Type TK38FW-NS10  WRE Connector Type TK38FW-NS10  WRE Connector Type TK38FW-NS10
Terminal   Color   Signal Name [Specification]   No of Wire   1   W	Terminal   Color   Signal Name [Specification]   No. of Wire   FRONT CAMERA POWER SUPPLY   2   BR   FRONT CAMERA MAGE SIGNAL   FRONT CAMERA SIGNAL   FRONT	Terminal Color No. of Wire 7 R	Terminal Color Signal Name [Specification]

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	Nion]	А
	WIRE TO WIRE THEOMW-CS16-TM4  THEOMW-CS16-TM4  Signal Name [Specification]	В
	MW W W W W W W W W W W W W W W W W W W	С
	Connector Name Connector Type Connector Type Terminal Color No. of Wire 28 of Wre 29 V 100 V	D
Specification]		Е
M3 FUSE BLOCK (J/B) NSIZFW-CS  60 40 30 20 10 120 110 100 90 80 70 60 120 110 100 90 80 70 60	No.   M5	F
Connector No.  Connector Name F Connector Name No.  Terminal No.  Odor No.  Terminal Odor	Connector No.   M   Connector No.   M   Connector Name   M   Connector Type   T   M   M   M   M   M   M   M   M   M	G
		Н
00K (J/B) MZ 7A 6A 5A 4A Signal Name [Specification]		I
IN THE BIT		J
WIN MONITOR)  Connector No.  Connector Type IN  Connector Type IN  Terminal Color  No.  2A C C  5A V	21 Y 22 R 23 R 24 R 24 R 25 R 25 R 26 R 26 R 26 R 26 R 26 R 27 R 27 R 27	K
		L
BOSE AUDIO WITH NAVIGATION (T Connector No. F151  Connector Name TGM (TRANSMISSION CONTROL MODULE)  Connector Type SPIGEG  A.S. F151  Connector Type SPIGEG  F151  Connector Type SPIGEG  Signal Name [Specification]  Torminal Color Signal Name [Specification]  7 L REV LAMP RLY	WIRE NH	M
AUDIO WITH No. FIST Name TOM (TRANS).  Type SPIOFG  Color of Wire  L	M4 WIRE TO WIRE TO THADEN-	AV
BOSE AUIC Connector No. Connector Name Connector Type Connector Type Terminal Color No. of Wire 7 L	Connector No.	0
	JCNWM1069GB	Р

Connector No. M13 Connector Name FRONT SOUAWKER LH Connector Type TROSTER  H.S.	Terminal Color Signal Name [Specification] No. of Wire 1 L 2 W	Connector No. M37 Connector Name STEERING ANGLE SENSOR Connector Type THOSP-W-WH  T 2 3 8 T 4 5	Terminal   Color   Signal Name [Specification]   3   L   SENORT   4 BR   SENOR   5   5   5   5   5   5   5   5   5
Connector No. M10 Connector Name WIRE TO WIRE Connector Type TH24PW-NH  12   12   11   10   9   8   7   6   5   4   3   2   1	Terminal   Color   Signal Mane [Specification]   Color   Col	Connector No. M36 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TK08FGY-IV  132 25 26 26 26 25 26 25 26 25 26 26 25 26 26 26 26 26 26 26 26 26 26 26 26 26	Terminal   Golor   Signal Name [Specification]   24   P   -   -     31   L   -
WIN MONITOR)    66		Commetor No. M25 Commetor Type WISE TO WISE  Commetor Type NS16MM-C5  H.S. 1 2 3	Terminal Color   No. of Wire   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   No. of
BOSE AUDIO WITH NAVIGATION (TW Connector Name WIRE TO WIRE Connector Type TH80MW-CSI6-TM4  LISA TITLE CONNECTOR TH80MW-CSI6-TM4  TH80MW-CSI6-TM4	Terminal Color   Signal Name [Specification]	Connector No.         M24           Connector Name         DATA LINK CONNECTOR           Connector Type         BD16FW           Connector Type         BD16FW           Connector Type         BD16FW           T1         T1           T1         T1           T1         T1	Terminal   Coolor   Signal Name [Specification]   No. of Wire   Signal Name [Specification]

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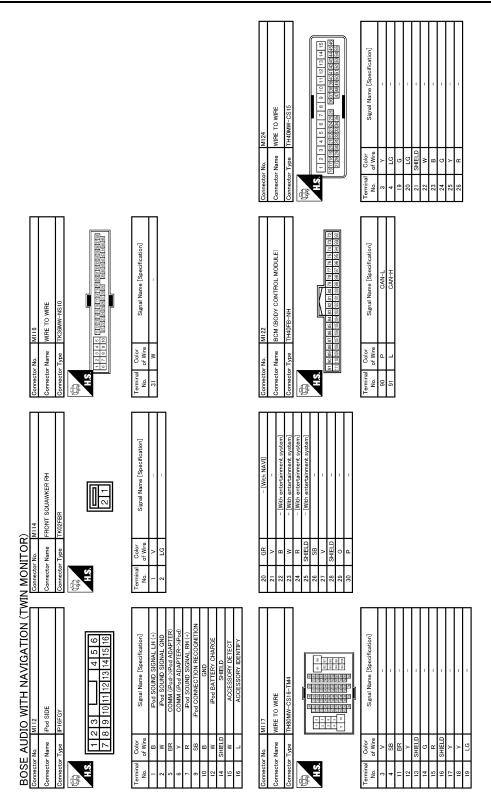
5 A/C AMP.	Signal Name [Specification] CAN+H CAN-L	GND SHELD  KIMCE SHOAL (Whose, extreme system)  KGB (R. RED) SIGNIAL  RGB (B. BLUE) SIGNIAL  RGB SYNG  VP  VP  SHIELD  COMM (DISP->CONT)  SHIELD	АВ
r No. M67  r Name UNIFED METER AND A/C AMP  TH32PW-NH  TH32PW-NH  TH32PW-NH  TH32PW-NH  TH32PW-NH  TH32PW-NH  TH32PW-NH  TH32PW-NH	Color of Wire P	SHELD	С
Connector No. Connector Name Connector Type H.S.	Terminal No. 56 56 72	13 16 17 18 19 19 20 20 20 22 22 22 22 23 23 23 23 23 23 23 24 25 25 26 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28	D
D A/C AMP.	(6-PULSE)	(WITH NAVI)  4 3 2 1  16 15 14 13  Specification  16 15 14 13  ERY  ERY  ERY  ERY  ERY  ERS  SIGNAL  ELD  PS SIGNAL  ELD  PS SIGNAL  MT-DISP)  AGE SIGNAL	E
METER AN NH S S S S S S S S S S S S S S S S S S	Signal Name [Specification] VEHICLE SPEED (8-PULSE)	Lay UNIT	F
4 2	Color of Wire R	M75 HRANT C C C C C C C C C C C C C C C C C C C	G
Connector No. Connector Name Connector Type H.S. H.S.	Terminal C	Connector Nuc.	Н
	اما		
	Signal Name [Specification]	NOTION SWITCH NH    R   10   12   14   16     7   9   11   13   15     8   10   12   14   16     7   9   11   13   15     8   10   12   14   16     7   9   11   13   15     8   10   12   14   16     7   9   11   13   15     8   10   12   14   16     7   9   11   13   15     8   10   12   14   16     9   11   13   15     10   12   14   16     10   12   14   16     10   12   14     10   12   14     11   12   15     11   13   15     12   14   15     13   15     14   15     15   15     16   15     17   15     18   16     19   16     10   17	I
M63 CENTER SPEAKER TKOZFBR	Signal I	3 4 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	J
ONITOR ector No. ector Name ector Type	Terminal Color No. of Wire	eettor Nome eettor Name eettor Typee minal Color of Name of Wire of Name of Wire of Name of Na	K
		Termin	L
GATION 101112 1222324	ecification] A FRONT LH R REAR LH R REAR RH GND GND (H) (L) R R	ceffcation)	ħ.A
MA4 MA4 TH24FW-NH TH24FW-NH  3 4 5 6 7 8 9 15 16 17 18 19 20 21	Signal Name [Specification] CORNER SENSOR FRONT ILH CORNER SENSOR FRAR IH CORNER SENSOR FRAR IH CORNER SENSOR FRAR IH CORNER SENSOR FRAR IH CORNER SONSOR FRAR IH CORNER SENSOR FRAR IH CORNER SENSOR FRAR IH CORNER (H) AV COMM (H) BUZZER GND	MSGZFL-MZ-LC  MSGZFL-MZ-LC  Signal Name [Specification]	M
MOIO WIT  M44  SONAR CON  TH24FW-NH  2 3 4 5 6 14 15 16 17 1		MSOZFL-US	AV
BOSE AUDIO WITH NAVIGATION Connector No. M44 Connector Name SOURROL UNIT Connector Type THZ4FV-NH  M.S. T 2 3 4 5 6 7 8 9 101112  1 2 3 4 5 6 7 8 9 101112  1 3 4 5 6 7 8 9 101112	Color   Color	Connector No.  Connector Name Connector Type  LLS  Color  No.  Of Wire  2  W 2  W 5  O 0  Color  No.  O 0  O 0  O 0  O 0  O 0  O 0  O 0  O	0
			JCNWM1071GB
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BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)  Connector No.   M80   13   ER	IN (TWIN MONI)		Connector No. M87	R	
Connector Name AV CONTROL UNIT (WITH NAVI)	15	Y SOUND SIGNAL REAR RH (-)  B STRG SW GND	Connector Name AV CONTROL UNIT (WITH NAVI)	41 B CONTROL SIGNAL 1 42 B CONTROL SIGNAL 2	_
Connector Type TH18FW-CS2	16		Connector Type TH40FW-NH	8	П
48	5	Y BALIERY		44 SB MODE CHANGE SIGNAL 48 G AV COMM (H)	_
<u> </u>			S.E.	ď	П
	Г		7	PC	_
10 4 5 9 9 9			22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 61 61 62 62 64 56 58 60	\ AV	_
10 11 12 13 14 15 16 17 18			12 02 02		_
	1			53 P CAN-L	_
Tourniand Color	Γ		Torminal Color		
			_		
1 V AMP. ON SIGNAL	<u> </u>		21 B GND		
2 P SOUND SIGNAL FRONT LH (+)			22 Y BATTERY		
3 L SOUND SIGNAL FRONT LH (-)			23 B GND		
4 V SOUND SIGNAL REAR LH (+)			24 Y BATTERY		
5 LG SOUND SIGNAL REAR LH (-)			25 V ACC		
6 P STRG SW A			26 G MICROPHONE VCC		
7 SB ACC			27 SHIELD MICROPHONE GND		
9 R ILLUMINATION			28 R MICROPHONE SIGNAL		
10 B SHIELD	Ī		9		
œ	T		ŀ		
. 0	<u> </u>		. 0		
	]				
	Γ				
Connector No. M88	72 St	SHIELD	Connector No. M89		
Connector Name AV CONTROL UNIT (WITH NAVI)			Connector Name AV CONTROL UNIT (WITH NAVI)		
т			Т		
Connector Type IH12FW=NH	7		Connector Type TH32FW-NH		
<b>€</b>			1		
3			生力		
\{\{\}			#S		
62 64 66 68 70 72			76 77 78 79 80 81 82 83 84 85 86		
61 63 65 67 69 71			[89] 90 [91] 92 [ 93 [ 94 [ 95 [ 96 [ 97 [ 98 [ 99 [ 100] 101] 102] 103] 104		
Terminal Color			Terminal Color		
No. of Wire Signal Manie Especification			No. of Wire Signal Manie Lopecinication.		
61 B RGB (R: RED) SIGNAL			79 Y iPod SOUND SIGNAL LH (+) [With entertainment system]		
W			۳		
R RGB (E			В		
SHIELD	1		SB		
0	1		4		
SHIELD	1		g		
B RGB ARE	1		102 BR SW GND		
ш	1				
M	1				
70 BR COMM (CONT->DISP) 71 Y COMM (DISP->CONT)	Т				
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JCNWM1072GB

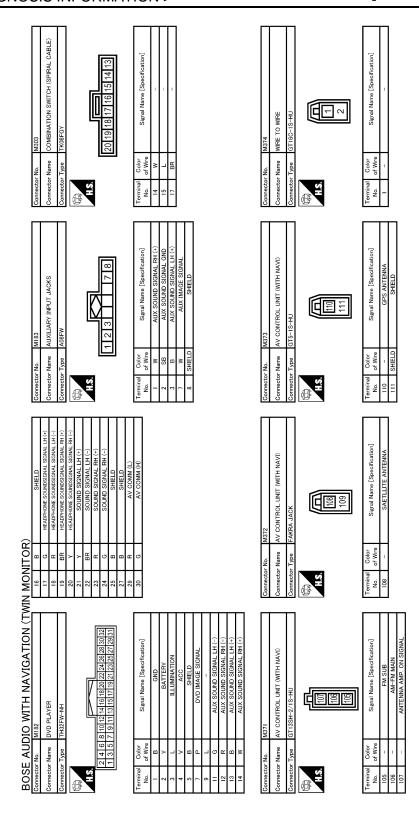
No. M89 Name V/DEO DISTRIBUTOR Type TH/06P/P/-NH 54 56 60	Color  Signal Name [Specification]  GND  GND  CND  B BATTERY  ACC  G BATTERY  ACC  G HEADPHONE ON SIGNAL	Y   Pod SOUND SIGNAL RH (+)	В	
Connector No. Connector Name Connector Type H.S.	Terminal No. 100. 53 53 54 55 56 56 60	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	D	
18 20 22 24 17 19 21 23	peoification) M. (L) M. (L) M. (L) MAGE GND D. (L) SIGNAL L. (L) SIGNAL SIGNAL SIGNAL	10   10   10   10   10   10   10   10	Е	
RIBUTOR 12 14 16 11 13 15 11 16 16 11 13 15 11 16 16 11 13 15 15 15 15 15 15 15 15 15 15 15 15 15	Signal Name [Specification] AV COMM (H) AV COMM (H) AV COMM (H) AV COMM (H) SHIELD COMPOSITE IMAGE SIGNAL AUX INAGE SIGNAL SHIELD DVD IMAGE SIGNAL	17   18   19   10   11   11   11   11   11   11	F	
M98 VIDEO TH24F		TH24	G	
Connector No. Connector Name Connector Type A.S. A.S. 1 3	Color   Color   Color     No.   Of Wire     3   G     4   R     6   G     7   SHELD     8   R     19   W     21   SHELD     22   SHELD     23   SHELD     24   L     24   L     25   SHELD     26   Color     27   SHELD     28   Color     29   Color     20   Color     20   Color     21   Color     22   Color     23   Color     24   Color     25   Color     26   Color     27   Color     28   Color     29   Color     20   Color     20   Color     20   Color     21   Color     22   Color     23   Color     24   Color     25   Color     26   Color     27   Color     28   Color     29   Color     20   Color     21   Color     22   Color     24   Color     25   Color     26   Color     27   Color     28   Color     28   Color     29   Color     20   Col	Connector Name Connector Name Connector Name 15 112 112 112 114 2 BR 3 0 O 4 4 V 4 4 V 9 0 V 11 L 11		
			Н	
TON ELD \$P->DIST) \$T->DISP)		7 8 15 16 15 16 NAVI	I	
IGNITION SHELD COMM (DIST->DISP) COMM (DIST->DISP)		MITO WIRE TO WIRE THIBMW-NH  1 2 3 4 5 6 7 8 1 10 11 11 12 13 14 15 16 Signal Name (Specification)  Tweb NAVI	J	
MIN MONITOR) 38 SHIELD 39 V 40 SB			К	
		Connector Nar Connector Type	I	
T) NOIT	stion] AL NAL NAL NAL GNAL	trien]	L	
NAVIGAT	Signal Name (Specification) RGB (TR EED) SIGNAL RGB (G GREEN) SIGNAL RGB (B LUE) SIGNAL VP HP HP HP HP HP HP COMPOSITE MAGE SIGNAL COMPOSITE MAGE SIGNAL	H VO ENGINE) -RZS-R-LH-Z -RZS-R-RZS-	М	
D WITH 7 7 7 7 7 8 80 DISTRIBE 16FW-NH 28 30 32 27 29 31	Signal I RGB ( RGB ( RGB ( RGB / RGB /	MIOT ECM (WITH VO ENGINE) PRESENCE R-LH-Z FIELD TO THE STEEL TO THE ST	AV	
BOSE AUDIC Connector No. MS Connector Name VIII Connector Type THA	of Wire Wire Wire Wire Wire Wire Wire Wire			
BOSE A Connector No Connector Ny Connector Ty H.S.	Terminal No. 26 26 27 28 29 30 31 32 33 34 35	Connector Normal Connector Type H.S.  H.S.  H.S.  113  114  114  114	JCNWM1073GB	
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JCNWM1074GB

Corrector Name WIRE TO WIRE  Corrector Thi2MM-NH  LS  THI2MM-NH  Terminal Color No. of Wire No. of Wire 11 SHELD  12 Signal Name [Specification]		В
Connector No. Connector Name Connector Type  Terminal Color No. 1 SHELL 12 WILL 12		D
6 effication		Е
MI40 WIRE TO WIRE THI BMW-NH 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Signal Name [Specification]		F
Type Type G Wine G Wile B B B B B B B B B B B B B B B B B B B		G
Connecto Con	2 1 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Н
	WRRE 7 B 9 (10) 11 (2) 13 (4 (5) 16 29 24 26 (20) 29 (20) 31 (32) Sigmal Name (Specification)	1
	WIRE TO WIRE THE WARE TO WIRE SIgnal Name 14 5 6 7 8 9 1 20 20 20 20 20 20 20 20 20 20 20 20 20	J
WIN MONITOR)  19 SHIELD  20 SHIELD  21 R  22 R  23 B  24 G  26 B  27 SB  28 B  29 P  29 SHIELD  30 SHIELD  31 L  31 L	Connector No.   MIST TO Connector Name   WIRE TO LOGNED   MIST THESEMINATED   MIST THESE T	К
		L
NAVIGATIO    Name [Specification]	M180   PR24FGV-R28-R-LH-Z   PR24FGV-R28-R-LH-Z   PR24FGV-R28-R-LH-Z   PR24FGV-R28-R-LH-Z   PR24FGV-R28-R-LH-Z   PR24FGV-R28-R-LH-Z   PR24FGV-R28-R-LH-Z   PR24FGV-R38-R-LH-Z   PR24FGV-R-LH-Z   PR24FGV-R-LH-Z   PR24FGV-R-LH-Z   PR24FGV-R-H   PR24FGV-R-H	М
Signal	MI 80  ECM (WITH VK ENGINI PRIZAFGY-RES-R-LIH  126 122 123 113 113 113 113 113 113 113 113	AV
Connector No.   M139		
BOSE A   Connector Name   Connector Name   Connector Type   Connector Ty	Connector No.  Connector Name Commetter Type Terminal Color No. of Wire 105 L	0
		JCNWM1075GB
		r

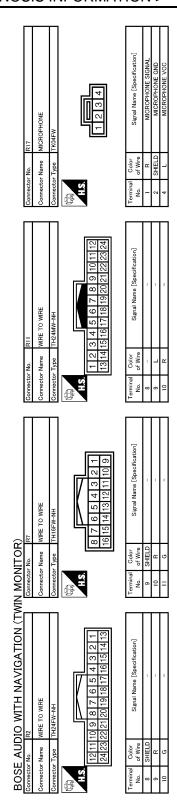
Revision: 2009 March AV-911 2009 FX35/FX50



JCNWM1076GB

# [NAVIGATION (TWIN MONITOR)]

WRE 1-2/IPP-HU 2 3 Signal Name (Specification)	M389 WINDOW ANTENNA (SUB) POIFB-A  Signal Name (Specification)		A B
Commetter No. M885 Commetter Name WIRE TO WIRE Commetter Type GT133CN-2/IPP-HU  Terminal Color Signal Name No. of Wire Signal Name 3	Cornector No. M389 Connector Name WINDOW ANI Connector Type POLFB-A H.S. H.S. Terminal Color No. of Wire 1		C D
PP-HU  Signal Name [Specification]  SATELLITE ANTENNA	UG  UG  Signal Name (Specification)		Е
No. M383  Name ANTENN.  Type GT16C-1  Oolor  of Wee	No. M388 WRE TO Type JASO PI		F G
Connector No. Connector Type H.S. H.S.  Terminal Color No. 3 - 7 Well	Connector No. Connector Type Connector Type No. of Will		Н
WIRE PP-HU Signal Name [Specification]	OK  CR  Signal Name [Specification]		I
IRE TO 116C-1	MIRE TO JASO JA		J
Connector Name   Mays   Connector Name	Connector No. Connector Name Connector Type  Terminal Color No of Wife  1		K
India (TWII	iten]		L
WIRE  2/15-HU  Signal Name [Specification]	A BASE W-1/IPP-HU Signal Name (Specification) ANTENNA AMP. ON SIGNAL AM-FM MAIN	<u> </u>	M
UDIO WITH N   Wise TO WIRE T	M386 ANTENN, GT13SS	А	١V
BOSE AUIC Connector No. Connector Type Connector Type Terminal Color 1 2 2 - 3 - 3	Connector No. Connector Name Connector Type  H.S.  Terminal Color  1 2 2		0
		JCNWM1077GB	Р



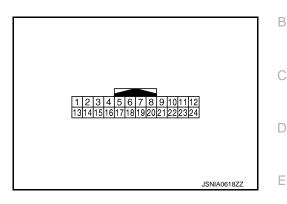
JCNWM1078GB

## [NAVIGATION (TWIN MONITOR)]

## **IPOD ADAPTER**

Reference Value

**TERMINAL LAYOUT** 



### PHYSICAL VALUES

	minal color)	Description			O an aliting	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (R)	13 (G)	iPod sound signal LH	Output	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 *** 2ms SKIB3609E
2 (BR)	14 (Y)	iPod sound signal RH	Output	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 → 2ms SKIB3609E
3 (O)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
4 (V)	_	AV communication signal (L)	Input/ Output	_	_	_
5 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
8 (W)	Ground	iPod battery charge	Output	Ignition switch ON	Connected to iPod <sup>®</sup>	12.0 V

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## [NAVIGATION (TWIN MONITOR)]

Terminal (Wire color)		Description		Condition		Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
9 (Y)	Ground	Communication signal (iPod adapter→iPod <sup>®</sup> )	Output	Ignition switch ON	The wave pattern is displayed just after iPod connection.	(V) 3 2 1 0  JPNIA0462GB  NOTE:  After the wave pattern display, the value continues Approx 3.3 V
10 (BR)	Ground	Communication signal (iPod <sup>®</sup> →iPod adapter)	Input	Ignition switch ON	Connected to iPod <sup>®</sup>	(V) 3 2 1 0 → •2ms JPNIA0462GB
11 (L)	Ground	ACCESSORY-IDENTIFY	_	Ignition switch ON	Connected to iPod <sup>®</sup>	0 V
12 (R)	23 (W)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 → 2ms SKIB3609E
15	_	Shield	_	_	_	_
16 (LG)	_	AV communication signal (H)	Input/ Output	_	_	_
17 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
19	_	Shield	_	_	_	_
21 (SB)	Ground	iPod connection recognition signal	Input	Ignition switch ON	Not connected to iPod <sup>®</sup> Connected to iPod <sup>®</sup>	4.0 V 0 V
22 (W)	Ground	ACCESSORY-DETECT	_	Ignition switch ON	Connected to iPod <sup>®</sup>	0 V
24 (B)	23 (W)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 → 2ms SKiB3609E

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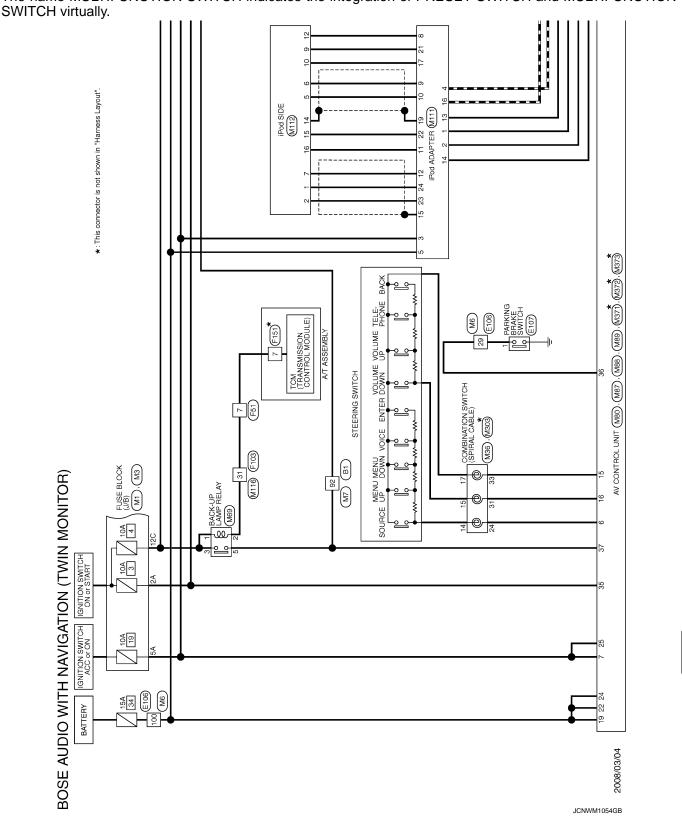
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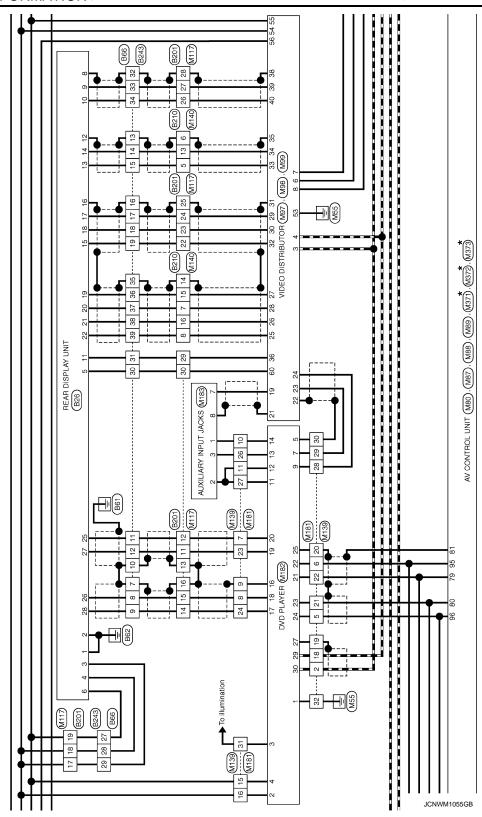
Wiring Diagram - BOSE AUDIO WITH NAVIGATION (TWIN MONITOR) -

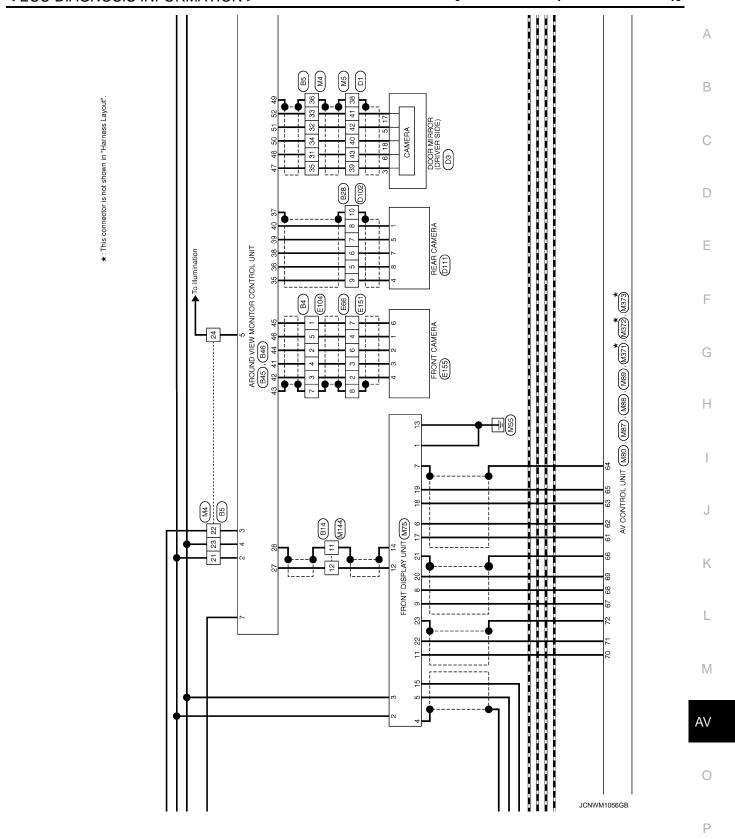
#### NOTE:

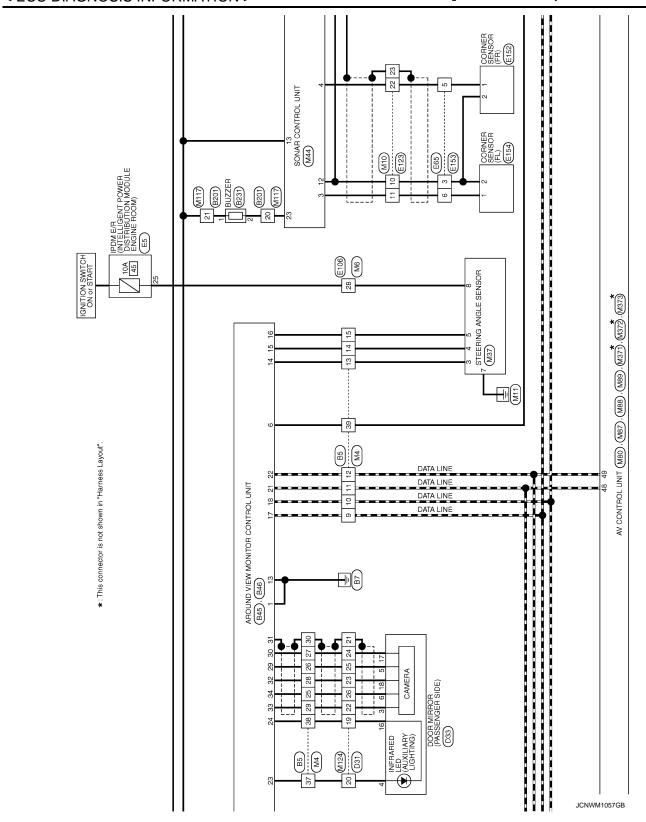
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION

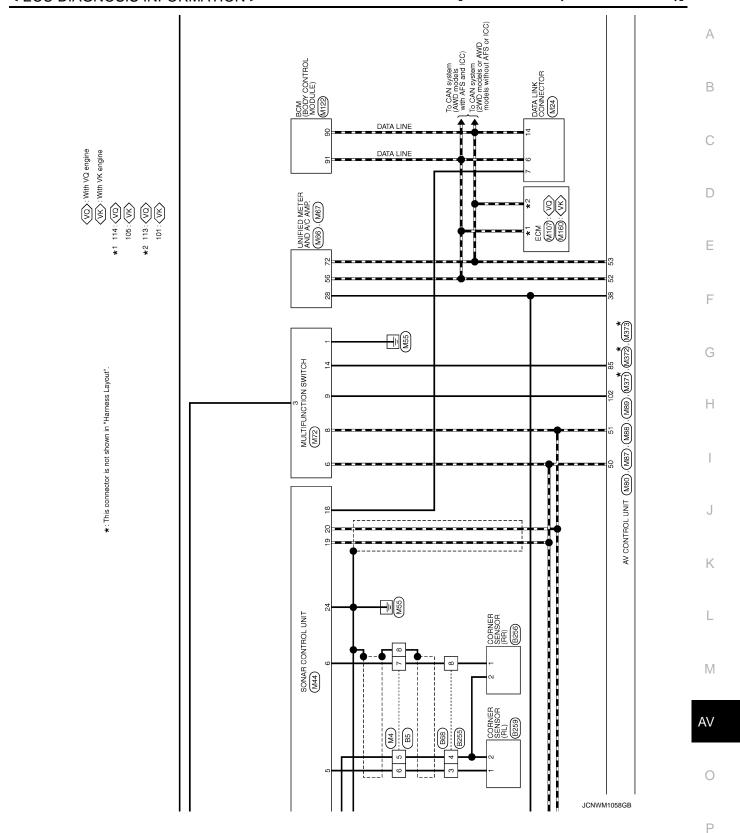


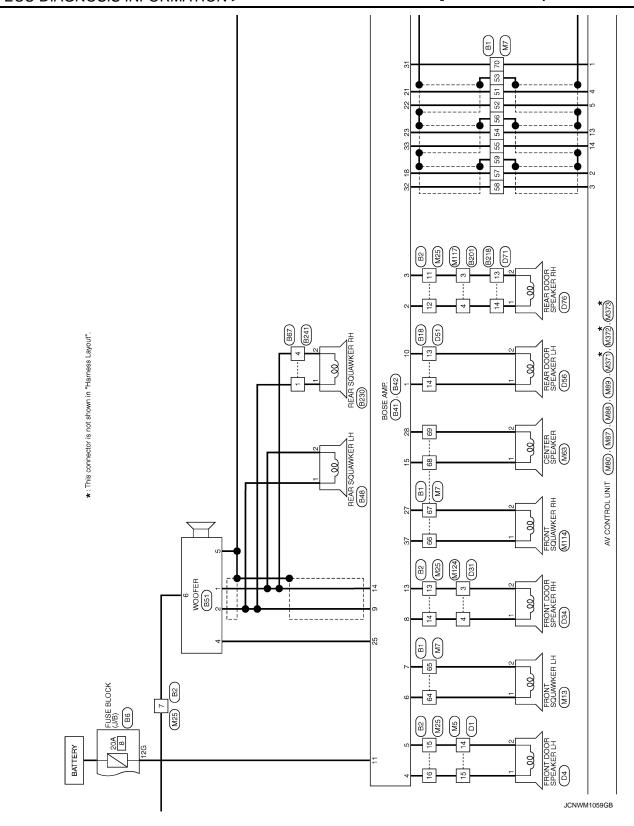
\*: This connector is not shown in "Harness Layout".



