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# AUDIO, VISUAL & NAVIGATION SYSTEM

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< PRECAUTION > [BASE AUDIO]

## **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 dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. Information necessary to service the system safely is included in the SR and SB section 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 SR section.
- 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 Airbag Diagnosis Sensor Unit or other Airbag 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.

Cautions in Removing Battery Terminal and AV Control Unit (Models with AV Control Unit)

#### **CAUTION:**

Remove battery terminal and AV control unit 30 seconds or more after turning the ignition switch OFF. NOTE:

After the ignition switch is turned OFF, the AV control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

Precaution for Trouble Diagnosis

INFOID:0000000008360053

#### 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

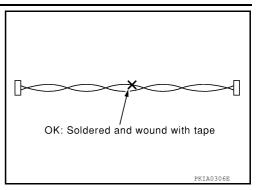
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AV COMMUNICATION SYSTEM

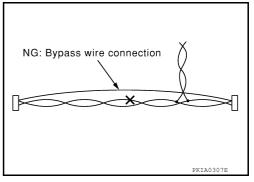
## **PRECAUTIONS**

< PRECAUTION > [BASE AUDIO]

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



 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.)



**Precaution for Work** 

• When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.

• When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.

Protect the removed parts with a shop cloth and prevent them from being dropped.

- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
- Water soluble dirt: Dip a soft cloth into lukewarm water and wring the water out of the cloth to wipe the dirty area.
  - Then rub with a soft and dry cloth.
- Oily dirt: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
  - Then dip a cloth into fresh water and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

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## **PREPARATION**

< PREPARATION > [BASE AUDIO]

# **PREPARATION**

## **PREPARATION**

Special Service Tool

INFOID:0000000008360056

Tool number (Kent-Moore No.) Tool name	Description
— (J-46534) Trim tool set	Removing trim components

## **Commercial Service Tools**

INFOID:0000000008360057

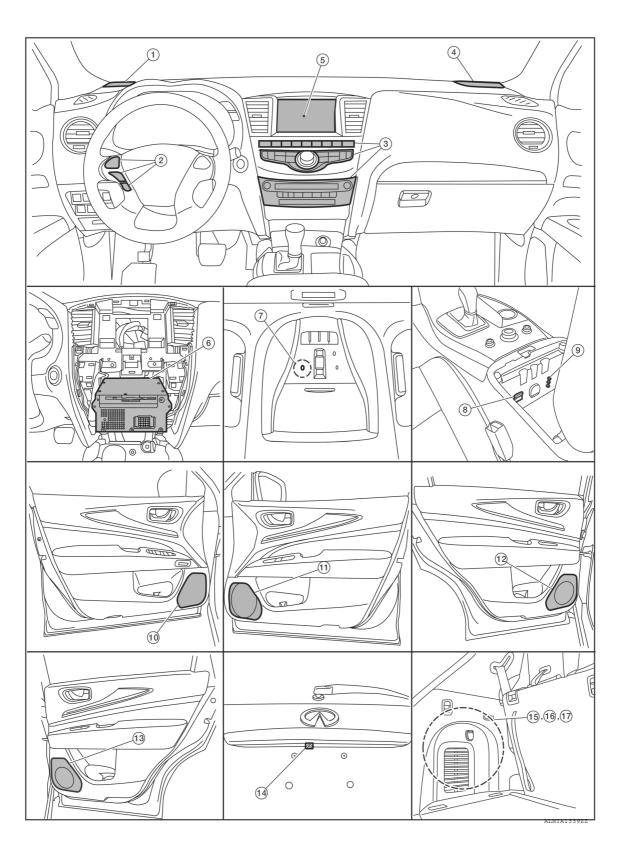
(Kent-Moore No.) Tool name		Description
( — ) Power tools		Loosening nuts, screws and bolts
	PIIB1407E	

INFOID:0000000008202455

# SYSTEM DESCRIPTION

## **COMPONENT PARTS**

**Component Parts Location** 



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## **COMPONENT PARTS**

< SYSTEM DESCRIPTION > [BASE AUDIO]

1.	Instrument panel tweeter LH	2.	Steering switch	3.	A/C and AV switch assembly
4.	Instrument panel tweeter RH	5.	Display unit	6.	AV control unit (view with center stack removed)
7.	Microphone	8.	USB interface	9.	Front auxiliary input jacks
10.	Front door speaker LH	11.	Front door speaker RH	12.	Rear door speaker LH
13.	Rear door speaker RH	14.	Rear view camera	15.	Bluetooth® control unit
16.	Satellite radio tuner	17.	Bluetooth® antenna		

## **Component Description**

INFOID:0000000008202456

Part name	Description	
AV control unit	<ul> <li>Master unit of MULTI AV system.</li> <li>AV control unit includes audio, USB connection and vehicle status functions.</li> <li>Connected to MULTI AV system control units via AV communication.</li> <li>Connected to other vehicle control units via CAN communication to obtain necessary information for vehicle information function.</li> <li>Receives steering angle signal via CAN communication from steering angle sensor and controls an expected course line during rear view monitor operation.</li> <li>Inputs signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>TEL voice signal and voice guidance signal are input from Bluetooth<sup>®</sup> control unit.</li> <li>Camera image signal is received and transmitted to display unit.</li> </ul>	
Display unit	<ul> <li>Display image is controlled by AV control unit via serial communication.</li> <li>Receives power (signal VCC and inverter VCC) from AV control unit.</li> <li>RGB image signals (RGB image, RGB area and RGB synchronizing) are input from AV control unit.</li> <li>Composite image signals are input from AV control unit.</li> <li>Synchronizing signals (HP, VP) are output to AV control unit.</li> </ul>	
Front door speaker	Outputs low and mid range sounds.	
Instrument panel tweeter	Outputs high range sounds.	
Rear door speaker	Outputs low, mid and high range sounds.	
A/C and AV switch assembly	<ul> <li>Operation panels are equipped with switches for audio and air conditioner operations.</li> <li>Operation signal is transmitted via AV communication to AV control unit.</li> <li>Disk eject operation signal is performed via hardwire.</li> </ul>	
Rear view camera	Camera power supply is input from AV control unit.     Vehicle rear view image is transmitted to display unit via AV control unit.	
Steering angle sensor	Connected to AV control unit via CAN communication and transmits steering angle sensor signal.	
Steering switch	<ul> <li>Operations for audio, hands-free phone and voice recognition are possible.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>	
Microphone	<ul> <li>Used for hands-free phone and voice recognition operation.</li> <li>Microphone signal is transmitted to Bluetooth<sup>®</sup> control unit.</li> <li>Power (Microphone VCC) is supplied from Bluetooth<sup>®</sup> control unit.</li> </ul>	
Antenna amp.	<ul> <li>Radio signal received by window antenna is amplified and transmitted to AV control unit.</li> <li>Power (antenna amp. ON signal) is supplied from AV control unit.</li> </ul>	
Satellite radio tuner	<ul> <li>Inputs satellite radio signal from satellite radio antenna and outputs sound signal to AV control unit.</li> <li>Controlled via serial communication (communication signal and request signal) by AV control unit.</li> </ul>	
Satellite radio antenna	Satellite radio signal is received and transmitted to satellite radio tuner.	
Bluetooth® control unit	<ul> <li>Inputs TEL voice signal from Bluetooth<sup>®</sup> antenna and outputs it to AV control unit.</li> <li>Controlled via AV communication by AV control unit.</li> </ul>	

## **COMPONENT PARTS**

## < SYSTEM DESCRIPTION >

[BASE AUDIO]

Part name	Description
Bluetooth <sup>®</sup> antenna	Receives TEL voice signal and outputs it to Bluetooth® control unit.
USB connector	USB sound and data input signals are transmitted to AV control unit.

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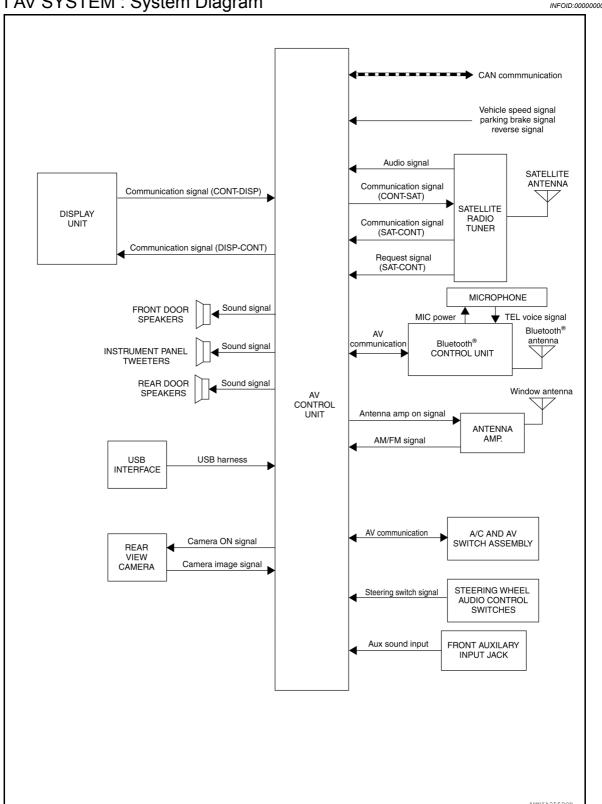
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## **SYSTEM MULTI AV SYSTEM**

MULTI AV SYSTEM: System Diagram

INFOID:0000000008227251



MULTI AV SYSTEM: System Description

INFOID:0000000008227252

#### SYSTEM

### < SYSTEM DESCRIPTION >

[BASE AUDIO]

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The audio system consists of the following components

- AV control unit
- A/C and AV switch assembly
- Display unit
- Steering wheel audio control switches
- Front door speakers
- Instrument panel tweeters
- Rear door speakers
- Window antenna

When the audio system is on, radio signals are received by the window antenna. The AV control unit then sends audio signals to the front door speakers, instrument panel tweeters and rear door speakers.

Refer to Owner's Manual for audio system operating instructions.

### SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components

- Satellite antenna
- Satellite radio tuner

When the satellite radio system is on, radio signals are supplied to the satellite radio tuner from the satellite antenna. The satellite radio tuner then sends audio signals to the AV control unit.

Refer to Owner's Manual for satellite radio system operating instructions.

#### HANDS-FREE PHONE SYSTEM

System Operation

#### NOTE:

Cellular telephones must have their wireless connection set up (paired) before using the Bluetooth® telephone

The Bluetooth® telephone system allows users who have a Bluetooth® cellular telephone to make a wireless connection between their cellular telephone and the Bluetooth® control unit. Hands-free cellular telephone calls can be sent and received. Some Bluetooth® cellular telephones may not be recognized by the Bluetooth® control unit. When a cellular telephone or the Bluetooth® control unit is replaced, the telephone must be paired with the Bluetooth® control unit. Different cellular telephones may have different pairing procedures, refer to the cellular telephone operating manual.

Refer to the Owner's Manual for Bluetooth® telephone system operating instructions.

Bluetooth® Control Unit

When the ignition switch is turned to ACC or ON, the Bluetooth<sup>®</sup> control unit will power up. During power up, the Bluetooth® control unit is initialized and performs various self-checks. Initialization may take up to 20 seconds. If a phone is present in the vehicle and paired with the Bluetooth® control unit, Nissan Voice Recognition will then become active. Bluetooth® telephone functions can be turned off using the Nissan Voice Recognition system.

Steering Wheel Audio Control Switches

When buttons on the steering wheel audio control switch are pushed, the resistance in steering wheel audio control switch circuit changes, depending on which button is pushed. The Bluetooth® control unit uses this signal to perform various functions while navigating through the voice recognition system.

The following functions can be performed using the steering wheel audio control switch:

- Initiate self-diagnosis of the Bluetooth<sup>®</sup> telephone system.
- Start a voice recognition session
- Answer and end telephone calls
- · Adjust the volume of calls

#### Microphone

The microphone is located in the roof console assembly. The microphone sends a signal to the Bluetooth® control unit. The microphone can be actively tested during self-diagnosis.

The AV control unit receives signals from the Bluetooth® control unit and sends audio signals to the speakers.

#### REAR VIEW CAMERA SYSTEM

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## **SYSTEM**

## < SYSTEM DESCRIPTION >

[BASE AUDIO]

When the shift selector is in the R position, the display shows a view to the rear of the vehicle. Lines which indicate the vehicle clearance and distances are also displayed.

## SPEED SENSITIVE VOLUME SYSTEM

Volume level of this system goes up and down automatically in proportion to the vehicle speed. The control level can be selected by the customer. Refer to Owner's Manual for operating instructions.

< SYSTEM DESCRIPTION >

[BASE AUDIO]

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## DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description INFOID:000000008297152

The AV control unit on board diagnosis includes the following functions:

 A/C and AV switch assembly self diagnosis that checks the ON/OFF operation (continuity) of each switch in the A/C and AV switch assembly.

NOTE:

The hazard switch and disk eject switch are not included in this operation check.

AV control unit on board diagnosis performs the following functions listed in the table below:

Mode		Description	
	Self Diagnosis	AV control unit diagnosis.     Diagnoses the connections across system components (between AV control unit and each unit).	
	Display Diagnosis	<ul> <li>Color tone check using color spectrum bar display and white display.</li> <li>Light and shade check by gradation bar display.</li> </ul>	
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition and reverse.	
	Speaker Test	Speaker connection can be confirmed by test tone.	
Confirmation/	Error History	The system malfunction and frequency of past occurrences is displayed.  When malfunctioning item is selected, time and place that the malfunction last occurred are displayed.	
Adjustment	Camera Cont.	<ul> <li>Guiding line position that overlaps rear view camera image can be adjusted.</li> <li>Configuration stored in the AV control unit can be checked.</li> </ul>	
	Vehicle CAN Diagnosis	Transmit/receive function of CAN communication can be monitored.	
	AV COMM Diagnosis	Communication condition of each unit of Multi AV system can be monitored.	
	Delete Unit Connection Log	Erase connection history of unit and error history.	
	Initialize Settings	Initializes the AV control unit memory.	

Perform CONSULT diagnosis if the AV control unit on board diagnosis does not start, the screen does not display anything, or the A/C and AV switch assembly self diagnosis does not function.

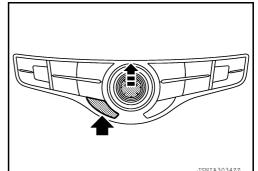
## On Board Diagnosis Function

INFOID:0000000008297153

### METHOD OF STARTING

A/C and AV Switch Assembly Self Diagnosis

- Press the BACK and UP 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 switches illuminate, and the self-diagnosis mode begins.
- The ON position continuity of each switch can be checked by pressing the switch. The buzzer sounds if continuity is present.
- The self diagnosis mode is canceled when the ignition switch is turned OFF.



AV Control Unit Self Diagnosis

- 1. Turn the ignition ON.
- 2. Turn the audio system OFF.

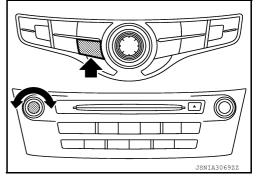
ne ignition switch is

Revision: March 2012 AV-23 2013 Infiniti JX

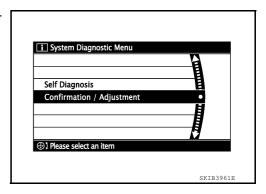
### < SYSTEM DESCRIPTION >

[BASE AUDIO]

 While pressing the SETTING button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. When selfdiagnosis mode begins, a short beep will be heard. Shifting from current screen to previous screen is performed by pressing BACK button.



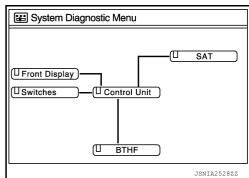
4. The trouble diagnosis initial screen is displayed, and Self Diagnosis or Confirmation/Adjustment can be selected.



### SELF DIAGNOSIS MODE

AV Control Unit Self Diagnosis

- 1. Select Self Diagnosis.
- 2. Self diagnosis screen is displayed. The bar graph visible in center of screen indicates progress of self diagnosis.
- Diagnosis results are displayed after self diagnosis is completed. Unit names and connection lines are color coded according to diagnostic results. Control Unit (AV control unit) is displayed in red.



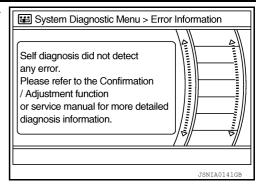
Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction <sup>1</sup>	Red	Green

- 1: Control Unit (AV control unit) is displayed in red.
- Replace AV control unit if Self Diagnosis did not run because control unit malfunction is indicated. The symptom is AV control unit internal error. Refer to AV-128, "Removal and Installation AV Control Unit".
- 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 >

[BASE AUDIO]

Comments of self diagnosis results can be viewed in the diagnosis result screen.



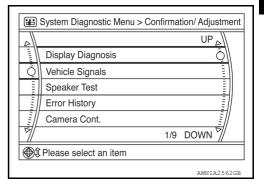
## AV Control Unit Self Diagnosis Results

Only Unit Part Is Displayed In Red		
Screen switch	Description	Possible cause
Control unit	Malfunction is detected in AV control unit power supply or ground circuit.	AV control unit power supply or ground circuits. Refer to AV-89.     If no malfunction is detected in AV control unit power supply and ground circuits, replace AV control unit. Refer to AV-128.

A C	onnecting Cable Between Units Is Displayed In	Yellow
Area with yellow connection lines	Description	Possible cause
Control unit ⇔ Front Display	Malfunction is detected in serial communication circuits between AV control unit and display unit.	Serial communication circuits between Alcontrol unit and display unit. Refer to AV-83.
Control unit ⇔ SAT	When any of the following is detected:     satellite radio tuner power supply or ground circuit malfunction.     communication circuit malfunction between AV control unit and satellite radio tuner.     request signal circuit malfunction between AV control unit and satellite radio tuner.	<ul> <li>Satellite radio tuner power supply or ground circuits. Refer to <u>AV-91</u>.</li> <li>Communication circuit between AV control unit and satellite radio tuner. Refer to <u>AV-85</u>.</li> <li>Request signal circuit between AV control unit and satellite radio tuner. Refer to <u>AV-85</u>.</li> </ul>
Control unit ⇔ BTHF	When any of the following is detected: Bluetooth® control unit power supply or ground circuit malfunction. AV communication circuit malfunction between AV control unit and Bluetooth® control unit.	Bluetooth® control unit power supply or ground circuits. Refer to AV-92. AV communication circuits between AV control unit and Bluetooth® control unit.

## AV Control Unit Confirmation/Adjustment

- Select Confirmation/Adjustment.
- 2. Select each switch on the Confirmation/Adjustment screen to display the relevant trouble diagnosis screen. Press the BACK switch to return to the initial Confirmation/Adjustment screen.



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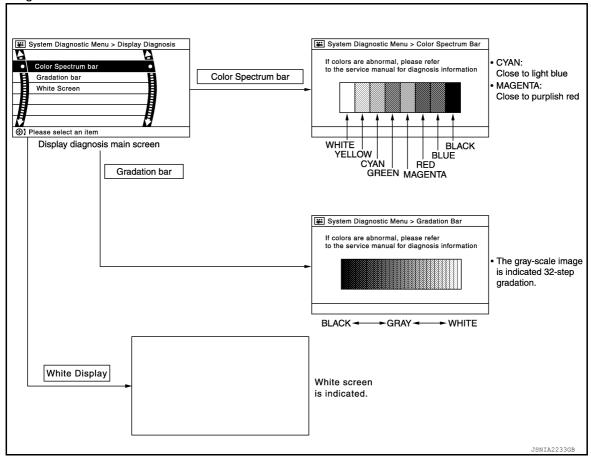
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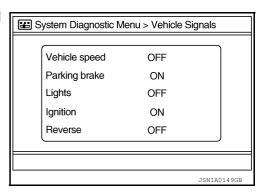
[BASE AUDIO]

Display Diagnosis



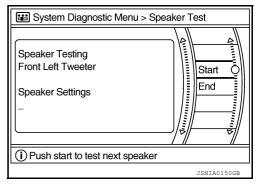
### Vehicle Signals

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



### Speaker Test

Select Speaker Test to display the Speaker Diagnosis screen. Press Start to generate a test tone in a speaker. Press Start again to generate a test tone in the next speaker. Press End to stop the test tones.



### **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.

## < SYSTEM DESCRIPTION >

[BASE AUDIO]

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 situation.

The frequency of occurrence is displayed in a count up manner. The actual count up method differs depending on the error item.

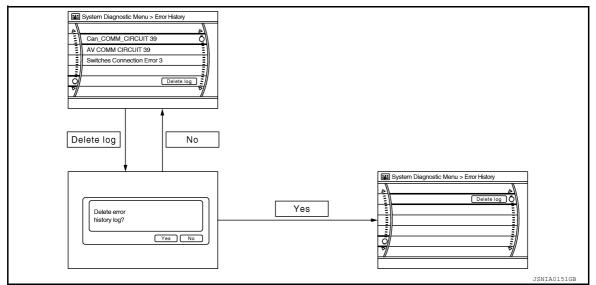
#### Count up method A

- The counter resets to 0 if an error occurs when ignition switch is turned ON. The counter increases by 1 if the condition is normal at a next ignition 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.

#### Count up method B

- The counter increases by 1 if an error occurs when ignition switch is ON. The counter will not decrease even if the condition is normal at the next ignition 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.

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)
Count up method B	Other than the above



### 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	Description	Possible cause	
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, then repair the malfunctioning components according to diagnosis results. Refer to AV-30	
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.		
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-128.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.		
CAN Controller Memory Error	AV Control unit manufiction is detected.		
Steer. Angle Sensor Calibration	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor. Refer to BRC-59.	

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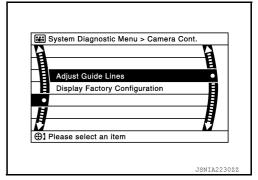
## < SYSTEM DESCRIPTION >

[BASE AUDIO]

Error item	Description	Possible cause
Display Connection Error	When any of the following is detected: display unit power supply or ground circuits malfunction. communication circuit malfunction between AV control unit and display unit.	<ul> <li>Display unit power supply or ground circuits. Refer to <u>AV-89</u>.</li> <li>Communication circuits between AV control unit and display unit. Refer to <u>AV-83</u>.</li> </ul>
XM Connection Error	When any of the following is detected:  satellite radio tuner power supply or ground circuit malfunction.  communication circuit malfunction between AV control unit and satellite radio tuner.  request signal circuit malfunction between AV control unit and satellite radio tuner.	<ul> <li>Satellite radio tuner power supply or ground circuits. Refer to AV-91.</li> <li>Communication circuit between AV control unit and satellite radio tuner. Refer to AV-85.</li> <li>Request signal circuit between AV control unit and satellite radio tuner. Refer to AV-85.</li> </ul>
AV COMM CIRCUIT     Switches Connection Error	<ul> <li>When any of the following is detected:</li> <li>A/C and AV switch assembly power supply or ground circuit malfunction.</li> <li>AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.</li> </ul>	<ul> <li>A/C and AV switch assembly power supply or ground circuits. Refer to AV-93.</li> <li>AV communication circuits between AV control unit and A/C and AV switch assembly.</li> </ul>
AV COMM CIRCUIT     H/F Unit Connection Error	When any of the following is detected: Bluetooth® control unit power supply or ground circuit malfunction. AV communication circuit malfunction between AV control unit and Bluetooth® control unit.	<ul> <li>Bluetooth<sup>®</sup> control unit power supply or ground circuits. Refer to AV-92.</li> <li>AV communication circuits between AV control unit and Bluetooth<sup>®</sup> control unit.</li> </ul>
<ul><li>AV COMM CIRCUIT</li><li>Switches Connection Error</li><li>H/F Unit Connection Error</li></ul>	AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	AV communication circuits between AV control unit and A/C and AV switch assembly.

### Camera Cont.

The two functions of "Correct Draw Line of Rear view Cam", "Confirm Configuration" are available.

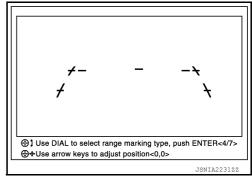


### Adjust Offset of Rear view Camera

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

## **CAUTION:**

After the adjustment, never perform other operations for one minute.

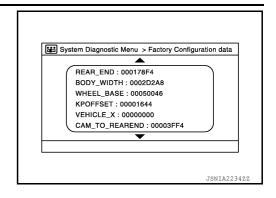


**Factory Configuration Confirmation** 

### < SYSTEM DESCRIPTION >

[BASE AUDIO]

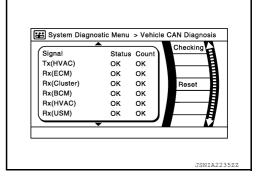
· Configuration stored in the AV control unit can be checked.



### 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 / ???	OK / 0 – 39	
Rx(ECM)	OK / ???	OK / 0 – 39	
Rx(Cluster)	OK / ???	OK / 0 – 39	
Rx(BCM)	OK / ???	OK / 0 – 39	
Rx(HVAC)	OK / ???	OK / 0 – 39	
Rx(USM)	OK / ???	OK / 0 – 39	
Rx(VDC)	OK / ???	OK / 0 – 39	
Rx(STRG)	OK / ???	OK / 0 – 39	



#### NOTE:

"???" indicates UNKWN.

### AV COMM Diagnosis

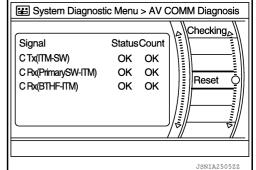
- Displays the communication status between AV control unit and each unit.
- The error counter displays "OK" if any malfunction was not detected in the past and displays "0" if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle. The upper limit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

Items	Status (Current)	Counter (Past)	
C Tx(ITM-SW)	OK / ???	OK / 0 – 39	
C Rx(PrimarySW-ITM)	OK / ???	OK / 0 – 39	
C Rx(BTHF-ITM)	OK / ???	OK / 0 – 39	



"???" indicates UNKWN.

**Delete Unit Connection Log** 



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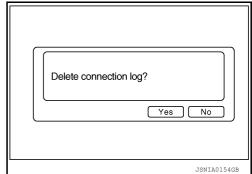
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## < SYSTEM DESCRIPTION >

[BASE AUDIO]

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

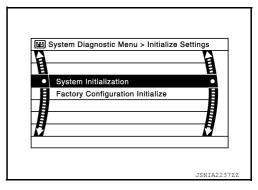


#### Initialize Settings

"User Data Initialization" and "Accessory Number Initialization" are possible.

#### **CAUTION:**

- Never perform Accessory Number Initialization except when configuration is unsuccessful.
- Accessory Number Initialization requires configuration. For details, refer to <u>AV-76, "CONFIGURATION (AV CONTROL</u> <u>UNIT): Description"</u>.



## **CONSULT Function**

INFOID:0000000008297154

### CONSULT FUNCTIONS

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

Direct Diagnostic Mode	Description			
Ecu Identification	The AV control unit part number is displayed.			
Self Diagnostic Result				
Data Monitor	The AV control unit input/output data is displayed in real time.			
Work support	The settings for AV control unit functions can be changed.			
Configuration	<ul> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing AV control unit.</li> </ul>			
CAN Diag Support Mntr	<ul> <li>The result of transmit/receive diagnosis of AV communication is displayed.</li> <li>The result of transmit/receive diagnosis of CAN communication is displayed.</li> </ul>			

### **ECU IDENTIFICATION**

The part number of AV control unit is displayed.

### SELF DIAGNOSTIC RESULT

Refer to AV-39, "DTC Index".

#### DATA MONITOR

Monitor Item [Unit]	Description		
VHCL SPD SIG [On/Off]	<ul> <li>On: vehicle speed &gt; 0 km/h (0 MPH).</li> <li>Off: vehicle speed = 0 km/h (0 MPH).</li> </ul>		
PKB SIG [On/Off]	On: parking brake applied.     Off: parking brake released.		
ILLUM SIG [On/Off]	On: optical sensor signal is received.     Off: optical sensor signal is not received.		

## < SYSTEM DESCRIPTION >

[BASE AUDIO]

Monitor Item [Unit]	Description
IGN SIG [On/Off]	On: ignition switch ON.     Off: ignition switch ACC.
REV SIG [On/Off]	<ul> <li>On: selector lever in R position.</li> <li>Off: selector lever in any position other than R.</li> </ul>

## **WORK SUPPORT**

Conditions	Description	
ST ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position adjustment can be performed. Refer to <a href="mailto:BRC-59">BRC-59</a> , "Description".	

## **CONFIGURATION**

Refer to AV-76, "CONFIGURATION (AV CONTROL UNIT): Description".

## CAN DIAG SUPPORT MNTR

Refer to LAN-19, "CAN Diagnostic Support Monitor".

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## DIAGNOSIS SYSTEM (BLUETOOTH® CONTROL UNIT)

## **Diagnosis Description**

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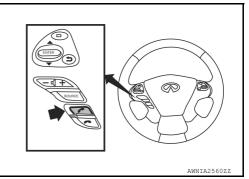
The Bluetooth<sup>®</sup> control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

## Bluetooth® CONTROL UNIT INITIALIZATION CHECKS

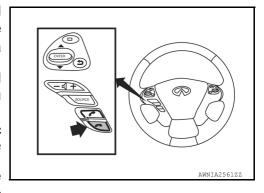
- · Internal control unit failure
- Bluetooth<sup>®</sup> antenna connection open or shorted
- Steering wheel audio control switches [ (PHONE/SEND), (PHONE/END)] stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth<sup>®</sup> inquiry check

## **OPERATION PROCEDURE**

- 1. Turn ignition switch to ACC or ON.
- 2. Wait for the Bluetooth® system to complete initialization. This may take up to 20 seconds.
- Press and hold the steering wheel audio control switch (PHONE/SEND) button for at least 5 seconds. The Bluetooth<sup>®</sup> system will begin to play a verbal prompt.



- 4. While the prompt is playing, press and hold the steering wheel audio control switch (PHONE/END) button until you hear the "Diagnostics mode" prompt. The Bluetooth® system will sound a 5-second beep.
- 5. While the beep is sounding, press and hold the steering wheel audio control switch (PHONE/END) button again until you hear prompts.
- 6. The Bluetooth<sup>®</sup> system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician. Refer to <u>AV-32</u>, "Work Flow".
- 7. After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails, refer to <u>AV-32</u>, "Work Flow".



Work Flow

Failure Message	Action				
"Internal failure"	Replace Bluetooth <sup>®</sup> control unit. Refer to AV-138, "Removal and Installation".				
"Bluetooth® antenna open"	Inspect harness connection.				
"Bluetooth® antenna shorted"	2. Replace Bluetooth <sup>®</sup> antenna. Refer to <u>AV-138, "Removal and Installation"</u> .				
"Phone/Send for Hands Free System is stuck"	Check steering wheel audio control switches. Refer to AV-123, "Diagnosis Proce-				
"Phone/End for the Hands Free System is stuck"	dure".				
"Microphone test" (failed interactive test)	Inspect harness between Bluetooth <sup>®</sup> control unit and microphone.     Replace microphone. Refer to <u>AV-139</u> , " <u>Removal and Installation</u> ".				

## [BASE AUDIO]

# **ECU DIAGNOSIS INFORMATION**

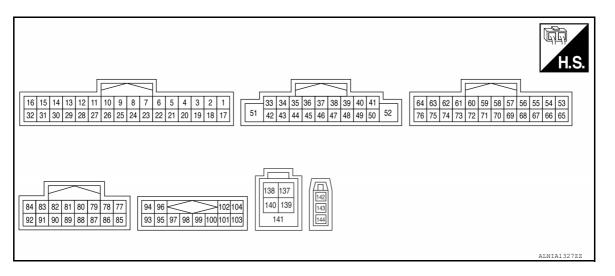
## AV CONTROL UNIT

Reference Value

### VALUES ON THE DIAGNOSIS TOOL

Monitor Item Condition		Value/Status
VHCL SDD SIC	Vehicle speed = 0 km/h (0 MPH).	Off
VHCL SPD SIG	Vehicle speed > 0 km/h (0 MPH).	On
PKB SIG	Parking brake released.	Off
PND SIG	Parking brake applied.	On
ILLUM SIG	Optical sensor signal is not received.	Off
ILLUM SIG	Optical sensor signal is received.	On
IGN SIG	Ingnition switch OFF or ACC.	Off
IGIN SIG	Ignition switch ON.	On
REV SIG	Selector lever in any position other than R.	Off
KEV SIG	Selector lever in R position.	On

## TERMINAL LAYOUT



## PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
5 (W)	4 (B)	Bluetooth <sup>®</sup> voice signal	Input	Ignition During voice guide output		0	
6	_	Shield	_	_	_	_	
10 (V)	Ground	Switch ground	_	Ignition s	switch ON	0 V	

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## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
11 (L)	_	CAN-H	Input/ Output	_	_	_
12 (P)	_	CAN-L	Input/ Output	_	_	_
13 (SB)	_	AV communication signal (H)	Input/ Output	_	_	_
14 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_
15 (SB)	_	AV communication signal (H)	Input/ Output	_	_	_
16 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_
20 (R)	22 (B)	AUX sound signal RH	Input	Ignition switch ON	AUX mode selected.	(V) 1 0 -1 → 2ms SKIB3609E
21 (W)	22 (B)	AUX sound signal LH	Input	Ignition switch ON	AUX mode selected.	(V) 1 0 -1 + 2ms SKIB3609E
25	_	Shield	_		_	_
				Ignition	Pressing eject switch.	0 V
28 (Y)	Ground	Disk eject signal	Input	switch ON	Except above.	5.0 V
29 (LG)	Ground	Ignition signal	Input	Ignition s	switch ON	Battery voltage
30				Ignition	Selector lever in R position.	Battery voltage
(R)	Ground	Reverse signal	Input	switch ON	Selector lever in any position other than R.	0 V
31				Ignition	Parking brake applied.	4.5 V
(G)	Ground	Parking brake signal	Input	switch ON	Parking brake released.	0 V
32 (BG)	Ground	Vehicle speed signal	Input	Ignition switch ON	Vehicle speed approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).

## **AV CONTROL UNIT**

## < ECU DIAGNOSIS INFORMATION >

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Terminal No. (Wire color)		Description				Value
+	_	Signal name	Input/ Output	Condition		(Approx.)
34 (SB)	35 (V)	Sound signal front door speaker and instrument panel tweeter LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
36 (BR)	37 (Y)	Sound signal rear door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
		Steering switch signal A	Input	Ignition switch ON	Press SOURCE switch	0V
					Press △ switch	1.0V
38 (G)	47				Press ♥ switch	2.0V
	(B)				Press 🗸 switch	3.0V
					Press ENTER switch	4.0V
					Except above	5.0V
39 (P)	Ground	ACC power supply	Input	Ignition switch ACC		Battery voltage
41	Ground	Illumination signal	Input	Ignition switch OFF	Lighting switch OFF	0 V
(R)					Lighting switch ON	Battery voltage
43 (BR)	44 (Y)	Sound signal front door speaker and instrument panel tweeter RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 ** 2ms SKIB3609E
45 (L)	46 (SB)	Sound signal rear door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
	47 (B)	Steering switch signal B	Input	Ignition switch ON	Press - 🗓 switch	0V
48 (W)					Press ☐+ switch	1.0V
					Press A switch	2.0V
					Press <b>5</b> switch	3.0V
					Press DISP switch	4.0V
					Except above	5.0V

## < ECU DIAGNOSIS INFORMATION >

+ - Signal name Output  51 (Y) Ground Battery power supply Input Ignition switch OFF  52 (GR) Ground Ground - Ignition switch ON  53 (B) Ground Composite image signal Output Switch ON  54 (W) Ground RGB signal (B: blue) Output Ignition switch ON  55 (W) Ground RGB signal (G: green) Output On Switch ON  56 (B) Ground RGB signal (R: red) Output Ignition Switch ON  57 (R) Ground RGB signal (R: red) Output Ignition Switch ON  58 (B) Ground RGB signal (R: red) Output Ignition Switch ON  58 (B) Ground RGB signal (R: red) Output Ignition Switch ON  59 (C) Spectrum Bar (C) Spectrum Bar (C) (C) Spectrum Bar (C) (C) (C) Spectrum Bar (C) (C) (C) Spectrum Bar (C) (C) (C) (C) Spectrum Bar (C) (C) (C) (C) Spectrum Bar (C)	Terminal No. (Wire color)		Description		O an disting		Value
Ground   G	+	_	Signal name			Condition	(Approx.)
GR   Ground   Groun		Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
Camera image or AUX image displayed   Camposite image signal   Composite image signal   Camera image or AUX image displayed   Camera image or AU		Ground	Ground	_	Ignition switch ON		0 V
Ground   G		Ground	Composite image signal	Output	switch		0. 4 0 -0. 4 • • • 40μs
Ground   RGB signal (B: blue)   Output   Ignition   Switch ON   Skilb22373   Skil		Ground		_	Ignition switch ON		0 V
Ground   RGB signal (G: green)   Output   Ignition   Switch ON   Begin Confirmation/Adjustment mode, then select "Color Spectrum Bar"   O. 4   O. 4   O. 4   O. 4   O. 4   O. 4   O. 5   O. 5   O. 5   O. 5   O. 6   O. 7   O. 7   O. 7   O. 8   O. 8   O. 8   O. 9   O. 1   O. 1		Ground	RGB signal (B: blue)	Output	switch	ment mode, then select	0. 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Ground RGB signal (R: red)  Output Ignition switch ON  Begin Confirmation/Adjustment mode, then select "Color Spectrum Bar"  Output Ignition switch ON  RGB signal (R: red)  Output Ignition switch ON  Output Ignition switch ON  SKIB2238J		Ground	RGB signal (G: green)	Output	switch	ment mode, then select	0. 4 0 -0. 4 -40μs
58 (B) Ground RGB synchronizing signal Output Ignition switch ON	57 (R)	Ground	RGB signal (R: red)	Output	switch	ment mode, then select	0. 4 0
59 — Shield — — — — —		Ground	RGB synchronizing signal	Output	Ignition switch ON		4 0 → 20 <i>µ</i> s
	59	_	Shield	_	_	_	

# **AV CONTROL UNIT**

## < ECU DIAGNOSIS INFORMATION >

[BASE AUDIO]

	inal No. e color)	Description			Canaditta	Value	/
+	_	Signal name	Input/ Output		Condition	(Approx.)	
					RGB image displayed	5.0 V	[
60 (W)	Ground	RGB area (YS) signal	Output	Ignition switch ON	AUX image displayed	(V) 6 4 2 0	(
						+	[
						(V) 6	[
61 (B)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	Adjusting display bright- ness	4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ı
						PKIB5039J	(
62 (G)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition s	switch ON	(V) 4	ŀ
						**************************************	ı
63 (B)	Ground	Signal ground	_	Ignition s	switch OFF	0 V	
64 (V)	Ground	Signal VCC	Output	Ignition s	switch ACC	9.0 V	
66	_	Shield	_	_	_	_	k
67	_	Shield	_	_	_	_	
72	_	Shield	_	_	_	_	L
73 (W)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	Adjusting display bright- ness	(V) 6 4 1	N
						PKIB5039J	A۱
						(V) 4	
74 (R)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch ON		0 + 4ms   SKIB3598E	F
75 (LG)	Ground	Inverter ground	_	Ignition s	switch OFF	0 V	
76 (L)	Ground	Inverter VCC	Output	Ignition s	switch ACC	9.0 V	

## < ECU DIAGNOSIS INFORMATION >

	nal No. e color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
82 (W)	Ground	Camera image signal	Input	Ignition switch ON	Camera image displayed	(V) 0.4 -0.4 +40µs SKIB2251J
83 (W)	Ground	AUX image signal	Input	Ignition switch ON	AUX image displayed	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
87 (R)	Ground	Camera power supply	Output	Ignition switch ON	Selector lever in "R" position	6.0 V
88 (B)	Ground	Camera ground	_	Ignition s	switch ON	0 V
89	_	Shield	_	_	_	_
90	_	Shield			_	_
91 (B)	Ground	AUX image signal ground	_	Ignition s	switch ON	0 V
94 (B)	93 (W)	Satellite radio sound signal LH	Input	Ignition switch ON	Satellite radio mode selected	(V) 1 0 -1 + 2ms SKIB3609E
96 (G)	95 (R)	Satellite radio sound signal RH	Input	Ignition switch ON	Satellite radio mode selected	(V) 1 0 -1 + 2ms SKIB3609E
97	_	Shield	_	_	_	<del>-</del>
98	_	Shield	_	_	_	_
100 (W)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	Satellite radio mode selected	(V) 10 0 -10 → 10ms SKIA9299J

## **AV CONTROL UNIT**

## < ECU DIAGNOSIS INFORMATION >

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	nal No. e color)	Description			Condition	Value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
101 (B)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	Satellite radio mode selected	(V) 10 0 -10 -10 -10 -10 -10	
102 (R)	Ground	Communication signal (CONT→SAT)	Output	Ignition switch ON	Satellite radio mode selected	(V) 10 0 -10 -1ms	
137 (G)	_	V BUS signal	_	_	_	_	
138 (W)	_	USB ground	_	_	_	_	
139 (R)	_	USB D+ signal	_	_	_	_	
140 (L)	_	USB D- signal	_	_	_	_	
141	_	Shield	_	_	_	_	
142 (B)	_	Antenna amp. ON signal	Output	Ignition s	switch ON	Battery voltage	
143 (B)	_	AM - FM main	Input	_	_	_	
144 (B)	_	FM sub	Input	_		_	

DTC Index

CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-78, "DTC Logic"
U1010: CONTROL UNIT	AV-79, "DTC Logic"
U1200: CONT UNIT	AV-80, "DTC Logic"
U1216: CAN CONT	AV-81, "DTC Logic"
U1232: ST ANGLE SEN CALIB	AV-82, "DTC Logic"
U1240: SWITCH CONN	AV-87, "Description"
U1243: FRONT DISP CONN	AV-83, "DTC Logic"
U1255: SAT CONN	AV-85, "DTC Logic"
U1256: HAND FREE CONN	AV-87, "Description"
U1300: AV COMM CIRCUIT	AV-87, "Description"
U1310: CONTROL UNIT	AV-88, "DTC Logic"

Revision: March 2012 AV-39 2013 Infiniti JX

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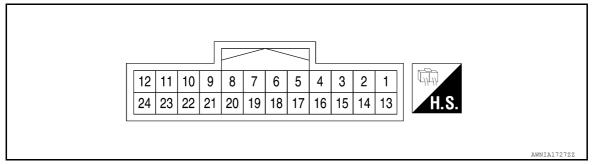
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# **DISPLAY UNIT**

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	_	0V
2 (L)	Ground	Inverter VCC	Input	Ignition switch ACC	_	9V
3 (V)	Ground	Signal VCC	Input	Ignition switch ACC	_	9V
4 (W)	Ground	Composite image ground	_	Ignition switch ON	_	0V
5	_	Shield	_	1	_	_
6 (B)	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 (G)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	<del>-</del>	(V) 4 0 + 20µs SKIB3601E

## **DISPLAY UNIT**

## < ECU DIAGNOSIS INFORMATION >

[BASE AUDIO]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
					At RGB image is displayed.	5V
9 (W)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At DVD image is displayed.	(V) 6 4 2 0 • • • 200 μ s pkib4948J
11 (W)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 1 ms PKIB5039J
13 (LG)	Ground	Inverter ground	_	Ignition switch ON	_	0V
14 (B)	Ground	Signal ground	_	Ignition switch ON	_	0V
15 (B)	Ground	Composite image signal	Input	Ignition switch ON	At rear view camera image is displayed.	(V) 0. 4 0 -0. 4 ••••40µs SKIB2251J
17 (R)	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 JSNIA10292Z
18 (W)	Ground	RGB signal (B: blue)	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  JSNIA103122

## **DISPLAY UNIT**

[BASE AUDIO]

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

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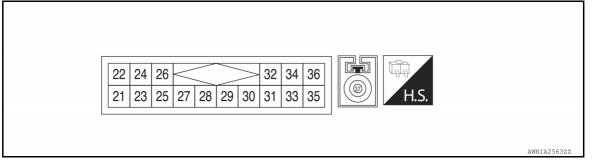
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# SATELLITE RADIO TUNER

Reference Value



## PHYSICAL VALUES

Terr	minal	Description				Deference value	•
+	_	Signal name	Input/ Output		Condition	Reference value (Approx.)	-
22 (B)	21 (W)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	(V) 1 0 -1 + 2ms SKIB3609E	
24 (G)	23 (R)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	(V) 1 0 -1 + 2ms SKIB3609E	
25	_	Shield	_	_	_	_	-
26	_	Shield	_	_	_	_	-
28 (W)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 +10ms SKIA9299J	Α
29 (R)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 +1ms SKIA9300J	-

# **SATELLITE RADIO TUNER**

## < ECU DIAGNOSIS INFORMATION >

[BASE AUDIO]

Tern	ninal	Description				Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
30 (B)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 + 1ms SKIA9301J	
32 (SB)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
35 (GR)	Ground	Ground	_	Ignition switch ON	_	0V	
36 (BG)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
37 (B)	_	Satellite antenna	_	_	_	_	

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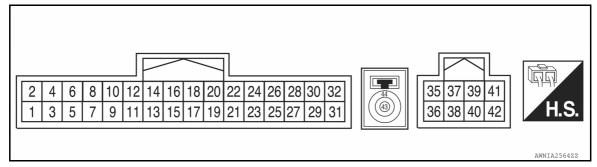
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# **BLUETOOTH® CONTROL UNIT**

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal color)	Descriptio	n		Condition	Reference value	
+	-	Signal name	Input/out- put		Condition	(Approx.)	
1 (Y)	Ground	Battery power	Input	_	-	Battery voltage	
2 (R)	Ground	ACC power	Input	Ignition switch ACC/ON	-	Battery voltage	
3 (P)	Ground	IGN power	Input	Ignition switch ON/ START	-	Battery voltage	
4 (B)	Ground	Ground	_	Ignition switch ON	-	0V	
5	-	Shield	-	_	_	_	
7 (B)	8	MIC in signal	Input	_	-	-	
9 (W)	10 (B)	Audio out	Output	Ignition switch ACC/ON	Bluetooth <sup>®</sup> control unit sends audio sig- nal	(V) 1 0 -1 ** 2ms SKIB3609E	
20 (B)	Ground	Ground	-	Ignition switch ON	-	0V	
23 (B)	Ground	Ground	-	Ignition switch ON	-	0V	
24 (B)	Ground	Ground	_	Ignition switch ON	-	0V	
27 (B)	Ground	Ground	_	Ignition switch ON	_	0V	

# **BLUETOOTH® CONTROL UNIT**

## < ECU DIAGNOSIS INFORMATION >

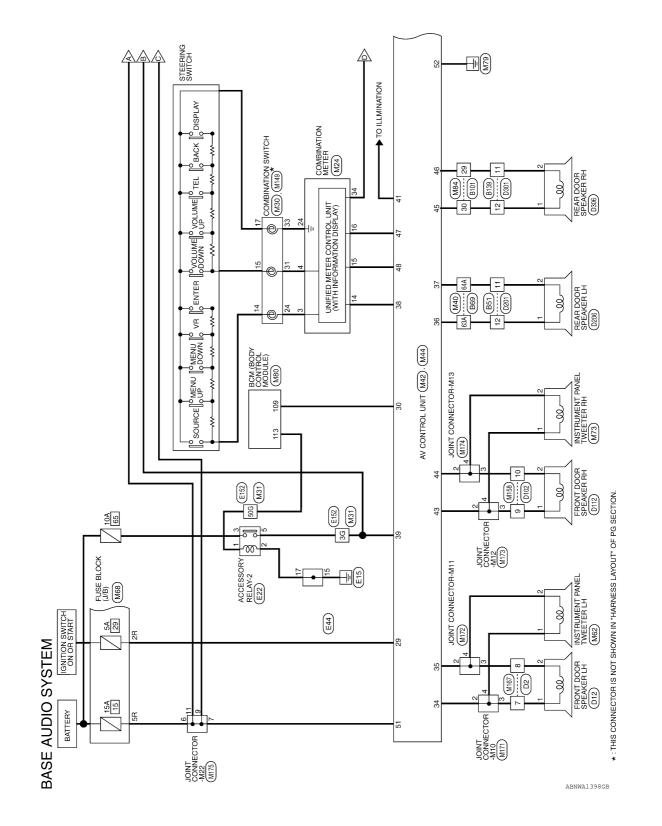
[BASE AUDIO]

	ninal color)	Description	1	Condition		Reference value
+	_	Signal name	Input/out- put		Condition	(Approx.)
28 (V)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 15 10 5 0  **20ms  **PKIA1935E
29 (W)	Ground	Microphone power	Output	Ignition switch ON	_	5V
35 (SB)	_	M-CAN1 (+)	_	_	_	_
36 (LG)	_	M-CAN1 (-)	-	_	_	_
43 (B)	_	Bluetooth <sup>®</sup> antenna	-	_	_	_
44	_	Shield	ı	_	_	_

# WIRING DIAGRAM

# **BASE AUDIO**

Wiring Diagram



**AV-47** 

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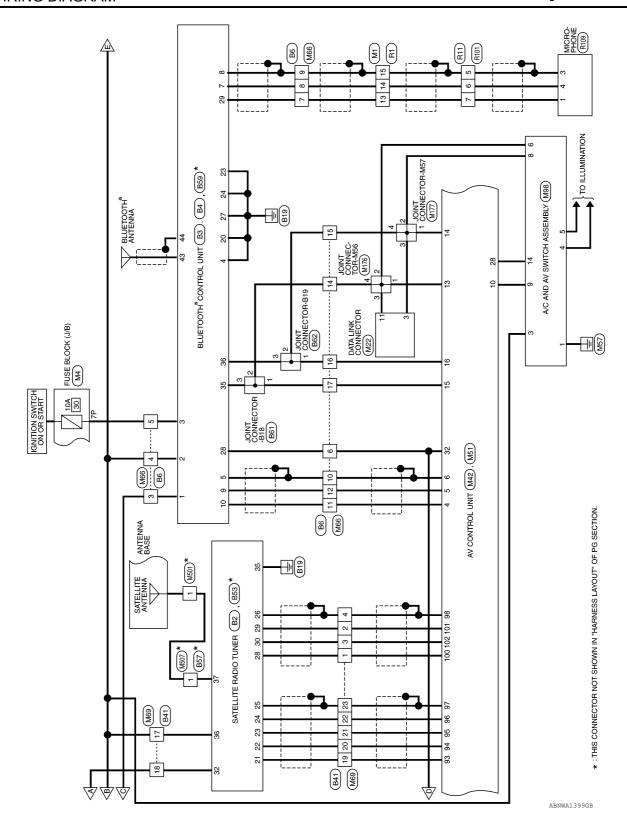
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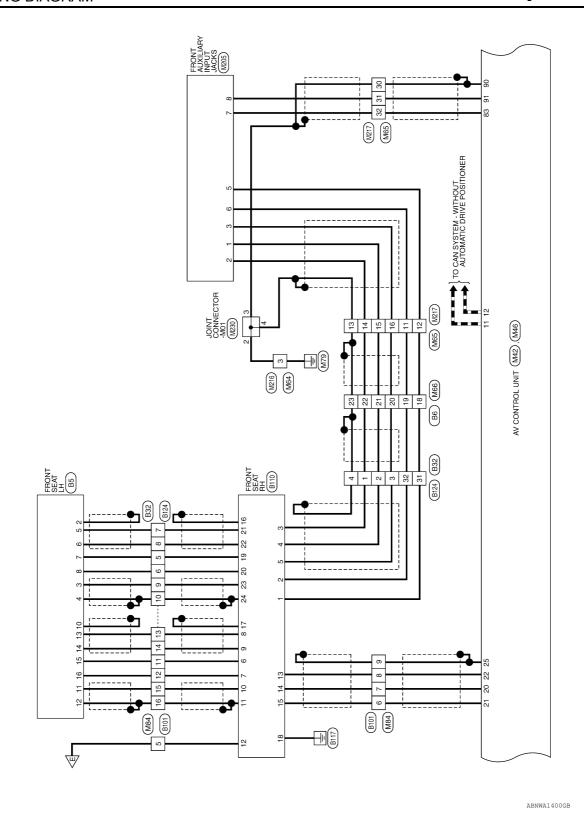
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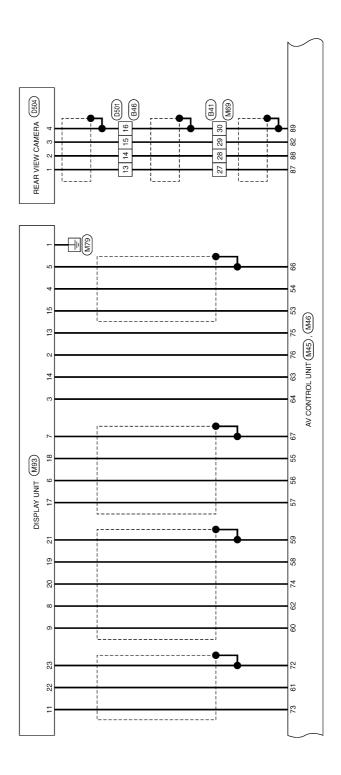
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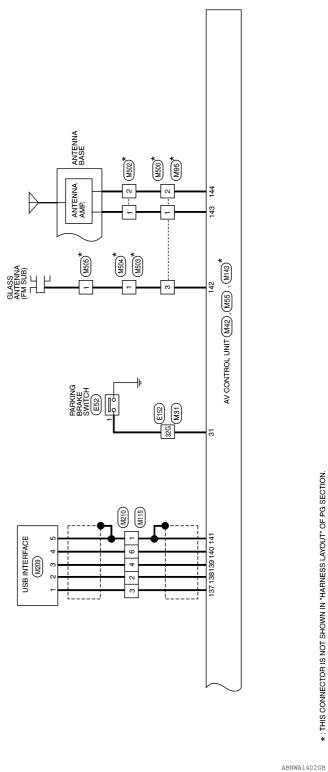
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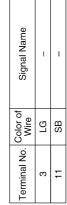
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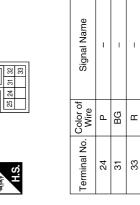






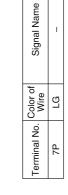












Signal Name	STRG SW GND	SPEED 8 P/R	
Color of Wire	æ	GR	
Terminal No.	24	34	

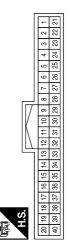




Connector No.		Σ	_									
Connector Name WIRE TO WIRE	Name	⋝	E	111	O	≷	<u>E</u>					
Connector Color WHITE	Color	⋝	l≒	世								
用.S.	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 23	e <del>5</del>	4 6	2 2	9 8	7 61	8 8	ᅰᇷ	9 10 11 12 21 22 23 24	23 =	12 24	
			11									_

Signal Name	ı	-	_
Color of Wire	8	В	SHIELD
Terminal No.	13	14	15

Connector No.	M24
nnector Name	Connector Name COMBINATION METER
Connector Color WHITE	WHITE



Signal Name	STRG SW INPUT1	STRG SW INPUT 2	STRG SW OUTPUT1	STRG SW OUTPUT2	STRG SW OUTPUT GND
Color of Wire	۵	BG	ŋ	Μ	В
erminal No. Color of Wire	8	4	14	15	16

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BASE AUDIO SYSTEM CONNECTORS

91A 92A 93A 94A 95A 96A 97A 98A 99A100A

Signal Name

Color of Wire BR

Terminal No. 63A 64A

Signal Name

Color of Wire P

Terminal No.

32G 50G

36

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51A 52A 53A 54A 55A 56A 57A 58A 59A 60A 61A 62A 63A 64A 65A 66A 67A 68A 69A 70A

51G52G53G54G55G56G57G58G59G60G61G 62G63G64G65G66G67G68G69G70G

1672G73G74G75G77677G78G79G80G81G 82G83G84G85G86G87G88G89G90G

11A 12A 13A 14A 15A 16A 17A 18A 19A 20A 21A 22A 23A 23A 25A 26A 27A 28A 28A 30A

226|236|46|156|166|176|186|196|206|216

31G 32G 33G 34G 35G 36G 37G 38G 39G 40G 4 42G 43G 44G 45G 46G 47G 48G 49G 50G

1A 2A 3A 4A 5A 6A 7A 8A 9A 10A

Connector Name WIRE TO WIRE

Connector Name WIRE TO WIRE

M31

Connector No.

Connector Color WHITE

M40

Connector No.

Connector Color WHITE

31A 32A 33A 34A 35A 36A 37A 38A 39A 40A 41A 42A 43A 44A 45A 46A 47A 48A 49A 50A



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Signal Name	AUX GND	ı	ı	SHIELD	ı	I	CD(DVD) EJECT	NSI	REVERSE SIG	PKB SIG	SPEED 8P
Color of Wire	В	ı	ı	SHIELD	ı	ı	<b>\</b>	LG	Œ	В	BG
Terminal No.	22	23	24	25	26	27	87	29	30	31	35

Signal Name	1	1	GND	CAN-H	CAN-L	M-CAN1 H	M-CAN1 L	M-CAN2 H TRM	M-CAN2 L TRM	ı	1	ı	AUX AUDIO RH+	AUX AUDIO RLH+
Color of Wire	ı	1	>	_	۵	SB	ГG	SB	LG	_	1	-	В	8
Terminal No. Wire	8	6	10	7	12	13	14	15	16	17	18	19	20	21

				-	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
				3	19
				6 5 4 3	20
				S	21
	≒			9	22
	5		117	7	23
			<i> </i>	16 15 14 13 12 11 10 9 8	24
	×		IN	6	52
	뉟		ПΠ	유	92
	18	쁘		Ξ	27
42	>			12	28
M42	₹	>		13	53
	Je.	Ž		7	98
o.	a	8		5	31
۱ <u>۲</u>	Z	5		16	32
Connector No.	Connector Name AV CONTROL UNIT	Connector Color WHITE	E	É	Ċ

Signal Name	I	-	I	TEL VOICE-	TEL VOICE+	SHIELD	I
Color of Wire	1	_	_	В	M	SHIELD	1
Terminal No. Wire	٢	2	3	4	5	9	7

Signal Name	RR RH SP-	STRG SW GND	STRG SW B	_	ı	+B	GND
Color of Wire	SB	В	M	_	1	У	GR
Terminal No. Wire	46	47	48	49	50	51	52

Signal Name	STRG SW	ACC	I	ILL	ı	FR RH SP+	FR RH SP-	RR RH SP+
Color of Wire	ŋ	۵	1	Я	1	BR	٨	٦
Terminal No.	38	39	40	14	42	43	<b>7</b> 7	45

	AV CONTROL UNIT	里	36 37 38 39 40 41 45 46 47 48 49 50 22	Signal Name	I	FR LH SP+	FR LH SP-	RR LH SP+	RR LH SP-	
M44		lor WH	33 34 35 42 43 44	Color of Wire	ı	SB	۸	BR	>	
Connector No.	Connector Name	Connector Color WHITE	原引 H.S.	Terminal No.	33	34	35	36	37	

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Signal Name	1	SHIELD	IT DISP	۷P	INV GND	INV VC
Color of Wire	_	SHIELD	W	В	LG	_
Terminal No. Wire	71	72	73	74	75	9/

Signal Name	RGB SYN	RGB SYN GND	γS	DISP IT	롸	SIG GND	SIG VC	_	SHIELD	SHIELD	_	_	-
Color of Wire	В	SHIELD	8	В	ŋ	В	>	1	SHIELD	SHIELD	1	-	ı
Ferminal No.	28	59	09	61	62	63	64	65	99	29	89	69	70

Connector Name AV CONTROL UNIT  Connector Color WHITE  MHS  (44 86 82 61 80 59 86 57 58 55 54 58)  (75 75 74 73 72 71 70 89 86 77 88 65	Connector No.		M45	2								
58 57 56 55 54 70 69 88 67 66	Connector	· Name	۸	8	Z	Щ	Ы	5	Ξ	_		
E3 E2 61 60 59 58 57 56 55 54 75 74 73 72 71 70 69 68 67 66	Connector	. Color	W	Ę	111							
63 62 61 60 59 58 57 56 55 54 75 74 73 72 71 70 69 68 67 66					- I N	- IV	117					
76 75 74 73 72 71 70 69 68 67 66 65	Ě	64 63 6	2 61	09	59	58	22	26	55	54	23	
	į	76 75 7	4 73	72	71	20	69	89	29	99	92	

Signal Name	COMP OUT-	COMP OUT+	В	9	В	
Color of Wire	В	8	Μ	В	ш	
Terminal No. Wire	53	54	55	99	22	

Signal Name	COMP1 IN +	ı	ı	1	CAM 6.2	CAM GN	SHIELD	SHIELD	COMP IN	1
Color of Wire	Ν	ı	1	ı	œ	В	SHIELD	SHIELD	В	1
Terminal No. Wire	83	84	85	98	87	88	68	06	91	92

	<u></u>				
	15			4	85
	_		_	[2	8
	12		117	79	87
	ᄂ		W	8	8
	Ö	쁜		84 83 82 81 80 79 78 77	92 91 90 89 88 87 86 85
M46			Ш	82	6
Ż	⋖	≥		8	5
	e	'n		8	8
nnector No.	nnector Name AV CONTROL UNIT	nnector Color WHITE		Ţ	ó



Signal Name	_	1	ı	-	1	COMP2 IN +
Color of Wire	_	-	1	_	ı	Ν
Terminal No. Wire	22	78	6/	08	81	82

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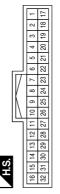
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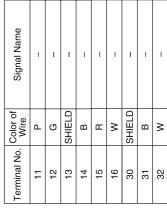








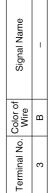




Signal Name		SHIELD	1	REQ1	XT	RX	1	I
Color of		SHIELD	ı	M	В	В	I	1
Terminal No. Color of	C	98	66	100	101	102	103	104







Signal Nan	SHIELD	ı	REQ1	XT	RX	I	I
Color of Wire	SHIELD	ı	8	В	В	I	1
Terminal No. Wire	86	66	100	101	102	103	104

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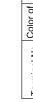
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Signal Name	1	1
Color of Wire	SB	>
al No.		

Connector No.	M51
Connector Name	Connector Name AV CONTROL UNIT
Connector Color WHITE	WHITE
10 10 10 10 10 10 10 10 10 10 10 10 10 1	94 96 102 104
28	20 80 88 100 101 103





Signal Name	N BUS LH-	N BUS LH+	N BUS RH-	N BUS RH+	SHIELD	
Color of Wire	M	В	æ	5	SHIELD	
Terminal No. Color of Wire	93	94	92	96	97	

Connector Name INSTRUMENT PANEL TWEETER LH Connector Color BROWN
2////
CHO
Connector No.   M62



Color of Wire	SB	۸
Terminal No.	٦	2

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Connector No.	M68
Connector Name	Connector Name FUSE BLOCK (J/B)
Connector Color BROWN	BROWN

<u>ग्वत्तां प्रतापत्रता रात्ता गत्ता वत्ता वत्ता ।</u>	Signal Name	-	
16R 15R 14R	Color of Wire	ГG	
H.S.	Terminal No. Wire	2R	

oignainaine	1	I		-	INSTRUMENT PANEL TWEETER RH	BROWN		Signal Name	-
Wire	ГG	<b>\</b>		. M73				Color of Wire	BR
מווומו אלי	2R	5R		Connector No.	Connector Name	Connector Color	「所 H.S.	Terminal No.	1

Signal Name	_	ı	ı	_	ı	_	ı	ı	_	ı	I	_	I	ı
Color of Wire	SHIELD	SHIELD	В	M	SB	LG	FG	SB	G	Ь	Μ	В	В	SHIELD
Terminal No.	6	10	11	12	14	15	16	17	18	19	20	21	22	23

Signal Name	1	-	1	I	1	ı	I	I	ı	1
Color of Wire	<b>\</b>	W	В	В	G	SHIELD	В	В	×	SHIELD
Terminal No.	18	19	20	21	22	23	27	28	29	30
	Terminal No.   Color of   Signal Name   Wire	Color of Wire	Color of Wire Y	Color of Wire Y	Color of Wire W	Color of Wire W W W	Color of Wire Y W W B B R G G G SHIELD	Color of Wire W W B B B B B B B B B B B B B B B B B	Color of Wire W W B B B R R R B R R B B R B R B R B R	Color of Wire W W W W B B B B B B B B B B B B B B B

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								-	-	-	-	
Connector No.	No.	M66	ဖွ									
Connector Name WIRE TO WIRE	Name	M	꿆	<u> </u>	\ C	¥	몿					
Connector Color WHITE	Color	M	   	ш								
					- 11	l IV	- 17	_				
-	12 1	1 10	6	∞	7	9	r.	4	3	2	F	
6	24 23 22 21 20 19 18 17 16 15 14	3 22	21	20	19	9	17	9	15	14	13	

Signal Name	ı	I	1	ı	1	-
Color of Wire	<b>&gt;</b>	۵	ГG	BG	M	В
Terminal No. Wire	ဗ	4	5	9	7	8

(16) 14 13 12 11 10 9 8 7 6 5 4 3 2 1 1	Connector Color WHITE	Connector Name WIRE TO WIRE	Connector No. M69
	S. 16 15 14 13 12 11 10 9 8 7 6 5 4 3 8 22 21 20 19	10 9 8 7 6 5 4 3 22 21 20 130 139	7 6 5 4 3 22 2 2 2 1 20 19

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Terminal No.	Color of Wire	Signal Name
6	SHIELD	_
59	SB	_
30	_	1

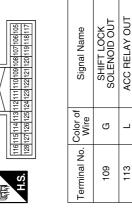
Signal Name	В	RGB SYNC	۸b	SYNC GND	UART OUT	UART GND	_
Color of Wire	×	В	В	SHIELD	В	SHIELD	_
Terminal No. Wire	18	19	20	21	22	23	24

Connector No.	M84
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE

Signal Name	I	ı	ı	_	
Color of Wire	Ь	Α	ш	В	
Terminal No.	2	9	7	8	

Signal Name	ŋ	RGB GND	HP	γS	I	UART IN	I	INV GND	SIG GND	COMP	I	Я
Color of Wire	В	SHIELD	G	Ν	1	M	_	LG	В	В	1	В
Terminal No.	9	7	8	6	10	11	12	13	14	15	16	17

M80	BCM (BODY CONTROL MODULE)	BLACK	
Connector No.	Connector Name   BCM (BODY   CONTROL M	Connector Color BLACK	



	PLAY UNIT	TE TI	11   10   9   8   7   6   5   4   3   2   1	Signal Name	GND	INV VCC	SIG VCC	COMP GND	COMP SHIELD
. M93	me DIS	lor WH	24 23 22 21 2	Color of Wire	В	Т	>	Μ	SHIELD
Connector No.	Connector Name DISPLAY UNIT	Connector Color WHITE	H.S.	Terminal No.	-	2	က	4	5

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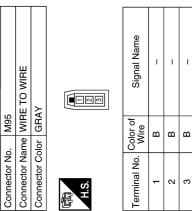
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Signal Name	I	1	1	_	1	_	_
Color of Wire	LG	>	ı	1	ı	ı	Υ
Terminal No. Color of Wire	8	6	10	11	12	13	14

Connector No.	M98
Connector Name	Connector Name A/C AND AV SWITCH ASSEMBLY
Connector Color WHITE	WHITE



Signal Name

Color of Wire GR

Terminal No.