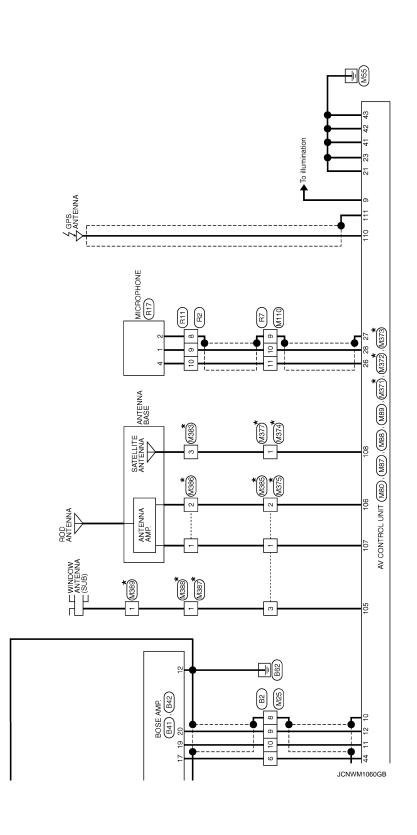








\*: This connector is not shown in "Harness Layout".



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Connector Name   WIRE TO WIRE
A   Color   Color

JCNWM1061GB

23 24   23   24   24   24   24   24   24	SQLAWER (-)	А
RE 1920 21 22 20 21 22 2 2 2 2 2 2 2 2 2 2 2	CIND SIGNAL WOOFER AND REAR SQLAWREE HI-C	В
828 WIRE TO 1712 AMY TO 1712	B SOUND SIGNAL	С
Connector No.  Connector Name  Connector Type  13 1 2 1 3 1 1 2 1 3 1 1 1 2 1 1 1 1 1 1	27 27 47	D
AGE SIGNAL  S) SIGNAL  NID  NID  NID  NID  NID  NID  NID  NI	BM2	Е
COMPOSITE IMAGE SIGNAL RGB AREA IVS) SIGNAL OND OND VP HP RGB (B: BLUE) SIGNAL RGB (B: BLUE) SIGNAL RGB (B: BLUE) SIGNAL RGB (B: RED) SIGNAL HEADPHONE SOUNDSIGNAL SIGNAL INFO	BOSE AMP. SGALZEBR-S.JAZ    12	F
		G
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Н
Signal Name   Specification	AMP. ON SIGNAL SOUND SIGNAL FRONT LH (-) SOUND SIGNAL FRONT SOUAWKER PH (+) D SIGNAL FRONT SOUAWKER PH (+)	I
1   1   1   1   1   1   1   1   1   1	SOUND SIGNAL FRE SOUND	J
MIN MONITOR	31 CR	K
		L
Connector No.   Bit   Connector TKIOFFV-NSS   TO 9   8   7   6   7   6   7   11   12   11	10   10   10   10   10   10   10   10	M
UDIO WITH   B118   B1		AV
Connector Name   Connector Name   Connector Name   Connector Name   Connector Type   Conn	Connector No.  Connector Name Connector Type  13	0
	JCNWM1062GB	

**AV-925** Revision: 2009 March 2009 FX35/FX50

O   O   O   O   O   O   O   O   O   O	32 W SIDE CAMERA RH GND     33 BR SIDE CAMERA RH GND     34 L SIDE CAMERA RH COMM     35 G G REAR CAMERA RH COMM     36 G REAR CAMERA RH COMPR SUPPLY     37 SHIELD   ARABRA CAMERA COMPR SUPPLY     38 L REAR CAMERA MAGE SUPPLY     39 Y REAR CAMERA MAGE SUCHAL     40 BR REAR CAMERA MAGE SUCHAL     40 BR REAR CAMERA MAGE GND     40 BR REAR CAMERA MAGE GND     41 BR REAR CAMERA MAGE GND     42 BR REAR CAMERA MAGE GND     43 BR REAR CAMERA MAGE GND     44 BR REAR CAMERA MAGE GND     45 BR REAR CAMERA MAGE GND     46 BR REAR CAMERA MAGE GND     47 BR REAR CAMERA MAGE GND     48 BR REAR CAMERA MAGE GND     49 BR REAR CAMERA MAGE GND     40 BR REAR CAMERA MAGE GND     41 BR REAR CAMERA MAGE GND     42 BR REAR CAMERA MAGE GND     43 BR REAR CAMERA MAGE GND     44 BR REAR CAMERA MAGE GND     45 BR REAR CAMERA MAGE GND     46 BR REAR CAMERA MAGE GND     47 BR REAR CAMERA MAGE GND     48 BR REAR CAMERA MAGE GND     49 BR REAR CAMERA MAGE GND     40 BR REAR		36 W W C C C C C C C C C C C C C C C C C
Connector No.   B46	Terminal Color   Signal Name [Specification]     1	Cornector No. 866  Cornector Name WIRE TO WIRE  Cornector Type TH40AMV-NH  T12 3 4 5 5 7 8 0 10 11 12 10 10 10 10 10 10 10 10 10 10 10 10 10	Terminal   Color   Signal Name [Specification]     No
WIN MONITOR)  52		Connector No. BS1 Connector Name WOOFER Connector Type RSOBFGY  H.S.	Terminal   Color   Signal Name [Specification]   Color   Col
BOSE AUDIO WITH NAVIGATION (TW Connector No. 845 AROUND VIEW MONITOR CONTROL UNIT CONNECTOR Name AROUND VIEW MONITOR CONTROL UNIT CONNECTOR Type 1724FW-NH AROUND VIEW MONITOR CONTROL UNIT CONNECTOR Name AROUND VIEW MONITOR CONTROL UNIT CON	Terminal   Color   Signal Name [Specification]     No.	Connector No. B48 Connector Name REAR SOLAWKER LH Connector Type TROOFBR	Terminal   Color   Signal Name [Specification]

JCNWM1063GB

- [With NAVI] - [With NAVI] - [With entraliament system] - [With entertainment system]			Signal Name [Specification]		АВ
20 GR 21 L 22 B - [With 23 W - [With 24 R - [With 25 SHELD - [With 26 SHELD 27 V 27 V 28 SHELD 29 O O		Connector No. B231 Connector Name BUZZER Connector Type RR02FBR-DGY H.S.	Terminal   Color   Signal   No.   Of Wire   Signal		C
	[hojde:		ation]		Е
E201 WIRE TO WIRE TH80FW-CS16-TM4	Signal Name (Specification)	ER30 TRCAR SOUAWKER RH TROZFBR	Signal Name [Specification]		F
ector No. Rector No. Sector Type	No. of Wire   No. of Wire	ector No. ector Type	Terminal Golor No. of Wire of Wire 2 R 2		G
Conn		Conn			Н
	Signal Name [Specification]	14 13 12 11	Signal Name [Specification]		I
B68 WIRE TO WIRE RSDGMGY	Signal N	TO WIRE NW-NS8	Signal N		J
WIN MONITOR) Connector No. B88 Connector Name WIRE Connector Type RS06 HS06	Terminal Color No. of Wire A 4 B B R R	Connector No. B218 Connector Name WIRE Connector Type TK100 HS 10 9 8 7 18 17 1	Terminal   Color   No.   13   V     14   SB		K
M. L.					L
BOSE AUDIO WITH NAVIGATION (TV Connector No. B87 Connector Name WIRE TO WIRE Connector Type NSDBWW-CS  H.S. T Z T Z T Z T Z T Z T Z T Z Z Z Z Z Z	Signal Name [Specification]	HRE H 5 4 3 2 1 13 12 11 10 9	Signal Name [Specification]		M
DIO WITH B67 WIRE TO WIRE NSOBAWW-CS 1 2   1 2		MIRE TO WIRE THISFW-NH			AV
BOSE AUC Connector No. Connector Name Connector Type	Terminal   Color   No. of Wire   1   C   4   R   R   R   R   R   R   R   R   R	Connector No Connector Type Connector Type H.S.	Terminal Color No. of Wire 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	IONIMMAGACO	0
				JCNWM1064GB	Р

Connector No. 8255 Cornector Name WIRE TO WIRE Connector Type RS08FGY	H3. H3. (4 3 2 1) (8 7 6 5)	Terminal   Color   Signal Name   Specification	Ocurrector No. D3 Courrector Name DOOR MIRROR (DRIVER SIDE) Corrector Type ITH24MM-NH  M.S. I2 I11 10 9 8 7 6 5 4 3 2 1  [24 22 22 21 20 19 18 I17 16 15 14 13	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   S
18 W 19 E 27 V 27 C 28 GR 20 CR 20 C	A SHELLD	HH	D1   Connector Name   WIRE TO WIRE   Connector Type   TH40FW-CS15	Terminal   Color   Signal Name [Specification]   14   P
IN MONITOR	H.S.    Main temperature   Main	Terminal   Color   Signal Name [Specification]   No. of Wive   Signal Name [Specification]   No. of Wive   Shell   Shell   No. of Wive   Shell   No. of Wive   No. of Wi	Gornnector No. B259 Commector Name CORNER SENSOR (RL.) Commector Type YDX02FB  H.S.	Terminal   Color   Signal Name [Specification]
BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)	HS 3 2 1 8 7 6 5 4	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1	Connector No. B256 Connector Name CORNER SENSOR (RR) Connector Type YDX02FB	Terminal Color No. of Wire Signal Name [Specification]

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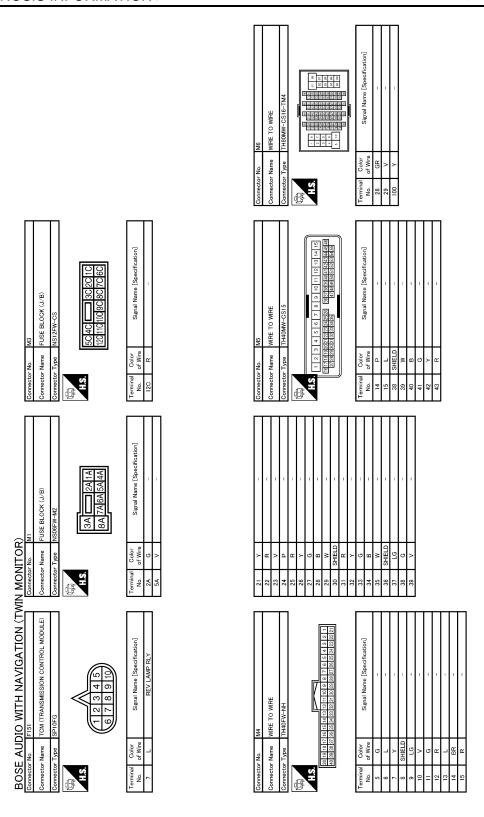
Connector No. D34 Connector Name FRONT DOOR SPEAKER RH Connector Type NS02/FBR-CS  MS02/FBR-CS  MS02/FBR-CS  211	Terminal Color No. of Wire  1 L	Connector No. D76  Connector Name REAR DOOR SPEAKER RH  Connector Type NS0ZFBR-CS  H.S.	Color   Signal Name [Specification]   1   SB   -		A B C
Connector No. D33 Connector Name DOOR MIRROR (PASSENGER SIDE) Connector Type TH24MW-NH  L3	No. of Wire   Signal Name [Specification]   Office   Of	Connector No. D71 Connector Name WIRE TO WIRE Connector Type   TK10MW-NS8  H.S. 1   2   3   4   5   6   7   8   910    1   12   13   14   15   16   17   18	Terminal Color No. of Wire Signal Name (Specification) 13 V - 14 SB -		E F G
Connector Name   Conn	Terminal Color No. of Wire Signal Name [Specification] 4 L L 19 C 20 LG 21 SHIELD 23 BR 24 L L 24 L R 24 R R 25 R R R 26 R R R	Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NS02FBR-C5  TAS	Terminal   Codor   Signal Name   Specification		 J K
BOSE AUDIO WITH NAVIGATION (TWI Connector No D4 Connector Name FRONT DOOR SPEAKER LH Connector Type INSIGEBR-CS	Terminal   Collor   Signal Name [Specification]   No. of Wire   L   L	Connector No. DSI Connector Type TKIOMW-NS8  TAILS 11 12 13 14 15 16 17 18	Terminal   Color   Signul Name [Specification]   13   V   -   14   SB   -   -	JCNWM1066GB	M AV
				JCNWM1066GB	Р

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BOSE AUDI	BOSE AUDIO WITH NAVIGATION (TW	WIN MONITOR) Connector No.   D111	Connector No. E5	Connector No. [E65
e e	WIRE TO WIRE	e e	e.	ne ne
Connector Type Ti	TH24FW-NH	Connector Type TH08MW-NH	Connector Type TH20FW-CS12-M4-1V	Connector Type RS06FB-PR
HS. 121110	12[11]10[9] 8 7 6 5 4 3 2 1 2423[22[20]19[18]17[16]15[14]13	HS. 148 7 6 5 1 1 1 6 5 5 1 1 1 1 1 1 1 1 1 1 1 1	11.5. STORT TO STORT THE PROPERTY OF STORT OF ST	#8 #8
Terminal Color No. of Wire 5 R R 6 G G 7 7 Y Y 9 W 10 SHIELD	Signal Name [Specification]	Terminal   Color   Signal Name [Specification]   Color   Col	Terminal Color   Signal Name [Specification]   Color   Signal Name [Specification]   CE GND   25   G   COLOR   E SIGNAL   CE	Terminal   Color   Signal Name   Specification   3
Connector No. El Connector Type R Connector Type R H.S.	E66 RS06FBPR 4 3 2 1 8 7 6 5	Connector No. E104 Connector Name WIRE TO WIRE Connector Type N312MW-CS      2   3       4   5       2   8   9   10   11   12   12	Connector No. E 106 Connector Name WIRE TO WIRE Connector Type TH80FW-CS16-TM4	Connector No. E107 Connector Name PARKING BRAKE SWITCH Connector Type TBDIFW
Color   Color	Signal Name [Specification]	Terminal   Color   Signal Name   Specification   No. of Wire   Signal Name   Specification	Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   28 G   -	Terminal Color No. of Wire  Signal Name [Specification]

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Connector No. E153 Connector Name WIRE TO WIRE Connector Type RS06MB  H.S.	of Wire Signal Name [Specification]  B B	Connector No. F103  Connector Type TK36FW-NS10  M.S. STATEMENT STA	nal Color Signal Name [Specification]		A B C
Oomeet Oomeet Oomeet H.S.	Terminal No. 0.0	Commett	Terminal 31		D E
Connector No. E182 Connector Name CORNER SENSOR (FR) Connector Type YOXUZFB	irial Oolor Signal Name (Specification) R R	Connector No. F51  Connector Name A/T ASSEMBLY  Connector Type RR (OrG-DGY  H.S. F51  F81 OrG-TABLY  F81 Org-TABLY  F81 Org-TABLY  F81 Org-TABLY  F82 Org-TABLY  F83 Org-TABLY  F83 Org-TABLY  F83 Org-TABLY  F83 Org-TABLY  F84 Org-TABLY  F85 Org-TA	Signal Name [Specification]		F
Connect Connect Connect Connect H.S.	Terminal No. 0	Connect Connect H.S.	Terminal No. 7		Н
VIN MONITOR) Connector No. El SI Connector Type RS08MB-PR  LAS.  (1 2 3 4)	Terminal   Color   Signal Name [Specification]   No. of Wire   2   L	Connector No. E155 Connector Name FRONT CAMERA Connector Type RH06FB H.S.	Terminal   Color   Signal Name [Speeification]     No.		J K
BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)	Terminal   Color   Signal Name [Specification]   No. of Wire   Color   Color	Connector No. E154 Connector Name CORNER SENSOR (FL.) Connector Type YDX/ZFB H.S.	Color	JCNWM1068GB	M AV
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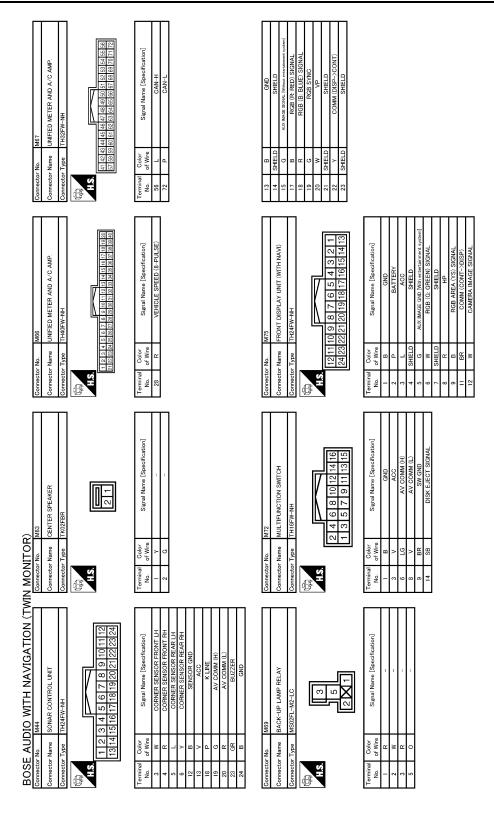


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# [NAVIGATION (TWIN MONITOR)]

No. M13  -Name FRONT SOUAWKER LH  Type TKOZFBR  Color of Wire L L L L L	No. M37  Name STEERING ANGLE SENSOR  Type TH08FW-NH  T 2 3 8  T 4 5	Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   SENSOR   ER   SENSOR   ER   SENSOR   ER   SENSOR   ER   COND		A B C
Connector No.  Connector Name Connector Name Connector Name No.  Terminal Oolor No.  1 1 L 1 L	Connector No. Connector Name Connector Type H.S.	Terminal No. 07 7 7 7 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9		D
4 3 2 1 16 15 14 13 Specification]	M36 COMBINATION SWITCH (SPIRAL CABLE) TROBFGY-IV  24 25 26 31 32 33 34	ooifeation]		Е
WIRE NH  NH  1	-1v 25 26 32 33 34	Signal Name (Specification)		F
M10 M18E TO M1		Odor Pire B		G
Connector No. Connector No. The connector No. Th	Connector No. Connector Name Connector Type	Terminal OC No. of 7		Н
	6 7 15 16 16 16 16 16 16 16 16 16 16 16 16 16	oreification)		1
	W-CS W-CS 11 11 12 13 14	Signal Name [Specification]		J
OT > 0 > 0 > 0 > 0 > 0 > 0 > 0 > 0 > 0 >	No. M25 Name WIRE TO WIRE Type NS16MW-CS  1 2 3  8 9 10 11 1	S S S S S S S S S S S S S S S S S S S		K
WIN MONITOR)	Connector No. Connector Type	Terminal No. 1		K
		<u>ا</u>		L
WRE CSI6-TM4  CS	114 15 16 6 7 8	Signal Name (Specification)		M
M M M M M WHE TO THEROWN	M24 BD16FW BD16FW 9 10 11 12 13 14 1:			AV
BOSE AUC Connector Name Connector Type Connector Type No. of Wire 51 V 52 LG 53 SHELD 54 SHELD 55 SHELD 56 C 56 V 56 SHELD 57 P 58 SHELD 57 P 64 C 58 SHELD 56 C 66 W	ector No. ector Name ector Type	Color   Colo		0
O Company of the comp	Commo	<u> -</u> "	JCNWM1070GB	
				Р

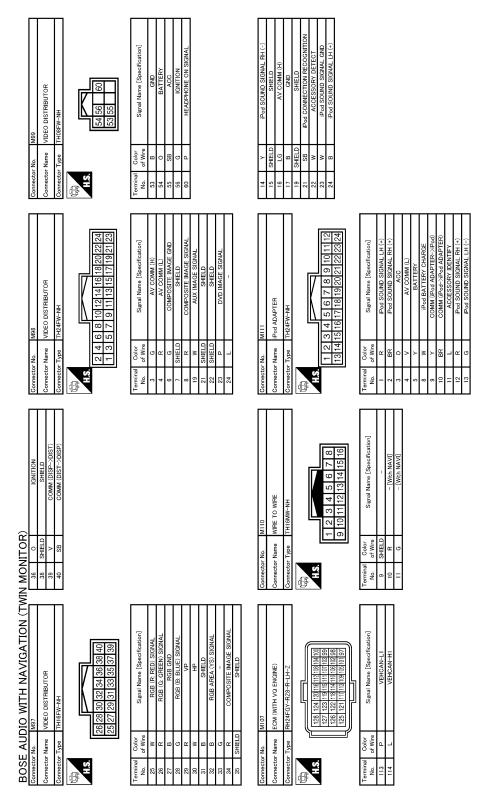
Revision: 2009 March AV-933 2009 FX35/FX50



JCNWM1071GB

MAL MAL	А
VEHICLE SPEED (8-PULSE CONTROL SIGNAL 1 CONTROL SIGNAL 3 CONTROL SIGNAL 3 MODE CHANGE SIGNAL AV COMM (1) AV COMM (1) AV COMM (1) AV COMM (1) CAN-H CAN-H CAN-H CAN-H	В
	С
88 1 4 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	D
NAVI)	Е
AV CONTROL UNIT (WITH NAV))  TH4GPW-NH  Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]  BATTERY  GND  BATTERY  GND  GND  GND  GND  GND  GND  GND  GN	F
	G
Connector Name   Conn	Н
REAR PH (+) REAR PH (-) W GND SW B FFFY	I
SOUND SIGNAL REAR PH (-) SOUND SIGNAL REAR PH (-) STRG SW GND SW	J
VIN MONITOR)  13 BR   R   V   R   R   R   R   R   R   R	K
	L
BOSE AUDIO WITH NAVIGATION (Typerameter No. M80   M8	M
AV CONTROL UNIT (WITH NAV)    AV CONTROL UNIT (WITH NAV)    THISPW-CS2    10	AV
Connector Name   Connector Name   Connector Name   Connector Name   Connector Type   Connector Type   Connector Name   Conn	0
JCNWM1072GB	Р

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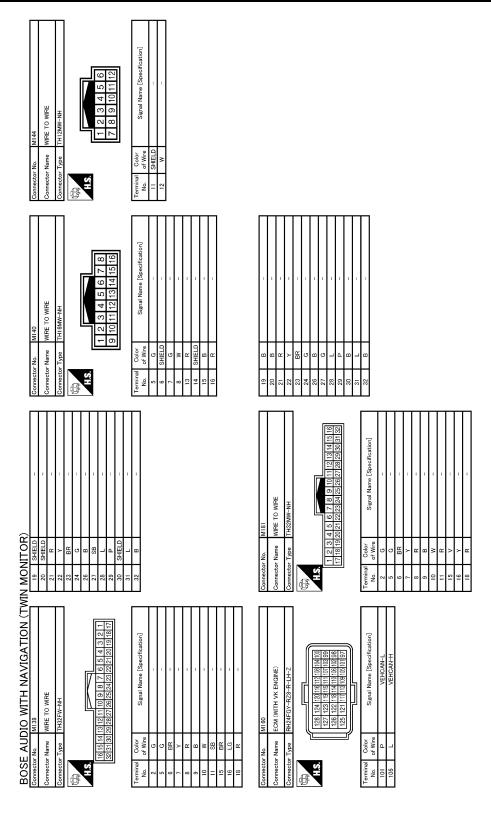


JCNWM1073GB

## [NAVIGATION (TWIN MONITOR)]

		Miles   Mile	A B C
No. M116 Name WIRE TO Type TX38MW  12 3 4 5 11038 1 7 8 9 10 ENDER	No of Wire Signal Name (Specification)	Connector No.   M122	E F G
	No. of Wire Signal Name (Specification)	20   GR	J K
AUDIO WITH NAVIGATION  Fine Mili2  Fige Prieff or Field of Field o	No         of Wire         Signal Name (Specification)           1         B         Fod SOUND SIGNAL LIN (+)           2         W         Fod SOUND SIGNAL CND           5         BR         COMM (Fod->)Fod ADAPTER)           6         Y         COMM (Fod->)Fod ADAPTER)           7         R         Fod SOUND SIGNAL RH (+)           9         SB         Fod CONNECTION RECOGNITION           10         B         Fod CONNECTION RECOGNITION           12         W         Fod BATTERY CHARGE           14         SHIELD         SHIELD           15         W         ACCESSORY DETECT           16         L         ACCESSORY DETECT           16         L         ACCESSORY DENTIFY	Connector No.   MI17	AV O 0 074GB

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JCNWM1075GB

Connector No.   M303	Connector Name WIRE TO WIRE Connector Type GT1160-15-HU  Connector Type GT1160-15-HU  Terminal Color No of Wire Signal Name [Specification]	A B C
		E
AUXILLARY INPUT JACKS A08FW  12 3 T7 8  Signal Name [Specification] AUX SOUND SIGNAL RH (+) AUX SOUND	AV CONTROL UNIT (WITH NAVI) GT5-1S-HU GT6-1S-HU Signal Name [Specification] GPS ANTENNA SHIELD SHIELD	F
ector No. ector Name ector Type or of Wie- o	nector No.  nector Name nector Type  1.5.  1.5.  1.1.  SHIELD	G
		Н
SHELD HEADPHONE SOUNDSIGNAL SIGNAL LH (+) HEADPHONE SOUNDSIGNAL SIGNAL HE (+) SOUND SIGNAL LH (-) SOUND SIGNAL LH (-) SOUND SIGNAL LH (-) SOUND SIGNAL HH (-) SHELD AV COMM (1) AV COMM (1)	MATZ AV CONTROL UNIT (WITH NAVI) FAKRA JACK  [100] Sigral Name [Specification] SAFILLITE ANTENNA	I J
MIN MONITOR)  16 B B F F F F F F F F F F F F F F F F F	Connector No. MS72 Connector Name AV OO Connector Type FAKRA HS. Terminal Color No. of Wire 108	K
		L
MISC	MAZ1 AV CONTROL UNIT (WITH NAVI) GITI3SH-2/1S-HU  Signal Name [Specification] FM SUB  AM-FM MAIN  ANTENNA AMP. ON SIGNAL	М
E AUDIO WITH or Name DVD PLAVER or Type THZETW-NH    2   6   8   10   12   14   13   15   11   13   14   14	M371-	AV
BOSE AUI	Connector No. Connector Name Connector Type Connector Type No. Of Wire 106  107  107  107	0
B S S S S S S S S S S S S S S S S S S S		CNWM1076GB
		Р

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BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)	IN MONITOR) Connector No M327	Connector No M383	Connector No M385
e e	e e	e e	e e
H.S.	HS.	H.S.	H.S.
Terminal   Color   Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification] No. of Wire SatteLUTE ANTENNA 3 - SATELLITE ANTENNA	Terminal   Color   Signal Name [Specification]
Connector No. M386	Connector No. M387	Connector No. M388	Connector No. M389
Connector Name ANTENNA BASE Connector Time GT18SSN-17IDD-HII	Connector Name WIRE TO WIRE Connector Tune I MSO IACK	Connector Name WIRE TO WIRE	Connector Name WINDOW ANTENNA (SUB) Connector Tune DOILER-A
Terminal Color Signal Name [Specification] No. of Wire ANTENNA AMP. ON SIGNAL	Terminal Color Signal Name [Specification] No. of Wire	Terminal Color Signal Name [Specification] No. of Wire 1	Terminal Color Signal Name [Specification] No. of Wire -

JCNWM1077GB

### **IPOD ADAPTER**

## [NAVIGATION (TWIN MONITOR)]

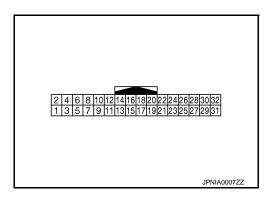
	ion]			А
# E 3 4 4	Signal Name [Specification] MICROPHONE SIGNAL MICROPHONE GND MICROPHONE VCC			В
Cornector No. R17 Connector Name MIGROPHONE Connector Type TK04FW MASA	Color of Wire Sir			С
Connector No. Connector Typ	Terminal No. 2 2 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6			D
10 11 12 22 24 E 2 2 2 4 E 2 2 2 4 E 2 2 2 4 E 2 2 2 4	coffication]			Е
WIRE TO WIRE THZAMW-NH  3 4 5 6 7 8 9 15 16 17 18 19 20 21	Signal Name (Specification)			F
or No.	Ocior of Wire			G
Connect Connect H.S.	Terminal No. 0			Н
100 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Signal Name [Specification]			I
7 HIGFW-NH 7 6 5 4 15 14 13 12	Signal Name			J
MIN MONITOR)  Connector No. R7  Connector Name WIRE TO WIR  Connector Type THISPW-NH  H.S.  R 7 6 5  1615 14 11	Color No.   Orlor No.   Orlo			K
N				L
Connector No.   R2   Connector No.   R2   Connector No.   R2   Connector Type   TH24FW-NH	Signal Name (Specification)			M
MIRE TO WIRE TO WIRE TO WIRE TO WIRE TO WIRE TO WIRE WIRE WIRE WIRE WIRE WIRE WIRE WIRE				AV
BOSE AUC Connector Nane Connector Type Connector Type 12 111 24 23	Terminal   Color			0
			JCNWM1078GB	Р

## **DVD PLAYER**

Reference Value

INFOID:0000000003825980

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
2 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
3	Ground	Illumination signal	Input	Ignition switch	Lighting switch is OFF.	0 V
(L)	Giodila	iliumination signal	Прис	ON	Lighting switch is ON.	12.0 V
4 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
5 (B)	_	Shield	_	_	_	_
7 (P)	5 (B)	DVD image signal	Output	Ignition switch ON	When DVD image is displayed.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
9 <sup>*</sup> (L)	_	_	_	_	_	_
13 (B)	11 (G)	AUX sound signal LH	Input	Ignition switch ON	AUX sound output.	(V) 1 0 -1 *** 2ms SKIB3609E

### **DVD PLAYER**

## [NAVIGATION (TWIN MONITOR)]

	minal e color)	Description				Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
14 (W)	12 (R)	AUX sound signal RH	Input	Ignition switch ON	AUX sound output.	(V) 1 0 -1 *** 2ms SKIB3609E
16	_	Shield	_	_	_	
17 (G)	18 (R)	Headphone sound signal LH	Output	Ignition switch ON	Headphone sound output.	(V) 1 0 -1 +2ms SKIB3609E
19 (BR)	20 (Y)	Headphone sound signal RH	Output	Ignition switch ON	Headphone sound output.	(V) 1 0 -1 + 2ms SKIB3609E
21 (Y)	22 (BR)	Sound signal LH (DVD and AUX sound)	Output	Ignition switch ON	AUX or DVD sound output.	(V) 1 0 -1 + 2ms SKIB3609E
23 (R)	24 (G)	Sound signal RH (DVD and AUX sound)	Output	Ignition switch ON	AUX or DVD sound output.	(V) 1 0 -1 *** 2ms SKIB3609E
25 (B)	_	Shield	_	_	_	_
27 (B)	_	Shield	_	_	_	_
29 (R)	_	AV communication signal (L)	Input/ Output	_	_	_
30 (G)	_	AV communication signal (H)	Input/ Output	_	_	_

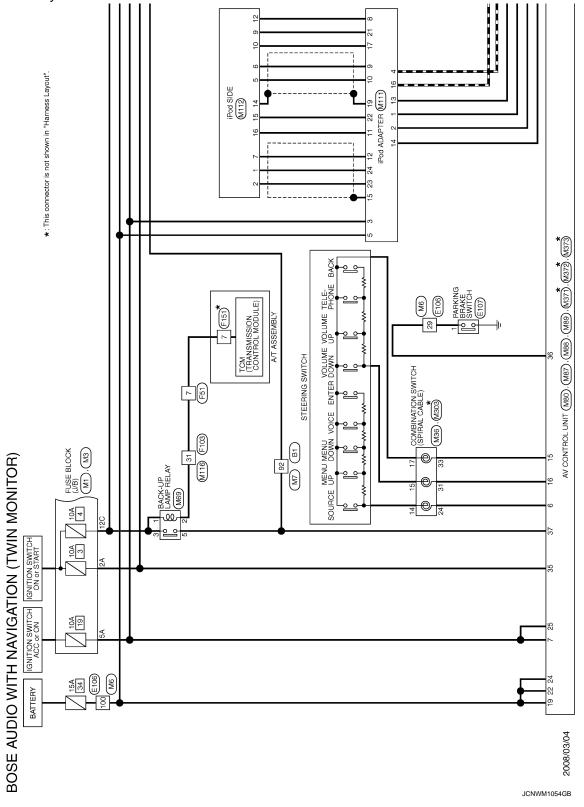
#### NOTE:

<sup>\*:</sup> This harness is not used.

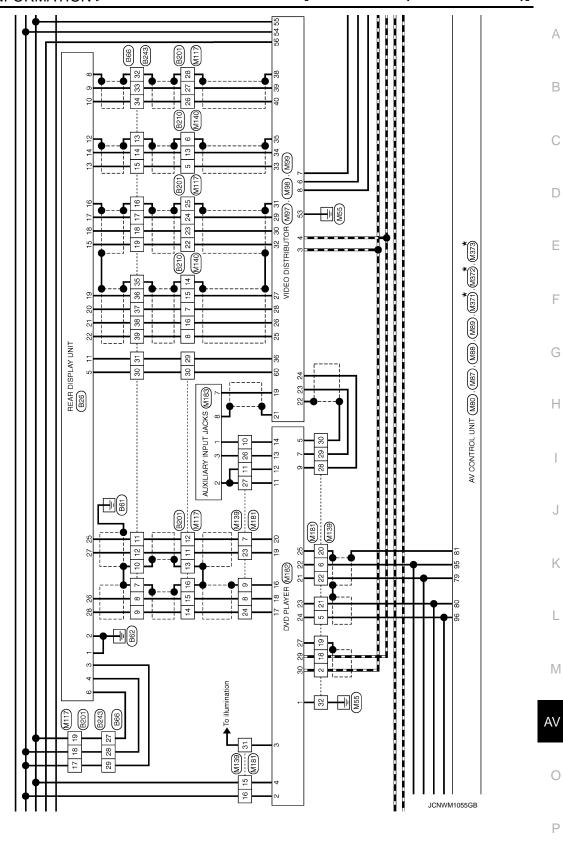
Wiring Diagram - BOSE AUDIO WITH NAVIGATION (TWIN MONITOR) - INFOID:000

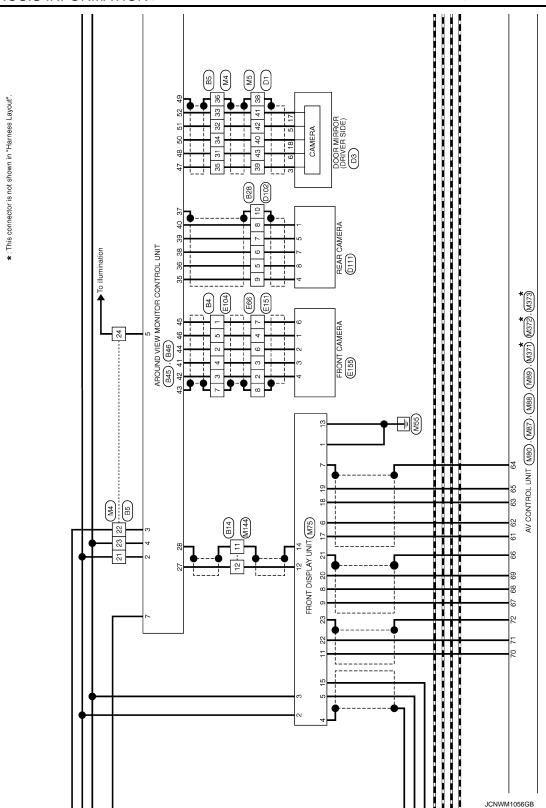
#### NOTE:

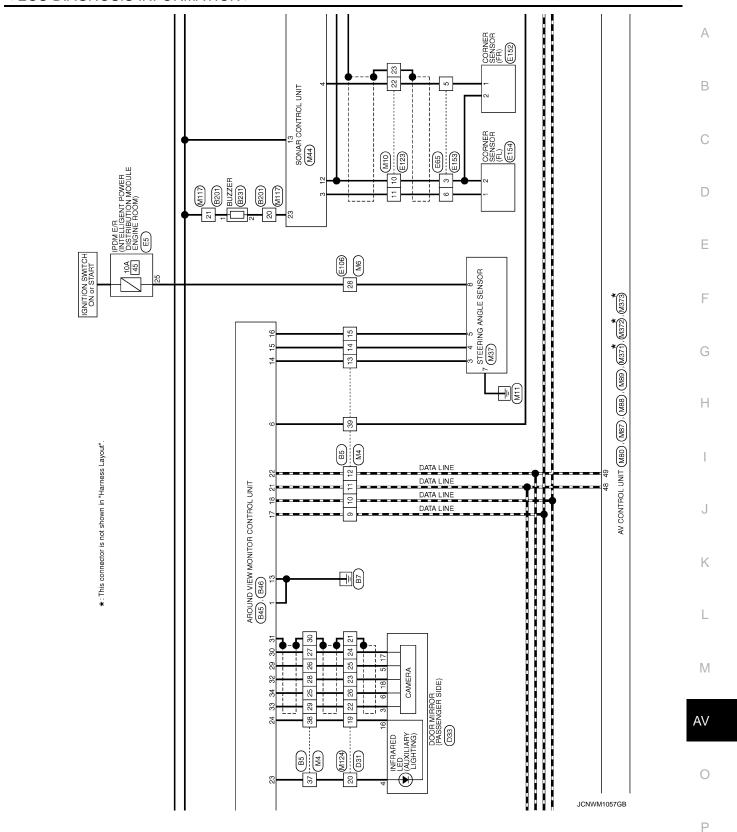
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

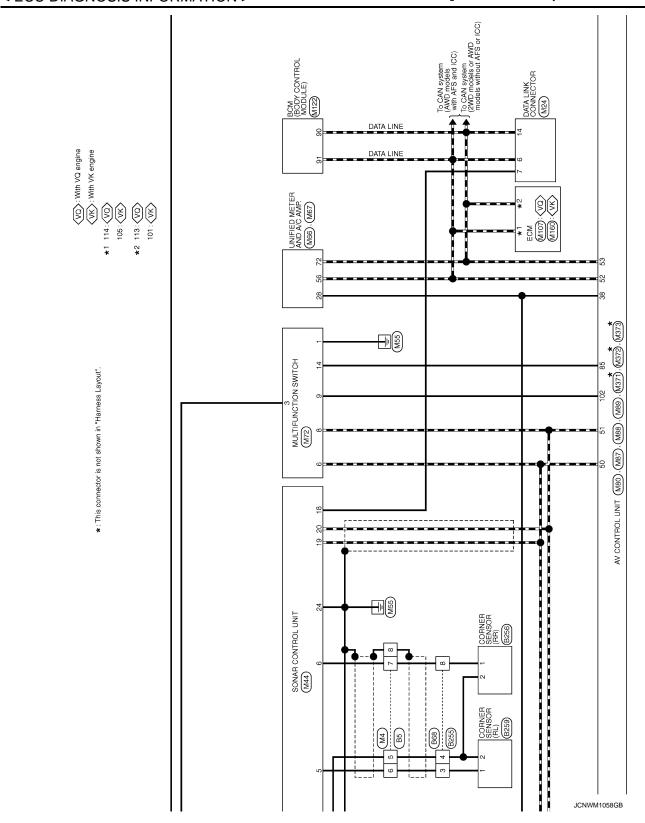


\*: This connector is not shown in "Harness Layout".









Α

В

C

D

Е

F

G

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J

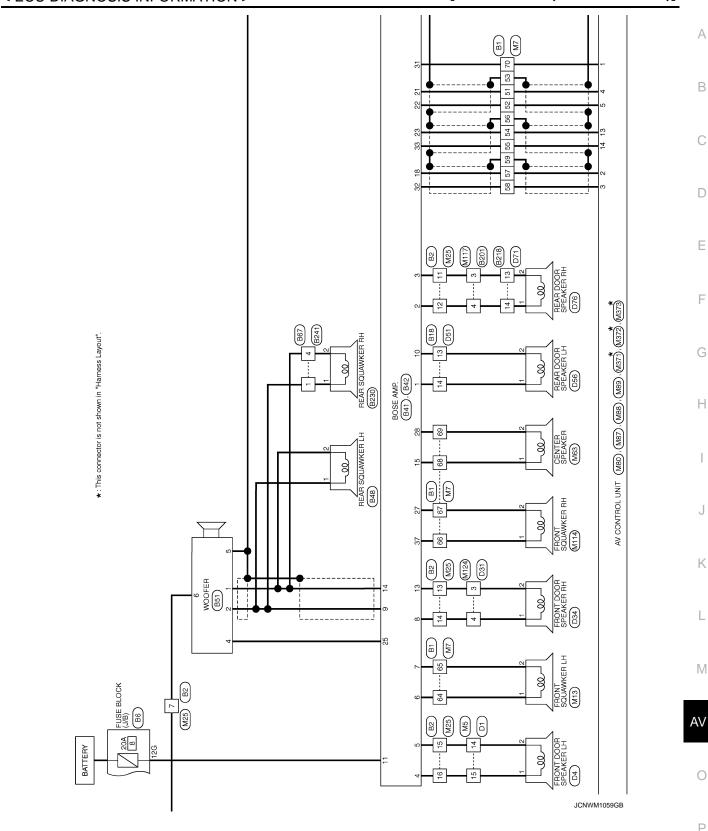
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L

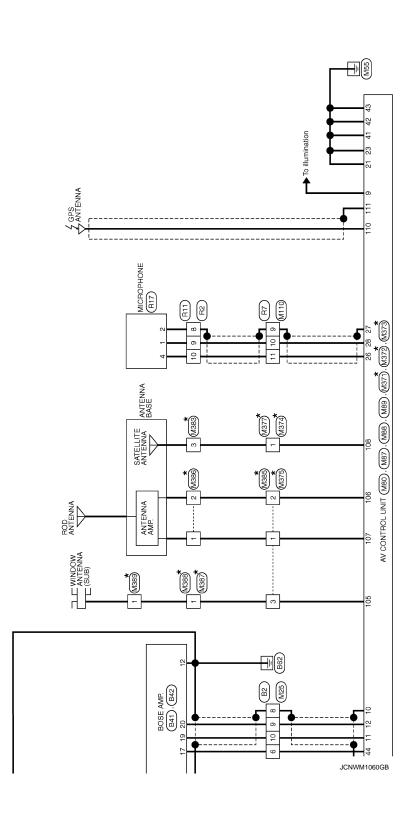
M

0

Ρ



\*: This connector is not shown in "Harness Layout".



# [NAVIGATION (TWIN MONITOR)]

Connector No. 64  Connector Name WIRE TO WIRE  Connector Type  NS12FW-CS  ALS	SHELD	Connector No. B14 Connector Type TH12FW-NH  Connector Type TH12FW-NH  Connector Type TH12FW-NH  Connector Type TH12FW-NH  Connector Type TH12FW-NH	Color   Color   Signal Name [Specification]   No. of Wire   SHELD   -		В
Connecto Connecto Connecto A.S.	5 - 2 6 4 0 C	Com	Termina No		D
			sation]		Е
B2   WIRE TO WIRE   NSI 6FW-CS   T   C   S   4   T   3   2   1		BB FUSE BLOCK (J/B) NSIZEBR-CS 5G4G  3G 2G 1G 12011G10G9G8G 7G 6G	Signal Name [Specification]		F
			of Wire GR		G
Connector No. Connector Name Connector Type I.S. I.S.  I.S.  Terminal Color No. Act Wiles	NO.	Connector No. Connector Name Connector Type	Terminal No. 12G		Н
			1 1 1 1 1 1 1 1		I J
<u> </u>					0
MIN MONITOR)  66 V 67 V 68 C 68 C 70 GR 70 GR 82 0		<del>                                     </del>	32 Y N N N N N N N N N N N N N N N N N N		К
		000			L
BOSE AUDIO WITH NAVIGATION (T Connector No. B1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name (Specification)		M
BI WITH NA BI WIRE TO WIRE THEOFW-CSIB-TRAM BI WIRE SIGNAL SIGNAL SIGNAL NAME AND SIGNAL NAME		WIRE TO WIRE TH40MW-NH TH40MW-NH			AV
BOSE AUC Gonnector No. Connector Type Connector Type Terninal Color No. On Mo.		Connector No. B5 Connector Type ITH40MW- Connector Type ITH40MW- IL2 3 4 5 6 2 2 2	Terminal Color No. of Wire S B B B B W B B B B B B B B B B B B B B		0
				JCNWM1061GB	Р

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Connector No R28	e e	Connector Type TH24MW-NH			1 0 0 1	12 3 4 5 6 7 8 9 10 11 12	77		Terminal Color Signal Manua [Sanaifenstian]	of Wire			- BB	H	10 SHIELD -						12 B GND	13 Y SOUND SIGNAL FRONT DOOR SPEAKER RH (=)	14 R SOUND SIGNAL WOOFER AND REAR SQUAWKER (-)																	
13	$\mathbb{H}^{}$	íω	Н	19 B RGB GND	G RGB (E	æ	22 W RGB (R: RED) SIGNAL	25 THEADPHONE SCONDSIGNAL SIGNAL LH (*)  26 PHEADPHONE SOUNDSIGNAL SIGNAL LH (*)	BR	28 L HEADPHONE SOUNDSIGNAL SIGNAL LH (+)											Sonnector No. B42	Owe Name	-	Connector Type SGA12FBK-SJA2	<b>4</b>		1413 12 11 10	987654321	Ferminal   Color   Signal Name [Specification]   No. of Wire	t	2 SB SOUND SIGNAL REAR DOOR RH (+)	3 V SOUND SIGNAL REAR DOOR RH (-)	_	۵	†	s × .	5 ,	+	5 8	II GR BATTERY
IN MONITOR) Generator No. 1826	Connector Name REAR DISPLAY UNIT	Connector Type TH32FW-NH			7	2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Terminal Color Signal Name [Security 2]	re	GND	70	. 97	5 P HEADPHONE ON SIGNAL	6 GR ACC	SHIELD	> .	SB	0	12 SHIELD SHIELD	31 GR AMP. ON SIGNAL G	32 L SOUND SIGNAL FRONT LH (-)	Y SOUND SIGNAL REAR RH (-)	3/ V SOUND SIGNAL FROM SQUAWKER RH (+)	2		3		F	1					_1				1	_
BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)	ae .	Connector Type TK10FW-NS8	<b>4</b>		10 9 8 7 6 == 5 4 3 2 1	3 17 16 15 14 13 12			la.	of Wire	2 3	- +-									Gonnector No. B41	BOSE AMB	Т	Connector Type SCAT9FBK-SGA4	4	Ċ	37 36 35 34 33 32 31 30 29	27 2025 24 23 22 21 20 19 18 1/110 15	Terminal Color Signal Name [Specification]	t	0	Ь	œ	ŋ	>	g g	¥ .	+	T	5

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# [NAVIGATION (TWIN MONITOR)]

AL AL GIND GIND GIND GIND GIND GIND GIND GIND		$\prod$	А	
AV COMM (H)  AV COMM (L)  AV COMM (L)  LED (+)  LED (+)  LED (+)  LED (+)  CAMERA IMAGE SIGNAL SIDE CAMERA RH OWER SUPPLY REAR CAMERA COMM REAR CAMERA COMM REAR CAMERA COMM REAR CAMERA COMM REAR CAMERA IMAGE SIGNAL REAR CAMERA IMAGE SIGNAL REAR CAMERA IMAGE SIGNAL			В	
	BR GR CG	Ø	С	
<del></del>	<del>                                     </del>	39 8 39 8	D	
ITOR CONTROL UNIT    Company   Compa		specification]	Е	
WEW MON WE W MON WE W MON WE W MON WE W MON WE	MIRE NH 8 10 11 12 29 30 31 32	Signal Name (Specification)	F	
Color No.   Colo	3 4 8 8 8 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Terminal of Odior No. of Odior	G	
Conner   Con	Common		Н	
SIDE CAMERA LH IMAGE GND		Signal Name (Specification) SOUND SIGNAL WOOFER (+) SOUND SIGNAL WOOFER (+) WOOFER AMD BATTERY	I	
	RSOBFGY 2 4 6 1 3 5 1 3 5 1	Signal Nan SOUND SIC SOUND SIC WOOFER B	J	
WIN MONITOR)	9 9	Terminal Color No. of Wre No. of Wre 2 G G G G G G G G G G G G G G G G G G	К	
		$\overline{\Box}$	L	
BOSE AUDIO WITH NAVIGATION (T Connector No.   845   1424 46 49 50 52 54 56 58 60 62 64 41 43 43 47 49 51 53 55 57 59 61 63 63 64 64 64 6 6 6 6 6 6 6 6 6 6 6 6	KER LH	Signal Name [Specification]	М	
DIO WITH   B45	REAR SQUAWKER LH TKO2FBR	Ш	AV	
BOSE AUC   Connector Name   Connector Type   Connector Type   Connector Type   Connector No. of Wie   Connector No. of Wie	Connector Name Connector Type	Color	0	
		<del></del>	JCNWM1063GB	
			'	

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BOSE AUDIO WITH NAVIGATION (TV	WIN MONITOR)						
Connector No. B67	Connector No. B68	Connector No. B201	01	20	GR	- [With NAV[]	П
Consector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name	JAIM OT JAIM	21	٦	- [With NAVI]	
Comecco Name With 10 With			ie io mine	22	В	<ul><li>[With entertainment system]</li></ul>	
Connector Type NS08MW-CS	Connector Type RS08MGY	Connector Type TH	TH80FW-CS16-TM4	23	М	<ul> <li>[With entertainment system]</li> </ul>	
¢	¢	q		24	Я	<ul> <li>[With entertainment system]</li> </ul>	
10000000000000000000000000000000000000	10000000000000000000000000000000000000			25	SHIELD	<ul> <li>[With entertainment system]</li> </ul>	
		) I	15 15 15 15 15 15 15 15 15 15 15 15 15 1	26	SB	=	
1 2 1			2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	27	>	1	
\(\rapprox \)	וכ		85 55 86 56 86 56	28	SHIELD	-	
]	8/19/2	*I*	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	29	0	-	
				30	۵	1	7
	Terminal Color	Terminal Color	3	_			
No. of Wire Signal Name [Specification]		_	Signal Name [Specification]				
	3 W –	3	_				
4 R -	4 B –	4 SB	_				
	02 80	11 BR	-				
		7	Ī				
		ᇬ	_				
		+	_				
		1	-				
		S		_			
		$\dashv$	1				
		18 GR	_				
		/ 61	1				
Connector No. B210	Connector No. B218	Connector No. B230	30	Connector No.	tor No. B231	31	
L L L L L L L L L L L L L L L L L L L	LOWN CT LOWN	Г	TAN COLLANDO		г	0	_
- 1	П		AR SUDAWNER RH	Connec	П	BUZZER	_
Connector Type TH16FW-NH	Connector Type TK10FW-NS8	Connector Type TK	TK02FBR	Connec	Connector Type RK(	RK02FBR-DGY	_
<b>—</b>	4	4		Œ		•	
	生力	1		T.		<b>«</b>	
7	100878 5143011	2		<u> </u>		1	
2	17 16 15 14 13 12		2 1			7 7	
16 15 14 13 12 11 10 9						<b>)</b>	
<u>a</u>	<u>a</u>	<u>a</u>	Signal Name [Specification]	Terminal	_	Signal Name [Specification]	_
No. of Wire	No. of Wire	No. of Wire		ő	of Wire	0	_
5 P	$\dashv$	5	=	_	_	1	_
6 SHIELD –	14 SB –	2 R	_	2	GR	1	_
4							
- M 8							
1							
7							
16 R							

JCNWM1064GB

# [NAVIGATION (TWIN MONITOR)]

Connector No.   6255	1000R MIRROR (DRIVE)   1000R MIRROR (DRIVE)	A B C
	With the connector Name   With TO WIRE	E F G
	Connector Name   CORNER SENSOR (RL)	J K
B241   WIRE TO WIRE   WIRE TO WIRE   Signal   Name [Specification]	Connector Name CORNER SENSOR (RR Connector Name Connector Type VDXQ2FB  Terminal Color No of Wire Signal Name 2 B B B A B B B B B B B B B B B B B B B	M AV

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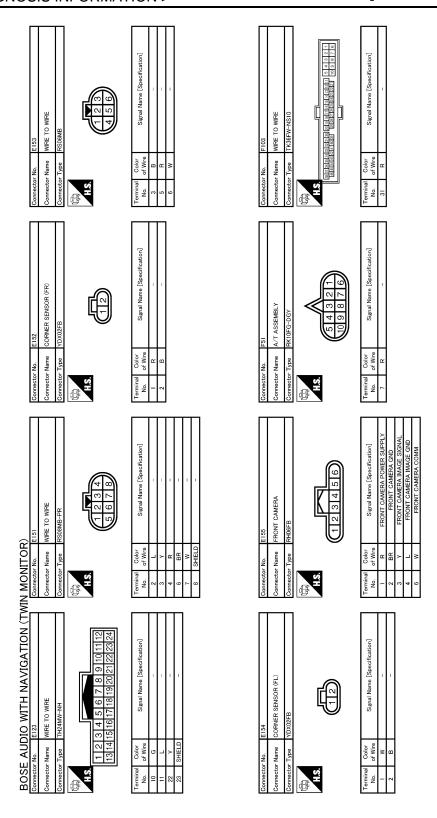
BOSE AUDIO WITH NAVIGATION (TW	WIN MONITOR)		
Connector No. D4	Connector No. D31	Connector No. D33	Connector No. D34
Connector Name FRONT DOOR SPEAKER LH	Connector Name WIRE TO WIRE	Connector Name DOOR MIRROR (PASSENGER SIDE)	Connector Name FRONT DOOR SPEAKER RH
Connector Type NS02FBR-CS	Connector Type TH40FW-CS15	Connector Type TH24MW-NH	Connector Type NS02FBR-CS
<b>E</b>			<b>F</b>
	1.5   14   12   12   11   10   0   0   7   6   6   4   3   2   1	12	
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]
Н	3 Р	Н	Н
2 P =	_ (	S),	2 P
	50 LG	- 22	
	Ś	$\vdash$	
	22 W –	17 L –	
	23 BR –	18 BR -	
	4		
	$\dashv$		
	26 R = _		
Gonnector No. D51	Connector No. D56	Connector No. D71	Connector No. D76
Connector Name WIRE TO WIRE	Connector Name REAR DOOR SPEAKER LH	Connector Name WIRE TO WIRE	Connector Name REAR DOOR SPEAKER RH
Connector Type TK10MW-NS8	Connector Type NS02FBR-CS	Connector Type TK10MW-NS8	Connector Type NS02FBR-CS
番	香	暖	傳
12345 678910 1112131415161718	HS.	12345 678910 1112131415161718	H.S.
Terminal Color Signal Name [Specification] No. of Wire 13 V -	Terminal Color Signal Name [Specification] No. of Wire -	Terminal Color Signal Name [Specification]  No. of Wire  13 V	Terminal Color Signal Name [Specification] No. of Wire -
14 SB –	2 V –	14 SB –	2 V =

JCNWM1066GB

# [NAVIGATION (TWIN MONITOR)]

	eeification]		ecification.]		А
2. E65 Inne WIRE TO WIRE RS306FB-PR (6.5.4	Color Signal Name (Specification) of Wine G G T T T T	D. ELO7 ppe TEOLFW	Color Signal Name [Specification] LG		В
Connector No. Connector Name Connector Type	Terminal No. 0	Connector No. Connector Name Connector Type	No. o		D
POWER ROOM) ENGINE ROOM)  國際語言 57 部  國際語言 57 部	eeffcation]		ocification]		Е
E5 IPDM E.R. (WITELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) TH20FW-CS12-M4-1V TH20FW-CS12-M4-1V TH20FW-GS12-M4-1V	Signal Name [Specification]	E106  TH 60 FP	Signal Name [Specification]		F
ector No. ector Name ector Type	Terminal Color No. of Wire 25 G	ector No. Eector Name v ector Type 1	Terminal Color No. of Wire 28 LG G G G 100 Y		G
Conn Conn	<u> </u>	Conn			Н
	Signal Name [Specification] REAR CAMBEN COMM REAR CAMBEN COMM REAR CAMBEN COMM REAR CAMBEN COMM REAR CAMBEN COM REAR CAMBEN CO	■ 01112	Signal Name [Specification]		I
PEAR CAMERA THOSIMW-NH  4 3 2 8 7 6	Signal Na REAR CAN REAR CAM REAR CAME REAR CAME	E104 WIRE TO WIRE NSI 28WW-CS  1 2 3	Signal Man		J
MIN MONITOR) Connector Name RR Connector Type III	Color   Colo	Connector No.  Connector Name Connector Type N.  Connector Type N.  Connector Type N.	Terminal Color No. of Wire 2 BR W W Z 3 L W W W Z 5 SHELD 7 SHELD		K
					L
BOSE AUDIO WITH NAVIGATION (TOTAL CONTROLL OF THE TO WITH CONTROLL OF THE TOTAL THE TO	Signal Name (Specification)		Signal Name (Specification)		M
DIO WITH  DI02  WIRE TO WIRE  TH24FW-NH  10 9 8 7		E66 WIRE TO WIRE RS08FB-PR 8 7			AV
BOSE AUC Connector No. Connector Name Connector Type H.S. H.S. E41211	Color   Color   Color	Connector No. Connector Name Connector Type	Terminal   Color   No. of Wire   Str.   Color   Of Wire   Str.   Color   Of Wire   Str.   Of   Of   Of   Of   Of   Of   Of   O		0
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	[logicol]	А
	WIRE TO WIRE THBOMW-CS16-TM4	В
	No M6 WRE TO Type Color  V V V	С
	Connector No. Connector Name Connector Type Ro. Ro. 28 CR 29 CR 29 CR 100 Y	D
2010 7060 (Specification)	12   13   14   15   15   15   15   15   15   15	Е
M3  NSIZPW-CS  NSIZPW-CS  5C 4C 3C 2C 1C  12C 11C 10C 9C 9C 7C 6C  Signal Name [Specification]	Name   WIRE TO WIRE   Type   TH40MW-CS15	F
ector No. ector Name ector Type ector Type  D. Odor Color C. R.	3 2 1 0 9 8 8 6 6 cto cto	G
Tem		Н
OOK (J/B) MZ  AZ  AZ  AZ  AZ  AZ  AZ  AZ  AZ  AZ		I
10 USE BL.		J
MIN MONITOR) Commetter Name Connector Type Description Terminal No. of Wire SA V	N	K
		L
BOSE AUDIO WITH NAVIGATION (T Commetor No. F151  Commetor Name TOM (TRANSMISSION CONTROL MODULE)  Commetor Name TOM (TRANSMISSION CONTROL MODULE)  Commetor Type SPIGEG  ALS  Terminal Color No. of Wire Signal Name [Specification]  Terminal Color No. of Wire REV LAMP RLY  REV LAMP RLY	WIRE NH NH Signal Name (Specification) Signal Name (Specification)	M
UDIO WI	M44 WIRE TO TH40 FW	AV
BOSE AUC Connector Name Connector Type  Terminal Color No. of Wire  7 L	Connect Connec	0
	JCNWM1069GB	Р

Connector No. M13 Connector Name FRONT SOUAWKER LH Connector Type TROSTER  H.S.	Terminal Color Signal Name [Specification] No. of Wire 1 L 2 W	Connector No. M37 Connector Name STEERING ANGLE SENSOR Connector Type THOSP-W-WH  T 2 3 8 T 4 5	Terminal   Color   Signal Name [Specification]   3   L   SENORT   4 BR   SENOR   5   5   5   5   5   5   5   5   5
Connector No. M10 Connector Name WIRE TO WIRE Connector Type TH24PW-NH  12   12   11   10   9   8   7   6   5   4   3   2   1	Terminal   Color   Signal Mane [Specification]   Color   Col	Connector No. M36 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TK08FGY-IV  132 25 26 26 26 25 26 25 26 25 26 26 25 26 26 26 26 26 26 26 26 26 26 26 26 26	Terminal   Golor   Signal Name [Specification]   24   P   -   -     31   L   -
WIN MONITOR)    66		Commetor No. M25  Commetor Type MSI ET O WIRE  Commetor Type NSI INMV-CS  H.S. 1 2 3	Terminal Color   No. of Wire   Signal Name [Specification]
BOSE AUDIO WITH NAVIGATION (TW Connector Name WIRE TO WIRE Connector Type TH80MW-CSI6-TM4  LISA TITLE CONNECTOR TH80MW-CSI6-TM4  TH80MW-CSI6-TM4	Terminal Color   Signal Name [Specification]	Connector No.         M24           Connector Name         DATA LINK CONNECTOR           Connector Type         BD16FW           Connector Type         BD16FW           Connector Type         BD16FW           T1         T1           T1         T1           T1         T1	Terminal   Coolor   Signal Name [Specification]   No. of Wire   Signal Name [Specification]

JCNWM1070GB

Connector No. M67  Connector Name UNIFED METER AND A/C AMP.  Connector Type TH32FW-NH  T	Color   Signal Mane [Specification]	B   GND	В
Connectc Connectc	Terminal No. 56 72 72	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	D
7. 18 19 20 27 38 39 40	ation]	(WITH NAVI)  4 3 2 1  4 3 2 1  16 15 14 13  Specification)  10 15 14 13  Specification  EFP  CC  ELD  EN SIGNAL  ELD  ELD  ELD  ELD  ELD  ELD  ELD  E	Е
M66 UNIFIED METER AND A/C AMP. TH40FW-NH  F F F F F F F F F F F F F F F F F F F	Signal Name [Specification] VEHICLE SPEED (6-PULSE)	DISPLAY UNIT -NH	F
4 4	O Color of Wire		G
Connector No. Connector Name Connector Type H.S.	Terminal No. 28	Connector Name   Connector Name   Connector Type	Н
	Signal Name (Specification)	NOTION SWITCH  NH    R   10   12   14   6     7   9   11   13   15     7   9   11   13   15     7   9   11   13   15     7   9   11   13   15     7   9   11   13   15     8   10   10   10     8   10   10     9   10   10   10     10   10   10     10   10	I
M63 CENTER SPEAKER TK02FBR	Signal		J
VIN MONITOR)  Connector No. M6  Connector Name GE  Connector Type TK	Terminal Color No. of Wire 1 V V Color Col	Connector No.   M72	К
0N (TWI			L
H NAVIGATI.	Signal Name (Specification) CORNER SENSOR FRONT RH CORNER SENSOR REAR IH CORNER SENSOR REAR RH CORNER SENSOR REAR RH CORNER SCORN (R) AV COMM (H) AV COMM (H) BUZZER GND	MS9 BACK-UP LAMP RELAY MS92PL-M2-LC  MS92PL-M2-LC  Signal Name [Specification]	М
DIO WIT  M44  SONAR CON  TH24FW-NH  3 4 5		MSOZFI-	AV
BOSE AUC Commercer No. Commercer Name Commercer Type	Color   Color	Connector Name Connector Type  Terminal Color No. of Wire  2 R  3 R  5 0	0
			JCNWM1071GB

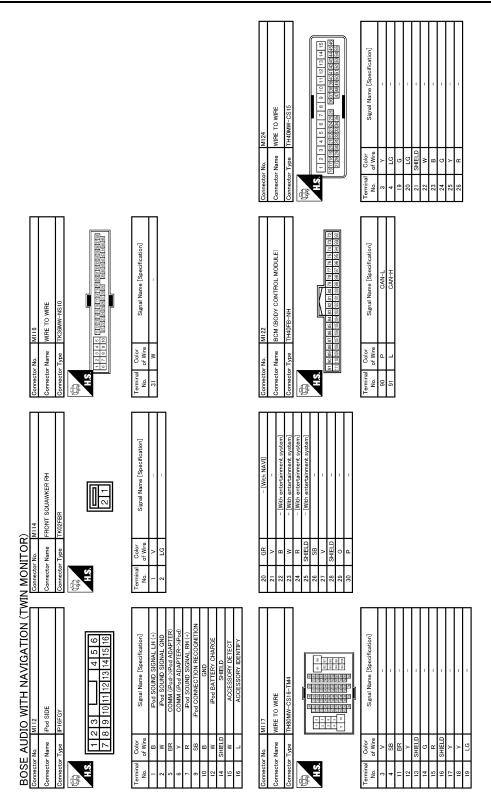
Revision: 2009 March AV-961 2009 FX35/FX50