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	Connector Name   COMBINATION SWTICH		20 19 18 17 16 15 14 13	Signal Name	1	ı
). M149	ume CO	olor GR,	20 19	Color of Wire	В	ä
Connector No.	Connector Na	Connector Color GRAY	H.S.	Terminal No.	14	15

Connector No.	D. M143	43
Connector Name		AV CONTROL UNIT
Connector Color		GRAY
Œ		
S E		142
		<u> </u>
Terminal No.	Color of Wire	Signal Name
142	В	ANT MAIN
143	В	ANT +B
144	В	ANT SUB

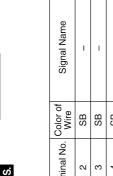
5	E TO WIRE	, At	2 4 9	Signal Name	ı	ı	ı	ı	1
. M115	me WIF	lor GR/		Color of Wire	SHIELD	Χ	g	В	۷
Connector No.	Connector Name WIRE TO WIRE	Connector Color GRAY	同 H.S.	Terminal No. Wire	-	2	3	4	9

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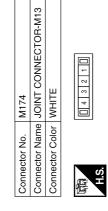
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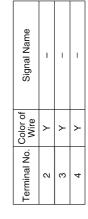
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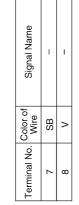




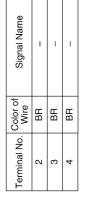


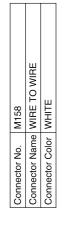


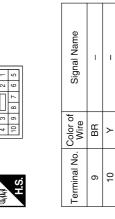
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Connector No.	o. M172	.2
Connector Na	ame JOII	Connector Name JOINT CONNECTOR-M11
Connector Color WHITE	olor WH	<u> </u>
原 H.S.		4 3 2 1
Terminal No. Wire	Color of Wire	Signal Name
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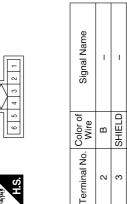
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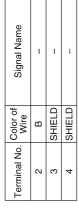
						_		Г		_
Conne	Connector No.	Connector No. M175 Connector Name JOINT CONNECTOR-M22	Connector No.	o. M176 ame JOINT	Connector No. M176 Connector Name JOINT CONNECTOR-M56	Conne	Connector No. Connector Nam	me JOINT	Connector No. M177  Connector Name JOINT CONNECTOR-M57	
Conne	Connector Color WHITE	WHITE	Connector Color	olor WHITE	щ	Conne	ector Col	Connector Color WHITE		
臣				4	3 2 1			4 3	3 2 1 0	
H.S.	7 8 6	6 5 4 3 2 1	S. H			N. H.	6			
7 22 21	22 21 20 19 18 1	17 16 15 14 13 12		-						_
%   %   %	31 30 29 29	22 27 34 30 08 97 08 08 09 09 09 09 09 09 09 09 09 09 09 09 09	Terminal No.	Color of Wire	Signal Name	Termir	Terminal No.	Color of Wire	Signal Name	
	1 2 2 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2		-	SB	1		-	re	1	
			2	SB	ı		2	ГG	I	
Terminal No.	al No. Color of	or of Signal Name	8	SB	ı		3	LG	1	
9			4	SB	1		4	ГG	1	
0   ^										
6										
=										
Connec	Connector No.	M205	Connector No.	o. M209		Conne	Connector No.	M210		
Connec	ctor Name	Connector Name FRONT AUXILIARY INPUT	Connector N	ame USB	Connector Name USB INTERFACE	Conne	ector Na	-	TO WIRE	
Connec	Connector Color	WHITE	Connector Color	olor   GREEN	EN	Conne	Connector Color	or GRAY		
			•	7				٦		
			MAKAN	<u>l</u>		My Marian			<u> </u>	
H.S.	1 2	3 4 5 6 7 8	H.S.		8 2	S.	<b>7</b>	2 4	a 8	
Terminal No.	al No. Color of Wire	or of Signal Name		<u> </u>				9	7	
-		R AUX AUDIO RH+	Terminal No	Color of	Signal Name	T	ON legitiment	Color of	Signal Mamo	
2		B AUX AUDIO GND				<u> </u>		Wire	Olgilai Malile	
3	M	V AUX AUDIO LH+	-	<b>5</b>	1			SHIELD	1	
4		1	2	>	1		2	>	I	
LO Al		G PLOGIN DETECT	က	æ	ı		3	ŋ	1	
9 SNIA		P PLUGIN GND	4	_	ı		4	æ	1	
2	. M		2	SHIELD	I		9	_	1	
<b>8</b>		B AUX VIDEO-								

**BASE AUDIO** 

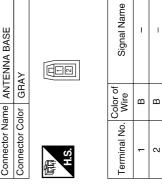
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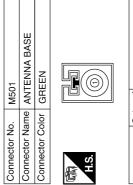


M502	Connector Name ANTENNA BASE	GRAY	
Connector No.	Connector Name	Connector Color GRAY	



7	WIRE TO WIRE	ITE		9 10 11 12 13 14 15 16 25 26 27 28 29 30 31 32	Signal Name	1	ı	1	ı	I	_	ı	_	-	
, M217	_	lor WHITE		6 7 8 22 23 24 2	Color of Wire	Ь	g	SHIELD	В	Я	W	SHIELD	В	W	
Connector No.	Connector Name	Connector Color	(A)	1 2 3 4 5 17 18 19 20 21	Terminal No.	11	12	13	14	15	16	30	31	32	

Signal Name	I	I	I	I	_	_	I	_	I	
Color of Wire	۵	9	SHIELD	В	В	Μ	SHIELD	В	M	
Terminal No.   Color of Wire	11	12	13	14	15	16	30	31	32	



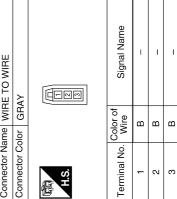


Terminal No.	Color of Wire	В
	Terminal No.	1

Signal Name

9	IE TO WIRE	TE	2 3 mm 4 5 6 7 9 10 11 12 13 14 15 16	Signal Name	ı
. M216	me WIF	lor WHI	8 9 10	Color of Wire	В
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	师 H.S.	Terminal No. Wire	3

M500	WIRE TO WIRE	GRAY	
Connector No.	Connector Name WIRE TO WIRE	Connector Color GRAY	



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Connector Color CDAX	Connector Color GBAY	Connector Name   WIRE TO WIRE	Connector Name GLASS	Connector Name GLASS ANTENNA (FM SUB)
The state of the s	E.S.		(A)	
Terminal No. Wire Signal Name	Terminal No. Wire	olor of Signal Name	Terminal No. Wire	of Signal Name
- B	-	- I	- H	ı

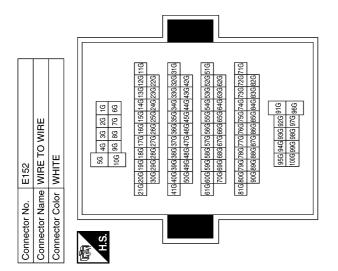
E44	JOINT CONNECTOR-E01	WHITE	10 9 8 7 6 5 4 3 2 1 21 20 19 18 17 16 15 14 13 12 32 31 30 29 28 27 26 25 24 23	or of Signal Name	ı	1
	ame,		22 21 20 33 32 31	Color of Wire	GR	a
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	15	17

	_	_						
	ACCESSORY RELAY-2	Æ	  20 3	Signal Name	ı	ı	ı	1
. E22		lor BLUE		Color of Wire	თ	В	ш	۵
Connector No.	Connector Name	Connector Color	南 H.S.	Terminal No.	-	2	3	5

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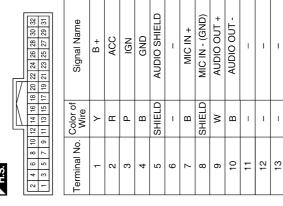
Signal Name	ı	1	-
Color of Wire	Ь	LG	В
Terminal No.	3G	32G	50G

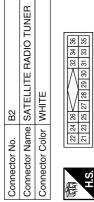
Connector No.	). E52	
Connector Na	ame PAF	Connector Name PARKING BRAKE SWTICH
Connector Color BLACK	olor BLA	CK
H.S.		<u> </u>
Terminal No.	Color of Wire	Signal Name
-	ГG	I

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Signal Name	-	-	1	I	1	1	CONT 1	1	ı	CONT 4	CONT 5	I	1	CONT 6	SPEED	MIC POWER	1	1	_
Color of Wire	1	-	-	1	1	ı	В	1	ı	В	В	ı	ı	В	>	Ν	-	1	_
Terminal No.	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29	90	31	32

Connector No. B3  Connector Name BLUETOOTH® CONTROL UNIT  Connector Color WHITE		
Connector Name BLUETOOTH® CONTROL UNIT Connector Color WHITE		B3
Connector Color WHITE	Connector Name	BLUETOOTH® CONTROL UNIT
	Connector Color	WHITE





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32	31	1
Λ	98	1
<i>۱</i> /	83	1
١ /	28	1
IV	27	1
26	25	
24	23	
22	21	1

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Signal Name	(-) HOT LCH	SAT LCH (+)	SAT RCH (-)	SAT RCH (+)	EARTH (SIG)	DATA EARTH	1	REQ1 (SAT-COMBI)	TXD (SAT-COMBI)	RXD COMBI-SAT)	-	BAT	-	-	EARTH	SOV
Color of Wire	M	В	ш	g	SHIELD	SHIELD	-	M	ш	В	1	SB	_	-	GR	BG
Terminal No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

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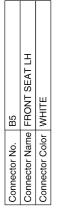
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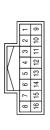
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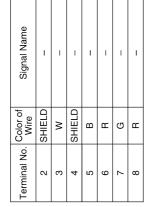
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Signal Name	-	_	ı	-	_	I	_
Color of Wire	SHIELD	Μ	SHIELD	В	В	В	٦
Terminal No. Wire	10	11	12	13	14	15	16













Signal Nam	CANH	CANL	I	-	-	I	-	I
Color of Wire	SB	ГG	-	_	_	-	_	_
Terminal No.	32	36	37	38	39	40	41	42

Signal Name	1	ı	-	ı	ı	I	ı	ı	I	-	ı	ı
Color of Wire	В	Ν	SB	LG	LG	SB	۵	BG	Μ	В	В	SHIELD
Terminal No.	1	12	14	15	16	17	18	19	20	21	22	23

		12	24
			13 14 15 16 17 18 19 20 21 22 23 24
		8 9 10 11	22
#    ,		6	21
	7	8	8
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W W B	Ξ	4	9
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일   월   5		2	14
2 2 3		-	13
Connector No. B6 Connector Name WIRE TO WIRE Connector Color WHITE	1	ı	5
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Signal Name	I	1	1	I	I	1	I	ı
Color of Wire	>	Œ	۵	>	Μ	В	SHIELD	SHIELD
Terminal No. Wire	3	4	2	9	7	8	6	10

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	WIRE TO WIRE	ITE	5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24	Signal Name	-	1	I	I
. B46		lor WH	2 3 4 15 16	Color of Wire	В	В	Μ	SHIELD
Connector No.	Connector Name	Connector Color WHITE	斯 H.S.	Terminal No.	13	14	15	16

Signal Name	1	1	ı	ı	ı	ı	1	1	I	1	1	_	1	1
Color of Wire	G	ш	В	ш	8	SHIELD	В	٦	В	ш	Μ	SHIELD	Ь	BG
Terminal No.	5	9	7	8	6	10	11	12	13	14	15	16	31	32

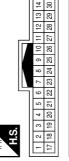
Signal Name	I	ı	I	ı	ı	I	ı	I	1	ı
Color of Wire	SB	>	В	В	ŋ	SHIELD	æ	В	Μ	SHIFLD
Terminal No.	18	19	20	21	22	23	27	28	59	30
	Color of Wire	Color of Wire SB	Color of Wire SB	Color of Wire SB W	Color of Wire SB W W	Color of Wire SB W	Color of Wire SB W W B B B B B B B B B B B B B B B B	Color of Wire SB SB W W B B B G G G G G SHIELD	Color of Wire SB SB BB	Color of Wire SB SB BB

Connector No.	B32
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE



Signal Name		-	_	I	-
Color of	Wire	В	В	Μ	SHIELD
Terminal No Color of	5	1	2	3	4

r No. B41	Connector Name WIRE TO WIRE	Connector Color WHITE	
Connector No.	Connector Nam	Connector Colo	ſ



Signal Name	ı	1	ı	1	1
Color of Wire	Μ	æ	В	SHIELD	BG
Terminal No. Wire	-	2	3	4	17

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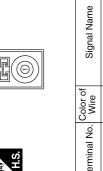
Connector Name JOINT CONNECTOR-B19

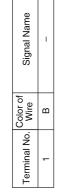
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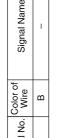
Connector No.











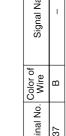


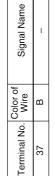


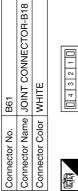
Signal Name	1	1	1
Color of Wire	FG	FG	LG
Terminal No. Wire	1	2	က

Connector No.	B53
Connector Name	Connector Name SATELLITE ANTENNA
Connector Color	GREEN





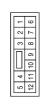






Signal Name	_	I	I
Color of Wire	SB	SB	SB
Terminal No.	1	2	3







Signal Name	I	ı	
Color of Wire	Я	۵	
Terminal No.	11	12	

Connector Name BLUETOOTH CONTROL UNIT

B59

Connector No.

Connector Color GRAY



Signal Name	ı	ı
Color of Wire	В	SHIELD
Terminal No.	43	44

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Connector No.	No. B69			Terminal No.	Color of Wire	Signal Name		Connector No.	). B101		
Connector Name	Name WIRE T	Connector Name WIRE TO WIRE		63A	<u>a</u>	1	<u> </u>	Connector Name   WIRE TO WIRE	ame WIRE	TO WIRE	
	10100			64A	æ	1			I ILI M	ш	
所.S.H.S.		5A 4A 3A 2A 1A						明.S.			
		10A P/ PO PE						0	1	4	
	21A 20A 1	21A 20A 19A 18A 17A 16A 15A 14A 13A 12A 11A 30A 29A 28A 27A 26A 25A 24A 23A 22A						17 18 19 20 21	22 23 24 25	26 27 28	
	41A 40A 3	41A 40A 39A 38A 37A 36A 35A 34A 33A 32A 31A 50A 49A 48A 47A 46A 45A 44A 43A 42A						Terminal No.	Color of	Signal Name	
	61A 60A 5	61A 60A 59A 58A 57A 56A 55A 54A 53A 52A 51A						2	>	1	
	70A 6	70A 69A 68A 67A 66A 65A 64A 63A 62A						9	>	1	
	81A 80A 7	81A 80A 79A 78A 77A 76A 75A 74A 73A 72A 71A						7	æ	1	
	90A8	89A 88A 87A 86A 85A 84A 83A 82A						8	В	ı	
								6	SHIELD	1	
		100 000 000 070 000						59	SB	ı	
		400 U.S. U.S. U.S. U.S. U.S. U.S. U.S. U.						30	re	1	
1			7								
							L				
Connector No.	Vo. B110	Connector Name FRONT SEAT BH		Terminal No.	Color of Wire	Signal Name		Terminal No.	Color of Wire	Signal Name	
Connector Color WHITE	Solor WH	ITE ITE		9	В	1		16	SHIELD	1	
				7	٦	1		17	SHIELD	-	
堰				8	g	1		18	В	1	
\ \frac{1}{2}	12 11 10 9	8 7 6 5 4 3 2		6	В	ı		19	g	1	
	24 23 22 21	21 20 19 18 17 16 15 14 13		10	*	ı		20	ж	ı	
				F	SHIELD	1		21	ŋ	ı	
Terminal No.	Color of	Signal Name		12	^	1		22	В	1	
•	) 			13	В	1		23	Μ	-	
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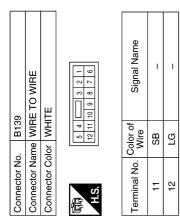
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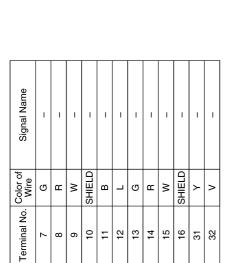
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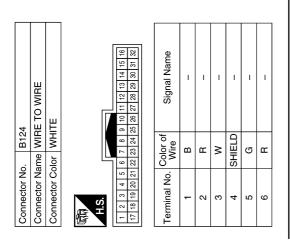
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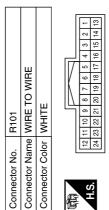
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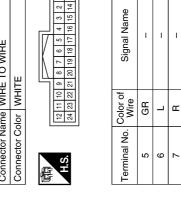
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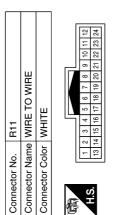


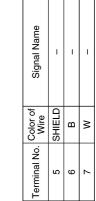


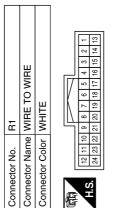


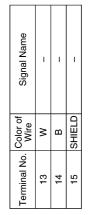












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Connector No.	o. D12	
Connector Na	ame FRC	Connector Name   FRONT DOOR SPEAKER LH
Connector Color WHITE	olor WH	TE TE
H.S.		
Terminal No. Color of Wire	Color of Wire	Signal Name
-	В	-
2	Α	1

	IE TO WIRE	ПЕ	■ 8 0 10 10 10 10 10 10 10 10 10 10 10 10 1	Signal Name	ı	ı
. D2	me WIF	lor WH	5 6 7	Color of Wire	ŋ	8
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	品.S.	Terminal No. Color of Wire	7	80

	6	ROPHONE	ІТЕ	3 2 1	Signal Name	-	_	-
Ī	. R109	me MIC	lor WH	4	Color of Wire	æ	GR	_
	Connector No.	Connector Name MICROPHONE	Connector Color WHITE	用.S.	Terminal No.	1	3	4

Connector No.	). D201	1
Connector Name WIRE TO WIRE	ame WIF	IE TO WIRE
Connector Color WHITE	olor WH	TE TE
图 H.S.	2 7	9 0 10 11 12
Terminal No. Wire	Color of Wire	Signal Name
11	>	ı
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2	Connector Name FRONT DOOR SPEAKER RH	ITE	2 1	Signal Name	I	_
.   D112	me FR0	lor WH		Color of Wire	g	Μ
Connector No.	Connector Na	Connector Color WHITE	南 H.S.	Terminal No.	-	2

Connector No.	D102
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE
H.S.	5 6 7 8 9 10
_	7

ı	8 L D D D D D D D D D D D D D D D D D D	Signal N	I	-
	- rv	Color of Wire	В	M
	雨 H.S.	Terminal No.	6	10

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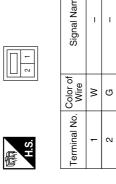
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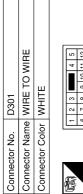
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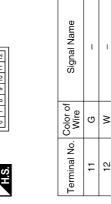
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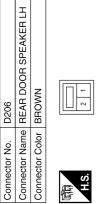
Connector No.	D306
Connector Name	Connector Name REAR DOOR SPEAKER RH
Connector Color BROWN	BROWN

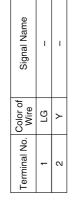


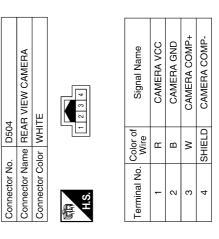


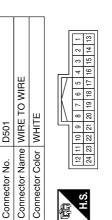












Signal Name	– (WITH BASE AUDIO SYSTEM)	_	– (WITH BASE AUDIO SYSTEM)	_
Color of Wire	В	В	Μ	SHIELD
Terminal No. Color of Wire	13	14	15	16

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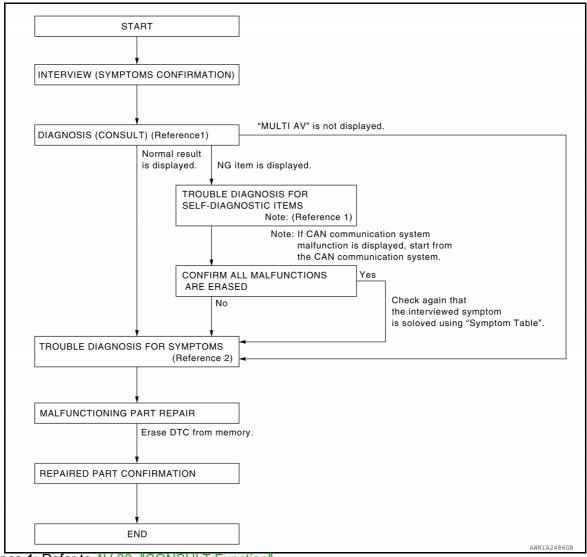
[BASE AUDIO] < BASIC INSPECTION >

# **BASIC INSPECTION**

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow INFOID:0000000008282661

#### **OVERALL SEQUENCE**



Reference 1: Refer to AV-30, "CONSULT Function". Reference 2: Refer to AV-126, "Symptom Table".

#### **DETAILED FLOW**

### CHECK SYMPTOM

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.

#### >> GO TO 2

# 2.self-diagnosis (consult)

- Connect CONSULT and perform "SELF-DIAGNOSIS" for "MULTI AV". NOTE:
  - Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed.
- Check if any DTC No. is displayed in the self-diagnosis results.

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#### DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION > [BASE AUDIO]

#### Is any DTC No. displayed?

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

# ${f 3.}$ CHECK SELF-DIAGNOSIS RESULTS (CONSULT)

- 1. Check the DTC No. indicated in the self-diagnosis results.
- 2. Perform the relevant diagnosis referring to the DTC No. list. Refer to AV-39, "DTC Index".

#### NOTE

Start with the diagnosis for the CAN communication system if "CAN COMM CIRCUIT [U1000] or CONTROL UNIT (CAN) [U1010]" is displayed.

>> GO TO 5

# 4. PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to <u>AV-126, "Symptom Table"</u>.

>> GO TO 5

# 5. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

#### NOTE:

Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC No. has been indicated in the self-diagnosis results.

>> GO TO 6

### 6. CHECK AFTER REPAIR

- 1. Perform self-diagnosis for "MULTI AV" with CONSULT after repairing or replacing the malfunctioning parts.
- 2. Check if any DTC No. is displayed in the self-diagnosis results.

#### Is any DTC No. displayed?

YES >> GO TO 3 NO >> GO TO 7

### 7. FINAL CHECK

Perform the operation check to confirm that the malfunction symptom is solved or that any other symptoms are present.

#### Are any symptoms present?

YES >> GO TO 4

NO >> Inspection End.

INSPECTION AND ADJUSTMENT [BASE AUDIO] < BASIC INSPECTION > INSPECTION AND ADJUSTMENT Α ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT: Description INFOID:0000000008282662 BEFORE REPLACEMENT When replacing AV control unit, save or print current vehicle specification with CONSULT configuration before replacement. NOTE: If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing AV control unit. AFTER REPLACEMENT **CAUTION:** E When replacing AV control unit, you must perform "After Replace ECU" with CONSULT. • Complete the procedure of "After Replace ECU" in order. • If you set incorrect "After Replace ECU", incidents might occur. • Configuration is different for each vehicle model. Confirm configuration of each vehicle model. ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT: Work Procedure 1. SAVING VEHICLE SPECIFICATION (P)-CONSULT Н Enter "Re/Programming, Configuration" and perform "Before Replace ECU" to save or print current vehicle specification. NOTE: If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing AV control unit. >> GO TO 2. 2.REPLACE AV CONTROL UNIT Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

>> GO TO 3.

### 3. WRITING VEHICLE SPECIFICATION

(P)CONSULT

1. Enter "Re/Programming, Configuration".

- 2. If "Before Replace ECU" operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press "Confirm" to write vehicle specification. Refer to <a href="AV-76">AV-76</a>, "CONFIGURATION (AV CONTROL UNIT): Work Procedure".
- 3. If "Before Replace ECU" operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to AV-76, "CONFIGURATION (AV CONTROL UNIT): Work Procedure".

>> GO TO 4.

### 4. OPERATION CHECK

Check that the operation of the AV control unit and camera images (fixed guide lines and predictive course lines) are normal.

>> Work End.

# CONFIGURATION (AV CONTROL UNIT)

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#### INSPECTION AND ADJUSTMENT

< BASIC INSPECTION > [BASE AUDIO]

### CONFIGURATION (AV CONTROL UNIT): Description

INFOID:0000000008282664

Vehicle specification needs to be written with CONSULT because it is not written after replacing AV control unit.

Configuration has three functions as follows:

Function	Description
"Before Replace ECU"	<ul> <li>Reads the vehicle configuration of current AV control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

#### **CAUTION:**

- When replacing AV control unit, you must perform "Select Saved Data List" or "After Replace ECU" with CONSULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new AV control unit.

# CONFIGURATION (AV CONTROL UNIT): Work Procedure

INFOID:0000000008282665

# 1. WRITING MODE SELECTION

#### (P)CONSULT

Select "Reprogramming, Configuration" of AV control unit.

When writing saved data>>GO TO 2.

When writing manually>>GO TO 3.

# 2.PERFORM "SAVED DATA LIST"

#### (P)CONSULT

Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm".

>> Work End.

# ${f 3.}$ PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"

#### (P)CONSULT

- 1. Select "After Replace ECU" or "Manual Configuration".
- 2. Identify the correct model and configuration list. Refer to <u>AV-77, "CONFIGURATION (AV CONTROL UNIT)</u>: Configuration List".
- 3. Confirm and/or change setting value for each item.

#### **CAUTION:**

Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.

4. Select "Next".

#### **CAUTION:**

Make sure to select "Next", confirm each setting value and press "OK" even if the indicated configuration of brand new AV control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.

5. When "Completed", select "End".

>> GO TO 4.

### 4. OPERATION CHECK

Confirm that each function controlled by AV control unit operates normally.

### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION > [BASE AUDIO]

>> Work End.

# CONFIGURATION (AV CONTROL UNIT): Configuration List

INFOID:0000000008282666

#### CAUTION:

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

MANUAL SETTING ITEM			
Items Setting value			
CAMERA SYSTEM	NONE/AVM ⇔ REAR CAMERA		
SOUND SYSTEM	BASE ⇔ BOSE		

⇔: Items which confirm vehicle specifications

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#### **U1000 CAN COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# **DTC/CIRCUIT DIAGNOSIS**

# U1000 CAN COMM CIRCUIT

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause	
CAN COMM CIRCUIT [U1000]	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.	

# Diagnosis Procedure

INFOID:0000000008227268

# 1. PERFORM SELF DIAGNOSTIC RESULT

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

#### Is CAN COMM CIRCUIT displayed?

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

NO >> Refer to GI-53, "Intermittent Incident".

# **U1010 CONTROL UNIT (CAN)**

### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# U1010 CONTROL UNIT (CAN)

DTC Logic

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.  Refer to AV-128, "Removal and Installation - AV Control Unit".

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### **U1200 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# **U1200 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
CONT UNIT [U1200]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.  Refer to AV-128, "Removal and Installation - AV Control Unit".

### **U1216 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# **U1216 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
CAN CONT [U1216]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.  Refer to AV-128, "Removal and Installation - AV Control Unit".

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#### **U1232 STEERING ANGLE SENSOR**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# **U1232 STEERING ANGLE SENSOR**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.  Refer to BRC-59, "Work Procedure".

# **Diagnosis Procedure**

1. ADJUST THE PREDICTIVE COURSE LINE CENTER POSITION OF THE STEERING ANGLE SENSOR When U1232 is detected, adjust the predictive course line center position of the steering angle sensor.

>> Refer to BRC-59, "Work Procedure".

#### **U1243 DISPLAY UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

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### U1243 DISPLAY UNIT

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT DISP CONN [U1243]	When any of the following is detected:  display unit power supply or ground circuit malfunction.  serial communication circuit malfunction between display unit and AV control unit.	Display unit power supply and ground circuits.     Serial communication circuits between display unit and AV control unit.

### Diagnosis Procedure

INFOID:0000000008227275

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuits. Refer to <u>AV-89, "DISPLAY UNIT : Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMMUNICATION CIRCUIT CONTINUITY

Turn ignition switch OFF.

- 2. Disconnect display unit connector and AV control unit connector M45.
- 3. Check continuity between display unit connector M93 terminals 11, 22 and AV control unit connector M45 terminals 73, 61.

Displ	Display unit AV co		ntrol unit	Continuity
Connector	Terminals	Connector	Terminals	Continuity
M93	11	M45	73	Yes
Maa	M45 22		61	165

4. Check continuity between display unit connector M93 terminals 11, 22 and ground.

Display unit		Ground	Continuity
Connector	Terminals	Ground	Continuity
M93	11		No
IVI93	12	_	INO

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# $3. \texttt{CHECK COMMUNICATION SIGNAL (DISP} {\rightarrow} \texttt{CONT)}$

- 1. Connect display unit connector and AV control unit connector M45.
- 2. Turn ignition switch ON.
- 3. Check signal between display unit connector M93 terminal 11 and ground.

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Displa	ay unit	Ground		
(	(+)		Condition	Reference value
Connector	Terminal	(–)		
M93	11	_	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. Refer to AV-128, "Removal and Installation - AV Control Unit".

 $\textbf{4.} \textbf{CHECK COMMUNICATION SIGNAL (CONT} \rightarrow \textbf{DISP})$ 

Check signal between display unit connector M93 terminal 22 and ground.

Displ	ay unit	Ground		
(	(+)		Condition	Reference value
Connector	Terminal	(–)		
M93	22	_	When adjusting display brightness.	(V) 6 4 2 0 • • 1ms

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Replace display unit. Refer to AV-131, "Removal and Installation".

#### **U1255 SATELLITE RADIO TUNER**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

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### **U1255 SATELLITE RADIO TUNER**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
SAT CONN [U1255]	When any of the following is detected:     satellite radio tuner power supply or ground circuit malfunction.     communication circuit malfunction between AV control unit and satellite radio tuner.     request signal circuit malfunction 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>

# Diagnosis Procedure

INFOID:0000000008227277

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

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

Check satellite radio tuner power supply and ground circuit. Refer to <u>AV-91, "SATELLITE RADIO TUNER : Diagnosis Procedure"</u>.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK COMMUNICATION CIRCUIT AND REQUEST SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect AV control unit connector M51 and satellite radio tuner connector B2.
- Check continuity between AV control unit connector M51 terminals 100, 101, 102 and satellite radio tuner connector B2 terminals 28, 29, 30.

AV cor	ntrol unit	Satellite ı	radio tuner	Continuity
Connector	Terminals	Connector	Terminals	Continuity
	100		28	
M51	101	B2	29	Yes
	102		30	

4. Check continuity between AV control unit connector M51 terminals 100, 101, 102 and ground.

AV control unit			Continuity
Connector	Terminals		Continuity
	100	Ground	
M51	101		No
	102		

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.CHECK AV CONTROL UNIT VOLTAGE

- Connect AV control unit connector M51.
- 2. Turn ignition switch ON.
- 3. Check signal between AV control unit connector M51 terminals 100, 101 and ground.

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#### **U1255 SATELLITE RADIO TUNER**

#### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

AV co	AV control unit		
(+)		( )	Voltage (Approx.)
Connector	Terminals	(-)	(
M51	100		7.01/
I GIVI	101	_	7.0 V

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

# 4. CHECK SATELLITE RADIO TUNER VOLTAGE

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M51.
- 3. Connect satellite radio tuner connector B2.
- 4. Turn ignition switch ON.
- 5. Check signal between satellite radio tuner connector B2 terminal 30 and ground.

Satellite radio tuner		Ground	
(+)		( )	Voltage (Approx.)
Connector	Terminals	(-)	(
B2	30	_	7.0 V

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Replace satellite radio tuner. Refer to <u>AV-140, "Removal and Installation"</u>.

#### **U1300 AV COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

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# U1300 AV COMM CIRCUIT

Description INFOID:000000008227278

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

#### SELF-DIAGNOSIS RESULTS DISPLAY ITEM

CONSULT Display	CONSULT Display DTC Detection Condition	
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When any of the following is detected:  A/C and AV switch assembly power supply or ground circuit malfunction.  AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	<ul> <li>A/C and AV switch assembly power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and A/C and AV switch assembly.</li> </ul>
AV COMM CIRCUIT [U1300]     HAND FREE CONN [U1256]	When any of the following is detected:  Bluetooth® control unit power supply or ground circuit malfunction.  AV communication circuit malfunction between AV control unit and Bluetooth® control unit.	Bluetooth® control unit power supply and ground circuits. AV communication circuits between AV control unit and Bluetooth® control unit.
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]     HAND FREE CONN [U1256]	AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	AV communication circuits between AV control unit and A/C and AV switch assembly.

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### **U1310 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# **U1310 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace the AV control unit if the malfunction occurs constantly.  Refer to AV-128, "Removal and Installation - AV Control Unit".

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000008227280

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

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### 1.CHECK FUSE

Check that the following fuses are not blown.

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Terminal No.	Signal name	Fuse No.
29	Ignition signal	29 (5A)
39	ACC power supply	65 (10A)
51	Battery power supply	15 (15A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

Turn ignition switch OFF.

2. Disconnect AV control unit connectors M42 and M44.

3. Check voltage between AV control unit connectors and ground.

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AV cor	ontrol unit Ground		Condition	Voltage	
Connector	Terminal	Cround	Condition	(Approx.)	
M42	29		Ignition switch: ON	_	
M44	39	_	Ignition switch: ACC	Battery voltage	
IVI <del>44</del>	51		Ignition switch: OFF		

#### <u>Is the inspection result normal?</u>

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK GROUND CIRCUIT

Turn ignition switch OFF.

Check continuity between AV control unit connector M44 terminal 52 and ground.

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AV control unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M44	52	_	Yes	

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

#### **DISPLAY UNIT**

# DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000008227281

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK INVERTER VCC AND SIGNAL VCC (POWER SUPPLY) CIRCUIT 1

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#### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

Check voltage between display unit harness connector M93 terminals 2, 3 and ground.

Display unit		Ground	Condition	Voltage
Connector	Terminal	Ground	Condition	(Approx.)
M93	2	_	Ignition switch: ACC	9.0 V
MISO	3	_	ignition switch. Acc	9.0 V

#### Is the inspection result normal?

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

# 2.CHECK INVERTER VCC AND SIGNAL VCC (POWER SUPPLY) CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M45 and display unit connector.
- 3. Check continuity between AV control unit connector M45 terminals 64, 76 and display unit connector M93 terminals 3, 2.

AV cor	ntrol unit	Display unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M45	64	M93	3	Yes
IVI43	76	IVISS	2	165

4. Check continuity between AV control unit connector M45 terminals 64, 76 and ground.

AV control unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M45	64		No	
IVI45	76	_	NO	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.CHECK INVERTER VCC AND SIGNAL VCC (POWER SUPPLY) CIRCUIT 2

- 1. Connect the AV control unit connector M45.
- 2. Check voltage between AV control unit connector M45 terminals 64, 76 and ground.

AV control unit		Ground		.,,,,,
	(+)		Condition	Voltage (Approx.)
Connector	Terminal	(-)		( FF. 5)
M45	64		Ignition switch: ACC	9.0 V
IVIAO	76		ignition switch. Acc	9.0 V

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

### 4. CHECK INVERTER GROUND AND SIGNAL GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M45 and display unit connector.
- 3. Check continuity between AV control unit connector M45 terminals 63, 75 and display unit connector M93 terminals 14, 13.

#### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

AV cor	ntrol unit	Display unit		Display unit		Continuity	
Connector	Terminal	Connector	Terminal	Continuity			
M45	63	M93	14	Yes	_		
IVITO	75	IVISS	13	165			

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

### **5.**CHECK DISPLAY UNIT GROUND CIRCUIT

Check continuity between display unit connector M93 terminal 1 and ground.

Display unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M93	1	_	Yes	

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

#### SATELLITE RADIO TUNER

### SATELLITE RADIO TUNER : Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
32	Battery power supply	15 (15A)
36	ACC power supply	65 (10A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner connector B2.
- Check voltage between satellite radio tuner connector B2 terminal 32, 36 and ground.

Satellite radio tuner		Ground	Condition	Voltage
Connector	Terminal	Ground	Condition	(Approx.)
B2	32		Ignition switch: OFF	Battery voltage
DZ	36	_	Ignition switch: ACC	Dattery voitage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Check continuity between satellite radio tuner connector B2 terminal 35 and ground.

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INFOID:0000000008227282

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#### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

Satellite radio tuner		Ground	Continuity	
Connector	Terminal	Orodria		
B2	35	_	Yes	

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

#### BLUETOOTH® CONTROL UNIT

# BLUETOOTH® CONTROL UNIT: Diagnosis Procedure

INFOID:0000000008233642

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
1	Battery power supply	15 (15A)
2	ACC power supply	65 (10A)
3	Ignition signal	30 (10A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth® control unit connector B3.
- 3. Check voltage between Bluetooth® control unit connector B3 and ground.

Bluetooth <sup>®</sup> control unit		Ground	Condition	Voltage
Connector	Terminal	Cround	Condition	(Approx.)
	1		Ignition switch: OFF	
В3	2	<u> </u>	Ignition switch: ACC	Battery voltage
	3		Ignition switch: ON	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check continuity between Bluetooth® control unit connector B3 and ground.

Bluetooth <sup>®</sup> control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
	4		Yes
В3	23	_	
	27		

#### Is the inspection result normal?

YES >> Inspection End.

#### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

NO >> Repair or replace harness or connectors.

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY: Diagnosis Procedure

INFOID:0000000008282585

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Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1.CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
36	ACC power supply	65 (10A)

#### Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

Turn ignition switch OFF.

2. Disconnect A/C and AV switch assembly connector.

Check voltage between A/C and AV switch assembly connector M98 terminal 3 and ground.

A/C and AV s	witch assembly	Ground	Condition	Voltage	
Connector	Terminal	Ground	Condition	(Approx.)	
M98	3	_	Ignition switch: ACC	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.check control unit ground circuit

Turn ignition switch OFF.

Disconnect AV control unit connector M42.

Check continuity between A/C and AV switch assembly connector M98 terminal 9 and AV control unit connector M42 terminal 10.

A/C and AV s	witch assembly	AV cor	ntrol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M98	9	M42	10	Yes

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

#### 4. CHECK SWITCH GROUND CIRCUIT

Check continuity between A/C and AV switch assembly connector M98 terminal 1 and ground.

A/C and AV switch assembly		Ground	Continuity
Connector	Terminal	Ground	Continuity
M98	1	_	Yes

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

**AV-93** Revision: March 2012 2013 Infiniti JX ΑV

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[BASE AUDIO]

# FRONT DOOR SPEAKER

### Diagnosis Procedure

INFOID:0000000008282587

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CONNECTOR CHECK

Check the AV control unit and speaker connectors for the following:

- · Proper connection
- Damage
- · Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

# 2.CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

- Disconnect AV control unit connector M44 and suspect front door speaker connector.
- 2. Check continuity between AV control unit connector M44 and suspect front door speaker connector.

AV cor	ntrol unit	Front door speaker		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	34	D12 (LH)	D42 (LLI)	D42 (LU)	
M44	35		2	Van	
IVI44	43	D440 (DU)	1	Yes	
	44	D112 (RH)	2		

3. Check continuity between AV control unit connector M44 and ground.

AV co	AV control unit		Continuity
Connector	Terminal	- Ground	Continuity
M44	34		No
	35		
	43	_	
	44	-	

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

# 3. CHECK FRONT DOOR SPEAKER SIGNAL

- 1. Connect AV control unit connector M44 and suspect front door speaker connector.
- 2. Turn ignition switch to ACC.
- Push AV control unit POWER switch.
- Check signal between AV control unit connector M44 and ground.

AV control unit connector M44			
(+)	(-)	Condition	Reference value
Terminal	Terminal		

### FRONT DOOR SPEAKER

#### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

34	35		0.0
43	44	Audio signal output	(V) 1 0 -1 + 2ms SKIB3609E

### Is the inspection result normal?

YES

>> Replace front door speaker. Refer to <u>AV-132, "Removal and Installation"</u>.
>> Replace AV control unit. Refer to <u>AV-128, "Removal and Installation - AV Control Unit"</u>. NO

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#### **INSTRUMENT PANEL SPEAKER/TWEETER**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

### **INSTRUMENT PANEL SPEAKER/TWEETER**

# Diagnosis Procedure

INFOID:0000000008282589

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the AV control unit and speaker connectors for the following:

- · Proper connection
- Damage
- · Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

# 2.CHECK INSTRUMENT PANEL TWEETER SIGNAL CIRCUIT CONTINUITY

- 1. Disconnect AV control unit connector M44 and suspect instrument panel tweeter connector.
- 2. Check continuity between AV control unit connector M44 and suspect instrument panel tweeter connector.

AV cor	ntrol unit	Instrument panel tweeter		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	34	M62 (LH)	Meg (LLI)	1	
M44	35		2	Yes	
	43	MZQ (DLI)	1	res	
	44	M73 (RH)	2		

3. Check continuity between AV control unit connector M44 and ground.

AV co	AV control unit		Continuity
Connector	Terminal	- Ground	Continuity
	34	_	No
M44	35		
	43		
	44		

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

# 3. CHECK INSTRUMENT PANEL TWEETER SIGNAL

- 1. Connect AV control unit connector M44 and suspect instrument panel tweeter connector.
- 2. Turn ignition switch to ACC.
- Push AV control unit POWER switch.
- Check signal between AV control unit connector M44 and ground.

AV control unit connector M44			
(+)	(-)	Condition	Reference value
Terminal	Terminal		

#### **INSTRUMENT PANEL SPEAKER/TWEETER**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

34	35		4.0
43	44	Audio signal output	(V) 1 0 -1 ** 2ms SKIB3609E

#### Is the inspection result normal?

YES

>> Replace instrument panel tweeter. Refer to <u>AV-133, "Removal and Installation"</u>.
>> Replace AV control unit. Refer to <u>AV-128, "Removal and Installation - AV Control Unit"</u>. NO

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### REAR DOOR SPEAKER

### Diagnosis Procedure

INFOID:0000000008282591

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the AV control unit and speaker connectors for the following:

- · Proper connection
- Damage
- · Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

# 2.CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

- Disconnect AV control unit connector M44 and suspect rear door speaker connector.
- 2. Check continuity between AV control unit connector M44 and suspect rear door speaker connector.

AV cor	ntrol unit	Rear door speaker		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	36	D206 (LH)	D000 (LLI)	1	
M44	37		2	Yes	
	45	D000 (DLI)	1	res	
	46	D306 (RH)	2		

3. Check continuity between AV control unit connector M44 and ground.

AV control unit		Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
	36			
M44	37		No	
	45	_		
	46			

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

# 3.CHECK REAR DOOR SPEAKER SIGNAL

- 1. Connect AV control unit connector M44 and suspect rear door speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push AV control unit POWER switch.
- Check signal between AV control unit connector M44 and ground.

AV control unit connector M44			
(+)	(-)	Condition	Reference value
Terminal	Terminal		

### **REAR DOOR SPEAKER**

#### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

36	37		0.0
45	46	Audio signal output	(V) 1 0 -1 + 2ms SKIB3609E

### Is the inspection result normal?

YES >> Replace rear door speaker. Refer to AV-134, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

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### FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

### FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

### Diagnosis Procedure

INFOID:0000000008302650

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK AUX SOUND SIGNAL CIRCUIT CONTINUITY 1

- Turn ignition switch OFF.
- Disconnect front auxiliary input jacks connector M205 and front seat RH connector B110.
- 3. Check continuity between front auxiliary input jacks connector M205 terminals 1, 3 and front seat RH connector B110 terminals 4, 5.

Front auxilia	ry input jacks	Front s	seat RH	Continuity
Connector	Terminal	Connector Terminal		Continuity
M205	1	B110	4	Yes
MZOS	3	BIIO	5	165

4. Check continuity between front auxiliary input jacks connector M205 terminals 1, 3 and ground.

Front auxiliary input jacks		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M205	1		No	
WZUS	3	<u> </u>	INU	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK AUX SOUND SIGNAL CIRCUIT CONTINUITY 2

- Disconnect AV control unit connector M42.
- 2. Check continuity between AV control unit connector M42 terminals 20, 21 and front seat RH connector B110 terminals 14, 15.

AV cor	ntrol unit	Front seat RH		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M42	20	B110	14	Yes
IVI4Z	21	5110	15	165

3. Check continuity between AV control unit connector M42 terminals 20, 21 and ground.

AV control unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M42	20		No	
10142	21	_	No	

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.CHECK AUX SOUND SIGNAL GROUND CIRCUIT CONTINUITY 1

Check continuity between front auxiliary input jacks connector M205 terminal 2 and front seat RH connector B110 terminal 3.

#### FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

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Front auxilia	ry input jacks	Front	seat RH	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M205	2	B110	3	Yes

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

# 4. CHECK AUX SOUND SIGNAL GROUND CIRCUIT CONTINUITY 2

Check continuity between AV control unit connector M42 terminal 22 and front seat RH connector B110 terminal 13.

AV cor	AV control unit		Front seat RH	
Connector	Terminal	Connector	Terminal	Continuity
M42	22	B110	13	Yes

#### Is inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

# 5. CHECK AUX SOUND SIGNAL

- 1. Connect AV control unit connector M42 and front seat RH connector B110.
- 2. Turn ignition switch to ACC.
- 3. Select AUX mode.
- 4. Check signals between AV control unit connector M42 and ground.

AV control unit connector M42				
(+)	(-)	Condition	Reference value	
Terminal	Terminal			
20	22			
21	22	AUX mode selected	(V) 1 0 -1 + 2ms SKIB3609E	

#### Is the inspection result normal?

YES >> Replace front auxiliary input jacks. Refer to AV-137, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

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#### SATELLITE AUDIO SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

### SATELLITE AUDIO SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008302652

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK SATELLITE SOUND SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect AV control unit connector M51 and satellite radio tuner connector B2.
- 3. Check continuity between AV control unit connector M51 and satellite radio tuner connector B2.

AV cor	ntrol unit	Satellite radio tuner		Continuity
Connector	Terminals	Connector	Terminals	Continuity
M51	94	B2	22	Yes
M51	96	DZ	24	165

4. Check continuity between AV control unit connector M51 and ground.

AV control unit			Continuity
Connector	Terminals	Ground	Continuity
M51	94	Ground	No
I CIVI	96		INO

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK SATELLITE SOUND SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M51 and satellite radio tuner connector B2.

AV control unit		Satellite radio tuner		Continuity
Connector	Terminals	Connector	Terminals	Continuity
M51	93 M51		21	Yes
95	95	B2	23	165

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

### 3. CHECK SATELLITE SOUND SIGNAL

- 1. Connect AV control unit connector M51 and satellite radio tuner connector B2.
- 2. Turn ignition switch to ACC.
- Select satellite radio mode.
- 4. Check signals between AV control unit connector M51 and ground.

AV control unit connector M51			
(+)	(–)	Condition	Reference value
Terminal	Terminal		

### **SATELLITE AUDIO SIGNAL CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

94	93		00
96	95	Satellite radio mode selected	(V) 1 0 -1 ** 2ms SKIB3609E

### Is the inspection result normal?

YES >> Replace satellite radio tuner. Refer to AV-140, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

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#### **BLUETOOTH® VOICE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

### BLUETOOTH® VOICE SIGNAL CIRCUIT

### Diagnosis Procedure

INFOID:0000000008302654

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK BLUETOOTH® VOICE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M42 and Bluetooth® control unit connector B3.
- 3. Check continuity between AV control unit connector M42 terminal 5 and Bluetooth® control unit connector B3 terminal 9.

AV cor	ntrol unit	Bluetooth <sup>®</sup>	control unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M42	5	B3	9	Yes

4. Check continuity between AV control unit connector M42 terminal 5 and ground.

AV control unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M42	5	_	No	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK BLUETOOTH $^{\scriptscriptstyle (\!0\!)}$ VOICE SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M42 terminal 4 and Bluetooth® control unit connector B3 terminal 10.

AV cor	ntrol unit	Bluetooth <sup>®</sup>	control unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M42	4	B3	10	Yes

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

#### 3.CHECK BLUETOOTH $^{ ext{@}}$ VOICE SIGNAL

- Connect AV control unit connector M42 and Bluetooth® control unit connector B3.
- 2. Turn ignition switch to ACC.
- 3. Press r switch.
- 4. Check signals between AV control unit connector M42 and ground.

### **BLUETOOTH® VOICE SIGNAL CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

AV control unit connector M42			
(+)	(-)	Condition	Reference value
Terminal	Terminal		
5	4	During voice guide output with switch pressed.	(V) 1 0 -1 + 2ms

#### Is the inspection result normal?

>> Replace Bluetooth<sup>®</sup> control unit. Refer to <u>AV-138, "Removal and Installation"</u>.
>> Replace AV control unit. Refer to <u>AV-128, "Removal and Installation - AV Control Unit"</u>. YES

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### **RGB (R: RED) SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# RGB (R: RED) SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008227285

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK RGB (R: RED) SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect AV control unit connector M45 and display unit connector.
- Check continuity between AV control unit connector M45 terminal 57 and display unit connector M93 terminal 17.

AV cor	ntrol unit	Display unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M45	57	M93	17	Yes

4. Check continuity between AV control unit connector M45 terminal 57 and ground.

AV cor	ntrol unit		Continuity
Connector	Terminal	Ground	Continuity
M45	57		No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK RGB (R: RED) SIGNAL

- Connect AV control unit connector M45 and display unit connector.
- Turn ignition switch ON.
- 3. Check signal between display unit connector M93 terminal 17 and ground.

Displa	ay unit	Ground		
(	+)	( )	Condition	Reference value
Connector	Terminal	(–)		
M93	17	_	"Color Spectrum Bar" on DISPLAY DIAG- NOSIS screen.	(V) 0. 4 0 −0. 4  -0. 4  SKIB2238J

#### Is inspection result normal?

YES >> Replace display unit. Refer to AV-131, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

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

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# RGB (G: GREEN) SIGNAL CIRCUIT

# **Diagnosis Procedure**

INFOID:0000000008227287

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M45 and display unit connector.
- 3. Check continuity between AV control unit connector M45 terminal 56 and display unit connector M93 terminal 6.

AV cor	rol unit Disp		ay unit	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M45	56	M93	6	Yes	

4. Check continuity between AV control unit connector M45 terminal 56 and ground.

AV control unit			Continuity	
Connector	Connector Terminal		Continuity	
M45	56		No	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK RGB (G: GREEN) SIGNAL

- 1. Connect AV control unit connector M45 and display unit connector.
- 2. Turn ignition switch ON.
- Check signal between display unit connector M93 terminal 6 and ground.

Displ	Display unit			
(	(+)		Condition	Reference value
Connector	Terminal	- (-)		
M93	6	_	"Color Spectrum Bar" on DISPLAY DIAG- NOSIS screen.	(V) 0.4 0 -0.4 • • 40μs

#### Is inspection result normal?

YES >> Replace display unit. Refer to AV-131, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

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### **RGB (B: BLUE) SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# RGB (B: BLUE) SIGNAL CIRCUIT

### Diagnosis Procedure

INFOID:0000000008227289

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect AV control unit connector M45 and display unit connector.
- Check continuity between AV control unit connector M45 terminal 55 and display unit connector M93 terminal 18.

AV cor	AV control unit		ay unit	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M45	55	M93	18	Yes	

4. Check continuity between AV control unit connector M45 terminal 55 and ground.

AV control unit			Continuity	
Connector	Terminal	Ground	Continuity	
M45	55		No	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK RGB (B: BLUE) SIGNAL

- 1. Connect AV control unit connector M45 and display unit connector.
- 2. Turn ignition switch ON.
- Check signal between display unit connector M93 terminal 18 and ground.

Display unit		Ground		
(+)		( )	Condition	Reference value
Connector	Terminal	(-)		
M93	18	_	"Color Spectrum Bar" on DISPLAY DIAG- NOSIS screen.	(V) 0. 4  0

#### Is inspection result normal?

YES >> Replace display unit. Refer to AV-131, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

### **RGB SYNCHRONIZING SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

## RGB SYNCHRONIZING SIGNAL CIRCUIT

# Diagnosis Procedure

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Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK RGB SYNCHRONIZING SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M45 and display unit connector.
- 3. Check continuity between AV control unit connector M45 terminal 58 and display unit connector M93 terminal 19.

AV cor	AV control unit Display unit		Display unit		
Connector	Terminal	Connector Terminal		Continuity	
M45	58	M93	19	Yes	

4. Check continuity between AV control unit connector M45 terminal 58 and ground.

AV control unit			Continuity
Connector	Connector Terminal		Continuity
M45	58		No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK RGB SYNCHRONIZING SIGNAL

- 1. Connect AV control unit connector M45 and display unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between display unit connector M93 terminal 19 and ground.

Displ	Display unit		
	(+)		Reference value
Connector	Terminal	(-)	
M93	19	_	(V) 4 0 → 20 µs SKIB3603E

#### Is inspection result normal?

Revision: March 2012

YES >> Replace display unit. Refer to <u>AV-131, "Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

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

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# RGB AREA (YS) SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008227293

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect AV control unit connector M45 and display unit connector.
- Check continuity between AV control unit connector M45 terminal 60 and display unit connector M93 terminal 9.

AV cor	ntrol unit	Display unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M45	60	M93	9	Yes

4. Check continuity between AV control unit connector M45 terminal 60 and ground.

AV control unit			Continuity
Connector	Terminal	Ground	Continuity
M45	60		No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK RGB AREA (YS) SIGNAL

- 1. Connect AV control unit connector M45 and display unit connector.
- Turn ignition switch ON.
- Check signal between display unit connector M93 terminal 9 and ground.

Displ	ay unit	Ground		
(	+)	( )	Condition	Reference value
Connector	Terminal	(-)		
			RGB image displayed.	5.0 V
M93	9	_	AUX image displayed.	(V) 6 4 2 0 ★ + 200 \(\mu\) s PKIB4948J

#### Is inspection result normal?

YES >> Replace display unit. Refer to AV-131, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

## HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008227295

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

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

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M45 and display unit connector.
- 3. Check continuity between AV control unit connector M45 terminal 62 and display unit connector M93 terminal 8.

AV cor	ntrol unit	Display unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M45	62	M93	8	Yes

4. Check continuity between AV control unit connector M45 terminal 62 and ground.

AV control unit			Continuity
Connector	Terminal	Ground	Continuity
M45	62		No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

- 1. Connect AV control unit connector M45 and display unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between display unit connector M93 terminal 8 and ground.

Displ	Display unit		
	(+)		Reference value
Connector	Terminal	(-)	
M93	8	_	(V) 4 0 → 20µs SKIB3601E

#### Is inspection result normal?

YES >> Replace AV control unit. Refer to <u>AV-128, "Removal and Installation - AV Control Unit"</u>.

NO >> Replace display unit. Refer to AV-131, "Removal and Installation".

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

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008227297

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect AV control unit connector M45 and display unit connector.
- 3. Check continuity between AV control unit connector M45 terminal 74 and display unit connector M93 terminal 20.

AV cor	ntrol unit	Display unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M45	74	M93	20	Yes

Check continuity between AV control unit connector M45 terminal 74 and ground.

AV control unit			Continuity
Connector	Terminal	Ground	Continuity
M45	74		No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# $2.\mathsf{CHECK}$ VERTICAL SYNCHRONIZING (VP) SIGNAL

- 1. Connect AV control unit connector M45 and display unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between display unit connector M93 terminal 20 and ground.

Display unit		Ground		
(+)		( )	Reference value	
Connector	Terminal	(-)		
M93	20	_	(V) 4 0 + 4ms SKIB3598E	

#### Is inspection result normal?

YES >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

NO >> Replace display unit. Refer to AV-131, "Removal and Installation".

## **COMPOSITE IMAGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

## COMPOSITE IMAGE SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008227299

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Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M45 and display unit connector.
- 3. Check continuity between AV control unit connector M45 terminal 53 and display unit connector M93 terminal 15.

AV cor	AV control unit		Display unit	
Connector	Terminal	Connector Terminal		Continuity
M45	53	M93	15	Yes

4. Check continuity between AV control unit connector M45 terminal 53 and ground.

AV cor	ntrol unit		Continuity	
Connector	Connector Terminal		Continuity	
M45	53		No	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK COMPOSITE IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M45 terminal 54 and display unit connector M93 terminal 4.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M45	54	M93	4	Yes

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK COMPOSITE IMAGE SIGNAL

- Connect AV control unit connector M45 and display unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between display unit connector M93 terminal 15 and ground.

AV cor	AV control unit (+)			
(			Condition	Reference value
Connector	Terminal	(-)		
M45	53	_	Camera image dis- played.	(V) 0.4 0 -0.4 → 40µs skib2251J

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## **COMPOSITE IMAGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

### Is inspection result normal?

>> Replace display unit. Refer to <u>AV-131, "Removal and Installation"</u>.
>> Replace AV control unit. Refer to <u>AV-128, "Removal and Installation - AV Control Unit"</u>. NO

### **AUX IMAGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

## AUX IMAGE SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008227301

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Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK AUX IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M46 and front auxiliary input jacks connector.
- 3. Check continuity between AV control unit connector M46 terminal 83 and front auxiliary input jacks connector M205 terminal 7.

AV cor	AV control unit		Front auxiliary input jacks		
Connector	Terminal	Connector Terminal		- Continuity	
M46	83	M205	7	Yes	

4. Check continuity between AV control unit connector M46 terminal 83 and ground.

AV cor	trol unit		Continuity
Connector	Terminal	Ground	Continuity
M46	83		No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK AUX IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M46 and front auxiliary input jacks connector.
- 3. Check continuity between AV control unit connector M46 terminal 91 and front auxiliary input jacks connector M205 terminal 8.

AV control unit		Front auxiliary input jacks		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M46	91	M205	8	Yes	

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK AUX IMAGE SIGNAL

- 1. Connect AV control unit connector M46 and front auxiliary input jacks connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front auxiliary input jacks connector M205 terminal 7 and ground.

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## **AUX IMAGE SIGNAL CIRCUIT**

[BASE AUDIO]

Front auxiliary input jacks (+)		Ground			
		( )	Condition	Reference value	
Connector	Terminal	(–)			
M205	7	_	AUX image displayed.	(V) 0.4 0 -0.4 → 40µs	

### Is inspection result normal?

>> Replace AV control unit. Refer to <u>AV-128, "Removal and Installation - AV Control Unit"</u>. >> Replace front auxiliary input jacks. Refer to <u>AV-137, "Removal and Installation"</u>. YES

NO

## **CAMERA IMAGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

## CAMERA IMAGE SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008227303

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Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK CAMERA POWER SUPPLY CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M46 and rear view camera connector.
- 3. Check continuity between AV control unit connector M46 terminal 87 and rear view camera connector D504 terminal 1.

AV cor	AV control unit		Rear view camera		
Connector	Terminal	Connector Terminal		Continuity	
M46	87	D504	1	Yes	

4. Check continuity between AV control unit connector M46 terminal 87 and ground.

AV cor	trol unit		Continuity
Connector	Terminal	Ground	Continuity
M46	87		No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK CAMERA POWER SUPPLY VOLTAGE

- 1. Connect AV control unit connector M46 and rear view camera connector.
- 2. Turn ignition switch ON.
- 3. Shift the selector lever to "R".
- 4. Check voltage between AV control unit connector M46 terminal 87 and ground.

AV control unit		Ground		Voltage (Approx.)
(+)		( )	Condition	
Connector	Terminal	(-)		, , ,
M46	87	_	Selector lever is in "R".	6.0 V

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

# 3.CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M46 and rear view camera connector.
- Check continuity between AV control unit connector M46 terminal 82 and rear view camera connector D504 terminal 3.

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector Terminal		Continuity
M46	82	D504	3	Yes

4. Check continuity between AV control unit connector M46 terminal 82 and ground.

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### **CAMERA IMAGE SIGNAL CIRCUIT**

[BASE AUDIO]

AV control unit			Continuity
Connector Terminal		Ground	Continuity
M46	82		No

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

# 4. CHECK CAMERA GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M46 terminal 88 and rear view camera connector D504 terminal 2.

AV cor	AV control unit		Rear view camera	
Connector	Terminal	Connector	Terminal	Continuity
M46	88	D504	2	Yes

### Is inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

# 5. CHECK CAMERA IMAGE SIGNAL

- 1. Connect AV control unit connector M46 and rear view camera connector.
- 2. Turn ignition switch ON.
- Shift the selector lever to "R".
- 4. Check signal between AV control unit connector M46 terminal 82 and ground.

AV cor	ntrol unit	Ground		
(	+)	( )	Condition	Reference value
Connector	Terminal	(–)		
M46	82	_	Camera image dis- played.	(V) 0. 4 0 -0. 4 → 40µs

### Is inspection result normal?

YES >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

NO >> Replace rear view camera. Refer to AV-135, "Removal and Installation".

### **DISK EJECT SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

## DISK EJECT SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008227305

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Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK DISK EJECT SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M42 and A/C and AV switch assembly connector.
- 3. Check continuity between AV control unit connector M42 terminal 28 and A/C and AV switch assembly connector M98 terminal 14.

AV cor	ntrol unit	A/C and AV switch assembly		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M42	28	M98	14	Yes

4. Check continuity between AV control unit connector M42 terminal 28 and ground.

AV control unit			Continuity
Connector	Terminal Ground		Continuity
M42	28		No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector M42 and A/C and AV switch assembly connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit connector M42 terminal 28 and ground.

AV control unit (+)		Ground		Voltage (Approx.)
		(-)	Condition	
Connector	Terminal	(-)		( ) ;
M42	28		Pressing eject switch	0 V
17142	20	_	Except above	5.0 V

## Is the inspection result normal?

YES >> Replace A/C and AV switch assembly. Refer to <u>AV-129</u>, "Removal and Installation - AV and AC <u>Switch Assembly"</u>.

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

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### MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

## MICROPHONE SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008227307

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK MICROPHONE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect Bluetooth® control unit connector B3 and microphone connector.
- 3. Check continuity between Bluetooth® control unit connector B3 terminals 7, 8, 29 and microphone connector R109 terminals 4, 3, 1.

Bluetooth <sup>®</sup>	control unit	Microphone		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	7		4	
В3	8	R109	3	Yes
	29		1	

4. Check continuity between Bluetooth® control unit connector B3 terminals 7, 8, 29 and ground.

Bluetooth <sup>®</sup> control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
	7		
В3	8	_	No
	29		

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK MICROPHONE VCC VOLTAGE

- Connect Bluetooth<sup>®</sup> control unit connector B3.
- Turn ignition switch ON.
- 3. Check voltage between Bluetooth® control unit connector B3.

Bluetooth <sup>®</sup> contro	Valtage	
(+) (-)		Voltage (Approx.)
Terminal	Terminal	, , ,
29	8	5.0 V

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace Bluetoot®h control unit. Refer to AV-138, "Removal and Installation".

# CHECK MICROPHONE SIGNAL

- 1. Connect microphone connector.
- 2. Check signal between Bluetooth® control unit connector B3.

## MICROPHONE SIGNAL CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

Bluetooth <sup>®</sup> contro	Bluetooth® control unit connector B3		
(+)	(-)	Condition	Reference value
Terminal	Terminal		
7	8	Speak into microphone.	(V) 2.5 2.0 1.5 1.0 0.5 0

### Is the inspection result normal?

>> Replace Bluetooth<sup>®</sup> control unit. Refer to <u>AV-138, "Removal and Installation"</u>. >> Replace microphone. Refer to <u>AV-139, "Removal and Installation"</u>. YES

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### **BLUETOOTH® CONTROL SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# **BLUETOOTH® CONTROL SIGNAL CIRCUIT**

# **Diagnosis Procedure**

INFOID:0000000008227309

# 1. CHECK CONTROL SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth® control unit connector B3.
- 3. Check continuity between Bluetooth® control unit connector B3 terminals 20, 24 and ground.

Bluetooth <sup>®</sup> control unit		Ground	Continuity
Connector	Terminals	Olodiid	Continuity
B3	20		Yes
БЭ	24	_	165

### Is the inspection result normal?

YES >> Replace Bluetooth® control unit. Refer to AV-138, "Removal and Installation".

NO >> Repair or replace harness or connectors.

#### [BASE AUDIO]

# STEERING SWITCH

# Diagnosis Procedure

INFOID:0000000008227311

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Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

- 1. Turn ignition switch OFF.
- 2. Disconnect combination switch connector M149.
- 3. Check resistance between combination switch connector terminals.

Combination swite	Combination switch connector M149		Resistance $\Omega$
Terminal	Terminal	Condition	(Approx.)
		Depress SOURCE switch.	1
		Depress △ switch.	121
14		Depress ∇ switch.	321
		Depress 🗸 switch.	723
		Depress ENTER switch.	2023
	17	Depress - ☐ switch.	1
		Depress ☐+ switch.	121
15		Depress 🗪 switch.	321
		Depress <b>5</b> switch.	723
		Depress DISP switch.	2023

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering wheel audio control switch. Refer to AV-130, "Removal and Installation".

# 2. CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

- Disconnect combination meter connector M24 and combination switch connector M30.
- Check continuity between combination meter connector M24 and combination switch connector M30.

Combina	tion meter	Combination switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	3		24	
M24	24	M30	33	Yes
	4		31	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal	Ground	Continuity
	3		
M24	24	No	No
	4		

Is the inspection result normal?

### STEERING SWITCH

## < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M149.

Combination switch			Continuity	
Connector	Terminal	Connector	Terminal	Continuity
	24		14	
M30	31	M149	15	Yes
	33		17	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace spiral cable. Refer to <u>SR-13, "Removal and Installation"</u>.

# 4. CHECK HARNESS BETWEEN COMBINATION METER AND AV CONTROL UNIT

- Disconnect AV control unit connector M44.
- 2. Check continuity between combination meter connector M24 and AV control unit connector M44.

Combina	tion meter	AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	14		38	
M24	15	M44	48	Yes
	16		47	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal	Ground	Continuity
	14		
M24	15	No	No
	16		

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

# 5. CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect combination meter connector M24 and AV control unit connector M44.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit connector M44.

AV control unit M44		
(+)	(-)	Voltage (Approx.)
Terminal	Terminal	(
38	47	5.0 V
48	47	5.0 V

#### Is the inspection result normal?

YES >> Replace combination meter. Refer to <a href="MWI-93">MWI-93</a>, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

### **USB CONNECTOR**

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

# **USB CONNECTOR**

# Diagnosis Procedure

INFOID:0000000008282593

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Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

# 1. CHECK USB INTERFACE HARNESS CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M55 and USB interface connector M209.
- 3. Check continuity between AV control unit connector M55 and USB interface connector M209.

AV con	AV control unit USB interface		Continuity	
Connector	Terminal	Connector	Terminal	Continuity
	137	M209 3 4	1	
	138		2	
M55	139		Yes	
	140		4	
	141		5	

4. Check continuity between AV control unit connector M55 and ground.

AV cor	ntrol unit	_	Continuity	
Connector	Terminal	_		
M55	137	Ground	No	
WIOO	139	Ground	INO	

#### Is the inspection result normal?

YES >> Replace the USB interface. Refer to AV-136, "Removal and Installation".

NO >> Repair or replace harness or connectors.

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# SYMPTOM DIAGNOSIS

# **MULTI AV SYSTEM**

# Symptom Table

#### INFOID:0000000008297150

# **AUDIO SYSTEM**

Symptom	Possible cause	Reference page
Inoperative	AV control unit power supply or ground circuit     AV control unit	• <u>AV-89</u> • <u>AV-23</u>
Steering switch does not operate	Steering switch     AV control unit	• <u>AV-123</u> • <u>AV-23</u>
All speakers do not sound	Speaker circuit shorted to ground     AV control unit	• AV-47 • AV-23
One or several speakers do not sound	Front door speaker     Instrument panel tweeter     Rear door speaker	<ul><li>AV-94</li><li>AV-96</li><li>AV-98</li></ul>
Buzz/rattle sound from speaker	The majority of buzz/rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the buzz/rattle.	Refer to "SQUEAK AND RATTLE TROUBLE DIAG- NOSIS" in the ap- propriate interior trim section.

### CD

Symptom	Possible cause	Reference page
CD cannot be inserted.		AV/ 22
CD cannot be ejected.	AV control unit	
The CD cannot be played.	AV CONTROL UNIT	AV-23
The sound skips, stops suddenly, or is distorted.		

## SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	Satellite radio tuner power supply or ground circuit     Satellite radio tuner communication circuit     Satellite radio tuner	• <u>AV-91</u> • <u>AV-85</u> • <u>AV-140</u>
Right or left channel does not sound	Satellite radio tuner audio signal circuit     Satellite radio tuner	• <u>AV-102</u> • <u>AV-140</u>

### HANDS-FREE PHONE

Symptom	Possible cause	Reference page
Inoperative	Bluetooth® control unit power supply or ground circuit Bluetooth® control unit	• <u>AV-92</u> • <u>AV-32</u>
Steering switch does not operate	Steering switch     Bluetooth <sup>®</sup> control unit	• <u>AV-123</u> • <u>AV-32</u>
Voice activated control does not operate	Microphone     Steering switch     Bluetooth <sup>®</sup> control unit	• AV-120 • AV-123 • AV-32

### NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BASE AUDIO]

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## NORMAL OPERATING CONDITION

Description INFOID:000000008297151

The majority of the audio concerns are the result of outside causes (bad CD, electromagnetic interference, etc.).

#### NOISE

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

- 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 the waves sent directly from the broadcast station arriving at the antenna at a different time from the waves which reflect off mountains or buildings.

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 determine the cause.

#### NOTE:

The source of the noise can be found easily by listening to the noise while removing the fuses of electrical components, one by one.

Type of Noise and Possible Cause

Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		Fuel pump condenser
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	Relay malfunction, AV control unit malfunction
	The noise occurs when various motors are operating.	Motor case ground     Motor
The noise occurs constantly, not just under certain conditions.		<ul><li>Rear defogger coil malfunction</li><li>Open circuit in printed heater</li><li>Poor ground of antenna feeder line</li></ul>
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		<ul><li> Ground wire of body parts</li><li> Ground due to improper part installation</li><li> Wiring connections or a short circuit</li></ul>

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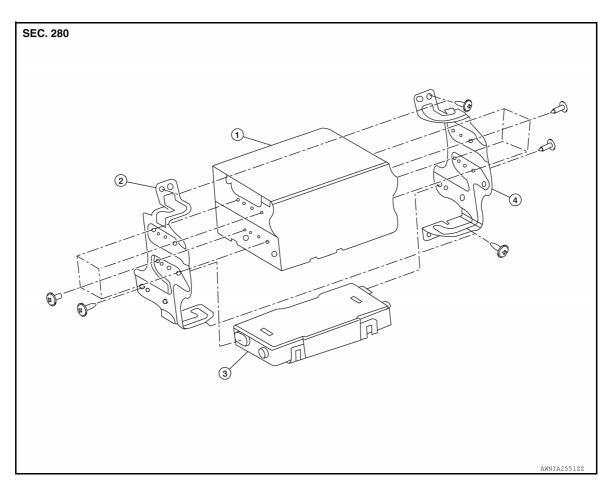
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# REMOVAL AND INSTALLATION

# AV CONTROL UNIT

Exploded View



1. AV control unit

- 2. AV control unit bracket LH
- 3. A/C auto amp.

4. AV control unit bracket RH

### Removal and Installation - AV Control Unit

INFOID:0000000007913605

### **REMOVAL**

#### **CAUTION:**

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to <a href="AV-76">AV-76</a>, "CONFIGURATION (AV CONTROL UNIT): Description".

- 1. Disconnect the negative battery terminal. Refer to PG-92, "Removal and Installation".
- 2. Remove cluster lid C upper. Refer to IP-21, "Removal and Installation Cluster Lid C Upper".
- Remove the screws, then pull out the AV control unit.
- 4. Disconnect the harness connectors from the AV control unit and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

#### **CAUTION:**

• When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to <u>AV-76, "CONFIGURA-TION (AV CONTROL UNIT)</u>: Description".

### **AV CONTROL UNIT**

### < REMOVAL AND INSTALLATION >

[BASE AUDIO]

Removal and Installation - AV and AC Switch Assembly

INFOID:0000000008273202

### **REMOVAL**

#### **CAUTION:**

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to <u>AV-76, "CONFIGURATION (AV CONTROL UNIT)</u>: <u>Description"</u>.

- Disconnect the negative battery terminal. Refer to <u>PG-92, "Removal and Installation"</u>.
- 2. Remove cluster lid C. Refer to IP-21, "Removal and Installation Cluster Lid C Upper".
- Remove the AV and AC switch assembly screws (A), then separate the cluster lid C from AV and AC switch assembly.
- 4. Release upper pawls and remove AV and AC switch assembly.

#### INSTALLATION

Installation is in the reverse order of removal.

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## **STEERING SWITCH**

[BASE AUDIO]

# STEERING SWITCH

# Removal and Installation

INFOID:0000000008297211

The steering switch and ICC steering switch are serviced as an assembly. Refer to <a href="CCS-190">CCS-190</a>, "Removal and <a href="Installation"</a>.

[BASE AUDIO]

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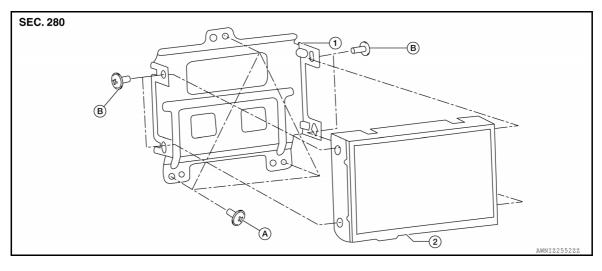
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INFOID:0000000008368146

# **DISPLAY UNIT**

**Exploded View** INFOID:0000000008368145



- Display unit bracket
- Display unit

Display unit bracket screws

# Display unit screws Removal and Installation

**REMOVAL** 

- Remove cluster lid D. Refer to <a href="IP-22">IP-22</a>, "Removal and Installation".
- Remove the display unit screws, and then pull out the display unit and bracket.
- Disconnect harness connector from the display unit, then remove the display unit and bracket.
- Remove the display unit brackets screws, then remove the display unit from the display unit bracket.

#### **INSTALLATION**

Installation is in the reverse order of removal.

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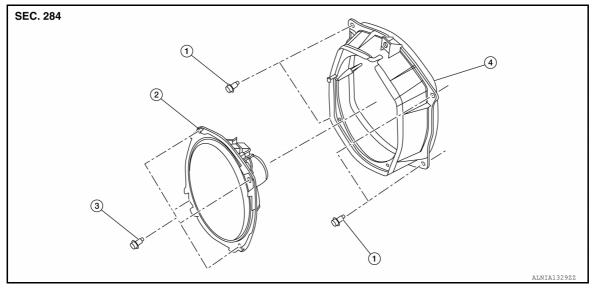
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# FRONT DOOR SPEAKER

# **Exploded View**

INFOID:0000000008297212



- 1. Speaker bracket bolt
- 2. Front door speaker
- 3. Speaker bolt

4. Speaker bracket

### Removal and Installation

INFOID:0000000008297213

### **REMOVAL**

- 1. Remove front door finisher. Refer to <a href="INT-15">INT-15</a>, "Removal and Installation".
- 2. Remove front door speaker bolts.
- 3. Disconnect harness connector from front door speaker, then remove front door speaker from speaker bracket.
- 4. Remove speaker bracket bolts.
- 5. Remove speaker bracket from front door.

#### **INSTALLATION**

Installation is in the reverse order of removal.

### **INSTRUMENT PANEL SPEAKER/TWEETER**

< REMOVAL AND INSTALLATION >

[BASE AUDIO]

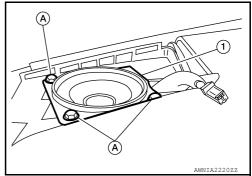
# **INSTRUMENT PANEL SPEAKER/TWEETER**

### Removal and Installation

#### INFOID:0000000008297215

### **REMOVAL**

- 1. Remove instrument panel tweeter grille (LH/RH). Refer to IP-14, "Exploded View".
- 2. Remove the screws (A), then pull out the instrument panel tweeter (1).
- 3. Disconnect the harness connector and remove the instrument panel tweeter (1).



#### **INSTALLATION**

Installation is in the reverse order of removal.

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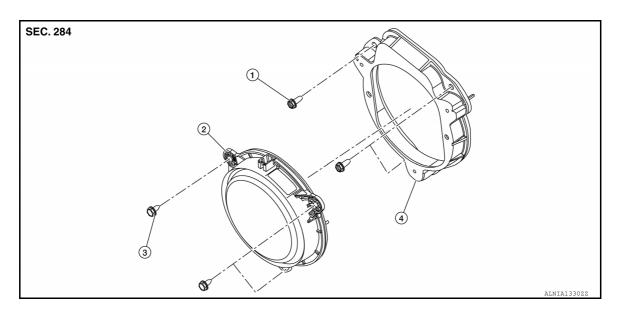
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# REAR DOOR SPEAKER

Exploded View



- 1. Speaker bracket bolt
- 2. Rear door speaker
- 3. Speaker bolt

4. Speaker bracket

### Removal and Installation

INFOID:0000000008297217

#### **REMOVAL**

- 1. Remove rear door finisher. Refer to INT-16, "Removal and Installation".
- Remove rear door speaker bolts.
- 3. Disconnect harness connector from the rear door speaker, then remove rear door speaker from speaker bracket.
- 4. Remove speaker bracket bolts.
- 5. Remove rear door speaker bracket.

## **INSTALLATION**

Installation is in the reverse order of removal.

### **REAR CAMERA**

### < REMOVAL AND INSTALLATION >

[BASE AUDIO]

# **REAR CAMERA**

## Removal and Installation

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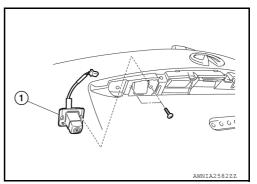
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### REMOVAL

- 1. Remove back door outer upper finisher. Refer to EXT-41, "Removal and Installation".
- 2. Remove rear camera screws, then remove rear camera (1).



### **INSTALLATION**

Installation is in the reverse order of removal.

#### NOTE:

Perform camera image calibration. Refer to <u>AV-547, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)</u>: Work <u>Procedure"</u>.

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[BASE AUDIO]

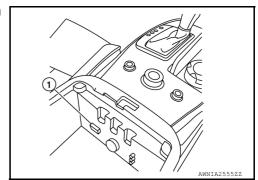
# **USB CONNECTOR**

# Removal and Installation

#### INFOID:0000000008297220

### **REMOVAL**

- 1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
- 2. Disconnect harness connector from the USB connector.
- 3. Release the pawl from the back of USB connector (1), then remove USB connector (1).



### **INSTALLATION**

Installation is in the reverse order of removal.

### FRONT AUXILIARY INPUT JACKS

< REMOVAL AND INSTALLATION >

[BASE AUDIO]

# FRONT AUXILIARY INPUT JACKS

## Removal and Installation

#### INFOID:0000000008297221

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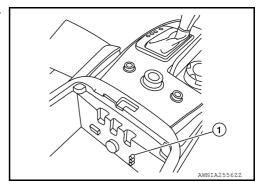
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### **REMOVAL**

- 1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
- 2. Disconnect harness connector from the front auxiliary input jack.
- 3. Remove front auxiliary input jack screws, then remove front auxiliary input jack (1).



### **INSTALLATION**

Installation is in the reverse order of removal.

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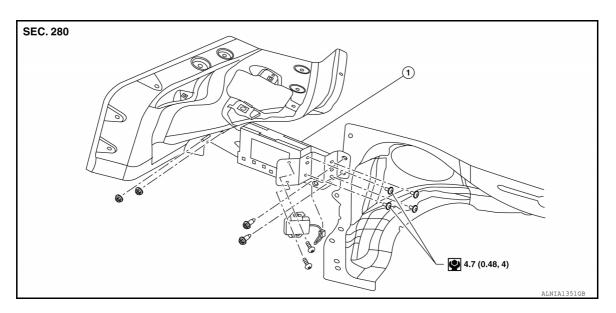
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# **BLUETOOTH CONTROL UNIT**

Exploded View



1. Bluetooth control unit

### Removal and Installation

INFOID:0000000008266382

#### **REMOVAL**

- 1. Remove satellite radio tuner. Refer to AV-140, "Removal and Installation"
- 2. Disconnect harness connector from bluetooth control unit.
- 3. Remove bluetooth control unit bolts, then remove bluetooth control unit.

#### **INSTALLATION**

Installation is in the reverse order of removal.

### [BASE AUDIO]

# **MICROPHONE**

### Removal and Installation

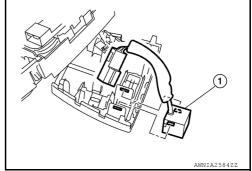
#### INFOID:0000000008297222

### **REMOVAL**

- 1. Remove the front room/map lamp assembly. Refer to <a href="INT-24">INT-24</a>, "Exploded View".
- 2. Remove the microphone (1) from the front room/map lamp assembly.

### **CAUTION:**

Carefully handle the pawl that retain the microphone because the pawl is fragile.



### **INSTALLATION**

Installation is in the reverse order of removal.

#### NOTE:

Check the microphone for looseness after installation.

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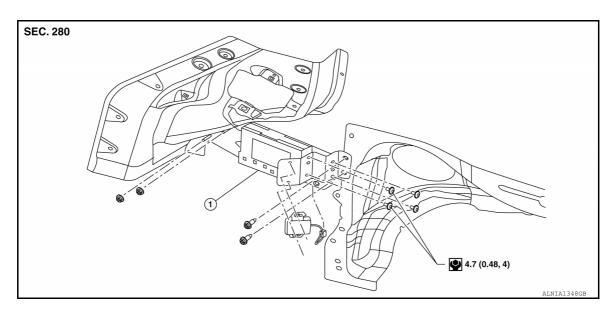
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# SATELLITE RADIO TUNER

Exploded View



1. Satellite radio tuner

### Removal and Installation

INFOID:0000000008266384

### **REMOVAL**

- 1. Remove tel antenna. Refer to AV-830, "Removal and Installation".
- 2. Disconnect harness connector from satellite radio antenna.
- 3. Remove bolts and then remove satellite radio tuner.

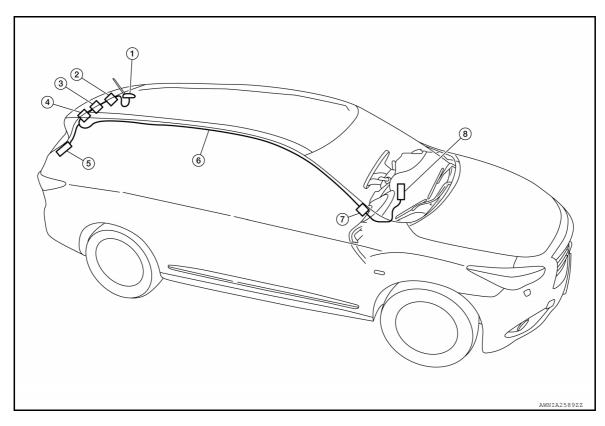
#### **INSTALLATION**

Installation is in the reverse order of removal.

INFOID:0000000008487399

# **AUDIO ANTENNA**

# **Location of Antennas**



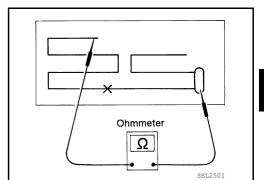
- Antenna base (satellite antenna and antenna amp)
- 4. M503, M504
- 7. M95, M500

- 2. M502
- 5. M505
- 8. AV control unit M124
- 3. M501
- 6. Antenna Feeder

# Window Antenna Repair

### **ELEMENT CHECK**

1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



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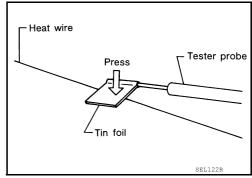
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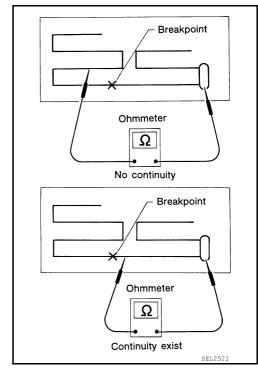
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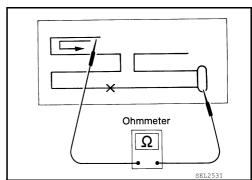
 When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



2. If an element is broken, no continuity will exist.



3. To locate a break, move probe along element. Tester indication will change abruptly when probe passes the broken point.



### **PRECAUTIONS**

< PRECAUTION >

[BOSE AUDIO W/O SURROUND SOUND]

# **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 dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. Information necessary to service the system safely is included in the SR and SB section 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 SR section.
- 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 Airbag Diagnosis Sensor Unit or other Airbag 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.

Cautions in Removing Battery Terminal and AV Control Unit (Models with AV Control Unit)

#### **CAUTION:**

Remove battery terminal and AV control unit 30 seconds or more after turning the ignition switch OFF. NOTE:

After the ignition switch is turned OFF, the AV control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

# Precaution for Trouble Diagnosis

#### 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

AV COMMUNICATION SYSTEM

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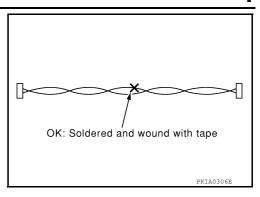
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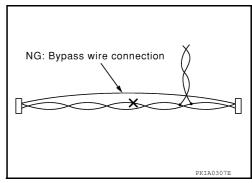
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Revision: March 2012 AV-143 2013 Infiniti JX

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



 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.)



#### Precaution for Work

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- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- · Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
- Water soluble dirt: Dip a soft cloth into lukewarm water and wring the water out of the cloth to wipe the dirty area.
  - Then rub with a soft and dry cloth.
- Oily dirt: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
  - Then dip a cloth into fresh water and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- · For genuine leather seats, use a genuine leather seat cleaner.

# **PREPARATION**

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Special Service Tool		INFOID:000	0000008360063
The actual shapes of Kent-Moore tools	may differ from those of special service tools	llustrated here.	
Tool number (Kent-Moore No.) Tool name		Description	
— (J-46534) Trim tool set	AWJIA0483ZZ	Removing trim components	
Commercial Service Too	ols	INFOID:000	0000008360064
(Kent-Moore No.) Tool name		Description	
( — ) Power tools		Loosening nuts, screws and bolts	

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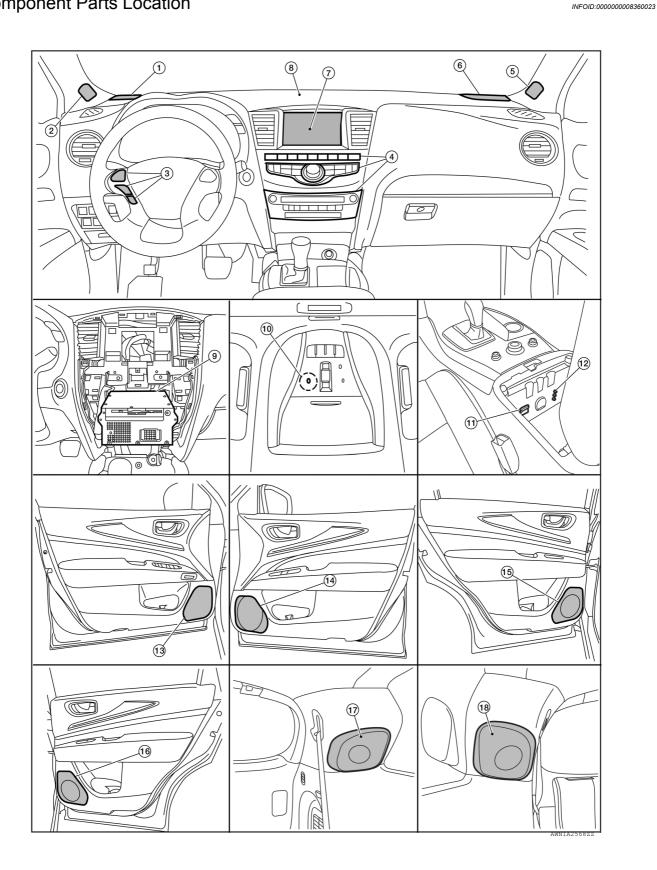
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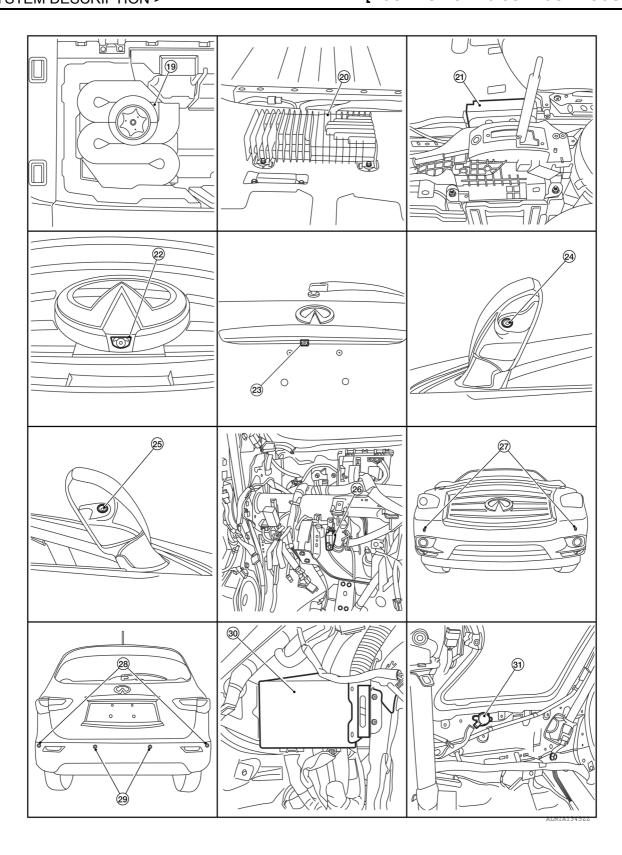
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# SYSTEM DESCRIPTION

# **COMPONENT PARTS**

**Component Parts Location** 





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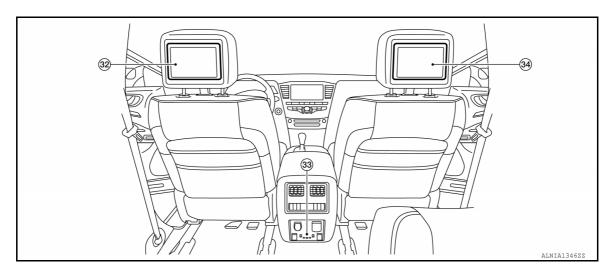
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- 1. Instrument panel tweeter LH
- 4. A/C and AV switch assembly
- 7. Display unit
- 10. Microphone
- 13. Front door speaker LH
- 16. Rear door speaker RH
- 19. Subwoofer
- 22. Front camera
- 25. Door mirror RH (side camera)
- 28. Rear sonar sensors outer
- 31. Sonar buzzer
- 34. Headrest display unit (passenger seat)

- 2. Front tweeter LH
- 5. Front tweeter RH
- 8. Center speaker
- 11. USB interface
- 14. Front door speaker RH
- 17. Rear side speaker LH
- 20. Bose<sup>®</sup> speaker amp.
- 23. Rear camera
- 26. Sonar control unit
- 29. Rear sonar sensors inner
- 32. Headrest display unit (driver seat)

- 3. Steering switch
- 6. Instrument panel tweeter RH
- 9. AV control unit (view with center stack removed)
- 12. Front auxiliary input jacks
- 15. Rear door speaker LH
- 18. Rear side speaker RH
- 21. Around view monitor control unit
- 24. Door mirror LH (side camera)
- 27. Front sonar sensors outer
- 30. Video distributor
- 33. Rear auxiliary input jacks

Component Description

INFOID:0000000008360024

Revision: March 2012 A V -1 4 8 2013 Infiniti JX

# **COMPONENT PARTS**

# < SYSTEM DESCRIPTION >

# [BOSE AUDIO W/O SURROUND SOUND]

Part name	Description	
AV control unit	<ul> <li>Master unit of MULTI AV system.</li> <li>AV control unit includes audio, hands-free phone, navigation, USB connection, DVD play and vehicle status functions.</li> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>Connected to MULTI AV system control units via AV communication.</li> <li>Connected to other vehicle control units via CAN communication to obtain necessary information for vehicle function.</li> <li>Receives steering angle signal via CAN communication from steering angle sensor and controls an expected course line during around view monitor operation.</li> <li>Inputs signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>RGB digital image signal and composite image signal are output to front display unit.</li> <li>Transmits image and sound output to video distributor and inputs image switch signal from headrest display units via AV communication.</li> <li>Receives an intelligent key identification signal necessary for intelligent key interlocking function via hard wire from BCM.</li> <li>Transmits Amp. ON signal and mode change signal to BOSE amp.</li> <li>Update of map data is performed using DVD-ROM.</li> </ul>	
Display unit	<ul> <li>Display image is controlled by AV control unit via serial communication.</li> <li>Receives power from AV control unit.</li> <li>RGB and RGB digital image signals are input from AV control unit.</li> <li>Composite image signals are input from AV control unit.</li> <li>Synchronizing signals are output to AV control unit.</li> <li>Camera image signals are input from around view monitor control unit via video output signal.</li> <li>Touch panel functions can be operated by touching display directly.</li> </ul>	
BOSE speaker amp.	Receives sound signals from AV control unit and outputs sound signals to each speaker.	
Instrument panel tweeter	Outputs high range sound signals from BOSE speaker amp.	
Center speaker	Outputs mid and high range sound signals from BOSE speaker amp.	
Front tweeter	Outputs high range sound signals from BOSE speaker amp.	
Front door speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.	
Rear door speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.	
Rear side speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.	
A/C and AV switch assembly	<ul> <li>Outputs low range sound signals from BOSE speaker amp.</li> <li>Operation panels are equipped with switches for audio and air conditioner operations.</li> <li>Operation signal is transmitted via AV communication to AV control unit and around view monitor.</li> <li>Disk eject operation signal is performed via hardwire.</li> </ul>	
Steering switch	<ul> <li>Operations for audio, hands-free phone and voice recognition are possible.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>	
Steering angle sensor	Connected to AV control unit via CAN communication and transmits steering angle sensor signal.	
Video distributor	<ul> <li>Receives image and sound signals from AV control unit and transmits them to headrest display units.</li> <li>Receives image and sound signals from rear auxiliary input jacks and transmits them to headrest display units.</li> <li>Transmits image and sound signals to headrest display unit and receives image switch signal from headrest display units.</li> </ul>	
Headrest display units	<ul> <li>Composite image signals are input from video distributor.</li> <li>Receives DVD/AUX/USB sound signals from video distributor and transmits ther to headphones.</li> <li>Transmits image switch signal to video distributor according to remote control of eration.</li> <li>Transmits image switch signal to AV control unit via AV communication according to remote control operation.</li> </ul>	

# **COMPONENT PARTS**

# < SYSTEM DESCRIPTION >

# [BOSE AUDIO W/O SURROUND SOUND]

Part name	Description
Front auxiliary input jacks	Transmits image and sound signals to AV control unit.
Rear auxiliary input jacks	Transmits image and sound signals to video distributor and headrest display units.
Around view monitor control unit	<ul> <li>Supplies power to front, rear and side cameras.</li> <li>Superimposes images from each camera and outputs them to display unit.</li> <li>Superimposes guiding line, predicted course line and sonar indicator to camera image that outputs to display unit.</li> <li>Performs reception/transmission of communication signals with cameras.</li> <li>Transmits sonar operation signal from sonar control unit via CAN communication.</li> <li>Receives sonar information from sonar control unit via CAN communication.</li> <li>Transmits data received/transmitted from sonar control unit to AV control unit via CAN communication.</li> </ul>
Front camera	<ul> <li>Inputs power supply from around view monitor control unit.</li> <li>Outputs image of vehicle front to around view monitor control unit.</li> <li>Performs reception/transmission of communication signal with around view monitor control unit.</li> </ul>
Rear camera	<ul> <li>Inputs power supply from around view monitor control unit.</li> <li>Outputs image of vehicle rear to around view monitor control unit.</li> <li>Performs reception/transmission of communication signal with around view monitor control unit.</li> </ul>
Side camera LH	<ul> <li>Inputs power supply from around view monitor control unit.</li> <li>Outputs image of vehicle LH side to around view monitor control unit.</li> <li>Performs reception/transmission of communication signal with around view monitor control unit.</li> </ul>
Side camera RH	<ul> <li>Inputs power supply from around view monitor control unit.</li> <li>Outputs image of vehicle RH side to around view monitor control unit.</li> <li>Performs reception/transmission of communication signal with around view monitor control unit.</li> </ul>
Sonar control unit	<ul> <li>Connected to around view monitor control unit via CAN communication.</li> <li>Receives sonar operation signal from around view monitor control unit via CAN communication.</li> <li>Transmits sonar detection status to around view monitor control unit via CAN communication.</li> <li>Judges warning level according to signals from front and rear sensors.</li> </ul>
Front sensors	Detects front obstacle distance and transmits signal to sonar control unit.
Rear sensors	Detects rear obstacle distance and transmits signal to sonar control unit.
Microphone	<ul> <li>Used for hands-free phone, voice recognition and INFINITI CONNECTIONS oper ations.</li> <li>Microphone signal is transmitted to telematics control unit (TCU).</li> <li>Power (Microphone VCC) is supplied from TCU.</li> </ul>
Telematics control unit (TCU)	<ul> <li>Connected to the AV control unit via a USB harness for sound signal input/output and USB communication.</li> <li>Data is sent to and received from the INFNITI CONNECTIONS data center via the TEL antenna.</li> <li>Inputs TEL voice signal from TEL antenna and outputs it to AV control unit.</li> </ul>
TEL antenna	Receives TEL voice signals and outputs them to TCU.     Transmits TEL voice signals from TCU.
GPS antenna	GPS signal is received and transmitted to AV control unit.
Antenna amp.	<ul> <li>Radio signal received by window antenna is amplified and transmitted to AV control unit.</li> <li>Power (antenna amp. ON signal) is supplied from AV control unit.</li> </ul>
Satellite radio antenna	Satellite radio signal is received and transmitted to AV control unit.
USB connector	USB sound and data input signals are transmitted to AV control unit.

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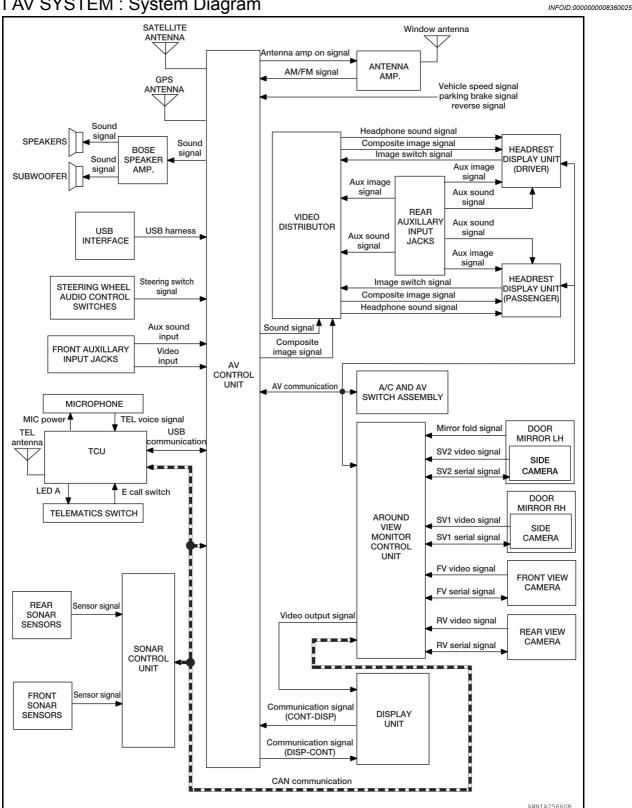
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# **SYSTEM MULTI AV SYSTEM**

MULTI AV SYSTEM: System Diagram



MULTI AV SYSTEM: System Description

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# [BOSE AUDIO W/O SURROUND SOUND]

The audio system consists of the following components

- · AV control unit
- · A/C and AV switch assembly
- Display unit
- · Steering wheel audio control switches
- · BOSE speaker amp.
- Center speaker
- · Instrument panel tweeters
- · Front tweeters
- Front door speakers
- · Rear door speakers
- · Rear side speakers
- Subwoofer
- Window antenna

When the audio system is on, radio signals are received by the window antenna. The AV control unit then sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the speakers, tweeters and subwoofer.

Refer to Owner's Manual for audio system operating instructions.

# SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components

- Satellite antenna
- · AV control unit

When the satellite radio system is on, radio signals are supplied to the AV control unit from the satellite antenna. The AV control unit then sends audio signals to the BOSE speaker amp.

Refer to Owner's Manual for satellite radio system operating instructions.

### HANDS-FREE PHONE SYSTEM

#### **System Operation**

#### NOTE:

Cellular telephones must have their wireless connection set up (paired) before using the Bluetooth<sup>®</sup> telephone system.

The Bluetooth<sup>®</sup> telephone system allows users who have a Bluetooth<sup>®</sup> cellular telephone to make a wireless connection between their cellular telephone and the AV control unit. Hands-free cellular telephone calls can be sent and received. Some Bluetooth<sup>®</sup> cellular telephones may not be recognized by the AV control unit. When a cellular telephone or the AV control unit is replaced, the telephone must be paired with the AV control unit. Different cellular telephones may have different pairing procedures, refer to the cellular telephone operating manual.

Refer to the Owner's Manual for Bluetooth<sup>®</sup> telephone system operating instructions.

#### AV Control Unit

When the ignition switch is turned to ACC or ON, the AV control unit will power up. During power up, the AV control unit is initialized and performs various self-checks. Initialization may take up to 20 seconds. If a phone is present in the vehicle and paired with the AV control unit, Infiniti Voice Recognition will then become active. Bluetooth<sup>®</sup> telephone functions can be turned off using the Infiniti Voice Recognition system.

### Steering Wheel Audio Control Switches

When buttons on the steering wheel audio control switch are pushed, the resistance in steering wheel audio control switch circuit changes, depending on which button is pushed. The AV control unit uses this signal to perform various functions while navigating through the voice recognition system.

The following functions can be performed using the steering wheel audio control switch:

- Initiate self-diagnosis of the Bluetooth® telephone system
- · Start a voice recognition session
- · Answer and end telephone calls
- · Adjust the volume of calls
- Récord memos

### Microphone

The microphone is located in the roof console assembly. The microphone sends a signal to the Telematics Control Unit (TCU), which transmits the signal to the AV control unit via the USB communication circuits. The microphone can be actively tested during self-diagnosis.

### [BOSE AUDIO W/O SURROUND SOUND]

# NAVIGATION SYSTEM

System Operation

#### NOTE:

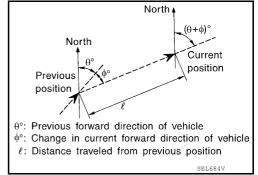
Refer to NAVI System Owner's Manual for system operation.

The navigation system periodically calculates the vehicle's current position according to the following three signals: Travel distance of the vehicle as determined by the vehicle speed sensor, turning angle of the vehicle as determined by the gyroscope (angular velocity sensor), and the direction of vehicle travel as 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 read from the map data, which is stored in the hard disk drive (HDD) (map-matching), and indicated on the screen with a current-location mark.

By comparing the vehicle position detection results found by the GPS and by map-matching, more accurate vehicle position data can be used.

The current vehicle position will be calculated by detecting the distance the vehicle moved from the previous calculation point and its direction.



#### **Travel Distance**

Travel distance calculations are based on the vehicle speed input signal. Therefore, the calculation may become incorrect as the tires wear down. To prevent this, an automatic distance fine adjustment function has been adopted.

#### Travel Direction

Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). As the gyroscope and GPS antenna have both merit and demerit, input signals from them 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.

Туре	Advantage	Disadvantage
Gyroscope (angular velocity sensor)	Can detect the vehicle's turning angle quite accurately.	Direction errors may accumulate when the vehicle is driven for long distances without stopping.
GPS antenna (GPS information)	Can detect the vehicle's travel direction (North/South/East/West).	Correct direction cannot be detected when the vehicle speed is low.

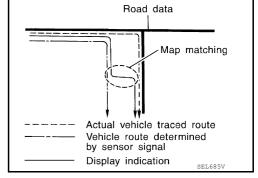
# Map-Matching

Map—matching is a function that repositions the vehicle on the road map when a new location is judged to be the most accurate. This is done by comparing the current vehicle position, calculated by the method described in the position detection principle, with the road map data around the vehicle, read from the map data stored on the HDD.

Therefore, the vehicle position may not be corrected after the vehicle is driven over a certain distance or time in which GPS information is hard to receive. In this case, the current-location mark on the display must be corrected manually.

# **CAUTION:**

The road map data is based on data stored on the HDD.



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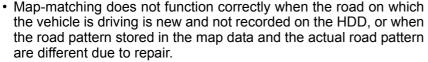
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### [BOSE AUDIO W/O SURROUND SOUND]

 In map-matching, alternative routes to reach the destination will be shown and prioritized, after the road on which the vehicle is currently driven has been judged and the current-location mark has been repositioned.

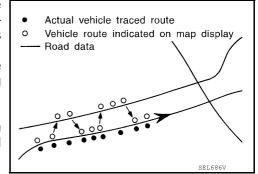
If there is an error in distance and/or direction, the alternative routes will be shown in different order of priority, and the wrong road can be avoided.

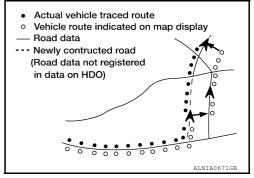
If two roads are running in parallel, they are of the same priority. Therefore, the current-location mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.



When driving on a road not present in the map, the map-matching function may find another road and position the current-location mark on it. Then, when the correct road is detected, the currentlocation mark may leap to it.

 Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the HDD is limited. Therefore, when there is an excessive gap between the current vehicle position and the position on the map, correction by map-matching is not possible.



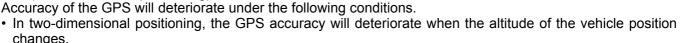


# GPS (Global Positioning System)

GPS (Global Positioning System) has been developed and controlled by the US Department of Defense. The system utilizes GPS satellite (NAVSTAR), sending out radio waves while flying on an orbit around the earth at the height of approx. 21,000 km (13,000 mi).

The GPS receiver calculates the vehicle's position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves received from four or more GPS satellites (three-dimensional positioning). If radio waves were received only from three GPS satellites, the GPS receiver calculates the vehicle's position in two dimensions (latitude/longitude), utilizing the altitude data calculated previously by using radio waves from four or more GPS satellites (two-dimensional positioning).

Accuracy of the GPS will deteriorate under the following conditions.



• There may be an error of approximately 10 m (30 ft.) in position detected by three-dimensional positioning, which is more accurate than two-dimensional positioning. The accuracy can be even lower depending on the

arrangement of the GPS satellites utilized for the positioning.

 Position detection is not possible when the vehicle is in an area where radio waves from the GPS satellite do not reach, such as in a tunnel, parking lot in a building, and under an elevated highway. Radio waves from the GPS satellites may not be received when some object is located over the GPS antenna.

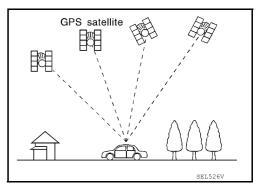
• Position correction by GPS is not available while the vehicle is stopped.

### SPEED SENSITIVE VOLUME SYSTEM

Volume level of this system goes up and down automatically in proportion to the vehicle speed. The control level can be selected by the customer. Refer to Owner's Manual for operating instructions.

# FRONT AUXILIARY INPUT JACKS

- Image and sound can be output from an external device connected to the front auxiliary input jacks.
- AUX image signals are transmitted to each unit as follows:
- To the display unit via AV control unit.
- To the headrest display units via AV control unit and video distributor.
- AUX sound signals are transmitted to each unit as follows:
- To each speaker via AV control unit and BOSE speaker amp.



# **SYSTEM**

# < SYSTEM DESCRIPTION >

# [BOSE AUDIO W/O SURROUND SOUND]

- To video distributor via AV control unit.
- Headphone sound signals are transmitted via infrared communication between headrest display units and headphones.

# REAR ENTERTAINMENT SYSTEM

- Image and sound (DVD, USB memory-stored video data and front auxiliary input) played by AV control unit can be enjoyed in rear seat using headrest display units and headphones.
- Image and sound of an external device connected to rear auxiliary input jacks for rear seat can be enjoyed in rear seat using headrest display units and headphones. Also, image and sound from rear auxiliary input jacks can be selected and played individually on each side as well as on both sides.
- Headrest display units have a self-diagnosis function. Refer to <u>AV-179</u>, "On <u>Board Diagnosis Function"</u>.

#### NOTE:

Image signal and sound signal from rear auxiliary input jacks are not transmitted to front display unit and each speaker.

### **Operation Signal**

- The rear entertainment system can be controlled by the rear seat remote control.
- The rear seat remote control transmits the operation signal to the remote control receiver built into headrest display units, which then transmits it to the AV control unit and video distributor.

### Headphone Sound

- Sound signals output from AV control unit or rear auxiliary input jacks are transmitted to headrest display units via video distributor.
- Headphone sound signals are transmitted via infrared communication between headrest display units and headphones.

# **Headrest Display Units**

- Composite image signals from AV control unit are transmitted to headrest display unit via video distributor.
- Image switch signals from headrest display units are transmitted to AV control unit and video distributor, according to rear seat remote control operation.
- When image switch signal is transmitted from headrest display unit to AV control unit via AV communication, image played by AV control unit (DVD, USB memory-stored video data, and front auxiliary input) switches.
- When image switch signal is transmitted from headrest display unit to video distributor, image output from AV control unit and image output from rear auxiliary input jacks switch.

# AROUND VIEW MONITOR SYSTEM

- 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 viewed on display (superimposed on the camera image) in combination with the camera assistance sonar system to warn of the approach of an obstacle.
- In front view and rear view, the vehicle width, distance lines and predictive 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. The vehicle icon and sonar indicator 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 displays the sonar indicator on the Birds-Eye view, Front-Side view, Rear wide view.
- AV control unit renders the Change View switch, view icon, warning message on display.

# Operation Description

#### NOTE:

The first, second, and third camera image displayed when switched to the camera image display depends on the settings of Camera View Priority.

- Around view monitor operates by pressing the CAMERA switch on the A/C and AV switch assembly and shifting the selector lever to the R position.
- When the selector lever is in any position other than R, 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 R position.

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# < SYSTEM DESCRIPTION >

- The around view monitor's, Birds-Eye view, Front-side view or rear wide view (rear only) can be switched by pressing the CAMERA switch.
- The around view monitor is cancelled 3 minutes after pressing the CAMERA switch, and the display returns to the previous screen.
- ON/OFF setting of sonar indicator display on the Front-Side view screen can be performed.
- 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.
- The sonar operates only when the camera screen is displayed.

### SONAR SYSTEM

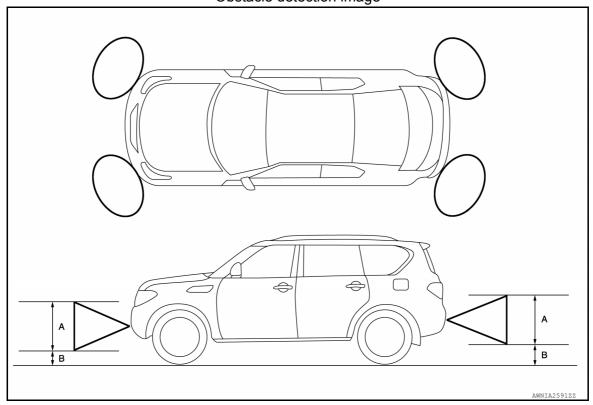
### **System Operation Description**

- Around view monitor control unit transmits the sonar operation signal via CAN communication to sonar control unit to control the operation of sonar indicator and sonar buzzer.
- Sonar control unit transmits the detection signal and detection distance signal via CAN communication to around view monitor control unit. Around view monitor control unit operates the applicable sonar indicator.
- When receiving a sonar operation signal from the around view monitor control unit, the sonar control unit converts the signal into a detection distance signal and transmits it to the AV control unit via CAN communication. When receiving the detection signal, the AV control unit activates the speakers via the BOSE speaker amp.
- The sonar control unit is capable of self diagnosis. It can detect sensor malfunction or sensor harness open circuits. It transmits the diagnosis results to around view monitor control unit and always displays the sonar indicator in red to inform the vehicle operator.

#### 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)

# **SYSTEM**

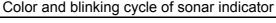
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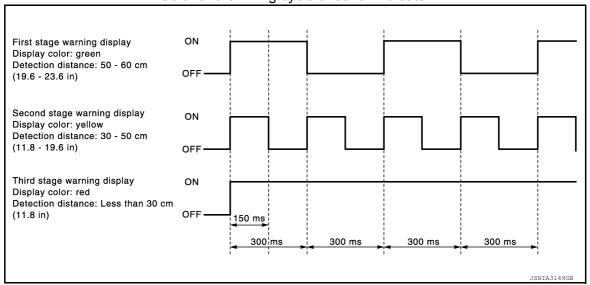
# [BOSE AUDIO W/O SURROUND SOUND]

Detection distance				
Warning item	Sensitivity level 1 (Fastest warning)	Sensitivity level 2 (Faster warning)	Sensitivity level 3 (Default value)	Sensitivity level 4 (Slower warning)
First stage 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)
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.





# Sonar Buzzer Operation

- Each sonar sensor transmits a sensor signal to the sonar control unit when detecting an obstacle.
- The sonar control unit converts a signal received from each sonar sensor into distance and transmits detection distance signal to the AV control unit via AV communication.
- The AV control unit transmits a buzzer signal to the BOSE amp. corresponding to each sonar sensor based on the received signal.
- When receiving a buzzer signal, the BOSE amp. transmits the buzzer signal to the each speaker. When each speaker receives a buzzer signal, a buzzer sounds.
- When the front corner sensor detects an obstacle, a buzzer is heard from the speakers on the front side.
- When the rear corner sensor detects an obstacle, a buzzer is heard from the speakers on the rear side.
- It changes the buzzer cycle in 3 stages according to the detection distance.

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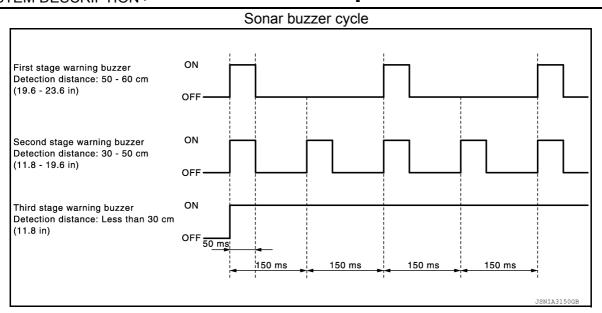
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### VEHICLE INFORMATION FUNCTION

- Status of audio, climate control system, fuel economy, maintenance and navigation are displayed.
- AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM and combination meter.
- AV control unit is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.

### INTELLIGENT KEY INTERLOCKING FUNCTION

The AV control unit recognizes a door-unlocked state of Intelligent Key according to an Intelligent Key recognition signal transmitted from BCM and saves two different types of audio settings and navigation settings.

Settings saved in the AV control unit

- Map display
- · Route guidance
- Locator
- Route search
- Sound quality
- Radio preset
- Language

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[BOSE AUDIO W/O SURROUND SOUND]

# DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description INFOID:0000000008360027

The AV control unit on board diagnosis includes the following functions:

 A/C and AV switch assembly self diagnosis that checks the ON/OFF operation (continuity) of each switch in the A/C and AV switch assembly.

### NOTE:

The hazard switch and disk eject switch are not included in this operation check.

AV control unit on board diagnosis performs the following functions listed in the table below:

Mode			Description
Self Diagnosis		sis	<ul> <li>AV control unit diagnosis.</li> <li>Diagnoses the connections across system components, between AV control unit and GPS antenna.</li> </ul>
	Display Diagnosis		The following check functions are available: color tone check by color bar display and white 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, reverse, side view switch and room lamp.
	Speaker Test		The connection of a speaker can be confirmed by test tone.
	Naciantian	Steering Angle Ad- justment	When there is a difference between the actual turning angle and the ve hicle 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.
	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.
Confirmation/	Synchronizer FE	S Clock	-
Adjustment	Vehicle CAN Dia	gnosis	The transmitting/receiving of CAN communication can be monitored.
	AV COMM Diagnosis  Handsfree Phone/Infiniti Connection		The communication condition of each unit of Multi AV system can be monitored.
			The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed. Diagnosis of the Infiniti Connection system can be performed.
		XM NaviTrffic	Change Channel
		XM NavWeather	Any necessary channels required to receive traffic information from the satellite radio system can be set.
XM	XM	XM CGS	Change Application ID
		Diag	Any application ID'-s required to receive traffic information from the satellite radio system can be set.
	Delete Unit Conn	ection Log	Erase the connection history of unit and error history.
	Initialize Settings		Initializes the AV control unit memory.
Version Information		on	Version information of the AV control unit is displayed.

Perform CONSULT diagnosis if the AV control unit on board diagnosis does not start, the screen does not display anything, or the A/C and AV switch assembly self diagnosis does not function.

# On Board Diagnosis Function

METHOD OF STARTING

A/C and AV Switch Assembly Self Diagnosis

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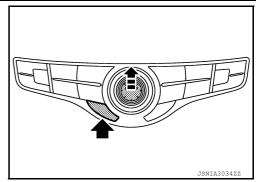
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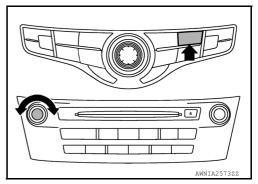
# [BOSE AUDIO W/O SURROUND SOUND]

- Press the BACK and UP 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 switches illuminate, and the self-diagnosis mode begins.
- The ON position continuity of each switch can be checked by pressing the switch. The buzzer sounds if continuity is present.
- The self diagnosis mode is canceled when the ignition switch is turned OFF.

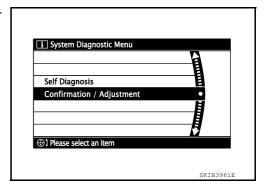


# AV Control Unit Self Diagnosis

- 1. Turn the ignition ON.
- 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 selfdiagnosis mode begins, a short beep will be heard. Shifting from current screen to previous screen is performed by pressing BACK button.



4. The trouble diagnosis initial screen is displayed, and Self Diagnosis or Confirmation/Adjustment can be selected.



# **SELF DIAGNOSIS MODE**

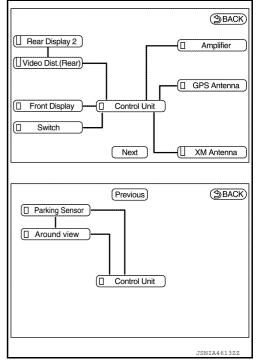
AV Control Unit Self Diagnosis

- 1. Select Self Diagnosis.
- 2. Self diagnosis screen is displayed. The bar graph visible in center of screen indicates progress of self diagnosis.

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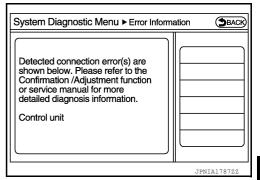
# [BOSE AUDIO W/O SURROUND SOUND]

 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	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction <sup>1</sup>	Red	Green

- 1: Control Unit (AV control unit) is displayed in red.
- Replace AV control unit if Self Diagnosis did not run because control unit malfunction is indicated. The symptom is AV control
  unit internal error. Refer to AV-388, "Removal and Installation AV Control Unit".
- 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.
- Comments of self diagnosis results can be viewed in the diagnosis result screen.



AV Control Unit Self Diagnosis Results

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# [BOSE AUDIO W/O SURROUND SOUND]

Only Unit Part Is Displayed In Red			
Screen switch	Description	Possible cause	
Control Unit	Malfunction is detected in AV control unit power supply and ground circuits.	<ul> <li>AV control unit power supply or ground circuits. Refer to AV-334.</li> <li>If no malfunction is detected in AV control unit power supply and ground circuits, replace AV control unit. Refer to AV-388.</li> </ul>	
Amplifier	<ul> <li>When either one of the following items are detected:</li> <li>sound signal circuits between BOSE amp. and each speaker are malfunctioning.</li> <li>BOSE amp. malfunction is detected.</li> </ul>	Malfunctioning speaker circuits     Replace BOSE amp. Refer to AV-392.     "Removal and Installation".	

A Connecting Cable Between Units Is Displayed In Yellow			
Area with yellow connection lines	Description	Possible cause	
Control unit ⇔ Front Display	Serial communication circuits between AV control unit and front display unit are malfunctioning.	Serial communication circuits between AV control unit and front display unit.	
Control unit ⇔ GPS Antenna	GPS antenna connection malfunctions detected.	Check the connection of the GPS antenna connector.	
Control unit ⇔ XM Antenna	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection	
Control unit ⇔ Amplifier	When either one of the following items are detected: BOSE amp. power supply and ground circuits are malfunctioning. AV communication circuits between headrest display unit LH and BOSE amp. are malfunctioning.	BOSE amp. power supply and ground circuits.     Refer to AV-335, "BOSE AMP. : Diagnosis Procedure".     AV communication circuits between headrest display unit LH and BOSE amp.	
Control unit ⇔ Around view Around view ⇔ Parking Sensor	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.	<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>	
Control unit ⇔ Parking Sensor Around view ⇔ Parking Sensor	When either one of the following items are detected:  • sonar control unit power supply and ground circuits are malfunctioning.  • AV communication circuits between AV control unit and sonar control unit are malfunctioning.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and sonar control unit.</li> </ul>	

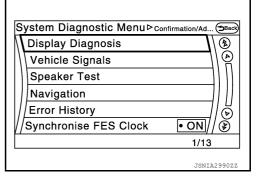
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# [BOSE AUDIO W/O SURROUND SOUND]

A Connecting Cable Between Units Is Displayed In Yellow			
Area with yellow connection lines	Description	Possible cause	
Control unit ⇔ Video Dist.(Rear) Video Dist.(Rear) ⇔ Rear display 2	<ul> <li>When either one of the following items are detected:</li> <li>video distributor power supply and ground circuits are malfunctioning.</li> <li>headrest display unit LH power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between AV control unit and headrest display unit LH are malfunctioning.</li> <li>location recognition signal circuit between headrest display unit LH and ground is malfunctioning.</li> </ul>	<ul> <li>Video distributor power supply and ground circuits.</li> <li>Headrest display unit LH power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and headrest display unit LH.</li> <li>Location recognition signal circuit between headrest display unit LH and ground.</li> </ul>	
Video Dist.(Rear) ⇔ Rear display 2	<ul> <li>When either one of the following items are detected:</li> <li>headrest display unit RH power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between headrest display unit LH and headrest display unit RH are malfunctioning.</li> <li>location recognition signal circuit between headrest display unit RH and ground is malfunctioning.</li> </ul>	<ul> <li>Headrest display unit RH power supply and ground circuits.</li> <li>AV communication circuits between headrest display unit LH and headrest display unit RH.</li> <li>Location recognition signal circuit between headrest display unit RH and ground.</li> </ul>	

# AV Control Unit Confirmation/Adjustment

- Select Confirmation/Adjustment.
- 2. Select each switch on the Confirmation/Adjustment screen to display the relevant trouble diagnosis screen. Press the BACK switch to return to the initial Confirmation/Adjustment screen.



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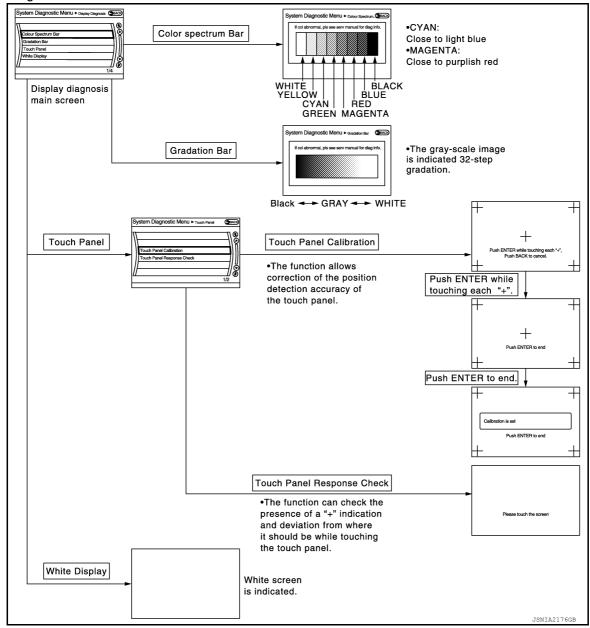
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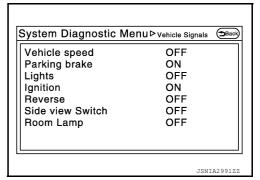
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# Display Diagnosis



# Vehicle Signals

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

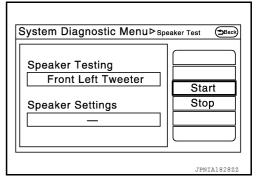


Speaker Test

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# [BOSE AUDIO W/O SURROUND SOUND]

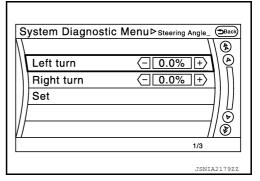
Select Speaker Test to display the Speaker Diagnosis screen. Press Start to generate a test tone in a speaker. Press Start again to generate a test tone in the next speaker. Press End to stop the test tones.



### Navigation

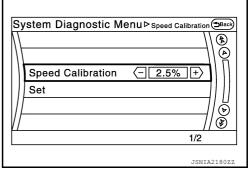
### STEERING ANGLE ADJUSTMENT

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



### SPEED CALIBRATION

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 chain fitted on tires.



### **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 situation.

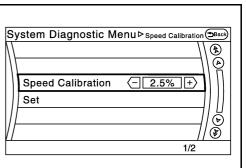
The error record displays the time and place of the most recent occurrence of that error. However, take note of the following points.

- If there is a malfunction with the GPS antenna circuit board in the AV control unit, the correct date and time of occurrence may not be able to 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 ignition switch is turned ON. The counter increases by 1 if the condition is normal at a next ignition 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.

Count up method B



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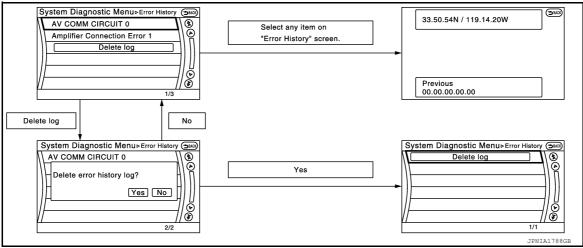
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# < SYSTEM DESCRIPTION >

# [BOSE AUDIO W/O SURROUND SOUND]

- The counter increases by 1 if an error occurs when ignition switch is ON. The counter will not decrease even if the condition is normal at the next ignition 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.

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)
Count up method B	Other than the above



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	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, and then repair the malfunctioning parts according to the diagnosis results.  Refer to AV-172, "CONSULT Function".
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		Replace the AV control unit if the malfunc-
Connection Of Gyro		tion occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".
Connection of G Sensor		
CAN Controller Memory Error	AV control unit malfunction is detected.	
Bluetooth® Module Connection Error		
Sub CPU Connection Error		
Audio connection error		
DSP Connection Error		If a disc can be played, then there is a
DSP Communication Error	AV control unit malfunction is detected.	<ul> <li>possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> <li>Refer to <u>AV-388</u>, "Removal and Installation - <u>AV Control Unit"</u>.</li> </ul>

# < SYSTEM DESCRIPTION >

# [BOSE AUDIO W/O SURROUND SOUND]

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Error item	Description	Possible malfunction factor/Action to take
HDD Connection Error		If the music box function has no malfunc-
HDD Read Error		tions, then there is a possibility of the detection of a temporary malfunction.
HDD Write Error	AV control unit malfunction is detected.	Replace the AV control unit if the mal-
HDD Communication Error		function occurs constantly.  Refer to AV-388, "Removal and Installa-
HDD Access Error		tion - AV Control Unit".
GPS Communication Error		An intermittent error caused by strong ra-
GPS ROM Error		dio interference may be detected unless any symptom (GPS reception error, etc.)
GPS RAM Error	GPS malfunction is detected.	occurs.
GPS RTC Error		Replace the AV control unit if the mal- function occurs constantly.  Refer to AV-388. "Removal and Installa- tion - AV Control Unit".
Unfinished configuration	The writing of configuration data is incomplete.	Write configuration data with CONSULT.
USB Controller Communication Error	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DVD Mechanism Communication Error	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> <li>Refer to AV-388, "Removal and Installation - AV Control Unit".</li> </ul>
Steer. Angle Sensor Calibration	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.  Refer to AV-172, "CONSULT Function".
Amplifier Temperature Error	BOSE amp. malfunction is detected.	Replace the BOSE amp. Refer to AV-392, "Removal and Installation".
Front Display Connection Error	When either one of the following items are detected:  • front display unit power supply and ground circuits are malfunctioning.  • Serial communication circuits between AV control unit and front display unit are malfunctioning.	<ul> <li>Front display unit power supply and ground circuits.</li> <li>Serial communication circuits between AV control unit and front display unit.</li> </ul>
AV COMM CIRCUIT     2nd Display Connection Error	When either one of the following items are detected:  video distributor power supply and ground circuits are malfunctioning.  headrest display unit LH power supply and ground circuits are malfunctioning.  AV communication circuits between AV control unit and headrest display unit LH are malfunctioning.  location recognition signal circuit between headrest display unit LH and ground is malfunctioning.	<ul> <li>Video distributor power supply and ground circuits.</li> <li>Headrest display unit LH power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and headrest display unit LH.</li> <li>Location recognition signal circuit between headrest display unit LH and ground.</li> </ul>
3rd Display Connection Error	When either one of the following items are detected:  headrest display unit RH power supply and ground circuits are malfunctioning.  AV communication circuits between headrest display unit LH and headrest display unit RH are malfunctioning.  location recognition signal circuit between headrest display unit RH and ground is malfunctioning.	Headrest display unit RH power supply and ground circuits.  AV communication circuits between headrest display unit LH and headrest display unit RH.  Location recognition signal circuit between headrest display unit RH and ground.

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# [BOSE AUDIO W/O SURROUND SOUND]

Error item	Description	Possible malfunction factor/Action to take
AM/FM antenna amplifier short to ground	Radio antenna amp. ON signal circuit mal-	Radio antenna amp. ON signal circuit be-
AM/FM antenna amplifier open	function is detected.	tween AV control unit and antenna amp.
Ext_Amp_ON output terminal short to ground	BOSE amp. ON signal circuit malfunction is detected.	BOSE amp. ON signal circuit between AV control unit and BOSE amp.
Ext_Amp_ON output terminal :open		
GPS Antenna Error	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
XM Antenna Connection Error	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.
USB electric current Error	Detection of overcurrent in USB connector.	Check USB harness between the AV control unit and USB connector.
FL-DOOR SPEAKER OUT: open		
FL-DOOR SPEAKER OUT: short	When either one of the following items are	
FL-DOOR SPEAKER: short to ground	detected:	On additional size the ball and BOOF
FL-DOOR SPEAKER: short to battery	sound signal circuits between BOSE amp. and front door speaker LH are mal-	Sound signal circuits between BOSE amp. and front door speaker LH.
FL-DOOR TWEETER OUT: open	functioning.	Sound signal circuits between BOSE
FL-DOOR TWEETER OUT: short	<ul> <li>sound signal circuits between BOSE amp. and front door tweeter LH are mal-</li> </ul>	amp. and front door tweeter LH.
FL-DOOR TWEETER OUT: short to ground	functioning.	
FL-DOOR TWEETER OUT: short to battery		
FR-DOOR SPEAKER OUT: open		
FR-DOOR SPEAKER OUT: short		
FR-DOOR SPEAKER OUT: short to ground	When either one of the following items are	
FR-DOOR SPEAKER OUT: short to battery	detected: • sound signal circuits between BOSE	Sound signal circuits between BOSE
FR-DOOR TWEETER OUT: open	amp. and front door speaker RH are mal-	amp. and front door speaker RH.
FR-DOOR TWEETER OUT: short	functioning.  • sound signal circuits between BOSE	<ul> <li>Sound signal circuits between BOSE amp. and front door tweeter RH.</li> </ul>
FR-DOOR TWEETER OUT: short to ground	amp. and front door tweeter RH are mal- functioning.	amprona non coor mooner na n
FR-DOOR TWEETER OUT: short to battery		
FL-INST TWEETER OUT: open		
FL-INST TWEETER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp.
FL-INST TWEETER OUT: short to ground	and tweeter LH are malfunctioning.	and tweeter LH.
FL-INST TWEETER OUT: short to battery		
FC-INST SPEAKER OUT: open		
FC-INST SPEAKER OUT: short	Malfunction is detected sound signal cir-	Sound signal circuits between BOSE amp.
FC-INST SPEAKER OUT: short to ground	cuits between BOSE amp. and center speaker.	and center speaker.
FC-INST SPEAKER OUT: short to battery	-	
FR-INST TWEETER OUT: open		
FR-INST TWEETER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp.
FR-INST TWEETER OUT: short to ground	and tweeter RH are malfunctioning.	and tweeter RH.
FR-INST TWEETER OUT: short to battery		
2L-DOOR SPEAKER OUT: open		
2L-DOOR SPEAKER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp.
2L-DOOR SPEAKER OUT: short to ground	and rear door speaker LH are malfunctioning.	and rear door speaker LH.
2L-DOOR SPEAKER OUT: short to battery		

# < SYSTEM DESCRIPTION >

# [BOSE AUDIO W/O SURROUND SOUND]

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Error item	Description	Possible malfunction factor/Action to take
2R-DOOR SPEAKER OUT: open		
2R-DOOR SPEAKER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp.
2R-DOOR SPEAKER OUT: short to ground	and rear door speaker RH are malfunctioning.	and rear door speaker RH.
2R-DOOR SPEAKER OUT: short to battery	Š	
RL-SPEAKER OUT: open		
RL-SPEAKER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp.
RL-SPEAKER OUT: short to ground	and rear speaker LH are malfunctioning.	and rear speaker LH.
RL-SPEAKER OUT: short to battery		
RR-SPEAKER OUT: open		
RR-SPEAKER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp.
RR-SPEAKER OUT: short to ground	and rear speaker RH are malfunctioning.	and rear speaker RH.
RR-SPEAKER OUT: short to battery		
SUBWOOFER OUT: open		
SUBWOOFER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp.
SUBWOOFER OUT: short to ground	and subwoofer are malfunctioning.	and subwoofer.
SUBWOOFER OUT: short to battery		
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 were malfunctioning.</li> <li>AV communication circuits between AV control unit and multifunction switch are malfunctioning.</li> </ul>	Multifunction switch power supply and ground circuits.     AV communication circuits between AV control unit and multifunction switch.
<ul><li>AV COMM CIRCUIT</li><li>Amplifier Connection Error</li></ul>	When either one of the following items are detected: BOSE amp. power supply and ground circuits are malfunctioning. AV communication circuits between headrest display unit LH and BOSE amp. are malfunctioning.	BOSE amp. power supply and ground circuits.     Refer to AV-335, "BOSE AMP. : Diagnosis Procedure".     AV communication circuits between headrest display unit LH and BOSE amp
AV COMM CIRCUIT     AVM Connection Error	<ul> <li>When either one of the following items are detected:</li> <li>around view monitor control unit power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between AV control unit and around view monitor control unit are malfunctioning.</li> </ul>	<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     Sonar Connection Error	<ul> <li>When either one of the following items are detected:</li> <li>sonar control unit power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between AV control unit and sonar control unit are malfunctioning.</li> </ul>	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and sonar control unit.</li> </ul>

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### < SYSTEM DESCRIPTION >

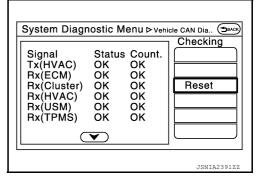
# [BOSE AUDIO W/O SURROUND SOUND]

Error item	Description	Possible malfunction factor/Action to take
<ul> <li>AV COMM CIRCUIT</li> <li>Switches Connection Error</li> <li>Sonar Connection Error</li> <li>AVM Connection Error</li> <li>2nd Display Connection Error</li> </ul>	AV communication circuits between AV	AV communication circuits between AV
<ul> <li>AV COMM CIRCUIT</li> <li>Switches Connection Error</li> <li>Amplifier Connection Error</li> <li>Sonar Connection Error</li> <li>AVM Connection Error</li> <li>2nd Display Connection Error</li> </ul>	control unit and multifunction switch are malfunctioning.	control unit and multifunction switch.

### 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 / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx(TPMS)	OK / ???	OK / 0 – 39
Rx(STRG)	OK / ???	OK / 0 – 39
Rx(ACC)	OK / ???	OK / 0 – 39
RX(VDC)	OK / ???	OK / 0 – 39



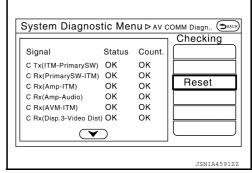
### NOTE:

"???" indicates UNKWN.

### 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" is pressed.

Items	Status (Current)	Counter (Past)
C Tx(ITM-PrimarySW)	OK / ???	OK / 0 – 39
C Rx(PrimarySW–ITM)	OK / ???	OK / 0 – 39
C Rx(Amp–ITM)	OK / ???	OK / 0 – 39
C Rx(Amp–Audio)	OK / ???	OK / 0 – 39
C Rx(AVM–ITM)	OK / ???	OK / 0 – 39
C Rx(Disp.3–Video Dist)	OK / ??? / –	OK / 0 – 39
C Rx(Video Dist-ITM)	OK / ???	OK / 0 – 39
C Rx(Sonar–ITM)	OK / ???	OK / 0 – 39



# < SYSTEM DESCRIPTION >

# [BOSE AUDIO W/O SURROUND SOUND]

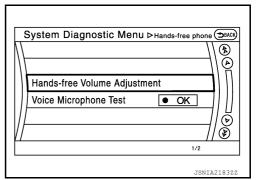
Items	Status (Current)	Counter (Past)
C Rx(Sonar–AVM)	OK / ???	OK / 0 – 39
C Rx(R.RemoteCont–ITM)	OK / ???	OK / 0 – 39

### NOTE:

"???" indicates UNKWN

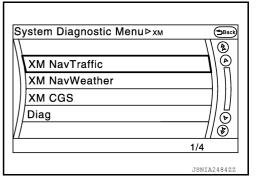
### Hands-Free Phone

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



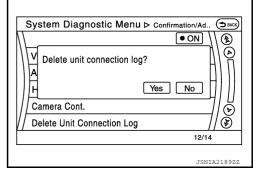
#### XM

- Change Channel
- Any necessary channels required to receive traffic information from the satellite radio system can be set.
- Change Application ID
- Any application ID'-s 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 the AV control unit memory. (Clear the records of the unit that has been removed.)



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Initialize Settings

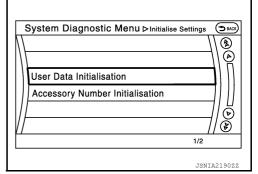
# < SYSTEM DESCRIPTION >

# [BOSE AUDIO W/O SURROUND SOUND]

"User Data Initialization" and "Accessory Number Initialization" are possible.

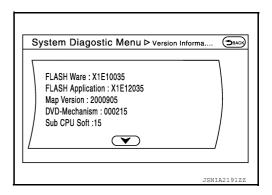
# **CAUTION:**

- Never perform Accessory Number Initialization except when configuration is unsuccessful.
- Accessory Number Initialization requires configuration. For details, refer to <u>AV-262</u>, "<u>CONFIGURATION</u> (<u>AV CONTROL</u> <u>UNIT</u>): <u>Description</u>".



### **Version Information**

Version information of the AV control unit is displayed.



# **CONSULT Function**

INFOID:0000000008360029

# **CONSULT FUNCTIONS**

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

Direct Diagnostic Mode	Description
Ecu Identification	The AV control unit part number is displayed.
Self Diagnostic Result	The AV control unit self diagnostic results are displayed.
Data Monitor	The AV control unit input/output data is displayed in real time.
Work support	The settings for AV control unit functions can be changed.
Configuration	<ul> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing AV control unit.</li> </ul>
CAN Diag Support Mntr	<ul> <li>The result of transmit/receive diagnosis of AV communication is displayed.</li> <li>The result of transmit/receive diagnosis of CAN communication is displayed.</li> </ul>

# **ECU IDENTIFICATION**

The part number of AV control unit is displayed.

# SELF DIAGNOSTIC RESULT

Refer to AV-187, "DTC Index".

### DATA MONITOR

Monitor Item [Unit]	Description
VHCL SPD SIG [On/Off]	<ul> <li>On: vehicle speed &gt; 0 km/h (0 MPH).</li> <li>Off: vehicle speed = 0 km/h (0 MPH).</li> </ul>
PKB SIG [On/Off]	On: parking brake applied.     Off: parking brake released.
ILLUM SIG [On/Off]	On: optical sensor signal is received.     Off: optical sensor signal is not received.

# < SYSTEM DESCRIPTION >

# [BOSE AUDIO W/O SURROUND SOUND]

Monitor Item [Unit]	Description
IGN SIG [On/Off]	<ul><li>On: ignition switch ON.</li><li>Off: ignition switch ACC.</li></ul>
REV SIG [On/Off]	<ul> <li>On: selector lever in R position.</li> <li>Off: selector lever in any position other than R.</li> </ul>

# **WORK SUPPORT**

Conditions	Description
ST ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position adjustment can be performed. Refer to BRC-59, "Description".

# **CONFIGURATION**

Refer to AV-262, "CONFIGURATION (AV CONTROL UNIT): Description".

# CAN DIAG SUPPORT MNTR

Refer to LAN-19, "CAN Diagnostic Support Monitor".

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# **DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)** [BOSE AUDIO W/O SURROUND SOUND]

< SYSTEM DESCRIPTION >

# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

# **CONSULT Function**

INFOID:0000000008374952

# **CONSULT FUNCTIONS**

CONSULT performs the following functions via communication with the around view monitor control unit.

Direct Diagnostic Mode	Description
Ecu Identification	The around view monitor control unit part number is displayed.
Self Diagnostic Result	The around view monitor control unit self diagnostic results are displayed.
Data Monitor	The around view monitor control unit input/output data is displayed in real time.
Work support	The settings for around view monitor control unit functions can be changed.
Configuration	<ul> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing around view monitor control unit.</li> </ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

### **ECU IDENTIFICATION**

The part number of around view monitor control unit is displayed.

# SELF DIAGNOSTIC RESULT

Refer to AV-204, "DTC Index".

# **DATA MONITOR**

Monitor Item	Description
ST ANGLE SENSOR SIGNAL [On/Off]	Indicates condition of steering angle sensor signal.
REVERSE SIGNAL [On/Off]	Indicates selector lever position.
VEHICLE SPEED SIGNAL [mph/km/h]	Indicates condition of vehicle speed signal.
CAMERA SWITCH SIGNAL [On/Off]	Indicates condition of camera switch signal.
CAMERA OFF SIGNAL [On/Off]	Indicates condition of camera OFF signal.
ST ANGLE SENSOR TYPE [Absolute]	Indicates steering angle sensor type.
ST GEAR RATIO TYPE [Type O]	Indicates steering gear ratio type.
STEERING POSITION [LHD/RHD]	Indicates drive type.
REAR CAMERA IMAGE SIGNAL [OK]	Indicates condition of camera image signal.
R-CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
R-CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
F-CAMERA IMAGE SIGNAL [OK]	Indicates condition of camera image signal.
F-CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
F-CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
DR-SIDE CAMERA IMAGE SIG [OK]	Indicates condition of camera image signal.
DR CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
DR-SIDE CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
PA-SIDE CAMERA IMAGE SIG [OK]	Indicates condition of camera image signal.
PA CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
PA-SIDE CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
ACC [OK]	indicates condition of accessory signal.
FOLDING MOTOR VOLT 1 [On/Off]	indicates condition of mirror folding motor.
FOLDING MOTOR VOLT 2 [On/Off]	indicates condition of mirror folding motor.