BOSE AUDIO WITH NAVIGATION (T		WIN MONITOR)					
Connector No. M80		13 BR	SOUND SIGNAL REAR RH (+)	Gonnector No. M87	38 R	VEHICLE SPEED (8-PULSE)	
(NAM HIM) TIMIT IONITED AV	NAVU	14 Y	SOUND SIGNAL REAR RH (-)	Constant Many CONTED LINIT (WITH NAVI)	41 B	CONTROL SIGNAL 1	
	(140)	15 B	STRG SW GND		42 B	CONTROL SIGNAL 2	
Connector Type TH18FW-CS2		1 91	STRG SW B	Connector Type TH40FW-NH	43 B	CONTROL SIGNAL 3	
¢		. ∀ 61	BATTERY	4	44 SB	MODE CHANGE SIGNAL	
F					48 G	AV COMM (H)	
				JHC	49 R	AV COMM (L)	
	Ī				F	AV COMM (H)	Γ
1 2 3 4 5 6 7	<u> </u> 6 8			22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60	╁	AV COMM (L)	Γ
19 10 11 12 13 14 15 16 17 18	7 18 20			21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59	52 L	CAN-H	Γ
					53 P	CAN-L	
				L			1
Terminal Color Signal Name [Specification]	cification]			Terminal Color Signal Name [Specification]			
t	SMAI			t			
2 P SOLIND SIGNAL FRONT I H (+)	ONT I H (+)			. >			
L	ONT LH (-)			. 8			
4 V SOUND SIGNAL REAR LH (+)	EAR LH (+)			×			
5 LG SOUND SIGNAL REAR LH	EAR LH (-)			25 V AGC			
6 P STRG SW A	A			26 G MICROPHONE VCC			
7 SB ACC				27 SHIELD MICROPHONE GND			
9 R ILLUMINATION	NOI			~			
В				9			
œ	ONT RH (+)			L			
9	ONT RH (-)			0			
Connector No. M88		72 SHIELD	SHIELD	Connector No. M89			
т		1		Т			
Connector Name AV CONTROL UNIT (WITH NAVI)	NAVI)			Connector Name AV CONTROL UNIT (WITH NAVI)			
Connector Type TH12FW-NH				Connector Type TH32FW-NH			
ą				ą́			
医				医			
SE SE	ſ			H.S.			
62 64 66 68 70 72	<u> </u>			73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88			
61 63 65 67 69 71				89 90 91 92 93 94 95 96 97 98 99 100 101 102 100 104			
	1						
Terminal Color				Terminal Color			
	cification						
61 B RGB (R: RED) §	SIGNAL			79 Y PPod SOUND SIGNAL LH (+) [With entertainment system]			
┞	) SIGNAL			œ			
œ	SIGNAL			B			
SHIELD				85 SB DISK EJECT SIGNAL			
65 G RGB SYNC	2			HB			
SHIELD				H			
B RGB ARE	SIGNAL			102 BR SW GND			
В							
W							
	->DISP)						
71 Y COMM (DISP->CONT)	CONT)						

JCNWM1072GB

Connector No.   M89	14 Y   Pod SOUND SIGNAL RH (+)     15   SHIELD   SHIELD     16   LG	A B C
Connector No.   M98	Connector No.   M111	E F G
MONITOR   IGNITION	Connector No.   MI 10	J K
Connector No.   M67   Connector No.   M67   Connector No.   M67   Connector Name   VIDEO DISTRIBUTOR   Connector Name   VIDEO DISTRIBUTOR   Connector Type   THIEFF-NH   Connector Type   THIEFF-NH   Connector Type   THIEFF-NH   Connector Type   THIEFF-NH   Connector Type   Con	Connector No.   MIO7	AV O
		Р

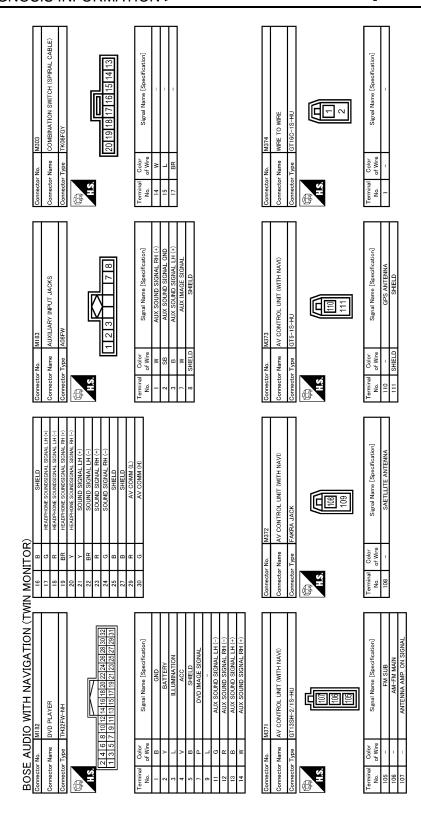
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astion)]		А
M-NH  2 3 4 5 6 8 9 10 11 11 2 Signal Name (Specification)		В
Name WRE TO Color of YMre SHELD SWE		С
Connector No. Connector Name Connector Type H.S. H.S. II SHEEL 11 SHEEL 11 SHEEL		D
7 8 15 16 16 16 16 16 16 16 16 16 16 16 16 16		Е
8: TO WIFE IBMM-NH Sigmal Name [ Sigmal Name [		F
Name 17ype 0 of Wine 0 S G G G G G S G G G G G G G G G G G G		G
Connecto Con	2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	Н
	Pr No. Mi81  Type TH22MW-NH    12   3   4   5   6   7   8   9   10111213141516    17   18   19   200   21   22   29   20   20   30   31   32      2   3   4   5   6   7   8   9   101111213141516    3   4   5   6   7   8   9   101111213141516    4   7   8   9   9   9   9   9   9   9   9      5   6   7   8   9   9   9   9   9   9   9      6   7   8   9   9   9   9   9   9      7   7   8   9   9   9   9   9      8   8	I
	MIST WHEE TO WIFE THISZMM-NH	J
MIN MONITOR)  19 SHELD  20 SHIELD  21 R  22 BR  23 BR  24 B  26 BR  26 BR  27 SB  28 BR  29 P  29 SHELD  30 SHELD  31 BR  32 SHELD  32 SHELD  33 SHELD  34 SHELD  35 SHELD  36 SHELD  37 SHELD	Connector Name   M   Connector Name   T   T   T   T   T   T   T   T   T	К
		L
NAVIGATI	H VK ENGINE)  -RZS-R-LH-Z  -RZS	M
NITH M139 WIRE TO WIRE TH32FW-NH 13 12 11 10 9 29 28 27 26 25 Signal	M160 E CM (WT 128 12 127 127 126 12 126 12	AV
Connector No.   M.39	Connector No Connector Name Connector Type  H.S.  H.S.  Only of Wire 100  D.  100  D.  100	0
	Trent T T T T T T T T T T T T T T T T T T T	JCNWM1075GB
		Р

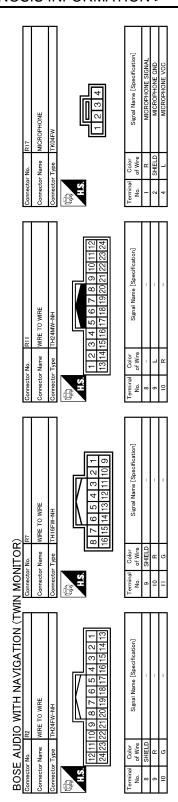
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JCNWM1076GB

# [NAVIGATION (TWIN MONITOR)]

WRE 1-2/IPP-HU 2 3 Signal Name (Specification)	M389 WINDOW ANTENNA (SUB) POIFB-A  Signal Name (Specification)		A B
Commetter No. M885 Commetter Name WIRE TO WIRE Commetter Type GT133CN-2/IPP-HU  Terminal Color No. of Wire Signal Name 2	Cornector No. M389 Connector Name WINDOW ANI Connector Type POLFB-A H.S. H.S. Terminal Color No. of Wire 1		C D
PP-HU  Signal Name [Specification]  SATELLITE ANTENNA	UG  UG  Signal Name (Specification)		Е
No. M383  Name ANTENN.  Type GT16C-1  Oolor  of Wee	No. M388 WRE TO Type JASO PI		F G
Connector No. Connector Type H.S. H.S.  Terminal Color No. 3 - 7 Well	Connector No. Connector Type Connector Type No. of Will		Н
WIRE PP-HU Signal Name [Specification]	OK  CR  Signal Name [Specification]		I
IRE TO 116C-1	MIRE TO JASO JA		J
Connector Name   Mays   Connector Name	Connector No. Connector Name Connector Type  Terminal Color No of Wife  1		K
India (TWII)	iten]		L
WIRE  2/15-HU  Signal Name [Specification]	A BASE  V=1/IPP-HU  Signal Name (Specification)  ANTENNA AMP. ON SIGNAL  AM-FM MAIN	<u> </u>	M
UDIO WITH N   Wise TO WIRE T	M386 ANTENN, GT13SS	А	١V
BOSE AUIC Connector No. Connector Type Connector Type Terminal Color 1 2 2 - 3 - 3 - 3	Connector No. Connector Name Connector Type  H.S.  Terminal Color  1 2 2		0
		JCNWM1077GB	Р



JCNWM1078GB

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (TWIN MONITOR)]

Α

В

C

D

Е

F

Н

K

M

ΑV

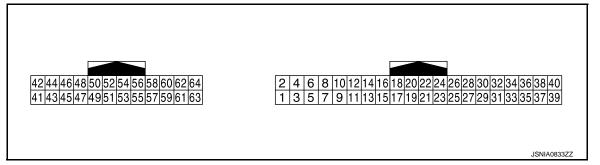
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## AROUND VIEW MONITOR CONTROL UNIT

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	rminal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
1 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
2 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
3 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage	
4 (LG)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
5	0	III and a second and	1	Ignition	Lighting switch is OFF.	0 V	
(R)	Ground	Illumination signal	Input	switch OFF	Lighting switch is ON.	12.0 V	
6 (V)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).	
7	0	D	1	Ignition	R position	12.0 V	
(O)	Ground	Reverse signal	Input	switch ON	Other than R position	0 V	
13 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V	

	rminal e color)	Description			0 . 1111	Reference value					
+	_	Signal name	Input/ Output		Condition	(Approx.)					
14	Ground	nd Sensor signal 1	Input	Ignition ut switch ON	Turn the steering to the right	(V) 4 2 0 SKIB3827E  A: Sensor signal 1 B: Sensor signal 2					
(GR)		- Control of the cont				Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2				
15	Ground	Sensor signal 2		Ignition	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2					
(SB)				input	Input	Input	Input	Input	switch ON	ON	Turn the steering to the left
16 (L)	Ground	Sensor signal 3	Input	Ignition switch ON	Turn the steering around the neutral position	A: Sensor signal 3 B: Sensor signal 1					
17 (W)	_	AV communication signal (H)	Input/ Output	_	_	_					
18 (P)	_	AV communication signal (L)	Input/ Output	_	_	_					

### < ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (TWIN MONITOR)]

	rminal e color)	Description		Condition		Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
21 (O)	_	AV communication signal (H)	Input/ Output	_	_	_
22 (V)	_	AV communication signal (L)	Input/ Output	_	_	_
23 (LG)	24 (G)	Auxiliary infrared LED power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	5.5 V
27	Ground	Camera image signal	Output	Ignition switch	At camera image display	(V) 1 0 -1 +40 μ s JSNIA0834GB
(W)	Clound	Caniera image signal	Cutput	ON	Other than camera image display	(V) 1 0 -1 40 μ s  JSNIA0835GB
28	_	Shield	_	_	_	_
29 (R)	30 (Y)	Side camera passenger side image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μ s JSNIA0834GB
31		Shield	_	_	_	_
32 (W)	Ground	Side camera passenger side ground	_	Ignition switch ON	_	0 V
33 (BR)	Ground	Side camera passenger side communication signal	Input/ Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 1.0 μ s JSNIA0836GB
34 (L)	Ground	Side camera passenger side power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V

### < ECU DIAGNOSIS INFORMATION >

## [NAVIGATION (TWIN MONITOR)]

Terminal (Wire color)		Description	Condition		Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)
35 (W)	Ground	Rear camera communication signal	Input/ Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 1.0 µs JSNIA0836GB
36 (G)	Ground	Rear camera power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V
37	_	Shield	_	_	_	_
38 (L)	Ground	Rear camera ground	_	Ignition switch ON	_	0 V
39 (Y)	40 (BR)	Rear camera image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 -1 -40 μ s  JSNIA0834GB
41 (L)	42 (BR)	Front camera image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 -40 μ s JSNIA0834GB
43	_	Shield	_	_	_	_
44 (Y)	Ground	Front camera ground	_	Ignition switch ON	_	0 V
45 (W)	Ground	Front camera communication signal	Input/ Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0  JSNIA0836GB
46 (G)	Ground	Front camera power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V
47 (BR)	Ground	Side camera driver side com- munication signal	Input/ Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 1 3 2 1 3 3 3 3 3 3 3 3 3 3 3 3 3

#### < ECU DIAGNOSIS INFORMATION >

# [NAVIGATION (TWIN MONITOR)]

	rminal e color)	Description			Condition	Reference value	A
+	_	Signal name	Input/ Output		Condition	(Approx.)	
48 (L)	Ground	Side camera driver side power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V	E
49	_	Shield	_	_	_	_	
50 (W)	Ground	Side camera driver side ground	_	Ignition switch ON	_	0 V	
51 (R)	52 (Y)	Side camera driver side image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μ s  JSNIA0834GB	E

Wiring Diagram - BOSE AUDIO WITH NAVIGATION (TWIN MONITOR) - INFOID:000000003827016

NOTE:

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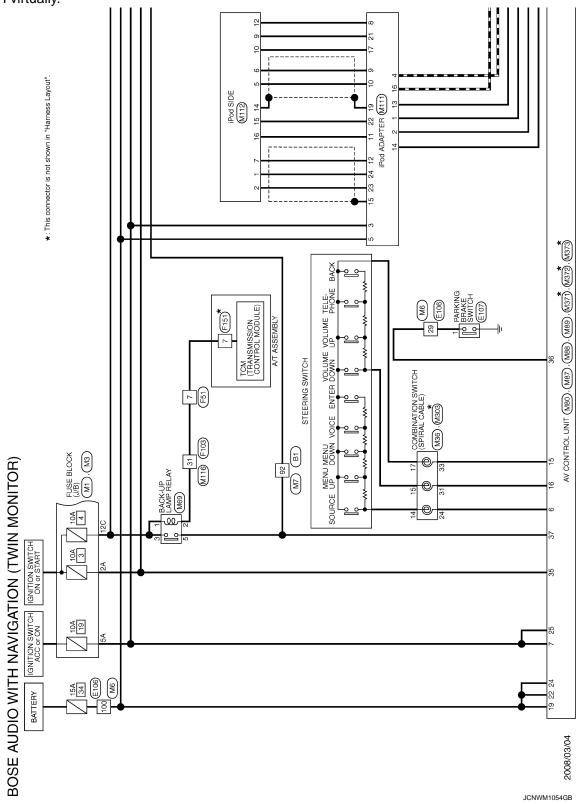
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ΑV

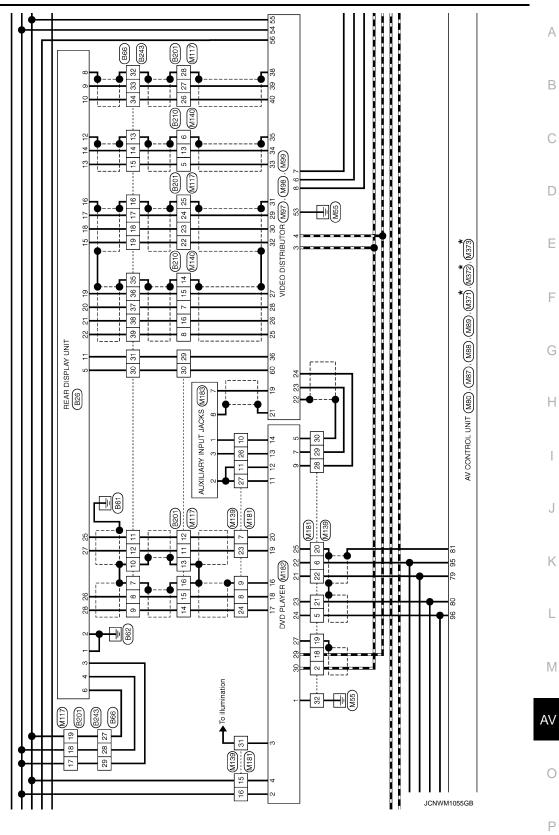
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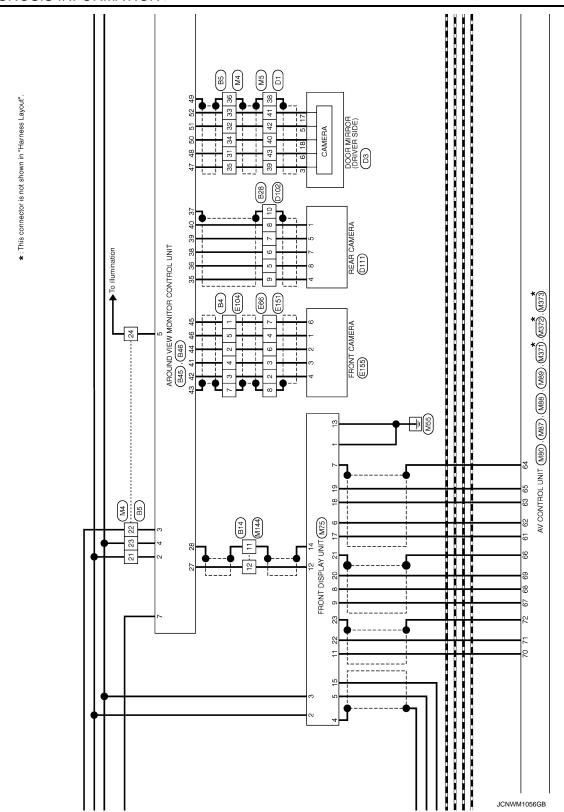
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The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.



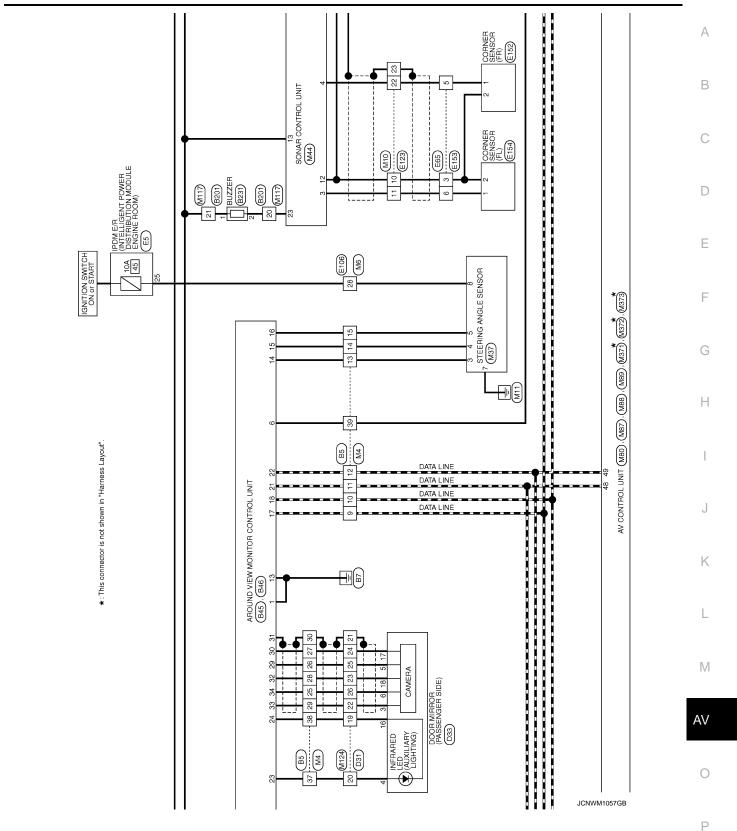
\*: This connector is not shown in "Harness Layout".

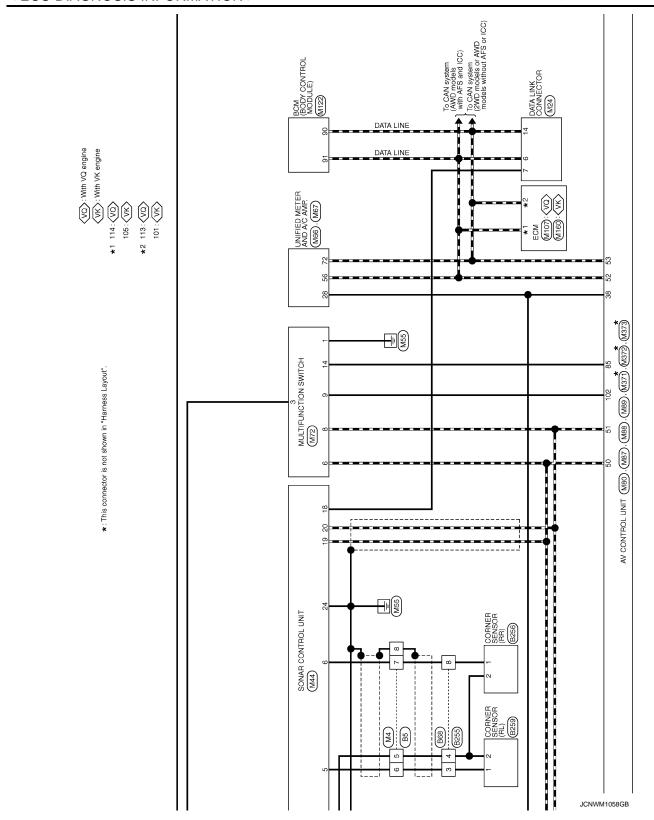




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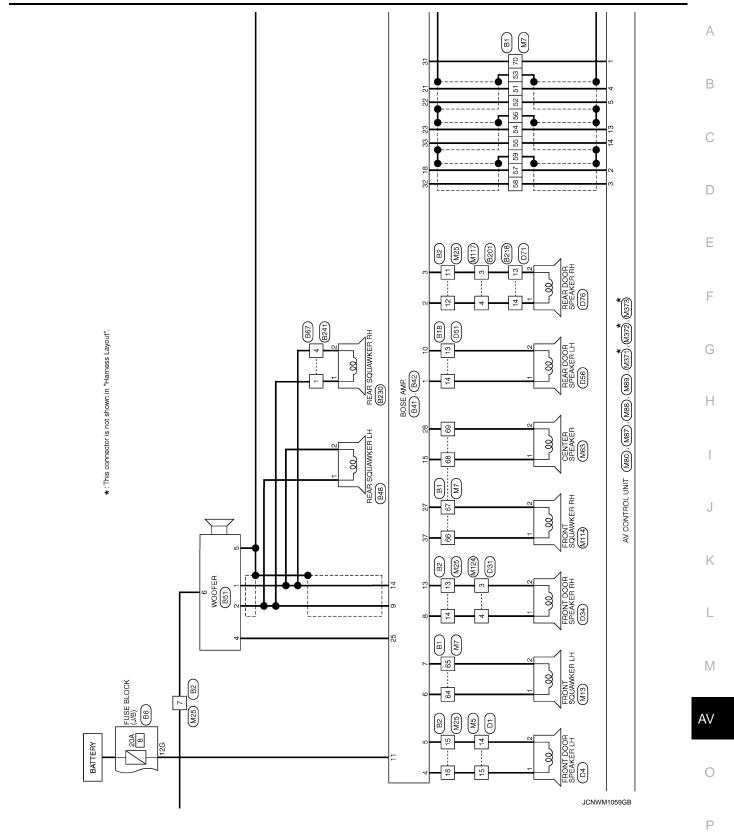
[NAVIGATION (TWIN MONITOR)]



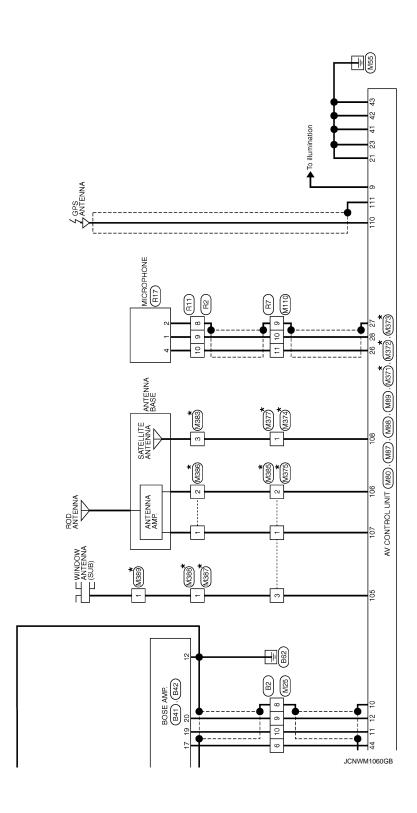


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[NAVIGATION (TWIN MONITOR)]







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[NAVIGATION (TWIN MONITOR)]

WIRE TO WIRE   NSIZFW-CS   Signal Name [Specification]	### TO WIRE  THI 2PW-NH  6 5 4 3 2 1  12 11 10 9 8 7  Signal Name [Specification]	АВ
Connector No.   B4	Connector No.   B14	C
9 8 1 1 Sofficetion	Signation   Signat	Е
121110   12   13   14   15   15   15   15   15   15   15	BB	F
tor No.	Connector No.   B6   Connector Name   FUSE BLOCK   Connector Type   NSI2FBR-CS   Connector Type   NSI2FBR-CS   Connector Type   NSI2FBR-CS   Connector Type   NSI2FBR-CS   N	G
		Н
		I
		J
MIN MONITOR)  66	21 Y	К
		L
BOSE AUDIO WITH NAVIGATION (Transmetter Name   WIRE TO WIRE		M
DIO WITH IN WIRE TO WIRE TO WIRE TO WIRE TO WIRE STATE OF THE STATE OF	BB5 TH40MW- 1140MW- 1140MW- 1140MW- 1140MW- 1140MW-	AV
BOSE AUC Commector Name Connector Type Connector Type Connector Type Connector Type Connector Type Connector Type Connector Type Signature Signatu	Connector No.   B5	0
	JONW	/M1061GB
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[NAVIGATION (TWIN MONITOR)]

SiGNAL   Cornector No.   B28   Cornector Name   WIRE TO WIRE     Cornector Type   TH24MW-NH     Cornector Type   TH24MW-NH	12   B   GND     13   Y   SOUND SIGNAL PROFIT DOOR STEAMER RH (-)     14   R   SOUND SIGNAL WOOFER AND FEAR SQUAWWER (-)     14   R   SOUND SIGNAL WOOFER AND FEAR SQUAWWER (-)     15   R   SOUND SIGNAL WOOFER AND FEAR SQUAWWER (-)     16   R   SOUND SIGNAL WOOFER AND FEAR SQUAWWER (-)     17   STEAMER H (-)     18   STEAMER H (-)     19   STEAMER H (-)     10   STEAMER H (-)     20   STEAMER H (-)     21   STEAMER H (-)     22   STEAMER H (-)     23   STEAMER H (-)     24   STEAMER H (-)     25   STEAMER H (-)     26   STEAMER H (-)     27   STEAMER H (-)     28   STEAMER H (-)     29   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     21   STEAMER H (-)     22   STEAMER H (-)     24   STEAMER H (-)     25   STEAMER H (-)     26   STEAMER H (-)     27   STEAMER H (-)     28   STEAMER H (-)     29   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     21   STEAMER H (-)     22   STEAMER H (-)     24   STEAMER H (-)     25   STEAMER H (-)     26   STEAMER H (-)     27   STEAMER H (-)     28   STEAMER H (-)     29   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     21   STEAMER H (-)     22   STEAMER H (-)     24   STEAMER H (-)     25   STEAMER H (-)     26   STEAMER H (-)     27   STEAMER H (-)     28   STEAMER H (-)     29   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     21   STEAMER H (-)     22   STEAMER H (-)     24   STEAMER H (-)     25   STEAMER H (-)     26   STEAMER H (-)     27   STEAMER H (-)     28   STEAMER H (-)     29   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     21   STEAMER H (-)     22   STEAMER H (-)     24   STEAMER H (-)     25   STEAMER H (-)     26   STEAMER H (-)     27   STEAMER H (-)     28   STEAMER H (-)     29   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     20   STEAMER H (-)     20   S
13   G   COMPOSITE IMAGE SIGNAL     14   R   COMPOSITE IMAGE SIGNAL     15   BR   RGB AREA (YS) SIGNAL     17   Y   VP     19   B   RGB GO SIGNAL     19   B   RGB (G GREBA) SIGNAL     20   G   RGB (B BLUE) SIGNAL IN (-)     21   R   RGB (G GREBA) SIGNAL IN (-)     22   W   RGB (G GREBA) SIGNAL IN (-)     23   F   HEADPHONE SOUNDSIGNAL SIGNAL IN (-)     24   BR   HEADPHONE SOUNDSIGNAL SIGNAL IN (-)     25   C   HEADPHONE SOUNDSIGNAL SIGNAL IN (-)     26   C   HEADPHONE SOUNDSIGNAL SIGNAL IN (-)     27   BR   HEADPHONE SOUNDSIGNAL SIGNAL IN (-)     28   L   HEADPHONE SOUNDSIGNAL SIGNAL IN (-)     29   L   HEADPHONE SOUNDSIGNAL SIGNAL IN (-)     20   C   C   C   C   C   C   C     20   C   C   C   C   C   C   C     20   C   C   C   C   C   C   C   C   C     21   C   C   C   C   C   C   C   C   C	Connector No.   B42   Connector Name   BOSE AMP.
MONITOR   Commector No.   626   Commector Name   FREAR DISPLAY UNIT   Commector Type   TH22FW-NH   FRANCH DISPLAY UNIT   Commector Type   TH22FW-NH   FRANCH DISPLAY UNIT   TH22FW-NH	31 GR
Connector Name   Bits   Connector Name   Figure 1   MONITOR   Connector Name   Figure 2   Miles 1   Miles 2   Miles 3   Miles 4   Miles 4   Miles 4   Miles 4   Miles 4   Miles 4   Miles 6   Mile	Connector No.   B41   Connector Name   BOSE AMP.