# **WORK SUPPORT**

# **DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)** [BOSE AUDIO W/O SURROUND SOUND]

<	SYST	ΓFΜ	DESC	CRIPT	rion >

Support Item	Description
NON-VIEWABLE AREA REMINDER	ON/OFF setting of non-viewable area can be performed.
INITIALIZE CAMERA IMAGE CALIBRATION	Factory image calibration restoration can be performed.
STEERING ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position adjustment can be performed.
CALIBRATING CAMERA IMAGE (FRONT CAMERA)	Performs calibration of front camera.
CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)	Performs calibration of passenger side camera.
CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)	Performs calibration of driver side camera.
CALIBRATING CAMERA IMAGE (REAR CAMERA)	Performs calibration of rear camera.
FINE TUNING OF BIRDS-EYE VIEW	Confirmation and adjustment of difference between each camera can be performed.
REAR WIDE-VIEW FIXED GUIDE LINE CORRECTION	Performs calibration of rear wide-view guide line correction.
TURNING RADIUS CORRECTION	Performs calibration of turning radius correction.
PARTS WITH DOOR MIRROR AUTO FOLD FUNC	ON/OFF setting of auto fold mirror function can be performed.
SONAR Off POP-UP DISPLAY SETTING CHANGE	ON/OFF setting of sonar pop-up display can be performed.
FRONT WIDE-VIEW FIXED GUIDE LINE CORRECTION	Performs calibration of front wide-view guide line correction.
ZOOM FUNCTION	Adjustment of magnification setting of camera can be performed.

# CONFIGURATION

Refer to AV-264, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Description".

# CAN DIAG SUPPORT MNTR

Refer to LAN-19, "CAN Diagnostic Support Monitor".

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# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

< SYSTEM DESCRIPTION >

[BOSE AUDIO W/O SURROUND SOUND]

# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

CONSULT Function

# APPLICATION ITEMS

CONSULT 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-210, "DTC Index".

# **DATA MONITOR**

Monitor Item	Display	Description	
VEHICLE SPEED	(mph)	Vehicle speed	
SONAR C/U POWER SUPPLY	(v)	Supply voltage for the Sonar C/U	
SENSOR VOLTAGE	(v)	Sensor voltage	
DETECTION MODE	(Mode)	Displays detection mode display	
SW OPRT AFTR IGN ON	Yes	Switch operation after ignition ON	
3W OFRI AFTRIGION ON	No	Switch operation after ignition on	
SONAR TEMPORARY	Yes	Sonar system temporary Off	
OFF	No	Sonar system On	
SONAR PERMANENT OFF	Yes	Sonar system malfunction	
	No	Sonar system without malfunction	
P N RANGE	Yes	Selector lever is in "P" or "N" position	
	No	Selector lever is another position other than "P" or "N"	
LED	Yes	Led On	
LED	No	Led Off	
TRAILER CONNECT	CON	Trailer connector is in use	
TRAILER CONNECT	N CON	Trailer connector is not in use	
REVERSE RANGE	On	Selector lever is in the "R" position	
REVERSE RANGE	Off	Selector lever is in another position other than "R"	

# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

# < SYSTEM DESCRIPTION >

# [BOSE AUDIO W/O SURROUND SOUND]

Monitor Item	Display	Description	•
COR[RL]			A
COR[RL]-> CEN[RL]/ CEN[R]			В
CEN[RL]/CEN[R]-> COR[RL]			D
CEN[RL]/CEN[R]			С
CEN[RL]-> CEN[RR]			
CEN[RR]-> CEN[RL]			
CEN[RR]			D
CEN[RR]-> CEN[RR]/ COR[RR]			
COR[RR]-> CEN[RR]/ CEN[R]	-		Е
COR[RR]	1		
COR[FL]	1		F
COR[FL]-> CEN[FL]/ CEN[F]	(cm)	Measures the distance in cm to the obstacle.	
CEN[FL]/CEN[F] ->COR[FL]			G
CEN[FL]/CEN[F]			Н
CEN[FL]-> CEN[FR]			П
CEN[FR]-> CEN[FL]			
CEN[FR]			
CEN[FR]/CEN[F]-> COR[FR]	-		
COR[FR]-> CEN[FR]/ CEN[F]			J
COR[FR]			
CEN[FR]/CEN[F]-> COR[FR]			K
COR[FR]-> CEN[FR]/ CEN[F]			L
COR[FR]	1		
RVRB TIME COR[RL]			B. 4
RVRB TIME COR[RR]			M
RVRB TIME CEN[RL]			
RVRB TIME CEN[RR]	(ms)	Measures the distance in ms to the obstacle.	AV
RVRB TIME COR[FL]			
RVRB TIME COR[FR]			_
RVRB TIME CEN[FL]			0
RVRB TIME CEN[FR]			•

<sup>\*:</sup> Even when a buzzer (backward) is output condition, this item is indicated as OFF.

# **ACTIVE TEST**

Active test item	Function
REAR BUZZER	This test is able to check rear buzzer operation.

# **WORK SUPPORT**

# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

# < SYSTEM DESCRIPTION >

# [BOSE AUDIO W/O SURROUND SOUND]

Work support item	Function
VOLUME SETTING	Allows you to adjusts the volume of the warning tone.
TRAILER HITCH DETECTION RANGE ADJUSTMENT	Allows you to adjust the rear sonar sensors when towing a trailer.

# CORNER SEN DISTANCE SET

Corner sensor warning buzzer distance can be set to 4 phases as follows.

Warning item	FARTHER	FAR	NORMAL (Default)	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)
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 "NORMAL".

# **DIAGNOSIS SYSTEM (HEADREST DISPLAY UNIT)**

< SYSTEM DESCRIPTION >

[BOSE AUDIO W/O SURROUND SOUND]

# DIAGNOSIS SYSTEM (HEADREST DISPLAY UNIT)

Description INFOID:000000008368197

Self-diagnosis of headrest display unit can be performed by operating rear seat remote controller.

# On Board Diagnosis Function

Self-diagnosis mode can check the following items.

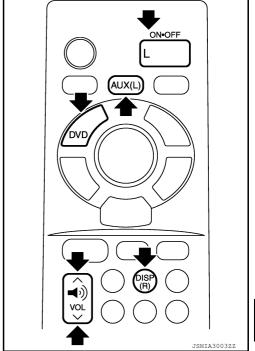
Diagnosis item	Display	Description
Display Location	Left/Right/Un- known	Installation location of headrest display unit is displayed. <b>NOTE:</b> If displayed location is different from the actual location or shown as "unknown", check location recognition signal circuit.
Software Ver.	****	Software version of headrest display unit is displayed.
Hardware Ver.	****	Hardware version of headrest display unit is displayed.
Seat Position	OK	Not used for this vehicle.

# METHOD OF STARTING

- Turn ignition switch to the ON position.
- 2. Turn the headrest display unit OFF.
- 3. Press each switch of rear seat remote controller in the order shown below.

"AUX(L)" $\rightarrow$ "VOL DOWN" $\rightarrow$ "DISP(R)" $\rightarrow$ "VOL UP" $\rightarrow$ "DVD" $\rightarrow$ "L" **NOTE**:

- Operation must be done within 20 seconds.
- Perform the operation of rear seat remote controller for headrest display unit of each side.



4. When the rear seat remote operation is performed as shown on procedure 3, self-diagnosis screen is displayed.

Diagnosis

Display Location Left/ΩAch

Software Ver. MON 003000

I/F 003000

Hardware Ver. 003000

Seat Position OK

Exit

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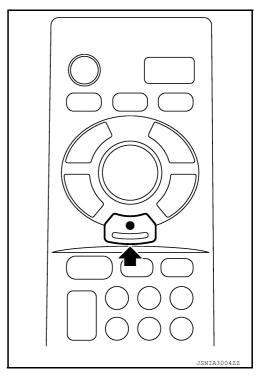
# **DIAGNOSIS SYSTEM (HEADREST DISPLAY UNIT)**

< SYSTEM DESCRIPTION >

[BOSE AUDIO W/O SÚRROUND SOUND]

Finishing Self-diagnosis Mode

Self-diagnosis mode is canceled when pressing the enter switch of rear seat remote controller.



# **ECU DIAGNOSIS INFORMATION**

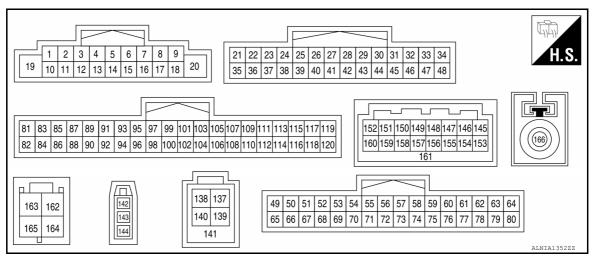
## AV CONTROL UNIT

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
VILICI, CDD CIC	Vehicle speed = 0 km/h (0 MPH).	Off
VHCL SPD SIG	Vehicle speed > 0 km/h (0 MPH).	On
PKB SIG	Parking brake released.	Off
PKB SIG	Parking brake applied.	On
ILLUM CIC	Optical sensor signal is not received.	Off
ILLUM SIG	Optical sensor signal is received.	On
IGN SIG	Ingnition switch OFF or ACC.	Off
IGN SIG	Ignition switch ON.	On
DEV CIC	Selector lever in any position other than R.	Off
REV SIG	Selector lever in R position.	On

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (SB)	Ground	BOSE amp. ON signal	Output	Ignition switch ACC	_	Battery voltage
2 (B)	3 (W)	Sound signal front LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E

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	minal color)	Description		Condition		Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
4 (B)	5 (W)	Sound signal rear LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 ** 2ms SKIB3609E
					Keep pressing SOURCE switch.	0 V
					Keep pressing MENU UP switch.	1.0 V
6 (G)	15 (B)	Steering switch signal A	Input	Ignition switch ON	Keep pressing MENU DOWN switch.	2.0 V
				ON	Keep pressing ò switch	3.0 V
					Keep pressing ENTER switch.	4.0 V
					Except for above.	5.0 V
7 (G)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
10 (BR)	_	Shield	_	_	_	_
11 (W)	12 (B)	Sound signal front RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
13 (B)	14 (W)	Sound signal rear RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
					Keep pressing VOL DOWN switch.	0 V
16	15	Steering switch signal B	Input	Ignition switch	Keep pressing VOL UP switch.	1.0 V
(W)	(B)	Clocking Switch Signal D	input	ON	Keep pressing C switch.	2.0 V
					Keep pressing <b>5</b> switch.	3.0 V
					Except for above.	5.0 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage

### < ECU DIAGNOSIS INFORMATION >

## [BOSE AUDIO W/O SURROUND SOUND]

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	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
20 (GR)	Ground	Ground	_	Ignition switch ON	_	0 V
24 (R)	39 (B)	AUX sound signal LH	Input	Ignition switch ON	When front AUX mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
26 (W)	40 (R)	Sound signal LH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 + 2ms SKIB3609E
27 (B)	41 (G)	Sound signal RH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 + 2ms SKIB3609E
37	_	Shield	_	_	_	_
38 (W)	39 (B)	AUX sound signal RH	Input	Ignition switch ON	When front AUX mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
42	_	Shield	_	_	_	_
53	Ground	Parking brake signal	Input	Ignition switch	Parking brake is applied.	0 V
(G)	Giodila	Faiking brake signal	Input	ON	Parking brake is released.	4.5 V
55 (W)	Ground	Composite image signal ground	_	Ignition switch ON	_	0 V
56 (B)	Ground	Composite image signal	Output	Ignition switch ON	At DVD image is displayed.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
57 (BG)	_	I-Key memory	_	_	_	_

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
58 (G)	_	AV-ACC (DCM) —		_	_	_
60 (W)	Ground	Microphone VCC	Output	Ignition switch ON	_	5.0 V
61 (W)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 •••1ms
62 (P)	_	CAN-L	Input/ Output	_	_	_
63 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_
64 (LG)	_	M CAN-L TRM	_	_	_	_
67 (P)	_	MR output	_	_	_	_
68 (LG)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
69	Ground	d Reverse signal	Input	Ignition switch ON	Selector lever is in R position.	Battery voltage
(R)	Cround				Selector lever is in other than R position.	0 V
70 (BG)	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).
71	_	Shield —		_	_	JSNIA0012GB
72 (R)	Ground	Composite image synchro- nizing signal	Output	Ignition switch ON	At DVD image is displayed.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4

### < ECU DIAGNOSIS INFORMATION >

## [BOSE AUDIO W/O SURROUND SOUND]

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	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
75 (B)	59	Microphone signal	Input	Ignition switch ON	Give a voice.	(V) 2.5 2.0 1.5 1.0 0.5 0 + 2ms
76	_	Shield	_	_	_	_
77 (B)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 +-1ms PKIB5039J
78 (L)	_	CAN-H	Input/ Output	_	_	_
79 (SB)	Ground	Dimmer signal	Input	Ignition switch ON	Either of the following conditions Lighting switch is OFF Lighting switch is 1st or 2nd, and the area around the vehicle is bright (shine a light on the optical sensor)  Lighting switch is 1st or 2nd, and the area around the vehicle is dark (block the light from the optical	0 V  Battery voltage
80 (SB)	_	M CAN-H TRM	_	_	sensor)	<del>-</del>
91 (W)	Ground	AUX image signal	Input	Ignition switch ON	At front AUX image is displayed.	(V) 0. 4 0 -0. 4 +40µs skib2251J
92 (B)	Ground	AUX image signal ground	_	Ignition switch ON		0 V
94	_	Shield	_		_	_
97 (Y)	Ground	Disk eject signal	Input	Ignition switch ON	Pressing the eject switch.  Except for above.	0 V 5.0 V
98 (V)	Ground	Switch ground	_	Ignition switch ON	_	0 V

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	(Арргох.,		(Approx.)
105 (W)	Ground	Composite image signal ground	_	Ignition switch ON	_	0 V
106	_	Shield	_	_	_	_
107 (B)	Ground	Ground Composite image signal		Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	(V) 0.4 0 -0.4 +40µs
137 (G)	_	V BUS signal	_	_	_	_
138 (W)		USB D+ signal		_	_	_
139 (R)	_	USB ground	_	_	_	_
140 (L)	_	USB D– signal	_	_	_	_
141	_	Shield — — —		_		
142 (B)		FM sub	Input	_	_	_
143 (B)	Ground	Antenna amp. ON signal	Ignition amp. ON signal Input switch ON		_	Battery voltage
144 (B)	_	AM-FM main	Input	_	_	_
145 (W)	_	USB D- signal	Input	_	_	_
146 (L)	_	USB VBUS signal	Input	_	_	_
151 (B)		U-VOICE ground	Input	_	_	
152 (B)		U-VOICE signal	Input	_	_	_
153 (B)	Ground	GPS antenna signal	Input	Ignition switch ON	Not connected GPS antenna connector.	5.0 V
159	_	Shield	_	_	_	_
160 (B)		D-VOICE signal	_	_	_	
161	_	Shield	_	_	_	_
162	_	Shield			_	
163	_	Shield	_	_	_	
164 (B)	Ground	RGB digital image signal (–)	Output	Ignition switch ON	Not connected connector.	1.3 V

#### < ECU DIAGNOSIS INFORMATION >

#### [BOSE AUDIO W/O SURROUND SOUND]

	minal color)	Description		Condition		Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
165 (B)	Ground	RGB digital image signal (+)	Output	Ignition switch ON	Not connected connector.	1.3 V
166	Ground	Satellite radio antenna sig- nal	Input	Ignition switch ON	Not connected satellite antenna connector.	5.0 V

Fail-Safe INFOID:0000000008486410

When the ambient temperature becomes extremely low or extremely high, AV control unit displays a message and limits the function of the AV control unit.

#### **FAIL-SAFE CONDITIONS**

When the ambient temperature is -20°C (-4°F) or lower, or when it is 70°C (158°F) or higher.

#### Display

The following messages are displayed during fail-safe:

Fail-safe mode	Display
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.

#### **DESCRIPTION OF CONTROLS**

Function	1	Fail-safe mode activated		
	Operation	A/C and AV switch assembly can be operated.		
Air conditioner	Display	<ul> <li>LEDs of A/C and AV switch assembly illuminate.</li> <li>Temperature, mode and blower speed are displayed in a simplified mode.</li> </ul>		
Audio	Operation	Only ON/OFF and volume control operations of A/C and AV switch assembly are available.		
Audio	Display	"Fail-safe mode" is displayed.		
Camara	Operation	Image tone cannot be controlled.		
Camera	Display	Cannot be superimposed. (warning display, tone control display)		
Hands-free phone	Operation	Inoperative.		
Navigation Operation		Inoperative.		
Self diagnosis		Displays in a simplified mode.		
CONSULT diagnosis	<b>3</b>	Inoperative.		

#### **Ability Operation Mode**

If HDD data can be read, "Fail-safe mode" is displayed and functions listed above can be operated.

**DTC Index** INFOID:0000000008486411

#### SELF-DIAGNOSIS RESULTS DISPLAY ITEM

CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-274, "AV CONTROL UNIT : DTC Logic"
U1010: CONTROL UNIT (CAN)	AV-275, "AV CONTROL UNIT : DTC Logic"
U1200: CONT UNIT	AV-276, "DTC Logic"
U1201: GYRO NO CONN	AV-277, "DTC Logic"
U1202: G-SENSOR NO CONN	AV-278, "DTC Logic"

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### < ECU DIAGNOSIS INFORMATION >

CONSULT Display	Reference Page
U1204: GPS COMM	AV-279, "DTC Logic"
U1205: GPS ROM	AV-280, "DTC Logic"
U1206: GPS RAM	AV-281, "DTC Logic"
U1207: GPS RTC	AV-282, "DTC Logic"
U1216: CAN CONT	AV-283, "DTC Logic"
U1217: BLUETOOTH MODULE	AV-284, "DTC Logic"
U1218: HDD CONN	AV-285, "DTC Logic"
U1219: HDD READ	AV-286, "DTC Logic"
U121A: HDD WRITE	AV-287, "DTC Logic"
U121B: HDD COMM	AV-288, "DTC Logic"
U121C: HDD ACCESS	AV-289, "DTC Logic"
U121D: DSP CONN	AV-290, "DTC Logic"
U121E: DSP COMM	AV-291, "DTC Logic"
U1225: USB CONTROLLER	AV-292, "DTC Logic"
U1227: DVD COMM	AV-293, "DTC Logic"
U1228: SUB CPU CONN	AV-294, "DTC Logic"
U1229: iPod CERTIFICATION	AV-295, "DTC Logic"
U122A: CONFIG UNFINISH	AV-296, "DTC Logic"
U122E: Built-in AUDIO CONN	AV-297, "DTC Logic"
U1231: AMP TEMP	AV-298, "DTC Logic"
U1232: ST ANGLE SEN CALIB	AV-299, "DTC Logic"
U1243: FRONT DISP CONN	AV-300, "DTC Logic"
U1244: GPS ANTENNA CONN	AV-302, "DTC Logic"
U1258: XM ANTENNA CONN	AV-303, "DTC Logic"
U125A: 3RD DISP CONN	AV-304, "DTC Logic"
U1263: USB OVERCURRENT	AV-305, "DTC Logic"
U1264: ANTENNA AMP TERMINAL (OPEN or SHORT)	AV-306, "DTC Logic"
U1265: AMP ON TERMINAL (GND-SHORT or VB-SHORT)	AV-307, "DTC Logic"
U1300: AV COMM CIRCUIT U1240: SWITCH CONN	
U1300: AV COMM CIRCUIT U124E: AMP CONN	
U1300: AV COMM CIRCUIT U1246: VIDEO DIST CONN	
U1300: AV COMM CIRCUIT     U125B: AROUND CAMERA CONN	
<ul><li>U1300: AV COMM CIRCUIT</li><li>U125C: SONAR CONN</li></ul>	AV-308, "Description"
<ul> <li>U1300: AV COMM CIRCUIT</li> <li>U1240: SWITCH CONN</li> <li>U125C: SONAR CONN</li> <li>U125B: AROUND CAMERA CONN</li> <li>U1246: VIDEO DIST CONN</li> </ul>	Av-300, Description
<ul> <li>U1300: AV COMM CIRCUIT</li> <li>U1240: SWITCH CONN</li> <li>U124E: AMP CONN</li> <li>U125C: SONAR CONN</li> <li>U125B: AROUND CAMERA CONN</li> <li>U1246: VIDEO DIST CONN</li> </ul>	

### < ECU DIAGNOSIS INFORMATION >

## [BOSE AUDIO W/O SURROUND SOUND]

CONSULT Display	Reference Page	_
U1310: CONTROL UNIT (AV)	AV-318, "DTC Logic"	- A
U1601: FL-DOOR WOOFER/TWEETER (OPEN, SHORT, GND-SHORT)		В
U1603: FL-DOOR WOOFER/TWEETER (VB-SHOR)	AV-319, "DTC Logic"	D
U1609: FR-DOOR WOOFER/TWEETER (OPEN, SHORT, GND-SHORT)	AV-319, DTC Logic	С
U160B: FR-DOOR WOOFER/TWEETER (VB-SHOR)		Б
U1627: F-INST L-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-320, "DTC Logic"	– D
U162F: F-INST R-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-320, DTC Logic	Е
U162A: F-INST C-SQAWK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-321, "DTC Logic"	_
U1684: 2L-DOOR SPEAKER/TWEETER (OPEN, SHORT, GND-SHORT)		F
U1687: 2L-DOOR SPEAKER/TWEETER (VB-SHOR)	AV 222 UDTO Logicu	G
U162C: 2R-DOOR SPEAKER/TWEETER (OPEN, SHORT, GND-SHORT)	AV-322, "DTC Logic"	
U162F: 2R-DOOR SPEAKER/TWEETER (VB-SHOR)		Н
U175D: R-LUGGAGE L-WOOFER (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-323, "DTC Logic"	-
U176A: R-ROOF L-WK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV 224 UDTO Logicu	_
U1772: R-ROOF R-WK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-324, "DTC Logic"	J

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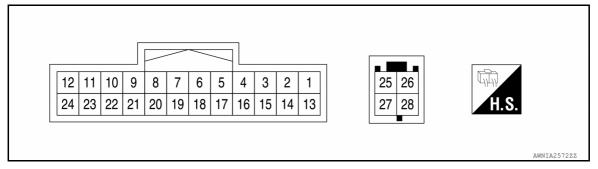
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## **DISPLAY UNIT**

Reference Value

## TERMINAL LAYOUT



#### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
6	_	Shield	_	_	_	_	
7	_	Shield	_	_	_	_	
8 (B)	Ground	Camera image signal	Input	Ignition switch ON	At camera image is displayed.	(V) 0. 4 0 -0. 4 -40µs SKIB2251J	
9 (B)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	(V) 4 2 0 +-1ms PKIB5039J	
10 (W)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 •••1ms	
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
12 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	

### **DISPLAY UNIT**

### < ECU DIAGNOSIS INFORMATION >

## [BOSE AUDIO W/O SURROUND SOUND]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
18 (B)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	(V) 0. 4 0 -0. 4 -40µs skib2251J
19 (W)	Ground	Composite image signal ground	_	Ignition switch ON	_	0 V
20 (R)	Ground	Composite image synchro- nizing signal	Input	Ignition switch ON	_	(V) 4 0 + 20μs SKIB0825E
22	_	Shield	_		_	_
23 (P)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
25	_	Shield	_	_	_	_
26	_	Shield	_		_	_
27 (B)	_	RGB digital image signal (–)	Input	_	_	_
28 (B)	_	RGB digital image signal (+)	Input	_	_	_

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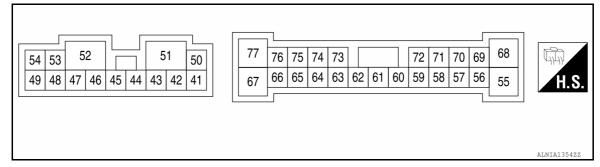
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## BOSE AMP.

Reference Value

#### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	rminal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
41 (R)	42 (G)	Sound signal tweeter LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
44 (G)	43 (W)	Sound signal rear speaker RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
45 (G)	46 (W)	Sound signal tweeter RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 +2ms SKIB3609E
47 (B)	_	Ground	_	Ignition switch ON	_	0 V
50 (LG)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
51 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
52 (B)	_	Ground	_	Ignition switch ON	_	0 V

### **BOSE AMP.**

## [BOSE AUDIO W/O SURROUND SOUND]

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	e color)	Description	Г		Condition	Reference value
+	-	Signal name	Input/ Output		Condition	(Approx.)
53 (W)	48 (G)	Sound signal rear speaker LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
54 (G)	49 (W)	Sound signal rear door speaker RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
57 (W)	56 (B)	Sound signal woofer	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms skib3609E
58 (G)	59 (R)	Sound signal front door speaker LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
60 (W)	Ground	BOSE amp. ON signal	Input	Ignition switch ON	_	Battery voltage
61	_	Shield	_	_	_	_
62 (W)	_	_	_	_	_	_
64 (B)	63 (W)	Sound signal rear LH	Input	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
66 (B)	65 (W)	Sound signal rear RH	Input	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E

## **BOSE AMP.**

	rminal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
68 (P)	55 (R)	Sound signal rear door speaker LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E	
69 (P)	70 (R)	Sound signal center speaker	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E	
71 (W)	72 (P)	Sound signal front door speaker RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E	
73 (B)	74 (W)	Sound signal front RH	Input	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E	
75 (B)	76 (W)	Sound signal front LH	Input	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E	

< ECU DIAGNOSIS INFORMATION >

[BOSE AUDIO W/O SURROUND SOUND]

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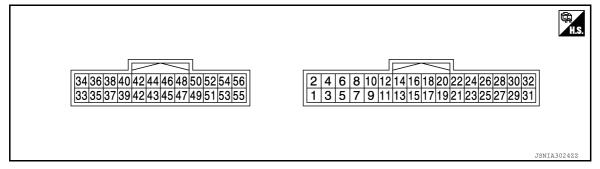
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# **VIDEO DISTRIBUTOR**

Reference Value

#### **TERMINAL LAYOUT**



## PHYSICAL VALUES

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
1 (B)	_	Ground	_	Ignition switch ON	_	0 V	
2 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
3 (B)	_	Ground	_	Ignition switch ON	_	0 V	
4 (W)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
5 (BR)	Ground	Cont. ground for headrest display unit RH	_	Ignition switch ON	_	0 V	
6	Ground	ACC signal for headrest display unit RH	Output	Ignition switch OFF	_	3.3 V	
(L)	Glound		Japan	Ignition switch ACC	_	0 V	
7 (SB)	Ground	Cont. ground for headrest display unit LH	_	Ignition switch ON	_	0 V	
8	Ground	ACC signal for headrest	Output	Ignition switch OFF	_	3.3 V	
(BR)	Ground	display unit LH		Ignition switch ACC	_	0 V	
9	Ground	Image switch signal for	Input	Ignition	When DVD, USB or front AUX image is displayed on headrest display unit RH.	0.5 V	
(SB)	Giound	Ground headrest display unit RH		switch - ON	When rear AUX image is displayed on headrest display unit RH.	4.5 V	

<u> </u>	DIACING	OSIO INI ORIMATION >			<u> </u>	<u> </u>
	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
10		Image switch signal for	Input	Ignition switch	When DVD, USB or front AUX image is displayed on headrest display unit LH.	0.5 V
(L)	Glound	headrest display unit LH	три	ON	When rear AUX image is displayed on headrest display unit LH.	4.5 V
14 (R)	15 (G)	Headphone sound signal RH for headrest display unit RH	Output	Ignition switch ON	Output headphone sound from headrest display unit RH to headphone.	(V) 1 0 -1 + 2ms SKIB3609E
16 (B)	17 (W)	Headphone sound signal LH for headrest display unit RH	Output	Ignition switch ON	Output headphone sound from headrest display unit RH to headphone.	(V) 1 0 -1 + 2ms SKIB3609E
18 (V)	Ground	AV ground for headrest display unit RH	_	Ignition switch ON	_	0 V
19 (V)	Ground	AV ground for headrest display unit LH	_	Ignition switch ON	_	0 V
20 (B)	21 (G)	Headphone sound signal RH for headrest display unit LH	Output	Ignition switch ON	Output headphone sound from headrest display unit LH to headphone.	(V) 1 0 -1 2ms SKIB3609E
22 (W)	23 (R)	Headphone sound signal LH for headrest display unit LH	Output	Ignition switch ON	Output headphone sound from headrest display unit LH to headphone.	(V) 1 0 -1 2ms SKIB3609E
27 (W)	Ground	Composite image signal ground for headrest display unit RH	_	Ignition switch ON	_	0 V
28 (B)	Ground	Composite image signal for headrest display unit RH	Output	Ignition switch ON	When DVD, USB, front AUX or rear AUX image is displayed on headrest dis- play unit RH.	0. 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

### < ECU DIAGNOSIS INFORMATION >

## [BOSE AUDIO W/O SURROUND SOUND]

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	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
29	_	Shield	_	_	_	_
30	_	Shield	_	_	_	_
31 (P)	Ground	Composite image signal ground for headrest display unit LH	_	Ignition switch ON	_	0 V
32 (L)	Ground	Composite image signal for headrest display unit LH	Output	Ignition switch ON	When DVD, USB, front AUX or rear AUX image is displayed on headrest dis- play unit LH.	(V) 0. 4 0 −0. 4 → 40μs SKIB2251J
33 (W)	Ground	Composite image signal ground	_	Ignition switch ON	_	0 V
34 (B)	Ground	Composite image signal	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	(V) 0. 4 0 -0. 4 -40µs SKIB2251J
35	_	Shield		_	_	_
40 (B)	39 (W)	AUX image signal	Input	Ignition switch ON	When rear AUX image is displayed on headrest display unit LH or RH.	0.4 0 -0.4 -0.4 -0.8
41	_	Shield	_	_	_	_
45 (W)	46 (R)	Sound signal LH	Input	Ignition switch ON	When DVD, USB or front AUX mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 + 2ms SKIB3609E
47 (B)	48 (G)	Sound signal RH	Input	Ignition switch ON	When DVD, USB or front AUX mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 + 2ms SKIB3609E
49	_	Shield	_	_	_	_
53	_	Shield	_	_	_	_

### < ECU DIAGNOSIS INFORMATION >

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
54 (B)	56 (W)	AUX sound signal LH	Input	Ignition switch ON	When rear AUX mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 * • 2ms SKIB3609E
55 (R)	56 (W)	AUX sound signal RH	Input	Ignition switch ON	When rear AUX mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 + 2ms SKIB3609E

## **HEADREST DISPLAY UNIT**

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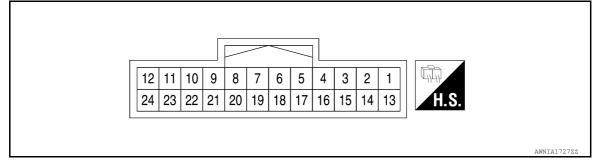
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## **HEADREST DISPLAY UNIT**

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
3	_	Shield	_	_	_	_	
4 (P)*1 4 (Y)*2	Ground	Composite image signal ground	_	Ignition switch ON	_	0 V	
6 (SB)*1 6 (BR)*2	- Ground	Cont. ground	_	Ignition switch ON	_	0 V	
7 (L) <sup>*1</sup>		Image switch signal	Output	Ignition switch	When DVD, USB or front AUX image is displayed on headrest display unit.	0.5 V	
7 (LG) <sup>*2</sup>	Ground	image switch signal		ON	When rear AUX image is displayed on headrest display unit.	4.5 V	
9 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_	
10 (SB)	_	AV communication signal (H)	Input/ Output	_	_	_	
12 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
13 (B)	1 (W)	Headphone sound signal LH	Input	Ignition switch ON	Headphone sound output.	(V) 1 0 -1 + 2ms	

## **HEADREST DISPLAY UNIT**

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
14 (R)	2 (G)	Headphone sound signal RH	Input	Ignition switch ON	Headphone sound output.	(V) 1 0 -1 2ms SKIB3609E	
15	_	Shield	_	_	_	_	
16 (L) <sup>*1</sup>				Ignition	When DVD, USB or front	(V) 0. 4	
16 (O) <sup>*2</sup>	Ground	Composite image signal	Input	switch ON	AUX image is displayed on headrest display unit.	0 -0. 4 -40μs skib2251J	
17 (P)*1 17 (SB)*2	Ground	AV ground	_	Ignition switch ON		0 V	
19	Ground	ACC signal	Input	Ignition switch OFF	_	3.3 V	
(BR)	Ground	700 Signal	mpat	Ignition switch ACC	_	0 V	
20*2		Shield	_	_	_	_	
21 (LG)	_	AV communication signal (L)	Input/ Output		_	_	
22 (SB)	_	AV communication signal (H)	Input/ Output		_		
24 (SB)*1	Ground	Battery power supply		Ignition		Battery voltage	
24 (Y)*2	Ground	ballery power supply	Input	switch OFF	_		

<sup>\*1:</sup> Driver seat

<sup>\*2:</sup> Passenger seat

< ECU DIAGNOSIS INFORMATION >

[BOSE AUDIO W/O SURROUND SOUND]

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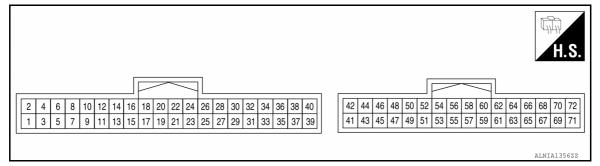
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## AROUND VIEW MONITOR CONTROL UNIT

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 (LG)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
4 (P)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
11 (G)	_	Signal ground	_	_	_	_
13 (P)	_	Camera direct OFF	_	_	_	_
14 (BG)	_	RX	_	_	_	_
19 (B)	_	AV communication signal (H)	Input/ Output	_	_	_
20 (W)	_	AV communication signal (L)	Input/ Output	_	_	_
23	_	Shield	_	_	_	_
25 (LG)	Ground	Reverse signal	Input	Ignition switch ON	R position Other than R position	Battery voltage 0 V
27 (B)	_	V-CAN (H)	_	_	_	_
28 (W)	_	V-CAN (L)	_	_	_	_
29	_	Shield	_	_	_	_
30 (W)	_	Mirror signal 2	_	_	_	_

### < ECU DIAGNOSIS INFORMATION >

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
32 (G)	_	Mirror signal 1	_	_	_	_
43 (B)	_	External video output	_	_	_	_
44	_	Shield	_	_	_	_
47 (B)	Ground	Camera image signal	Output	Ignition switch ON	At camera image display	(V) 0. 4 0 -0. 4 SKIB2251J
48	_	Shield	_	_	_	_
49 (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
50 (B)	Ground	Rear camera power supply	Output	lgnition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V
52 (R)	Ground	Rear camera ground	_	Ignition switch ON	_	0 V
53 (G)	54	Rear camera image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 -40 μ s
55 (B)	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 1.0 μs JSNIA0836GB
56 (W)	Ground	Side camera driver side power supply	Output	lgnition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V
58 (G)	Ground	Side camera driver side ground	_	Ignition switch ON	_	0 V

### < ECU DIAGNOSIS INFORMATION >

	minal e color)	Description			O constitues	Reference value	А
+	_	Signal name	Input/ Output		Condition	(Approx.)	
59 (R)	60	Side camera driver side image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 +40 μs JSNIA0834GB	B C
61 (W)	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 10 10 10 10 10 10 10 10 10 10 10 10 1	E
62 (B)	Ground	Side camera passenger side power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V	G
64 (R)	Ground	Side camera passenger side ground	_	Ignition switch ON	_	0 V	Н
65 (G)	66	Side camera passenger side image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 -40 μs JSNIA0834GB	J
67 (B)	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 1.0 μs JSNIA0836GB	K L
68 (W)	Ground	Front camera power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V	AV
70 (G)	Ground	Front camera ground	_	Ignition switch ON	_	0 V	0
71 (R)	72	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	Ρ

< ECU DIAGNOSIS INFORMATION >

## [BOSE AUDIO W/O SURROUND SOUND]

DTC Index

CONSULT Display	Reference Page
U1302: CAMERA SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY	AV-310, "DTC Logic"
U1303: LED SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY	AV-314, "DTC Logic"
U1304: NON-COMPLETION OF THE CALIBRATION	AV-316, "DTC Logic"
U1305: NON-COMPLETION OF THE WRITE CONFIGURATION	AV-317, "DTC Logic"

< ECU DIAGNOSIS INFORMATION >

[BOSE AUDIO W/O SURROUND SOUND]

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# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

CONSULT	MONITOR	ITEM

Monitor Item		Condition	Value/Status
VEHICLE SPEED	While driving	Displays the vehicle speed	
SONAR C/U POWER SUPPLY	Engine running		Power supply voltage of the Sonar C/U
SENSOR VOLTAGE	Engine running		Displays sensor voltage
DETECTION MODE	Ignition switch	Displays detection mode	Mode 1
DETECTION MODE	ON	Displays detection mode	Mode 2
SW OPRT AFTR IGN ON	Ignition switch	Switch operation after ignition ON	Yes
SW OFICE ALTICION ON	ON	Switch operation after ignition ON	No
SONAR TEMPORARY OFF	Ignition switch	Sonar system not in use	Yes
SONAR TEMPORART OFF	ON	Sonar system in use	No
SONAR PERMANENT OFF	Ignition switch	Sonar system has malfunctioned	Yes
OUNTIL F LINIVIAINEINT OFF	ON	Sonar system has no malfunction	No
	lanition awitch	When the selector lever is in "P", "N" position	On
P N RANGE	Ignition switch ON	When the selector lever is in any position other than "N", "P"	Off
LED	Ignition switch ON	Led is illuminated	On
LED		Led is not illuminated	Off
TDAILED CONNECT	Ignition switch	If trailer connector is in use	CON
TRAILER CONNECT	ON	If trailer connector is not in use	N CON
DEVEDSE DANCE	Ignition switch	When the selector lever is in "R"	On
REVERSE RANGE	ON	When the selector lever is in any position other than "R"	Off
		When a sensor is abnormal.	ERROR
	Ignition switch ON	When a sensor is not detection.	LV. 0
COR[RL]		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
00 (I, 12)		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CEN[RL]/CEN[R]->	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
COR[RL]	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3

### < ECU DIAGNOSIS INFORMATION >

Monitor Item		Value/Status	
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CEN[RL]/CEN[R]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
OLIVINEFOLIVIN	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CEN[RL]-> CEN[RR]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
	Ignition switch ON	When a sensor is not detection.	LV. 0
CEN[RR]-> CEN[RL]		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
o(,,		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CEN [RR]		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CEN[RR]/CEN[R]->	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
COR[RR]	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
COR[RR]-> CEN[RR]/	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
CEN[R]	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3

< ECU DIAGNOSIS INFORMATION >

[BOSE AUDIO W/O SURROUND SOUND]

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Monitor Item		Value/Status	
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CORIRRI	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
COR[RR]	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
COR[FL]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
oo. qj	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
COR[FL]-> CEN[FL]/CEN[F]	Ignition switch ON	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CEN[FL]/CEN[F]-> COR[FL]		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.7 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 1
CEN[FL]/CEN[F]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 2
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 3
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 4
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CEN[FL]-> CEN[FR]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3

Revision: March 2012 AV-207 2013 Infiniti JX

#### < ECU DIAGNOSIS INFORMATION >

Monitor Item		Condition	Value/Status	
		When a sensor is abnormal.	ERROR	
		When a sensor is not detection.	LV. 0	
CEN[FR]-> CEN[FL]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1	
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2	
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3	
		When a sensor is abnormal.	ERROR	
		When a sensor is not detection.	LV. 1	
CEN[FR]	Ignition switch ON	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 2	
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV.3	
		When a sensor is abnormal.	ERROR	
		When a sensor is not detection.	LV. 0	
CEN[FR]/CEN[F]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1	
->COR[FR]	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV.2	
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3	
	Ignition switch ON	When a sensor is abnormal.	ERROR	
		When a sensor is not detection.	LV. 0	
COR[FR]-> CEN[FR]/ CEN[F]		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 1	
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3	
		When a sensor is abnormal.	ERROR	
		When a sensor is not detection.	LV.0	
COR [FR]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1	
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2	
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3	
RVRB TIME COR[RL]		Corner rear left		
VRB TIME COR[RR]		Corner rear right		
RVRB TIME CEN[RL]		Center rear left		
RVRB TIME CEN[RR] Ignition sv		Center rear right	Distance in time to	
RVRB TIME COR[FL]	ON	Corner front left	obstacle (ms)	
RVRB TIME COR[FR]		Corner front right		
RVRB TIME CEN[FL]		Center front left		
RVRB TIME CEN[FR]		Center front right		

<sup>\*:</sup> Even when a buzzer (backward) is output condition, this item is indicated as OFF.

< ECU DIAGNOSIS INFORMATION >

[BOSE AUDIO W/O SURROUND SOUND]

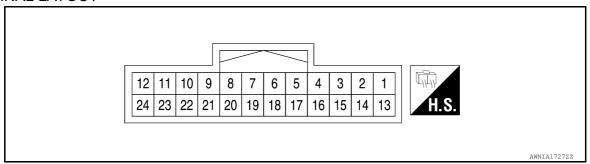
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### TERMINAL LAYOUT



#### PHYSICAL VALUES

	inal No. e color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
3 (R)	13 (B)	Outer 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)	13 (B)	Outer 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  JSNIA0837GB
5 (B)	_	V-CAN (H)	Input/ Output	_	_	_
6 (W)	_	V-CAN (L)	Input/ Output	_	_	_
9 (W)	14 (B)	Inner 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
10 (W)	14 (B)	Outer 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
12 (LG)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage

### < ECU DIAGNOSIS INFORMATION >

## [BOSE AUDIO W/O SURROUND SOUND]

	nal No. color)	Description		Condition		Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
15 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
19 (BR)	20 (LG)	Buzzer	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	Battery voltage
21 (W)	14 (B)	Inner 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
22 (W)	14 (B)	Outer 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

DTC Index

CONSULT Display	Reference Page		
U1000: CAN COMM CIRCUIT	AV-274, "SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : DTC Logic"		
U1010: CONTROL UNIT (CAN)	AV-275, "SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): DTC Logic"		
B2720: REAR LEFT SIDE EXTERNAL SENSOR	AV-325, "DTC Logic"		
B2721: REAR LEFT SIDE INTERNAL SENSOR	AV-326, "DTC Logic"		
B2722: REAR RIGHT SIDE INTERNAL SENSOR	AV-327, "DTC Logic"		
B2723: REAR RIGHT SIDE EXTERNAL SENSOR	AV-328, "DTC Logic"		
B2724: ECU	AV-329, "DTC Logic"		
B2725: REAR BUZZER	AV-330, "DTC Logic"		
B2729: FRONT LEFT SIDE EXTERNAL SENSOR	AV-332, "DTC Logic"		
B272C: FRONT RIGHT SIDE EXTERNAL SENSOR	AV-333, "DTC Logic"		

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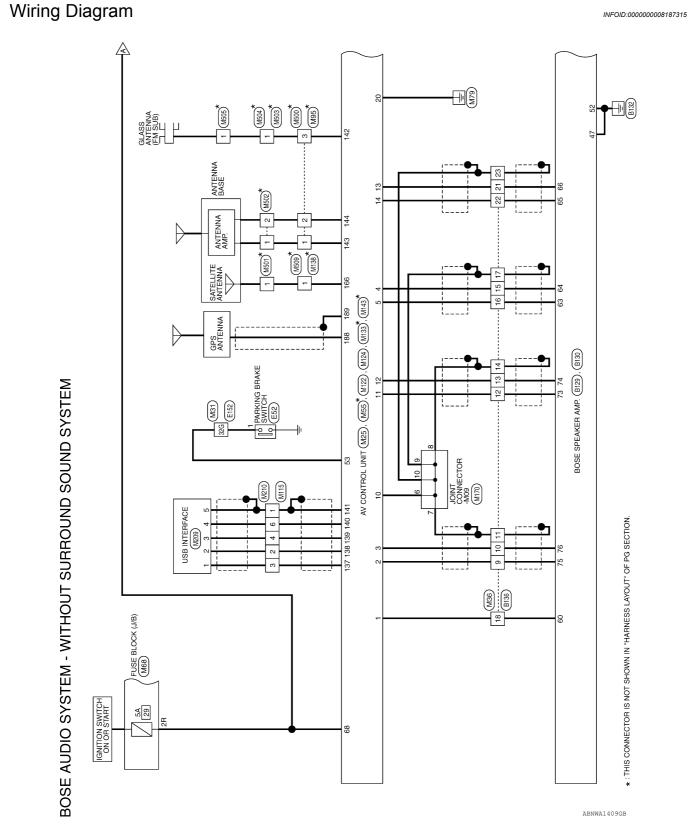
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# WIRING DIAGRAM

## **BOSE AUDIO W/O SURROUND SOUND**

....



#### REAR SIDE SPEAKER RH (8153) INSTRUMENT PANEL TWEETER RH (M73) 3 43 INSTRUMENT PANEL TWEETER LH (M62) 44 7 7 SUBWOOFER (B73) 62 B43 B43 61 B139 D301 26 REAR DOOR SPEAKER RH D307 7 REAR DOOR SPEAKER LH D207 B130 12 BOSE SPEAKER AMP. (B129) 48 B140 B49 B51 D201 60 B140 B140 53 FRONT TWEETER RH (M111) FUSE BLOCK (J/B) FRONT DOOR SPEAKER RH (D112) 3 M158 D102 M10 Bitt 15A 51 FRONT TWEETER LH (M109) 15A 9 BATTERY 20 FRONT DOOR SPEAKER LH (D12) 3 M10 15 JOINT CONNECTOR -M10 M171 M167 ABNWA1410GB

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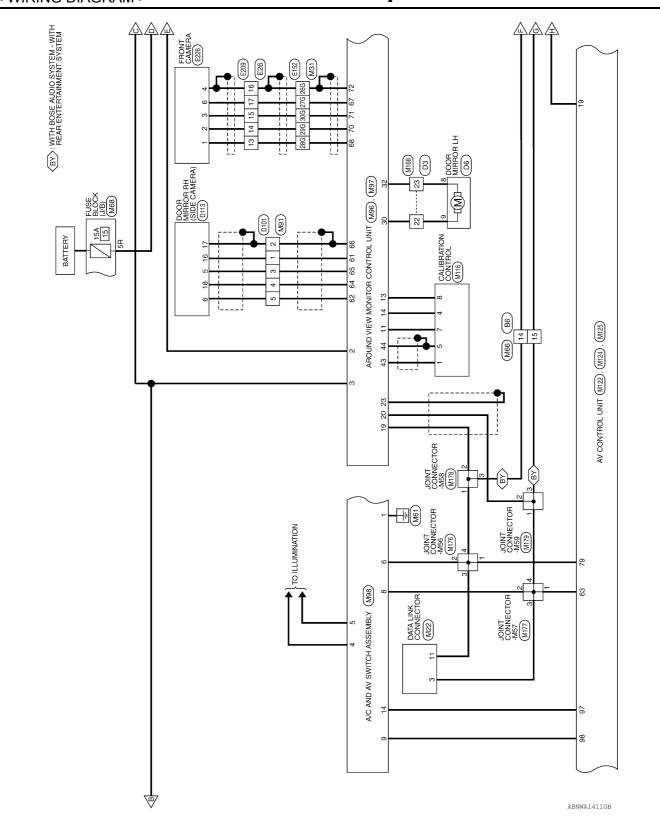
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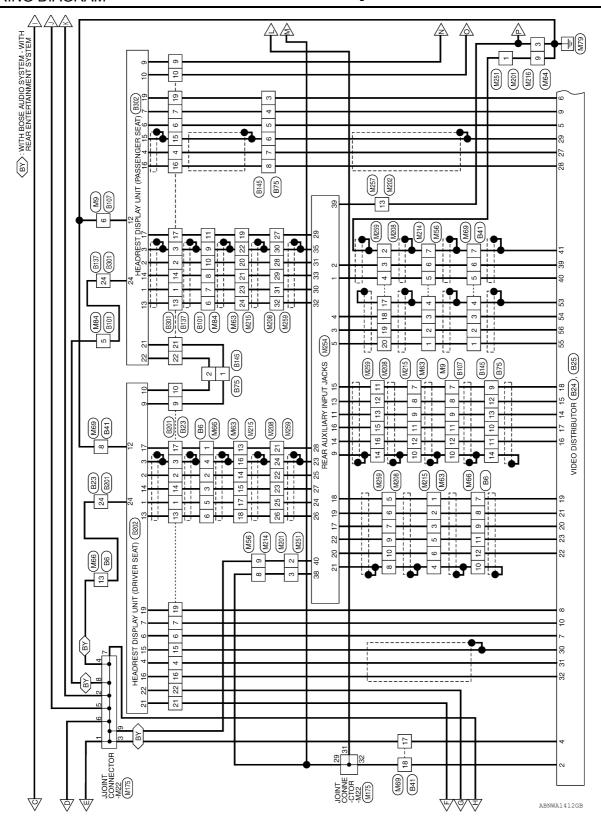
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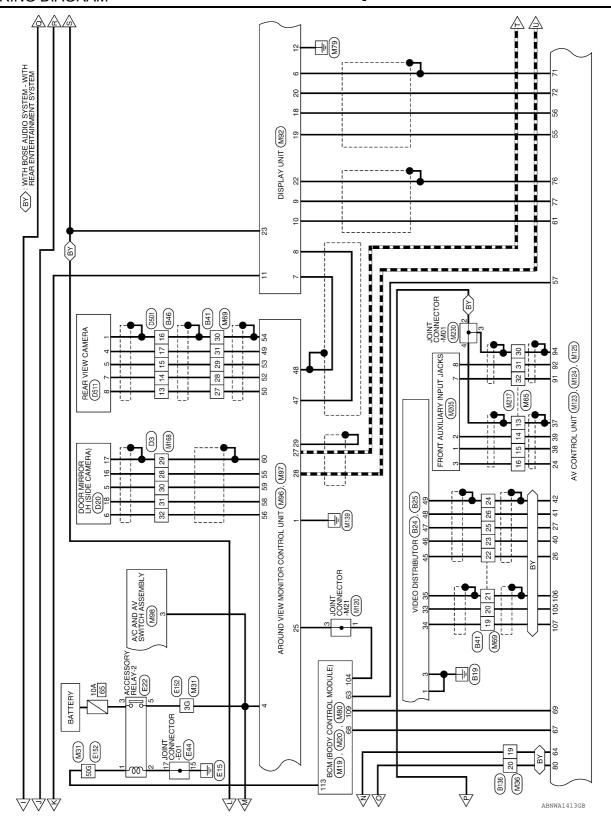
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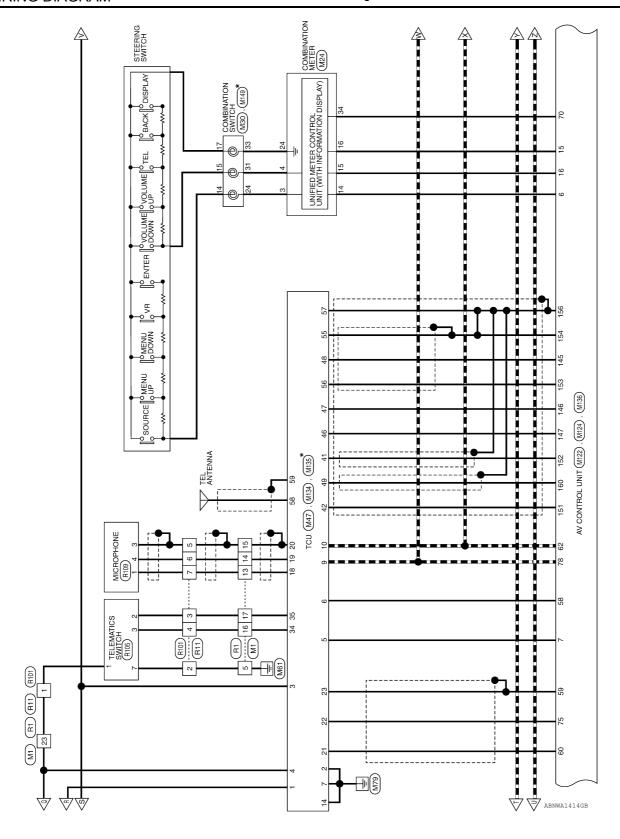
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Revision: March 2012 AV-215 2013 Infiniti JX



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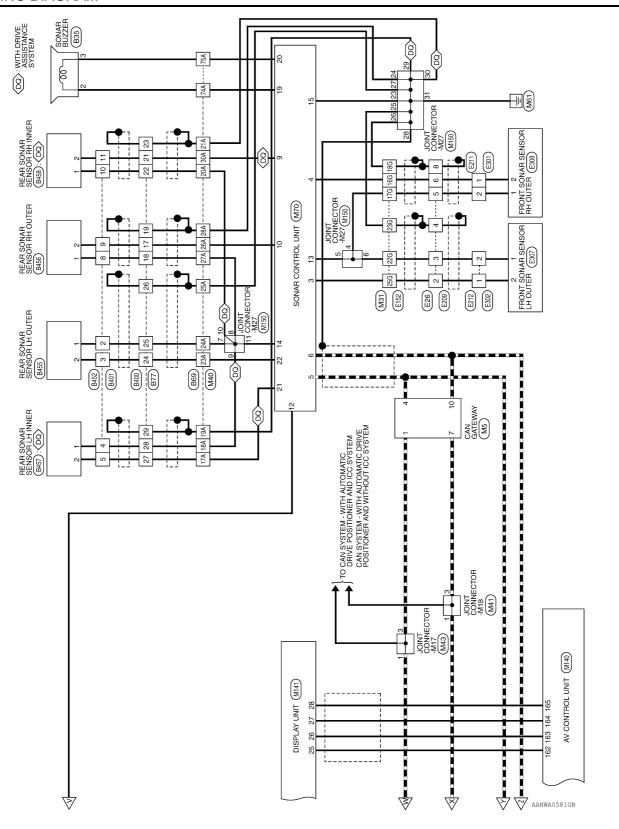
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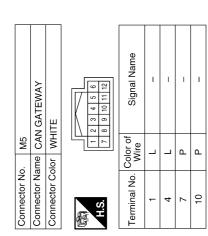
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[BOSE AUDIO W/O SURROUND SOUND]

#### < WIRING DIAGRAM >



Signal Name	_	-	I	_	I	I
Color of Wire	Œ	9	ŋ	Μ	Ь	>
Terminal No. Wire	11	12	13	14	15	16

SYSTEM		Connector Name FUSE BLOCK (J/B)	ITE	8P   5P   4P   3P   2P   1P   6P   5P   4P   13P   12P   10P   3P   8P   8P	Signal Name	ı	-
OUNC	Ψ	me FU	or WH	7P 6P 5P 4P 16P 13P	Color of Wire	>	٦
OUND SC	Connector No.	Connector Na	Connector Color WHITE	国 H.S.	Terminal No. Wire	14P	15P
SURR							
BOSE AUDIO SYSTEM - WITHOUT SURROUND SOUND SYSTEM		RE TO WIRE	ITE	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Signal Name	ı	ı
SYS	Ξ	me WIF	lor WH	2 3 4 3 14 15 16	Color of Wire	m	Ν
SE AUDIC	Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Wire	2	13
BOS							

Terminal No. 2 13 4 15 16 17 23

ш ≥ В SHIELD

œ ≥ ۵

	WIRE TO WIRE	ITE	5 4 3 2 1	14 13 12 11 10 9 8		Signal Name	ı	I	1	I	I	I	ı	ı
. M10		lor WHITE	9 2	16 15 1		Color of Wire	ŋ	٦	>	G	8	g	8	8
Connector No.	Connector Name	Connector Color	管	H.S.		Terminal No.	ဇ	4	2	9	7	8	6	10
					-									

		ŀ										
Connector No.	Š.	_	6W									
Connector Name   WIRE TO WIRE	Name	<u>۸</u>	Ν	Щ.	2	>	II.	ш				
Connector Color WHITE	Color	_	¥	E	l							
é			5		ΙN	l IV	117					
E	12 11 10 9	9	6	8	7	9	ß	4	m	2	-	
H.S.	24 23 22 21 20 19 18 17 16 15 14 13	22	21	20	19	92	17	16	15	14	13	
												,

Signal Name	ı	ı		ı	ı	1	ı
Color of Wire	GR	>	В	æ	SHIELD	M	В
Terminal No. Wire	9	7	8	6	10	11	12

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# [BOSE AUDIO W/O SURROUND SOUND]

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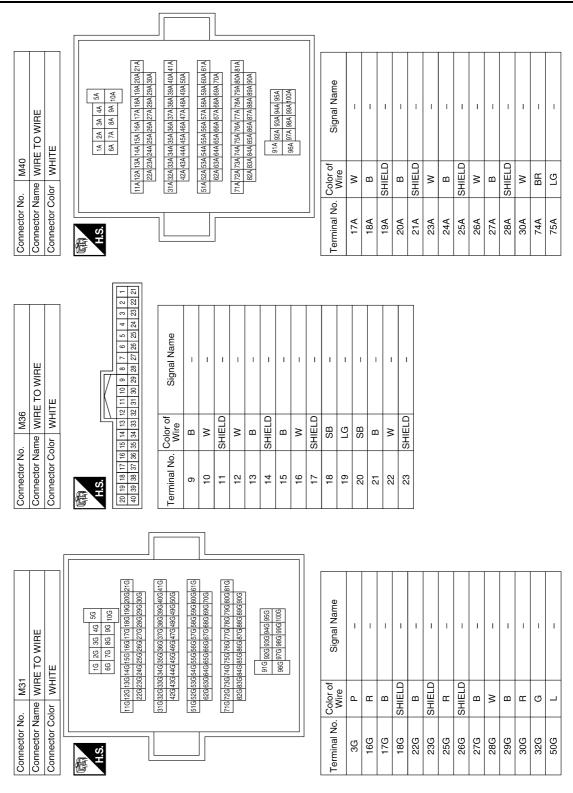
Connector No.  Connector Name Connector Color  H.S.  (80   59   56   56   56   56   58   57   56   55   58   57   56   55   58   58   58   58   58   58	ame BCM (F MODUL)	Connector No. M19  Connector Name BCM (BODY CONTROL MODULE)  Connector Color BLACK  H.S.  (60 39 38 57 56 55 54 53 52 51 50 49 48 47 46 44 43 42 41 50 77 77 77 77 77 77 77 77 77 77 77 77 77	Connector No. Connector Color Connector Color H.S.	1 1 1 1 1 <del></del>	M20 MODULE) BLACK	Connector No. Connector Color H.S.		M22 DATA LINK CONNECTOR WHITE  9 10 11 12 13 14   5   6   7   8	
Terminal No. 63 68	Color of Wire BG	Signal Name I-KEY LINK SIGNAL MR OUTPUT	Terminal No. 104	Color of Wire LG RE	Signal Name REVERSE LAMP OUT	Terminal No.	Color of Wire LG SB	Signal Name	
Connector No. Connector Name Connector Color	o. M24 ame COMBI olor WHITE	Connector No. M24  Connector Name COMBINATION METER  Connector Color WHITE	Connector No. M25 Connector Name GPS ANTENNA Connector Color PINK	me GPS AN	VTENNA	Connector No. Connector Name Connector Color	me COMB	Connector No. M30  Connector Name COMBINATION SWITCH  Connector Color GRAY	
H.S.  20 19 18 17 16 40 39 38 37 36	77 16 15 14 13 1: 37 36 35 34 33 3	(H.S.) 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 40 38 37 38 35 34 33 32 31 30 23 28 27 28 25 28 27 28 25 21 22 21	H.S.			所 H.S.		25 24 31 32 33	
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	
3	P BG	STRG SW INPUT 1	188	B SHIELD	1 1	24	P BG	1 1	
14	ŋ	STRG SW OUTPUT 1		_		33	<u>«</u>	1	
16	<b>⊗</b> B	STRG SW OUTPULZ STRG SW OUTPUT GND							
24	æ	STRG SW GND							
34	GR	SPEED 8 P /R							

ABNIA3525GB

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[BOSE AUDIO W/O SURROUND SOUND]

#### < WIRING DIAGRAM >



ABNIA3526GB

# [BOSE AUDIO W/O SURROUND SOUND]

Signal Name	1	ı	ı	ı	I	_	ı	_	_	I	ECALL SW	LED A	_	ı	ı	_	-
Color of Wire	1	1	1	ı	ı	-	1	ı	-	ı	ш	>	1	ı	ı	Ι	1
Ferminal No.	24	25	26	27	28	59	30	31	32	33	34	35	36	37	38	39	40

Signal Name	GND	_	V-CAN H	V-CAN L	-	_	-	AUDIO TYPE CONFIG 1	_	_	_	DON DIM	MIC SIG	MIC GND	MIC VCC DETECTION	DCM MIC SIG	DCM MIC GND
Color of Wire	В	-	Г	Ь	1	1	1	В	_	ı	-	M	В	SHIELD	Μ	В	SHIELD
Terminal No.	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23

M47	TCU	WHITE		
Connector No.	Connector Name TCU	Connector Color   WHITE	原 H.S.	