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< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (TWIN MONITOR)]

M (H) M (L)		A	
W	BR   GR   C   C   C   C   C   C   C   C   C	В	
11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	118 229 32 29 33 34 34 34 35 4 36 36 37 36 38 36 39 36 30 36 30 30 36 30 3	D	
R CONTROL UNIT	56 66 97 16 99 20 56 66 97 16 19 20 50 40 50 50 40 50 50 40 50 50 40 50 50 40 50 50 50 50 50 50 50 50 50 50 50 50 50	E	
or No. B46  or Type Trype TH40PV-NH  L4   0   0   0   0   0   0   0   0   0	B66   THOMM-NH   THOMM-NH   S   S   S   S   S   S   S   S   S	F	
Connector No.   E	Connector No. B Connector Type T Connector T C	G	
QN		ПП	
SIDE CAMERA LH IMAGE GND	2 4 6 Signal Name (Specification) Signal Signal Name (Specification)	SOUND SIGNAL WOOFER (+) WOOFER AMP ON SIGNAL GND BATTERY	
SIDE CAME	PSOGER PSOGER PSOGER PSOGER Signal Nar Sound Ste	SOUND SIC	
VIN MONITOR)		2 4 0 0 K	
B45 AROUND VIEW MONITOR CONTROL LUNIT TH24FW-NH TH24FW-NH TH24FW-NH TH24F 50 52 54 56 58 60 62 64 15 47 49 51 53 55 57 59 61 63 Signal Name (Specification) FRONT CAMERA IMAGE SIGNAL FRONT CAMERA LA COMM FRONT CAMERA LH COMM SIDE CAMERA LH CAMERA	UAWKER LH	М	
	REAR SQ TK02FBR	AV	
BOSE AU Commetter Nam Commetter Nam Commetter Type  10	Connector Name Connector Type	<u>a</u>	
		JCNWM1063GB	

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BOSE AUDIO WITH NAVIGATION (TW	WIN MONITOR)	Connector No 18201	ag o	- Parek NAVI	
	Т	Т	$^{+}$	- Dates MANG	
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	23 B	- [With entertainment system]	
Connector Type NS08MW-CS	Connector Type RS08MGY	Connector Type TH80FW-CS16-TM4	H	- [With entertainment system]	
	ſ		24 R	- [With entertainment system]	
			25 SHIELD	- [With entertainment system]	
S. S	\$ 1 m		26 SB	-	
1 2		97 92 8512 8515 4153 2513 7	П	-	
4 5 6 7 8	1 C	n 9 0 0 0 9 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ά	1	
-11	8/199	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	$\dashv$	1	
			30 P	ı	
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]			
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	8 R	11 BR -			
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Connector No. B210	Connector No. B218	Connector No. B230	Connector No. B231	31	
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name REAR SQUAWKER RH	Connector Name BU	BUZZER	
- H	DOW MICOSALE	COLORVIE C	T	2000	
ector lype	lector Type	ector Type	lector Lype	OZFBK-DG1	
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16 15 14 13 12 11 10 9	18 17 16 15 14 13 12 11	1 2		⋻	
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Terminal Golor Signal Name [Specification] No. of Wire	Terminal Color Signal Name [Specification] No. of Wire	Terminal Golor Signal Name [Specification] No. of Wire	Terminal Color No. of Wire	Signal Name [Specification]	
Т	т	T	t	1	
6 SHIELD –	14 SB –	2 R =	2 GR	1	
- 5 L					
M -					
14 SHIFID					
8					
- 19 H					

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< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (TWIN MONITOR)]

Page   Page	Connector No. D3 Connector Name DOOR MIRROR (ORIVER SIDE) Connector Type TH24MW-NH  (12   11   10   9   8   7   6   5   4   3   2   1   (24   23   22   12   10   19   18   17   16   14   13   13   14   13   (24   23   22   21   20   19   18   17   16   15   14   13   14   14	Color   Signal Name (Specification)   No.   Of Wire   Signal Name (Specification)   No.   Color	A B C
19 W	Connector No.   D1	Terminal   Color   No.   Signal Name [Specification]   Terminal   Color   Signal Name [Specification]   Terminal   Secondary   Secondary	E F G
MIN MONITORA   B243	Connector No. B259 Connector Name CORNER SENSOR (RL.) Connector Type YDX02FB  A1.5  A1.5	Terminal Color Signal Name [Specification] No. of Wire 1 W	J K
BOSE AUDIO WITH NAVIGATION (TW Connector No. B241 Connector Name WIRE TO WIRE Connector Type NSOBEW-CS	Connector No. B256 Connector Name CORNER SENSOR (RR) Connector Type YDX02FB	Terminal Color No. of Wire Signal Name [Specification]  No. of Wire Signal Name [Specification]  1 R R	M AV

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BOSE AUDIO WITH NAVIGATION (TW	WIN MONITOR)		
Connector No. D4	Connector No. D31	Connector No. D33	Connector No. D34
Connector Name FRONT DOOR SPEAKER LH	Connector Name WIRE TO WIRE	Connector Name DOOR MIRROR (PASSENGER SIDE)	Connector Name FRONT DOOR SPEAKER RH
Connector Type NS02FBR-CS	Connector Type TH40FW-CS15	Connector Type TH24MW-NH	Connector Type NS02FBR-CS
8	<b>F</b>	髩	匮
	15   14   13   12   11   10   5   6   6   4   3   2   1	121110 9 8 7 6 5 4 3 2 1 242922212019181716151413	
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Golor Signal Name [Specification]	Terminal Color Signal Name [Specification]
2 L	G -	3 W	
┨		Н	┨
	Ħ	Н	
	21 SHIELD –	16 G	
	H	ł	
	Н		
	26 R –		
Connector No. D51	Connector No. D56	Connector No. D71	Connector No. D76
Connector Name WIRE TO WIRE	Connector Name REAR DOOR SPEAKER LH	Connector Name WIRE TO WIRE	Connector Name REAR DOOR SPEAKER RH
Connector Type TK10MW-NS8	Connector Type NS02FBR-CS	Connector Type TK10MW-NS8	Connector Type NS02FBR-CS
HS 12345 678910	\$1.	H.S. 12345 678910 11123415 1415161718	SH SH
Terminal   Color   Signal Name [Specification]   Olor	Terminal   Color   Signal Name [Specification]   Odor   Specification]   SB   -	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1.4   Solution	Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1 SB
000		200	^

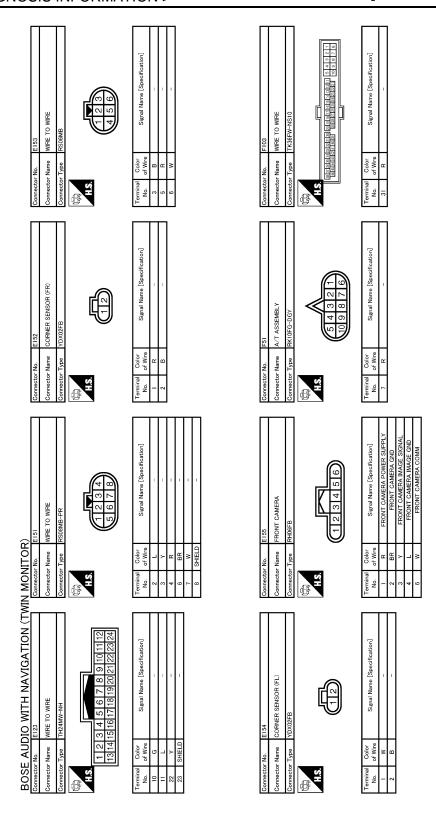
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< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (TWIN MONITOR)]

WRE PR 3 2 1 Signal Name [Specification]	FIO7 TBOIFW  Signal Name [Specification]	АВ
Connector No.   E65	Connector No. E107 Connector Name PARKING BI Connector Type TB01FW  Connector Type TB01FW  No. of Wire  I.S.	C D
ES DISTRIBUTION MODULE ENGINE ROOM) TH20FW-CS12-M4-1V TH20FW-CS12-M4-1V TH20FW-CS12-M4-1V Signal Name [Specification]	YW-CS16-TM4  YW-CS16-TM4  Signal Name [Specification]	E
Connector No.   E5   Connector No.     Connector Name   DOS TREBITION MODU   Connector Type   TH20FW-CS12-M4-1V   TH20FW-CS12-M4-	Cornector No.   E106	G
CAMERA MM-NH  1 3 2 11  8 7 6 5  Signal Name [Specification] REAR CAMERA IMAGE GND REAR CAMERA COMM REAR CAMERA COMM REAR CAMERA CHD REAR CAMERA CHD REAR CAMERA CHD REAR CAMERA SUPPLY	-CS 3	I .
111 H08	Connector No.   E104	J
WIRE NH NH NH NH Signal Name [Specification]	WIRE    3 2	L M
Connector Name   MIRE TO WITH NAVIGATION (TWIN MONITOR)	E66   MRE TO   MRE	AV
		JCNWM1067GB

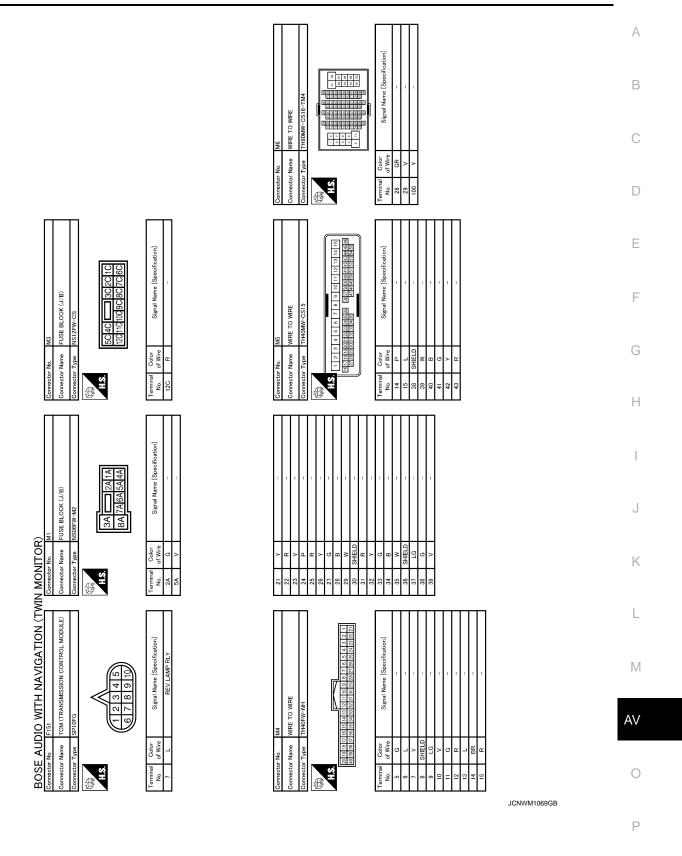
Revision: 2009 March AV-987 2009 FX35/FX50



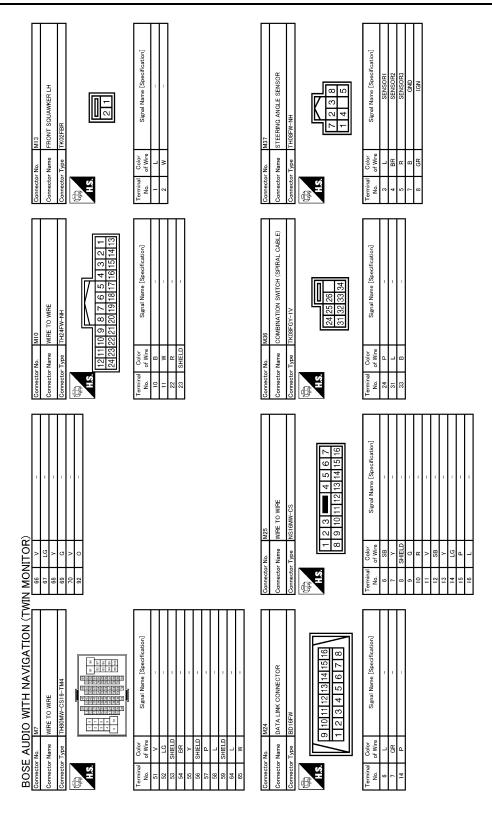
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< ECU DIAGNOSIS INFORMATION >

# [NAVIGATION (TWIN MONITOR)]



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< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (TWIN MONITOR)]

M67 THG2PW-NH THG3PW-NH	Signal Name (Specification) CAN-L CAN-L	CRND SHIELD AUX MACE STOME, Immore restant RGB RR-RED) SIGNAL RGB (S-RLUE) SIGNAL RGB SYNC VP SHIELD COMMI (DISP-2-CONT) SHIELD		АВ
Oomector No.   M67	Terminal   Color   No.   1	13 B SHELD S		C
A/C AMP.	Signal Name [Specification] VEHICLE SPEED (8-PULSE)	Park		Е
r No. M66  or Type TH40FW-MH  1 2 3 4 5 6 7 6 9 10 11 12 13 14 5 16 17 20 20 20 20 20 20 20 20 20 20 20 20 20		М75 FRONT D ТН24FW-		F G
Connector No. Connector Type H.S. H.S.	Terminal Color No. of Wire 28 R	Connector Name Connector Type  Connector Type  124 [2] [1]  Color No. of Wire  1 B 1 B 2 P 2 P 3 L 3 L 4 SHELD 5 G 6 W 6 W 7 SHELD 8 B 8 B 1 B 1 B 1 B 1 B 1 B 1 B 1 B 1 B 1 B 1		Н
	Signal Name [Specification]	NH   NH   NH   NH   NH   NH   NH   NH		I
M83 CENTER SPEAKER TKOZFBR	Signal Nam	MULTEUNCTION SWITCH THIBFW-NH THIBFW		J
WIN MONITOR) Connector Name of Connector Type II	Terminal Color No. 1 Yer 2 G G	Connector Name   Connector Name   Connector Type   Color   No.   Of Wire   1   B   B		К
	nul LH NIT LH NIT RH NR TH NR RH NR RH	tion)		L
BOSE AUDIO WITH NAVIGATION (T    Commercer No.   M44	Signal Name (Specification) CORNERS SENSOR PRONT LH CORNERS SENSOR PRAR LH CORNERS SENSOR PRAR RH SENSOR PRAR RH SENSOR RAR K LINE ACCOMM (1) AV COMM (1) AU COMM (1) BUZZER GND	M69 BACK-UP LAMP RELAY MSQ2FL-M2-LC  Signal Name [Specification]		M
BOSE AUDIO WITH Connector Name SONAR CON Connector Type TH24FV-NH H.S. H.S. H.S. H.S. H.S. H.S. H.S. H.	Of Wire Of Wire Of Wire Of Wire Of Of Wire Of	MSOZFI-		AV
BOSE AU Connector Nu Connector Name Connector Type H.3.	Terminal No. 7	Connector No. Connector Type Connector Type Terminal Color No. of Wirt Terminal Color Society	JCNWM1071GB	0
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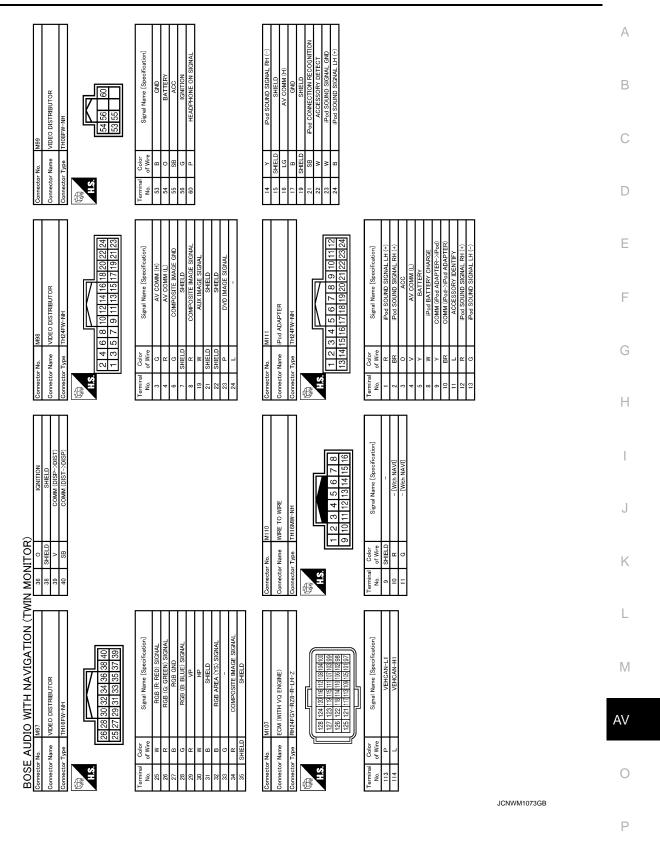
Revision: 2009 March AV-991 2009 FX35/FX50

BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)	WIN MONITOR)	Connactor No M67	20 D VEHICLE SPEED (9-DIII SE)	г
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	В		В	_
Connector Type TH18FW-CS2	16 L STRG SW B	Connector Type TH40FW-NH	+	_
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			p 00	_
			PC	_
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19 10 11 12 13 14 15 16 17 18 20		21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59	52 L CAN-H	_
			53 P CAN-L	
		T		
_		_		
1 V AMP. ON SIGNAL		21 B GND		
2 P SOUND SIGNAL FRONT LH (+)		22 Y BATTERY		
3 L SOUND SIGNAL FRONT LH (-)		В		
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12 G SOUND SIGNAL FRONT RH (-)		37 O REVERSE		
Connector No. M88	72 SHIELD SHIELD	Connector No. M89		
OCCUPANT MATERIAL MANAGEMENT (MATERIAL MANAGEMENT)		COVERN LITTLE CONTINUES OF THE CONTINUES		
Connector Type TH12FW-NH		Connector Type TH32FW-NH		
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No. of Wire		No. of Wire		
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MMCO MAG				
71 Y COMM (DISP->CONT)				

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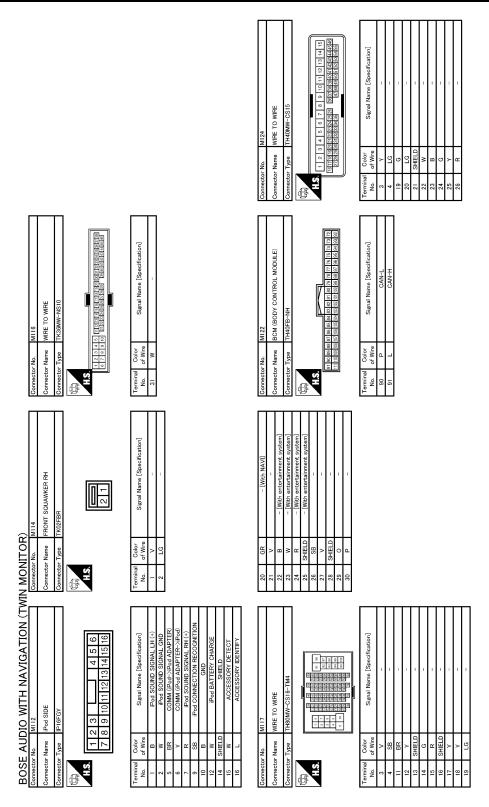
< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (TWIN MONITOR)]



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[NAVIGATION (TWIN MONITOR)]



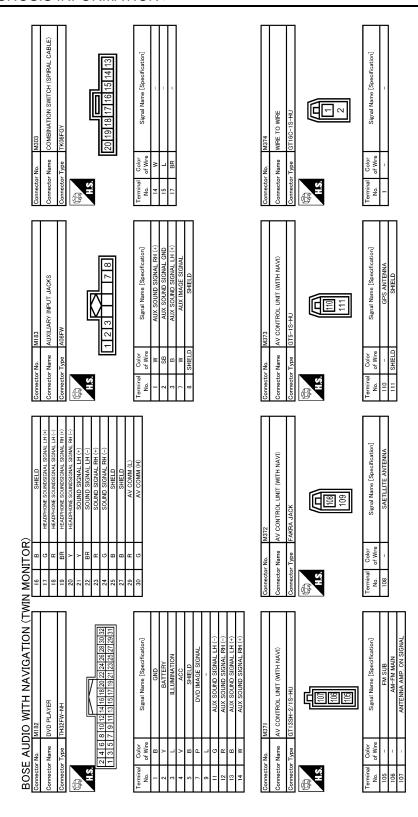
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[NAVIGATION (TWIN MONITOR)]

WRE 19 4 5 6 10 11 12 Signal Name [Specification]		АВ
MI 44 THI 2 MMR TO		С
Connector Name Connector Name Connector Name Connector Type Connector Type Name Name Name Name Name Name Name Nam		D
5 1 8 15 16 16 16 16 16 16 16 16 16 16 16 16 16		Е
MI40 WIRE TO WIRE THI BMW-NH  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16  Signal Name [Specification]		F
Mit do   Mit do   Mit do   Connector Name   Wifte TO Mit do   Mi	21 R R C C C C C C C C C C C C C C C C C	G
ППППППППППППППППППППППППППППППППППППППП		Н
		I
	r No. Milit 1  r Type WIRE TO WIRE  TH32RMY-NH  TH32RMY-NH  T 2 3 4 5 6 7 8 9 10 11 12 13 14 15 10 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 17 18 19 20 21 22 23 24 25 28 27 28 29 30 31 17 18 19 20 21 22 23 24 25 28 27 28 29 30 31 17 18 19 20 21 22 23 24 25 28 27 28 29 20 31 17 18 19 20 21 22 23 24 25 28 27 28 29 20 31 18 18 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	J
N MONITOR,  19 SHELD  20 SHELD  21 R P P P P P P P P P P P P P P P P P P	Connector No.  Connector Name  Connector Type  Connector Type  1 2 3 4  1 1 2 3 4  Terminal Color  No. of Wire  2 5 G G  6 6 B R  9 9 B R  11 P Y  11 P Y  12 P Y  13 P Y  14 P P P P P P P P P P P P P P P P P P P	К
WE I I I I I I I I I I I I I I I I I I I		L
Some state   No.   Commerce   No.   Co	MI 50  FREATOY - RZB - R-L H-Z	M
DIO WITH M139 WIRE TO WIRE TH32FW-NH TS [2] [1] [10 ] S [2] [2] [2] [10 ] S [3] [2] [2] [2] [2] [2] [2] [2] [2] [2] [2	M160 EOM (WT RH24FG)	AV
Commetter Name   Commetter Name   Commetter Name   Commetter Type   Commetter Type   Commetter Type   Commetter Type   Color Name   C	Connector No. Connector Name Connector Name LLS Connector Name Connector Name LLS Connect	0
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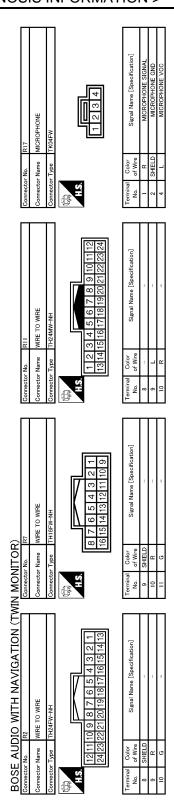
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< ECU DIAGNOSIS INFORMATION >

[NAVIGATION (TWIN MONITOR)]

[out	[loo]		А
WRE 1-2/IPD-HU 2 3 Signal Name [Specification]	M389 WINDOW ANTENNA (SUB) POIFB-A  T  Signal Name [Specification]		В
MA385 WIRE TO GT133CD	No. M389 Name WINDOW Type POI FB-A  of Wire		С
Connector No. Connector Name Connector Type No. Terminal Color 1 2 2 2 2 3 3 3 3 3 3	Connector No. Connector Name Connector Type H.S. H.S.  H.S.  Odor No. of Wre		D
ooffeation) NTENNA	ooffcation]		Е
M383 ANTENNA BASE GT16C-IPP-HU Signal Name [Specification] SATELLITE ANTENNA	WIRE TO WIRE  JASO PLUG  Signal Name [Specification]		F
No. Name Type Color of Wire	Name Type Color of Wire		G
Connector Connector Connector No. 3	Connector Connector Terminal No.		Н
WIRE PP-HU  Signal Name [Specification]	WIRE  OK  Signal Name [Specification]		I
IRE TO 1166-1	M387 WIRE TO WIRE JASO JACK Sigral Name		J
Connector Name   Maria   Connector Name   Connector Nam	Connector No. M. Connector Type Democrator Type Democrator Type Democrator Type Democrator Type Democrator Terminal Color No. Of Wire Democrator Terminal Color No. Democrator D		K
ION (TAWII	lan		L
WRE 2/15-HU  2/15-HU  Signal Name [Specification]	A BASE V-1/1PP-HU  Signal Name (Specification)  ANTENNA AMP. ON SIGNAL  AM-FM MAIN		M
AUDIO WITH N	M336 ANTENN FOR GT13SSN FOR GT13SSN		AV
BOSE AU Connector Name Connector Type Connector Type No of Viv. 1 2 2 2 3	Connector No Connector Type Connector Type H.S. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0
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JCNWM1078GB

# **SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)** [NAVIGATION (TWIN MONITOR)]

< ECU DIAGNOSIS INFORMATION >

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

Reference Value INFOID:0000000003825628

#### VALUES ON THE DIAGNOSIS TOOL

CONSULT-III	MONITOR	ITEM
-------------	---------	------

Monitor Item		Condition	Value/Status
SONAR OPE	Ignition switch	Around view monitor operating (sonar operating).	On
	ON ON	Around view monitor non-operating (sonar non-operating).	Off
BUZZER OUTPUT	Ignition switch	Buzzer is output condition.	On
	ON	Buzzer is not output condition.	Off
CR SEN [FL]		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV.0
	Ignition switch	The distance between the corner sensor and an obstacle is 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
	ON	The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV.0
CR SEN [FR]	Ignition switch	The distance between the corner sensor and an obstacle is 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
	ON	The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV.0
CR SEN [RL]	Ignition switch	The distance between the corner sensor and an obstacle is 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
	ON	The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4
CR SEN [RR]		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV.0
	Ignition switch	The distance between the corner sensor and an obstacle is 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
	ON	The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4

**AV-999** Revision: 2009 March 2009 FX35/FX50 Р

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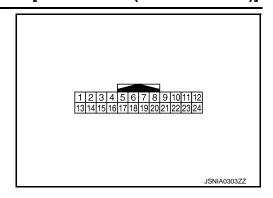
M

AV

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) [NAVIGATION (TWÍN MONITOR)]

< ECU DIAGNOSIS INFORMATION >

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

	inal No. e color)	Description		Condition		Value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
3 (W)	12 (B)	Corner sensor signal front LH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0 → 10ms JSNIA0837GB	
4 (R)	12 (B)	Corner sensor signal front RH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0 ***10ms	
5 (L)	12 (B)	Corner sensor signal rear LH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0 **10ms	
6 (Y)	12 (B)	Corner sensor signal rear RH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0 10ms JSNIA0837GB	
12 (B)	Ground	Sensor ground	_	Ignition switch ON	_	0 V	
13 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	12.0 V	
18 (P)	_	K-line (CONSULT-III)	_	_	_	_	

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) [NAVIGATION (TWIN MONITOR)]

#### < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value
+	_	Signal name	Input/ Output	Condition		(Approx.)
19 (G)	_	AV communication (H)	Input/ Output	_	_	_
20 (R)	_	AV communication (L)	Input/ Output	_	_	_
23 (GR)	Ground	Buzzer drive signal	Output	Ignition switch ON	When buzzer operation	NOTE: Waveform period changes due to the distance to an obstacle.
24 (B)	Ground	Ground	_	Ignition switch ON	_	0 V

Wiring Diagram - BOSE AUDIO WITH NAVIGATION (TWIN MONITOR) - INFOID:000000003827017 NOTE:

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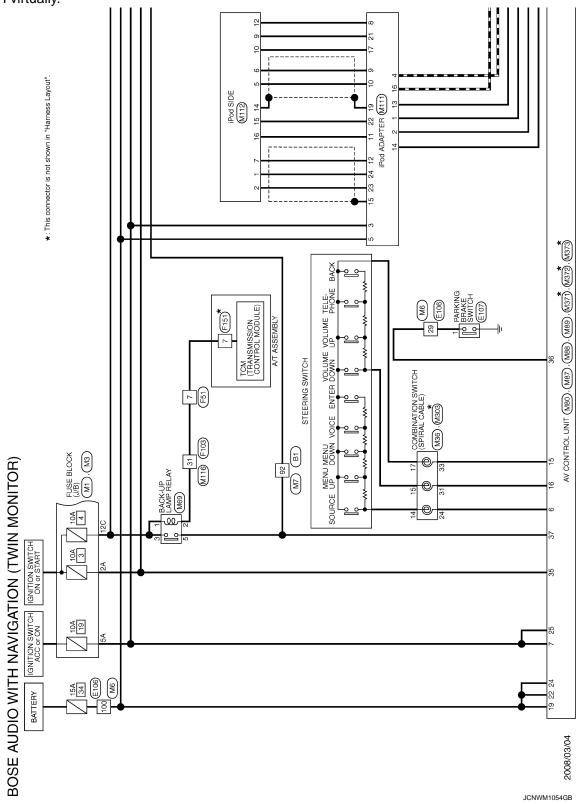
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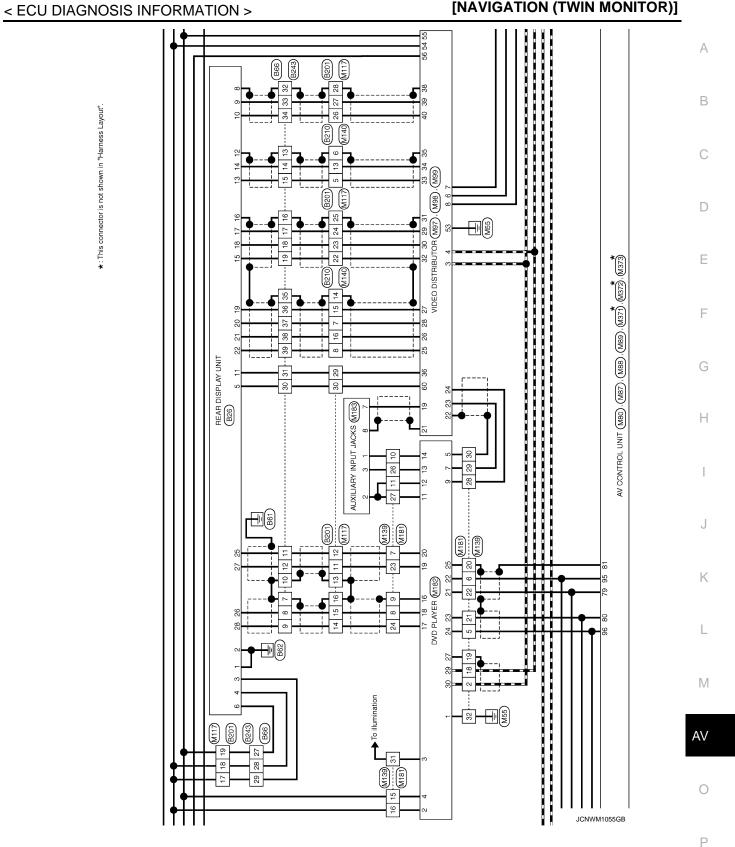
# **SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)** [NAVIGATION (TWIN MONITOR)]

#### < ECU DIAGNOSIS INFORMATION >

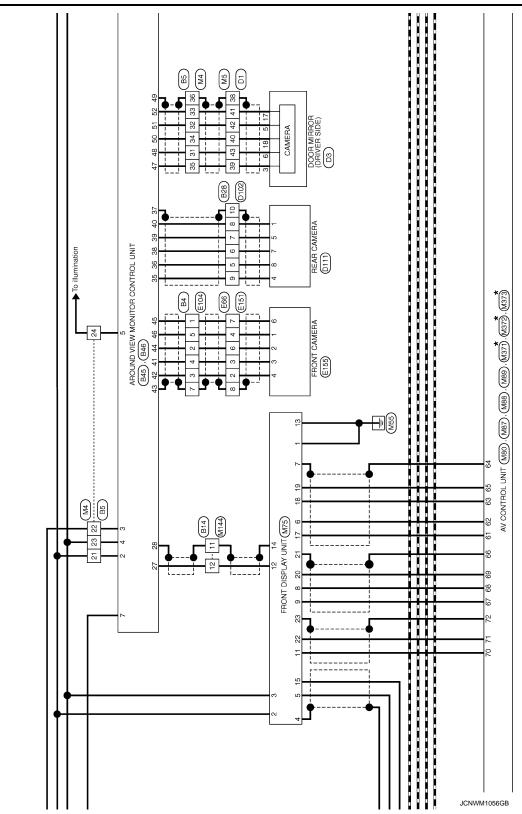
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.



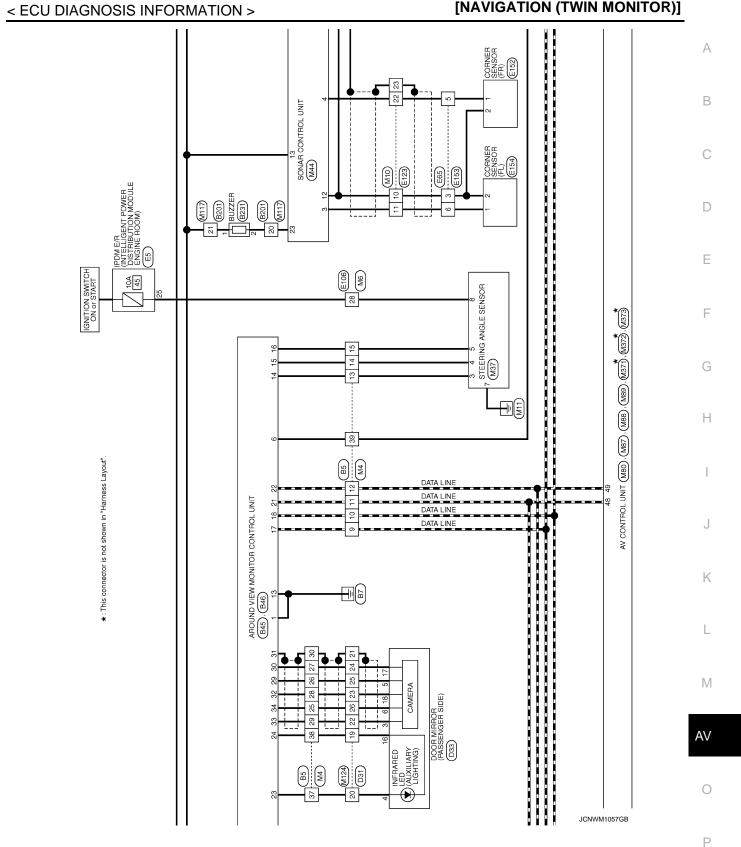
# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) NOSIS INFORMATION > [NAVIGATION (TWIN MONITOR)]



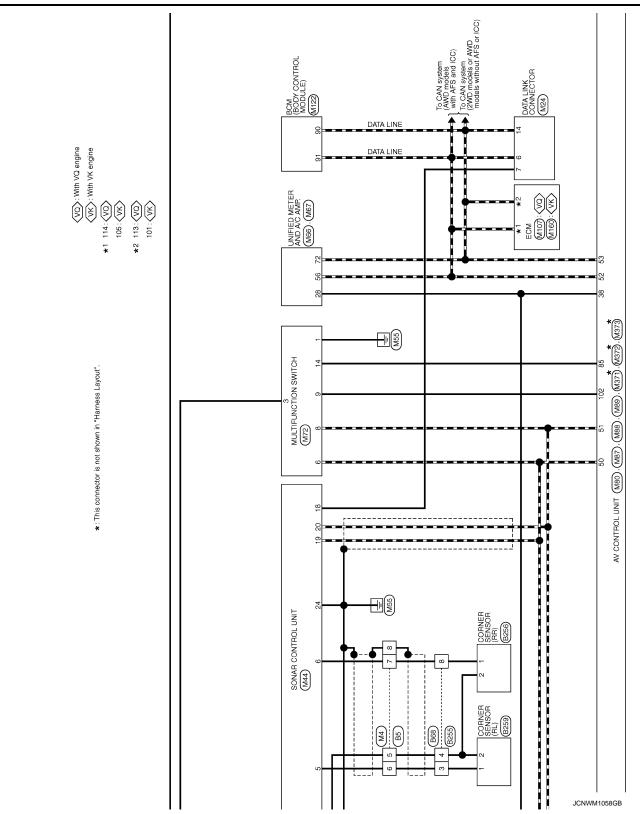
\*: This connector is not shown in "Harness Layout"



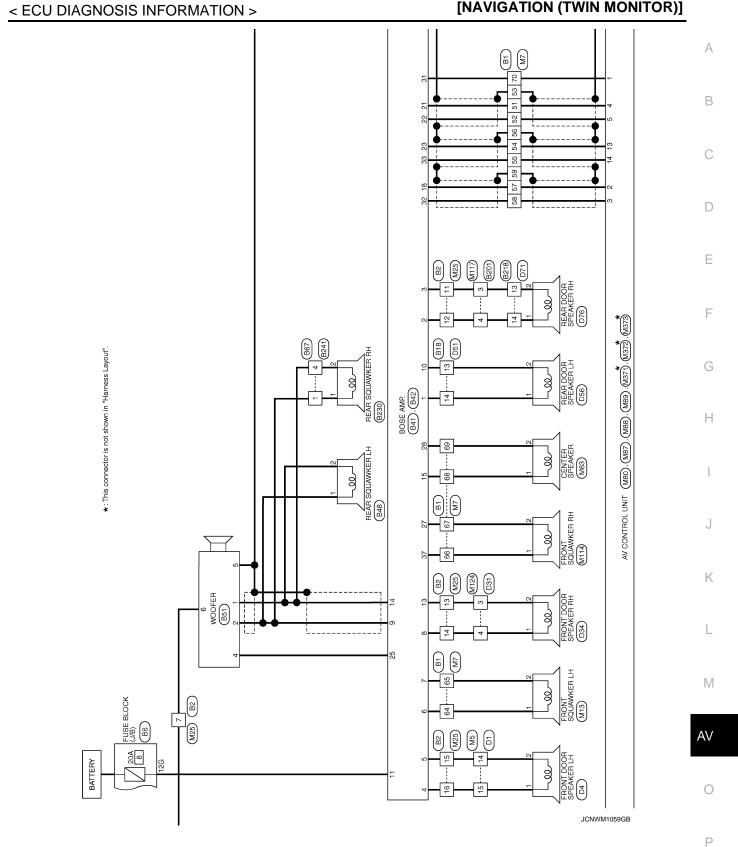
# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) NOSIS INFORMATION > [NAVIGATION (TWIN MONITOR)]



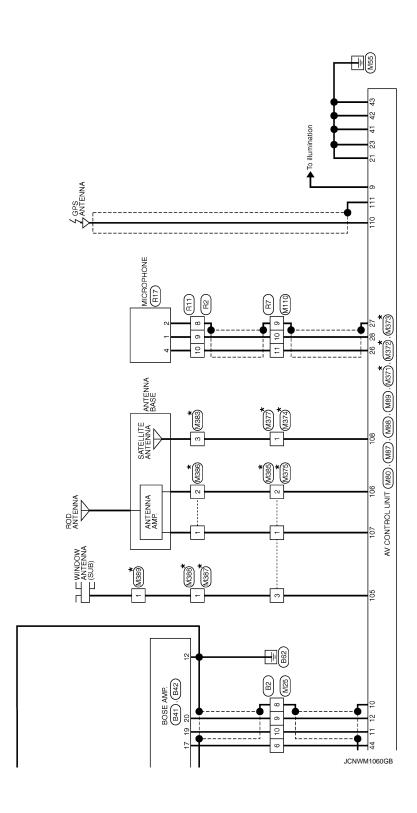
# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) [NAVIGATION (TWÍN MONITOR)]



# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) NOSIS INFORMATION > [NAVIGATION (TWIN MONITOR)]





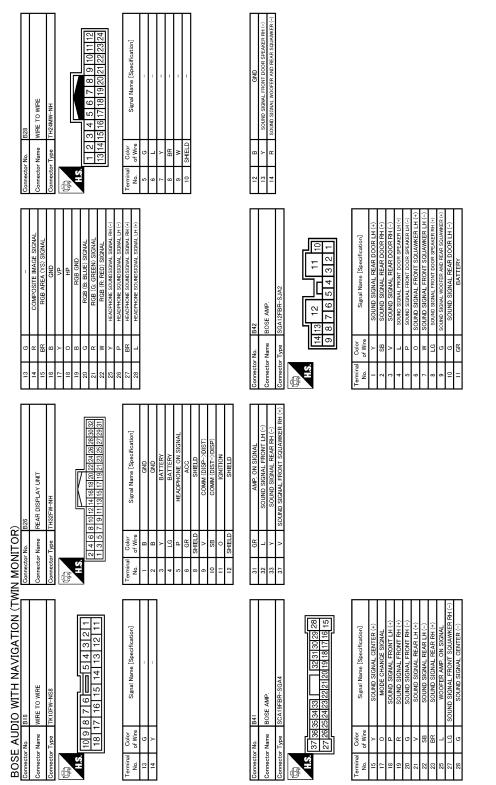


< ECU DIAGNOSIS INFORMATION >

Signal Name Signal Name  Signal Name	3
1	E F
Connector Name   WIRE TO WIRE	M V

**AV-1009** Revision: 2009 March 2009 FX35/FX50

< ECU DIAGNOSIS INFORMATION >

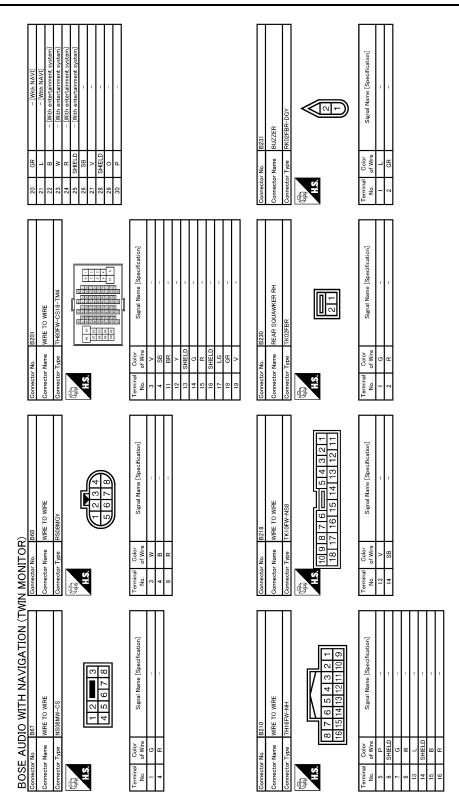


JCNWM1062GB

< ECU DIAGNOSIS INFORMATION >

W   AV COMM (H)   O   AV COMM (H)   O   AV COMM (H)   O   AV COMM (H)   O   C   O   AV COMM (L)   O   O   O   O   O   O   O   O   O	A B C
Connector No.   846	D E F
NONITOR   SIDE CAMERA LH IMAGE GND   Corrector No	H I J
BOSE AUDIO WITH NAVIGATION (TWIN Connector Name   B45   Connector Name   RAOUND VIEW MONITOR CONTROL UNIT   Connector Name   RAOUND VIEW MONITOR CONTROL UNIT   Connector Type   IH24F/P-NH	M AV
	Р

**AV-1011** Revision: 2009 March 2009 FX35/FX50

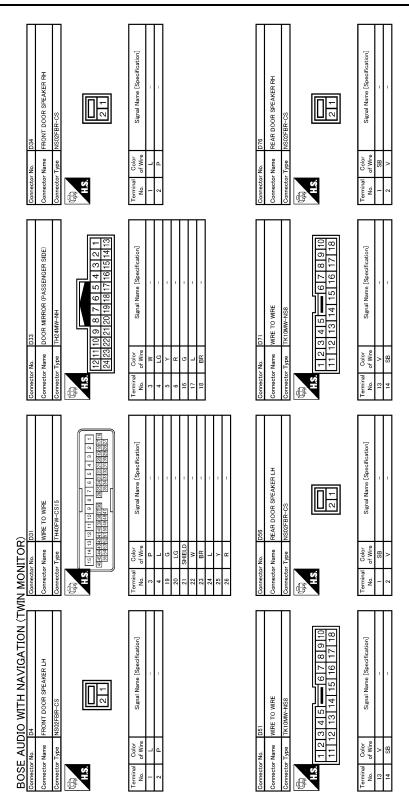


JCNWM1064GB

< ECU DIAGNOSIS INFORMATION >

Connector No.         R255           Connector Name         WIRE TO WIRE           Connector Type         RS08FGY           HS.         4 3 2 1           R 7 6 5	Terminal   Color   Signal Name [Specification]	Connector Name	Terminal   Color   Signal Name   Specification   Color   Signal Name   Specification   Specification		A B C
18 W	<b>υ</b> α ≽	Connector Name WIRE TO WIRE  Connector Type TH40FW-CS15  LS 14   3   2   1   10   9   8   7   6   5   4   3   2   1    MS 15   14   13   12   11   10   9   8   7   6   5   4   3   2   1    MS 25   M	Terminal   Color   Signal Name [Specification]   Color   Col		E F G
Connector Nume WIRE TO WIRE Connector Type TH40FW-NH  MAS CONNECTOR TYPE TH40FW-NH  MAS CONNECTOR THE TH	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Signal Name [Specification]   Color   C	Connector No. B259 Connector Name CORNER SENSOR (RL.) Connector Type YDX02FB  A.S.	Terminal Color No. of Wire Signal Name [Specification] 1 W - 2 B -		J K
BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)   Connector No.   B241   Connector Type   T45   Connector Type   T45	Terminal Color	Connector No. B266 Connector Name CORNER SENSOR (RR) Connector Type YDX027B	Terminal Color Signal Name [Specification]  No. of Wire	JCNWM1065GB	M AV

**AV-1013** Revision: 2009 March 2009 FX35/FX50

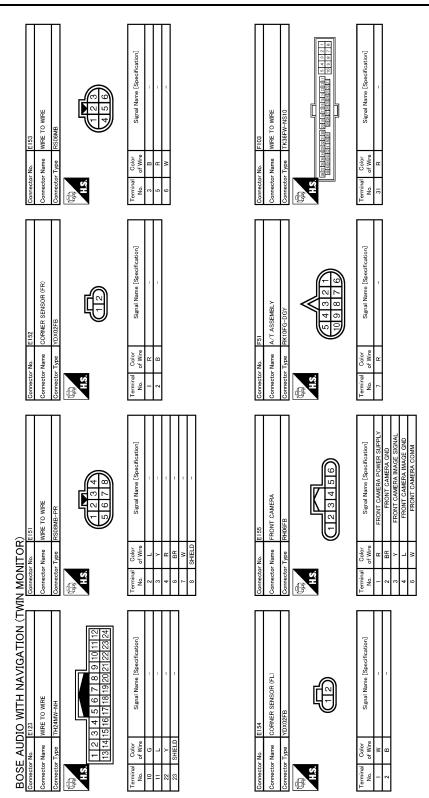


JCNWM1066GB

< ECU DIAGNOSIS INFORMATION >

me WIRE TO WIRE  PROGRES-PR  3 2 1	Color Signal Name [Specification]  Owline  Y  L	Name PARKING BRAKE SWITCH Type TB01FW  of Wire Signal Name [Specification]  LG -		A B
Connector No. Connector Name Connector Type	Terminal O No. 0 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Connector No. Connector Type Connector Type I.S. I.S. I.S. I.C. I.C. I.C. I.C. I.C.		D
PIDALE PR (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) THISDRY-CS12-M4-1V TRIGHY-CS12-M4-1V TRIGHY-CS12-M4-1V TRIGHY-CS12-M4-1V TRIGHY-CS12-M4-1V	Signal Name [Specification]	WIRE TO WIRE THBORW-CS IG-TMA  WIRE TO WIRE Signal Name [Specification]		E
Connector No. E5 Connector Name DIST Connector Type TH20 H.S. B 10 11 12 13	Terminal Golor No. of Wire 25 G	Connector No. E106 Connector Type TH800 Connector T		G H
1) DIIII REAR CAMERA THORNW-NH  4 3 2 1  8 7 6 5	Signal Name [Specification]  REAR CAMERA INAGE GND  REAR CAMERA INAGE SIGNAL  REAR CAMERA GND  REAR CAMERA CND  REAR CAMERA POWER SUPPLY	1   2   3		I
IN MONITOR) Connector Name RR Connector Type IT. H.S.	No.   Color   No.   Color   No.   Color   No.   Color   Colo	Connector No.  Connector Name Will  Connector Type M.  H.S.  H.S.  Terminal Color  No. of Wire  1 Will  2 BR  4 Y  4 Y  5 SHELD		К
DIO WITH NAVIGATION (TW bioz wite to wite The Wi	Signal Name [Specification]	E66   WIRE TO WIRE   RS06FB-PR		M AV
BOSE AUC Connector Name Connector Type	Terminal   Color   No.   of Wire   No.   of Wire   No.   of Wire   S   C   C   C   C   C   C   C   C   C	Connector Name   Connector Type	JCNWM1067GB	0
				Р

**AV-1015** Revision: 2009 March 2009 FX35/FX50

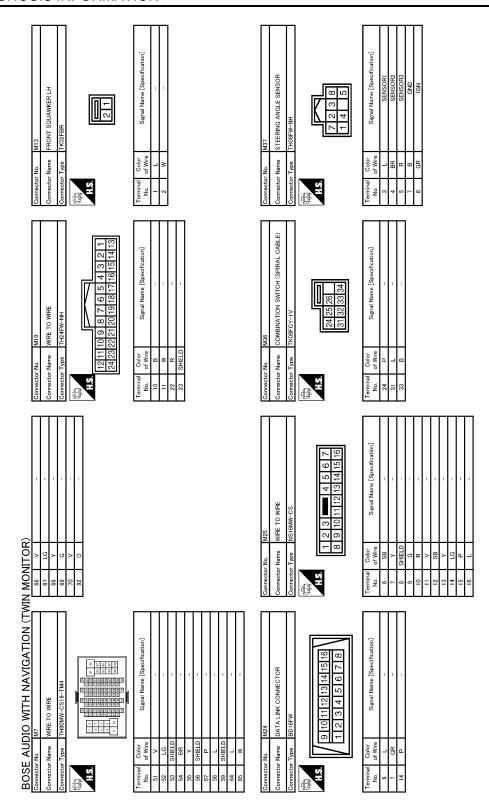


JCNWM1068GB

< ECU DIAGNOSIS INFORMATION >

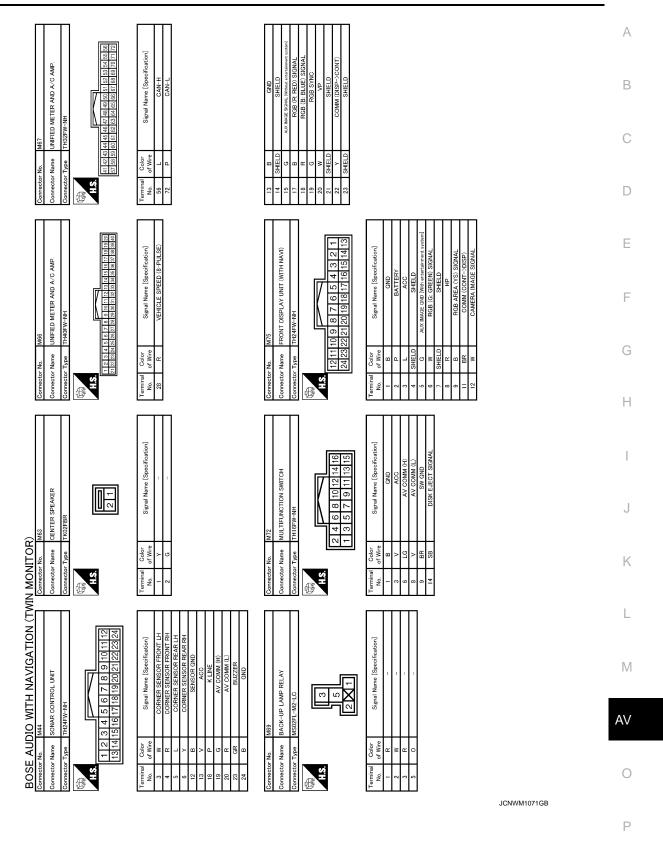
Column   C		ation	А
BOSE ALDIO WITH NAVIGATION (TWWN MONITOR)  Control that will be control		SSIGNAMA SSI	В
BOSE AUDIO WITH HAVIGATION COMIN MONITOR)    Concept law   2017		MWWEETO	С
Contract Name   Contract Nam		Connector Connector Connector Connector Inc. 100 28 29 100	D
Concept Plan   Conc	11C Proceffication	1   2   1   4   15   16   16   16   16   16   16   16	Е
Concept Plan   Conc	195 BLOCK (J/B) 195 BLOCK (J/B) 196 BLOCK (J/B) 197 BLOCK (J/B) 197 BLOCK (J/B) 197 BLOCK (J/B) 197 BLOCK (J/B) 198 BLOCK (J/B	FRE TO WIRE   H40MW-CS15   FRE TO WIRE   H40MW-CS15   H40	F
Convector Name   Conv	No. Name Type Color of Wire R	Sector No.   M   Sector No.   M   Sector No.   M   Sector Type   Trianglesses   Sector Type   Trianglesses   Sector Type   Sector Type   Trianglesses   Sector Type   Trianglesses   Sector Type   Trianglesses   Sector Type   Trianglesses   Trian	G
Connector Name   COAITRO WITH NAVIGATION (TWIN MONITOR)	Tempo Community King King King King King King King King	W   W   W   W   W   W   W   W   W   W	Н
Connector Name   COAITRO WITH NAVIGATION (TWIN MONITOR)	PATA SA4A  SA4A  The second of		I
Connector No.   Fish   Connector No.   Conne	Signal Na		J
BOSE AUDIO WITH NAVIGATION (Tr Commestor Name   TOM (Translamssion contribute)  Connector Type   Towner   Towne	NNITOR)  Tor Name   Miles  Tor Type   Miles  of Wire  of Wire  of Wire		K
JCNWM1069GB		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	ı
JCNWM1069GB	TION (T	N 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L
JCNWM1069GB	NAVIGA SION CONTR SION EV LAMP RLY	Mame (Specifical Control Contr	M
JCNWM1069GB	UDIO WITH F151  TOM (TRANSMIS  SIPING  Signal N  Fine  Signal N  Fine  Signal N  Fine  Signal N  Fine	M44 WIRE TO 77 8 66 69 69 61 61 61 61 61 61 61 61 61 61 61 61 61	AV
	BOSE A Connector No Connector Typ Connector Typ Terminal Co No. of No.	2	0
	- <del></del>	JCNWM1069GB	Р

**AV-1017** Revision: 2009 March 2009 FX35/FX50



JCNWM1070GB

< ECU DIAGNOSIS INFORMATION >



**AV-1019** Revision: 2009 March 2009 FX35/FX50

< ECU DIAGNOSIS INFORMATION >

38			
Connector No. M87 Connector Type TH40FW-NH  Connector Type TH40FW-NH  M87  Connector Type TH40FW-NH  (22 25 25 25 25 25 25 25 25 25 25 25 25 2	Terminal Color No.   Signal Name [Specification]	Connector No. M89  Connector Name Av CONTROL UNIT (WITH NAV))  Connector Type TH32FW-NH  M.S. Francisco See 87 88 88 88 88 88 88 88 88 88 88 88 88	Terminal   Color   Signal Name [Specification]     No.   of Wire   Perd Stoud Stouk, Let Viron extrainment system]     80
NA MONITOR   SOUND SIGNAL REAR PH (+)   SOUND SIGNAL REAR PH (+)   SOUND SIGNAL REAR PH (+)   STRG SWIGND   STRG SW B   STRG		72 SHIELD SHIELD	
BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)  Connector Name AV CONTROL UNIT (WITH NAV)  Connector Type ITHISPV-CS2  ALS  Connector Type ITHISPV-CS2	Color   Signal Name [Specification]   Color   Signal Name [Specification]   1   V   AMP ON SIGNAL   1   V   SOUND SIGNAL FRONT LH (+)   2   V   SOUND SIGNAL REAR LH (+)   4   V   SOUND SIGNAL REAR LH (-)   6   P   STRG SIGNAL REAR LH (-)   1   S   S   STRG SIGNAL REAR LH (-)   1   R   SOUND SIGNAL REAR LH (-)   1   R   SOUND SIGNAL REAR H (-)   1   R   SOUND SIGNAL REAR H (-)   1   C   C   C   C   C   C   C   C   C	Connector No. M88  Connector Name AV CONTROL UNIT (WITH NAVI)  Connector Type THIZPY-NH  H.S. 62 64 66 68 70 72  61 63 65 67 69 71	Forming   Color   Signal Name [Specification]

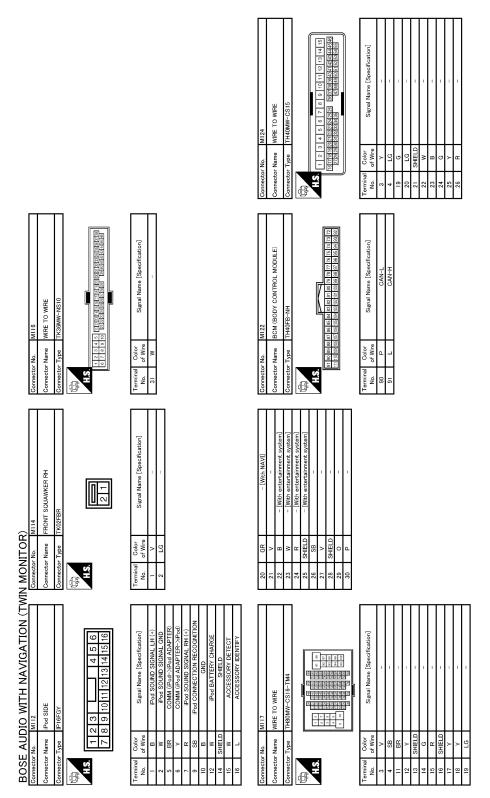
JCNWM1072GB

< ECU DIAGNOSIS INFORMATION >

BOSE AUDIO WITH NAVIGATION (TWIN MONITOR)    Secretaria   Property   Property	Connector No. M99 Connector Name VIDEO DISTRIBUTOR THOSEW-WH  H.S. 59 56 60	Color   Signal Name [Specification]   Orlor   Signal Name [Specification]   Orlor   Orlor	Y   Pod SOUND SIGNAL RH (-)		A B C
Control   Cont	Commetter No.	Terminal No. 55 55 55 56 56 60 60 60	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		D
Concessor No.   Wildle   NAVIGATION (TWIN MONITOR)   Control   C		Signal Name (Specification) AV COMM (H) AV COMM (L) COMPOSITE INAGE GND SHELD COMPOSITE INAGE SIGNAL AUX IMAGE SIGNAL SHIELD SHIELD DVD IMAGE SIGNAL	M-NH  5   6   7   8   9   10   11   12    17   18   19   20   21   22   23   24    17   18   19   20   21   22   23   24    Signal Name (Specification)  Flood SOUND SIGNAL LH (+)  Flood SOUND SIGNAL RH (+)  Flood SOUND SIGNAL RH (+)  Flood SOUND SIGNAL RH (+)		
Connector like   March   Control			Milling   Mill		G
Connector Name   WIPC DISTRIBUTOR   Separation   Connector Name	Connect	Termina No. No. 10 19 21 22 22 22 22 24 24 24 24	Connect Connec		Н
Connector Name   WIPC DISTRIBUTOR   Separation   Connector Name	IGNITION SHELD COMM (DIST->DISP)		MH 4 5 6 7 8 12 13 14 15 16 16 12 13 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16		I
BOSE AUDIO WITH NAVIGATION (TW Connector No. May)   Connector Name   VIDEO DISTRIBUTIOR	IN MONITOR)  36 0 0 38 SHIFLD 39 V 40 SB		MITO 00 00 00 00 00 00 00 00 00 00 00 00 00		K
	ML) NOI.	ou]			L
	H NAVIGAT	roal Name (Specification Red) Stock (Specification Red) SIGNAL GROB GND CROB (B. BLUE) SIGNAL WP HP	VQ ENGINE)  728-F-1H-Z  728-F-1H-Z  728-F-1H-Z  728-F-1H-Z  728-F-1H-Z  18 [18] [18] [18] [18] [18] [18] [18] [1		M
	M97		M107 E CM (WII 128   12   12   12   12   12   12   12		AV
	BOSE Al Connector No. Connector Type Connector Type H.S.		Connector No.  Connector Name Connector Type  H.S.  113 P V 114 P		0
Р	<u> </u>			JCNWM1073GB	P

**AV-1021** Revision: 2009 March 2009 FX35/FX50

< ECU DIAGNOSIS INFORMATION >

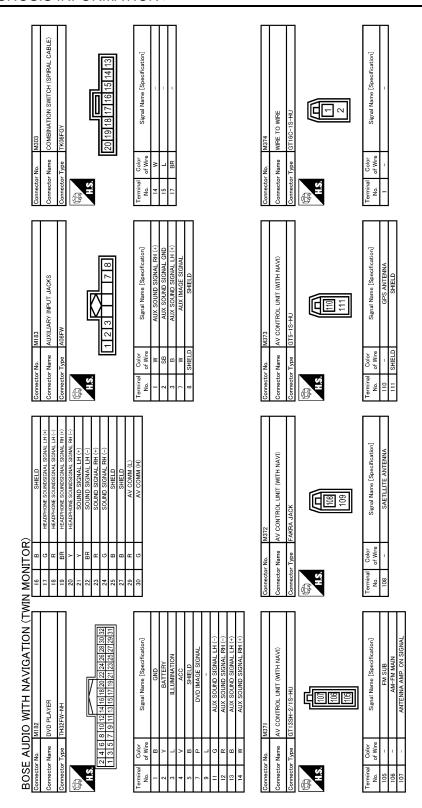


JCNWM1074GB

< ECU DIAGNOSIS INFORMATION >

Connector No. MI144 Connector Name WRE TO WRE TH12MW-NH Terminal Color No. of Wire No. of Wire 11 SHELD 12 W		В
Connector Connector I Terminal No. 11		D
[5] [8] [16] [16] [16] [16] [16] [16] [16] [16		Е
MI40 WIRE TO WIRE THIGMW-NH 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16  Signal Name [Specification]		F
elector No.  lector Name lector Type lecto	11	G
		Н
	WIRE NH  7 8 9 10.111213141516 20 21 25 26 27 28 29 30 31 32 Signal Name (Specification)	I
	Or No. MI 81  Or Type TTO WIRE  Type TH 62 MW-NH  Of G G G G G W W W W W W W W W W W W W W W	J
WIN MONITOR)  19 SHELD  20 SHELD  20 SHELD  21 R  23 BR  24 B  26 B  26 B  27 R  28 P  29 P  29 P  29 P  30 SHELD  31 R	Connector No.   Connector No.	К
		L
Manage   M	MI 60  PRESENT VERSINE)  PRESENT PLINE  TEST TEST THE INTERIOR OF TEST TEST TEST THE INTERIOR OF TEST TEST TEST TEST TEST TEST TEST TES	М
MI139 WIRE TO WIRE TH32FW-NH T1312 T110 9 128 28 27 28 52 Signal	MI 60 RECAL (WITH VICE NOINE)	AV
BOSE AUD   Connector Name   Value		
A   Commetter Na   Commetter Na   Commetter Na   Commetter Na   Commetter Type   Commetter Na   Commetter Type   Commetter	Connector No. Connector Type	0
		JCNWM1075GB

**AV-1023** Revision: 2009 March 2009 FX35/FX50

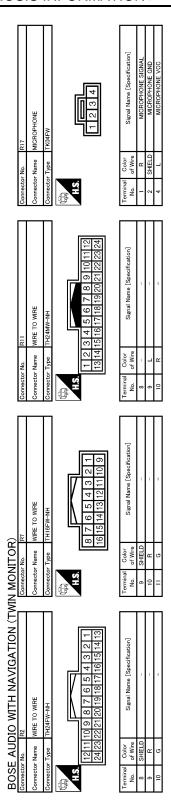


JCNWM1076GB

< ECU DIAGNOSIS INFORMATION >

[toon]	tom)		А
WIRE H-Z/IPP-HU Signal Name [Specification]	M389 WINDOW ANTENNA (SUB) POIFE-A  Signal Name [Specification]		В
M385 WIRE TO GT13SCh	MASS WINDOW POIFS-A		С
Connector No. Connector Name Connector Type No. No. of Wire 2 3 - 3 3 3	Oonnector No. Connector Name Connector Type  H.S. H.S.  I eminal Color No. of Wire		D
viEulnA	oeification		Е
ANTENNA BASE GTI6C-IPP-HU  Signal Name [Specification] SATELLITE ANTENNA	WRE TO WIRE  JASO PLUG  Signal Name [Specification]		F
No. Name Type	lor Vire		G
Connector Connector No. 18.8	Connector No.		Н
WIRE PP-HU Signal Name [Specification]	WIRE  CK  Signal Name [Specification]		I
1716C-1	WIRE TO WIRE JASO JACK Signal Name		J
Connector Name W Connector Type Gonnector Type Gonn	Connector No. In Connector Type 1 Connec		K
NOI			L
WIRE 2/1S-HU  Signal Name [Specification]	A BASE  1-1/1PP-HU  Signal Name [Specification]  ANTENAN AMP ON SIGNAL  AM-FM MAIN		M
MM375 WIRE TO GT13SC-	M886 ANTENNA O GT135SN		AV
BOSE AUI Connector Name Connector Type Connector Ty	Connector No. Connector Name Connector Type No. Terminal No. Of Wir.  1	JCNWM1077GB	0
			Р

**AV-1025** Revision: 2009 March 2009 FX35/FX50



JCNWM1078GB

Fail-Safe INFOID:0000000003825630

• Sonar control unit has diagnosis function which can detect corner sensor malfunction and sensor harness disconnection.

• It transmits the malfunction status to around view monitor control unit and informs the malfunction to the user by displaying continuously red sonar indicator.

< ECU DIAGNOSIS INFORMATION >

**DTC Index** 

DTC	Display item	Malfunction is detected when	Reference
B2700	CORNER SENSOR [FL] [B2700]	Corner sensor front left is malfunctioning.	AV-708, "DTC Logic"
B2701	SENSOR HARNESS OPEN [CR-FL] [B2701]	Corner sensor front left harness circuit is open.	AV-709, "Diagnosis Procedure"
B2702	CORNER SENSOR [FR] [B2072]	Corner sensor front right is malfunctioning.	AV-710, "DTC Logic"
B2703	SENSOR HARNESS OPEN [CR-FR] [B2703]	Corner sensor front right harness circuit is open.	AV-711, "Diagnosis Procedure"
B2704	CORNER SENSOR [RL] [B2704]	Corner sensor rear left is malfunctioning.	AV-712, "DTC Logic"
B2705	SENSOR HARNESS OPEN [CR-RL] [B2705]	Corner sensor rear left harness circuit is open.	AV-713, "Diagnosis Procedure"
B2706	CORNER SENSOR [RR] [B2706]	Corner sensor rear right is malfunctioning.	AV-714, "DTC Logic"
B2707	SENSOR HARNESS OPEN [CR-RR] [B2707]	Corner sensor rear right harness circuit is open.	AV-715, "Diagnosis Procedure"

#### NOTE:

"TIME" means the following.

• 0: Means detected malfunction at present. (From malfunction detection to turning ignition switch OFF)

• 1–39: Means detected malfunction in past.

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**AV-1027** Revision: 2009 March 2009 FX35/FX50

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# SYMPTOM DIAGNOSIS

### MULTI AV SYSTEM SYMPTOMS

Symptom Table

#### RELATED TO NAVIGATION

Symptoms	Check items	Possible malfunction location / Action to take
	All switches cannot be operated.     "MULTI AV" is displayed on system selection screen when the CONSULT-III is started.	Multifunction switch power supply and ground circuit.     AV communication circuit between AV control unit and multifunction switch.     Perform CONSULT-III self-diagnosis. Refer to AV-671.  "CONSULT-III Function (MULTI AV)".
Multifunction switch and preset switch operation does not work.	All switches cannot be operated.     "MULTI AV" is not displayed on system selection screen when the CONSULT-III is initialized.	AV control unit power supply and ground circuit malfunction. Refer to AV-716, "AV CONTROL UNIT: Diagnosis Procedure".
	Only specified switch cannot be operated.	Multifunction switch or preset switch malfunction. Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-656, "Diagnosis Description".
Fuel economy display, vehicle set-	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis. Refer to AV-671, "CONSULT-III Function (MULTI AV)".
ting operation is abnormal.	There is no malfunction in the self-diagnosis results.	Ignition signal circuit malfunction (AV control unit).  Refer to AV-716, "AV CONTROL UNIT : Diagnosis Procedure".
Guide sound is not heard.	On the setting display select "system sound (guide sound volume, etc.)," and confirm that guide sound is ON.	AV control unit malfunction.  Replace AV control unit. Refer to AV-1045, "Exploded View".

#### RELATED TO HANDS-FREE PHONE

- Check that the cellular phone is corresponding type (Bluetooth<sup>™</sup> correspond) when the hands-free related malfunction vehicle is in service before performing a diagnosis.
- There is a case that malfunction occurs due to the version change of the phone type, etc. even though it is a
  corresponding type. Therefore, confirm it by changing the cellular phone to another corresponding type
  phone, and check that it operates normally. It is necessary to distinguish whether the cause is the vehicle or
  cellular phone.