Signal Name	B+	GND	ACC	NSI	ACC OUT	AV ACC
Color of Wire	<b>\</b>	В	۵	ГG	G	១
Terminal No. Wire	1	7	က	4	5	9

ABNIA3527GB

M43	tor Name JOINT CONNECTOR-M1	WHITE	
tor No.	tor Name	tor Color	

Connector Name	tor Color	
Sonnec	Sonnector	癌



M41	Connector Name JOINT CONNECTOR-M18	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



Signal Name	1	1
Color of Wire	Ь	Ь
Terminal No.	Į.	3

Signal Name

**AV-221** Revision: March 2012 2013 Infiniti JX Α

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	Connector Name INSTRUMENT PANEL TWEETER LH	BROWN		Signal Name	_	-
M62	ne INS TW			Solor of Wire	g	≯
Connector No.	Connector Na	Connector Color	明.S.	Terminal No. Wire	1	2
		•				

Connector No.	). M64	
Connector Name	ıme WIF	WIRE TO WIRE
Connector Color	olor WHITE	ITE
H.S.	7 6 15 15	15 14 13 12 11 10 9 8
Terminal No. Wire	Color of Wire	Signal Name
3	В	-
6	В	=

Connector No.	M56
Connector Name	Connector Name   WIRE TO WIRE
Connector Color WHITE	WHITE

Signal Name	ı	Ι	I	-	-	I	ı	I	I
Color of Wire	В	Μ	В	SHIELD	В	Μ	SHIELD	Ь	٦
Terminal No. Wire	1	2	ဇ	4	9	9	7	8	6

Signal Name	ı	ı	-	ı	ı	_	1	1	ı	ı	-	_	I	I	I
Color of Wire	SHIELD	>	В	٦	ŋ	В	SHIELD	Ν	В	٦	g	В	SHIELD	8	В
Terminal No.	10	#	12	13	14	15	16	17	18	19	20	21	22	23	24

Connector No.	M55
Connector Name	Connector Name   AV CONTROL UNIT
Connector Color BLUE	BLUE

141	Signal Name	VBUS	USB GND	USB D+	USB D-	SHIELD
	Color of Wire	ŋ	8	ш	٦	SHIELD
是 H.S.	Terminal No.	137	138	139	140	141

8	WIRE TO WIRE	WHITE	9 8 7 6 5 4 3 2 1	21 20 19 18 17 16 15 14 13	Signal Name	1	ı	ı	ı	ı	1	1	ı	1
. M63			12 11 10	24 23 22 2	Color of Wire	SB	g	Œ	SHIELD	×	В	>	G	Œ
Connector No.	Connector Name	Connector Color		H.S.	Terminal No.	-	2	ဇ	4	5	9	7	8	6

ABNIA3528GB

## [BOSE AUDIO W/O SURROUND SOUND]

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< WIRING DIAGRAM >

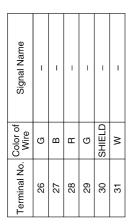
nector No.	o. M65		F	C A I	Color of	owol N loanio	T Cierron Control	Color of	O N Touri	
ector Na	ame WIR	nector Name   WIRE TO WIRE		nal No.	Wire	olgnal Name	l erminal No.	Wire	Signal Name	
nector Color	olor WHITE			13	SHIELD	1	30	SHIELD	I	
	_			14	В	ı	31	В	1	
				15	Ж	1	32	×	1	
16 1 32 3	15 14 13 12 31 30 29 28	11         10         9         8         7         6         5         4         3         2         1           27         26         25         24         23         22         21         20         19         18         17		16	>	I				1
nector No.	o. M66		Termi	Terminal No.	Color of	Signal Name	Connector No.	. M68		
ector Na	ame WIF	nector Name   WIRE TO WIRE			Wire		Connector Name		FUSE BLOCK (J/B)	
nector Color	olor WHITE	ITE		7	SB	– (WITH REAR ENTERTAINMENT	Connector Color	olor BROWN	Z	
٦						SYSTEM)	[			
<u>ν</u>	12 11 10 9 24 23 22 21	8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13		7	>	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	是 H.S.	7R 6R 5R 4 16R15R14R13	7R 6R 5R 4R () 3R 2R 1R 16R 15R 14R 13R 12R 11R 10R 9R 8R	
						– (WITH REAR		olor of		
minal No.	Wire	Signal Name		ω	മ	ENTERTAINMENT SYSTEM)	Terminal No.	Wire	Signal Name	
-	Г	-				– (WITHOUT REAR	2R	LG	1	
2	G	ı		80	В	ENTERTAINMENT	5R	Т	1	
		– (WITH REAR				SYSTEM)				1
е	Œ	ENTERTAINMENT SYSTEM)		ი	Œ	– (WITH REAR ENTERTAINMENT SYSTEM)				
ო	>	– (WITHOUT REAR ENTERTAINMENT SYSTEM)		6	SHIELD	– (WITHOUT REAR ENTERTAINMENT				
,	i i	- (WITH REAR	<u> </u>	10	SHIELD	SYSTEM)				
4	SHIELD	SYSTEM)				– (WITH BEAB				
4	۵	- (WITHOUT REAR ENTERTAINMENT		=	>	ENTERTAINMENT SYSTEM)				
		SYSTEM)			ſ	- (WITHOUT REAR				
2	>	– (WITH REAR ENTERTAINMENT		=	n	SYSTEM)				
		SYSTEM)			(	- (WITH REAR				
2	P	- (WITHOUT REAR ENTERTAINMENT		12	ω	ENTERTAINMENT SYSTEM)				
		SYSTEM)		Ç	M	- (WITHOUT REAR				
9	В	– (WITH REAR ENTERTAINMENT		7	^	SYSTEM)				
		SYSTEM)		13	>	1				
u	a	- (WITHOUT REAR ENTERTAINMENT		14	SB	ı				
5	3	SYSTEM)	_	15	PC	1				

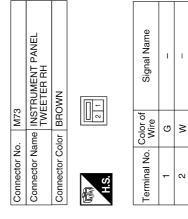
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Revision: March 2012 AV-223 2013 Infiniti JX

[BOSE AUDIO W/O SURROUND SOUND]

#### < WIRING DIAGRAM >





Signal Name	ı	ı	ı	ı	1	1	ı	1	1	ı	ı	ı	1
Color of Wire	В	M	SHIELD	В	>	۵	В	M	SHIELD	M	æ	SHIELD	В
Terminal No. Wire	2	9	7	8	17	18	19	20	21	22	23	24	25

Signal Name	1	ROR SENSOR SIGNAL	ı	NĐI	FR SENSOR GND	RR SENSOR GND	GND	ı	ı	I	SPEAKER PWR	SPEAKER RR SIGNAL	-	ROL SENSOR SIGNAL	-	-
Color of Wire	ı	>	ı	LG	В	Ф	m	ı	ı	ı	BB	ГG	1	≯	ı	1
Terminal No.	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

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	Connector Name WIRE TO WIRE	ector Color WHITE	6	15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 1	inal No. Color of Signal Name Wire	П П	2 W –	3 В –	4 SHIELD –
Connector No.	Connector N	Connector Color	H.S.	16 15 14 13 1: 32 31 30 29 2	Terminal No.	-	2	3	4

	≒				-	13
	5				2	24 23 22 21 20 19 18 17 16 15 14 13
	7				4 3	15
	Æ		١,	Ш	4	16
	눋			117	6 5	17
	Ö			IV.	9	18
	3	١		I٨	7	19
_	ΙAΙ	E		Ш	8	20
M70	Ó	₹	'	٦	9	21
_≥	S	>			9	22
	οu	7			12 11 10 9	23
<u>ö</u>	Jan	ĕ			12	24
<u>۲</u>	۲۸	Ž				
달	ctc	당	١.			
Jue	ne	ne			٥	2
Connector No.	Connector Name SONAR CONTROL UNIT	Connector Color WHITE		熩	7	1
<u> </u>	$\stackrel{\smile}{}$	$\subseteq$		0		3

Signal Name	1	-	FOL SENSOR SIGNAL	FOR SENSOR SIGNAL	V CAN-H	V CAN-L	=	-
Color of Wire	-	_	ш	В	В	Μ	_	_
Terminal No. Wire	1	7	3	4	9	9	2	8

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# [BOSE AUDIO W/O SURROUND SOUND]

< WIRING DIAGRAM >

Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	_	ı	_
Color of Wire	В	W	W	В	В	В	SHIELD	G	L
Terminal No. Color of Wire	9	9		7	8	8	6	10	11

	WIRE TO WIRE	WHITE	8 7 6 5 4 3 2 1 24 23 22 21 20 19 18 17	Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)	- (WITHOUT REAR
. M84			11 10 9 27 26 25	Color of Wire	<b>&gt;</b>	۵
Connector No.	Connector Name	Connector Color	H.S. 16 15 14 13 12 22 31 30 29 28	Terminal No.	5	ĸ

	ب		06 105
	ODY CONTRC .E)		201191
M80	BCM (B MODUL	BLACK	28 12 12 11 11 10 109 1
Connector No.	Connector Name   BCM (BODY CONTROL MODULE)	Connector Color BLACK	H.S. 12812

Terminal No. Color of Wire 109 R	Signal Name	REVERSE SIGNAI	ACC RELAY OUT	
Terminal No. 109 113		Œ	٦	
	Terminal No.	109	113	

				4 3 2 1	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
				2	51
				9	22
	ш		17	7	23
	₩		<i> </i>	8	24
	≤		IN	16 15 14 13 12 11 10 9	52
	잍	١	ПΠ	유	92
	щ	lΕ		F	27
M91	≝	¥		12	28
_≥	_>	>		13	29
	e e	5		4	30
ġ.	ā	ĕ		15	31
<u> </u>	_	ž		16	32
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE		2	Ċ

Signal Name	ı	-	ı	-	I
Color of Wire	W	SHIELD	В	В	В
Terminal No. Wire	-	2	3	4	2

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[BOSE AUDIO W/O SURROUND SOUND]

		Γ	7				7			Т	_			
	E TO WIRE	À			160	Signal Name		1	ı		ı			
. M95	me WIR	lor GRAY				Color of	۵ ۱	В	В		n			
Connector No.	Connector Name WIRE TO WIRE	Connector Color			Sil	Terminal No. Color of		-	2	(	£			
		L	0							+		1	NC NC	

Terminal No.	Color of Wire	Signal Name
24	-	I
25	re	REV
26	1	I
27	В	V-CAN1 H
28	8	V-CAN1 L
29	SHIELD	V-CAN1 GND
30	>	MIRROR SIGNAL 2
31	1	I
32	9	MIRROR SIGNAL 1
33	1	I
34	_	_
35	_	_
36	ı	I
37	_	_
38	_	1
39	-	1
40	_	-

Signal Name	FRONT DISP IT	IT FRONT DISP	BATT	GND	ı	1	ı	1	1	FRONT COMP +	FRONT COMP -	FRONT COMP SYNC	1	SHIELD	ACC	1	
Color of Wire	В	M	Υ	В	1	1	1	ı	1	В	>	æ	_	SHIELD	Д	_	
Terminal No.	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	54	

Signal Name	-	ı	ı	SIGNAL GND	ı	CAMERA DIRECT OFF	RX	ı	ı	ı	ı	MCAN-1H	MCAN-1L	-	ı	MCAN GND
Color of Wire	1	1	1	ß	1	Ь	BG	1	-	-	1	В	M	1	1	SHIELD
Terminal No.	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23

TINU	6 5 4 3 2 1 18 17 16 15 14 13	Signal Name	ı	ı	ı	ı	ı	FRONT COMP SHIELD	SHIELD	R CAMERA COMP
M92 DISPLAY UNIT	22 21 20 19	Color of Wire						SHIELD FRO	SHIELD	В
olor	12 11	Sol	Ė	ľ	'	'	'	SHI	SE	
Connector No. Connector Name Connector Color	H.S.	Terminal No.	-	2	ဗ	4	5	9	7	8

				38 40 37 39								
9	AROUND VIEW MONITOR CONTROL UNIT	WHITE		18 20 22 24 26 28 30 32 34 36 17 19 21 23 25 27 29 31 33 35	Signal Name	GND	+B	IGN	ACC	ı	ı	1
. M96				12 14 16	Color of Wire	В	>	മ	▄	ı	ı	ı
Connector No.	Connector Name	Connector Color	是 H.S.	2 4 6 8 10 1 3 5 7 9	Terminal No.	1	2	က	4	2	9	7

ABNIA3532GB

# [BOSE AUDIO W/O SURROUND SOUND]

< WIRING DIAGRAM >

onnector No.	). M98	8
onnector Name		A/C AND AV SWITCH ASSEMBLY
onnector Color		WHITE
H.S.	2 4 3 4	6 8 10 12 14 16 5 7 9 11 13 15
erminal No.	Color of Wire	Signal Name
-	GR	GND
က	۵	ACC
4	Œ	П
2	В	ILL CONT
9	SB	M CAN-H
80	re	M CAN-L
6	>	EJECT GND
14	Υ	CD(DVD)EJECT

3	A/C AND AV SWITCH ASSEMBLY	WHITE	6 8 10 12 14 16 5 7 9 11 13 15	Signal Name	GND	ACC	ILL	ILL CONT	M CAN-H	M CAN-L	EJECT GND	CD(DVD)EJECT
. М98			1 3 4	Color of Wire	GR	Ь	В	В	SB	LG	^	Υ
Connector No.	Connector Name	Connector Color	原动 H.S.	Terminal No.	1	3	4	5	9	8	6	14

Signal Name	RV POWER GND	RV VIDEO +	RV VIDEO -	SV2 SERIAL SIGNAL	SV2 POWER	-	SV2 POWER GND	SV2 VIDEO +	SV2 POWER GND	SV1 SERIAL SIGNAL	SV1 POWER	I	SV1 POWER GND	SV1 VIDEO +	SV1 VIDEO -	FV SERIAL SIGNAL	FV POWER	ı	FV POWER GND	FV VIDEO +	FV VIDEO -
Color of Wire	ш	G	SHIELD	В	W	-	G	В	SHIELD	M	В	ı	В	G	SHIELD	В	M	1	G	ш	SHIELD
Terminal No.	52	53	54	55	26	22	58	29	09	61	62	63	64	65	99	29	89	69	70	71	72

			72												
	AROUND VIEW MONITOR CONTROL UNIT	WHITE	52 54 56 58 60 62 64 66 68 70 51 53 55 57 59 61 63 65 67 69	Signal Name	1	ı	EXTERNAL VIDEO OUTPUT +	EXTERNAL VIDEO OUTPUT -	ı	ı	VIDEO OUTPUT +	VIDEO OUTPUT -	RV SERIAL SIGNAL	RV POWER	1
. M97		Н	46 48 50 45 45 49	Color of Wire	ı	ı	В	SHIELD	1	ı	В	SHIELD	>	В	ı
Connector No.	Connector Name	Connector Color	H.S. 41 43	Terminal No.	41	42	43	44	45	46	47	48	49	50	51

Ξ	Connector Name FRONT TWEETER RH	NMC	2 1	Signal Name	-	I
. M111	me FR0	lor BR0		Color of Wire	В	W
Connector No.	Connector Na	Connector Color BROWN	原列 H.S.	Terminal No. Color of Wire	1	2

M110 THE CENTER STATE ST	AKER		Signal Name	-	
r No.	M110 CENTER SPE/ BROWN	2		ď	
	Connector No. Connector Name Connector Color		No. Cole		

Collifector No.	Connector Nam	Connector Colo	是 S.H	Terminal No.	1	0
	ER LH			l Name		

99	Connector Name FRONT TWEETER LH	NMC	2 1	Signal Name	_	_
. M109	me FR0	lor BR(		Color of Wire	Ь	×
Connector No.	Connector Na	Connector Color BROWN	原动 H.S.	Terminal No. Wire	1	0

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**AV-227** Revision: March 2012 2013 Infiniti JX Α

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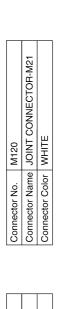
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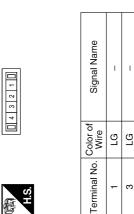
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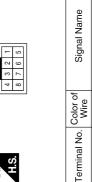
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Signal Name	1	1	_	1	1
Color of Wire	SHIELD	8	9	н	٦
Terminal No. Wire	1	2	3	4	9

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BG SHIELD

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Terminal No. Color of Wire	Color of Wire	Signal Name
12	В	FR RH PRE -
13	В	RR RH PRE +
14	8	RR RH PRE -
15	В	STRG SW GND
16	M	STRG SW B
17	1	1
18	_	1
19	У	(+)B
20	GR	GND

Signal Name	FR LH PRE -	RR LH PRE +	RR LH PRE -	STRG SW A	ACC	ı	-	SHIELD	FR RH PRE +
Color of Wire	8	В	8	g	В	1	-	BR	×
Terminal No.	ဗ	4	5	9	2	8	6	10	11

Connector No.		_	Ξ	M122									
Connector Name AV CONTROL UNIT	Jame	7	>	$\ddot{\circ}$	N	H	ō	$\Box$	Ē	_			
Connector Color GRAY	Solor	$\subseteq$	뜼	¥									
						IV.	11/	Г					
	٦	F	6	-	4	Ľ	"	ᆙ	a a	6		_	
Ú		-	7				,	,	,	>			
į.	<u>6</u>	10	Ξ	12	10 11 12 13 14 15 16 17 18	14	15	16	17	18	8		

Signal Name	AMP ON	FR LH PRE +	
Color of Wire	SB	В	
Terminal No.	1	2	

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## [BOSE AUDIO W/O SURROUND SOUND]

< WIRING DIAGRAM >

Signal Name	AUX SHIELD	AUX AUDIO RH	AUX AUDIO	HP 1 LH-	HP 1 RH-	HP 1 SHIELD	_	ı	ı	ı	1	1
Color of Wire	SHIELD	>	В	Я	ŋ	SHIELD	_	1	-	-	1	-
Terminal No. Wire	37	38	39	40	41	42	43	44	45	46	47	48

Signal Name	1	HP 1 LH+	HP 1 RH-	ı	1	ı	ı	ı	-	1	ı	1
Color of Wire	ļ	×	В	Ι	ı	I	_	ı	_	-	I	_
Terminal No. Wire	25	26	27	28	29	30	31	32	33	34	35	36

Connector No. M123  Connector Name AV CONTROL UNIT  Connector Color WHITE		ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı
Connector Name AV CONTROL UN Connector Color WHITE	Connector No.		Σ	23	~									
Connector Color WHITE	Connector Nan	e	A	C	Ó	Ę	R	٦(	5	$\vdash$				
TIPE 181 181 181 181 181 181 181 181 181 18	Connector Colc	_	∣⋝	두	Щ									
35 36 37 38 39 40 41 42 43 44 45 46 47 48	H.S. 35 36	37 23	7 8 8	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	8 9	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	82 24	62 84	8 4	15 45	8 8	88 74	8 8	

Signal Name	-	-	ı	AUX AUDIO LH
Color of Wire	_	-	1	В
Terminal No. Wire	17	22	23	54

Signal Name	IGN	REVERSE SIG	SPEED	NAVI COMP 1 SHIELD	NAVI COMP 1 SYNC	ı	-	MIC SIG	DISP SHIELD	DISP IT	CAN-H	M CAN-H	M CAN-H TRM
Color of Wire	LG	ш	BG	SHIELD	ш	ı	-	В	SHIELD	В	٦	SB	SB
Terminal No. Wire	89	69	70	7.1	72	73	74	75	92	77	78	26	80

Signal Name	ı	NAVI COMP 1-	NAVI COMP 1+	I-KEY MEMORY	AV-ACC (DCM)	PKB SIGMIC GND	MIC VCC	IT DISP	CAN-L	M CAN-L	M CAN-L TRM	-	ı	MR OUTPUT
Color of Wire	-	×	В	BG	ŋ	SHIELD	M	Μ	Ь	ЬLG	ГG	_	ı	Ь
Terminal No.	54	55	56	57	58	59	09	61	62	63	64	99	99	29

				62 63							
24	Connector Name AV CONTROL UNIT	里		54 55 56 57 58 59 60 61	70 71 72 73 74 75 76 77	Signal Name	ı	ı	-	ı	PKB SIG
. M124	me AV	lor WH		50 51 52 53	69 89 29	Color of Wire	ı	ı	-	ı	9
Connector No.	Connector Na	Connector Color WHITE	é	49	65 66 65 66	Terminal No.	49	20	51	52	53

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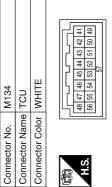
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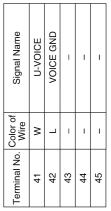
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Signal Name	ı	NAVI COMP 2-	NAVI COMP 2 SHIELD	NAVI COMP 2+	ı	ı	I	ı	-	_	ı	ı	ı	ı	ı	_	ı
Color of Wire	1	>	SHIELD	В	ı	ı	ı	ı	ı	1	ı	ı	ı	ı	I	_	ı
Terminal No.	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120

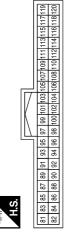
Signal Name	ı	VBUS	-O	D-VOICE	1	I	1	ı	I	GND(USB GND)	D+	CONN CHASSIS GND
Color of Wire	I	В	В	В	ı	ı	ı	I	ı	SHIELD	M	SHIELD
Terminal No. Wire	46	47	48	49	50	51	52	53	54	55	56	57

-		_	_	_	_	_	_	_	_		_	_	_					_	
	Signal Name	-	_	1	_	AUX VIDEO+	AUX VIDEO-	_	VIDEO SHIELD	_	-	DVD EJECT	EJECT GND	=	_	_	_	-	
	Color of Wire	1	1	1	1	Μ	В	1	SHIELD	-	-	<b>\</b>	^	_	-	_	_	ı	
	erminal No.	87	88	89	06	91	92	93	94	92	96	97	98	66	100	101	102	103	





Connector No.	M125
Connector Name	Connector Name AV CONTROL UNIT
Connector Color WHITE	WHITE



Signal Name	1	1	1	-	ı	I	
Color of Wire	1	ı	ı	_	-	ı	
Terminal No. Wire	81	82	83	84	85	98	

M133	Connector Name AV CONTROL UNIT	BROWN	
Connector No.	Connector Name	Connector Color BROWN	





Signal Name	_	
Color of Wire	В	
Terminal No.	166	

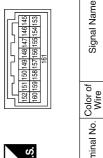
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## [BOSE AUDIO W/O SURROUND SOUND]

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Ì		
	Terminal No. Wire	Signal Name
	-	_
	В	VBUS
	m	D-
	В	D-VOICE
	1	1
	ı	-
	ı	_
	1	1
	ı	_
S	SHIELD	GND(USB GND)
	L/W	D+
တ	SHIELD	CONN CHASSIS GND

M136	Connector Name AV CONTROL UNIT	WHITE	162[51]50[149]48[47]146[45] 160[159]159[157]156[15[154]153]
Connector No.	Connector Name	Connector Color WHITE	H.S.



Signal Name

Terminal No.

VOICE GND U-VOICE

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147 149



Connector No.	M135
Connector Name TCU	TCU
Connector Color BROWN	BROWN



Signal Name	I	_
Color of Wire	В	SHIELD
Terminal No.	58	59

r No.	M141	
r Name	r Name DISPLAY UNIT	
Color	Color BROWN	



CONTROL UNIT					
I R		H	162	164	
Ś	щ	냽	163	165	ľ

M140	Sonnector Name AV CONTROL U	BLUE	
Connector No.	Sonnector Name	Connector Color BLUE	



. No. M138	Connector Name WIRE TO WIRE	Color GREEN	
Connector No. M	Connector Name W	Connector Color GREEN	副 H.S.



Signal Name	GND	GND	GVIF+	GVIF-
Color of Wire	SHIELD	SHIELD	В	В
Terminal No. Color of Wire	25	26	27	28

Signal Name	GND	GND	GVIF-	GVIF+
Color of Wire	SHIELD	SHIELD	В	В
Terminal No. Wire	162	163	164	165

Signal Name	_	
Color of Wire	В	
erminal No.	1	

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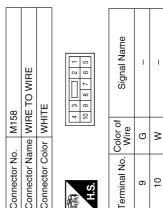
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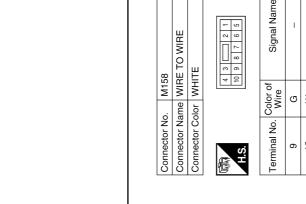
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Connector No.	). M149	63
Connector Na	ame COI	Connector Name COMBINATION SWITCH
Connector Color WHITE	olor WH	
H.S.	20 1	20 19 18 17 16 15 14 13
Terminal No. Wire	Color of Wire	Signal Name
14	В	ı
15	ЫĐ	1

Signal Nam	ı	_	I	
Color of Wire	В	GR	BR	
Terminal No.	14	15	17	

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Signal Name	I	-	1		ı	1	_	1	1	1
Color of Wire B B B B 10	В	В	SHIELD	GR						
Terminal No. Color of Wire 7 B B B B B B 9 B D TO 10 TO	11	23	24	25	26	27	28	29	30	31

Connector No.		M143
Connector Na	ame A	Connector Name AV CONTROL UNIT
Connector Color GRAY	olor GI	AAY
明.S.		[
Terminal No. Wire	Color o Wire	f Signal Name
142	a	ANT MAIN
143	В	ANT +B

Connector No.	M150	00
onnector Na	Ime JOII	Connector Name JOINT CONNECTOR-M27
Connector Color WHITE	lor WH	ПЕ
	9 6 01 11	8 7 6 5 4 3 2 1
Si Si	2 21 20 1	21 20 19 18 17 16 15 14 13 12
- Kil	33 32 31 3	30 29 28 27 26 25 24 23
Terminal No.	Color of Wire	Signal Name
4	В	I
5	В	ı
9	В	ı

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# [BOSE AUDIO W/O SURROUND SOUND]

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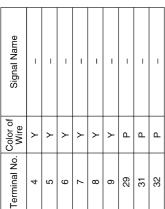
< WIRING DIAGRAM >

Connector No. M170  Connector Name JOINT CONNECTOR-M09  Connector Color WHITE  This is a first f	Signal Name -	1 1 1	1		M173 JOINT CONNECTOR-M12 WHITE	3 2 1	Signal Name	I	1 1
No. M170 Name JOINT C Color WHITE 11 10 9 8 7   22 21 20 19 18   33 32 31 30 29	Color of Wire BR	SHIELD SHIELD SHIELD	SHIELD		M173 ne JOINT or WHITE	4	Color of Wire	5	<u>თ</u> თ
Connector No. M170 Connector Name JOINT of Connector Color WHITE    11   10   9   8   7   11   10   9   8   7   11   10   9   8   7   11   10   9   8   7   11   10   9   8   7   11   11   11   11   11   11	Terminal No. 6	V 8 6			Connector No. M173 Connector Name JOINT Connector Color WHITE	图 H.S.	al No.	2	ω 4
2 2 1									
7 6 5 4 3 27 26 25 24 23	Signal Name	1 1 1	1 1	1	Connector No. M172 Connector Name JOINT CONNECTOR-M11 Connector Color WHITE	4 3 2 1	Signal Name	1	1 1
M168 MRE Plot WHITE	Color of Wire W	G B SHIFT D	m 0	3	me JOINT or WHITE		Color of Wire	<b>&gt;</b> :	<b>&gt; &gt;</b>
Connector No. M168 Connector Name WIRE TO WIRE Connector Color WHITE  ### April 18   17   16   15   14   13   12   11   10   9   8   10   38   37   38   38   37   38   38   37   38   38	Terminal No. (22	53 88 83		32	Connector No. M172 Connector Name JOINT	原 H.S.	al No.	2	ω 4
7 E TO WIRE TE 3   1   2   1   3   8   7   6   5   9   8   7   6   5   5   1   1   1   1   1   1   1   1	Signal Name	ı			M171 JOINT CONNECTOR-M10 WHITE	043210	Signal Name	ı	1 1
M167	Color of Wire	*			me JOINT		Color of Wire	١	۵ ۵
Connector No. M167 Connector Name WIRE TO WIRE Connector Color WHITE  A.S.  A.	Terminal No.	80			Connector No. M171 Connector Name JOINT	师 H.S.	al No.	2	ω 4

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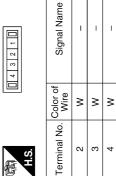
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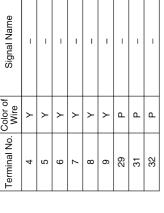
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Connector No.	M175
Connector Name	Connector Name JOINT CONNECTOR-M22
Connector Color WHITE	WHITE



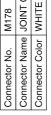




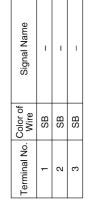
4 3 2 1	22 21 20 19 18 17 16 15 14 13 12	33 32 31 30 29 28 27 26 25 24 23	Signal Name	Ι	_	1	
6 5	17 16	28 27	Color of Wire	Υ	Υ	>	
7	18	29					
∞	19	30	ġ				
11 10 9	22 21 20	7 33 32 31	Terminal No.	-	2	က	

33 32 31 30 29 28 27 26 25 24 23	Signal Nar	ı	_	ı	
29 28 27	Color of Wire	<b>&gt;</b>	٨	>	
33 32 31 30	Terminal No. Wire	-	2	က	

o.	0/1	٥			
ame	NO N	Ļ	8	Ž	ame JOINT CONNECTOR-M
olor	WHITE	I			
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		4	က	3 2	-



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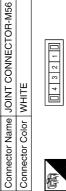
Connector No.

M176

Connector No.



Terminal No. Wire	Color of Wire	Signal Name
1	ГG	-
2	LG	-
3	ГG	I
4	PT	11







Signal Name	_	I	ı	_
Color of Wire	SB	SB	SB	SB
Terminal No. Wire	1	2	3	4

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[BOSE AUDIO W/O SURROUND SOUND]

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Connector Name JOINT Connector Color WHITE	me JOINT or WHITE	Connector Name JOINT CONNECTOR-M59 Connector Color WHITE	Connector Name WIRE TO WIRE Connector Color WHITE	ame WIRE	TO WIRE E	Connector Connector C	Connector Name WIRE TO WIRE Connector Color WHITE	TO WIRE
				-				
品S.	4	3 2 1	H.S.	8 10 3	3	H.S.		2   1
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
-	9	ı	-	В	ı	13	В	ı
2	P	ı	2	>	1			
8	   LG	I	3	>	I			
Connector No.	. M205		Connector No.	D. M208		Terminal No.	Color of Wire	Signal Name
onnector Nar	me FRON INPUT	Connector Name FRONT AUXILIARY INPUT JACKS	Connector Name WIRE TO WIRE	ame WIRE	TO WIRE	14	SHIELD	ı
Connector Color	lor WHITE	UI				15	W	1
	[					16	>	ı
	- 1⊢		S I			17	SHIELD	-
H.S.	1 2 3	4 5 6 7 8				18	В	1
			2 3 4	8 2 9	10 11 12 13 14 15	19	В	ı
			17 18 19 20 21	22 23 24 25	26 27 28 29 30 31 32	20	M	_
ON Jerimina T	Color of	Signal Namo	Torminal No		Signal Mamo	21	7	ı
2	Wire	0.00			פושות	22	ŋ	1
-	œ	AUX AUDIO RH+	2	SHIELD	1	23	ш	ı
2	В	AUX AUDIO GND	က	В	1	24	SHIELD	ı
က	>	AUX AUDIO LH+	4	>	1	25	×	1
7	8	AUX VIDEO+	2	SB	1	56	В	ı
8	В	AUX VIDEO-	9	ŋ	1	27	_	ı
			7	ш	1	28	Ø	1
			80	SHIELD	1	59	Œ	1
			6	×	1	30	SHIELD	1
			10	В	1	31	3	ī
			11	>	1	32	В	1
			12	ŋ	1			
			13	œ	1			

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Connector No.   M214   Connector No.   M214     Connector Name   WIRE TO WIRE     Connector Name   WIRE TO W	_											
Connector No.   M210   Connector No.   M210   Connector No.   M210   Connector No.   M210   Connector No.   Connector Color   GRAY   Connector Color   Connector Connector Color   Connector Color   Connector Color   Connector	4	RE TO WIRE	ITE	5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24	Signal Name	ı	1	1	ı	ı	ı	_
Connector No.   M210   Connector No.   M210   Connector No.   M210   Connector No.   M210   Connector No.   Connector Color   GRAY   Connector Color   Connector Connector Color   Connector Color   Connector Color   Connector		ame WIF	olor WH	2 3 4 1 15 16	Color of Wire	>	В	В	SHIELD	>	В	SHIELD
Connector No.   M210   Connector Name   WIRE TO WIRE	Connector No	Connector Na	Connector Co	E.S.	Terminal No.	-	2	3		2	9	
NTERFACE   Connector No.   M210												
Signal Name	0	E TO WIRE	47	- 2 4 9		ı	1	ı	1	ı		
Signal Name		me WIF	lor GR/		Color of Wire	SHIELD	W	G	н	7		
	Connector No	Connector Na	Connector Co	H.S.	Terminal No.	٦	2	3	4	9		
No. M206  No. Color of WHIT  No. Color of G G G G SHIELD		INTERFACE	ш		Signal Name	1	1	ı	1	ı		
		Name USB	Color WHIT	<u> </u>	No. Color of Wire	G	M	ш		SHIELD		

Signal Name	-	1	1	-	1	1	1
Color of Wire	В	7	G	н	SHIELD	8	В
Terminal No. Wire	18	19	20	21	22	23	24

Signal Name	ı	1	ı	1	1	Ι	1	1	-	-	I	1	1
Color of Wire	>	В	^	G	ш	SHIELD	M	В	٦	В	æ	SHIELD	W
Terminal No. Wire	5	9	7	8	6	10	11	12	13	14	15	16	17

MOSE	<u> </u>	Connector Color WHITE		H.S. (12   2   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   19   20   21   22   23   24	Terminal No. Color of Signal Name Wire	1 SB -	2 G –	3 R –	4 SHIELD –
2	Con	Conn	Œ	=======================================	Term				

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[BOSE AUDIO W/O SURROUND SOUND]

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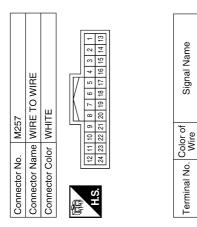
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Connector No.	M216	_	Connector No.	M217					
or Nan	ne WIRE	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	ne WIRE TO	) WIRE	Connector N	ame JOINT	Connector Name JOINT CONNECTOR-M01	
or Colc	Connector Color WHITE	щ	Connector Color WHITE	or WHITE		Connector Color WHITE	olor WHITI		
	8 9 10	2 3	H.S. 17 18	3 4 5 6 7 19 20 21 22 23	8 9 10 11 12 13 14 15 16 24 25 26 27 28 29 30 31 32	E.S.	9	2 2 1	
Terminal No.	Color of	Signal Name	Terminal No.	Color of	Signal Name	Terminal No.	Color of	Signal Name	
	<u></u> a		13	SHIFLD		0	<u> </u>	1	
	a m	1		В	1	ı σ	SHIELD	1	
			15	Œ	1	4	SHIELD	ı	
			16	8	1				]
			30	SHIELD	1				
			31	В	ı				
			32	M	1				
Connector No.	M251								
r Nan	ne WIRE	Connector Name WIRE TO WIRE							
or Colc	Connector Color WHITE	Щ							
	1 2 3	4 5 6 7							
	8 9 10	8 9 10 11 12 13 14 15 16							
Terminal No.	Color of Wire	Signal Name							
	В	1							
	Α.	-							
	>	ı							

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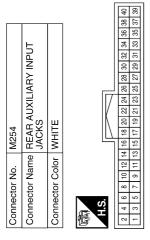
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Signal Name	ı	1	ı	ı	ı	ı	_	ı	I	ı	ı	1	ı	ı	1	ı	ı	ı	ı	-	ı	ı	_	_	1
Color of Wire	>	œ	BG	ŋ	В	SHIELD	M	SHIELD	>	5	В	œ	_	۵	>	g	В	Œ	I	SHIELD	1	I	>	В	>
ninal No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	36	40

Δ

13



Signal Name	1	ı	I	I	ı	ı	ı	ı	1	I	ı	I	I	-	1
Color of Wire	×	В	В	В	В	1	1	ı	SHIELD	_	В	_	g	В	^
Terminal No.	-	2	က	4	2	9	7	æ	6	10	11	12	13	14	15

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[BOSE AUDIO W/O SURROUND SOUND]

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≥ ∞	32 32 Connector No
	Connector Name ANTENNA BASE Connector Color GRAY  LLS. Terminal No. Color of Wire Signal

ABNIA3545GB

[BOSE AUDIO W/O SURROUND SOUND]

Connector No. M504 Connector Name WIRE TO W Connector Color GRAY	M504 ne WIRE or GRAY	ETO WIRE	Connector No. Connector Name Connector Color	o. M505 ame GLASS olor GRAY	Connector No. M505 Connector Name GLASS ANTENNA (FM SUB) Connector Color GRAY	Connector No. M509 Connector Name WIRE TO WIRE Connector Color GREEN	TO WIRE
配 H.S.			H.S.			H.S.	
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No. Color of Wire	Signal Name
-	<u>а</u>	1	-	В	1	- B	1
Connector No.	ne ACCE	ACCESSORY RELAY-2	Connector Name WIRE TO WIRE	o. E26 ame WIR	E TO WIRE	Connector Name WIRE TO WIRE	TO WIRE
Connector Color	or BLUE		Connector Color WHITE	olor WHI	TE	Connector Color WHITE	Ш
H.S.		2 X 1	H.S.	1 2 3 4 13 14 15 16	5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24	12 11 H.S.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No. Color of Wire	Signal Name
-	G	ı	2	8	ı	4 D	1
2	В	ı	က	В	ı		
က	æ	1	4	SHIELD	ı		
2	Ъ	1	2	В	1		
			9	Œ	ı		
			ω	SHIELD	ı		
			13	Œ	ı		
			14	В	1		
			15	g	1		
			16	SHIELD	ı		
			17	Μ	1		

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[BOSE AUDIO W/O SURROUND SOUND]

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#### < WIRING DIAGRAM >

		E209	WIRE 10 WIRE			2 21 20 19 18 17 16 15 14 13	-	r of Signal Name					ı	- Q7.	1	ı	1	- CT	1
		Connector No. E209	Connector Color WHITE			H.S. 24 23 22 21	_	Terminal No. Color of	0		N H		9	8 SHIELD	13 R	14 B	15 G	16 SHIELD	17 W
Connector Name PARKING BRAKE SWITCH Connector Color BLACK	Signal Name	Signal Name	ı	1	1	-	1	1	1	ı	1	1	1	1	1	ı			
Ine PARKIN	Color of Wire	Color of Wire	۵	Œ	В	SHIELD	В	SHIELD	8	SHIELD	>	<u>«</u>	а (	ت ت	უ ე ,	5			
Connector Name Connector Color H.S.	Terminal No.	Terminal No.	36	16G	17G	18G	22G	23G	25G		27G	28G	29G	306	326	5003			
Connector Name JOINT CONNECTOR-E01  Connector Color WHITE  THIS  THIS  TO BE T	Terminal No. Color of Signal Name Wire GR – 15 GR – 17 B – 17	Connector No. E152	Connector Color WHITE			56 46 36 26	10G 9G 8G					505/49/5/48/5/48/5/48/5/44/5/48/5/5/5/5/5/5/5/		7096996899669965999999	81G80G79G77G76G75G74G72G72G71G	90G 89G 87G 86G 85G 83G 82G	0.000	976 976 976 976 976 976 976 976 976 976	

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[BOSE AUDIO W/O SURROUND SOUND]

#### < WIRING DIAGRAM >



Signal Name	1	1	1	ı	I	
Color of Wire	В	В	В	SHIELD	8	
Terminal No. Wire	1	2	3	4	9	

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7	Connector Name FRONT SONAR SENSOR LH OUTER	CK	321	Signal Name	-	_
. E307	Ime FRC	lor BLA		Color of Wire	Ь	В
Connector No.	Connector Na	Connector Color BLACK	咸司 H.S.	Terminal No. Wire	-	2

2	RE TO WIRE	\ <sub>t</sub>	5 1 2 3 4 4 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Signal Name
. E212	me WIF	lor GR		Color of Wire
Connector No.	Connector Name WIRE TO WIRE	Connector Color GRAY	崎 H.S.	Terminal No. Color of Wire

			•			
2	RE TO WIRE	47	4 8 8 1 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Signal Name	-	=
. E302	me WIF	lor GR.		Color of Wire	თ	Д
Connector No.	Connector Name WIRE TO WIRE	Connector Color GRAY	「南南 H.S.	Terminal No. Wire	1	2

Connector No.	). E301	_
Connector Name WIRE TO WIRE	ame WIF	RE TO WIRE
Connector Color GRAY	olor GR.	47
丽 H.S.		S 1 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Terminal No. Wire	Color of Wire	Signal Name
-	უ	1
2	Ь	_

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Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	ı	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	ı	ı	1	ı
Color of Wire	В	SHIELD	SHIELD	α	В	8	SB	SB	FG
Ferminal No.	6	6	10	11	11	12	13	14	15

Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)	- (WITHOUT REAR ENTERTAINMENT SYSTEM)	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	– (WITH REAR ENTERTAINMENT SYSTEM)	- (WITHOUT REAR ENTERTAINMENT SYSTEM)	– (WITH REAR ENTERTAINMENT SYSTEM)	- (WITHOUT REAR ENTERTAINMENT SYSTEM)
Color of Wire	>	Ф	В	>	>	*	g	В
Terminal No.	5	5	9	9	7	7	80	8

	RE TO WIRE	ITE		5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24	Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
Be	me WIF	lor WH		2 3 4 8 14 15 16	Color of Wire	Œ	>	SHIELD	Œ
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	<b>E</b>	H.S.	Terminal No.	က	е	4	4

ABNIA3549GB

Connector No.	B1
Connector Name	Connector Name REAR SIDE SPEAKER LH
Connector Color BROWN	BROWN

	BROWN	2	of Signal Nar	1	ı
me F	lor E		Color of Wire	>	9
CONTRICTOR INSTRUCT REAR SIDE SPEAKE	Connector Color	原 H.S.	Terminal No.	1	2

Connector No.	o. E308	90
Connector Na	ame FR RF	Connector Name   FRONT SONAR SENSOR   RH OUTER
Connector Color BLACK	olor BL	ACK
原 H.S.		3 2 1
Terminal No. Wire	Color o Wire	Signal Name
-	۵	ı
2	g	ı

**AV-243** Revision: March 2012 2013 Infiniti JX

[BOSE AUDIO W/O SURROUND SOUND]

#### < WIRING DIAGRAM >

Signal Name		-	ı	1	1	ı	1	1
Color of Wire	SHIELD	٦	۵	BR	_	ГG	SB	SB
Terminal No. Wire	15	16	17	19	20	21	22	24

Signal Name	ı	1	ı	ı	ı	ı
Color of Wire	SB	٦	LG	SB	В	Ж
Terminal No. Wire	9	7	6	10	13	14

Connector No.	ا چ	<u>m</u>	B23									
Connector Name WIRE TO WIRE	Name	>	15	سِا	12	I≥						
Connector Color WHITE	Color	>	Į	ᄩ	l							
€					ΙIN	l IV	l 17	l				
	15	11 10 9	1150	ω	^	9	5	4	6	2	<u> </u>	
9	24 5	33	2	- 2	24 23 22 21 20 19 18 17 16 15 14 13	8	17	16	15	14	13	
											1	

8 7 6 5 4 3 2 1	24 23 22 21 20 19 18 17 16 15 14 13		Signal Name	1	1	I	=
12 11 10 9	24 23 22 2		Color of Wire	Μ	G	SHIELD	Ь
	6	J	Terminal No. Wire	1	2	ဗ	4

Signal Name	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	I	ı	ı	ı	ı	ı	ı	ı	I	
Color of Wire	ı	Œ	ŋ	В	8	>	>	В	5	8	œ	1	1	1	>	В	SHIELD	SHIELD	۵	٦	
Terminal No.	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	

								,
						8	31	
Г				]		8	29	
							27	
						56	25	
		Ä				24	23	
		۲		١.,	$\Box$	10 12 14 16 18 20 22 24 26 28	3 5 7 9 11 13 15 17 19 21 23 25 27 29	
		B			17	8	19	
		亞			V	18	17	
		ST			IN.	16	15	
		□	l		$\mathbb{L}$	14	13	
		0	쁜	'		12	11	
	B24	<u>=</u>	₹				6	
L	B	>	>			8	7	
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	cto	g	용					_
	ne	ne	l e			ú	ō	
	Connector No.	Connector Name VIDEO DISTRIBUTOR	Connector Color WHITE		驅	Ŧ	3	
L	0	0	$^{\square}$	]			7	

Signal Name	1	1	-	1	_	-	-	=	-	-	_	_
Color of Wire	В	^	В	8	BR	٦	SB	BR	SB	_	_	_
Terminal No.	-	2	3	4	5	9	7	8	6	10	11	12

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[BOSE AUDIO W/O SURROUND SOUND]

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#### < WIRING DIAGRAM >

	Confidence Name VIDEO DISTRIBUTOR	41	SHIELD	ı	Connector Name SONAR BUZZER
Connector Color   WHITE		42	1	1	Connector Color WHIIE
		43	1	1	
38 40	44 46 48 50 52 54	44	1	1	4 3 2 1
	43 45 47	45	>	1	
		46	æ	1	
Terminal No. Color of Wire	Signal Name	47	В	ı	Terminal No.   Color of   Signal Name   Wire
33 W	1	48	ŋ	ı	2 В
	1	49	SHIELD	ı	
H.	1	20	ı	1	
	1	51	1	1	
	1	52	1	ı	
	1	53	SHIELD	1	
	1	54	В	1	
		55	œ	1	
$\frac{1}{2}$	I	56	M	ı	
Connector No. B41		Terminal No	Color of	Signal Name	Connector No. B43
Connector Name WIRE TO WIRE	TO WIRE	3	Wire		Connector Name WIRE TO WIRE
Connector Color WHITE		17	>	ı	Connector Color WHITE
		18	M	1	
		19	В	ı	
2 3 4 5 6	7 8 9 10 11 12 13 14 15	20	*	ı	6 7 8 9 10 11
17 18 19 20 21 22	23 24 25 26 27 28 29 30 31 32	21	SHIELD	ı	
-		22	M	ı	
Terminal No. Color of Wire	Signal Name	23	Ж	1	Terminal No. Color of Signal Name
- C		24	SHIELD	1	D
	1	25	В	_	
		26	5	ı	
7		27	>	ı	
	1 1	28	œ	ı	
		29	5	ı	
<u> </u>	1	30	SHIELD	1	
	1	31	В	ı	

2013 Infiniti JX

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[BOSE AUDIO W/O SURROUND SOUND]

#### < WIRING DIAGRAM >

Connector No.	lo. B46		Connector No.	No. B49		Connector No.	o. B51		
Connector Name WIRE TO WIRE	lame WIR	E TO WIRE	Connector	Name WIF	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	ame WIR	E TO WIRE	
Connector Color WHITE	olor WHI	TE	Connector Color WHITE	Color WH	ITE	Connector Color WHITE	olor WHI	TE	
H.S.	1 2 3 4 13 14 15 16	13 14 15 16 17 18 19 20 21 22 23 24	H.S.	7 6 9	5 4 3 2 1 14 13 12 11 10 9 8	是 H.S.	2 2	5 4 3 2 1 12 11 10 9 8 7 6	
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	
13	8	1	6	ŋ	ı	Ξ	æ	ı	
14	ш	1	10	>	I	12	۵	I	
15	G	ı	-	۵	1				1
16	SHIELD	ı	12	۳	ı				
17	В	ı	13	SHIELD	-				
			14	В	ı				
			15	8	ı				
			16	>	ı				
N software				7-1-0		7	020		_
Connector Name WIRE TO WIRE	lo. bos	E TO WIRE	Terminal No.	. Wire	Signal Name	Connector Name		B/3	
Connector Color	MHITE WHITE		17A	>	1	Connector Color	_		
		1	18A	В	ı				_
			19A	SHIELD	ı		<u>(</u>		
O I	L"	5A 4A 3A 2A 1A	20A	W	1	S H		2 + 6 2 4 6 7 4 6	
	<u>1 =</u>	: ≲	21A	SHIELD	1		رو		
	_		23A	M	1		Color of		
	21A 20A 19A	21A 20A 19A 18A 17A 16A 15A 14A 13A 12A 11A	24A	В	-	l erminai No.	Wire	Signal Name	
	30A 29F	30A 29A 28A 27A 26A 25A 24A 23A 22A	25A	SHIELD	ı	-	В	1	
	41A 40A 39A	41A 40A 39A 38A 37A 36A 35A 34A 33A 32A 31A	26A	>	I	2	>	1	
	50A 49¢	488 478 468 458 448 438 428	27A	В	I	4	>	1	
	61A 60A 59A	,58A 57A 56A 55A 54A 53A 52A 51A	28A	SHIELD	1	2	В	1	
	70A 69A	70A 69A 68A 67A 66A 65A 64A 63A 62A	30A	В	ı	9	ŋ	1	_
	81A 80A 79A	814 804 794 784 774 754 744 734 724 714	74A	Д	I				
	90A 89A	90A 89A 88A 87A 86A 85A 84A 83A 82A	75A	>	I				
	[ĕ;]⊊	95A 94A 93A 92A 91A							
	1	808 U.S. U.S. U.S. U.S. U.S. U.S. U.S. U.S							
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[BOSE AUDIO W/O SURROUND SOUND]

#### < WIRING DIAGRAM >

Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	ı	=	_
Color of Wire	Œ	BG	SHIELD	В	SB
Terminal No. Wire	ω	8	6	10	11

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Signal Name

Color of Wire

Terminal No.

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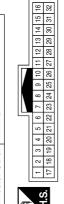
Signal Name		ı	I	ı	I	ı	I	I	ı	I	I	I
Color of	Wire	SB	BR	SHIELD	Μ	В	>	×	В	G	ш	SHIELD
oN leuima		4	5	9	7	8	6	10	11	12	13	14

H.S.   8 7 6 5 4 3   16 15 14 13 12 11   17   17   17   17   17   17   1	
Ferminal No. Color of Wire	of Signal Name
1 LG	ı
2 SB	ı
3 L	ı

Connector No.	٥	亨		В	B101	l — l									
Connector Name WIRE TO WIRE	٥	ďar	ne l	5	≝	ш	잍		≝	ш					
Connector Color WHITE	or O	혓	5	>	₹	H									
·						h	Ш١	N	И	17	Ш				
\ <del>\</del>	-	2	co	2 3 4 5 6	2	9	7	8	6	9	Ξ	8 9 10 11 12 13 14 15	13	14	15
Ó	17	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	19	20	21	22	23	24	52	92	27	88	83	၉	31
	ı	ı	ı	ı	ı	ı	ı								

Connector Name WIRE TO WIRE	or N	lan	υе	≥	Æ	Ш	0	≥	IB	ш						
Connector Color WHITE	o o	8	7	∣≥	토											
E						5	-11									
Ę	-	2	3 4 5 6	4	2	9	7	8	6	10	Ξ	8 9 10 11 12 13 14 15 16	13	14	15	16
į.	17	18	19	20	21	22	23	24	25	56	27	18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	29	8	3	32

Connector No.



Signal Name	-	Ι	_	-	_	_	I	_	-	-	_	I
Color of Wire	Μ	В	SHIELD	В	В	В	8	В	SHIELD	В	В	В
Terminal No. Wire	17	18	19	21	22	23	24	25	56	27	58	29

- (WITH REAR ENTERTAINMENT SYSTEM) - (WITHOUT REAR ENTERTAINMENT SYSTEM) - (WITH REAR ENTERTAINMENT SYSTEM) - (WITHOUT REAR ENTERTAINMENT SYSTEM) - (WITH REAR ENTERTAINMENT SYSTEM) - (WITH REAR ENTERTAINMENT SYSTEM)

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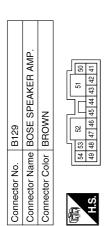
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[BOSE AUDIO W/O SURROUND SOUND]

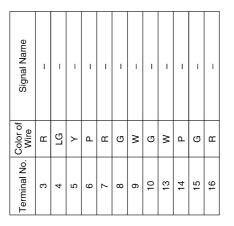
#### < WIRING DIAGRAM >



Signal Name	ı	ı	ı	1	ı	1	ı	ı	1	1	ı	1	1	-	
Color of Wire	æ	ŋ	ŋ	Μ	ŋ	Μ	В	ŋ	Μ	ЬLG	<b>&gt;</b>	В	Μ	g	
Terminal No.	41	42	43	<b>7</b> 7	45	46	47	48	49	92	51	25	23	54	

Signal Name	1	1	1	1	1	1	1	1	ı
Color of Wire	۵.	ш	8	۵	В	Α	В	8	ı
Terminal No. Color of Wire	69	70	71	72	73	74	22	9/	2.2

B111	Sonnector Name WIRE TO WIRE	BROWN	
Connector No.	Sonnector Name	Sonnector Color BROWN	



Signal Name	-	ı	ı	_	-	ı	_	ı	-	ı
Color of Wire	æ	Μ	SHIELD	Μ	Μ	В	Μ	В	1	Ь
Terminal No. Wire	59	09	61	62	63	64	92	99	29	89

Connector No.	Š.		B	B107									
Connector Name WIRE TO WIRE	Nan	<u>e</u>	∣≥	=		0	₹	₩	١				
Connector Color WHITE	Solo	_	≥	ᇁ	끧								
					- 11/		1/4	- 17					
2	-	2	8	4	2	9	7	œ	6	9 10 11 12	Ξ	12	
11:3:	13	14	15	16	17	18	19	20	21	13 14 15 16 17 18 19 20 21 22 23 24	23	24	
		11	11	11	11	11	Ш	$\ $	Ш	$\ $	$\ $		

5 6 7 8 9 10 11 12	13 14 15 16 17 18 19 20 21 22 23 24	Signal Name	_	I	1	ı	ı	-	I
1 2 3 4	3 14 15 16	Color of Wire	В	>	ŋ	ш	SHIELD	В	M
9		Terminal No.	9	7	8	6	10	11	12

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[BOSE AUDIO W/O SURROUND SOUND]

#### < WIRING DIAGRAM >

B139 WIRE TO WIRE WHITE	4   11   00   9   7   2   6   1   1   1   1   1   1   1   1   1	Signal Name		
9 5	12 2	Color of Wire	Μ	മ
Connector No. B139 Connector Name WIRE T Connector Color WHITE	哥 H.S.	Terminal No.	11	12

Signal Name	-	1	ı	_	1	1	_	ı	_	1	1	1	
Color of Wire	В	Μ	SHIELD	В	8	SHIELD	Μ	В	Μ	В	Μ	SHIELD	
Terminal No.	12	13	14	15	16	17	18	19	20	21	22	23	

				19 20 39 40				
9	RE TO WIRE	<u> </u>		9 10 11 12 13 14 15 16 17 18 29 30 31 32 33 34 35 36 37 38 3	Signal Name	-	_	ı
. B136	me WIF	lor WH		6 7 8 26 27 28	Color of Wire	В	>	SHIELD
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	崎高 H.S.	1 2 3 4 5 21 22 23 24 25	Terminal No.	6	10	11

Signal Name	I	_	I	I	-	ı	-	ı	ı	_	ı	_
Color of Wire	FG	SB	В	ш	SHIELD	0	SB	SB	SHIELD	ГG	SB	Υ
Terminal No.	6	10	13	14	15	16	17	19	20	21	22	24

Signal Name	ı	ı	ı	-	-	ı
Color of Wire	>	ŋ	SHIELD	>	BR	ľ
Terminal No.	-	2	က	4	9	7
	Color of Wire	Color of Wire	Color of Wire W	Color of Wire W G	Color of Wire W G G SHIELD	Color of Wire W G G SHIELD Y Y BR

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[BOSE AUDIO W/O SURROUND SOUND]

Signal Name	_	ı	_	1	_	_	_	_
Color of Wire	Y	0	^	В	Μ	G	ш	SHIELD
Terminal No. Wire	7	8	6	10	11	12	13	14

	_		_		_	_		_	_		_	_
Signal Name	ı	1	I	I	1	1	I	I	-	I	1	I
Color of Wire	LG	SB	В	В	SHIELD	_	Д	BR	1	ГG	SB	SB
Terminal No.	6	10	13	14	15	16	11	19	20	21	22	24

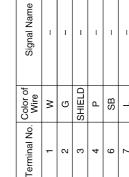
Connector No.	B	B145							
Connector Name WIRE TO WIRE	3	핕	Ш	0	⋝	ᇤ	اا		
Connector Color WHITE	M	Ξ	TE						
			- 111	- 11			_		
SH	-	2	3	4	2 3 4 5 6	9	7	<b>∞</b>	
Su -	6	10	11	12	9 10 11 12 13 14 15 16	14	15	16	

Signal Name	I	I	I	I	ı	I	
Color of Wire	ГG	SB	SB	_	BR	SHIELD	
Terminal No. Wire	-	2	3	4	5	9	

Signal Name	I	-	I	_	I	I	
Color of Wire	Pl	SB	SB	٦	BR	SHIELD	
Terminal No.	1	7	3	4	2	9	

B201	WIRE TO WIRE	WHITE
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE





B140	Connector Name WIRE TO WIRE	WHITE	1 2 3 6 7	8 9 10 11 12 13 14 15 16	
Connector No.	Connector Name	Connector Color WHITE	恒	8	į.

Signal Name	I	-	I	-	I	I	ı	ı
Color of Wire	g	M	Ь	н	SHIELD	8	В	Μ
Terminal No.   Color of   Wire	6	10	11	12	13	14	15	16

	_	3	Connector Name REAR SIDE SPEAKER	NWC
נ	W	B153	RE/	BRC
	_		ame	olor
2	16	Connector No.	Connector Na	Connector Color BROWN





Signal Name	-	_
Color of Wire	Μ	В
Ferminal No.	1	2

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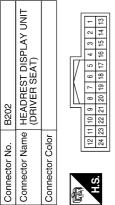
[BOSE AUDIO W/O SURROUND SOUND]

#### < WIRING DIAGRAM >

Connector No. Connector Name		B302 HEADREST DISPLAY UNIT
Connector Co	_	SSENGER SEAT)
H.S. 24	11 10 9 23 22 21	8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13
Terminal No.	Color of Wire	Signal Name
1	W	REAR 1 HP LH-
2	ŋ	REAR 1 HP LRH-
င	SHIELD	REAR 1 HP SHIELD
4	>	REAR 1 COMP -
5	_	_
9	BR	CONT GND
7	ГG	AUX REQ. OUT
8	ı	ı
6	LG	M-CAN 2 L
10	SB	M-CAN 2 H
11	_	_
12	В	GND
13	В	REAR 1 HP LH+
41	ш	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	0	REAR 1 COMP+
17	SB	AV GND
18	1	1
19	SB	ACC DET. IN
20	SHIELD	SHIELD M-CAN
21	ГG	M-CAN 1 L
22	SB	M-CAN 1 H
23	ı	I
24	>	BAT

Connector No.	No.	В	B301	-									
Connector Name WIRE TO WIRE	Name	>	II.	Ä	7	× <	₩.	Щ					
Connector Color WHITE	Color	>	ΙŦ	岜	l								
E				Ħ	Ш	N	W.		Ш				_
Š	-	2	ო	4	2	9	7	8	6	우	9 10 11 12	12	
6	13	13 14 15 16 17 18 19 20 21 22 23 24	2	16	17	8	19	20	21	23	ន	54	

Signal Name	I	ı	I	I	I	-	I	I	_	I	-	I	I	I	ı	I	_	I
Color of Wire	Μ	G	SHIELD	>	BR	FG	FG	SB	В	ш	SHIELD	0	SB	SB	SHIELD	ГG	SB	>
Terminal No.	-	2	3	4	9	2	6	10	13	14	15	16	17	19	20	21	22	24



20 19 18 17 16 15 14 13		Signal Name	REAR 1 HP LH-	REAR 1 HP LRH-	REAR 1 HP SHIELD	REAR 1 COMP -	_	CONT GND	AUX REQ. OUT	1	M-CAN 2 L	M-CAN 2 H	-	GND	REAR 1 HP LH+	REAR 1 HP RH+	REAR 1 COMP SHIELD	REAR 1 COMP+	AV GND	=	ACC DET. IN	=	M-CAN 1 L	M-CAN 1 H	=	BAT	
24 23 22 21	-	Color of Wire	W	G	SHIELD	Ь	-	SB	٦	1	БJ	SB	1	В	В	В	SHIELD	7	Д	-	BB	_	LG	SB	-	SB	
H.S.		erminal No.	1	2	3	4	5	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	

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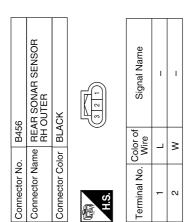
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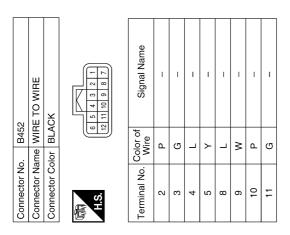
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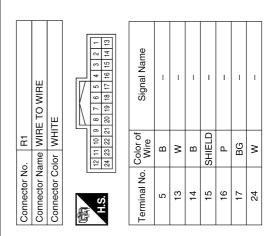
[BOSE AUDIO W/O SURROUND SOUND]

#### < WIRING DIAGRAM >



Connector No.	o. B455	5
Connector Na	ame RE/ LH	Connector Name REAR SONAR SENSOR LH OUTER
Connector Color	olor BLACK	CK
H.S.		3 2 1
Terminal No. Wire	Color of Wire	Signal Name
-	Ь	ı
2	В	ı





Connector No.	). B458	28
Connector Name	tme RE	REAR SONAR SENSOR RH INNER
Connector Color	olor BL	BLACK
ान्त्री H.S.		
Terminal No.	Color of Wire	Signal Name
1	Ь	1
2	g	I

	Connector Name REAR SONAR LH INNER	CK	3 2 1	Signal Name	ı	ı
. B457	me REA	lor BLA	9)	Color of Wire	_	>
Connector No.	Connector Na	Connector Color BLACK	原 H.S.	Terminal No.		2

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# **BOSE AUDIO W/O SURROUND SOUND**

[BOSE AUDIO W/O SURROUND SOUND]

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# < WIRING DIAGRAM >

Connector No. R11 Connector Name WIRE T Connector Color WHITE	lo. R11 lame WIR	Connector No. R11  Connector Name WIRE TO WIRE  Connector Color WHITE	Connector No. R101 Connector Name WIRE TO WIRE Connector Color WHITE	o. R101 ame WIRE	E TO WIRE	Connector No. Connector Name Connector Color	R105 ne TELEM. or WHITE	Connector No. R105 Connector Name TELEMATICS SWITCH Connector Color WHITE	
H.S.	12 11 10 9 24 23 22 21	8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13	H.S.	2 3 4 4 15 16	5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24	€ H.S.	8 7	00 00	
Terminal No.	Color of Wire	Signal Name	Terminal No.	ც>	Signal Name	Terminal No.	Color of Wire	Signal Name	
- 0	o l	ı	- 0	> 0	ı	- (	> 0	1	
2 0	٤ ٣	I	0 0	۵ (	I	CV C	ص <u>د</u>	I	
υ 4	≥ m	1 1	2 4	5 a	1 1	2 6	т с	1 1	
2	SHIELD	ı	r2	GR	ı				
9	В	I	9	_	ı				
9	W	ı	7	ш	ı				
Connector No.	lo. R109	6	Connector No.	o. D2		Connector No.	D3		
Connector Name MICROPHONE	lame MIC	ROPHONE	Connector Name WIRE TO WIRE	ame WIRE	E TO WIRE	Connector Name WIRE TO WIRE	ne WIRE	TO WIRE	
Connector Color	color WHITE	ITE	Connector Color WHITE	olor WHI	1	Connector Color WHITE	or WHITE		
高 SH	4	4 3 2 1	原 H.S.	- n	1 2 8 3 4 8 9 10	语 S.H			
						2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		01 10 11 21 21 12 13 13 10	[S
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	22 23 24	27 28	32 33 34 35	40
- c	æ 8		7 0	<u>ق</u> ق	1	Terminal No.	Color of Wire	Signal Name	
5 4	<u> </u>	1 1	0	^	I	22	>	ı	
	ı					23	LG	-	
						28	G	1	
						S 62	SHIELD	1	
						30	В	ı	
						31	В	ı	
						32	>	ı	

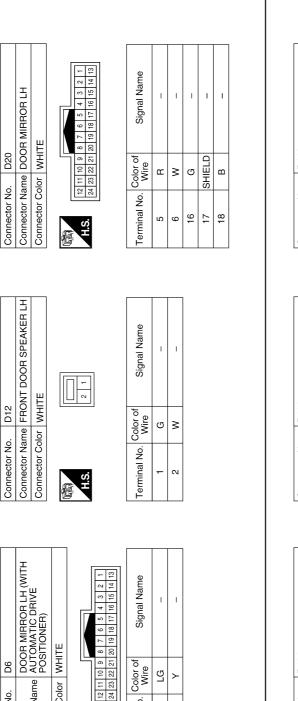
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Revision: March 2012 AV-253 2013 Infiniti JX

# **BOSE AUDIO W/O SURROUND SOUND**

SONT DOOR SPEAKER RH

Signal Name



Connector Color WHITE

Connector Name Connector No.

Color of Wire Ŋ >

Terminal No. 8 6

. D112	Connector Name FRONT D	or WHITE	2 2	Color of Wire	g	8			
Connector No.	Connector Na	Connector Color WHITE	是 H.S.	Terminal No. Wire	-	2			
							]		
72	RE TO WIRE	IITE	1 2 9 9 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0	Signal Name	ı	ı			
.   D1(	me WIF	lor WH		Color of Wire	g	>			
Connector No. D102	Connector Name WIRE TO WIRE	Connector Color WHITE	南 H.S.	Terminal No. Wire	6	10			
		_	1 32						
01	Connector Name WIRE TO WIRE	HTE	3 4 5 6 7 8 9 10 11 12 13 14 15 15 12 23 24 25 26 27 28 29 30 31	Signal Name	1	-	ı	ı	I
). D1(	ıme WII	lor WF	3 4 5 19 20 21	Color of Wire	G	SHIELD	۳	ш	>
Connector No. D101	Connector Na	Connector Color WHITE	H.S. 17 18	Terminal No. Wire	-	8	က	4	5
									1730

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# **BOSE AUDIO W/O SURROUND SOUND**

[BOSE AUDIO W/O SURROUND SOUND]

# < WIRING DIAGRAM >

Connector Name DOOR MIRROR RH	T	Confinector No.	D201		Connector No.	o. D207	7
		Connector Name WIRE TO WIRE	ne WIRE	TO WIRE	Connector N	ame RE/	Connector Name REAR DOOR SPEAKER LH
		Connector Color WHITE	or WHITE		Connector Color BROWN	olor BRC	NWO
7 6 5 4 3 19 18 17 16 15	15 14 13	H.S.	6 7	3 9 10 11 12	是 H.S.		
Signal Na	Name	Terminal No.   Color of Wire	Color of Wire	Signal Name	Terminal No. Color of Wire	Color of Wire	Signal Name
1		=	>	1	-	LG	ı
1		12	PC	1	2	>	ı
ı							
I							
1							

Connector No.	Š.		ď	D501	l _								
Connector Name WIRE TO WIRE	Nam	Ф	∣≥∣	וּיי	Ш	0	⋝	置					
Connector Color WHITE	Colo	_	$\geq$	= ו	H								
						- 11	- IV	- 117	_				
	12 11 10 9	l⊬	9	6	8	7	9	2	4	က	2	-	
6.1	24 23 22 21 20 19 18 17 16 15 14	23	23	21	20	13	8	17	91	15	7	5	

Signal Name	1	_	-	ı	I
Color of Wire	>	В	В	SHIELD	В
Terminal No. Wire	13	14	15	16	17

NMC	2 1	10000
ır BBC		Color of
Connector Color BROWN	(京) H.S.	Toriminol No C

Connector Name REAR DOOR SPEAKER RH

D307

Connector No.

Signa		
Color of Wire	Μ	g
erminal No.	1	2

-	E TO WIRE	TE TE	7 8 9 10 11 12	Signal Name	1
. D301	me WIR	lor WHI	- 0	Color of Wire	Œ
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Wire	-

Signal Name	1	_
Color of Wire	G	W
Terminal No.	11	12

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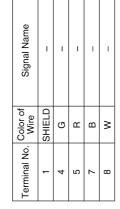
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# [BOSE AUDIO W/O SURROUND SOUND]







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# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORKFLOW

Work Flow (Multi AV System)

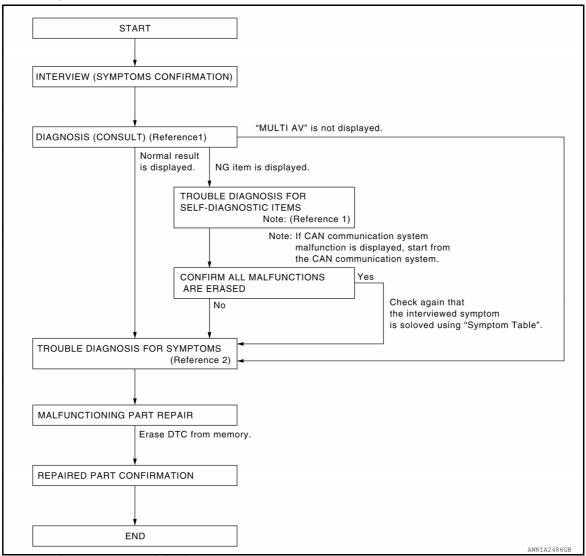
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# **OVERALL SEQUENCE**



Reference 1: Refer to <u>AV-172, "CONSULT Function"</u>. Reference 2: Refer to <u>AV-377, "Symptom Table"</u>.

### **DETAILED FLOW**

# 1. CHECK SYMPTOM

Check the malfunction symptoms by performing the following items.

Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred).

**AV-257** 

· Check the symptom.

### >> GO TO 2

Revision: March 2012

# 2.self-diagnosis (consult)

- Connect CONSULT and perform "SELF-DIAGNOSIS" for "MULTI AV". NOTE:
- Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed.
- 2. Check if any DTC No. is displayed in the self-diagnosis results.

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### **DIAGNOSIS AND REPAIR WORKFLOW**

### < BASIC INSPECTION >

[BOSE AUDIO W/O SURROUND SOUND]

# Is any DTC No. displayed?

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

# ${f 3.}$ CHECK SELF-DIAGNOSIS RESULTS (CONSULT)

- 1. Check the DTC No. indicated in the self-diagnosis results.
- Perform the relevant diagnosis referring to the DTC No. list. Refer to AV-187, "DTC Index".

### NOTF:

Start with the diagnosis for the CAN communication system if "CAN COMM CIRCUIT [U1000] or CONTROL UNIT (CAN) [U1010]" is displayed.

>> GO TO 5

# 4. PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-377, "Symptom Table".

>> GO TO 5

# 5. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

### NOTE:

Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC No. has been indicated in the self-diagnosis results.

>> GO TO 6

# 6. CHECK AFTER REPAIR

- 1. Perform self-diagnosis for "MULTI AV" with CONSULT after repairing or replacing the malfunctioning parts.
- 2. Check if any DTC No. is displayed in the self-diagnosis results.

### Is any DTC No. displayed?

YES >> GO TO 3 NO >> GO TO 7

# 7. FINAL CHECK

Perform the operation check to confirm that the malfunction symptom is solved or that any other symptoms are present.

### Are any symptoms present?

YES >> GO TO 4

NO >> Inspection End.

# Work Flow (Camera Assistance Sonar)

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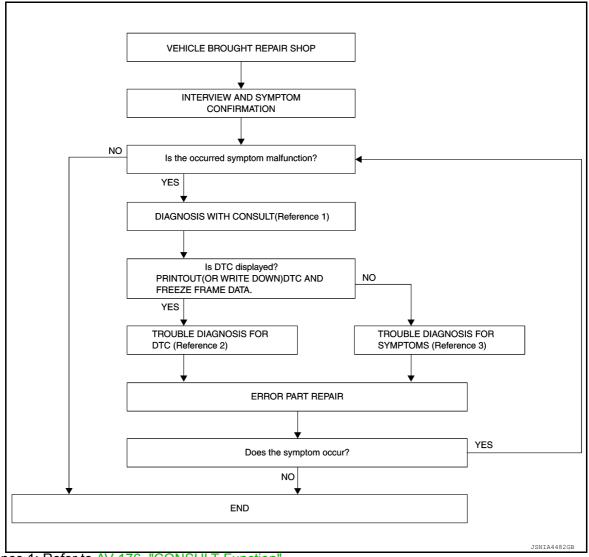
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### **OVERALL SEQUENCE**



Reference 1: Refer to AV-176, "CONSULT Function".

Reference 2: Refer to AV-210, "DTC Index".

Reference 3: Refer to AV-377, "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

- Connect CONSULT and perform a self-diagnosis for "SONAR". Refer to <u>AV-176, "CONSULT Function"</u>.
   NOTE:
  - Skip to step 4 of the diagnosis procedure if "SONAR" is not displayed.
- 2. When DTC is detected, follow the instructions below:
- Record DTC and Freeze Frame Data.

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# **DIAGNOSIS AND REPAIR WORKFLOW**

### < BASIC INSPECTION >

[BOSE AUDIO W/O SURROUND SOUND]

### 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-210, "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-377, "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.

### 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.

< BASIC INSPECTION >

[BOSE AUDIO W/O SURROUND SOUND]

# **INSPECTION AND ADJUSTMENT**

# ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT

# ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT: Description

INFOID:0000000008359988

### BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT configuration before replacement.

### NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing AV control unit.

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### AFTER REPLACEMENT

### **CAUTION:**

When replacing AV control unit, you must perform "After Replace ECU" with CONSULT.

- Complete the procedure of "After Replace ECU" in order.
- If you set incorrect "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

# ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT: Work Procedure

INFOID:0000000008359989

# 1. SAVING VEHICLE SPECIFICATION

# CONSULT

Enter "Re/Programming, Configuration" and perform "Before Replace ECU" to save or print current vehicle specification.

### NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing AV control unit.

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### >> GO TO 2.

# 2. REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

### >> GO TO 3.

# 3. WRITING VEHICLE SPECIFICATION

### (P)CONSULT

- 1. Enter "Re/Programming, Configuration".
- 2. If "Before Replace ECU" operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press "Confirm" to write vehicle specification. Refer to <a href="AV-262">AV-262</a>, "CONFIGURATION (AV CONTROL UNIT): Work Procedure".
- 3. If "Before Replace ECU" operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to <a href="AV-262">AV-262</a>, "CONFIGURATION (AV CONTROL UNIT): Work Procedure".

# >> GO TO 4.

# 4. OPERATION CHECK

Check that the operation of the AV control unit is normal.

### >> Work End.

# CONFIGURATION (AV CONTROL UNIT)

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### [BOSE AUDIO W/O SURROUND SOUND]

# CONFIGURATION (AV CONTROL UNIT): Description

INFOID:000000000835999

Vehicle specification needs to be written with CONSULT because it is not written after replacing AV control unit.

Configuration has three functions as follows:

Function	Description
"Before Replace ECU"	<ul> <li>Reads the vehicle configuration of current AV control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

### **CAUTION:**

- When replacing AV control unit, you must perform "Select Saved Data List" or "After Replace ECU" with CONSULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new AV control unit.

# CONFIGURATION (AV CONTROL UNIT): Work Procedure

INFOID:0000000008359991

# 1. WRITING MODE SELECTION

### (P)CONSULT

Select "Reprogramming, Configuration" of AV control unit.

When writing saved data>>GO TO 2.

When writing manually>>GO TO 3.

# 2.PERFORM "SAVED DATA LIST"

### (P)CONSULT

Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm".

>> Work End.

# 3. PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"

### (P)CONSULT

- 1. Select "After Replace ECU" or "Manual Configuration".
- 2. Identify the correct model and configuration list. Refer to <u>AV-263, "CONFIGURATION (AV CONTROL UNIT)</u>: Configuration List".
- 3. Confirm and/or change setting value for each item.

### **CAUTION:**

Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.

4. Select "Next".

### **CAUTION:**

Make sure to select "Next", confirm each setting value and press "OK" even if the indicated configuration of brand new AV control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.

5. When "Completed", select "End".

>> GO TO 4.

# 4. OPERATION CHECK

Confirm that each function controlled by AV control unit operates normally.

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[BOSE AUDIO W/O SURROUND SOUND]

>> Work End.

# CONFIGURATION (AV CONTROL UNIT): Configuration List

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Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

MANUAL SE	ETTING ITEM
Items	Setting value
ENGINE TYPE	NORMAL ⇔ HYBRID
SOUND SYSTEM	BOSE SURROUND ⇔ BOSE ⇔ BASE

⇒: Items which confirm vehicle specifications

# ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CON-TROL UNIT

### ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL **UNIT**: Description INFOID:0000000008376938

### BEFORE REPLACEMENT

When replacing around view monitor control unit, save or print current vehicle specification with CONSULT configuration before replacement.

### NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing around view monitor control unit.

### AFTER REPLACEMENT

### **CAUTION:**

When replacing around view monitor control unit, you must perform "After Replace ECU" with CON-SULT.

- Complete the procedure of "After Replace ECU" in order.
- If you set incorrect "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

# ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL

**UNIT**: Work Procedure

# 1. SAVING VEHICLE SPECIFICATION

### (P)-CONSULT

Enter "Re/Programming, Configuration" and perform "Before Replace ECU" to save or print current vehicle specification.

### NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing around view monitor control unit.

>> GO TO 2.

# 2.REPLACE AROUND VIEW MONITOR CONTROL UNIT

Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

>> GO TO 3.

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# 3. WRITING VEHICLE SPECIFICATION

### (P)CONSULT

Enter "Re/Programming, Configuration".

2. If "Before Replace ECU" operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press "Confirm" to write vehicle

> **AV-263** 2013 Infiniti JX

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INFOID:0000000008376939

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### < BASIC INSPECTION >

[BOSE AUDIO W/O SURROUND SOUND]

specification. Refer to <u>AV-264, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Work Procedure".</u>

3. If "Before Replace ECU" operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to <a href="AV-264">AV-264</a>. "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Work Procedure".

>> GO TO 4.

# 4. OPERATION CHECK

Check that the operation of the around view monitor control unit and camera images (fixed guide lines and predictive course lines) are normal.

>> Work End.

# CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT)

# CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Description

INFOID:0000000008376940

Vehicle specification needs to be written with CONSULT because it is not written after replacing around view monitor control unit.

Configuration has three functions as follows:

Function	Description
"Before Replace ECU"	<ul> <li>Reads the vehicle configuration of current around view monitor control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

### **CAUTION:**

- When replacing around view monitor control unit, you must perform "Select Saved Data List" or "After Replace ECU" with CONSULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new around view monitor control unit.

# CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Work Procedure

NFOID:0000000008376941

# 1. WRITING MODE SELECTION

(P)CONSULT

Select "Reprogramming, Configuration" of around view monitor control unit.

When writing saved data>>GO TO 2.

When writing manually>>GO TO 3.

2.PERFORM "SAVED DATA LIST"

CONSULT

Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm".

>> Work End.

# ${f 3.}$ PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"

### CONSULT

1. Select "After Replace ECU" or "Manual Configuration".

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### < BASIC INSPECTION >

[BOSE AUDIO W/O SURROUND SOUND]

- Identify the correct model and configuration list. Refer to AV-265, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Configuration List".
- Confirm and/or change setting value for each item.

### CAUTION:

Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.

Select "Next".

### CAUTION:

Make sure to select "Next", confirm each setting value and press "OK" even if the indicated configuration of brand new around view monitor control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.

5. When "Completed", select "End".

>> GO TO 4.

# 4. OPERATION CHECK

Confirm that each function controlled by around view monitor control unit operates normally.

>> Work End.

# CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Configuration List

INFOID:0000000008376942

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### **CAUTION:**

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

MANUAL SETTING ITEM	
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BCI FUNCTION	WITH ⇔ WITHOUT

⇒: Items which confirm vehicle specifications

# ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT

# ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT: Description

INEOID:0000000008489503

### BEFORE REPLACEMENT

When replacing sonar control unit, save or print current vehicle specification with CONSULT configuration before replacement.

### NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing sonar control unit.

### AFTER REPLACEMENT

### **CAUTION:**

When replacing sonar control unit, you must perform "After Replace ECU" with CONSULT.

- Complete the procedure of "After Replace ECU" in order.
- If you set incorrect "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

### ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT: Work Procedure INFOID:0000000008489504

# 1.SAVING VEHICLE SPECIFICATION

### (P)-CONSULT

Enter "Re/Programming, Configuration" and perform "Before Replace ECU" to save or print current vehicle specification.

NOTE:

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**AV-265** Revision: March 2012 2013 Infiniti JX

### < BASIC INSPECTION >

[BOSE AUDIO W/O SURROUND SOUND]

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing sonar control unit.

>> GO TO 2.

# 2. REPLACE SONAR CONTROL UNIT

Replace sonar control unit. Refer to AV-410, "Removal and Installation".

>> GO TO 3.

# 3. WRITING VEHICLE SPECIFICATION

### (P)CONSULT

- 1. Enter "Re/Programming, Configuration".
- 2. If "Before Replace ECU" operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press "Confirm" to write vehicle specification. Refer to <a href="AV-266">AV-266</a>, "CONFIGURATION (SONAR CONTROL UNIT): Work Procedure".
- 3. If "Before Replace ECU" operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to <a href="AV-266">AV-266</a>, "CONFIGURATION (SONAR CONTROL UNIT): Work Procedure".

>> GO TO 4.

### 4. OPERATION CHECK

Check that the operation of the sonar control unit is normal.

>> Work End.

# **CONFIGURATION (SONAR CONTROL UNIT)**

# CONFIGURATION (SONAR CONTROL UNIT): Description

INFOID:0000000008489505

Vehicle specification needs to be written with CONSULT because it is not written after replacing sonar control unit.

Configuration has three functions as follows:

Function	Description
"Before Replace ECU"	<ul> <li>Reads the vehicle configuration of current sonar control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

### **CAUTION:**

- When replacing sonar control unit, you must perform "Select Saved Data List" or "After Replace ECU" with CONSULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new sonar control unit.

# CONFIGURATION (SONAR CONTROL UNIT): Work Procedure

INFOID:0000000008489506

# 1. WRITING MODE SELECTION

(P)CONSULT

Select "Reprogramming, Configuration" of sonar control unit.

When writing saved data>>GO TO 2. When writing manually>>GO TO 3.

< BASIC INSPECTION >

[BOSE AUDIO W/O SURROUND SOUND]

# 2.PERFORM "SAVED DATA LIST"

CONSULT

Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm".

>> Work End.

# $3.\mathsf{perform}$ "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"

### (P)CONSULT

- 1. Select "After Replace ECU" or "Manual Configuration".
- 2. Identify the correct model and configuration list. Refer to <u>AV-267, "CONFIGURATION (SONAR CONTROL UNIT)"</u>: Configuration List".
- 3. Confirm and/or change setting value for each item.

### **CAUTION:**

Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.

Select "Next".

### **CAUTION:**

Make sure to select "Next", confirm each setting value and press "OK" even if the indicated configuration of brand new sonar control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.

5. When "Completed", select "End".

>> GO TO 4.

### 4. OPERATION CHECK

Confirm that each function controlled by sonar control unit operates normally.

>> Work End.

# CONFIGURATION (SONAR CONTROL UNIT): Configuration List

### **CAUTION:**

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

MANUAL SETTING ITEM	
Items Setting value	
BCI FUNCTION	WITH ⇔ WITHOUT

⇔: Items which confirm vehicle specifications

# PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT

# PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Description

**5**4

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

### PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Work Procedure

INFOID:0000000008368208

INFOID:0000000008489507

# 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.

>> END

# CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

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### [BOSE AUDIO W/O SURROUND SOUND]

# CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Description

INFOID:0000000008486412

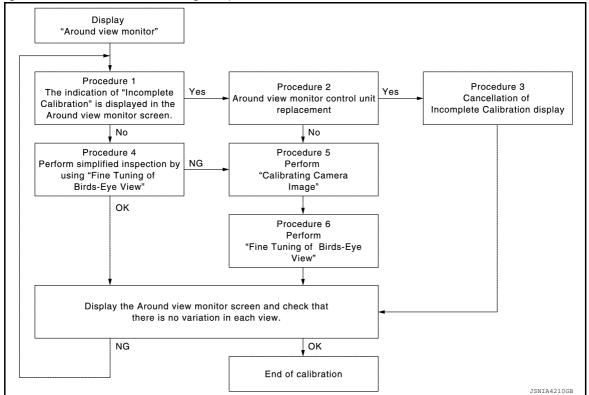
- Calibration must be performed after removing/replacing the cameras, removing parts (e.g. front grille, door mirror, and others) mounted on the cameras, or replacing the Around view monitor control unit.
- The use of CONSULT is required to perform calibration or writing of calibration results to the 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): Work Procedure

NFOID:0000000008486413

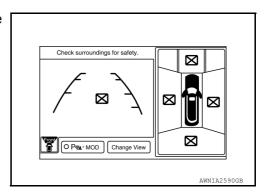
### CALIBRATION FLOWCHART

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



### NOTE:

View in the incomplete calibration state is indicated by "\sum" on the around view monitor.



### CALIBRATION PROCEDURE

 ${f 1}$  . AROUND VIEW MONITOR SCREEN CONFIRMATION

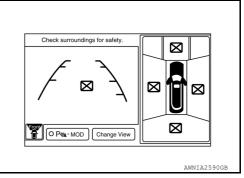
### < BASIC INSPECTION >

### [BOSE AUDIO W/O SURROUND SOUND]

Check that there is no indication of "Incomplete calibration".

Is the "Incomplete calibration" 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.cancel the indication of incomplete calibration (perform this only after replacing around view monitor control unit.)

CONSULT work support

1. On the CONSULT screen, touch "CALIBRATING CAMERA IMAGE (FRONT CAMERA)", "CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)", "CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)", or "CALIBRATING CAMERA IMAGE (REAR CAMERA)" to accept the selection.

NOTE:

To cancel the indication of Incomplete calibration, select items based on the target camera.

2. On the adjustment screen of each camera, touch "APPLY" button. After this, touch "OK" button.

### **CAUTION:**

- Never perform operations other than those mentioned above.
- Never perform "Initialize Camera Image Calibration".
- 3. Display the around view monitor screen to check that there is no errors, such as deviations among the camera images.

### 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)

sed on the target camera.

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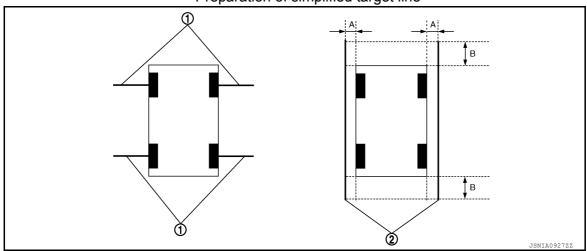
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### Preparation of simplified target line



Target lines 1

- 2. Target lines 2
- A. Approx. 30 cm (11.8 in)
- B. Approx. 1.0 m (39.3 in)
- 3. CONSULT work support

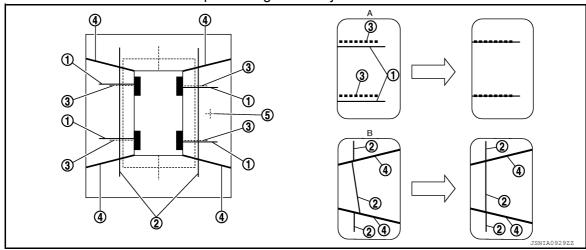
Touch "FINE TUNING OF BIRDS-EYE VIEW" on the CONSULT screen.

- 4. On the CONSULT screen, touch "SELECT" button to select right or left camera and perform camera calibration as instructed below:
- If the marker on the screen deviates from Target line 1, touch "AXIS X" button and "AXIS Y" button to adjust so that the marker is placed on the Target line 1.
- If Target line 2 is misaligned among the cameras, adjust each camera image to bring Target line 2 into a straight line.

### **CAUTION:**

### Never adjust the front camera and rear camera. Only adjust the right and left cameras.

# Simplified target line adjustment method



Target lines 1

2. Target lines 2

Marker for target line 1

- 4. Boundary between cameras
- 5. Crosshairs cursor (mark indicated the selected camera)
- A. Adjustment method for target lines 1 (right)
- Adjustment method for target lines 2 (right)
- 5. Adjust right and left cameras. Touch "APPLY" on the CONSULT screen to display adjustment results.
- 6. After adjusting right and left cameras, check that the marker is properly placed on the screen and there is no deviation in Target line 1.

### NOTE:

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

### Is the difference corrected?

YES >> On the CONSULT screen, touch "OK" button to complete writing to the around view monitor control unit.

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.

# Target line preparation procedure 1

1. Thread

4.

- Point RM0 (mark)
- Weight
- 5. Packing tape (to fix the vinyl string)
- g) 6. Vinyl string

3.

Point FM0 (mark)

- Put the points FM and RM (mark) 75 cm (29.5 in) from the points FM0 and RM0 individually.
- 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

- Point FM
- 4. Point FL (mark)

- Point RM
- 5. Point FR (mark)

- 3. Triangle scale
- 6. Point RL (mark)

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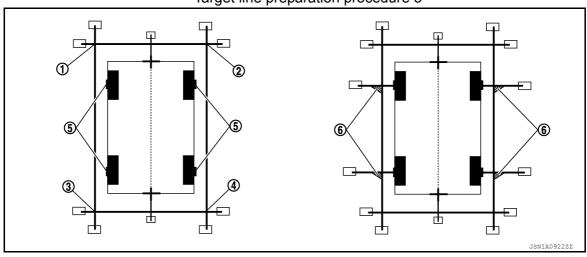
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### < BASIC INSPECTION >

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

- B. Approx. 1.5 m (59 in)
- 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.
- 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



1. Point FL

Point RR

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

Perform "Calibrating Camera Image"

©CONSULT work support

1. On the CONSULT screen, touch "CALIBRATING CAMERA IMAGE (FRONT CAMERA)", "CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)", "CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)", or "CALIBRATING CAMERA IMAGE (REAR CAMERA)" to accept the selection.

### NOTE:

To cancel the indication of Incomplete calibration, select items based on the target camera.

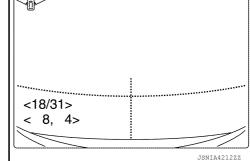
 On the adjustment screen of each camera, adjust the parameter by touching the "AXIS X" button, "AXIS Y" button, and "ROTATE" button to place the calibration marker shown on the camera screen on the target line drawn on the ground.

Adjustment range

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

Upper/lower direction (upper/lower switch) : -22 - 22

Left/right direction (left/right switch) : -22 - 22



Touch "APPLY" button on the CONSULT screen. "PRCSNG" is L
displayed and adjustment results are shown on the camera screen.

### **CAUTION:**

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

4. Touch "OK" button on the CONSULT screen. "PRCSNG" is displayed and adjustment results are written to the around view monitor control unit.

### **CAUTION:**

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

>> GO TO 6.

 $6.\mathtt{PERFORM}$  "FINE TUNING OF BIRDS-EYE VIEW"

# [BOSE AUDIO W/O SURROUND SOUND]

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

(P)CONSULT work support

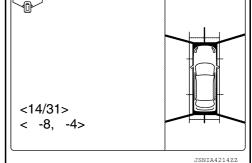
< BASIC INSPECTION >

Select "FINE TUNING OF BIRDS-EYE VIEW" by touching CONSULT screen.

On the adjustment screen of each camera, adjust the parameter by touching the "AXIS X" button, "AXIS Y" button", and "ROTATE" button to place the calibration marker shown on the camera screen on the target line drawn on the ground. NOTE:

Touch "SELECT" button on the CONSULT screen to select the target camera.

Touch "APPLY" button on the CONSULT screen. "PRCSNG" is displayed and adjustment results are shown on the camera screen.



### **CAUTION:**

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

Touch "OK" button on the CONSULT screen. "PRCSNG" is displayed and adjustment results are written to the around view monitor control unit.

### **CAUTION:**

- · Check that "PRCSNG" is displayed. Never perform other operations while "PRCSNG" is dis-
- After pressing the "OK" button, never press buttons other than the "BACK" button. NOTE:
- It can be initialized to the NISSAN factory default condition with "Initialize Camera Image Calibration".
- The adjustment value is cancelled in this mode by performing "Initialize Camera Image Calibration".

>> Calibration end

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**AV-273** Revision: March 2012 2013 Infiniti JX

### **U1000 CAN COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: DTC Logic

INFOID:0000000008359996

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000]	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

# AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000008359997

# 1.PERFORM SELF DIAGNOSTIC RESULT

- Turn ignition switch ON and wait for 2 seconds or more.
- Perform Self Diagnostic Result for MULTI AV.

### Is CAN COMM CIRCUIT displayed?

>> Refer to <u>LAN-22</u>, "<u>Trouble Diagnosis Flow Chart</u>". >> Refer to <u>GI-53</u>, "<u>Intermittent Incident</u>". YES

NO

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): DTC Logic INFOID-000000003368304

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000]	Sonar control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): Diagnosis Procedure

INFOID:0000000008368303

# 1.PERFORM SELF DIAGNOSTIC RESULT

- Turn ignition switch ON and wait for 2 seconds or more.
- 2. Perform Self Diagnostic Result for SONAR.

### Is CAN COMM CIRCUIT displayed?

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

NO >> Refer to GI-53, "Intermittent Incident".

# **U1010 CONTROL UNIT (CAN)**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# U1010 CONTROL UNIT (CAN)

AV CONTROL UNIT

AV CONTROL UNIT: DTC Logic

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### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): DTC Logic INFOID:00000008368305

# DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the sonar control unit if the malfunction occurs constantly.  Refer to AV-410, "Removal and Installation".

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# **U1200 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1200 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
CONT UNIT [U1200]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **U1201 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO W/O SURROUND SOUND]

# **U1201 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GYRO NO CONN [U1201]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-388. "Removal and Installation - AV Control Unit".

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# **U1202 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1202 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
G-SENSOR NO CONN [U1202]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

### **U1204 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO W/O SURROUND SOUND]

# **U1204 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GPS CONN [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486346

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

### Is DTC U1204 detected?

YES >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

NO >> Refer to GI-53, "Intermittent Incident".

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# **U1205 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1205 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ROM [U1205]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486349

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- Turn ignition switch ON. Perform Self Diagnostic Result again.

# Is DTC U1205 detected?

YES >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

NO >> Refer to GI-53, "Intermittent Incident".

# **U1206 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1206 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GPS RAM [U1206]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486352

# 1. PERFORM SELF DIAGNOSTIC RESULT

- Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

### Is DTC U1206 detected?

YES >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

NO >> Refer to GI-53, "Intermittent Incident".

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# **U1207 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1207 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GPS RTC [U1207]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486355

# 1. PERFORM SELF DIAGNOSTIC RESULT

- Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

# Is DTC U1207 detected?

YES >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

NO >> Refer to GI-53, "Intermittent Incident".

# **U1216 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO W/O SURROUND SOUND]

# **U1216 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
CAN CONT [U1216]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

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# **U1217 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1217 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
BLUETOOTH MODULE [U1217]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **U1218 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

# **U1218 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
HDD CONN [U1218]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388. "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486359

# 1. CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

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# **U1219 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1219 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
HDD READ [U1219]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486361

# 1. CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

# **U121A AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO W/O SURROUND SOUND]

# **U121A AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
HDD WRITE [U121A]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486363

1. CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

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# **U121B AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U121B AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
HDD COMM [U121B]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486365

# 1. CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

## **U121C AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## **U121C AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
HDD ACCESS [U121C]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486367

# 1. CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

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### **U121D AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## **U121D AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
DSP CONN [U121D]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486369

# 1. CHECK CD PLAYBACK

Check the CD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the CD playback function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

## **U121E AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

## **U121E AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
DSP COMM [U121E]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486371

1. CHECK CD PLAYBACK

Check the CD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the CD playback function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

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## **U1225 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1225 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
USB CONTROLLER [U1225] [U1225]	USB connection malfunction is detected.	Check that connection to USB connector is normal.

## **U1227 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

## **U1227 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
DVD COMM [U1227]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-388. "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008486374

1. CHECK DVD PLAYBACK

Check the DVD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the DVD playback function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

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## **U1228 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1228 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

## **U1229 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO W/O SURROUND SOUND]

# **U1229 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-388. "Removal and Installation - AV Control Unit".

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### **U122A AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# U122A AV CONTROL UNIT

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
CONFIG UNFINISH [U122A]	Configuration data is incomplete.	Write configuration data.  Refer to AV-262, "CONFIGURATION (AV CONTROL UNIT): Work Procedure".

# **Diagnosis Procedure**

INFOID:0000000008486378

# 1.PERFORM CONFIGURATION

When U122A is detected, configuration data must be written.

>> Write configuration data with CONSULT. Refer to <a href="AV-262">AV-262</a>, "CONFIGURATION (AV CONTROL UNIT): Work Procedure".

## **U122E AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U122E AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

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## U1231 BOSE AMP.

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# U1231 BOSE AMP.

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
AMP TEMP [U1231]	BOSE amp. malfunction is detected.	Replace BOSE amp. if malfunction occurs constantly.  Refer to AV-392, "Removal and Installation".

### **U1232 STEERING ANGLE SENSOR**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## U1232 STEERING ANGLE SENSOR

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of steering angle sensor is incomplete.	Adjust predictive course line center position of steering angle sensor.

# Diagnosis Procedure

INFOID:0000000008486382

1. ADJUST PREDICTIVE COURSE LINE CENTER POSITION OF STEERING ANGLE SENSOR

When U1232 is detected, the predictive course line center position of the steering angle sensor needs to be adjusted.

>> Adjust the predictive course line center position of steering angle sensor. Refer to <u>AV-267</u>, "<u>PRE-DICTED COURSE LINE CENTER POSITION ADJUSTMENT</u>: Work <u>Procedure</u>".

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### **U1243 DISPLAY UNIT**

#### [BOSE AUDIO W/O SURROUND SOUND]

## U1243 DISPLAY UNIT

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT DISP CONN [U1243]	When any of the following is detected.  display unit power supply or ground circuit malfunction.  serial communication circuit malfunction between front display unit and AV control unit.	Display unit power supply and ground circuits.     Serial communication circuits between front display unit and AV control unit.

### Diagnosis Procedure

INFOID:0000000008486384

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuits. Refer to AV-334, "DISPLAY UNIT: Diagnosis Procedure".

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMMUNICATION CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect display unit connector M92 and AV control unit connector M124.
- 3. Check continuity between display unit connector M92 terminals 9, 10 and AV control unit connector M124 terminals 77, 61.

Disp	ay unit	AV control unit		Continuity
Connector	Terminals	Connector	Terminals	Continuity
M92	9	M124	77	Yes
IVI92	10	IVI 124	61	165

4. Check continuity between display unit connector M92 terminals 9, 10 and ground.

Display unit		Ground	Continuity
Connector	Terminals	Giodila	Continuity
M92	9		No
W92	10	— No	INU

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# $3. \text{CHECK COMMUNICATION SIGNAL (DISP} \rightarrow \text{CONT)}$

- 1. Connect display unit connector M92 and AV control unit connector M124.
- Turn ignition switch ON.
- 3. Check signal between display unit connector M92 terminal 9 and ground.

### **U1243 DISPLAY UNIT**

## < DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

Displa	y unit	Ground			Α
(+	+)	( )	Condition	Reference value	
Connector	Terminal	(-)			В
M92	9	_	When adjusting display brightness.	(V) 6 4 2 0 +	C

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

# $\textbf{4.} \textbf{CHECK COMMUNICATION SIGNAL (CONT} \rightarrow \textbf{DISP)}$

Check signal between display unit connector M92 terminal 10 and ground.

Displ	ay unit	Ground		
(	(+)		Condition	Reference value
Connector	Terminal	(-)		
M92	10	_	When adjusting display brightness.	(V) 6 4 2 0 PKIB5039J

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Replace display unit. Refer to <u>AV-391, "Removal and Installation"</u>.

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### **U1244 GPS ANTENNA**

### [BOSE AUDIO W/O SURROUND SOUND]

## **U1244 GPS ANTENNA**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna disconnection.

## Diagnosis Procedure

INFOID:0000000008486386

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. GPS ANTENNA INSPECTION

Visually inspect the GPS antenna and antenna feeder. Refer to <u>AV-416, "Removal and Installation"</u>. <u>Is inspection result normal?</u>

YES >> GO TO 2.

NO >> Replaceair malfunctioning parts.

# 2. 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 terminal	Ground	Voltage	
(+)	(–)	voltage	
188	_	5.0 V	

### Is inspection result normal?

YES >> Inspection End.

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

## **U1258 SATELLITE RADIO ANTENNA**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## U1258 SATELLITE RADIO ANTENNA

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.

## Diagnosis Procedure

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Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. SATELLITE RADIO ANTENNA INSPECTION

Visually inspect the satellite radio antenna and antenna feeder. Refer to <u>AV-414, "Location of Antennas"</u>. <u>Is inspection result normal?</u>

YES >> GO TO 2.

NO >> Replaceair malfunctioning parts.

# 2. CHECK AV CONTROL UNIT VOLTAGE

- 1. Disconnect AV control unit connector M133.
- 2. Turn ignition switch ON.
- Check voltage between AV control unit terminal 166 and ground.

AV control unit terminal	Ground	Voltage
(+)	(-)	voltage
166	_	5.0 V

### Is inspection result normal?

YES >> Inspection End.

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

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### **U125A HEADREST DISPLAY UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## U125A HEADREST DISPLAY UNIT

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
3RD DISP CONN [U125A]	When any of the following is detected.  headrest display unit power supply or ground circuit malfunction.  AV communication circuit malfunction between headrest display units.	<ul> <li>Headrest display unit power supply and ground circuits.</li> <li>AV communication circuits between headrest display units.</li> </ul>

## Diagnosis Procedure

INFOID:0000000008486390

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

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

Check headrest display unit power supply and ground circuits. Refer to <u>AV-339</u>, "<u>HEADREST DISPLAY UNIT</u>: <u>Diagnosis Procedure</u>".

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK AV COMMUNICATION CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect headrest display unit connectors.
- 3. Check continuity between headrest display unit (driver seat) connector B202 and headrest display unit (passenger seat) connector B302.

Headrest displ	ay unit (driver seat)	Headrest display u	nit (passenger seat)	Continuity
Connector	Terminals	Connector	Terminals	Continuity
B202	9	P202	21	Yes
6202	10	B302	22	res

4. Check continuity between headrest display unit (driver seat) connector B202 and ground.

Headrest display unit (driver seat)		Ground	Continuity
Connector	Terminals	Ground	Continuity
P202	9		No
B202	10	_	No

### Is the inspection result normal?

YES >> Replace headrest display unit (passenger seat). Refer to AV-407, "Removal and Installation".

NO >> Repair or replace harness or connectors.

### **U1263 USB**

### < DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

## U1263 USB

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
USB OVERCURRENT [U126]	Overcurrent in USB connector is detected.	Check USB harness between the AV control unit and USB connector.

# **Diagnosis Procedure**

INFOID:0000000008486392

# 1. CHECK USB INTERFACE HARNESS

Visually inspect USB interface harness.

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace USB interface harness. Refer to AV-400, "Removal and Installation".

# $2.\mathsf{CHECK}$ USB INTERFACE HARNESS CONTINUITY

Check USB interface harness continuity. Refer to AV-368, "Diagnosis Procedure".

#### Is the inspection result normal?

YES >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

NO >> Replace USB interface harness. Refer to AV-400, "Removal and Installation".

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### **U1264 ANTENNA AMP.**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

## U1264 ANTENNA AMP.

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
ANTENNA AMP TERMINAL [U1264]	Antenna amp. ON signal circuit open or short circuited.	Antenna amp. ON signal circuit between AV control unit and antenna amp.

## Diagnosis Procedure

INFOID:0000000008486394

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND ANTENNA BASE

- 1. Turn ignition switch OFF.
- Disconnect AV control unit connector M143 and antenna base connector M502.
- 3. Check continuity between AV control unit connector M143 and antenna base connector M502.

AV cor	AV control unit		Antenna base	
Connector	Terminal	Connector Terminal		Continuity
M143	143	M502	1	Yes

4. Check continuity between AV control unit connector M143 and ground.

AV control unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M143	143	_	No	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector M143.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit connector M143 and ground.

AV control unit (+)		Ground	V 11
		( )	Voltage (Approx.)
Connector	Terminal	(-)	(
M143	143	_	Battery voltage

#### Is the inspection result normal?

YES >> Replace antenna base. Refer to <u>AV-417</u>, "<u>Removal and Installation</u>".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

## U1265 BOSE AMP.

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

## U1265 BOSE AMP.

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
AMP ON TERMINAL [U1265]	BOSE amp. ON signal circuit open or short circuited.	BOSE amp. ON signal circuit between AV control unit and BOSE amp.

## Diagnosis Procedure

INFOID:0000000008486396

Regarding Wiring Diagram information, refer to AV-211. "Wiring Diagram".

# 1. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND BOSE SPEAKER AMP.

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M122 and Bose speaker amp. connector B130.
- 3. Check continuity between AV control unit connector M122 and Bose speaker amp. connector M130.

AV control unit		Bose speaker amp.		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M122	1	B130	60	Yes	

4. Check continuity between AV control unit connector M122 and ground.

AV control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M122	1	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2. CHECK AV CONTROL UNIT VOLTAGE

- Connect AV control unit connector M122.
- 2. Turn ignition switch ON.
- Check voltage between AV control unit connector M122 and ground.

AV control unit		Ground	
(+)		( )	Voltage (Approx.)
Connector	Terminal	(-)	( )   - /
M122	1	_	Battery voltage

### Is the inspection result normal?

YES >> Replace Bose speaker amp. Refer to AV-392, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

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### **U1300 AV COMM CIRCUIT**

## **U1300 AV COMM CIRCUIT**

Description INFOID:000000008486397

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

### SELF DIAGNOSTIC RESULT DISPLAY ITEM

CONSULT Display	DTC Detection Condition	Possible Cause
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When any of the following is detected:  • A/C and AV switch assembly power supply or ground circuit malfunction.  • AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	A/C and AV switch assembly power supply and ground circuits.     Refer to AV-337, "A/C AND AV SWITCH ASSEMBLY: Diagnosis Procedure".      AV communication circuits between AV control unit and A/C and AV switch assembly.
<ul><li>AV COMM CIRCUIT [U1300]</li><li>AMP CONN [U124E]</li></ul>	When any of the following is detected: BOSE speaker amp. power supply or ground circuit malfunction.  AV communication circuits between AV control unit and BOSE speaker amp. are malfunctioning.	BOSE speaker amp. power supply and ground circuits.     Refer to AV-335, "BOSE AMP.: Diagnosis Procedure".     AV communication circuits between AV control unit and BOSE speaker amp.
AV COMM CIRCUIT [U1300]     VIDEO DIST CONN [U1246]	When any of the following is detected:  video distributor power supply or ground circuit malfunction.  headrest display unit (driver seat) power supply or ground circuit malfunction.  AV communication circuit malfunction between AV control unit and headrest display unit (driver seat).	Video distributor power supply and ground circuits.  Refer to AV-338, "VIDEO DISTRIBUTOR: Diagnosis Procedure".  Headrest display unit (driver seat) power supply and ground circuits.  Refer to AV-339, "HEADREST DISPLAY UNIT: Diagnosis Procedure".  AV communication circuits between AV control unit and headrest display unit (driver seat).
AV COMM CIRCUIT [U1300]     AROUND CAMERA CONN [U125B]	When any of the following is detected:     around view monitor control unit power supply or ground circuit malfunction.     AV communication circuit malfunction between AV control unit and around view monitor control unit.	Around view monitor control unit power supply and ground circuits.  Refer to AV-339, "AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure".      AV communication circuits between AV control unit and around view monitor control unit.
AV COMM CIRCUIT [U1300]     SONAR CONN [U125C]	When any of the following is detected:  sonar control unit power supply or ground circuit malfunction.  AV communication circuit malfunction between AV control unit and sonar control unit.	Sonar control unit power supply and ground circuits.     Refer to AV-340, "SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): Diagnosis Procedure".      AV communication circuits between AV control unit and sonar control unit.

## **U1300 AV COMM CIRCUIT**

## < DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO W/O SURROUND SOUND]

CONSULT Display	DTC Detection Condition	Possible Cause	Λ
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]     SONAR CONN [U125C]     AROUND CAMERA CONN [U125B]     VIDEO DIST CONN			В
• AV COMM CIRCUIT	AV communication circuit malfunction between AV	AV communication circuits between AV control unit	D
[U1300] • SWITCH CONN [U1240] • AMP CONN [U124E]	control unit and A/C and AV switch assembly.	and A/C and AV switch assembly.	Е
<ul> <li>SONAR CONN [U125C]</li> </ul>			F
<ul> <li>AROUND CAMERA CONN [U125B]</li> <li>VIDEO DIST CONN [U1246]</li> </ul>			G

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< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

### U1302 CAMERA POWER VOLT

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAMERA SUPPLY POWER SUPPLY VOLTAGE ABNOR- MALITY [U1302]	Short in camera power circuit.	<ul><li> Harness or connectors.</li><li> Camera.</li><li> Around view monitor control unit.</li></ul>

### Diagnosis Procedure

INFOID:0000000008368307

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK CAMERA DATA MONITOR

Check CAMERA IMAGE SIG, CAMERA COMM STATUS and CAMERA COMM LINE for each camera in "DATA MONITOR" of "AVM".

#### Is "OK" displayed for all cameras?

YES >> Refer to GI-53, "Intermittent Incident".

NO-1 (Front camera)>>GO TO 2.

NO-2 (Rear camera)>>GO TO 4.

NO-3 (LH side camera)>>GO TO 6.

NO-4 (RH side camera)>>GO TO 8.

# 2.CHECK FRONT CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and camera connectors.
- Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view mo	onitor control unit	Front camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M97	68	E226	1	Yes
	70	E220	2	165

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Ground	
M97	68	_	No

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- 1. Connect around view monitor control unit connector M97 and front camera connector E226.
- 2. Turn ignition switch ON.
- Check voltage between around view monitor control unit connector M97 terminals.

### < DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

Around view monitor control unit M97			
(+)	(-)	Condition	Voltage (Approx.)
Terminal	Terminal		
68	70	CAMERA switch is ON or shift position is R.	6.0 V

#### Is the inspection result normal?

YES >> Replace front camera. Refer to AV-403, "Removal and Installation".

NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

# 4. CHECK REAR CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector M97 and rear camera connector D511.
- Check continuity between around view monitor control unit connector M97 and rear camera connector

Around view mo	onitor control unit	Rear camera		Continuity
Connector	Terminal	Connector Terminal		Continuity
M97	50	D511	8	Yes
W97	52	D311	7	165

Check continuity between around view monitor control unit connector M97 and ground.

Around view mo	Around view monitor control unit		Continuity
Connector	Terminal	Ground	Continuity
M97	50	_	No

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

## 5. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- 1. Connect around view monitor control unit connector M97 and rear camera connector D511.
- 2. Turn ignition switch ON.
- Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97			N/ 1/
(+)	(-)	Condition	Voltage (Approx.)
Terminal	Terminal		
50	52	CAMERA switch is ON or shift position is R.	6.0 V

### Is the inspection result normal?

- YES >> Replace rear camera. Refer to AV-404, "Removal and Installation".
- >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation". NO

## $oldsymbol{6}.$ CHECK LH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
- Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view mo	onitor control unit	LH side camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity

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#### < DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

	F.0		•	
M97	56	D20	6	Yes
IVIO	58	D20	18	103

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M97	56	_	No

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness or connectors.

## .CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- 1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
- Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97			Mallana
(+)	(–)	Condition	Voltage (Approx.)
Terminal	Terminal		
56	58	CAMERA switch is ON or shift position is R.	6.0 V

#### Is the inspection result normal?

- YES >> Replace LH side camera. Refer to AV-405, "Removal and Installation".
- NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

# 8. CHECK RH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
- 3. Check continuity between around view monitor control unit connector M97 and RH side camera connector D113.

Around view n	nonitor control unit	RH side camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M97	62	D113	6	Yes
IVI97	64	סווט	18	165

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Giouna	Continuity
M97	62	_	No

#### Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness or connectors.

# 9. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- Connect around view monitor control unit connector M97 and RH side camera connector D113.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit connector M97 terminals.

### < DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO W/O SURROUND SOUND]

Around view monitor control unit M97			
(+)	(-)	Condition	Voltage (Approx.)
Terminal	Terminal		
62	64	CAMERA switch is ON or shift position is R.	6.0 V

### Is the inspection result normal?

YES >> Replace RH side camera. Refer to AV-405, "Removal and Installation".

NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

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### **U1303 LED POWER SUPPLY VOLT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## U1303 LED POWER SUPPLY VOLT

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
LED SUPPLY POWER SUP- PLY VOLTAGE ABNORMAL- ITY [U1303]		<ul><li> Harness or connectors.</li><li> Camera.</li><li> Around view monitor control unit.</li></ul>

### Diagnosis Procedure

INFOID:0000000008368309

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK CAMERA DATA MONITOR

Check CAMERA IMAGE SIG, CAMERA COMM STATUS and CAMERA COMM LINE for each camera in "DATA MONITOR" of "AVM".

#### Is "OK" displayed for all cameras?

YES >> Refer to GI-53, "Intermittent Incident".

NO-1 (LH side camera)>>GO TO 2.

NO-2 (RH side camera)>>GO TO 4.

# 2.CHECK LH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
- 3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M97	56	D20	6	Yes
IVI97	58	D20	18	165

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M97	56	_	No

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- Connect around view monitor control unit connector M97 and LH side camera connector D20.
- Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit connector M97 terminals.

### **U1303 LED POWER SUPPLY VOLT**

#### < DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

Around view monitor control unit M97			
(+)	(-)	Condition	Voltage (Approx.)
Terminal	Terminal		(
56	58	CAMERA switch is ON or shift position is R.	6.0 V

#### Is the inspection result normal?

YES >> Replace LH side camera. Refer to AV-405, "Removal and Installation".

>> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation". NO

# 4. CHECK RH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
- Check continuity between around view monitor control unit connector M97 and RH side camera connector

Around view me	onitor control unit	RH side	camera	Continuity
Connector	Terminal	Connector	Terminal	Continuity
MOZ	62	D113	6	Yes
M97	64	סווט	18	165

Check continuity between around view monitor control unit connector M97 and ground.

Around view mo	Around view monitor control unit		Continuity
Connector	Terminal	Ground	Continuity
M97	62	_	No

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

## 5. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- 1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
- Turn ignition switch ON.
- Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97			V 11
(+)	(-)	Condition	Voltage (Approx.)
Terminal	Terminal		( )
62	64	CAMERA switch is ON or shift position is R.	6.0 V

**AV-315** 

#### Is the inspection result normal?

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YES >> Replace RH side camera. Refer to AV-405, "Removal and Installation".

NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

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## **U1304 CAMERA IMAGE CALIBRATION**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1304 CAMERA IMAGE CALIBRATION**

DTC Logic

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
NON-COMPLETION OF THE CALIBRATION [U1304]	Camera calibration malfunction.	Cameras are not calibrated. Refer to <u>AV-268</u> , "CAL- <u>IBRATING CAMERA IMAGE (AROUND VIEW</u> <u>MONITOR)</u> : Work Procedure".

## **U1305 CONFIG UNFINISH**

< DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO W/O SURROUND SOUND]

# **U1305 CONFIG UNFINISH**

DTC Logic

## DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
NON-COMPLETION OF THE WRITE CONFIGURA- TION [U1305]	Around view monitor control unit configuration malfunction.	Around view monitor control unit not configurated.  Refer to AV-264, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Work Procedure".

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## **U1310 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1310 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-388, "Removal and Installation - AV Control Unit".

## U1601, U1603, U1609, U160B FRONT DOOR SPEAKER/TWEETER [BOSE AUDIO W/O SURROUND SOUND]

< DTC/CIRCUIT DIAGNOSIS >

# U1601, U1603, U1609, U160B FRONT DOOR SPEAKER/TWEETER

**DTC Logic** INFOID:0000000008486399

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FL-DOOR WOOFER (OPEN, SHORT, GND- SHORT) [U1601] FL-DOOR WOOFER (VB-SHOR] [U1603]	When any of the following is detected: Sound signal circuit malfunction between BOSE speaker amp. and front door speaker LH. Sound signal circuit malfunction between BOSE speaker amp. and front tweeter LH.	<ul> <li>Sound signal circuits between BOSE speaker amp. and front door speaker LH. Refer to <u>AV-348</u>, "<u>Diagnosis Procedure</u>".</li> <li>Sound signal circuits between BOSE speaker amp. and front tweeter LH. Refer to <u>AV-346</u>, "<u>Diagnosis Procedure</u>".</li> </ul>
FR-DOOR WOOFER (OPEN, SHORT, GND- SHORT) [U1609] FR-DOOR WOOFER (VB-SHOR) [U160B]	When any of the following is detected: Sound signal circuit malfunction between BOSE speaker amp. and front door speaker RH. Sound signal circuit malfunction between BOSE speaker amp. and front tweeter RH.	<ul> <li>Sound signal circuits between BOSE speaker amp. and front door speaker RH. Refer to AV-348, "Diagnosis Procedure".</li> <li>Sound signal circuits between BOSE speaker amp. and front tweeter RH. Refer to AV-346, "Diagnosis Procedure".</li> </ul>

# **Diagnosis Procedure**

1. PERFORM SELF DIAGNOSTIC RESULT

- Perform Self Diagnostic Result for MULTI AV.
- Erase Self Diagnostic Result. Turn ignition switch OFF.
- Turn ignition switch ON. Perform Self Diagnostic Result again.

### Is DTC U1601, U1603, U1609 or U160B detected?

YES >> Refer to AV-348, "Diagnosis Procedure".

>> Refer to GI-53, "Intermittent Incident". NO

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**AV-319** Revision: March 2012 2013 Infiniti JX

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# **U1627, U162F TWEETER**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# **U1627, U162F TWEETER**

DTC Logic

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
F-INST L-TWEETER (OPEN, SHORT, GND- SHORT or VB-SHOR) [U1627]	Sound signal circuit malfunction between BOSE speaker amp. and instrument panel tweeter LH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter LH.  Refer to AV-344, "Diagnosis Procedure".
F-INST R-TWEETER (OPEN, SHORT, GND- SHORT or VB-SHOR) [U162F]	Sound signal circuit malfunction between BOSE speaker amp. and instrument panel tweeter RH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter RH.  Refer to AV-344, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000008486402

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

### Is DTC U1627 or U162F detected?

YES >> Refer to AV-344, "Diagnosis Procedure".

NO >> Refer to GI-53, "Intermittent Incident".

### **U162A CENTER SPEAKER**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

## **U162A CENTER SPEAKER**

DTC Logic

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
F-INST C-SQUAWK (OPEN, SHORT, GND- SHORT, or VB-SHORT) [U162A]	Sound signal circuit malfunction between BOSE speaker amp. and center speaker.	Sound signal circuits between BOSE speaker amp. and center speaker.  Refer to AV-342, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000008486404

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

## Is DTC U162A detected?

YES >> Refer to <u>AV-342, "Diagnosis Procedure"</u>.

NO >> Refer to GI-53, "Intermittent Incident".

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# U1684, U1687, U168C, U168F REAR DOOR SPEAKER/TWEETER

< DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO W/O SURROUND SOUND]

# U1684, U1687, U168C, U168F REAR DOOR SPEAKER/TWEETER

DTC Logic

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
2L-DOOR SPEAKER (OPEN, SHORT, GND- SHORT) [U1684] 2L-DOOR SPEAKER (VB- SHOR) [U1687]	Sound signal circuit malfunction between BOSE speaker amp. and rear door speaker LH.	Sound signal circuits between BOSE speaker amp. and rear door speaker LH.  Refer to AV-350, "Diagnosis Procedure".
2R-DOOR SPEAKER (OPEN, SHORT, GND- SHORT) [U168C] 2R-DOOR SPEAKER (VB- SHOR) [U168F]	Sound signal circuit malfunction between BOSE speaker amp. and rear door speaker RH.	Sound signal circuits between BOSE speaker amp. and rear door speaker RH.  Refer to AV-350, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000008486406

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

### Is DTC U1684, U1687, U168C or U168F detected?

YES >> Refer to <u>AV-350, "Diagnosis Procedure"</u>. NO >> Refer to <u>GI-53, "Intermittent Incident"</u>.

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### **U175D WOOFER**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

## U175D WOOFER

DTC Logic

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
R-LUGGAGE L-WOOFER (OPEN, SHORT, GND- SHORT or VB-SHOR) [U175D]	Sound signal circuit malfunction between BOSE speaker amp. and subwoofer.	Sound signal circuits between BOSE speaker amp. and subwoofer.  Refer to AV-354, "Diagnosis Procedure".

# **Diagnosis Procedure**

INFOID:0000000008486408

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

### Is DTC U175D detected?

YES >> Refer to AV-354, "Diagnosis Procedure".

NO >> Refer to GI-53, "Intermittent Incident".

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## U176A, U1772 ROOF SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# U176A, U1772 ROOF SPEAKER

DTC Logic

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
R-ROOF L-SQAWK (OPEN, SHORT, GND- SHORT or VB-SHOR) [U176A]	Sound signal circuit malfunction between BOSE speaker amp. and rear side speaker LH.	Sound signal circuits between BOSE speaker amp. and rear side speaker LH.  Refer to AV-352, "Diagnosis Procedure".
R-ROOF R-SQAWK (OPEN, SHORT, GND- SHORT or VB-SHOR) [U1772]	Sound signal circuit malfunction between BOSE speaker amp. and rear side speaker RH.	Sound signal circuits between BOSE speaker amp. and rear side speaker RH. Refer to AV-352, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000008487460

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

### Is DTC U176A or U1772 detected?

YES >> Refer to AV-352, "Diagnosis Procedure".

NO >> Refer to GI-53, "Intermittent Incident".

## **B2720 CORNER SENSOR [RL]**

< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

## **B2720 CORNER SENSOR [RL]**

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR LEFT SIDE EXTER- NAL SENSOR [B2720]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Rear sonar sensor LH outer.</li></ul>

### Diagnosis Procedure

INFOID:0000000008368345

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Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK REAR SONAR SENSOR LH OUTER CIRCUIT CONTINUITY

Turn ignition switch OFF.

- Disconnect sonar control unit connector and rear sonar sensor LH outer connector.
- Check continuity between sonar control unit connector M70 and rear sonar sensor LH outer connector B455.

Sonar co	ontrol unit	Rear sonar sensor LH outer		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M70	22	B455	2	Yes
	14	D400	1	165

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M70	22	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2.CHECK REAR SONAR SENSOR LH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

Turn ignition switch ON.

Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage
Connector	Terminal	Ground	(Approx.)
M70	22	_	0V

#### Is the inspection result normal?

YES >> Replace rear sonar sensor LH outer. Refer to AV-411, "Removal and Installation".

NO >> Repair or replace harness or connectors.

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## **B2721 CENTER SENSOR [RL]**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## **B2721 CENTER SENSOR [RL]**

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR LEFT SIDE INTER- NAL SENSOR [B2721]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Rear sonar sensor LH inner.</li></ul>

### Diagnosis Procedure

INFOID:0000000008368293

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK REAR SONAR SENSOR LH INNER CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and rear sonar sensor LH inner connector.
- Check continuity between sonar control unit connector M70 and rear sonar sensor LH inner connector B457.

Sonar control unit		Rear sonar sensor LH inner		Continuity
Connector	Terminal	Connector Terminal		Continuity
M70	21	B457	2	Yes
M70	14	D437	1	165

4. Check continuity between sonar control unit connector M70 and ground.

Sonar co	Sonar control unit		Continuity
Connector	Terminal	Ground	Continuity
M70	21	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2.CHECK REAR SONAR SENSOR LH INNER SIGNAL CIRCUIT SHORT TO BATTERY

- Turn ignition switch ON.
- Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage
Connector	Terminal	Ground	(Approx.)
M70	21	_	0V

#### Is the inspection result normal?

YES >> Replace rear sonar sensor LH inner. Refer to AV-411, "Removal and Installation".

NO >> Repair or replace harness or connectors.

## **B2722 CENTER SENSOR [RR]**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## **B2722 CENTER SENSOR [RR]**

DTC Logic INFOID:0000000008368294

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR RIGHT SIDE INTER- NAL SENSOR [B2722]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Rear sonar sensor RH inner.</li></ul>

### **Diagnosis Procedure**

INFOID:0000000008368346

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Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK REAR SONAR SENSOR RH INNER CIRCUIT CONTINUITY

Turn ignition switch OFF.

Disconnect sonar control unit connector and rear sonar sensor RH inner connector.

Check continuity between sonar control unit connector M70 and rear sonar sensor RH inner connector

Sonar co	ntrol unit Rear sonar sensor RH inner Contin		Rear sonar sensor RH inner	
Connector	Terminal	Connector	Terminal	Continuity
M70	9	B458	2	Yes
	14	D400	1	165

Check continuity between sonar control unit connector M70 and ground.

Sonar co	Sonar control unit		Continuity
Connector	Terminal	Ground	Continuity
M70	9	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2.CHECK REAR SONAR SENSOR RH INNER SIGNAL CIRCUIT SHORT TO BATTERY

Turn ignition switch ON.

Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage
Connector	Terminal	Giodila	(Approx.)
M70	9	_	0V

#### Is the inspection result normal?

YES >> Replace rear sonar sensor RH inner. Refer to AV-411, "Removal and Installation".

NO >> Repair or replace harness or connectors.

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## **B2723 CORNER SENSOR [RR]**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## B2723 CORNER SENSOR [RR]

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR RIGHT SIDE EXTER- NAL SENSOR [B2723]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Rear sonar sensor RH outer.</li></ul>

### Diagnosis Procedure

INFOID:0000000008368296

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK REAR SONAR SENSOR RH OUTER SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and rear sonar sensor RH outer connector.
- Check continuity between sonar control unit connector M70 and rear sonar sensor RH outer connector B456.

Sonar co	onar control unit Rear sonar sensor RH outer		Continuity	
Connector	Terminal	Connector Terminal		Continuity
M70	10	D456	2	Yes
IVI7O	14	B456	1	165

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
M70	10	_	No	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2.CHECK REAR SONAR SENSOR RH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

- Turn ignition switch ON.
- Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage
Connector	Terminal	Ordana	(Approx.)
M70	10	_	0V

#### Is the inspection result normal?

YES >> Replace rear sonar sensor RH outer. Refer to AV-411, "Removal and Installation".

NO >> Repair or replace harness or connectors.

### **B2724 SONAR CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## **B2724 SONAR CONTROL UNIT**

DTC Logic

## DTC DETECTION LOGIC

CONSULT Display DTC Detection Condition		Possible Cause	0
ECU [B2724]	Sonar control module malfunction.	Replace sonar control module.	C

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#### **B2725 REAR BUZZER**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

### **B2725 REAR BUZZER**

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR BUZZER [B2725]	<ul><li>Buzzer is open or short circuited.</li><li>Buzzer malfunction.</li></ul>	<ul><li> Harness or connectors.</li><li> Buzzer.</li></ul>

## Diagnosis Procedure

INFOID:0000000008368299

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

## 1. CHECK SONAR BUZZER SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and sonar buzzer connector.
- 3. Check continuity between sonar control unit connector M70 and sonar buzzer connector B35.

Sonar co	ontrol unit	Sonar buzzer		Continuity
Connector	Terminal	Connector Terminal		Continuity
M70	20	B35	3	Yes

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
M70	20	_	No	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2. CHECK SONAR BUZZER SIGNAL CIRCUIT SHORT TO BATTERY

- 1. Turn ignition switch ON.
- Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage	
Connector	Terminal	Orodina	(Approx.)	
M70	20	_	0V	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3.CHECK SONAR BUZZER SIGNAL CIRCUIT SHORT TO BUZZER POWER

- Turn ignition switch OFF.
- 2. Check continuity between sonar control unit connector M70 terminals.

Sonar control unit connector M70		Continuity	
Terminal Terminal		Gonunaty	
19	20	No	

#### Is the inspection result normal?

#### **B2725 REAR BUZZER**

### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

YES >> Replace sonar buzzer. Refer to <u>AV-413, "Removal and Installation"</u>.
NO >> Repair or replace harness or connectors.

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## **B2729 CORNER SENSOR [FL]**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## B2729 CORNER SENSOR [FL]

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT LEFT SIDE EXTERNAL SENSOR [B2729]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Front sonar sensor LH outer.</li></ul>

### Diagnosis Procedure

INFOID:0000000008368347

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK FRONT SONAR SENSOR LH OUTER CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and front sonar sensor LH outer connector.
- 3. Check continuity between sonar control unit connector M70 and front sonar sensor LH outer connector E307.

Sonar control unit		Front sonar sensor LH outer		Continuity
Connector	Terminal	Connector Terminal		Continuity
M70	3	E307	2	Yes
IVI7O	13	E307	1	165

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
M70	3	_	No	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## $2. \mathsf{CHECK}$ FRONT SONAR SENSOR LH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

- Turn ignition switch ON.
- Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage
Connector	Terminal	Ground	(Approx.)
M70	3	_	0V

#### Is the inspection result normal?

YES >> Replace front sonar sensor LH outer. Refer to AV-411, "Removal and Installation".

NO >> Repair or replace harness or connectors.

## **B272C CORNER SENSOR [FR]**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## **B272C CORNER SENSOR [FR]**

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT RIGHT SIDE EX- TERNAL SENSOR [B272C]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Front sonar sensor RH outer.</li></ul>

### Diagnosis Procedure

INFOID:0000000008368302

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Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK FRONT SONAR SENSOR RH OUTER CIRCUIT CONTINUITY

Turn ignition switch OFF.

- Disconnect sonar control unit connector and front sonar sensor RH outer connector.
- 3. Check continuity between sonar control unit connector M70 and front sonar sensor RH outer connector F308

Sonar co	ontrol unit	Front sonar sensor RH outer		Continuity
Connector	Terminal	Connector Terminal		Continuity
MZO	4	E308	2	Yes
M70	13	⊑300	1	165

4. Check continuity between sonar control unit connector M70 and ground.

Sonar co	Sonar control unit		Continuity
Connector	Terminal	Ground	Continuity
M70	4	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2.CHECK FRONT SONAR SENSOR RH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

- Turn ignition switch ON.
- Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage
Connector	Terminal	Ground	(Approx.)
M70	4	_	0V

#### Is the inspection result normal?

YES >> Replace front sonar sensor RH outer. Refer to AV-411, "Removal and Installation".

NO >> Repair or replace harness or connectors.

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< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000008359999

INFOID:0000000008360000

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
68	Ignition signal	29 (5A)
19	Battery power supply	15 (15A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

## 2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect AV control unit connectors M122 and M124.
- Check voltage between AV control unit connectors and ground.

AV cor	AV control unit		Condition	Voltage
Connector	Terminal	Ground	Condition	(Approx.)
M124	68		Ignition switch: ON	
M122	7	_	Ignition switch: ACC	Battery voltage
IVI I ZZ	19		Ignition switch: OFF	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Check continuity between AV control unit connector M122 terminal 20 and ground.

AV control unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M122	20	_	Yes	

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

DISPLAY UNIT

**DISPLAY UNIT: Diagnosis Procedure** 

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK FUSE

Check that the following fuses are not blown.

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#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

Terminal No.	Signal name	Fuse No.
11	Battery power supply	15 (15A)
23	ACC power supply	65 (10A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

## 2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect display unit connector.
- 3. Check voltage between display connector M92 and ground.

Displ	Display unit		Condition	Voltage
Connector	Terminal	Ground	Condition	(Approx.)
M92	23		Ignition switch: ACC	Battery voltage
IVI92	11		Ignition switch: OFF	battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Check continuity between display unit connector M92 terminal 12 and ground.

Display unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M92	12	_	Yes	

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

BOSE AMP.

#### **BOSE AMP.**: Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
50	Rattery nower supply	11 (15A)
51	Battery power supply	12 (15A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

## 2. CHECK POWER SUPPLY CIRCUIT

- 1. Disconnect BOSE speaker amp. connector B129.
- 2. Check voltage between BOSE speaker amp. connector B129 and ground.

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#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

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BOSE sp	BOSE speaker amp.		Voltage	
Connector	Terminal	Ground	(Approx.)	
B129	50		Ratteny voltage	
B129	51	_	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Check continuity between BOSE speaker amp. connector B129 and ground.

BOSE speaker amp.		Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
B129	47		Yes	
	52	_	ies	

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

#### **SUBWOOFER**

### SUBWOOFER: Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
6	Battery power supply	58 (10A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

## 2 CHECK POWER SUPPLY CIRCUIT

- Disconnect subwoofer connector.
- 2. Check voltage between subwoofer connector B73 and ground.

Subwoofer		Ground	Voltage	
Connector	Terminal	Ordana	(Approx.)	
B73	6	_	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3.CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check continuity between subwoofer connector B73 and ground.

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

Subwoofer		Ground	Continuity	
Connector	Terminal	Giouna	Continuity	
B73	5	_	Yes	

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY: Diagnosis Procedure

INFOID:0000000008360030

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1. CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
3	ACC power supply	65 (10A)

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

## 2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect A/C and AV switch assembly connector.

3. Check voltage between A/C and AV switch assembly connector M98 terminal 3 and ground.

A/C and AV s	witch assembly	Ground	Condition	Voltage
Connector	Terminal	Ground	Condition	(Approx.)
M98	3		Ignition switch: ACC	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3.CHECK CONTROL UNIT GROUND CIRCUIT

1. Turn ignition switch OFF.

Disconnect AV control unit connector M125.

 Check continuity between A/C and AV switch assembly connector M98 terminal 9 and AV control unit connector M125 terminal 98.

A/C and AV s	A/C and AV switch assembly		AV control unit	
Connector	Terminal	Connector Terminal		Continuity
M98	9	M125	98	Yes

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

4. CHECK SWITCH GROUND CIRCUIT

Check continuity between A/C and AV switch assembly connector M98 terminal 1 and ground.

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#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

INFOID:0000000008360034

A/C and AV s	A/C and AV switch assembly		Continuity	
Connector	Terminal	Ground	Continuity	
M98	1	_	Yes	

#### <u>Is the inspection result normal?</u>

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

#### VIDEO DISTRIBUTOR

### VIDEO DISTRIBUTOR: Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
2	ACC power supply	65 (10A)
4	Battery power supply	15 (15A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

## 2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect video distributor connector B24.
- 3. Check voltage between video distributor connector B24 and ground.

Video d	istributor	Ground	Ground Condition Voltage (Approx.)	
Connector	Terminal	Cidana		(Approx.)
B24	2		Ignition switch: ACC	Battery voltage
B24	4	_	Ignition switch: OFF	Dattery Voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity
Connector	Terminal	Giodila	Continuity
B24	1	_	Yes
524	3	_	163

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

#### HEADREST DISPLAY UNIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

INFOID:0000000008368245

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

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## 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
24	Battery power supply	15 (15A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

## 2. CHECK POWER SUPPLY CIRCUIT

- 1. Disconnect headrest display unit connector.
- 2. Check voltage between headrest display unit connector and ground.

Headrest displayl unit		Ground	Voltage
Connector	Terminal	Ground	(Approx.)
B202 (driver seat)	24		Battery voltage
B302 (passenger seat)	2 <del>4</del>	_	ballery vollage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3.CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check continuity between headrest display unit connector and ground.

Headrest displayl unit		Ground	Continuity
Connector Terminal		Giodila	
B202 (driver seat)	12		Yes
B302 (passenger seat)	12	_	165

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

#### AROUND VIEW MONITOR CONTROL UNIT

## AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure

INFOID:0000000008360032

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
3	Ignition signal	29 (5A)

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#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

Terminal No.	Signal name	Fuse No.
4	ACC power supply	65 (10A)
2	Battery power supply	15 (15A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

## 2.CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M96.
- Check voltage between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Condition	Voltage
Connector	Terminal	Giodila	Condition	(Approx.)
	3		Ignition switch: ON	
M96	4	_	Ignition switch: ACC	Battery voltage
	2		Ignition switch: OFF	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3.CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M96	1	_	Yes

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

## SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

## SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): Diagnosis Procedure

INFOID:0000000008360033

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.	
12	ACC power supply	65 (10A)	

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

## 2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector M70.
- Check voltage between sonar control unit connector M70 and ground.

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

Sonar control unit		Ground	Condition	Voltage	
Connector	Terminal	Oround	Condition	(Approx.)	
M70	12	_	Ignition switch: ACC	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M70	15	_	Yes

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

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#### **CENTER SPEAKER**

### Diagnosis Procedure

INFOID:0000000008360035

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- · Proper connection
- Damage
- · Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

## 2. CHECK CENTER SPEAKER SIGNAL CIRCUIT CONTINUITY

- 1. Disconnect BOSE speaker amp. connector B130 and center speaker connector.
- 2. Check continuity between BOSE speaker amp. connector B130 and center speaker connector.

BOSE sp	eaker amp.	Center speaker		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B130	69	M110	1	Yes
B130	70	WITO	2	165

3. Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp.		Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
B130	69	_	No	
	70		INO	

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

## 3. CHECK CENTER SPEAKER SIGNAL

- 1. Connect BOSE speaker amp. connector B130 and center speaker connector.
- 2. Turn ignition switch to ACC.
- Push AV control unit POWER switch.
- 4. Check signal between BOSE speaker amp. connector B130 and ground.

BOSE speaker an	np. connector B130		
(+)	(-)	Condition	Reference value
Terminal	Terminal		
69	70	Audio signal output	(V) 1 0 -1 + 2ms SKIB3609E

#### Is the inspection result normal?

### **CENTER SPEAKER**

< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

YES >> Replace center speaker. Refer to AV-396, "Removal and Installation".
>> Replace BOSE speaker amp. Refer to AV-392, "Removal and Installation".

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#### **INSTRUMENT PANEL SPEAKER/TWEETER**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

### **INSTRUMENT PANEL SPEAKER/TWEETER**

### Diagnosis Procedure

INFOID:0000000008360002

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- · Proper connection
- Damage
- · Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

## 2.CHECK INSTRUMENT PANEL TWEETER SIGNAL CIRCUIT CONTINUITY

- 1. Disconnect BOSE speaker amp. connector B129 and suspect instrument panel tweeter connector.
- Check continuity between BOSE speaker amp. connector B129 and suspect instrument panel tweeter connector.

BOSE sp	eaker amp.	Instrument panel tweeter		Continuity		
Connector	Terminal	Connector	Terminal	Continuity		
	41	M62 (LH)	MG2 (LU)	Mea (LLI)	1	
B129	42		2	Yes		
	45	M72 (DIII)	1	165		
	46	M73 (RH)	2			

Check continuity between BOSE speaker amp. connector B129 and ground.

BOSE s	BOSE speaker amp.		Continuity	
Connector	Terminal	- Ground	Continuity	
	41		No	
B129	42			
B129	45	_		
	46			

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

## 3.CHECK INSTRUMENT PANEL TWEETER SIGNAL

- 1. Connect BOSE speaker amp. connector B129 and suspect instrument panel tweeter connector.
- Turn ignition switch to ACC.
- 3. Push AV control unit POWER switch.
- 4. Check signal between BOSE speaker amp. connector B129 and ground.

BOSE speaker amp.			
(+)	(-)	Condition	Reference value
Terminal	Terminal		

### **INSTRUMENT PANEL SPEAKER/TWEETER**

#### < DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO W/O SURROUND SOUND]

41	42		(V)
45	46	Audio signal output	1 0 -1 + 2ms SKIB3609E

#### Is the inspection result normal?

YES >> Replace instrument panel tweeter. Refer to AV-395, "Removal and Installation".

NO >> Replace BOSE speaker amp. Refer to AV-392, "Removal and Installation".

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#### **FRONT TWEETER**

< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

#### FRONT TWEETER

### Diagnosis Procedure

INFOID:0000000008360036

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- · Proper connection
- Damage
- · Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

## 2.CHECK FRONT TWEETER SIGNAL CIRCUIT CONTINUITY

- Disconnect BOSE speaker amp. connector B130 and suspect front tweeter connector.
- Check continuity between BOSE speaker amp. connector B130 and suspect front door speaker connector.

BOSE sp	eaker amp.	Front tweeter		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	58	M109 (LH)	1	
B130	59		2	Yes
	71	M111 (RH)	1	165
	72		2	

3. Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE sp	BOSE speaker amp.		Continuity	
Connector	Terminal	- Ground	Continuity	
	58		No	
B130	59			
B130	71	<u> </u>	No	
	72			

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

## 3. CHECK FRONT TWEETER SIGNAL

- 1. Connect BOSE speaker amp. connector B130 and suspect front tweeter connector.
- Turn ignition switch to ACC.
- 3. Push AV control unit POWER switch.
- 4. Check signal between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp. connector B130			
(+)	(-)	Condition	Reference value
Terminal	Terminal		

### **FRONT TWEETER**

### < DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

58	59		0.0
71	72	Audio signal output	(V) 1 0 -1 + 2ms SKIB3609E

#### Is the inspection result normal?

YES

>> Replace front tweeter. Refer to <u>AV-394, "Removal and Installation"</u>.
>> Replace BOSE speaker amp. Refer to <u>AV-392, "Removal and Installation"</u>. NO

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#### FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

#### FRONT DOOR SPEAKER

### Diagnosis Procedure

INFOID:0000000008360001

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- · Proper connection
- Damage
- · Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

## 2.CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

- Disconnect BOSE speaker amp. connector B130 and suspect front door speaker connector.
- Check continuity between BOSE speaker amp. connector B130 and suspect front door speaker connector.

BOSE sp	eaker amp.	Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	58 P13 (LH)	D12 (LH)	1	Yes
B130	59	D12 (L11)	2	
	71	D112 (RH)	1	165
	72		2	

3. Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE sp	BOSE speaker amp.		Continuity
Connector	Terminal	- Ground	Continuity
	58		
B130	59		No
B130	71	<u> </u>	No
	72		

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

## 3.CHECK FRONT DOOR SPEAKER SIGNAL

- 1. Connect BOSE speaker amp. connector B130 and suspect front door speaker connector.
- Turn ignition switch to ACC.
- 3. Push AV control unit POWER switch.
- 4. Check signal between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp. connector B130			
(+)	(–)	Condition	Reference value
Terminal	Terminal		

### FRONT DOOR SPEAKER

#### < DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

58	59		0.0
71	72	Audio signal output	(V) 1 0 -1 + 2ms SKIB3609E

#### Is the inspection result normal?

>> Replace front door speaker. Refer to <u>AV-393, "Removal and Installation"</u>.
>> Replace BOSE speaker amp. Refer to <u>AV-392, "Removal and Installation"</u>. YES

NO

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#### **REAR DOOR SPEAKER**

[BOSE AUDIO W/O SURROUND SOUND]

#### REAR DOOR SPEAKER

### Diagnosis Procedure

INFOID:0000000008360037

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- · Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

## 2.CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

- Disconnect BOSE speaker amp. connectors and suspect rear door speaker connector.
- 2. Check continuity between BOSE speaker amp. connectors and suspect rear door speaker connector.

BOSE sp	eaker amp.	Rear door speaker		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B130	68	D207 (LH)	D007 (LLI)	1	
B130	55		2	Yes	
B129	54	D307 (RH)	1	165	
	49		2		

3. Check continuity between BOSE speaker amp. connectors and ground.

BOSE sp	BOSE speaker amp.		Continuity	
Connector	Terminal	- Ground	Continuity	
B130	68	_	No	
B130	55			
B129	54			
D129	49			

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

## 3.CHECK REAR DOOR SPEAKER SIGNAL

- 1. Connect BOSE speaker amp. connectors and suspect rear door speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push AV control unit POWER switch.
- Check signal between BOSE speaker amp. connectors and ground.

	BOSE speaker amp.		Condition	Reference value
Connector	(+)	(-)		
	Terminal	Terminal		

#### **REAR DOOR SPEAKER**

#### < DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

B130	68	55		
B129	54	49	Audio signal output	(V) 1 0 -1 ** 2ms SKIB3609E

#### Is the inspection result normal?

>> Replace rear door speaker. Refer to <u>AV-397, "Removal and Installation"</u>.
>> Replace BOSE speaker amp. Refer to <u>AV-392, "Removal and Installation"</u>. YES

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## **REAR SPEAKER**

#### [BOSE AUDIO W/O SURROUND SOUND]

#### REAR SPEAKER

### Diagnosis Procedure

INFOID:0000000008360003

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- · Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

## 2. CHECK REAR SIDE SPEAKER SIGNAL CIRCUIT CONTINUITY

- Disconnect BOSE speaker amp. connector B129 and suspect rear side speaker connector.
- 2. Check continuity between BOSE speaker amp. connector B129 and suspect rear side speaker connector.

BOSE sp	eaker amp.	Rear side speaker		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	53	B1 (LH)	D4 (LL)	1	
B129	48		2	Yes	
P159	44	D450 (DU)	1	168	
	43	B153 (RH)	2		

3. Check continuity between BOSE speaker amp. connector B129 and ground.

BOSE s	BOSE speaker amp.		Continuity
Connector	Terminal	Ground	Continuity
	53		No
B129	48		
	44	_	
	43		

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

## 3. CHECK REAR SIDE SPEAKER SIGNAL

- 1. Connect BOSE speaker amp. connector B129 and suspect rear side speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push AV control unit POWER switch.
- 4. Check signal between BOSE speaker amp. connector B129 and ground.

BOSE speaker amp. connector B129		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

### **REAR SPEAKER**

#### < DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

53	48		4.0
44	43	Audio signal output	(V) 1 0 -1 2ms SKIB3609E

#### Is the inspection result normal?

- >> Replace rear side speaker. Refer to <u>AV-398, "Removal and Installation"</u>.
  >> Replace BOSE speaker amp. Refer to <u>AV-392, "Removal and Installation"</u>. YES
- NO

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#### **SUBWOOFER**

#### [BOSE AUDIO W/O SURROUND SOUND]

#### **SUBWOOFER**

### Diagnosis Procedure

INFOID:0000000008368248

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1.CONNECTOR CHECK

Check the BOSE speaker amp. and subwoofer connectors for the following:

- Proper connection
- Damage
- · Disconnected or looses terminals

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2.VERIFY SUBWOOFER POWER SUPPLY AND GROUND

Check subwoofer power supply and ground. Refer to AV-336, "SUBWOOFER: Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3. CHECK SUBWOOFER SIGNAL CIRCUIT CONTINUITY

- 1. Disconnect BOSE speaker amp. connector B130 and subwoofer connector.
- 2. Check continuity between BOSE speaker amp. connector B130 and subwoofer connector.

BOSE sp	eaker amp.	Subwoofer		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B130	57	B73	1	Yes
B130	56	673	2	165

Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp.		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
B130	57	_	No	
	56	_	NO	

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

### 4. CHECK SUBWOOFER SIGNAL

- 1. Connect BOSE speaker amp. connector B130 and subwoofer connector.
- 2. Turn ignition switch to ACC.
- Push AV control unit POWER switch.
- 4. Check signal between BOSE speaker amp. connector B130 and ground.

### **SUBWOOFER**

### [BOSE AUDIO W/O SURROUND SOUND]

BOSE speaker amp. connector B130			
(+)	(-)	Condition	Reference value
Terminal	Terminal		
57	56	Audio signal output	(V) 1 0 -1 + 2ms

#### Is the inspection result normal?

YES

>> Replace subwoofer. Refer to <u>AV-399, "Removal and Installation"</u>.
>> Replace BOSE speaker amp. Refer to <u>AV-392, "Removal and Installation"</u>. NO

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## FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

### Diagnosis Procedure

INFOID:0000000008360004

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK AUX SOUND SIGNAL CIRCUIT CONTINUITY

- Turn ignition OFF.
- 2. Disconnect AV control unit connector M123 and front auxiliary input jacks connector.
- 3. Check continuity between AV control unit connector M123 and front auxiliary input jacks connector.

AV cor	ntrol unit	Front auxilia	ry input jacks	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M123	24	M205	3	Yes
IVITZS	38	WIZUS	1	165

4. Check continuity between AV control unit connector M123 and ground.

AV control unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M123	24		No	
WIIZJ	38	_	INU	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2. CHECK AUX SOUND SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M123 and front auxiliary input jacks connector.

AV cor	ntrol unit	Front auxilia	ry input jacks	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M123	39	M205	2	Yes

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3. CHECK AUX SOUND SIGNAL

- 1. Connect AV control unit connector M123 and front auxiliary input jacks connector.
- 2. Turn ignition switch to ACC.
- Select AUX mode.
- 4. Check signals between AV control unit connector M123 and ground.

AV control unit	AV control unit connector M123		Reference value
(+)	(-)		
Terminal	Terminal		

## FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT [BOSE AUDIO W/O SURROUND SOUND]

#### < DTC/CIRCUIT DIAGNOSIS >

24	39		
38	39	AUX mode selected	(V) 1 0 -1 + 2ms SKIB3609E

#### Is the inspection result normal?

YES

>> Replace front auxiliary input jacks. Refer to <u>AV-401, "Removal and Installation"</u>.
>> Replace AV control unit. Refer to <u>AV-388, "Removal and Installation - AV Control Unit"</u>. NO

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#### **RGB DIGITAL IMAGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

### RGB DIGITAL IMAGE SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008368212

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK RGB DIGITAL IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M140 and display unit connector M141.
- 3. Check continuity between AV control unit connector M140 and display unit connector M141.

AV cor	ntrol unit	Displa	ay unit	Continuity
Connector	Terminals	Connector	Terminals	Continuity
M140	165	M141	28	Yes
W1140	164	M141	27	165

4. Check continuity between AV control unit connector M140 and ground.

AV control unit		Ground	Continuity
Connector	Terminals	Ground	Continuity
M140	165	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2.CHECK RGB DIGITAL IMAGE SIGNAL

- Connect AV control unit connector M140.
- 2. Turn ignition switch ON.
- 3. Check signal between display unit connector M141 and ground.