### Simple Check for Bluetooth<sup>™</sup> Communication

If cellular phone and AV control unit cannot be connected with Bluetooth $^{\text{TM}}$  communication, following procedure allows the technician to judge which device has malfunction.

- Turn on a cellular phone, not connecting Bluetooth<sup>™</sup> communication.
- Start CONSULT-III, then start Windows<sup>®</sup>.
- 3. Set CONSULT-III near a cellular phone.
- 4. When operated Bluetooth<sup>™</sup> registration by cellular phone, check if CONSULT-III<sup>\*</sup> would be displayed on the device name. (If other Bluetooth<sup>™</sup> device is located near cellular phone, a name of the device would be displayed also.)
  NOTE:
  - \*:Displayed device name is "NISSAN-\*\*\*\*\*."
- If no device name is displayed, cellular phone is malfunctioning.
   Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.

CONSULT-III

Source Salost : FUNC

JPNIA0441GB

Trouble Diagnosis Chart by Symptom

# [NAVIGATION (TWIN MONITOR)]

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Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection. (no connection is displayed on the display at the guide.)	Repeat the registration of cellular phone.	AV control unit malfunction.  Replace AV control unit. Refer to AV-1045, "Exploded View".
Hands-free phone cannot be established.	<ul> <li>Hands-free phone operation can be made, but the communication cannot be established.</li> <li>Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.</li> </ul>	AV control unit malfunction.  Replace AV control unit. Refer to AV-1045, "Exploded View".
The other party's voice cannot be heard by hands-free phone.	_	AV control unit malfunction.  Replace AV control unit. Refer to AV-1045, "Exploded View".
Originating sound is not heard by the other party with hands-	Sound operation function is normal.	AV control unit malfunction.  Replace AV control unit. Refer to AV-1045, "Exploded View".
free phone communication.	Sound operation function does not work.	Microphone signal circuit malfunction.  Refer to AV-742, "Diagnosis Procedure".

Symptoms	Check items	Probable malfunction location / Action to take	Н
It does not switch to camera im-	"Camera Cont." of "Confirmation/Adjustment" can be selected.	Ignition signal circuit (around view monitor control unit).  Refer to AV-721, "AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure".	I
age even when the "CAMERA" switch is pressed or the selector lever is in the reverse position.	"Camera Cont." of "Confirmation/Adjustment" cannot be selected.	Around view monitor control unit power supply and ground circuits.  Refer to AV-721, "AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure".      AV communication circuits.  Refer to AV-671, "CONSULT-III Function (MULTI AV)".	J K
The screen switches when pressing the "CAMERA" switch	Only superimposing is displayed. (Only the image displayed by AV control unit is displayed)	Camera image signal circuit between around view monitor control unit and front display unit.  Refer to AV-744, "Diagnosis Procedure".  RGB (YS) area signal circuit between AV control unit and front display unit.  Refer to AV-727, "Diagnosis Procedure".  AV-727, "Diagnosis Procedure".	M
or shifting the selector lever to the reverse position, however, all views are not displayed.	Superimposing is not displayed.	Communication circuit between AV control unit and front display unit.  Refer to AV-671, "CONSULT-III Function (MULTI AV)".  Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and front display unit.  Refer to AV-728, "Diagnosis Procedure".	O P
Camera image is rolling.	AUX image is rolling	Vertical synchronizing (VP) signal circuit malfunction between AV control unit and front display unit.  Refer to AV-729. "Diagnosis Procedure".	

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### < SYMPTOM DIAGNOSIS >

# [NAVIGATION (TWIN MONITOR)]

Symptoms	Che	eck items	Probable malfunction location / Action to take
It cannot be switched to rear view monitor even when the selector lever is in the reverse position.	The front view is displayed normally.		Reverse signal circuit. (AV control unit)
The predicted course line display in front view and rear view is malfunctioning.	The "Steer. Angle Sensor" is not turned ON at "Connection Confirmation" of "Camera Cont."		Steering angle sensor signal circuits. Refer to AV-746, "Diagnosis Procedure".
<ul> <li>The front view screen is not displayed.</li> <li>The front of Birds-Eye view</li> </ul>	displayed. Camera in "Connection		<ul> <li>Front camera image signal circuit.</li> <li>Front camera power supply and ground circuits.</li> <li>Refer to <u>AV-755</u>, "<u>Diagnosis Procedure</u>"</li> </ul>
screen is not displayed.	Confirmation" mode of "Camera Cont."	Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Front camera communication signal circuit. Refer to AV-754, "Diagnosis Procedure".
The rear view screen is not displayed.  The rear of Birds Eve view.	d. Camera in "Connection • COMM Line: NG		Rear camera image signal circuit.     Rear camera power supply and ground circuits.  Refer to AV-758, "Diagnosis Procedure".
, , , , , , , , , , , , , , , , , , , ,	Confirmation" mode of "Camera Cont."	Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Rear camera communication signal circuits. Refer to AV-757, "Diagnosis Procedure".
The front-side screen is not displayed.     The side RH of Birds-Eye view screen is not displayed.    The side RH of Birds-Eye   1	Check the item Pass- Side Camera in "Con- nection Confirmation" mode of "Camera Cont."  •	Image Output Signal: NG     COMM Status: NG     COMM Line: NG	Side camera RH image signal circuit.     Side camera RH power supply and ground circuits.  Refer to AV-764, "Diagnosis Procedure".
		Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Side camera RH communication circuit. Refer to AV-763, "Diagnosis Procedure".
The side LH of Birds-eye view screen is not displayed.	Check the item Dr-Side Camera at "Connection Confirmation" mode of	Image Output Signal: NG     COMM Status: NG     COMM Line: NG	Side camera LH image signal circuit.     Side camera LH power supply and ground circuits.  Refer to AV-761, "Diagnosis Procedure".
Screen is not displayed.	"Camera Cont."	Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Side camera LH communication circuit. Refer to AV-760, "Diagnosis Procedure".
When shift position is other than "R" the front-side and front screen or the Birds-Eye view and front screen remain displaying even if the vehicle speed increases.	<u> </u>		Vehicle speed signal (around view monitor control unit).
Around view monitor does not start other than shift position "R"			Certain States restrict the operation so that around view monitor does not start other than at shift position "R".

RELATED TO CAMERA ASSISTANCE SONAR

#### < SYMPTOM DIAGNOSIS >

#### [NAVIGATION (TWIN MONITOR)]

• RGB area (YS) signal circuit malfunction between vid-

eo distributor and rear display unit. Refer to <u>AV-734</u>, "<u>Diagnosis Procedure</u>".

Symptoms	Check items	Probable malfunction location / Action to take
	The malfunction is detected in only 1 indicator (Always displayed in red)	Corner sensor malfunction in corresponding area     Corner sensor harness circuit in corresponding area     Perform CONSULT-III self-diagnosis of sonar system.     Refer to AV-678, "CONSULT-III Function (SONAR)".
The malfunction is detected in the sonar indicator (Always displayed in red)	The malfunction is detected in all 4 indicators (Always displayed in red)	<ul> <li>Corner sensor ground circuit.</li> <li>Perform CONSULT-III self-diagnosis of sonar system.</li> <li>Refer to <u>AV-678, "CONSULT-III Function (SONAR)"</u>.</li> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits.</li> <li>Perform CONSULT-III self-diagnosis of multi AV system.</li> <li>Refer to <u>AV-671, "CONSULT-III Function (MULTI AV)"</u>.</li> </ul>
The sonar indicator is normal,	The buzzer is turned ON when performing "Buzzer" in "Active test" of "Sonar".	Replace sonar control unit. Refer to AV-1072, "Exploded View"
but the buzzer does not sound	The buzzer is not turned ON when performing "Buzzer" in "Active test" of "Sonar".	Replace buzzer. Refer to AV-1075, "Exploded View".
RELATED TO RGB IMAG	GE	
Front Display Unit		
Symptoms	Check items	Possible malfunction location / Action to take
RGB image is not shown.	All RGB images are not shown.     "MULTI AV" is displayed on system selection screen when the CONSULT-III is started.	Perform CONSULT-III self-diagnosis. Refer to AV-671, "CONSULT-III Function (MULTI AV)".
	All RGB images are not shown.     "MULTI AV" is not displayed on system selection screen when the CONSULT-III is started.	AV control unit power supply and ground circuit.  Refer to AV-716, "AV CONTROL UNIT : Diagnosis Procedure".
	Light blue (Cyan) tint.	RGB signal (R: red) circuit malfunction between AV control unit and front display unit.  Refer to AV-723, "Diagnosis Procedure".
Color of RGB image is not proper.	Purple (Magenta) tint.	RGB signal (G: green) circuit malfunction between AV control unit and front display unit.  Refer to AV-724, "Diagnosis Procedure".
	Screen looks yellowish.	RGB signal (B: blue) circuit malfunction between AV control unit and front display unit.  Refer to AV-725, "Diagnosis Procedure".
RGB screen is rolling.	_	RGB synchronizing signal circuit malfunction between AV control unit and front display unit.  Refer to AV-726, "Diagnosis Procedure".
Rear Display Unit		
Symptoms	Check items	Possible malfunction location / Action to take
The menu screen is not displayed.	For rear display unit, AUX and DVD image are normal.	<ul> <li>Vertical synchronizing (VP) signal circuit malfunction between video distributor and rear display unit.     Refer to AV-735, "Diagnosis Procedure".</li> <li>Horizontal synchronizing (HP) signal circuit malfunction between video distributor and rear display unit.     Refer to AV-736, "Diagnosis Procedure".</li> </ul>
		<ul> <li>RGB area (YS) signal circuit malfunction between vid-</li> </ul>

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### < SYMPTOM DIAGNOSIS >

# [NAVIGATION (TWIN MONITOR)]

Symptoms	Check items	Possible malfunction location / Action to take
Color of RGB image (menu display screen) is not proper.	Light blue (Cyan) tint.	RGB signal (R: red) circuit malfunction between video distributor and rear display unit.  Refer to AV-731, "Diagnosis Procedure".
	Purple (Magenta) tint.	RGB signal (G: green) circuit malfunction between video distributor and rear display unit.  Refer to AV-732, "Diagnosis Procedure".
	Screen looks yellowish.	RGB signal (B: blue) circuit malfunction between video distributor and rear display unit.  Refer to AV-733, "Diagnosis Procedure".

#### RELATED TO VOICE CONTROL

Symptoms	Check items	Probable malfunction location
The voice cannot be controlled even if the voice control screen is displayed.	Voice sounds at "Voice Microphone Test" of Confirmation/Adjustment mode.	AV control unit malfunction.  Replace AV control unit. Refer to AV-1045, "Exploded View".
	Voice does not sound at "Voice Micro- phone Test" of Confirmation/Adjustment mode.	Microphone circuit malfunction.  Refer to AV-742, "Diagnosis Procedure".
The voice cannot be controlled (Voice control screen is not displayed).	Steering switch "SOURCE", "MENU UP", "MENU DOWN" operates, but "w\sum " does not operate.	Steering switch malfunction. Replace steering switch.
	Steering switch's "SOURCE", "MENU UP", "MENU DOWN", " odes not operate.	Steering switch signal A circuit malfunction. Refer to AV-748, "Diagnosis Procedure".
	All steering switches do not work.	Steering switch signal GND circuit malfunction. Refer to AV-752, "Diagnosis Procedure".

#### **RELATED TO AUDIO**

Symptoms	Check items	Possible malfunction location / Action to take
The disk cannot be removed.	_	Disk eject signal circuit malfunction. Refer to AV-741, "Diagnosis Procedure".
Audio sound is not heard.	No sound from all speakers.	Amp. ON signal circuit.     BOSE amp. power supply and ground circuits.     Refer to AV-719, "BOSE AMP.: Diagnosis Procedure".
	Sound is not heard from woofer.	<ul><li>Woofer power supply and ground circuits.</li><li>Sound signal (woofer) circuits.</li><li>Woofer amp. ON signal circuit.</li></ul>
	Sound is not heard from center speaker.	Sound signals center speaker circuit.
	Sound is heard only from specific places.	Sound signal circuits of suspect system.
It does not change to "Driver's Audio Stage" mode.	_	Mode change signal circuit.  Refer to AV-740, "Diagnosis Procedure".

#### < SYMPTOM DIAGNOSIS >

### [NAVIGATION (TWIN MONITOR)]

Symptoms	Check items	Possible malfunction location / Action to take
	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-671, "CONSULT-III Function (MULTI AV)".
Satellite radio is not received.	There is no malfunction in the CON-SULT-III self-diagnosis result.	Perform the following inspection procedure.  1. Check satellite radio antenna (antenna base) mounting nut for looseness.  NOTE:  Tightening torque: 6.5 N·m (0.66 kg-m, 58 in-lb)  2. Visually check for satellite radio antenna feeder.  3. Replace the satellite radio antenna (antenna base). Refer to AV-1057, "Exploded View".  4. Replace the AV control unit. Refer to AV-1045, "Exploded View".
AM/FM radio is not received.	Other audio sounds are normal.	Antenna amp. ON signal circuit.     Antenna feeder.

### RELATED TO iPod®

Connect another  $iPod^{\mathbb{R}}$  and check if the symptom is reproduced or not. If the symptom is reproduced, diagnose the vehicle. If no malfunction is detected, replace the iPod harness.

#### NOTE:

It is unable to check that between  $iPod^{\ensuremath{\text{@}}}$  and iPod harness.

Symptoms	Check items	Possible malfunction location / Action to take
The sound of iPod <sup>®</sup> is not heard.	Other audio sounds are normal.	<ul> <li>iPod sound signal circuits between AV control unit and iPod adapter.</li> <li>iPod sound signal circuits between iPod<sup>®</sup> and iPod adapter.</li> </ul>
It does not change to iPod mode.	There is malfunction in the CONSULT-III self-diagnosis.	adapter.  Perform CONSULT-III self-diagnosis.  Refer to AV-671, "CONSULT-III Function (MULTI AV)".
"iPod is not connected" is dis- played when it comes to iPod mode.	Connected to iPod <sup>®</sup> .	iPod connection recognition signal circuit between iPod <sup>®</sup> and iPod adapter.
iPod <sup>®</sup> cannot charge the battery.	_	iPod battery charge circuit between iPod <sup>®</sup> and iPod adapter.
The title of music file in the iPod $^{\text{@}}$ is not indicated.		Communication simultiple to the street in th
Accessing the iPod <sup>®</sup> is unavailable from the vehicle.	<u>—</u>	Communication circuit between iPod <sup>®</sup> and iPod adapter.

#### RELATED TO STEERING SWITCH

Symptoms	Probable malfunction location	
None of the steering switch operations work.	Steering switch signal GND circuit malfunction. Refer to AV-752, "Diagnosis Procedure".	
Only specified switch cannot be operated.	Steering switch malfunction. Replace steering switch.	
Steering switch's "SOURCE", "MENU UP", "MENU DOWN" and " v " switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-748, "Diagnosis Procedure".	
Steering switch's "VOL UP", "VOL DOWN", " " and " switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-750, "Diagnosis Procedure".	

#### **RELATED TO AUXILIARY INPUT**

#### NOTE

Check that there is no malfunction of AUX equipment main body before performing a diagnosis.

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# [NAVIGATION (TWIN MONITOR)]

Symptoms	Check items	Probable malfunction location
Front display unit and rear display unit, AUX image is not dis-	DVD image is normal.	AUX image signal circuit malfunction between auxiliary input jacks and video distributor.  Refer to AV-738, "Diagnosis Procedure".
played.	DVD image is not displayed.	Perform CONSULT-III self-diagnosis. Refer to AV-671, "CONSULT-III Function (MULTI AV)".
	DVD image is normal.	AUX image signal circuit malfunction between auxiliary input jacks and video distributor.  Refer to AV-738, "Diagnosis Procedure".
For front display unit, AUX image is not displayed (Menu display is normal).	DVD image is not displayed (Menu display is normal).	<ul> <li>Composite image signal circuits malfunction between video distributor and front display unit.     Refer to AV-730, "Diagnosis Procedure".</li> <li>RGB area (YS) signal circuit malfunction between AV control unit and front display unit.     Refer to AV-727, "Diagnosis Procedure".</li> </ul>
For front display unit, AUX image is not displayed (Menu display is not displayed, too).	DVD image is not displayed (Also, menu display is not displayed).	Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and front display unit.  Refer to AV-728. "Diagnosis Procedure".
For front display unit, AUX image is rolling.	DVD image is rolling.	Vertical synchronizing (VP) signal circuit malfunction between AV control unit and front display unit.  Refer to AV-729, "Diagnosis Procedure".
For rear display unit, AUX image is not displayed (Menu display is normal).	DVD image is not displayed (Menu display is normal).	Composite image signal circuits malfunction between video distributor and rear display unit.  Refer to AV-737, "Diagnosis Procedure".
At AUX of rear display, menu display is not displayed.	AUX image is normal.	<ul> <li>Vertical synchronizing (VP) signal circuit malfunction between video distributor and rear display unit. Refer to AV-735, "Diagnosis Procedure".</li> <li>Horizontal synchronizing (HP) signal circuit malfunction between video distributor and rear display unit. Refer to AV-736, "Diagnosis Procedure".</li> <li>RGB area (YS) signal circuit malfunction between video distributor and rear display unit. Refer to AV-734, "Diagnosis Procedure".</li> </ul>
Thoro is no ALIV sound	DVD sound is not normal, neither.	Sound signal circuit between DVD player and AV control unit.
There is no AUX sound.	The sound other than AUX sound is normal.	AUX sound signal circuit between auxiliary input jacks and DVD player.
There is no AUX sound from	DVD sound is normal.	Sound signal circuit between auxiliary input jacks and DVD player.
speaker on the right or left side.	DVD sound is not normal, neither.	Sound signal circuit between DVD player and AV control unit.
It does not change to AUX mode.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-671, "CONSULT-III Function (MULTI AV)".

### RELATED TO DVD MODE

Symptoms	Check items	Probable malfunction location
Front display unit and rear display unit, DVD image is not displayed.	AUX image is normal.	DVD image signal circuit.  Refer to AV-739, "Diagnosis Procedure".
	AUX image is not displayed.	Perform CONSULT-III self-diagnosis. Refer to AV-671, "CONSULT-III Function (MULTI AV)".
For front display unit, DVD image is not displayed (Menu display is normal).	AUX image is not displayed (Menu display is normal).	<ul> <li>Composite image signal circuits malfunction between video distributor and front display unit.     Refer to AV-730, "Diagnosis Procedure".</li> <li>RGB area (YS) signal circuit malfunction between AV control unit and front display unit.     Refer to AV-727, "Diagnosis Procedure".</li> </ul>

### < SYMPTOM DIAGNOSIS >

# [NAVIGATION (TWIN MONITOR)]

Symptoms	Check items	Probable malfunction location
For front display unit, DVD image is not displayed (Also, menu display is not displayed).	AUX image is not displayed (Also, menu display is not displayed).	Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and front display unit.  Refer to AV-728, "Diagnosis Procedure".
For front display, DVD image is rolling.	AUX image is rolling.	Vertical synchronizing (VP) signal circuit malfunction between AV control unit and front display unit.  Refer to AV-729, "Diagnosis Procedure".
For rear display, DVD image is not displayed (Menu display is normal).	AUX image is not displayed (Menu display is normal).	Composite image signal circuits malfunction between video distributor and rear display unit.  Refer to AV-737, "Diagnosis Procedure".
At DVD of rear display unit, menu display is not displayed.	DVD image is normal.	<ul> <li>Vertical synchronizing (VP) signal circuit malfunction between video distributor and rear display unit. Refer to AV-735, "Diagnosis Procedure".</li> <li>Horizontal synchronizing (HP) signal circuit malfunction between video distributor and rear display unit. Refer to AV-736, "Diagnosis Procedure".</li> <li>RGB area (YS) signal circuit malfunction between video distributor and rear display unit. Refer to AV-734, "Diagnosis Procedure".</li> </ul>
There is no DVD sound.	_	Sound signal circuit between DVD player and AV control unit.
There is no DVD sound from speaker on the right or left side.	_	Sound signal circuit between DVD player and AV control unit.
It does not change to DVD mode.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-671, "CONSULT-III Function (MULTI AV)".

#### **RELATED TO HEADPHONE**

Symptoms	Check items	Probable malfunction location
No sound is heard from head- phones.	The LED for headphones sound transmission is illuminated.	Headphones sound signal circuit.
	The LED for headphones sound transmission is not illuminated.	Headphones ON signal circuit.
No sound is heard from head- phones only for RH (LH).	— Headphones sound signal circuit RH (LH).	

### **RELATED TO REAR DISPLAY UNIT**

Symptoms	Check items	Possible malfunction location / Action to take
The menu screen is not displayed.	For rear display unit, AUX and DVD image are normal.	<ul> <li>Vertical synchronizing (VP) signal circuit malfunction between video distributor and rear display unit. Refer to AV-735, "Diagnosis Procedure".</li> <li>Horizontal synchronizing (HP) signal circuit malfunction between video distributor and rear display unit. Refer to AV-736, "Diagnosis Procedure".</li> <li>RGB area (YS) signal circuit malfunction between video distributor and rear display unit. Refer to AV-734, "Diagnosis Procedure".</li> </ul>
	Light blue (Cyan) tint.	RGB signal (R: red) circuit malfunction between video distributor and rear display unit.  Refer to AV-731, "Diagnosis Procedure".
Color of RGB image (menu display screen) is not proper.	Purple (Magenta) tint.	RGB signal (G: green) circuit malfunction between video distributor and rear display unit.  Refer to AV-732, "Diagnosis Procedure".
	Screen looks yellowish.	RGB signal (B: blue) circuit malfunction between video distributor and rear display unit.  Refer to AV-733, "Diagnosis Procedure".

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### < SYMPTOM DIAGNOSIS >

# [NAVIGATION (TWIN MONITOR)]

Symptoms	Check items	Possible malfunction location / Action to take
AUX and DVD image are not displayed.	Front display unit is not displayed.	Perform CONSULT-III self-diagnosis. Refer to AV-671, "CONSULT-III Function (MULTI AV)".
	Front display unit is normal.	Composite image signal circuit between video distributor and rear display unit.  Refer to AV-737, "Diagnosis Procedure".
Rear display unit does not open.	_	Perform CONSULT-III self-diagnosis. Refer to AV-671, "CONSULT-III Function (MULTI AV)".

< SYMPTOM DIAGNOSIS >

[NAVIGATION (TWIN MONITOR)]

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### NORMAL OPERATING CONDITION

Description INFOID:0000000003825633

- For Navigation system operation information, refer to Navigation system Owner's Manual.
- Vehicle operation information, refer to Owner's Manual.

#### **BASIC OPERATIONS**

Symptom	Possible cause	Possible solution
	The brightness is at the lowest setting.	Adjust the brightness of the display.
No image is displayed.	The system in the video mode.	Press <b><disc-aux></disc-aux></b> to change the mode.
	The display is turned off.	Press <day night=""> to turn on the display.</day>
No voice guidence is evailable. Or	The volume is not set correctly, or it is turned off.	Adjust the volume of voice guidance.
No voice guidance is available. Or The volume is too high or too low.	Voice guidance is not provided for certain streets (roads displayed in gray).	This is not a malfunction.
No map is displayed on the screen.	A screen other than map screen is displayed.	Press <map>.</map>
The screen is too dim. The movement is slow.	The temperature in the interior of the vehicle is low.	Wait until the interior of the vehicle has warmed up.
Some pixels in the display are darker or brighter than others.	This condition is an inherent characteristic of liquid crystal displays.	This is not a malfunction.
Some menu items cannot be selected.	Some menu items become unavailable while the vehicle is driven.	Park the vehicle in a safe location, and then operate the navigation system.

#### NOTE:

Locations stored in the Address Book and other memory functions may be lost if the vehicle's battery is disconnected or becomes discharged. If this occurs, service the vehicle's battery as necessary and re-enter the information in the Address Book.

#### RELATED TO VOICE RECOGNITION

Related to basic operation

Symptom	Possible cause	Possible solution
	The interior of the vehicle is too noisy.	Close the windows or have other occupants quiet.
	The volume of your voice is too low.	Speak louder
	The volume if your voice is too loud.	Speak softer
	Your pronunciation is unclear	Speak clearly
The system does not recognize your com-	You are speaking before the voice recognition made is ready	Press and release "v½" switch on the steering switch, and speak a command after the tone sounds
mand. or The system recognizes your command incor-	8 seconds or more have passed after you pressed and released "√∠" switch on the steering switch.	Make sure to speak a command within 8 seconds after you press and release "√≨" switch on the steering switch.
rectly	Only a limited range of voice commands is usable for each screen.	Use a correct voice command appropriate for the current screen
	The second of the fan od the air conditioner is too loud.	If the air conditioner is set to "Auto", the fan speed is automatically lowered and voice commands can be recognized more easily.  Lower the fan speed as necessary or set the air conditioner to "Auto".

#### Related to item choice

The system should respond correctly to all voice commands without difficulty. If problems are encountered, follow the solutions given in this guide for the appropriate error.

Where the solutions are listed b number, try each solution in turn, starting with number one, until the problem is resolved.

#### [NAVIGATION (TWIN MONITOR)]

Symptom/ error message	Solution	
	1. Ensure that the command format is valid.	
Displays "COMMAND NOT DEC	2. Speak clearly without pausing between words and at a level appropriate to the ambient noise level.	
Displays "COMMAND NOT REC- OGNIZED" or the system fails to in- terpret the command correctly.	3. Ensure that the ambient noise level is not excessive, for example, windows open or defrost on. <b>NOTE:</b> If it is too noisy to use the phone, it is likely that voice commands will not be recognized.	
	If optional words of the command have been omitted, then command should be tried with these in place.	
The system consistently selects the wrong voicetag	1.Ensure that the voicetag requested matches what was originally stored. This can be confirmed by giving the Addressbook Directory or Phone Directory command.	
	2. Replace one of the voicetags being confused with a different voicetag.	

#### Related to telephone

The system should respond correctly to all voice commands without difficulty. If problems are encountered, try the following solutions.

Where the solutions are listed by number, try each solution in turn, starting with number 1, until the problem is resolves.

Symptom	Solution	
	Ensure that the command is valid.	
	2. Ensure that the command is spoken after the tone.	
	3. Speak clearly without pausing between words and at level appropriate to the ambient noise level in the vehicle.	
System fails to interpret the command correctly.	4.Ensure that the ambient noise level is not excessive (for example, windows open or defroster on),  NOTE:  If it is too noisy to use the phone, it is likely that the voice commands will be recognized.	
	5. If more than one command was said at a time, try saying the commands separately.	
	6. If the system consistently fails to recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker. See "Speaker adaptation (SA) mode" earlier in this section. Refer to "OWNER'S MANUAL".	
The system consistently selects	1.Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the "List Names" command.	
the wrong voicetag	2. Replace one of the names being confused with a new name.	

#### RELATED TO AUDIO

- The majority of the audio malfunctions are the result of outside causes (bad CD/cassette, electromagnetic interference, etc.). Check the symptoms below to diagnose the malfunction.
- The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning.
   Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and then determine the cause.

#### NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA) or could be incorrectly mastered by the customer on a computer.
- Check if the CDs carry the Compact Disc Logo. If not, the disc is not mastered to the "red book" Compact Disc Standard and may not play.

### [NAVIGATION (TWIN MONITOR)]

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Symptom	Cause and Counter measure	
	Check if the CD/CF was inserted correctly.	
	Check if the CD/CF is scratched or dirty.	
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.	
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.	
Cannot play	If there is a mixture of music CD files (CD-DA data) and MP3/WMA files on a CD, only the music CD files (CD-DA data) will be played.	
	Files with extensions other than ".MP3", ".WMA", ".mp3", or ".wma" cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.	
	Check if the disc or the file is generated in an irregular format, This may occur depending on the variation or the setting of MP3/WMA writing applications or other text editing applications.	
	Check if the finalization process, such as session close and disc close, is done for the disc.	
	Check if the CD/CF is protected by copyright.	
Poor sound quality	Check if the CD/CF is scratched or dirty.	
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA CD/CF, or if it is a multi session disc, some time may be required before the music starts playing.	
Music cuts off or skips	The writing software and hardware combination might not match, or the writing speed, writing depth, writing width might not match the specifications. Try using the slowest writing speed.	
Skipping with high bit rate files	Skipping may occur with large quantities if data such as for high bit rate data.	
Move immediately to the next song when playing	When a non-MP3/WMA file has been given an extension of ".MP3", ".WMA", ".mp3", or ".wma", or when play is prohibited by copyright protection, the player will skip to the next song.	
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.	

Noise resulting from variations in field strength, such as fading noise and multi-path noise, or external noise from trains and other sources, is not a malfunction.

#### NOTE:

- Fading noise: This noise occurs because of variations in the field strength in a narrow range due to mountains or buildings blocking the signal.
- Multi-path noise: This noise results from a time difference between the broadcast waves directly from the station arriving at the antenna and the waves reflected by mountains or buildings.

#### RELATED TO VEHICLE ICON

Symptom	Possible cause	Possible solution
Names of roads differ between Plan View and Birdview <sup>™</sup> .	This is because the quantity of the displayed information is reduced so that the screen does not become too crowded. There is also a chance that names of the roads may be displayed multiple times, and the names appearing on the screen may be different because of a processing procedure.	This is not a malfunction.
The vehicle icen is not displayed in	The vehicle was transported after the ignition switch was pressed off, for example, by a ferry or car transporter.	Drive the vehicle for a while on a road where GPS signals can be received.
The vehicle icon is not displayed in the correct position.	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is traveling on a new road, the vehicle icon is located on another road nearby.	Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available.	Updated road information will be included in the next version of the map data.

#### < SYMPTOM DIAGNOSIS >

# [NAVIGATION (TWIN MONITOR)]

Symptom	Possible cause	Possible solution
The screen does not switch to the night screen even after turning on the headlights.	The daytime screen was set the last time the headlights were turned on.	Set the screen to the night screen mode using <day night=""> when you turn on the headlights.</day>
The map does not scroll even when the vehicle is moving.	The current location map screen is not displayed.	Press <map>.</map>
The vehicle icon is not displayed.	The current location map screen is not displayed.	Press <map>.</map>
The location of the vehicle icon is misaligned from the actual position.	When using tire chains or replacing the tires, speed calculations based on the speed sensor may be incorrect.	Drive the vehicle for a while (at approximately 19 MPH for about 30 minutes) to automatically correct the vehicle icon position.  If this does not correct the vehicle icon position, contact an INFINITI dealer.
	The map data has a mistake or is incomplete (the vehicle icon position is always misaligned in the same area).	Updated road information will be included in the next version of the map data.

#### RELATED TO ROUTE CALCULATION AND VISUAL GUIDANCE

Symptom	Possible cause	Possible solution
Waypoints are not included in the auto reroute calculation.	Waypoints that you have already passed are not included in the auto reroute calculation.	If you want to go to that waypoint again, you need to edit the route.
	Route calculation has not yet been performed.	Set the destination and perform route calculation.
Route information is not dis-	You are not driving on the suggested route.	Drive on the suggested route.
played.	Route guidance is set to off.	Turn on route guidance.
	Route information is not provided for certain types of roads (roads displayed in gray).	This is not a malfunction.
The auto reroute calculation (or detour calculation) suggests the same route as the one previously suggested.	Route calculations took priority conditions into consideration, but the same route was calculated.	This is not a malfunction.
A waypoint cannot be added.	Five waypoints are already set on the route, including ones that you have already passed.	A maximum of 5 waypoints can be set on the route. If you want to go to 6 or more waypoints, perform route calculations multiple times as necessary.
	Roads near the destination cannot be calculated.	Reset the destination to a main or ordinary road, and recalculate the route.
	The starting point and destination are too close.	Set a more distant destination.
The suggested route is not displayed.	The starting point and destination are too far away.	Divide your trip by selecting one or two intermediate destinations, and perform route calculations multiple times.
	There are time restricted roads (by the day of the week, by time) near the current vehicle location or destination.	Set [Use Time Restricted Roads] to off.
The part of the route that you have already passed is deleted.	A route is managed by sections between waypoints. If you passed the first waypoint, the section between the starting point and the waypoint is deleted. (It may not be deleted depending on the area.)	This is not a malfunction.
A - : - 4!: t · · t - · · · · · · · · · · ·	If there are restrictions (such as one-way streets) on roads close to the starting point or destination, the system may suggest an indirect route.	Adjust the location of the starting of the starting point or destination.
An indirect route is suggested.	The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets (gray roads.)	Reset the destination to a main or ordinary road, and recalculate the route.

# < SYMPTOM DIAGNOSIS >

# [NAVIGATION (TWIN MONITOR)]

Symptom	Possible cause	Possible solution
The landmark information does not correspond to the actual information.	This may be caused by insufficient or incorrect map data.	Updated information will be included in the next version of the data.
The suggested route does not exactly connect to the starting point, waypoints, or destination.	There is no data for route calculation closes to these locations.	Set the starting point, waypoints and destination on a main road, and perform route calculation.

#### RELATED TO VOICE GUIDANCE

Symptom	Possible cause	Possible solution
Voice guidance is not available	Voice guidance is only available at certain intersections marked with? In some case, voice guidance is not available even when the vehicle should make a turn.	This is not a malfunction.
	The vehicle has deviated from the suggested route.	Go back to the suggested route or request route calculation again
	Voice guide is set to off.	Turn on voice guidance.
	Route guidance is set to off.	Turn on voice guidance.
The guidance contact does not correspond to the actual condition.	The contact of voice guidance may vary, depending on the types of intersections at which turn are made.	Follow all traffic rules and regulations.

#### RELATED TO TRAFFIC INFORMATION

Symptom	Possible cause	Possible solution
The traffic information is not displayed	The traffic information is not set to on.	Set the traffic information to on.
	You are in an area where traffic information is not available	Scroll to an area where traffic information is available
	You have not subscribed to XM NavTraffic or, your subscription to XM NavTraffic has expired.	Check your subscription status of XM NavTraffic.
	The map scale is set at a level where the display of icons is impossible.	Check that the map scale is set at a level in which the display of icons is possible.
With the automatic detour route search ON, no detour route is set to avoid congested areas.	There is no faster route compared to the current route, based on the road network and traffic information.	The automatic detour search is not intended for avoiding traffic jams. It searches for the fasted rote taking into consideration such things as traffic jams.
The route does not avoid road section with traffic information stating it is closed due to road construction.	The navigation system is designed not to avoid this event because the actual period of closure may differ from the declared roadwork period.	Observe the actual road condition and follow the instructions on road for detour when necessary. If the road closure is for certain, use detour function and set the detour distance to avoid the closed road section.
Traffic information displayed differs from information from other media (e.g. radio).	Other media may use different information sources.	Observe the actual road conditions and regulations. Always observe safe driving practices and follow all traffic regulations.

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# **PRECAUTION**

#### **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIR BAG".
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
  ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s)
  with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly
  causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution for Trouble Diagnosis

INFOID:0000000003825635

#### AV COMMUNICATION SYSTEM

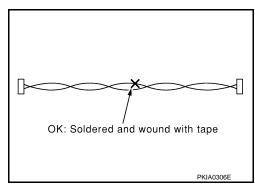
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

INFOID:0000000003825636

#### AV COMMUNICATION SYSTEM

• Solder the repaired parts, and wrap with tape. [Frays of twisted line must be within 110 mm (4.33 in).]

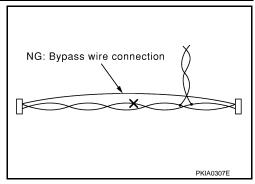


### **PRECAUTIONS**

#### < PRECAUTION >

### [NAVIGATION (TWIN MONITOR)]

 Do not perform bypass wire connections for the repair parts. (The spliced wire will become separated and the characteristics of twisted line will be lost.)



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### **PREPARATION**

< PREPARATION >

[NAVIGATION (TWIN MONITOR)]

# **PREPARATION**

# **PREPARATION**

# **Commercial Service Tools**

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Tool name		Description
Power tool	PBIC0191E	Loosening screws

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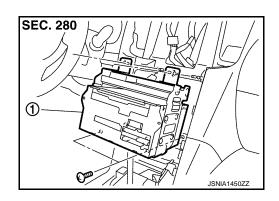
INFOID:0000000003926467

# REMOVAL AND INSTALLATION

## AV CONTROL UNIT

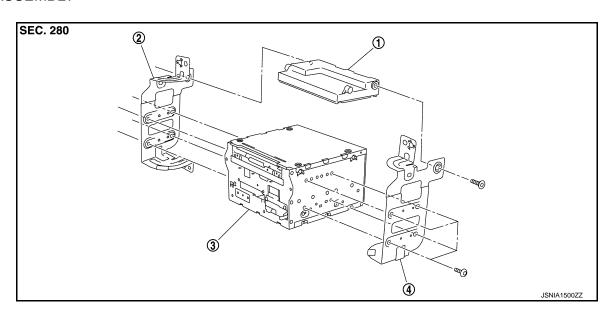
**Exploded View** 

**REMOVAL** 



1: AV control unit

### DISASSEMBLY



- 1. Unified meter and A/C amp.
- 2. Bracket LH

3. AV control unit

4. Bracket RH

### Removal and Installation

### **REMOVAL**

- Remove front display unit. Refer to <u>AV-1046</u>, "Removal and Installation".
- 2. Remove AV control unit with a unified meter and A/C amp. as a single unit from the body.
- 3. Remove bracket screws, and then remove AV control unit.

### **INSTALLATION**

Installation is the reverse order of removal.

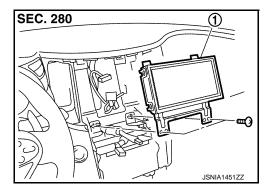
#### **CAUTION:**

Since AV control unit connector and unified meter and A/C amp. connector have the same form, be careful not to insert them wrongly.

## FRONT DISPLAY UNIT

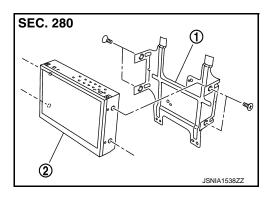
Exploded View

**REMOVAL** 



1. Front display unit

### **DISASSEMBLY**



- 1. Bracket
- 2. Front display unit

### Removal and Installation

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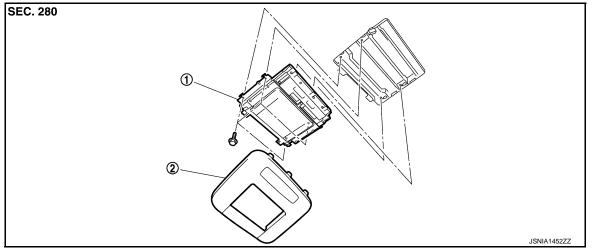
### **REMOVAL**

- 1. Remove cluster lid D. Refer to IP-12, "Removal and Installation".
- 2. Remove front display unit mounting screws.
- 3. Disconnect connector, and remove front display unit.

### **INSTALLATION**

## **REAR DISPLAY UNIT**

**Exploded View** 



- 1. Rear display unit
- 2. Rear display cover

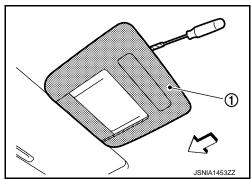
### Removal and Installation

### **REMOVAL**

Insert cloth-covered driver into gaps between rear display cover
 and headlining, and remove rear display cover.

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☐: Vehicle front



- 2. Remove rear display unit mounting bolts.
- 3. Disconnect connector, and remove rear display unit.

### **INSTALLATION**

Install in the reverse order of removal.

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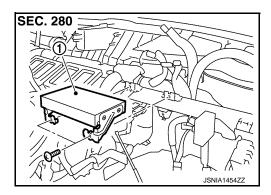
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## **VIDEO DISTRIBUTOR**

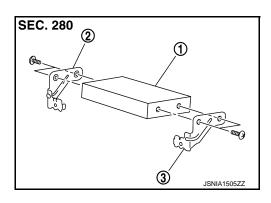
Exploded View

**REMOVAL** 



1: Video distributor

**DISASSEMBLY** 



- 1. Video distributor player
- 2. Bracket LH
- 3. Bracket RH

### Removal and Installation

INFOID:0000000003926474

2009 FX35/FX50

## REMOVAL

- 1. Remove instrument panel. Refer to IP-12, "Removal and Installation".
- 2. Remove video distributor mounting screws.
- 3. Disconnect connector and remove video distributor.

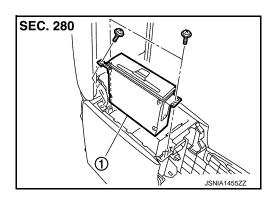
### **INSTALLATION**

## **DVD PLAYER**

**Exploded View** 

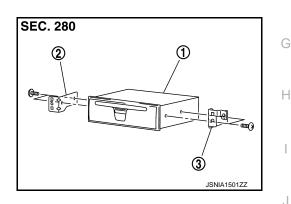
**Exploded View** 

**REMOVAL** 



1. DVD player

**DISASSEMBLY** 



- 1. DVD player
- 2. Bracket LH
- Bracket RH 3.

### Removal and Installation

**REMOVAL** 

- Remove DVD finisher. Refer to IP-24, "Disassembly and Assembly".
- Remove DVD player mounting screws.
- Remove connector and remove DVD player.

### **INSTALLATION**

Install in the reverse order of removal.

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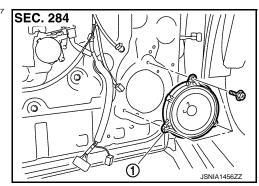
### FRONT DOOR SPEAKER

[NAVIGATION (TWIN MONITOR)]

## FRONT DOOR SPEAKER

**Exploded View** 

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Front door speaker

### Removal and Installation

INFOID:0000000003926478

### **REMOVAL**

- 1. Remove front door finisher. Refer to <a href="INT-11">INT-11</a>, "Removal and Installation".
- 2. Remove front door speaker mounting bolts.
- 3. Disconnect connector and remove front door speaker.

### **INSTALLATION**

### **REAR DOOR SPEAKER**

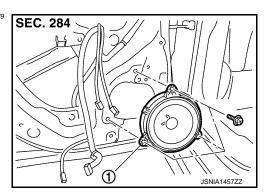
< REMOVAL AND INSTALLATION >

[NAVIGATION (TWIN MONITOR)]

## REAR DOOR SPEAKER

## **Exploded View**

INFOID:0000000003926479



Rear door speaker

### Removal and Installation

**REMOVAL** 

- 1. Remove rear door finisher. Refer to <a href="INT-14">INT-14</a>, "Removal and Installation".
- 2. Remove rear door speaker mounting bolts.
- 3. Disconnect connector and remove rear door speaker.

### **INSTALLATION**

Installation is the reverse order of removal.

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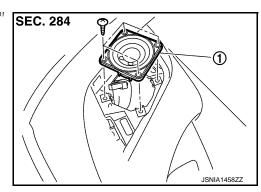
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## **FRONT SQUAWKER**

**Exploded View** 

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Front squawker

### Removal and Installation

INFOID:0000000003926482

### **REMOVAL**

- 1. Remove speaker grille. Refer to IP-12, "Removal and Installation".
- 2. Remove front squawker mounting screws.
- 3. Disconnect connector and remove front squawker.

### **INSTALLATION**

### **REAR SQUAWKER**

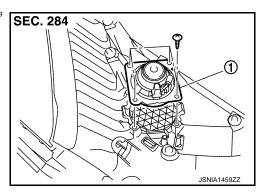
### < REMOVAL AND INSTALLATION >

## [NAVIGATION (TWIN MONITOR)]

## **REAR SQUAWKER**

**Exploded View** 

INFOID:0000000003926483



. Rear squawker

## Removal and Installation

REMOVAL

- 1. Remove luggage side finisher upper. Refer to INT-28, "Exploded View".
- 2. Remove rear squawker mounting screws.
- 3. Remove rear squawker.

### **INSTALLATION**

Installation is the reverse order of removal.

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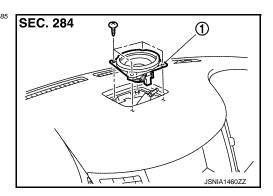
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## **CENTER SPEAKER**

**Exploded View** 

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Center speaker

### Removal and Installation

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### **REMOVAL**

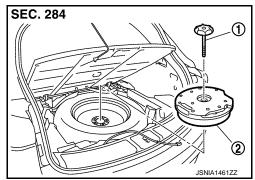
- 1. Remove center speaker grille. Refer to IP-11, "Exploded View".
- 2. Remove center speaker mounting screws, lift up the center speaker and disconnect connector.
- 3. Remove center speaker.

### **INSTALLATION**

## **WOOFER**

## **Exploded View**

INFOID:0000000003926487



- 1. Woofer clamp
- 2. Woofer

## Removal and Installation

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### **REMOVAL**

- 1. Pull up luggage finisher cover and hang the strap to upper body.
- 2. Remove woofer clamp.
- 3. Remove harness clip and connector.
- 4. Remove woofer.

### **INSTALLATION**

Installation is the reverse order of removal.

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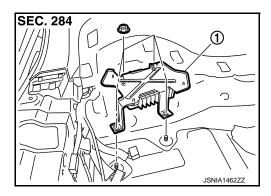
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## BOSE AMP.

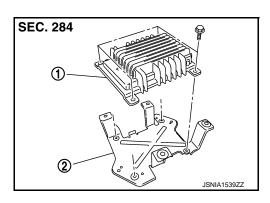
Exploded View

**REMOVAL** 



BOSE amp.

### **DISASSEMBLY**



- 1. BOSE amp.
- 2. Bracket

## Removal and Installation

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### **REMOVAL**

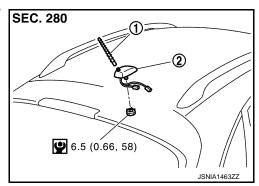
- 1. Remove luggage floor spacer (LH). Refer to <a href="INT-28">INT-28</a>, "Exploded View".
- 2. Remove BOSE amp. mounting nuts.
- 3. Disconnect connector and remove BOSE amp.

### **INSTALLATION**

## **ANTENNA BASE**

**Exploded View** 

INFOID:0000000003926491



- 1. Antenna rod
- 2. Antenna base

Refer to GI-4, "Components" for symbols in the figure.

### Removal and Installation

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### **REMOVAL**

- Remove headlining (rear). Keep a service area. Refer to <u>INT-23, "Exploded View"</u>.
- 2. Remove antenna base mounting nut.
- 3. Disconnect connector and remove antenna base.

### **INSTALLATION**

Installation is the reverse order of removal.

Antenna base mounting nut 

: 6.5 N·m (0.66 kg-m, 58 in-lb)

#### **CAUTION:**

Be careful about tightening torque. Antenna sensitivity becomes poor, and when it is excessive, roof panel may be deformed, when roof antenna mounting nut tightening torque is loose.

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### **MULTIFUNCTION SWITCH**

### [NAVIGATION (TWIN MONITOR)]

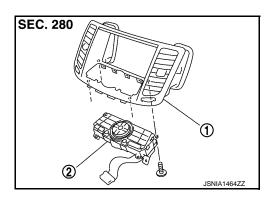
## **MULTIFUNCTION SWITCH**

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

DISASSEMBLY



- 1. Cluster lid D
- 2. Multifunction switch

### Removal and Installation

INFOID:0000000003926494

### **REMOVAL**

- 1. Remove cluster lid D. Refer to IP-11, "Exploded View".
- 2. Remove multifunction switch mounting screws.
- 3. Disconnect connector and remove multifunction switch.

### **INSTALLATION**

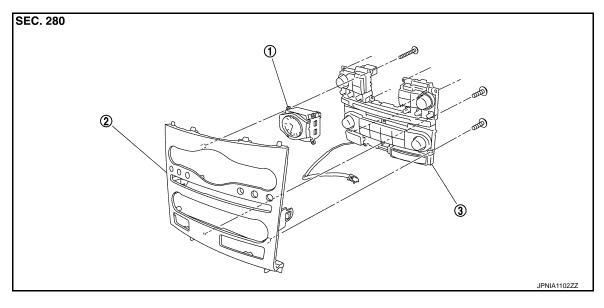
## PRESET SWITCH

**Exploded View** INFOID:0000000003926495

**REMOVAL** 

Refer to IP-11, "Exploded View".

DISASSEMBLY

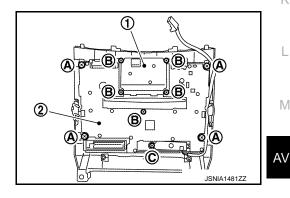


1. Clock Cluster lid C 3. Preset switch

### Removal and Installation

### **REMOVAL**

- Remove cluster lid C. Refer to IP-11, "Exploded View".
- Remove preset switch mounting screws. 2.
- Disconnect connector and remove preset switch. 3.
  - 1. Clock
  - 2. Preset switch
  - A. Screw
  - B. Screw
  - Screw



### **INSTALLATION**

Installation is the reverse order of removal.

### NOTE:

When installing preset switch, do not allow the print wire that connects preset switch and multifunction switch to get caught in between AV control unit and preset switch.

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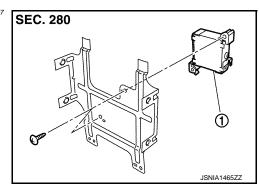
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## **IPOD ADAPTER**

## **Exploded View**

INFOID:0000000003926497



1. iPod adapter

### Removal and Installation

INFOID:0000000003926498

### **REMOVAL**

- 1. Remove front display unit with bracket. Refer to AV-1046, "Removal and Installation".
- 2. Remove front display from display bracket.
- 3. Remove iPod adapter mounting screws.
- 4. Disconnect connector and remove iPod adapter.

### **INSTALLATION**

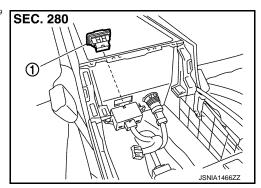
### **IPOD CONNECTOR**

## [NAVIGATION (TWIN MONITOR)]

## **IPOD CONNECTOR**

**Exploded View** 

INFOID:0000000003926499



. iPod connector

## Removal and Installation

REMOVAL

- 1. Remove console box assembly. Refer to IP-22, "Exploded View".
- 2. Press pawl from the back of console finisher to remove iPod connector.

### **INSTALLATION**

Install in the reverse order of removal.

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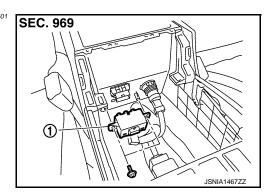
### **AUXILIARY INPUT JACKS**

[NAVIGATION (TWIN MONITOR)]

## **AUXILIARY INPUT JACKS**

**Exploded View** 

INFOID:0000000003926501



1. Auxiliary input jacks

### Removal and Installation

INFOID:0000000003926502

### **REMOVAL**

- 1. Remove console box assembly. Refer to IP-22, "Exploded View".
- 2. Remove auxiliary mounting screws.
- 3. Disconnect connector and remove auxiliary input jacks.

### **INSTALLATION**

## **MICROPHONE**

**Exploded View** 

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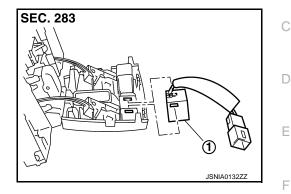
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**REMOVAL** 

Refer to INT-23, "Exploded View".

**DISASSEMBLY** 



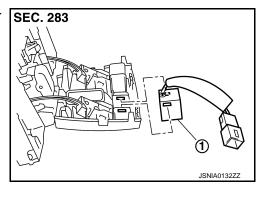
1. Microphone

### Removal and Installation

INFOID:0000000003926504

### **REMOVAL**

- 1. Remove map lamp assembly. Refer to <a href="INT-23">INT-23</a>, "Exploded View".
- 2. Remove microphone (1), stretching pawls of map lamp assembly.



### **INSTALLATION**

Installation is the reverse order of removal.

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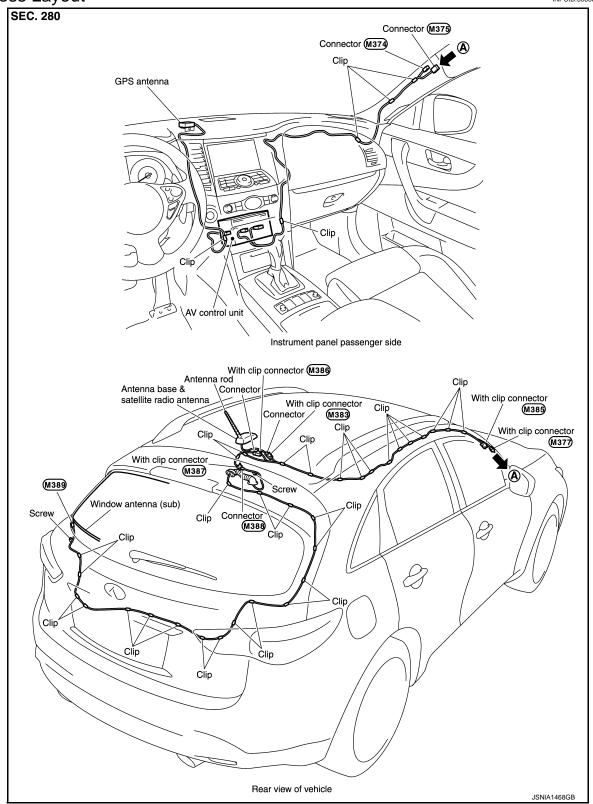
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## **GPS ANTENNA**

Exploded View

Harness Layout

INFOID:0000000003926506



### **GPS ANTENNA**

### < REMOVAL AND INSTALLATION >

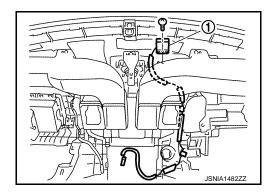
## [NAVIGATION (TWIN MONITOR)]

INFOID:0000000003926507

## Removal and Installation

### **REMOVAL**

- 1. Remove instrument panel. Refer to IP-11, "Exploded View".
- 2. Remove GPS antenna mounting screw.
- 3. Remove GPS antenna (1).



### **INSTALLATION**

Installation is the reverse order of removal.

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### AROUND VIEW MONITOR CONTROL UNIT

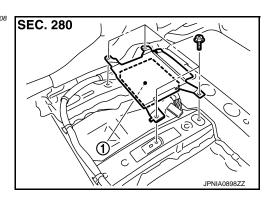
< REMOVAL AND INSTALLATION >

[NAVIGATION (TWIN MONITOR)]

### AROUND VIEW MONITOR CONTROL UNIT

**Exploded View** 

INFOID:0000000003926508



Around view monitor control unit

### Removal and Installation

INFOID:0000000003926509

### REMOVAL

- 1. Remove front seat (LH side). Refer to SE-70, "Exploded View".
- 2. Remove floor carpet. Keep a service area.
- 3. Remove around view monitor control unit mounting screws.
- 4. Disconnect connector and remove around view monitor control unit.

### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- 2. Perform camera image calibration. Refer to <u>AV-614</u>, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement".
- Perform predicted course line center position adjustment. Refer to <u>AV-613</u>, "<u>PREDICTED COURSE LINE</u> CENTER POSITION ADJUSTMENT: Special Repair Requirement".

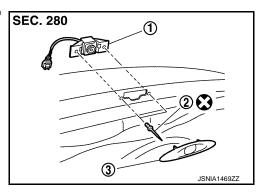
### **CAUTION:**

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

## FRONT CAMERA

**Exploded View** 

INFOID:0000000003926510



- 1. Front camera
- 2. Rivet
- 3. Front camera finisher

Refer to GI-3, "Contents" for symbols in the figure.

### Removal and Installation

**REMOVAL** 

- 1. Remove front camera finisher.
- 2. Remove front camera mounting rivet.
- Remove front camera.

### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- Perform camera image calibration. Refer to AV-614, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement".

### **CAUTION:**

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

AV-1067 Revision: 2009 March 2009 FX35/FX50

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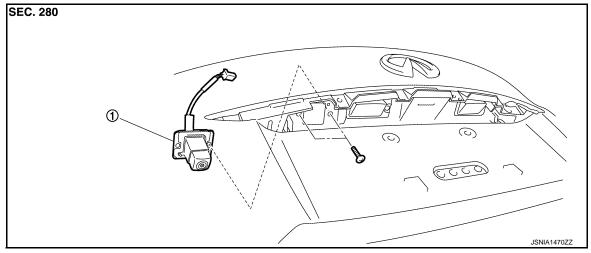
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## **REAR CAMERA**

## **Exploded View**

INFOID:0000000003926512



1. Rear camera

### Removal and Installation

INFOID:0000000003926513

### **REMOVAL**

- 1. Remove back door outside finisher upper. Refer to EXT-49, "Exploded View".
- 2. Remove door handle cover. Refer to EXT-49, "Exploded View".
- 3. Remove rear camera mounting screws and rear camera harness connector.
- 4. Remove rear camera.

### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- Perform camera image calibration. Refer to <u>AV-614</u>, "<u>CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR</u>): <u>Special Repair Requirement</u>".

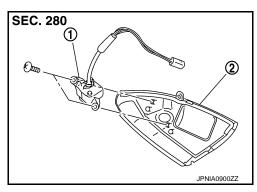
### **CAUTION:**

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

## SIDE CAMERA LH

## **Exploded View**

INFOID:0000000003926514

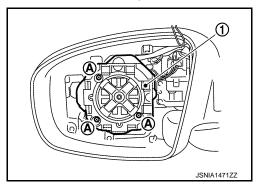


- 1. Side camera (LH)
- 2. Side camera finisher assembly

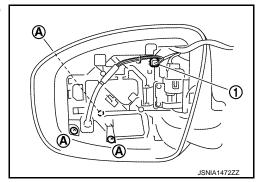
### Removal and Installation

### **REMOVAL**

- Remove glass mirror (driver side). Refer to MIR-91, "DOOR MIRROR ASSEMBLY: Exploded View".
- Remove screws (A), and actuator connector, and then actuator



- Remove door mirror cover. Refer to MIR-91, "DOOR MIRROR ASSEMBLY: Exploded View".
- Remove screws (A) and connector (1), and then remove side camera finisher assembly (LH).



- 5. Remove side camera (LH) mounting screws
- 6. Remove side camera (LH).

### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- Perform camera image calibration. Refer to AV-614, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement".

### **CAUTION:**

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

**AV-1069** Revision: 2009 March 2009 FX35/FX50 Е

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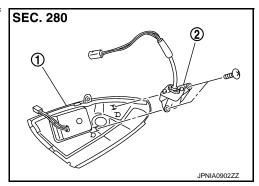
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## SIDE CAMERA RH

## **Exploded View**

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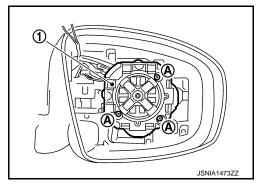
- 1. Side camera finisher assembly [infrared LED (auxiliary lighting)]
- 2. Side camera (RH)

### Removal and Installation

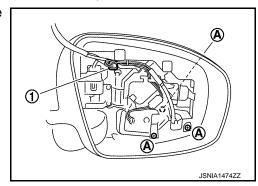
INFOID:0000000003926517

### **REMOVAL**

- 1. Remove glass mirror (passenger side). Refer to MIR-91, "DOOR MIRROR ASSEMBLY: Exploded View".
- 2. Remove screws (A) and actuator connector, and then actuator (1).



- 3. Remove door mirror cover. Refer to MIR-91, "DOOR MIRROR ASSEMBLY: Exploded View".
- 4. Remove screws (A) and connector (1), and then remove Side camera finisher assembly (RH).



- 5. Remove side camera (RH) screws.
- 6. Remove side camera (RH).

### **INSTALLATION**

- Installation is the reverse order of removal.
- 2. Perform camera image calibration. Refer to <u>AV-614</u>, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement".

#### **CAUTION:**

### **SIDE CAMERA RH**

< REMOVAL AND INSTALLATION >

[NAVIGATION (TWIN MONITOR)]

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

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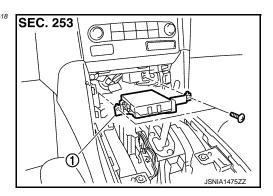
## **SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)** [NAVIGATION (TWIN MONITOR)]

< REMOVAL AND INSTALLATION >

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

**Exploded View** 

INFOID:0000000003926518



Sonar control unit

### Removal and Installation

INFOID:0000000003926519

### **REMOVAL**

- 1. Remove AV control unit. Refer to AV-1045, "Removal and Installation".
- Remove screws and connector, and then sonar control unit.

### **INSTALLATION**

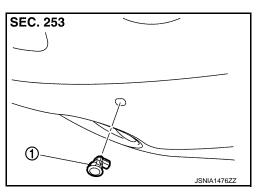
### < REMOVAL AND INSTALLATION >

## SONAR SENSOR

**FRONT** 

FRONT: Exploded View

INFOID:0000000003926520

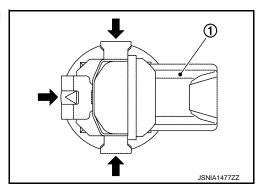


1. Sonar sensor (front)

### FRONT: Removal and Installation

Remove fender protector. Keep a service area. Refer to <u>EXT-25</u>, "FENDER PROTECTOR: Exploded <u>View"</u>.

- 2. Remove sonar sensor connector.
- 3. Press the sonar sensor (1) outside the front bumper, pressing the metal clips on the back to the direction of black arrows.



### **INSTALLATION**

Install the bumper when the pawl engages.

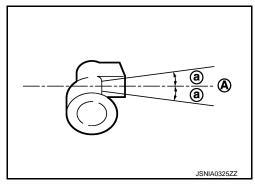
#### **CAUTION:**

**REMOVAL** 

The connector direction is within  $\pm 10^{\circ}$  from the horizontal position when assembling the bumper.

A : Horizontal position

a :10°



**REAR** 

Revision: 2009 March AV-1073 2009 FX35/FX50

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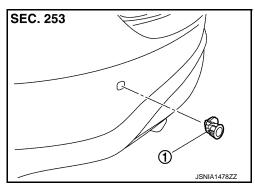
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**REAR**: Exploded View

INFOID:0000000003926522



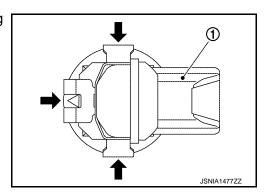
Sonar sensor (rear)

### **REAR**: Removal and Installation

INFOID:0000000003926523

#### **REMOVAL**

- 1. Remove sonar sensor connector.
- 2. Press the sonar sensor (1) outside the front bumper, pressing the metal clips on the back to the direction of black arrows.



### **INSTALLATION**

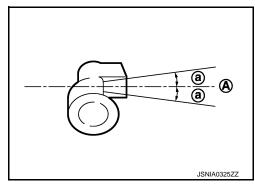
Install the bumper when the pawl engages.

### **CAUTION:**

The connector direction is within  $\pm 10^{\circ}$  from the horizontal position when assembling the bumper.

A : Horizontal position

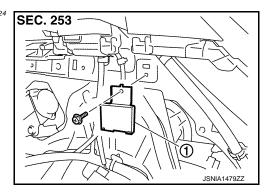
a : 10°



## **BUZZER**

## **Exploded View**

INFOID:0000000003926524



1. Buzzer

## Removal and Installation

## REMOVAL

- 1. Remove luggage side lower finisher (RH). Refer to <a href="INT-28">INT-28</a>, "Exploded View".
- 2. Remove buzzer mounting bolt.
- 3. Disconnect connector and remove buzzer.

### **INSTALLATION**

Install in the reverse order of removal.

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### STEERING ANGLE SENSOR

[NAVIGATION (TWIN MONITOR)]

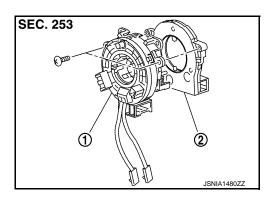
## STEERING ANGLE SENSOR

Exploded View

**REMOVAL** 

Refer to SR-8, "Exploded View".

**DISASSEMBLY** 



- 1. Spiral cable
- 2. Steering angle sensor

### Removal and Installation

INFOID:0000000003926527

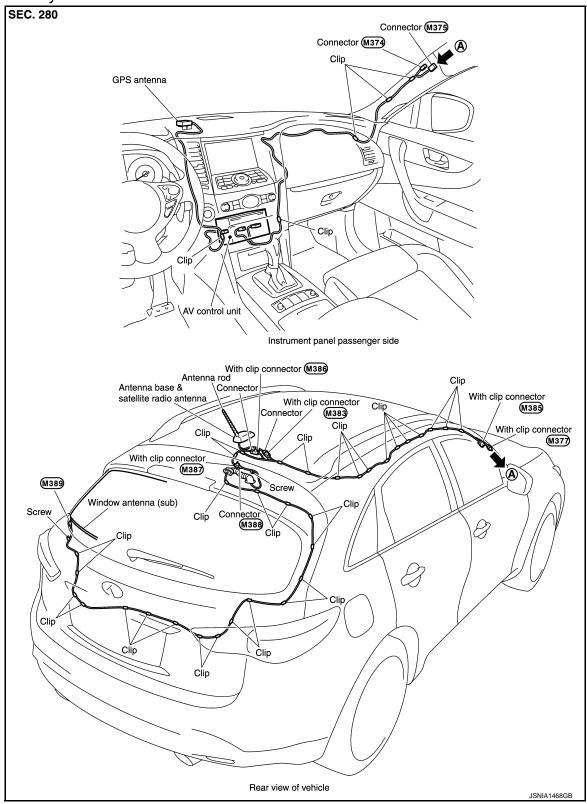
### **REMOVAL**

- 1. Remove spiral cable. Refer to SR-8, "Exploded View".
- 2. Remove steering angle sensor mounting screws.
- 3. Remove steering angle sensor.

### **INSTALLATION**

## ANTENNA FEEDER

Harness Layout



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