Display unit connector M141			
(+)	(-)	Condition	Voltage (Approx.)
Terminal	Terminal		( FF - 7
28	27	Audio system is ON.	1.3 V

#### Is the inspection result normal?

YES >> Replace display unit. Refer to AV-391, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

### COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DIS-PLAY UNIT)

### < DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT **DISPLAY UNIT)**

Diagnosis Procedure

INFOID:0000000008368214

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect AV control unit connector M124 and display unit connector M92.
- Check continuity between AV control unit connector M124 and display unit connector M92.

AV co	AV control unit		ay unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M124	56	MO2	18	Yes
IVI I 24	55	M92	19	res

Check continuity between AV control unit connector M124 and ground.

AV control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M124	56	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2. CHECK COMPOSITE IMAGE SIGNAL

- Connect AV control unit connector M124 and display unit connector M92.
- Turn ignition switch ON.
- Check signal between AV control unit connector M124 and ground.

AV control unit connector M124				
(+)	(-)	Condition	Reference value	
Terminal	Terminal			
56	55	DVD image is displayed.	(V) 0. 4 0 -0. 4 -40μs	

#### Is the inspection result normal?

YES >> Replace display unit. Refer to AV-391, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

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### COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO VIDEO DISTRIB-UTOR)

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO VIDEO DISTRIBUTOR)

Diagnosis Procedure

INFOID:0000000008368216

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

## 1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M125 and video distributor connector B25.
- 3. Check continuity between AV control unit connector M125 and video distributor connector B25.

AV control unit		Video distributor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M125	107	B25	34	Yes
	105		33	

4. Check continuity between AV control unit connector M125 and ground.

AV control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M125	107	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## $2.\mathsf{CHECK}$ COMPOSITE IMAGE SIGNAL

- 1. Connect AV control unit connector M125 and video distributor connector B25.
- Turn ignition switch ON.
- 3. Check signal between video distributor connector B25 and ground.

Video distributor connector B25			
(+)	(-)	Condition	Reference value
Terminal	Terminal		
34	33	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	(V) 0. 4 0 −0. 4 → 40µs SKIB2251J

#### Is the inspection result normal?

YES >> Replace video distributor. Refer to AV-406, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

# COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO HEADREST DISPLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO HEAD-REST DISPLAY UNIT)

Diagnosis Procedure

INFOID:0000000008368218

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Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect video distributor connector B24 and headrest display unit connectors.
- 3. Check continuity between video distributor connector B24 and headrest display unit connectors.

Video d	istributor	Video distributor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	32	P202 (driver seet)	16	Yes
B24	31	B202 (driver seat)	4	165
D2 <del>4</del>	28	B302 (passenger seat)	16	Voc
	27		4	Yes

4. Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
B24	32		No	
D24	28	_	INO	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMPOSITE IMAGE SIGNAL

- 1. Connect video distributor connector B24 and headrest display unit connectors.
- 2. Turn ignition switch ON.
- 3. Check signal between headrest display unit connectors and ground.

Headrest display unit					
Connector	(+)	(–)	Condition	Reference value	
Connector	Terminal	Terminal			
B202 (driver seat)	32	31			A
B302 (passenger seat)	28	27	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	(V) 0.4 -0.4 -0.4 -0.8 SKIB2251J	

#### Is the inspection result normal?

YES >> Replace headrest display unit. Refer to <u>AV-407, "Removal and Installation"</u>.

NO >> Replace video distributor. Refer to AV-406, "Removal and Installation".

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# AUX IMAGE SIGNAL CIRCUIT (FRONT AUXILIARY INPUT JACKS TO AV CONTROL UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# AUX IMAGE SIGNAL CIRCUIT (FRONT AUXILIARY INPUT JACKS TO AV CONTROL UNIT)

Diagnosis Procedure

INFOID:0000000008368220

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK AUX IMAGE SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M125 and front auxiliary input jacks connector M205.
- 3. Check continuity between AV control unit connector M125 and front auxiliary input jacks connector M205.

AV cor	ntrol unit	Front auxiliary input jacks		Continuity
Connector	Terminal	Connector Terminal		Continuity
M125	91	M205	7	Yes
IVITZS	92	WIZUS	8	165

Check continuity between AV control unit connector M125 and ground.

AV control unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M125	91	_	No	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK AUX IMAGE SIGNAL

- Connect AV control unit connector M125 and front auxiliary input jacks connector M205.
- 2. Turn ignition switch ON.
- Check signal between front auxiliary input jacks connector M205 and ground.

Front auxiliary input	jacks connector M205		
(+)	(-)	Condition Reference value	
Terminal	Terminal		
7	8	Front auxiliary input jacks image is displayed.	(V) 0. 4 0 -0. 4 → 40µs SKIB2251J

#### Is the inspection result normal?

YES >> Replace front auxiliary input jacks. Refer to AV-684, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

### **IMAGE SWITCH SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## **IMAGE SWITCH SIGNAL CIRCUIT**

# Diagnosis Procedure

INFOID:0000000008368224

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Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK CONTINUITY IMAGE SWITCH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect video distributor connector B24 and headrest display unit connectors.
- 3. Check continuity between video distributor connector B24 and headrest display unit connectors.

Video d	istributor	Headrest display unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	10	B202 (driver seat)	7	
B24	7		6	Yes
D24	9	B302 (passenger seat)	7	165
	5		6	

Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity
Connector	Terminal	Ground	Continuity
B24	10		No
	9	_	INO

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK VIDEO DISTRIBUTOR VOLTAGE

- Connect video distributor connector B24 and headrest display unit connectors.
- 2. Turn ignition switch ON.
- 3. Check voltage between video distributor connector B24 and ground.

Video distributo	or connector B24			
(+)	(-)	Condition	Voltage (Approx.)	M
Terminal	Terminal		(/ (pp.ox.)	141
10	7	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	0.5 V	AV
10	10 /	DVD, USB or rear auxiliary input jacks image is displayed on headrest display.	4.5 V	0
9	5	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	0.5 V	P
¥	9 5	DVD, USB or rear auxiliary input jacks image is displayed on headrest display.	4.5 V	

#### Is the inspection result normal?

YES >> Replace headrest display unit. Refer to AV-407, "Removal and Installation".

NO >> Replace video distributor. Refer to AV-406, "Removal and Installation".

### **DISK EJECT SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

### DISK EJECT SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008368351

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK DISK EJECT SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M125 and A/C and AV switch assembly connector.
- 3. Check continuity between AV control unit connector M125 terminal 97 and A/C and AV switch assembly connector M98 terminal 14.

AV cor	AV control unit		A/C and AV switch assembly	
Connector	Terminal	Connector Terminal		Continuity
M125	97	M98	14	Yes

4. Check continuity between AV control unit connector M125 terminal 978 and ground.

AV cor	ntrol unit		Continuity
Connector	Terminal	Ground	Continuity
M125	97		No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector M125 and A/C and AV switch assembly connector.
- 2. Turn ignition switch ON.
- Check voltage between AV control unit connector M125 terminal 97 and ground.

AV cor	AV control unit Ground			
(+)		(_)	Condition	Voltage (Approx.)
Connector	Terminal	(-)		( 11 - )
M125	97		Pressing eject switch	0 V
WITZS	97	_	Except above	5.0 V

### Is the inspection result normal?

- YES >> Replace A/C and AV switch assembly. Refer to <u>AV-389, "Removal and Installation AV and AC Switch Assembly"</u>.
- NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation AV Control Unit".

### MODE CHANGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## MODE CHANGE SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008368228

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Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK MODE CHANGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M122 and BOSE speaker amp. connector B130.
- 3. Check continuity between AV control unit connector M122 and BOSE speaker amp. connector B130.

AV cor	trol unit	BOSE speaker amp.		it BOSE speaker amp. Continuity		Continuity
Connector	Terminal	Connector	Terminal	Continuity		
M122	1	B130	60	Yes		

Check continuity between AV control unit connector M122 and ground.

AV control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M122	1	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK MODE CHANGE SIGNAL

- 1. Connect AV control unit connector M122 and BOSE speaker amp. connector B130.
- 2. Turn ignition switch ON.
- 3. Check voltage between BOSE amp. harness connector and ground.

BOSE speaker amp.		Ground		N/ 11
(	(+)		Condition	Voltage (Approx.)
Connector	Terminal	(-)		( FF 5)
		_	Driver's Audio Stage ON.	0 V
B130	60		Driver's Audio Stage OFF.	8.5 V

#### Is the inspection result normal?

YES >> Replace BOSE speaker amp. Refer to AV-392, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

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### [BOSE AUDIO W/O SURROUND SOUND]

### STEERING SWITCH

# Diagnosis Procedure

INFOID:0000000008368349

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

- 1. Turn ignition switch OFF.
- 2. Disconnect combination switch connector M149.
- 3. Check resistance between combination switch connector terminals.

Combination switch	bination switch connector M149  Condition		Resistance Ω
Terminal	Terminal	Condition	(Approx.)
		Depress SOURCE switch.	1
		Depress △ switch.	121
14	14	Depress ∇ switch.	321
		Depress w≤ switch.	723
		Depress ENTER switch.	2023
	15	Depress - ☐ switch.	1
		Depress ♥ + switch.	121
15		Depress 🗪 switch.	321
		Depress <b>5</b> switch.	723
		Depress DISP switch.	2023

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering wheel audio control switch. Refer to AV-390, "Removal and Installation".

# 2.CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

- 1. Disconnect combination meter connector M24 and combination switch connector M30.
- 2. Check continuity between combination meter connector M24 and combination switch connector M30.

Combina	tion meter	Combination switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	3		24	
M24	24	M30	33	Yes
	4		31	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal	Ground	Continuity
	3		
M24	24	_	No
	4		

#### Is the inspection result normal?

### STEERING SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO W/O SURROUND SOUND]

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YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M149.

Combination switch				Continuity
Connector Terminal Connector Terminal				Continuity
	24		14	
M30	31	M149	15	Yes
	33		17	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace spiral cable. Refer to <u>SR-13, "Removal and Installation"</u>.

# 4. CHECK HARNESS BETWEEN COMBINATION METER AND AV CONTROL UNIT

- Disconnect AV control unit connector M122.
- 2. Check continuity between combination meter connector M24 and AV control unit connector M122.

Combinat	tion meter	AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	14		6	
M24	15	M122	16	Yes
	16		15	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Connector Terminal		
	14		
M24	15	_	No
	16		

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

### 5. CHECK AV CONTROL UNIT VOLTAGE

- Connect combination meter connector M24 and AV control unit connector M122.
- Turn ignition switch ON.
- 3. Check voltage between AV control unit connector M122.

	ontrol unit M122		
Voltage (Approx.)	(-)	(+)	
	Terminal	Terminal	
5.0 V	15	6	
5.0 V	15	16	

#### Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-93. "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

### **USB CONNECTOR**

### [BOSE AUDIO W/O SURROUND SOUND]

# **USB CONNECTOR**

# Diagnosis Procedure

INFOID:0000000008368350

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK USB INTERFACE HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M55 and USB interface connector M209.
- 3. Check continuity between AV control unit connector M55 and USB interface connector M209.

AV con	trol unit	USB interface		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	137	M209	1	
	138		2	
M55	139		3	Yes
	140		4	
	141		5	

4. Check continuity between AV control unit connector M55 and ground.

AV control unit		_	Continuity
Connector	Terminal	_	Continuity
M55	137	Ground	No
WOO	139	Giodila	INO

#### Is the inspection result normal?

YES >> Replace the USB interface. Refer to AV-400, "Removal and Installation".

NO >> Repair or replace harness or connectors.

# FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008368230

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and front camera connector E226.
- 3. Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view mo	onitor control unit	Front camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M97	67	E226	6	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view mo	Around view monitor control unit		Continuity
Connector	Terminal	Ground	Continuity
M97	67	_	No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector M97 and front camera connector E226.
- 2. Turn ignition switch ON.
- Check signal between around view monitor control unit connector M97 and ground.

Around view mo	onitor control unit	Ground			
(	+)	( )	Condition	Reference value	
Connector	Terminal	(-)			
M97	67	_	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. Refer to AV-402, "Removal and Installation".

NO >> Replace front camera. Refer to AV-403, "Removal and Installation".

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### FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

### FRONT CAMERA IMAGE SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008368232

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK FRONT CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and front camera connector E226.
- 3. Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view m	onitor control unit	Front camera		Continuity
Connector	Terminals	Connector	Terminals	Continuity
M97	71	E226	3	Yes
IVI97	72	E220	4	165

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminals	Grodina	Continuity
M97	71	_	No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK FRONT CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector M97 and front camera connector E226.
- Turn ignition switch ON.
- Check signal between around view monitor control unit connector M97 terminals.

Around view mo	onitor control unit		
(+)	(-)	Condition	Reference value
Terminal	Terminal		
71	72	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. Refer to AV-402, "Removal and Installation".

NO >> Replace front camera. Refer to AV-403, "Removal and Installation".

## REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

### REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008368234

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Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and rear camera connector D511.
- 3. Check continuity between around view monitor control unit connector M97 and front camera connector D511.

Around view mo	onitor control unit	Rear camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M97	49	D511	4	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view mo	Around view monitor control unit		Continuity
Connector	Terminal	- Ground	Continuity
M97	49	_	No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector M97 and rear camera connector D511.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit connector M97 and ground.

Around view mo	onitor control unit	Ground			
(	+)	( )	Condition	Reference value	
Connector	Terminal	(-)			
M97	49	_	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. Refer to AV-402, "Removal and Installation".

NO >> Replace rear camera. Refer to AV-404, "Removal and Installation".

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### REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

### REAR CAMERA IMAGE SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008368236

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK REAR CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and rear camera connector D511.
- 3. Check continuity between around view monitor control unit connector M97 and rear camera connector D511.

Around view m	onitor control unit	Rear camera		Continuity
Connector	Terminals	Connector	Terminals	Continuity
M97	53	D511	5	Voc
IVI97	54	5311	1	Yes

Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminals	Grodina	Continuity
M97	53	_	No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK REAR CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector M97 and rear camera connector D511.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit connector M97 terminals.

Around view mo	onitor control unit		
(+)	(-)	Condition	Reference value
Terminal	Terminal		
53	54	CAMERA switch is ON or shift position is R.	(V) 1 0 -1 + 40 μs

#### Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

NO >> Replace rear camera. Refer to AV-404, "Removal and Installation".

# SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

### SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008368238

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
- 3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view mo	nd view monitor control unit LH side camera		LH side camera	
Connector	Terminal	Connector	Terminal	Continuity
M97	55	D20	16	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M97	55	_	No	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit connector M97 and ground.

Around view me	Around view monitor control unit				
(	(+)		Condition	Reference value	
Connector	Terminal	(-)			
M97	55	_	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. Refer to AV-402, "Removal and Installation".

NO >> Replace LH side camera. Refer to AV-405, "Removal and Installation".

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### SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

# SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008368240

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK LH SIDE CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
- Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view mo	nd view monitor control unit LH side camera		camera	Continuity
Connector	Terminals	Connector	Terminals	Continuity
M97	59 D20		5	Yes
IVI97	60	D20	17	165

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminals	Grodina	Continuity
M97	59	_	No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK LH SIDE CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
- 2. Turn ignition switch ON.
- Check signal between around view monitor control unit connector M97 terminals.

Around view mo	onitor control unit		
(+)	(-)	Condition	Reference value
Terminal	Terminal		
59	60	CAMERA switch is ON or shift position is R.	(V) 1 0 -1 40 μs JSNIA0834GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

NO >> Replace LH side camera. Refer to AV-405, "Removal and Installation".

# SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

## SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008368242

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
- 3. Check continuity between around view monitor control unit connector M97 and fRH side camera connector D113.

Around view mo	onitor control unit	RH side camera				Continuity
Connector	Terminal	Connector	Terminal	Continuity		
M97	61	D113	16	Yes		

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view mo	Around view monitor control unit		Continuity
Connector	Terminal	- Ground	Continuity
M97	61	_	No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground			
(	(+)	( )	Condition	Reference value	
Connector	Terminal	(-)			
M97	61	_	CAMERA switch is ON or shift position is R.	(V) 5 4 3 2 1 1.0 μ s JSNIA0836GB	

#### Is inspection result normal?

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YES >> Replace around view monitor control unit. Refer to <u>AV-402</u>, "<u>Removal and Installation</u>".

**AV-375** 

NO >> Replace RH side camera. Refer to AV-405, "Removal and Installation".

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### SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO W/O SURROUND SOUND]

### SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008368244

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

# 1. CHECK RH SIDE CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
- 3. Check continuity between around view monitor control unit connector M97 and fRH side camera connector D113.

Around view mo	onitor control unit	RH side camera		Continuity
Connector	Terminals	Connector Terminals		Continuity
M97	65	D113	5	Yes
IVI97	66	פווס	17	165

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminals	Grodina	Continuity
M97	65	_	No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK RH SIDE CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit connector M97 terminals.

Around view mo	onitor control unit		
(+)	(-)	Condition	Reference value
Terminal	Terminal		
65	66	CAMERA switch is ON or shift position is R.	(V) 1 0 -1 40 μs JSNIA0834GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

NO >> Replace RH side camera. Refer to AV-405, "Removal and Installation".

# [BOSE AUDIO W/O SURROUND SOUND]

# SYMPTOM DIAGNOSIS

# **MULTI AV SYSTEM**

Symptom Table

#### INFOID:0000000008359993

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### **AUDIO SYSTEM**

Symptom	Possible cause	Reference page
Inoperative	AV control unit power and ground circuit     AV control unit	<ul><li>AV-334</li><li>AV-159</li></ul>
Steering switch does not operate	Steering switch     AV control unit	<ul><li>AV-366</li><li>AV-159</li></ul>
All speakers do not sound	<ul> <li>Speaker circuit shorted to ground</li> <li>AV control unit power and ground circuit</li> <li>BOSE speaker amp. ON signal</li> <li>BOSE speaker amp. power and ground circuit</li> <li>BOSE speaker amp.</li> <li>AV control unit</li> </ul>	<ul> <li>AV-211</li> <li>AV-334</li> <li>AV-335</li> <li>AV-335</li> <li>AV-392</li> <li>AV-159</li> </ul>
One or several speakers do not sound	<ul> <li>Front door speaker</li> <li>Front tweeter</li> <li>Center speaker</li> <li>Instrument panel speaker/tweeter</li> <li>Rear door speaker</li> <li>Rear speaker</li> <li>Subwoofer</li> </ul>	<ul> <li>AV-348</li> <li>AV-346</li> <li>AV-342</li> <li>AV-344</li> <li>AV-350</li> <li>AV-352</li> <li>AV-354</li> </ul>
Buzz/rattle sound from speaker	The majority of buzz/rattle sounds are not indicative of ar issue with the speaker, usually something nearby the speaker is causing the buzz/rattle.	Refer to "SQUEAK AND RATTLE TROUBLE DIAG- NOSIS" in the ap- propriate interior trim section.

### **NAVIGATION SYSTEM**

Symptom	Possible cause	Reference page
Inoperative	AV control unit power and ground circuit     AV control unit	• <u>AV-334</u> • <u>AV-159</u>
Steering switch does not operate	Steering switch     AV control unit	• <u>AV-366</u> • <u>AV-159</u>
Voice activated control does not operate	Microphone     Steering switch     AV control unit	• AV-816 • AV-366 • AV-159

### HANDS-FREE PHONE SYSTEM

Symptom	Possible cause	Reference page
Inoperative	AV control unit power and ground circuit     AV control unit	• <u>AV-334</u> • <u>AV-159</u>
Steering switch does not operate	Steering switch     AV control unit	<ul><li>AV-366</li><li>AV-159</li></ul>
Voice activated control does not operate	Microphone     Steering switch     AV control unit	<ul> <li>AV-816</li> <li>AV-366</li> <li>AV-159</li> </ul>

CD

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# **MULTI AV SYSTEM**

# [BOSE AUDIO W/O SURROUND SOUND]

Symptom	Possible cause	Reference page
CD cannot be inserted.		
CD cannot be ejected.	AV control unit	AV-159
The CD cannot be played.	AV control unit	
The sound skips, stops suddenly, or is distorted.		

# SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	AV control unit power supply or ground circuit     AV control unit	• <u>AV-334</u> • <u>AV-388</u>

# **DVD PLAYER**

Symptom	Possible cause	Reference page
DVD player inoperative	Power supply and ground circuits     DVD player	• <u>AV-334</u> • <u>AV-388</u>
No sound when playing a DVD	Audio signal circuits     AV control unit     DVD player	<ul><li>AV-181</li><li>AV-159</li><li>AV-388</li></ul>
Video monitor is inoperative/does not display properly	<ul><li>Power supply and ground circuits</li><li>Video out circuit</li><li>DVD player</li><li>Video monitor</li></ul>	• AV-334 • AV-181 • AV-388 • AV-391
DVD remote control is inoperative/does not operate properly	DVD remote control     DVD player	• <u>AV-388</u>
Headphones inoperative	Headphone batteries     DVD player	• <u>AV-388</u>

# AROUND VIEW MONITOR

Symptom	Possible cause	Reference page
It does not switch to camera image even when the "CAMERA" switch is pressed or the selector lever is in the reverse position.	<ul> <li>Ignition signal circuit malfunction (around view monitor control unit).</li> <li>Around view monitor control unit power supply and ground circuits malfunction.</li> <li>AV communication circuits malfunction.</li> </ul>	<ul><li>AV-201</li><li>AV-339</li><li>AV-359</li></ul>
The screen switches when pressing the "CAMERA" switch or shifting the selector lever to the reverse position, however, all views are not displayed.	Camera image signal circuit between around view monitor control unit and front display unit malfunction     Communication circuit between AV control unit and front display unit malfunction	• AV-359 • AV-359
Camera image is rolling.	Communication circuit between AV control unit and front display unit malfunction	AV-359
It cannot be switched to rear view monitor even when the selector lever is in the reverse position.	Reverse signal circuit malfunction. (AV control unit)	AV-201
The predicted course line display in front view and rear view is malfunctioning.	Steering angle sensor signal circuits.	AV-201
<ul> <li>The front view screen is not displayed.</li> <li>The front of Birds-Eye view screen is not displayed.</li> </ul>	<ul> <li>Front camera image signal circuit malfunction.</li> <li>Front camera power supply and ground circuits malfunction.</li> <li>Front camera communication signal circuit malfunction.</li> </ul>	<ul><li>AV-370</li><li>AV-339</li><li>AV-369</li></ul>
<ul> <li>The rear view screen is not displayed.</li> <li>The rear of Birds-Eye view screen is not displayed.</li> </ul>	<ul> <li>Rear camera image signal circuit malfunction.</li> <li>Rear camera power supply and ground circuits malfunction.</li> <li>Rear camera communication signal circuits malfunction.</li> </ul>	<ul><li>AV-372</li><li>AV-339</li><li>AV-371</li></ul>

### **MULTI AV SYSTEM**

### < SYMPTOM DIAGNOSIS >

# [BOSE AUDIO W/O SURROUND SOUND]

Symptom	Possible cause	Reference page
<ul> <li>The front-side screen is not displayed.</li> <li>The passenger side of Birds-Eye view screen is not displayed.</li> </ul>	<ul> <li>Side camera RH image signal circuit malfunction.</li> <li>Side camera RH power supply and ground circuits malfunction.</li> </ul>	<ul><li>AV-376</li><li>AV-339</li></ul>
	Side camera RH communication circuit malfunction.	• <u>AV-375</u>
The driver side of Birds-eye view screen is not displayed.	Side camera LH image signal circuit malfunction.     Side camera LH power supply and ground circuits mal-	• <u>AV-374</u>
	function.  • Side camera LH communication circuit malfunction.	• <u>AV-339</u>
	0.00 00.100 0	• <u>AV-373</u>
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 circuit malfunction (around view monitor control unit).	<u>AV-201</u>

# CAMERA ASSISTANCE SONAR

Symptoms	Possible cause	Reference page
The malfunction is detected in only 1 indicator (Always displayed in red).	<ul> <li>Corner sensor malfunction in corresponding area.</li> <li>Corner sensor harness circuit in corresponding area.</li> </ul>	Perform CONSULT "self-diagnosis" of "SONAR". Refer to AV-176.
The malfunction is detected in all 4 indicators (Always displayed in red).	Corner sensor ground circuit malfunction.	Perform CONSULT "self-diagnosis" of "SONAR". Refer to AV-176.
	<ul> <li>Sonar control unit power supply and ground circuits malfunction.</li> <li>AV communication circuits malfunction.</li> </ul>	Perform CONSULT "self-diagnosis" of "MULTI AV". Refer to AV-172.

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[BOSE AUDIO W/O SURROUND SOUND]

### NORMAL OPERATING CONDITION

Description INFOID:000000008359994

The majority of the audio concerns are the result of outside causes (bad CD, electromagnetic interference, etc.).

#### **AUDIO SYSTEM**

The majority of the audio troubles are the result of outside causes (bad CD, electromagnetic interference, etc.).

#### Noise

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

- 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 the waves sent directly from the broadcast station arriving at the antenna at a different time from the waves which reflect off mountains or buildings.

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 determine the cause.

#### NOTE:

The source of the noise can be found easily by listening to the noise while removing the fuses of electrical components, one by one.

Type of Noise and Possible Cause

Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	Ignition components
The occurrence of the noise is lin	ked with the operation of the fuel pump.	Fuel pump condenser
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	Relay malfunction, audio unit malfunction
	The noise occurs when various motors are operating.	Motor case ground     Motor
The noise occurs constantly, not just under certain conditions.		<ul> <li>Rear defogger coil malfunction</li> <li>Open circuit in printed heater</li> <li>Poor ground of antenna feeder line</li> </ul>
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		<ul> <li>Ground wire of body parts</li> <li>Ground due to improper part installation</li> <li>Wiring connections or a short circuit</li> </ul>

#### NAVIGATION SYSTEM

#### **Basic Operation**

Symptom	Cause	Remedy
No image is shown.	Display brightness adjustment is set fully to DARK side.	Adjust the display brightness.
No guide sound is heard.	Volume control is set to OFF, MIN or MAX.	Adjust the audio guide volume.
Audio guide volume is too low or too high.	Audio guidance is not available while the vehicle is driving on a dark pink route.	System is not malfunctioning.
Screen is too dark. Motion of the image is too slow.	Temperature inside the vehicle is low.	Wait until the temperature inside the vehicle reaches the proper temperature.
Small black or bright spots appear on the screen.	Symptom peculiar to a liquid crystal display (display unit).	System is not malfunction.

Vehicle Mark

### < SYMPTOM DIAGNOSIS >

# [BOSE AUDIO W/O SURROUND SOUND]

Symptom	Cause	Remedy
Map screen and BIRDVIEW™ Name of the place vary with the screen.	Some thinning of the character data is done to prevent the display becoming to complex. In some cases and in some locations, the display contents may differ.  The same place name, street name, etc. may not be displayed every time on account of the data processing.	System is not malfunctioning.
Vehicle mark is not positioned correctly.	Vehicle is transferred by ferry or by towing after its ignition switch is turned to OFF.	Drive the vehicle for a while in the GPS satellite signal receiving condition.
Screen will not switch to nighttime mode after the lighting switch is turned ON.	The daytime screen is selected by the "SWITCH SCREENS" when the last time the screen dimming setting is done. Switching between daytime/nighttime screen may be inhibited by the automatic illumination adjustment function.	Perform screen dimming and select the nighttime screen by "SWITCH SCREENS".
Map screen will not scroll in accordance with the vehicle travel.	Current location is not displayed.	Press "MAP" button to display the current location.
Vehicle mark will not be shown.	Current location is not displayed.	Press "MAP" button to display the current location.
Accuracy indicator (GPS satellite mark) on the map screen stays	GPS satellite signal is intercepted because the vehicle is in or behind a building.	Move the vehicle out to an open space.
gray.	GPS satellite signal cannot be received because an obstacle is placed on top of the instrument panel.	Do not place anything on top of the meter display (instrument panel).
	GPS satellites are not visible from current location.	Wait until GPS satellites are visible by moving the vehicle.
Vehicle location accuracy is low.	Accuracy indicator (GPS satellite mark) on the map screen stays gray.	Current location is not determined.
	Vehicle speed setting by the vehicle speed pulse has been deviated (advanced or retarded) from the actual vehicle speed because tire chain is fitted or the system has been used on another vehicle.	Drive the vehicle for a while [for approx. 30 minutes at approx. 30 km/h (19 MPH)] and the deviation will be automatically adjusted. If advancement or retard still occur, perform the distance adjustment by CONFIRMA-TION/ADJUSTMENT mode of diagnosis function.
	Map data has error or omission. (Vehicle mark is always deviated to the same position.)	As a rule, an updated map DVD–ROM will be released once a year.

### Destination, Passing Points and Menu Items Cannot be Selected/Set

Symptom	Cause	Remedy	
Destination cannot be set.	Destination to be set is on an expressway.	Set the destination on an ordinary road.	
Passing point is not searched when re-searching the route.	The vehicle has already passed the passing point, or the system judged so.	, , , , , , , , , , , , , , , , , , , ,	
Route information will not be displayed.	Route searching has not been done.	Set the destination and perform route searching.	
	Vehicle mark is not on the recommended route.	Drive on the recommended route.	
	Route guide is turned OFF.	Turn route guide ON.	
	Route information is not available on the dark pink route.	System is not malfunctioning.	
After the route searching, no guide sign will appear as the vehicle goes near the entrance/exit to the toll road.	Vehicle mark is not on the recommended route. (On the display, only guide signs related to the recommended route will be shown.)	Drive on the recommended route.	

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# < SYMPTOM DIAGNOSIS >

# [BOSE AUDIO W/O SURROUND SOUND]

Symptom	Cause	Remedy
Automatic route searching is not possible.	Vehicle is driving on a highway (gray route), or no recommended route is available.	Drive on a road to be searched. Or re–search the route manually. In this case, however, the whole route will be searched.
Performed automatic detour search (or detour search). Howev- er, the result is the same as that of the previous search.	Performed search with every conditions considered. However, the result is the same as that of the previous search.	System is not malfunctioning.
Passing points cannot be set.	More than five passing points were set.	Passing points can be set up to five. To stop at more than five points, perform sharing in several steps.
When setting the route, the starting point cannot be selected.	The current vehicle location is always set as the starting point of a route.	System is not malfunctioning.
Some menu items cannot be selected.	The vehicle is being driven.	Stop the vehicle at a safe place and then operate the system.

#### Voice Guide

Symptom	Cause	Remedy
Voice guide will not operate.	Note: Voice guide is only available at intersections that satisfy certain conditions (indicated by ● on the map). Therefore, guidance may not be given even when the route on the map changes direction.	System is not malfunctioning.
	The vehicle is not on the recommended route.	Return to the recommended route or research the route.
	Voice guide is turned OFF.	Turn voice guide ON.
	Route guide is turned OFF.	Turn route guide ON.
Voice guide does not match the actual road pattern.	Voice guide may vary with the direction to which the vehicle is turn and the connection of the road to other roads.	Drive in conformity to the actual traffic rules.

#### Route Search

Symptom	Cause	Remedy
No route is shown.	No road to be searched is found around the destination.	Find wider road (orange road or wider) near- by and reset the destination and passing points onto it. Take care of the traveling direc- tion when there are separate up and down roads.
	Starting point and the destination are too close.	Set the destination at more distant point.
	Conditional traffic regulation (day of the week/ time of the day) is set at the area around the current location or the destination.	Turn the time-regulating search conditions OFF. Turn "Avoid regulation time" in the search conditions OFF.
Indicated route is intermittent.	In some areas, highways (gray routes) are not used for the search <sup>(Note)</sup> Therefore, the route to the current location or the passing points may be intermittent.	System is not malfunctioning.
When the vehicle has passed the recommended route, it is deleted from the screen.	A recommended route is controlled by each section. When the vehicle has passed the passing point 1, then the map data from the starting point up to the passing point 1 will be deleted. (The data may remain undeleted in some area.)	System is not malfunctioning.

#### < SYMPTOM DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

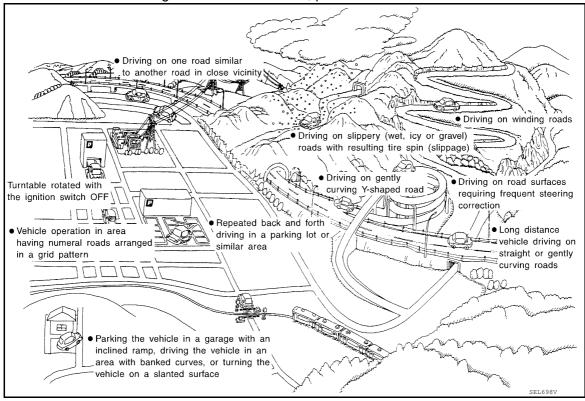
Symptom	Cause	Remedy
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, etc.) is set at the area around the starting point or the destination.	Slightly move the starting point or the destina tion, or set the passing point on the route of your choice.
	In the area where highways (gray routes) are used for the search, left turn has priority around the current location and the destination (passing points). For this reason, the recommended route may be detouring.	System is not malfunctioning.
Landmarks on the map do not match the actual ones.	This can be happen due to omission or error in the map data.	As a rule, an updated map DVD-ROM will be released once a year. Wait until the latest map has become available.
Recommended route is far from the starting point, passing points, and destination.	Starting point, passing points, and destination of the route guide were set far from the desired points because route searching data around these area were not stored.	Reset the destination onto the road nearby. If this road is one of the highways (gray routes), an ordinary road nearby may be displayed as the recommended route.

#### NOTE:

Except for the ordinance-designated cities. (Malfunctioning areas may be changed in the updated map disc.)

#### **Examples of Current-Location Mark Displacement**

Vehicle's travel amount is calculated by reading its travel distance and turning angle. Therefore, if the vehicle is driven in the following manner, an error will occur in the vehicle's current location display. If correct location has not been restored after driving the vehicle for a while, perform location correction.



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# [BOSE AUDIO W/O SURROUND SOUND]

Cause (con	dition) –: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
	Y-intersections  ELK0192D	At a Y intersection or similar gradual division of roads, an error in the direction of travel deduced by the sensor may result in the current-location mark appearing on the wrong road.	
	Spiral roads  ELK0193D	When driving on a large, continuous spiral road (such as loop bridge), turning angle error is accumulated and the vehicle mark may deviate from the correct location.	
Road config-	Straight roads  ELK0194D	When driving on a long, straight road and slow curve without stopping, map-matching does not work effectively enough and distance errors may accumulate. As a result, the vehicle mark may deviate from the correct location when the vehicle is turned at a corner.	If after travelling about 10 km (6 miles) the correct location has
uration	Zigzag roads	When driving on a zigzag road, the map may be matched to other roads in the similar direction nearby at every turn, and the vehicle mark may deviate from the correct location.	
	Roads laid out in a grid pattern	When driving where roads are laid out in a grid pattern, or where many roads are running in the similar direction nearby, the map may be matched to them by mistake and the vehicle mark may deviate from the correct location.	
	Parallel roads  ELK0197D	When two roads are running in parallel (such as highway and sideway), the map may be matched to the other road by mistake and the vehicle mark may deviate from the correct location.	

### < SYMPTOM DIAGNOSIS >

# [BOSE AUDIO W/O SURROUND SOUND]

Cause (co	ndition) -: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
	In a parking lot  Parking lot  SEL709V	When driving in a parking lot, or other location where there are no roads on the map, matching may place the vehicle mark on a nearby road. When the vehicle returns to the road, the vehicle mark may have deviated from the correct location. When driving in circle or turning the steering wheel repeatedly, direction errors accumulate, and the vehicle mark may deviate from the correct location.	
Place	Turntable	When the ignition switch is OFF, the navigation system cannot get the signal from the gyroscope (angular speed sensor). Therefore, the displayed direction may be	
	SEL710V	wrong and the correct road may not be easily returned to after rotating the vehicle on a turntable with the ignition OFF.	
	Slippery roads	On snow, wet roads, gravel, or other roads where tires may slip easily, accumulated mileage errors may cause the vehicle mark to deviate from the correct road.	If after travelling about 10 km (6 miles) the correct location has
	Slopes	When parking in sloped garages, when travelling on banked roads, or in other cases where the vehicle turns when tilted, an error in the turning angle will occur, and the vehicle mark may deviate from the road.	not been restored, perform lo- cation correction and, if neces- sary, direction correction.
Map data [	Road not displayed on the map screen  New road	When driving on new roads or other roads not displayed on the map screen, map matching does not function correctly and matches the location to a nearby road.	
	SEL699V	When the vehicle returns to a road which is on the map, the vehicle mark may deviate from the correct road.	
	Different road pattern (Changed due to repair)	If the road pattern stored in the map data and the actual road pattern are different, map matching does not function correctly	
	ELK0201D	and matches the location to a nearby road. The vehicle mark may deviate from the correct road.	
Vehicle	Use of tire chains	When tire chains are used, the mileage is not correctly detected, and the vehicle mark may deviate from the correct road.	Drive the vehicle for a while. If the distance still deviates, ad- just it by using the distance ad- justment function. (If the tire chain is removed, recover the original value.)

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#### < SYMPTOM DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

Cause (condition) -: While driving ooo: Display		Driving condition	Remarks (correction, etc.)
Precautions for driving	Just after the engine is started	If the vehicle is driven just after the engine is started when the gyroscope (angular speed sensor) correction is not completed, the vehicle can lose its direction and may have deviated from the correct location.	Wait for a short while before driving after starting the engine.
	Continuous driving without stopping	When driving long distances without stopping, direction errors may accumulate, and the current-location mark may deviate from the correct road.	Stop and adjust the orientation.
	Abusive driving	Spinning the wheels or engaging in other kinds of abusive driving may result in the system being unable perform correct detection, and may cause the vehicle mark to deviate from the correct road.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
How to cor- rect location	Position correction accuracy  Within 1 mm (0.04 in)  SELTOIN	If the accuracy of location settings is poor, accuracy may be reduced when the correct road cannot be found, particularly in places where there are many roads.	Enter in the road displayed on the screen with an accuracy of approx. 1mm. Caution: Whenever possible, use detailed map for the correc- tion.
	Direction when location is corrected  Direction calibration adjustment	If the accuracy of location settings during correction is poor, accuracy may be reduced afterwards.	Perform direction correction.

Location Correction by Map-Matching is Slow

- The map-matching function needs to refer to the data of the surrounding area. It is necessary to drive some distance for the function to work.
- Because map-matching operates on this principle, when there are many roads running in similar directions
  in the surrounding area, no matching determination may be made. The location may not be corrected until
  some special feature is found.

#### Name of Road is Not Displayed

The current road name may not be displayed if there are no road names displayed on the map screen.

Contents of Display Differ for Birdview<sup>™</sup> and the (Flat) Map Screen

Difference of the BIRDVIEW™ screen from the flat map screen are as follows.

- The current place name displays names which are primarily in the direction of vehicle travel.
- The amount of time before the vehicle travel or turn angle is updated on the screen is longer than for the (flat) map display.
- The conditions for display of place names, roads, and other data are different for nearby areas and for more distant areas.
- Some thinning of the character data is done to prevent the display becoming too complex. In some cases and in some locations, the display contents may differ.
- The same place name, street name, etc. may be displayed multiple times.

#### Vehicle Mark Shows a Position Which is Completely Wrong

In the following cases, the vehicle mark may appear on completely different position in the map depending on the GPS satellite signal receiving conditions. In this case, perform location correction and direction correction.

- · When location correction has not been done
- If the receiving conditions of the GPS satellite signal is poor, if the vehicle mark becomes out of place, it may
  move to a completely different location and not come back if location correction is not done. The position will
  be corrected if the GPS signal can be received.
- When the vehicle has traveled by ferry, or when the vehicle has been being towed

#### < SYMPTOM DIAGNOSIS >

#### [BOSE AUDIO W/O SURROUND SOUND]

- Because calculation of the current location cannot be done when traveling with the ignition off, for example when traveling by ferry or when being towed, the location before travel is displayed. If the precise location can be detected with GPS, the location will be corrected.

#### Vehicle Mark Jumps

In the following cases, the vehicle mark may appear to jump as a result of automatic correction of the current location.

- When map matching has been done
- If the current location and the vehicle mark are different when map matching is done, the vehicle mark may seem to jump. At this time, the location may be "corrected" to the wrong road or to a location which is not on a road.
- · When GPS location correction has been done
- If the current location and the vehicle mark are different when the location is corrected using GPS measurements, the vehicle mark may seem to jump. At this time, the location may be "corrected" to a location which is not on a road.

#### Vehicle Mark is in a River or Sea

The navigation system moves the vehicle mark with no distinction between land and rivers or sea. If the vehicle mark is somehow out of place, it may appear that the vehicle is driving in a river or the sea.

#### Vehicle Mark Automatically Rotates

The system wrongly memorizes the rotating status as stopping when the ignition switch is turned ON with the turntable rotating. That causes the vehicle mark to rotate when the vehicle is stopped.

When Driving on Same Road, Sometimes Vehicle Mark is in Right Place and Sometimes it is in Wrong Place The conditions of the GPS antenna (GPS data) and gyroscope (angular speed sensor) change gradually. Depending on the road traveled and the operation of the steering wheel, the location detection results will be different. Therefore, even on a road on which the location has never been wrong, conditions may cause the vehicle mark to deviate.

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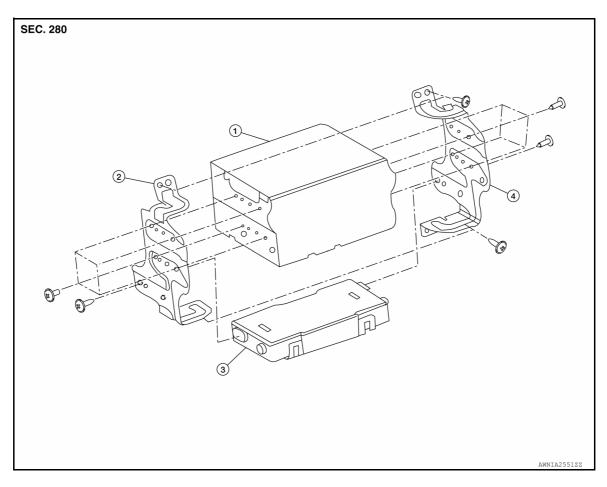
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# REMOVAL AND INSTALLATION

# AV CONTROL UNIT

Exploded View



1. AV control unit

- 2. AV control unit bracket LH
- 3. A/C auto amp.

4. AV control unit bracket RH

#### Removal and Installation - AV Control Unit

INFOID:0000000008297223

#### **REMOVAL**

#### **CAUTION:**

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to <a href="AV-262">AV-262</a>, "CONFIGURATION (AV CONTROL UNIT): Description".

- Disconnect the negative battery terminal. Refer to <u>PG-92. "Removal and Installation"</u>.
- 2. Remove cluster lid C upper. Refer to IP-21, "Removal and Installation Cluster Lid C Upper".
- Remove the screws, then pull out the AV control unit.
- 4. Disconnect the harness connectors from the AV control unit and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

#### **CAUTION:**

• When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to <u>AV-262, "CONFIGURATION"</u>. TION (AV CONTROL UNIT): Description".

### **AV CONTROL UNIT**

< REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

# Removal and Installation - AV and AC Switch Assembly

INFOID:0000000008297224

#### **REMOVAL**

#### **CAUTION:**

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to <u>AV-262</u>, "CONFIGURATION (AV CONTROL UNIT): <u>Description"</u>.

- Disconnect the negative battery terminal. Refer to <u>PG-92, "Removal and Installation"</u>.
- 2. Remove cluster lid C. Refer to IP-21, "Removal and Installation Cluster Lid C Upper"
- Remove the AV and AC switch assembly screws (A), then separate the cluster lid C from AV and AC switch assembly.
- 4. Release upper pawls and remove AV and AC switch assembly

#### INSTALLATION

Installation is in the reverse order of removal.

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### **STEERING SWITCH**

< REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

# STEERING SWITCH

# Removal and Installation

INFOID:0000000008297225

The steering switch and ICC steering switch are serviced as an assembly. Refer to <a href="CCS-190">CCS-190</a>, "Removal and <a href="Installation"</a>.

# **DISPLAY UNIT**

**Exploded View** 

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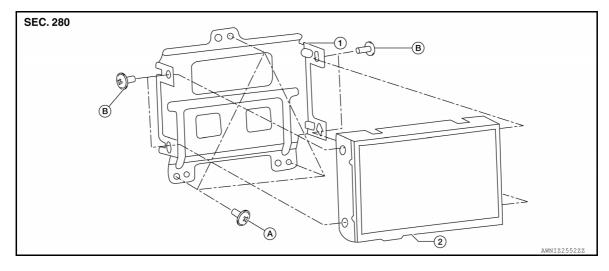
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- 1. Display unit bracket
- Display unit

A. Display unit bracket screws

#### Removal and Installation

Display unit screws

#### REMOVAL

- Remove cluster lid D. Refer to <u>IP-22, "Removal and Installation"</u>.
- 2. Remove the display unit screws, and then pull out the display unit and bracket.
- 3. Disconnect harness connector from the display unit, then remove the display unit and bracket.
- 4. Remove the display unit brackets screws, then remove the display unit from the display unit bracket.

#### **INSTALLATION**

Installation is in the reverse order of removal.

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### **BOSE SPEAKER AMP**

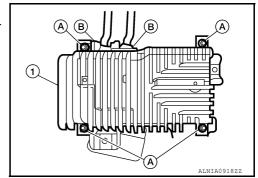
# **BOSE SPEAKER AMP**

### Removal and Installation

#### INFOID:0000000008297227

#### **REMOVAL**

- 1. Disconnect the negative battery terminal. Refer to PG-92, "Exploded View"
- 2. Remove third row seat. Refer to SE-95, "Removal and Installation".
- 3. Remove Bose speaker amp screws (A).
- 4. Disconnect the harness connectors (B) from the Bose speaker amp. and remove.



#### **INSTALLATION**

Installation is in the reverse order of removal.

# FRONT DOOR SPEAKER

**Exploded View** 

INFOID:0000000008297228

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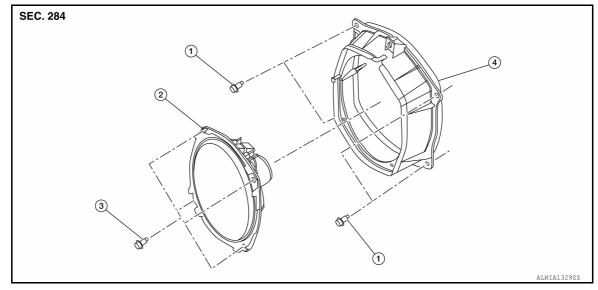
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- 1. Speaker bracket bolt
- 2. Front door speaker
- 3. Speaker bolt

4. Speaker bracket

### Removal and Installation

INFOID:0000000008297229

#### **REMOVAL**

- 1. Remove front door finisher. Refer to <a href="INT-15">INT-15</a>, "Removal and Installation".
- 2. Remove front door speaker bolts.
- Disconnect harness connector from front door speaker, then remove front door speaker from speaker bracket.
- 4. Remove speaker bracket bolts.
- 5. Remove speaker bracket from front door.

#### INSTALLATION

Installation is in the reverse order of removal.

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### **FRONT TWEETER**

[BOSE AUDIO W/O SURROUND SOUND]

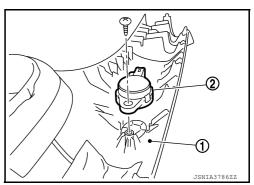
# FRONT TWEETER

# Removal and Installation

#### INFOID:0000000008360044

#### **REMOVAL**

- 1. Remove front pillar finisher (LH/RH). Refer to <a href="INT-17">INT-17</a>, "FRONT PILLAR FINISHER: Removal and Installation"
- 2. Remove front tweeter screws (2).
- 3. Remove front tweeter (2) from front pillar finisher (1).



### **INSTALLATION**

Installation is in the reverse order of removal.

### **INSTRUMENT PANEL SPEAKER/TWEETER**

< REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

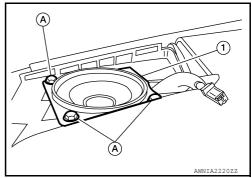
# **INSTRUMENT PANEL SPEAKER/TWEETER**

### Removal and Installation

#### INFOID:0000000008297231

#### **REMOVAL**

- 1. Remove instrument panel tweeter grille (LH/RH). Refer to IP-14, "Exploded View".
- 2. Remove the screws (A), then pull out the instrument panel tweeter (1).
- 3. Disconnect the harness connector and remove the instrument panel tweeter (1).



#### **INSTALLATION**

Installation is in the reverse order of removal.

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### **CENTER SPEAKER**

[BOSE AUDIO W/O SURROUND SOUND]

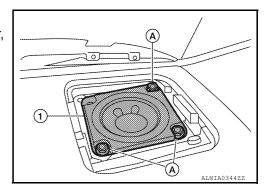
# **CENTER SPEAKER**

# Removal and Installation

#### INFOID:0000000008297232

### **REMOVAL**

- 1. Remove center speaker grille. Refer to IP-14, "Exploded View".
- 2. Remove the center speaker screws (A).
- 3. Pull out the center speaker (1), disconnect harness connector, then remove center speaker.

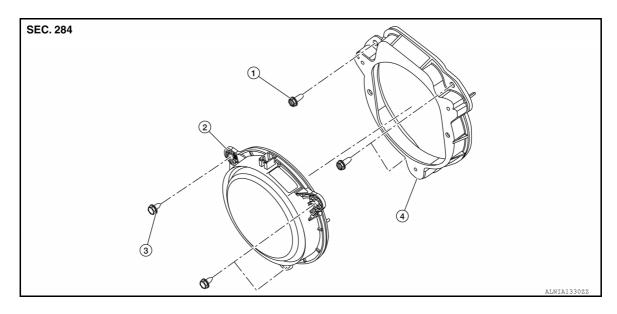


#### **INSTALLATION**

Installation is in the reverse order of removal.

# **REAR DOOR SPEAKER**

Exploded View



- 1. Speaker bracket bolt
- 2. Rear door speaker
- 3. Speaker bolt

4. Speaker bracket

## Removal and Installation

## **REMOVAL**

- 1. Remove rear door finisher. Refer to <a href="INT-16">INT-16</a>, "Removal and Installation".
- Remove rear door speaker bolts.
- 3. Disconnect harness connector from the rear door speaker, then remove rear door speaker from speaker bracket.
- 4. Remove speaker bracket bolts.
- Remove rear door speaker bracket.

## INSTALLATION

Installation is in the reverse order of removal.

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## **REAR SPEAKERS**

[BOSE AUDIO W/O SURROUND SOUND]

# **REAR SPEAKERS**

# Removal and Installation

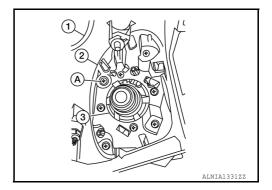
INFOID:0000000008297236

## **REMOVAL**

1. Remove back pillar finisher. Refer to <a href="INT-30">INT-30</a>, "BACK PILLAR FINISHER: Removal and Installation". CAUTION:

Do not reuse back pillar finisher.

- 2. Remove rear speaker bolts (A).
- 3. Remove bracket (2), then remove rear speaker (3).

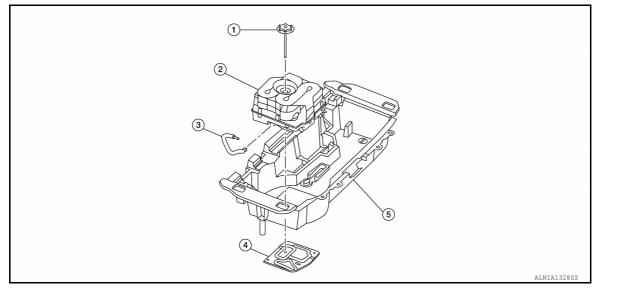


## **INSTALLATION**

Installation is in the reverse order of removal.

# **WOOFER**

# **Exploded View**



1. Spare tire clamp

4. Bracket

- 2. Woofer
- 5. Rear storage box
- 3. Harness

## Removal and Installation

## **REMOVAL**

- 1. Open the storage box lid.
- Remove the spare tire clamp.
- 3. Lift woofer to disconnect harness connector, then remove woofer.

#### INSTALLATION

Installation is in the reverse order of removal.

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## **USB CONNECTOR**

[BOSE AUDIO W/O SURROUND SOUND]

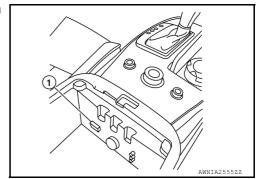
# **USB CONNECTOR**

# Removal and Installation

#### INFOID:0000000008297239

## **REMOVAL**

- 1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
- 2. Disconnect harness connector from the USB connector.
- 3. Release the pawl from the back of USB connector (1), then remove USB connector (1).



#### **INSTALLATION**

Installation is in the reverse order of removal.

## FRONT AUXILIARY INPUT JACKS

< REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

# FRONT AUXILIARY INPUT JACKS

## Removal and Installation

#### INFOID:0000000008297241

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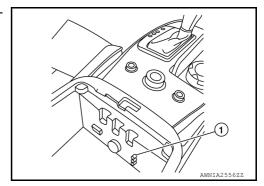
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## REMOVAL

- 1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
- 2. Disconnect harness connector from the front auxiliary input jack.
- 3. Remove front auxiliary input jack screws, then remove front auxiliary input jack (1).



#### **INSTALLATION**

Installation is in the reverse order of removal.

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## AROUND VIEW MONITOR CONTROL UNIT

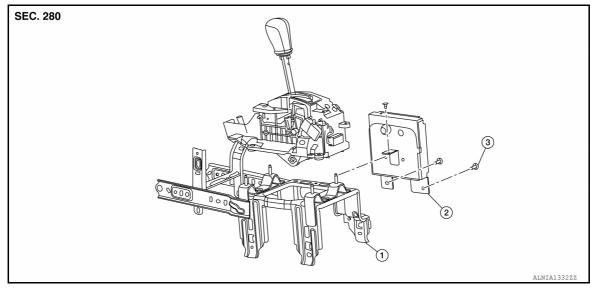
< REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

# AROUND VIEW MONITOR CONTROL UNIT

# **Exploded View**

INFOID:0000000008297242



2. Around view monitor control unit

3. Screw

# Removal and Installation

INFOID:0000000008297243

#### **REMOVAL**

1. Bracket

- 1. Remove center console. Refer to IP-18, "Removal and Installation".
- 2. Remove the around view monitor control unit screws.
- 3. Disconnect harness connector from around view monitor control unit and remove.

## **INSTALLATION**

Installation is in the reverse order of removal.

#### NOTE:

Perform camera image calibration. Refer to <u>AV-268, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)</u>: Work Procedure".

## **FRONT CAMERA**

## < REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

## FRONT CAMERA

## Removal and Installation

#### INFOID:0000000008297244

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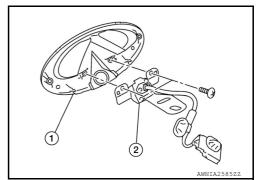
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#### **REMOVAL**

- 1. Remove front grille. Refer to EXT-23, "Removal and Installation".
- 2. Remove front camera screws, then remove front camera (2) from front emblem (1).



## **INSTALLATION**

Installation is in the reverse order of removal.

#### NOTE:

Perform camera image calibration. Refer to <u>AV-268, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Work Procedure"</u>.

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## **REAR CAMERA**

[BOSE AUDIO W/O SURROUND SOUND]

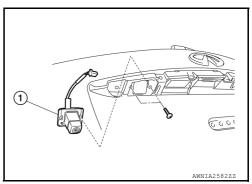
# **REAR CAMERA**

## Removal and Installation

INFOID:0000000008297245

#### **REMOVAL**

- 1. Remove back door outer upper finisher. Refer to EXT-41, "Removal and Installation".
- 2. Remove rear camera screws, then remove rear camera (1).



## **INSTALLATION**

Installation is in the reverse order of removal.

#### NOTE:

Perform camera image calibration. Refer to <u>AV-268, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Work Procedure"</u>.

## [BOSE AUDIO W/O SURROUND SOUND]

# SIDE CAMERA

# Removal and Installation

#### INFOID:0000000008297246

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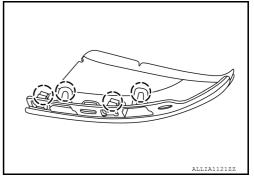
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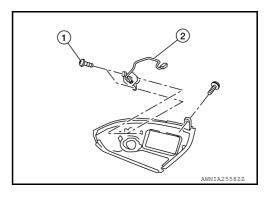
#### **REMOVAL**

- 1. Remove the door mirror assembly. Refer to MIR-29, "Removal and Installation".
- 2. Remove the door mirror rear finisher. Refer to MIR-31, "Removal and Installation".
- 3. Release the side camera finisher pawls using a suitable tool, disconnect the harness connector from the side camera, then remove the side camera finisher.

( ): Pawl



4. Remove the screws (1) and the side camera (2).



## **INSTALLATION**

Installation is in the reverse order of removal.

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## **VIDEO DISTRIBUTOR**

< REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

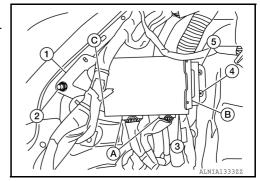
# **VIDEO DISTRIBUTOR**

## Removal and Installation

INFOID:0000000008297247

### **REMOVAL**

- 1. Remove luggage side lower finisher. Refer to <a href="INT-29">INT-29</a>, "LUGGAGE SIDE LOWER FINISHER: Removal and Installation".
- 2. Disconnect video distributor harness connectors (A).
- 3. Remove video distributor nuts (2) and bolts (4).
- 4. Remove video distributor (3) and brackets (1) (5) from the vehicle as a single unit.
- 5. Remove screws (B) (C), then remove video distributor (3).



#### **INSTALLATION**

Installation is in the reverse order of removal.

# **HEADREST DISPLAY UNIT**

## Removal and Installation

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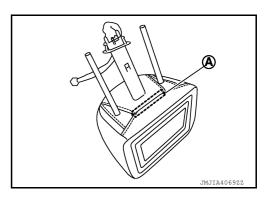
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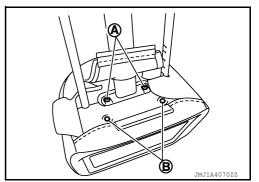
#### **REMOVAL**

#### **CAUTION:**

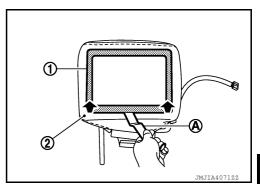
- Do not strongly press panel surface of display (glass area).
- Do not strongly press or pull out the movable part of display.
- 1. Remove the headrest trim retainer (A).



2. Remove the headrest display harness and upper tube screws (A), and then remove headrest display unit bolts (B).

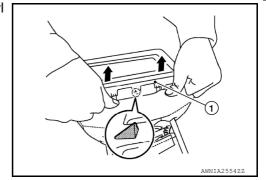


- 3. Remove the headrest display escutcheon and headrest display.
- Insert a suitable tool (A) between lower side of headrest display escutcheon (1) and headrest trim (2) and pull out lower side of escutcheon.



b. Pull out headrest display escutcheon (1) to the position that pawl is visible and disengage pawl.





c. Pull out lower side of headrest display escutcheon from headrest.

## **HEADREST DISPLAY UNIT**

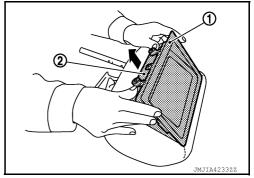
< REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

#### **CAUTION:**

Be careful not damage pawls on upper side headrest display escutcheon.

d. Pull downward and remove headrest display escutcheon (1) and headrest display unit (2) by pulling them out and removing pins on upper side of display.



- e. Disconnect inner harness connector.
- f. Press headrest display escutcheon to the headrest display unit side. Disconnect pawls on upper side and remove headrest display escutcheon.
- 4. Remove the headrest display harness upper tube from headrest trim.

## **INSTALLATION**

Installation is in the reverse order of removal.

## **REAR AUXILIARY INPUT JACKS**

< REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

# REAR AUXILIARY INPUT JACKS

## Removal and Installation

#### INFOID:0000000008297249

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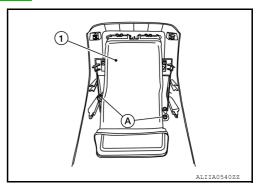
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## REMOVAL

- 1. Remove center console rear finisher. Refer to IP-18, "Exploded View".
- 2. Remove the screws (A) from the center ventilator duct (1).



- 3. Remove the center ventilator duct.
- 4. Remove rear auxiliary input jack screws, then remove rear auxiliary input jack.

## **INSTALLATION**

Installation is in the reverse order of removal.

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## **SONAR CONTROL UNIT**

< REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

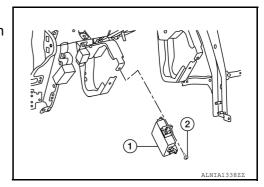
# **SONAR CONTROL UNIT**

# Removal and Installation

#### INFOID:0000000008297250

## **REMOVAL**

- 1. Remove instrument lower panel LH. Refer to IP-23, "Removal and Installation".
- 2. Remove sonar control unit bolt (2).
- 3. Disconnect harness connector from the sonar control unit, then remove sonar control unit (1).



## **INSTALLATION**

Installation is in the reverse order of removal.

# SONAR SENSOR

## Removal and Installation

#### INFOID:0000000008297251

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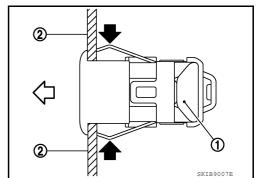
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#### **REAR SONAR SENSORS**

#### Removal

- 1. Remove rear bumper fascia assembly. Refer to EXT-20, "Removal and Installation".
- 2. Press sonar sensor spring ( ).
- Remove the sonar sensor (1) from rear bumper (2) as shown
- 4. Disconnect the harness connector from sonar sensor (1) and remove.



#### Installation

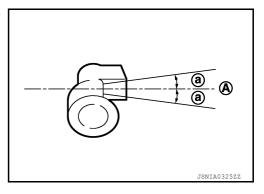
Installation is in the reverse order of removal.

#### **CAUTION:**

The connector direction is within ±10° from the horizontal position when assembling the bumper.

(A) : Horizontal position

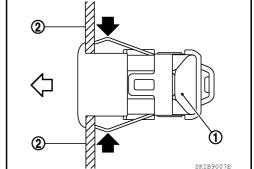
(a) : 10°



## FRONT SONAR SENSORS

### Removal

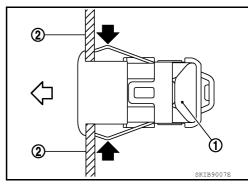
- 1. Remove front bumper fascia. Refer to EXT-17, "Removal and Installation".
- 2. Press sonar sensor spring ( ).
- Remove the sonar sensor (1) from front bumper (2) as shown (<□).
- 4. Disconnect harness connector from sonar sensor (1) and remove.



### Installation

Installation is in the reverse order of removal.

## **CAUTION:**



## **SONAR SENSOR**

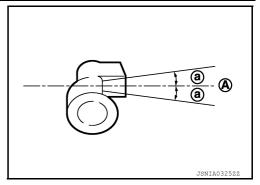
< REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

The connector direction is within  $\pm 10^{\circ}$  from the horizontal position when assembling the bumper.

(A) : Horizontal position

(a) : 10°



## [BOSE AUDIO W/O SURROUND SOUND]

# **BUZZER**

# Removal and Installation

INFOID:0000000008297252

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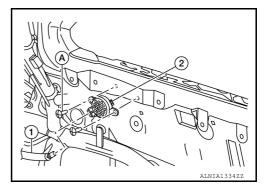
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## **REMOVAL**

- 1. Remove luggage side lower finisher (RH). Refer to <a href="INT-29">INT-29</a>, "LUGGAGE SIDE LOWER FINISHER: Removal and Installation".
- 2. Disconnect harness connector (1) from the buzzer.
- 3. Remove buzzer screws (A), then remove buzzer (2).



## **INSTLLATION**

Installation is in the reverse order of removal.

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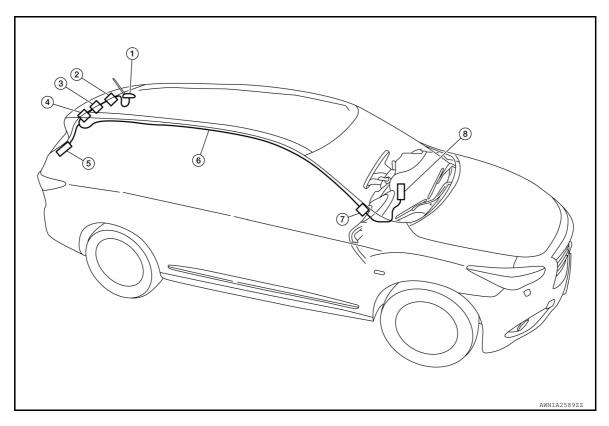
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# **AUDIO ANTENNA**

# **Location of Antennas**

INFOID:0000000008486420



- Antenna base (satellite antenna and antenna amp)
- 4. M503, M504
- 7. M95, M138, M500, M509

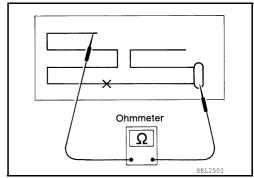
- 2. M502
- 5. M505
- 8. AV control unit M133, M143
- 3. M501
- 6. Antenna Feeder

# Window Antenna Repair

## INFOID:0000000008486421

# **ELEMENT CHECK**

1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.

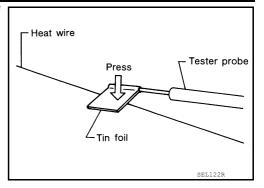


## **AUDIO ANTENNA**

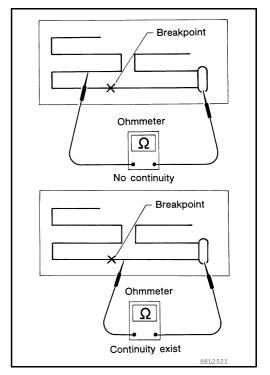
## < REMOVAL AND INSTALLATION >

## [BOSE AUDIO W/O SURROUND SOUND]

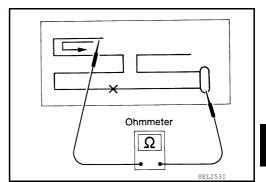
 When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



2. If an element is broken, no continuity will exist.



3. To locate a break, move probe along element. Tester indication will change abruptly when probe passes the broken point.



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## **GPS ANTENNA**

## [BOSE AUDIO W/O SURROUND SOUND]

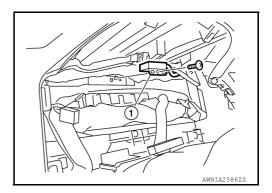
# **GPS ANTENNA**

# Removal and Installation

INFOID:0000000008297253

## **REMOVAL**

- 1. Remove combination meter. Refer to IP-15, "Removal and Installation".
- 2. Disconnect harness connector from AV control unit.
- 3. Remove feeder clips.
- 4. Remove GPS antenna screws, then remove GPS antenna (1).



#### **INSTALLATION**

Installation is in the reverse order of removal.

## **SATELLITE RADIO ANTENNA**

< REMOVAL AND INSTALLATION >

[BOSE AUDIO W/O SURROUND SOUND]

# SATELLITE RADIO ANTENNA

# Removal and Installation

INFOID:0000000008360066

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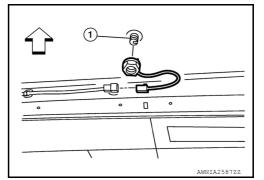
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### **REMOVAL**

- 1. Pull headlining assembly (rear). Obtain a service area. Refer to INT-25, "Removal and Installation".
- 2. Disconnect harness connector from antenna feeder.
- 3. Remove nut (1) then remove satellite radio antenna and two connectors shown in art cover from the vehicle as a unit.

  <□: Front



#### **INSTALLATION**

Installation is in the reverse order of removal.

#### **CAUTION:**

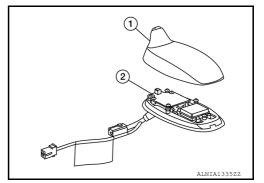
If the satellite radio antenna nut is not tightened to the specified torque, lower sensitivity of the antenna may be experienced. On the other hand, if the nut is tightened tighter than the specified torque, this will deform the roof panel.

# Disassembly and Assembly

#### INFOID:0000000008360067

#### DISASSEMBLY

Insert a suitable tool into gaps between satellite radio antenna (1) and the cover (2), and remove the cover (2) from satellite radio antenna (1).



## **ASSEMBLY**

Assembly is in the reverse order of disassembly.

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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 dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. Information necessary to service the system safely is included in the SR and SB section 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 SR section.
- 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 Airbag Diagnosis Sensor Unit or other Airbag 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.

Cautions in Removing Battery Terminal and AV Control Unit (Models with AV Control Unit)

#### **CAUTION:**

Remove battery terminal and AV control unit 30 seconds or more after turning the ignition switch OFF. NOTE:

After the ignition switch is turned OFF, the AV control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

# Precaution for Trouble Diagnosis

INFOID:0000000007913423

#### 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:0000000007913424

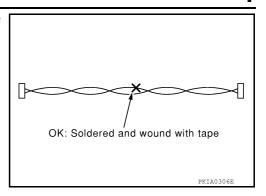
AV COMMUNICATION SYSTEM

## **PRECAUTIONS**

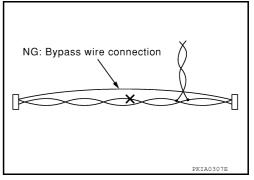
#### < PRECAUTION >

## [BOSE AUDIO WITH SURROUND SOUND]

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



 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.)



#### Precaution for Work

• When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.

• When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.

Protect the removed parts with a shop cloth and prevent them from being dropped.

- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
- Water soluble dirt: Dip a soft cloth into lukewarm water and wring the water out of the cloth to wipe the dirty area.
  - Then rub with a soft and dry cloth.
- Oily dirt: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
  - Then dip a cloth into fresh water and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

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## **PREPARATION**

# [BOSE AUDIO WITH SURROUND SOUND]

# **PREPARATION**

# **PREPARATION**

Special Service Tool

INFOID:0000000008360017

Tool number (Kent-Moore No.) Tool name		Description
(J-46534) Trim tool set	AWJIA0483ZZ	Removing trim components

# **Commercial Service Tools**

INFOID:0000000008360018

(Kent-Moore No.) Tool name		Description
( — ) Power tools		Loosening nuts, screws and bolts
	PIIB1407E	

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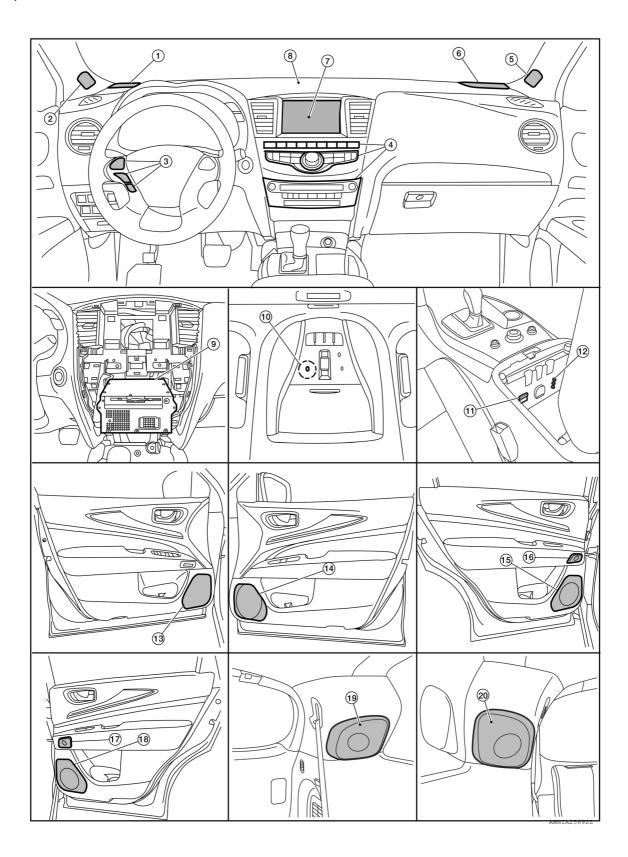
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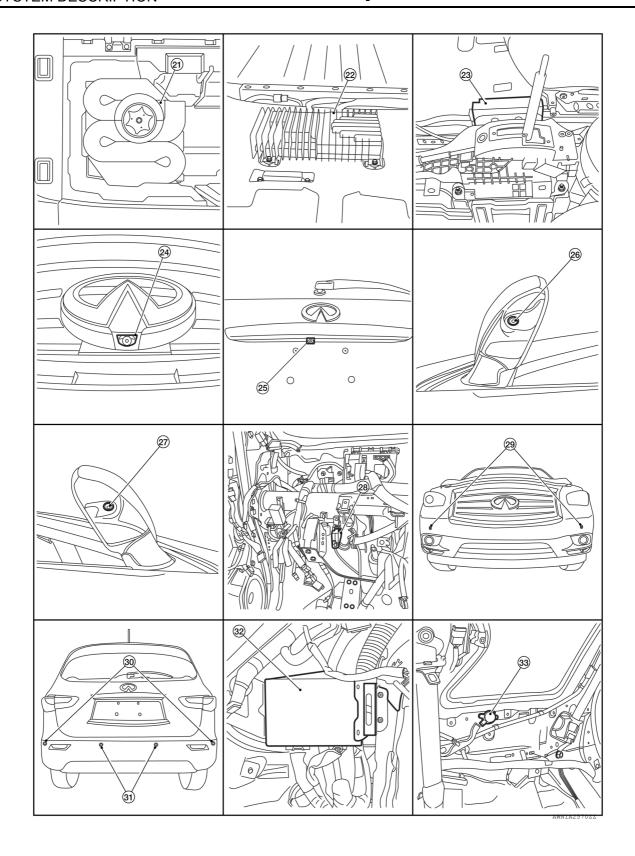
# SYSTEM DESCRIPTION

# **COMPONENT PARTS**

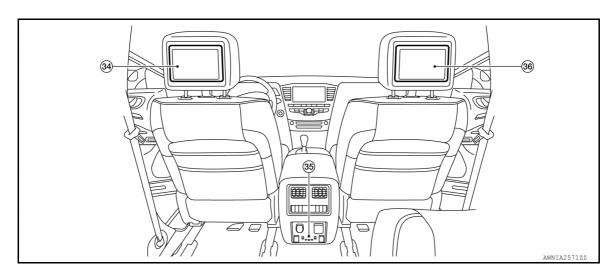
**Component Parts Location** 



2013 Infiniti JX



# [BOSE AUDIO WITH SURROUND SOUND]



- 1. Instrument panel tweeter LH
- 4. A/C and AV switch assembly
- 7. Display unit
- 10. Microphone
- 13. Front door speaker LH
- 16. Rear door tweeter LH
- 19. Rear side speaker LH
- 22. Bose apeaker amp.
- 25. Rear camera
- 28. Sonar control unit
- 31. Rear sonar sensors inner
- 34. Headrest display unit (driver seat)
- Component Description

- 2. Front tweeter LH
- 5. Front tweeter RH
- 8. Center speaker
- 11. USB interface
- 14. Front door speaker RH
- 17. Rear door tweeter RH
- 20. Rear side speaker RH
- 23. Around view monitor control unit
- 26. Door mirror LH (side camera)
- 29. Front sonar sensors outer
- 32. Video distributor
- 35. Rear auxiliary input jacks

- 3. Steering switch
- 6. Instrument panel tweeter RH
- AV control unit (view with center stack removed)
- 12. Front auxiliary input jacks
- 15. Rear door speaker LH
- 18. Rear door speaker RH
- Subwoofer
- 24. Front camera
- 27. Door mirror RH (side camera)
- 30. Rear sonar sensors outer
- 33. Sonar buzzer
- 36. Headrest display unit (passenger seat)

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Revision: March 2012 AV-423 2013 Infiniti JX

# **COMPONENT PARTS**

# [BOSE AUDIO WITH SURROUND SOUND]

Part name	Description	
AV control unit	<ul> <li>Master unit of MULTI AV system.</li> <li>AV control unit includes audio, hands-free phone, navigation, USB connection, DVD play and vehicle status functions.</li> <li>Integrates hard disk drive (HDD) allowing map data and music data to be stored.</li> <li>Connected to MULTI AV system control units via AV communication.</li> <li>Connected to other vehicle control units via CAN communication to obtain necessary information for vehicle function.</li> <li>Receives steering angle signal via CAN communication from steering angle sensor and controls an expected course line during around view monitor operation.</li> <li>Inputs signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>RGB digital image signal and composite image signal are output to front display unit.</li> <li>Transmits image and sound output to video distributor and inputs image switch signal from headrest display units via AV communication.</li> <li>Receives an intelligent key identification signal necessary for intelligent key interlocking function via hard wire from BCM.</li> <li>Transmits Amp. ON signal and mode change signal to BOSE amp.</li> <li>Update of map data is performed using DVD-ROM.</li> </ul>	
Display unit	<ul> <li>Display image is controlled by AV control unit via serial communication.</li> <li>Receives power from AV control unit.</li> <li>RGB and RGB digital image signals are input from AV control unit.</li> <li>Composite image signals are input from AV control unit.</li> <li>Synchronizing signals are output to AV control unit.</li> <li>Camera image signals are input from around view monitor control unit via video output signal.</li> <li>Touch panel functions can be operated by touching display directly.</li> </ul>	
BOSE speaker amp.	Receives sound signals from AV control unit and outputs sound signals to each speaker.	
Instrument panel tweeter	Outputs high range sound signals from BOSE speaker amp.	
Center speaker	Outputs mid and high range sound signals from BOSE speaker amp.	
Front tweeter	Outputs high range sound signals from BOSE speaker amp.	
Front door speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.	
Rear door tweeter	Outputs high range sound signals from BOSE speaker amp.	
Rear door speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.	
Rear side speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.	
Subwoofer	Outputs low range sound signals from BOSE speaker amp.	
A/C and AV switch assembly	<ul> <li>Operation panels are equipped with switches for audio and air conditioner operations.</li> <li>Operation signal is transmitted via AV communication to AV control unit and around view monitor.</li> <li>Disk eject operation signal is performed via hardwire.</li> </ul>	
Steering switch	<ul> <li>Operations for audio, hands-free phone and voice recognition are possible.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>	
Steering angle sensor	Connected to AV control unit via CAN communication and transmits steering angle sensor signal.	
Video distributor	<ul> <li>Receives image and sound signals from AV control unit and transmits them to headrest display units.</li> <li>Receives image and sound signals from rear auxiliary input jacks and transmits them to headrest display units.</li> <li>Transmits image and sound signals to headrest display unit and receives image switch signal from headrest display units.</li> </ul>	

## **COMPONENT PARTS**

## < SYSTEM DESCRIPTION >

# [BOSE AUDIO WITH SURROUND SOUND]

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Part name	Description	
Headrest display units	<ul> <li>Composite image signals are input from video distributor.</li> <li>Receives DVD/AUX/USB sound signals from video distributor and transmits them to headphones.</li> <li>Transmits image switch signal to video distributor according to remote control operation.</li> <li>Transmits image switch signal to AV control unit via AV communication according to remote control operation.</li> </ul>	
Front auxiliary input jacks	Transmits image and sound signals to AV control unit.	
Rear auxiliary input jacks	Transmits image and sound signals to video distributor and headrest display units.	
Around view monitor control unit	<ul> <li>Supplies power to front, rear and side cameras.</li> <li>Superimposes images from each camera and outputs them to display unit.</li> <li>Superimposes guiding line, predicted course line and sonar indicator to camera image that outputs to display unit.</li> <li>Performs reception/transmission of communication signals with cameras.</li> <li>Transmits sonar operation signal from sonar control unit via CAN communication.</li> <li>Receives sonar information from sonar control unit via CAN communication.</li> <li>Transmits data received/transmitted from sonar control unit to AV control unit via CAN communication.</li> </ul>	
Front camera	<ul> <li>Inputs power supply from around view monitor control unit.</li> <li>Outputs image of vehicle front to around view monitor control unit.</li> <li>Performs reception/transmission of communication signal with around view monitor control unit.</li> </ul>	
Rear camera	<ul> <li>Inputs power supply from around view monitor control unit.</li> <li>Outputs image of vehicle rear to around view monitor control unit.</li> <li>Performs reception/transmission of communication signal with around view monitor control unit.</li> </ul>	
Side camera LH	Inputs power supply from around view monitor control unit.     Outputs image of vehicle LH side to around view monitor control unit.     Performs reception/transmission of communication signal with around view monitor control unit.	
Side camera RH	<ul> <li>Inputs power supply from around view monitor control unit.</li> <li>Outputs image of vehicle RH side to around view monitor control unit.</li> <li>Performs reception/transmission of communication signal with around view monitor control unit.</li> </ul>	
Sonar control unit	<ul> <li>Connected to around view monitor control unit via CAN communication.</li> <li>Receives sonar operation signal from around view monitor control unit via CAN communication.</li> <li>Transmits sonar detection status to around view monitor control unit via CAN communication.</li> <li>Judges warning level according to signals from front and rear sensors.</li> </ul>	
Front sensors	Detects front obstacle distance and transmits signal to sonar control unit.	
Rear sensors	Detects rear obstacle distance and transmits signal to sonar control unit.	
Microphone	<ul> <li>Used for hands-free phone, voice recognition and INFINITI CONNECTIONS operations.</li> <li>Microphone signal is transmitted to telematics control unit (TCU).</li> <li>Power (Microphone VCC) is supplied from TCU.</li> </ul>	
Telematics control unit (TCU)	<ul> <li>Connected to the AV control unit via a USB harness for sound signal input/output and USB communication.</li> <li>Data is sent to and received from the INFNITI CONNECTIONS data center via the TEL antenna.</li> <li>Inputs TEL voice signal from TEL antenna and outputs it to AV control unit.</li> </ul>	
TEL antenna	Receives TEL voice signals and outputs them to TCU.     Transmits TEL voice signals from TCU.	
GPS antenna	GPS signal is received and transmitted to AV control unit.	
Antenna amp.	<ul> <li>Radio signal received by window antenna is amplified and transmitted to AV control unit.</li> <li>Power (antenna amp. ON signal) is supplied from AV control unit.</li> </ul>	

# **COMPONENT PARTS**

## < SYSTEM DESCRIPTION >

# [BOSE AUDIO WITH SURROUND SOUND]

Part name	Description
Satellite radio antenna	Satellite radio signal is received and transmitted to AV control unit.
USB connector	USB sound and data input signals are transmitted to AV control unit.

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# **SYSTEM MULTI AV SYSTEM**

MULTI AV SYSTEM: System Diagram

INFOID:0000000008376869 Window antenna ANTENNA Antenna amp on signal ANTENNA AM/FM signal AMP. GPS Vehicle speed signal <u>ANTENN</u>A parking brake signal reverse signal Sound Headphone sound signal signal **SPEAKERS** Composite image signal Sound **HEADREST BOSE** signal Image switch signal Sound **SPEAKER** DISPLAY UNIT Aux image (DRIVER) signal AMP. **SUBWOOFER** Aux image signal Aux sound signal REAR **VIDEO** AUXILLAR) Aux sound DISTRIBUTOR INPUT USB **USB** harness signal Aux sound INTERFACE JACKS signal Aux image signal **HEADREST** Steering switch Image switch signal DISPLAY UNIT (PASSENGER) STEERING WHEEL signal Composite image signal **AUDIO CONTROL SWITCHES** Headphone sound signal Sound signal Aux sound input Composite FRONT AUXILLARY Video image signal INPUT JACKS input CONTROL UNIT AV communication A/C AND AV SWITCH ASSEMBLY MICROPHONE MIC power TEL voice signal Mirror fold signal DOOR USB TEL MIRROR LH ommunication antenna TCU SV2 video signal SIDE CAMERA SV2 serial signal LED A E call switch DOOR MIRROR RH **TELEMATICS SWITCH** AROUND SV1 video signal VIEW SIDE MONITOR SV1 serial signal CAMERA CONTROL UNIT FV video signal FRONT VIEW CAMERA FV serial signal REAR Sensor signal SONAR Video output signal RV video signal **SENSORS** REAR VIEW **CAMERA** RV serial signal SONAR CONTROL UNIT Sensor signal FRONT SONAR Communication signal DISPLAY SENSORS (CONT-DISP) UNIT Communication signal (DISP-CONT) CAN communication AWNTA2566GB

MULTI AV SYSTEM: System Description

INFOID:0000000008376870

**AUDIO SYSTEM** 

### **SYSTEM**

#### < SYSTEM DESCRIPTION >

#### [BOSE AUDIO WITH SURROUND SOUND]

The audio system consists of the following components

- · AV control unit
- · A/C and AV switch assembly
- Display unit
- · Steering wheel audio control switches
- · BOSE speaker amp.
- Center speaker
- · Instrument panel tweeters
- · Front tweeters
- Front door speakers
- · Rear door speakers
- · Rear side speakers
- Subwoofer
- Window antenna

When the audio system is on, radio signals are received by the window antenna. The AV control unit then sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the speakers, tweeters and subwoofer.

Refer to Owner's Manual for audio system operating instructions.

## SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components

- Satellite antenna
- AV control unit

When the satellite radio system is on, radio signals are supplied to the AV control unit from the satellite antenna. The AV control unit then sends audio signals to the BOSE speaker amp.

Refer to Owner's Manual for satellite radio system operating instructions.

#### HANDS-FREE PHONE SYSTEM

#### **System Operation**

#### NOTE:

Cellular telephones must have their wireless connection set up (paired) before using the Bluetooth<sup>®</sup> telephone system.

The Bluetooth<sup>®</sup> telephone system allows users who have a Bluetooth<sup>®</sup> cellular telephone to make a wireless connection between their cellular telephone and the AV control unit. Hands-free cellular telephone calls can be sent and received. Some Bluetooth<sup>®</sup> cellular telephones may not be recognized by the AV control unit. When a cellular telephone or the AV control unit is replaced, the telephone must be paired with the AV control unit. Different cellular telephones may have different pairing procedures, refer to the cellular telephone operating manual.

Refer to the Owner's Manual for Bluetooth® telephone system operating instructions.

#### AV Control Unit

When the ignition switch is turned to ACC or ON, the AV control unit will power up. During power up, the AV control unit is initialized and performs various self-checks. Initialization may take up to 20 seconds. If a phone is present in the vehicle and paired with the AV control unit, Infiniti Voice Recognition will then become active. Bluetooth<sup>®</sup> telephone functions can be turned off using the Infiniti Voice Recognition system.

#### Steering Wheel Audio Control Switches

When buttons on the steering wheel audio control switch are pushed, the resistance in steering wheel audio control switch circuit changes, depending on which button is pushed. The AV control unit uses this signal to perform various functions while navigating through the voice recognition system.

The following functions can be performed using the steering wheel audio control switch:

- Initiate self-diagnosis of the Bluetooth® telephone system
- · Start a voice recognition session
- · Answer and end telephone calls
- · Adjust the volume of calls
- Récord memos

#### Microphone

The microphone is located in the roof console assembly. The microphone sends a signal to the Telematics Control Unit (TCU), which transmits the signal to the AV control unit via the USB communication circuits. The microphone can be actively tested during self-diagnosis.

## [BOSE AUDIO WITH SURROUND SOUND]

#### **NAVIGATION SYSTEM**

System Operation

#### NOTE:

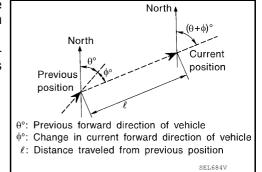
Refer to NAVI System Owner's Manual for system operation.

The navigation system periodically calculates the vehicle's current position according to the following three signals: Travel distance of the vehicle as determined by the vehicle speed sensor, turning angle of the vehicle as determined by the gyroscope (angular velocity sensor), and the direction of vehicle travel as 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 read from the map data, which is stored in the hard disk drive (HDD) (map-matching), and indicated on the screen with a current-location mark.

By comparing the vehicle position detection results found by the GPS and by map-matching, more accurate vehicle position data can be used.

The current vehicle position will be calculated by detecting the distance the vehicle moved from the previous calculation point and its direction.



#### **Travel Distance**

Travel distance calculations are based on the vehicle speed input signal. Therefore, the calculation may become incorrect as the tires wear down. To prevent this, an automatic distance fine adjustment function has been adopted.

#### Travel Direction

Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). As the gyroscope and GPS antenna have both merit and demerit, input signals from them 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.

Туре	Advantage	Disadvantage
Gyroscope (angular velocity sensor)	Can detect the vehicle's turning angle quite accurately.	Direction errors may accumulate when the vehicle is driven for long distances without stopping.
GPS antenna (GPS information)	Can detect the vehicle's travel direction (North/South/East/West).	Correct direction cannot be detected when the vehicle speed is low.

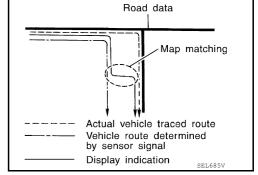
## Map-Matching

Map—matching is a function that repositions the vehicle on the road map when a new location is judged to be the most accurate. This is done by comparing the current vehicle position, calculated by the method described in the position detection principle, with the road map data around the vehicle, read from the map data stored on the HDD.

Therefore, the vehicle position may not be corrected after the vehicle is driven over a certain distance or time in which GPS information is hard to receive. In this case, the current-location mark on the display must be corrected manually.

### **CAUTION:**

The road map data is based on data stored on the HDD.



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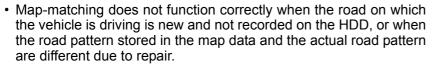
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#### [BOSE AUDIO WITH SURROUND SOUND]

 In map-matching, alternative routes to reach the destination will be shown and prioritized, after the road on which the vehicle is currently driven has been judged and the current-location mark has been repositioned.

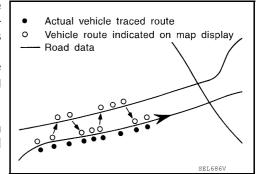
If there is an error in distance and/or direction, the alternative routes will be shown in different order of priority, and the wrong road can be avoided.

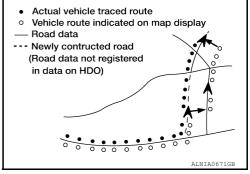
If two roads are running in parallel, they are of the same priority. Therefore, the current-location mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.



When driving on a road not present in the map, the map-matching function may find another road and position the current-location mark on it. Then, when the correct road is detected, the current-location mark may leap to it.

Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the HDD is limited. Therefore, when there is an excessive gap between the current vehicle position and the position on the map, correction by map-matching is not possible.



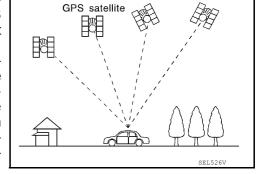


#### GPS (Global Positioning System)

GPS (Global Positioning System) has been developed and controlled by the US Department of Defense. The system utilizes GPS satellite (NAVSTAR), sending out radio waves while flying on an orbit around the earth at the height of approx. 21,000 km (13,000 mi).

The GPS receiver calculates the vehicle's position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves received from four or more GPS satellites (three-dimensional positioning). If radio waves were received only from three GPS satellites, the GPS receiver calculates the vehicle's position in two dimensions (latitude/longitude), utilizing the altitude data calculated previously by using radio waves from four or more GPS satellites (two-dimensional positioning).

Accuracy of the GPS will deteriorate under the following conditions.



- In two-dimensional positioning, the GPS accuracy will deteriorate when the altitude of the vehicle position changes.
- There may be an error of approximately 10 m (30 ft.) in position detected by three-dimensional positioning, which is more accurate than two-dimensional positioning. The accuracy can be even lower depending on the arrangement of the GPS satellites utilized for the positioning.
- Position detection is not possible when the vehicle is in an area where radio waves from the GPS satellite do
  not reach, such as in a tunnel, parking lot in a building, and under an elevated highway. Radio waves from
  the GPS satellites may not be received when some object is located over the GPS antenna.
- Position correction by GPS is not available while the vehicle is stopped.

#### SPEED SENSITIVE VOLUME SYSTEM

Volume level of this system goes up and down automatically in proportion to the vehicle speed. The control level can be selected by the customer. Refer to Owner's Manual for operating instructions.

### FRONT AUXILIARY INPUT JACKS

- Image and sound can be output from an external device connected to the front auxiliary input jacks.
- AUX image signals are transmitted to each unit as follows:
- To the display unit via AV control unit.
- To the headrest display units via AV control unit and video distributor.
- AUX sound signals are transmitted to each unit as follows:
- To each speaker via AV control unit and BOSE speaker amp.

### SYSTEM

## < SYSTEM DESCRIPTION >

#### [BOSE AUDIO WITH SURROUND SOUND]

- To video distributor via AV control unit.
- · Headphone sound signals are transmitted via infrared communication between headrest display units and headphones.

## REAR ENTERTAINMENT SYSTEM

- Image and sound (DVD, USB memory-stored video data and front auxiliary input) played by AV control unit can be enjoyed in rear seat using headrest display units and headphones.
- · Image and sound of an external device connected to rear auxiliary input jacks for rear seat can be enjoyed in rear seat using headrest display units and headphones. Also, image and sound from rear auxiliary input jacks can be selected and played individually on each side as well as on both sides.
- Headrest display units have a self-diagnosis function. Refer to AV-455, "On Board Diagnosis Function".

Image signal and sound signal from rear auxiliary input jacks are not transmitted to front display unit and each speaker.

#### Operation Signal

- The rear entertainment system can be controlled by the rear seat remote control.
- The rear seat remote control transmits the operation signal to the remote control receiver built into headrest display units, which then transmits it to the AV control unit and video distributor.

#### Headphone Sound

- Sound signals output from AV control unit or rear auxiliary input jacks are transmitted to headrest display units via video distributor.
- Headphone sound signals are transmitted via infrared communication between headrest display units and headphones.

#### **Headrest Display Units**

- Composite image signals from AV control unit are transmitted to headrest display unit via video distributor.
- Image switch signals from headrest display units are transmitted to AV control unit and video distributor, according to rear seat remote control operation.
- When image switch signal is transmitted from headrest display unit to AV control unit via AV communication, image played by AV control unit (DVD, USB memory-stored video data, and front auxiliary input) switches.
- When image switch signal is transmitted from headrest display unit to video distributor, image output from AV control unit and image output from rear auxiliary input jacks switch.

#### AROUND VIEW MONITOR SYSTEM

- 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
- The sonar indicator is viewed on display (superimposed on the camera image) in combination with the camera assistance sonar system to warn of the approach of an obstacle.
- In front view and rear view, the vehicle width, distance lines and predictive 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. The vehicle icon and sonar indicator 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 displays the sonar indicator on the Birds-Eye view, Front-Side view, Rear wide view.
- AV control unit renders the Change View switch, view icon, warning message on display.

## Operation Description

#### NOTE:

The first, second, and third camera image displayed when switched to the camera image display depends on the settings of Camera View Priority.

- Around view monitor operates by pressing the CAMERA switch on the A/C and AV switch assembly and shifting the selector lever to the R position.
- When the selector lever is in any position other than R, 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 R position.

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**AV-431** Revision: March 2012 2013 Infiniti JX

- The around view monitor's, Birds-Eye view, Front-side view or rear wide view (rear only) can be switched by pressing the CAMERA switch.
- The around view monitor is cancelled 3 minutes after pressing the CAMERA switch, and the display returns to the previous screen.
- ON/OFF setting of sonar indicator display on the Front-Side view screen can be performed.
- 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.
- The sonar operates only when the camera screen is displayed.

#### SONAR SYSTEM

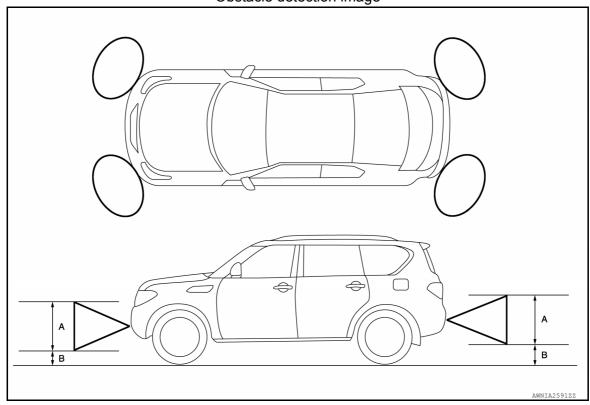
#### System Operation Description

- Around view monitor control unit transmits the sonar operation signal via CAN communication to sonar control unit to control the operation of sonar indicator and sonar buzzer.
- Sonar control unit transmits the detection signal and detection distance signal via CAN communication to around view monitor control unit. Around view monitor control unit operates the applicable sonar indicator.
- When receiving a sonar operation signal from the around view monitor control unit, the sonar control unit converts the signal into a detection distance signal and transmits it to the AV control unit via CAN communication. When receiving the detection signal, the AV control unit activates the speakers via the BOSE speaker amp.
- The sonar control unit is capable of self diagnosis. It can detect sensor malfunction or sensor harness open circuits. It transmits the diagnosis results to around view monitor control unit and always displays the sonar indicator in red to inform the vehicle operator.

#### 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)

### **SYSTEM**

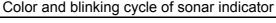
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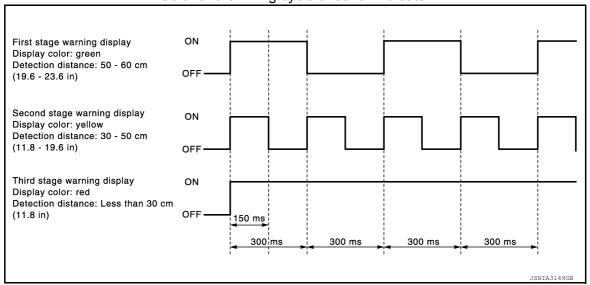
#### [BOSE AUDIO WITH SURROUND SOUND]

Detection distance				
Warning item	Sensitivity level 1 (Fastest warning)	Sensitivity level 2 (Faster warning)	Sensitivity level 3 (Default value)	Sensitivity level 4 (Slower warning)
First stage 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)
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.





## Sonar Buzzer Operation

- Each sonar sensor transmits a sensor signal to the sonar control unit when detecting an obstacle.
- The sonar control unit converts a signal received from each sonar sensor into distance and transmits detection distance signal to the AV control unit via AV communication.
- The AV control unit transmits a buzzer signal to the BOSE amp. corresponding to each sonar sensor based on the received signal.
- When receiving a buzzer signal, the BOSE amp. transmits the buzzer signal to the each speaker. When each speaker receives a buzzer signal, a buzzer sounds.
- When the front corner sensor detects an obstacle, a buzzer is heard from the speakers on the front side.
- When the rear corner sensor detects an obstacle, a buzzer is heard from the speakers on the rear side.
- It changes the buzzer cycle in 3 stages according to the detection distance.

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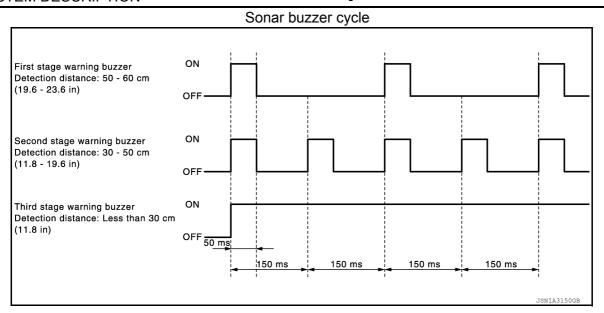
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#### VEHICLE INFORMATION FUNCTION

- Status of audio, climate control system, fuel economy, maintenance and navigation are displayed.
- AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM and combination meter.
- AV control unit is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.

#### INTELLIGENT KEY INTERLOCKING FUNCTION

The AV control unit recognizes a door-unlocked state of Intelligent Key according to an Intelligent Key recognition signal transmitted from BCM and saves two different types of audio settings and navigation settings.

Settings saved in the AV control unit

- Map display
- · Route guidance
- Locator
- · Route search
- · Sound quality
- · Radio preset
- Language

< SYSTEM DESCRIPTION >

[BOSE AUDIO WITH SURROUND SOUND]

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# DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description INFOID:0000000008376871

The AV control unit on board diagnosis includes the following functions:

 A/C and AV switch assembly self diagnosis that checks the ON/OFF operation (continuity) of each switch in the A/C and AV switch assembly.

#### NOTE:

The hazard switch and disk eject switch are not included in this operation check.

• AV control unit on board diagnosis performs the following functions listed in the table below:

	Mode		Description	
Self Diagnosis		3	<ul> <li>AV control unit diagnosis.</li> <li>Diagnoses the connections across system components, between AV control unit and GPS antenna.</li> </ul>	
	Display Diagnosis		The following check functions are available: color tone check by color bar display and white 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, reverse, side view switch and room lamp.	
	Speaker Test		The connection of a speaker can be confirmed by test tone.	
	Naciantian	Steering Angle Ad- justment	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.	
	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.	
Confirmation/	Synchronizer FES Clock		-	
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/Infiniti Connection		<ul> <li>The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.</li> <li>Diagnosis of the Infiniti Connection system can be performed.</li> </ul>	
		XM NaviTrffic	Change Channel	
		XM NavWeather	Any necessary channels required to receive traffic information from the satellite radio system can be set.	
	XM	XM CGS	Change Application ID	
		Diag	<ul> <li>Any application ID'-s required to receive traffic information from the satellite radio system can be set.</li> </ul>	
	Delete Unit Connection Log		Erase the connection history of unit and error history.	
	Initialize Settings		Initializes the AV control unit memory.	
	Version Information		Version information of the AV control unit is displayed.	

Perform CONSULT diagnosis if the AV control unit on board diagnosis does not start, the screen does not display anything, or the A/C and AV switch assembly self diagnosis does not function.

# On Board Diagnosis Function

INFOID:0000000008376872

#### METHOD OF STARTING

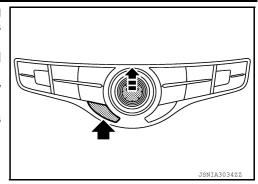
A/C and AV Switch Assembly Self Diagnosis

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#### < SYSTEM DESCRIPTION >

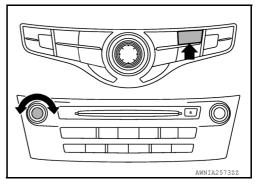
### [BOSE AUDIO WITH SURROUND SOUND]

- Press the BACK and UP 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 switches illuminate, and the self-diagnosis mode begins.
- The ON position continuity of each switch can be checked by pressing the switch. The buzzer sounds if continuity is present.
- The self diagnosis mode is canceled when the ignition switch is turned OFF.

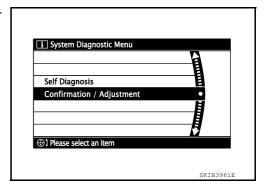


## AV Control Unit Self Diagnosis

- 1. Turn the ignition ON.
- 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 selfdiagnosis mode begins, a short beep will be heard. Shifting from current screen to previous screen is performed by pressing BACK button.



4. The trouble diagnosis initial screen is displayed, and Self Diagnosis or Confirmation/Adjustment can be selected.



#### SELF DIAGNOSIS MODE

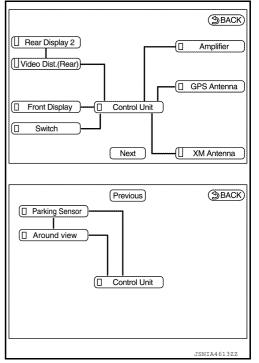
AV Control Unit Self Diagnosis

- Select Self Diagnosis.
- 2. Self diagnosis screen is displayed. The bar graph visible in center of screen indicates progress of self diagnosis.

### < SYSTEM DESCRIPTION >

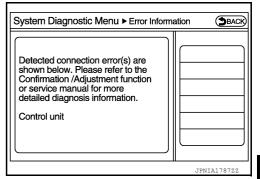
## [BOSE AUDIO WITH SURROUND SOUND]

 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	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction <sup>1</sup>	Red	Green

- 1: Control Unit (AV control unit) is displayed in red.
- Replace AV control unit if Self Diagnosis did not run because control unit malfunction is indicated. The symptom is AV control
  unit internal error. Refer to AV-668, "Removal and Installation AV Control Unit".
- 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.
- Comments of self diagnosis results can be viewed in the diagnosis result screen.



AV Control Unit Self Diagnosis Results

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Screen switch	Description	Possible cause
Control Unit	Malfunction is detected in AV control unit power supply and ground circuits.	AV control unit power supply or ground circuits. Refer to AV-613, "AV CONTROL UNIT: Diagnosis Procedure". If no malfunction is detected in AV control unit power supply and ground circuits, replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".
Amplifier	<ul> <li>When either one of the following items are detected:</li> <li>sound signal circuits between BOSE amp. and each speaker are malfunctioning.</li> <li>BOSE amp. malfunction is detected.</li> </ul>	Malfunctioning speaker circuits     Replace BOSE amp. Refer to AV-674.     "Removal and Installation".

A Connecting Cable Between Units Is Displayed In Yellow				
Area with yellow connection lines	Description	Possible cause		
Control unit ⇔ Front Display	Serial communication circuits between AV control unit and front display unit are malfunctioning.	Serial communication circuits between AV control unit and front display unit.		
Control unit ⇔ GPS Antenna	GPS antenna connection malfunctions detected.	Check the connection of the GPS antenna connector.		
Control unit ⇔ XM Antenna	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection		
Control unit ⇔ Amplifier	When either one of the following items are detected:  BOSE amp. power supply and ground circuits are malfunctioning.  AV communication circuits between headrest display unit LH and BOSE amp. are malfunctioning.	BOSE amp. power supply and ground circuits.     Refer to AV-614, "BOSE AMP.: Diagnosis Procedure".     AV communication circuits between headrest display unit LH and BOSE amp.		
Control unit ⇔ Around view Around view ⇔ Parking Sensor	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.	<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>		
Control unit ⇔ Parking Sensor Around view ⇔ Parking Sensor	When either one of the following items are detected:              • sonar control unit power supply and ground circuits are malfunctioning.             • AV communication circuits between AV control unit and sonar control unit are malfunctioning.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and sonar control unit.</li> </ul>		

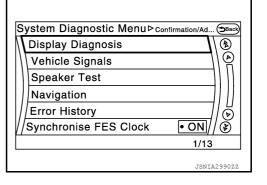
## < SYSTEM DESCRIPTION >

## [BOSE AUDIO WITH SURROUND SOUND]

A Connecting Cable Between Units Is Displayed In Yellow				
Area with yellow connection lines	Description	Possible cause		
Control unit ⇔ Video Dist.(Rear) Video Dist.(Rear) ⇔ Rear display 2	<ul> <li>When either one of the following items are detected:</li> <li>video distributor power supply and ground circuits are malfunctioning.</li> <li>headrest display unit LH power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between AV control unit and headrest display unit LH are malfunctioning.</li> <li>location recognition signal circuit between headrest display unit LH and ground is malfunctioning.</li> </ul>	<ul> <li>Video distributor power supply and ground circuits.</li> <li>Headrest display unit LH power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and headrest display unit LH.</li> <li>Location recognition signal circuit between headrest display unit LH and ground.</li> </ul>		
Video Dist.(Rear) ⇔ Rear display 2	<ul> <li>When either one of the following items are detected:</li> <li>headrest display unit RH power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between headrest display unit LH and headrest display unit RH are malfunctioning.</li> <li>location recognition signal circuit between headrest display unit RH and ground is malfunctioning.</li> </ul>	<ul> <li>Headrest display unit RH power supply and ground circuits.</li> <li>AV communication circuits between headrest display unit LH and headrest display unit RH.</li> <li>Location recognition signal circuit between headrest display unit RH and ground.</li> </ul>		

## AV Control Unit Confirmation/Adjustment

- Select Confirmation/Adjustment.
- 2. Select each switch on the Confirmation/Adjustment screen to display the relevant trouble diagnosis screen. Press the BACK switch to return to the initial Confirmation/Adjustment screen.



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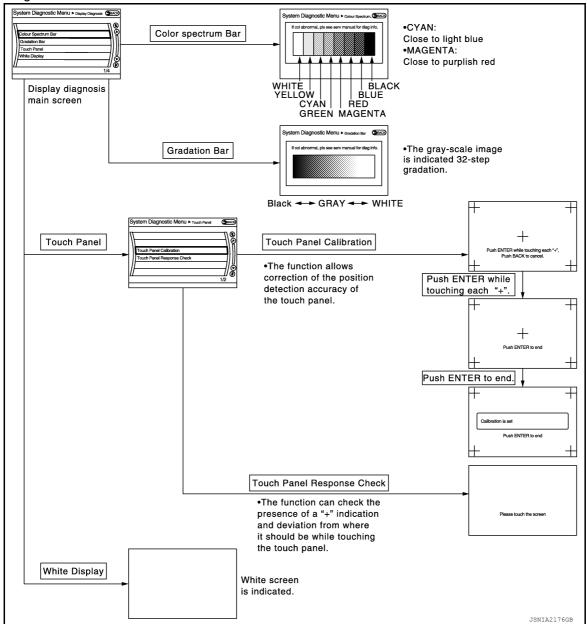
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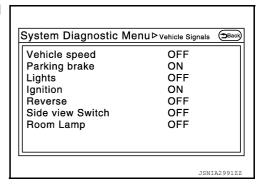
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#### Display Diagnosis



#### Vehicle Signals

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

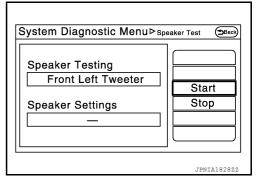


Speaker Test

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## [BOSE AUDIO WITH SURROUND SOUND]

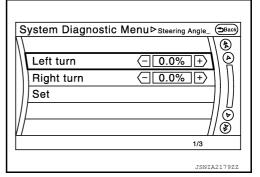
Select Speaker Test to display the Speaker Diagnosis screen. Press Start to generate a test tone in a speaker. Press Start again to generate a test tone in the next speaker. Press End to stop the test tones.



#### Navigation

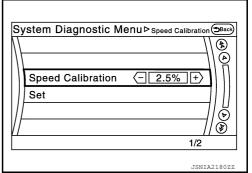
#### STEERING ANGLE ADJUSTMENT

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



#### SPEED CALIBRATION

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 chain fitted on tires.



#### **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 situation.

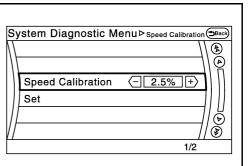
The error record displays the time and place of the most recent occurrence of that error. However, take note of the following points.

- If there is a malfunction with the GPS antenna circuit board in the AV control unit, the correct date and time of occurrence may not be able to 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 ignition switch is turned ON. The counter increases by 1 if the condition is normal at a next ignition 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.

Count up method B



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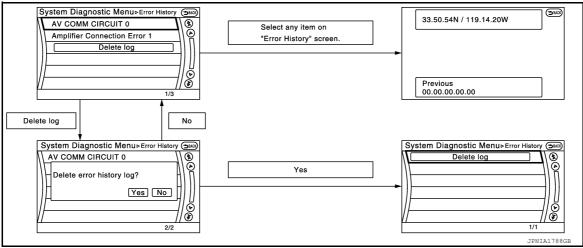
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## [BOSE AUDIO WITH SURROUND SOUND]

- The counter increases by 1 if an error occurs when ignition switch is ON. The counter will not decrease even if the condition is normal at the next ignition 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.

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)	
Count up method B	Other than the above	



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	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, and then repair the malfunctioning parts according to the diagnosis results.  Refer to AV-448, "CONSULT Function".
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		Replace the AV control unit if the malfunc-
Connection Of Gyro	AV control unit malfunction is detected.	tion occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".
Connection of G Sensor		
CAN Controller Memory Error		
Bluetooth <sup>®</sup> Module Connection Error		
Sub CPU Connection Error		
Audio connection error		
DSP Connection Error		If a disc can be played, then there is a
DSP Communication Error	AV control unit malfunction is detected.	<ul> <li>possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> <li>Refer to AV-668, "Removal and Installation - AV Control Unit".</li> </ul>

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# [BOSE AUDIO WITH SURROUND SOUND]

Error item	Description	Possible malfunction factor/Action to take
HDD Connection Error		If the music box function has no malfunc-
HDD Read Error		tions, then there is a possibility of the detection of a temporary malfunction.
HDD Write Error	AV control unit malfunction is detected.	<ul> <li>Replace the AV control unit if the mal-</li> </ul>
HDD Communication Error		function occurs constantly.  Refer to AV-668, "Removal and Installa-
HDD Access Error		tion - AV Control Unit".
GPS Communication Error		An intermittent error caused by strong ra-
GPS ROM Error		dio interference may be detected unless any symptom (GPS reception error, etc.)
GPS RAM Error	GPS malfunction is detected.	occurs.
GPS RTC Error		Replace the AV control unit if the mal- function occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".
Unfinished configuration	The writing of configuration data is incomplete.	Write configuration data with CONSULT.
USB Controller Communication Error	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DVD Mechanism Communication Error	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> <li>Refer to AV-668, "Removal and Installation - AV Control Unit".</li> </ul>
Steer. Angle Sensor Calibration	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.  Refer to AV-448, "CONSULT Function".
Amplifier Temperature Error	BOSE amp. malfunction is detected.	Replace the BOSE amp. Refer to AV-674, "Removal and Installation".
Front Display Connection Error	When either one of the following items are detected:  front display unit power supply and ground circuits are malfunctioning.  Serial communication circuits between AV control unit and front display unit are malfunctioning.	<ul> <li>Front display unit power supply and ground circuits.</li> <li>Serial communication circuits between AV control unit and front display unit.</li> </ul>
AV COMM CIRCUIT     2nd Display Connection Error	When either one of the following items are detected:  video distributor power supply and ground circuits are malfunctioning.  headrest display unit LH power supply and ground circuits are malfunctioning.  AV communication circuits between AV control unit and headrest display unit LH are malfunctioning.  location recognition signal circuit between headrest display unit LH and ground is malfunctioning.	<ul> <li>Video distributor power supply and ground circuits.</li> <li>Headrest display unit LH power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and headrest display unit LH.</li> <li>Location recognition signal circuit between headrest display unit LH and ground.</li> </ul>
3rd Display Connection Error	When either one of the following items are detected:  headrest display unit RH power supply and ground circuits are malfunctioning.  AV communication circuits between headrest display unit LH and headrest display unit RH are malfunctioning.  location recognition signal circuit between headrest display unit RH and ground is malfunctioning.	<ul> <li>Headrest display unit RH power supply and ground circuits.</li> <li>AV communication circuits between headrest display unit LH and headrest display unit RH.</li> <li>Location recognition signal circuit between headrest display unit RH and ground.</li> </ul>

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Error item	Description	Possible malfunction factor/Action to take
AM/FM antenna amplifier short to ground	Radio antenna amp. ON signal circuit mal-	Radio antenna amp. ON signal circuit be-
AM/FM antenna amplifier open	function is detected.	tween AV control unit and antenna amp.
Ext_Amp_ON output terminal short to ground	BOSE amp. ON signal circuit malfunction is	BOSE amp. ON signal circuit between AV
Ext_Amp_ON output terminal :open	detected.	control unit and BOSE amp.
GPS Antenna Error	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
XM Antenna Connection Error	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.
USB electric current Error	Detection of overcurrent in USB connector.	Check USB harness between the AV control unit and USB connector.
FL-DOOR SPEAKER OUT: open		
FL-DOOR SPEAKER OUT: short	When either one of the following items are	
FL-DOOR SPEAKER: short to ground	detected:	Cound signal signality between BOCE
FL-DOOR SPEAKER: short to battery	<ul> <li>sound signal circuits between BOSE amp. and front door speaker LH are mal-</li> </ul>	Sound signal circuits between BOSE amp. and front door speaker LH.
FL-DOOR TWEETER OUT: open	functioning.	Sound signal circuits between BOSE
FL-DOOR TWEETER OUT: short	<ul> <li>sound signal circuits between BOSE amp. and front door tweeter LH are mal-</li> </ul>	amp. and front door tweeter LH.
FL-DOOR TWEETER OUT: short to ground	functioning.	
FL-DOOR TWEETER OUT: short to battery		
FR-DOOR SPEAKER OUT: open		
FR-DOOR SPEAKER OUT: short	detected:	<ul> <li>Sound signal circuits between BOSE amp. and front door speaker RH.</li> <li>Sound signal circuits between BOSE amp. and front door tweeter RH.</li> </ul>
FR-DOOR SPEAKER OUT: short to ground		
FR-DOOR SPEAKER OUT: short to battery		
FR-DOOR TWEETER OUT: open		
FR-DOOR TWEETER OUT: short		
FR-DOOR TWEETER OUT: short to ground		
FR-DOOR TWEETER OUT: short to battery		
FL-INST TWEETER OUT: open		
FL-INST TWEETER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp and tweeter LH.
FL-INST TWEETER OUT: short to ground	and tweeter LH are malfunctioning.	
FL-INST TWEETER OUT: short to battery		
FC-INST SPEAKER OUT: open		
FC-INST SPEAKER OUT: short	Malfunction is detected sound signal cir-	Sound signal circuits between BOSE amp.
FC-INST SPEAKER OUT: short to ground	cuits between BOSE amp. and center speaker.	and center speaker.
FC-INST SPEAKER OUT: short to battery		
FR-INST TWEETER OUT: open		
FR-INST TWEETER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp. and tweeter RH.
FR-INST TWEETER OUT: short to ground	and tweeter RH are malfunctioning.	
FR-INST TWEETER OUT: short to battery		
2L-DOOR SPEAKER OUT: open		
2L-DOOR SPEAKER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp. and rear door speaker LH.
2L-DOOR SPEAKER OUT: short to ground	and rear door speaker LH are malfunctioning.	
2L-DOOR SPEAKER OUT: short to battery		

## < SYSTEM DESCRIPTION >

# [BOSE AUDIO WITH SURROUND SOUND]

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Error item	Description	Possible malfunction factor/Action to take	
2R-DOOR SPEAKER OUT: open			
2R-DOOR SPEAKER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp. and rear door speaker RH.	
2R-DOOR SPEAKER OUT: short to ground	and rear door speaker RH are malfunctioning.		
2R-DOOR SPEAKER OUT: short to battery			
RL-SPEAKER OUT: open			
RL-SPEAKER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp. and rear speaker LH.	
RL-SPEAKER OUT: short to ground	and rear speaker LH are malfunctioning.		
RL-SPEAKER OUT: short to battery			
RR-SPEAKER OUT: open			
RR-SPEAKER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp.	
RR-SPEAKER OUT: short to ground	and rear speaker RH are malfunctioning.	and rear speaker RH.	
RR-SPEAKER OUT: short to battery			
SUBWOOFER OUT: open			
SUBWOOFER OUT: short	Sound signal circuits between BOSE amp.	Sound signal circuits between BOSE amp. and subwoofer.	
SUBWOOFER OUT: short to ground	and subwoofer are malfunctioning.		
SUBWOOFER OUT: short to battery			
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 were malfunctioning.</li> <li>AV communication circuits between AV control unit and multifunction switch are malfunctioning.</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>	
<ul><li>AV COMM CIRCUIT</li><li>Amplifier Connection Error</li></ul>	When either one of the following items are detected: BOSE amp. power supply and ground circuits are malfunctioning. AV communication circuits between headrest display unit LH and BOSE amp. are malfunctioning.	BOSE amp. power supply and ground circuits.     Refer to AV-614, "BOSE AMP. : Diagnosis Procedure".     AV communication circuits between headrest display unit LH and BOSE amp.	
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 are malfunctioning.  AV communication circuits 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>	
AV COMM CIRCUIT     Sonar Connection Error	When either one of the following items are detected:  sonar control unit power supply and ground circuits are malfunctioning.  AV communication circuits between AV control unit and sonar control unit are malfunctioning.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and sonar control unit.</li> </ul>	

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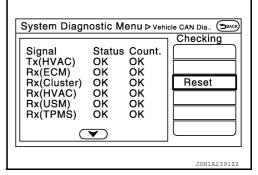
## [BOSE AUDIO WITH SURROUND SOUND]

Error item	Description	Possible malfunction factor/Action to take
AV COMM CIRCUIT     Switches Connection Error     Sonar Connection Error     AVM Connection Error     2nd Display Connection Error	AV communication circuits between AV control unit and multifunction switch are malfunctioning.	AV communication circuits between AV
<ul> <li>AV COMM CIRCUIT</li> <li>Switches Connection Error</li> <li>Amplifier Connection Error</li> <li>Sonar Connection Error</li> <li>AVM Connection Error</li> <li>2nd Display Connection Error</li> </ul>		control unit and multifunction switch.

#### 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 / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx(TPMS)	OK / ???	OK / 0 – 39
Rx(STRG)	OK / ???	OK / 0 – 39
Rx(ACC)	OK / ???	OK / 0 – 39
RX(VDC)	OK / ???	OK / 0 – 39



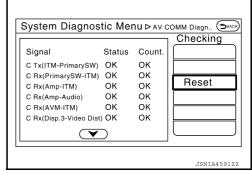
#### NOTE:

"???" indicates UNKWN.

#### 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" is pressed.

Items	Status (Current)	Counter (Past)
C Tx(ITM-PrimarySW)	OK / ???	OK / 0 – 39
C Rx(PrimarySW–ITM)	OK / ???	OK / 0 – 39
C Rx(Amp–ITM)	OK / ???	OK / 0 – 39
C Rx(Amp–Audio)	OK / ???	OK / 0 – 39
C Rx(AVM–ITM)	OK / ???	OK / 0 – 39
C Rx(Disp.3–Video Dist)	OK / ??? / –	OK / 0 – 39
C Rx(Video Dist-ITM)	OK / ???	OK / 0 – 39
C Rx(Sonar–ITM)	OK / ???	OK / 0 – 39



#### < SYSTEM DESCRIPTION >

## [BOSE AUDIO WITH SURROUND SOUND]

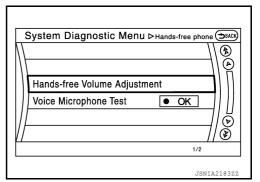
Items	Status (Current)	Counter (Past)
C Rx(Sonar–AVM)	OK / ???	OK / 0 – 39
C Rx(R.RemoteCont–ITM)	OK / ???	OK / 0 – 39

#### NOTE:

"???" indicates UNKWN

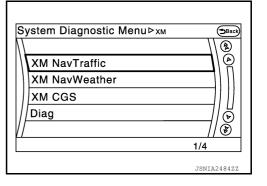
#### Hands-Free Phone

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



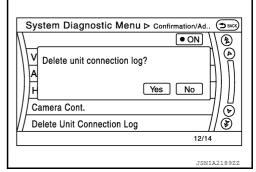
#### XM

- Change Channel
- Any necessary channels required to receive traffic information from the satellite radio system can be set.
- · Change Application ID
- Any application ID'-s 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 the AV control unit memory. (Clear the records of the unit that has been removed.)



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Initialize Settings

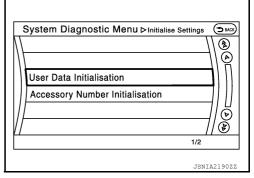
#### < SYSTEM DESCRIPTION >

## [BOSE AUDIO WITH SURROUND SOUND]

"User Data Initialization" and "Accessory Number Initialization" are possible.

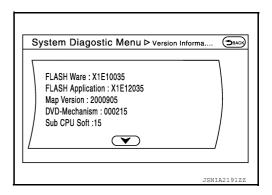
#### **CAUTION:**

- Never perform Accessory Number Initialization except when configuration is unsuccessful.
- Accessory Number Initialization requires configuration. For details, refer to <u>AV-541</u>, "<u>CONFIGURATION</u> (<u>AV CONTROL UNIT</u>): <u>Description</u>".



#### **Version Information**

Version information of the AV control unit is displayed.



## **CONSULT Function**

INFOID:0000000008376873

## **CONSULT FUNCTIONS**

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

Direct Diagnostic Mode	Description
Ecu Identification	The AV control unit part number is displayed.
Self Diagnostic Result	The AV control unit self diagnostic results are displayed.
Data Monitor	The AV control unit input/output data is displayed in real time.
Work support	The settings for AV control unit functions can be changed.
Configuration	<ul> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing AV control unit.</li> </ul>
CAN Diag Support Mntr	<ul> <li>The result of transmit/receive diagnosis of AV communication is displayed.</li> <li>The result of transmit/receive diagnosis of CAN communication is displayed.</li> </ul>

#### **ECU IDENTIFICATION**

The part number of AV control unit is displayed.

#### SELF DIAGNOSTIC RESULT

Refer to AV-464, "DTC Index".

#### DATA MONITOR

Monitor Item [Unit]	Description
VHCL SPD SIG [On/Off]	<ul> <li>On: vehicle speed &gt; 0 km/h (0 MPH).</li> <li>Off: vehicle speed = 0 km/h (0 MPH).</li> </ul>
PKB SIG [On/Off]	On: parking brake applied.     Off: parking brake released.
ILLUM SIG [On/Off]	<ul><li>On: optical sensor signal is received.</li><li>Off: optical sensor signal is not received.</li></ul>

## < SYSTEM DESCRIPTION >

# [BOSE AUDIO WITH SURROUND SOUND]

Monitor Item [Unit]	Description
IGN SIG [On/Off]	<ul><li>On: ignition switch ON.</li><li>Off: ignition switch ACC.</li></ul>
REV SIG [On/Off]	<ul> <li>On: selector lever in R position.</li> <li>Off: selector lever in any position other than R.</li> </ul>

## **WORK SUPPORT**

Conditions	Description
ST ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position adjustment can be performed. Refer to <a href="mailto:BRC-59">BRC-59</a> , "Description".

## **CONFIGURATION**

Refer to AV-541, "CONFIGURATION (AV CONTROL UNIT): Description".

## CAN DIAG SUPPORT MNTR

Refer to LAN-19, "CAN Diagnostic Support Monitor".

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# **DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)** [BOSE AUDIO WITH SURROUND SOUND]

< SYSTEM DESCRIPTION >

# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

#### **CONSULT Function** INFOID:0000000008376960

## **CONSULT FUNCTIONS**

CONSULT performs the following functions via communication with the around view monitor control unit.

Direct Diagnostic Mode	Description
Ecu Identification	The around view monitor control unit part number is displayed.
Self Diagnostic Result	The around view monitor control unit self diagnostic results are displayed.
Data Monitor	The around view monitor control unit input/output data is displayed in real time.
Work support	The settings for around view monitor control unit functions can be changed.
Configuration	<ul> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing around view monitor control unit.</li> </ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

#### **ECU IDENTIFICATION**

The part number of around view monitor control unit is displayed.

#### SELF DIAGNOSTIC RESULT

Refer to AV-482, "DTC Index".

#### **DATA MONITOR**

Monitor Item	Description
ST ANGLE SENSOR SIGNAL [On/Off]	Indicates condition of steering angle sensor signal.
REVERSE SIGNAL [On/Off]	Indicates selector lever position.
VEHICLE SPEED SIGNAL [mph/km/h]	Indicates condition of vehicle speed signal.
CAMERA SWITCH SIGNAL [On/Off]	Indicates condition of camera switch signal.
CAMERA OFF SIGNAL [On/Off]	Indicates condition of camera OFF signal.
ST ANGLE SENSOR TYPE [Absolute]	Indicates steering angle sensor type.
ST GEAR RATIO TYPE [Type O]	Indicates steering gear ratio type.
STEERING POSITION [LHD/RHD]	Indicates drive type.
REAR CAMERA IMAGE SIGNAL [OK]	Indicates condition of camera image signal.
R-CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
R-CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
F-CAMERA IMAGE SIGNAL [OK]	Indicates condition of camera image signal.
F-CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
F-CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
DR-SIDE CAMERA IMAGE SIG [OK]	Indicates condition of camera image signal.
DR CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
DR-SIDE CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
PA-SIDE CAMERA IMAGE SIG [OK]	Indicates condition of camera image signal.
PA CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
PA-SIDE CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
ACC [OK]	indicates condition of accessory signal.
FOLDING MOTOR VOLT 1 [On/Off]	indicates condition of mirror folding motor.
FOLDING MOTOR VOLT 2 [On/Off]	indicates condition of mirror folding motor.

## **WORK SUPPORT**

# **DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)** [BOSE AUDIO WITH SURROUND SOUND]

< SYSTEM DESCRIPTION >

Support Item	Description
NON-VIEWABLE AREA REMINDER	ON/OFF setting of non-viewable area can be performed.
INITIALIZE CAMERA IMAGE CALIBRATION	Factory image calibration restoration can be performed.
STEERING ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position adjustment can be performed.
CALIBRATING CAMERA IMAGE (FRONT CAMERA)	Performs calibration of front camera.
CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)	Performs calibration of passenger side camera.
CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)	Performs calibration of driver side camera.
CALIBRATING CAMERA IMAGE (REAR CAMERA)	Performs calibration of rear camera.
FINE TUNING OF BIRDS-EYE VIEW	Confirmation and adjustment of difference between each camera can be performed.
REAR WIDE-VIEW FIXED GUIDE LINE CORRECTION	Performs calibration of rear wide-view guide line correction.
TURNING RADIUS CORRECTION	Performs calibration of turning radius correction.
PARTS WITH DOOR MIRROR AUTO FOLD FUNC	ON/OFF setting of auto fold mirror function can be performed.
SONAR Off POP-UP DISPLAY SETTING CHANGE	ON/OFF setting of sonar pop-up display can be performed.
FRONT WIDE-VIEW FIXED GUIDE LINE CORRECTION	Performs calibration of front wide-view guide line correction.
ZOOM FUNCTION	Adjustment of magnification setting of camera can be performed.

#### CONFIGURATION

Refer to AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Description".

## **CAN DIAG SUPPORT MNTR**

Refer to LAN-19, "CAN Diagnostic Support Monitor".

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# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

< SYSTEM DESCRIPTION >

[BOSE AUDIO WITH SURROUND SOUND]

# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

CONSULT Function

#### APPLICATION ITEMS

CONSULT 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-488, "DTC Index".

## **DATA MONITOR**

Monitor Item	Display	Description
VEHICLE SPEED	(mph)	Vehicle speed
SONAR C/U POWER SUPPLY	(v)	Supply voltage for the Sonar C/U
SENSOR VOLTAGE	(v)	Sensor voltage
DETECTION MODE	(Mode)	Displays detection mode display
SW OPRT AFTR IGN ON	Yes	Switch operation after ignition ON
3W OFKI AFIK IGN ON	No	Switch operation after ignition on
SONAR TEMPORARY	Yes	Sonar system temporary Off
OFF	No	Sonar system On
SONAR PERMANENT	Yes	Sonar system malfunction
OFF	No	Sonar system without malfunction
P N RANGE	Yes	Selector lever is in "P" or "N" position
	No	Selector lever is another position other than "P" or "N"
LED	Yes	Led On
	No	Led Off
TRAILER CONNECT	CON	Trailer connector is in use
	N CON	Trailer connector is not in use
REVERSE RANGE	On	Selector lever is in the "R" position
	Off	Selector lever is in another position other than "R"

# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

## < SYSTEM DESCRIPTION >

# [BOSE AUDIO WITH SURROUND SOUND]

Monitor Item	Display	Description	
COR[RL]			A
COR[RL]-> CEN[RL]/ CEN[R]			В
CEN[RL]/CEN[R]-> COR[RL]			D
CEN[RL]/CEN[R]			С
CEN[RL]-> CEN[RR]			
CEN[RR]-> CEN[RL]			
CEN[RR]			D
CEN[RR]-> CEN[RR]/ COR[RR]			
COR[RR]-> CEN[RR]/ CEN[R]			Е
COR[RR]			
COR[FL]			F
COR[FL]-> CEN[FL]/ CEN[F]	(cm)	Measures the distance in cm to the obstacle.	0
CEN[FL]/CEN[F] ->COR[FL]			G
CEN[FL]/CEN[F]			Н
CEN[FL]-> CEN[FR]			11
CEN[FR]-> CEN[FL]			
CEN[FR]			
CEN[FR]/CEN[F]-> COR[FR]			
COR[FR]-> CEN[FR]/ CEN[F]			J
COR[FR]			
CEN[FR]/CEN[F]-> COR[FR]			K
COR[FR]-> CEN[FR]/ CEN[F]			L
COR[FR]			_
RVRB TIME COR[RL]			N. /I
RVRB TIME COR[RR]			M
RVRB TIME CEN[RL]			
RVRB TIME CEN[RR]	(ms)	Measures the distance in ms to the obstacle.	AV
RVRB TIME COR[FL]	(1115)		
RVRB TIME COR[FR]			_
RVRB TIME CEN[FL]			0
RVRB TIME CEN[FR]			_

<sup>\*:</sup> Even when a buzzer (backward) is output condition, this item is indicated as OFF.

# **ACTIVE TEST**

Active test item	Function
REAR BUZZER	This test is able to check rear buzzer operation.

## **WORK SUPPORT**

# DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

# < SYSTEM DESCRIPTION >

# [BOSE AUDIO WITH SURROUND SOUND]

Work support item	Function
VOLUME SETTING	Allows you to adjusts the volume of the warning tone.
TRAILER HITCH DETECTION RANGE ADJUSTMENT	Allows you to adjust the rear sonar sensors when towing a trailer.

## CORNER SEN DISTANCE SET

Corner sensor warning buzzer distance can be set to 4 phases as follows.

Warning item	FARTHER	FAR	NORMAL (Default)	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)
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 "NORMAL".

# **DIAGNOSIS SYSTEM (HEADREST DISPLAY UNIT)**

< SYSTEM DESCRIPTION >

[BOSE AUDIO WITH SURROUND SOUND]

# DIAGNOSIS SYSTEM (HEADREST DISPLAY UNIT)

Description INFOID:0000000008376962

Self-diagnosis of headrest display unit can be performed by operating rear seat remote controller.

# On Board Diagnosis Function

INFOID:0000000008376963

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Self-diagnosis mode can check the following items.

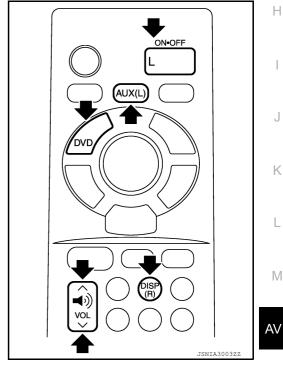
Diagnosis item	Display	Description			
Display Location	Left/Right/Un- known	Installation location of headrest display unit is displayed.  NOTE:  If displayed location is different from the actual location or shown as "unknown", check location recognition signal circuit.			
Software Ver.	****	Software version of headrest display unit is displayed.			
Hardware Ver.	****	Hardware version of headrest display unit is displayed.			
Seat Position	OK	Not used for this vehicle.			

#### METHOD OF STARTING

- 1. Turn ignition switch to the ON position.
- Turn the headrest display unit OFF.
- 3. Press each switch of rear seat remote controller in the order shown below.

"AUX(L)"→"VOL DOWN"→"DISP(R)"→"VOL UP"→"DVD"→"L"
NOTE:

- Operation must be done within 20 seconds.
- Perform the operation of rear seat remote controller for headrest display unit of each side.



4. When the rear seat remote operation is performed as shown on procedure 3, self-diagnosis screen is displayed.

Diagnosis

Display Location Left/ΩAch

Software Ver. MON 003000
I/F 003000

Hardware Ver. 003000

Seat Position OK

Exit

Revision: March 2012 AV-455 2013 Infiniti JX

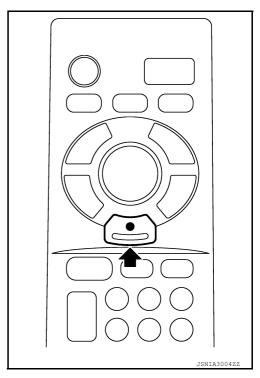
# **DIAGNOSIS SYSTEM (HEADREST DISPLAY UNIT)**

< SYSTEM DESCRIPTION >

[BOSE AUDIO WITH SURROUND SOUND]

Finishing Self-diagnosis Mode

Self-diagnosis mode is canceled when pressing the enter switch of rear seat remote controller.



# **ECU DIAGNOSIS INFORMATION**

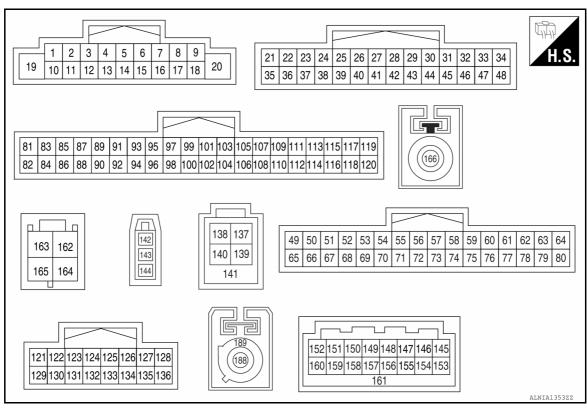
# AV CONTROL UNIT

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
VHCL SPD SIG	Vehicle speed = 0 km/h (0 MPH).	Off
VHCL SPD SIG	Vehicle speed > 0 km/h (0 MPH).	On
PKB SIG	Parking brake released.	Off
PND SIG	Parking brake applied.	On
ILLUM SIG	Optical sensor signal is not received.	Off
ILLUIVI SIG	Optical sensor signal is received.	On
IGN SIG	Ingnition switch OFF or ACC.	Off
IGN SIG	Ignition switch ON.	On
REV SIG	Selector lever in any position other than R.	Off
KEV SIG	Selector lever in R position.	On

## **TERMINAL LAYOUT**



PHYSICAL VALUES

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	minal e color)	Description			Condition	Reference value	
+	-	Signal name	Input/ Output	Condition		(Approx.)	
2 (B)	3 (W)	Sound signal front LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E	
4 (B)	5 (W)	Sound signal rear LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E	
-					Keep pressing SOURCE switch.	0 V	
			Input	Ignition switch ON	Keep pressing MENU UP switch.	1.0 V	
6 (G)	15 (B)				Keep pressing MENU DOWN switch.	2.0 V	
(0)	(5)				Keep pressing "≨ switch	3.0 V	
					Keep pressing ENTER switch.	4.0 V	
					Except for above.	5.0 V	
7 (G)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
10 (BR)	_	Shield	_	_	_	_	
11 (W)	12 (B)	Sound signal front RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 2ms SKIB3609E	
13 (B)	14 (W)	Sound signal rear RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E	

## < ECU DIAGNOSIS INFORMATION >

# [BOSE AUDIO WITH SURROUND SOUND]

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	minal e color)	Description			O an disting	Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
					Keep pressing VOL DOWN switch.	0 V
16	15	Ota a sing a switch airmal D	lanut	Ignition	Keep pressing VOL UP switch.	1.0 V
(W)	(B)	Steering switch signal B	Input	switch ON	Keep pressing ò switch.	2.0 V
					Keep pressing <b>5</b> switch.	3.0 V
					Except for above.	5.0 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
20 (GR)	Ground	Ground	_	Ignition switch ON	_	0 V
24 (R)	39 (B)	AUX sound signal LH	Input	Ignition switch ON	When front AUX mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
26 (W)	40 (R)	Sound signal LH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 + 2ms SKIB3609E
27 (B)	41 (G)	Sound signal RH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 + 2ms SKIB3609E
37	_	Shield	_	_	_	_
38 (W)	39 (B)	AUX sound signal RH	Input	Ignition switch ON	When front AUX mode is selected.	(V) 1 0 -1 → 2ms SKIB3609E
42	_	Shield	_	_	_	_
53	Ground	Parking brake signal	Input	Ignition switch	Parking brake is applied.	0 V
(G)	Ground	i anding place signal	прис	ON	Parking brake is released.	4.5 V

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output	Condition.		(Approx.)	
55 (W)	Ground	Composite image signal ground	_	Ignition switch ON	_	0 V	
56 (B)	Ground	Composite image signal	Output	Ignition switch ON	At DVD image is displayed.	(V) 0. 4 0 -0. 4 → 40μs SKIB2251J	
57 (BG)	_	I-Key memory	_	_	_	_	
58 (G)	_	AV-ACC (DCM)	_	_	_	_	
60 (W)	Ground	Microphone VCC	Output	Ignition switch ON	_	5.0 V	
61 (W)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 •••1ms	
62 (P)	_	CAN-L	Input/ Output	_	_	_	
63 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_	
64 (LG)	_	M CAN-L TRM	_	_	_	_	
67 (P)	_	MR output	_	_	_	_	
68 (LG)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage	
69 (R)	Ground	Reverse signal	Input	Ignition switch ON	Selector lever is in R position.  Selector lever is in other than R position.	Battery voltage	
70 (BG)	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).	
71	_	Shield	_	_	_	_	

## < ECU DIAGNOSIS INFORMATION >

# [BOSE AUDIO WITH SURROUND SOUND]

Terminal (Wire color)		Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
72 (R)	Ground	Composite image synchro- nizing signal	Output	Ignition switch ON	At DVD image is displayed.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4	
75 (B)	59	Microphone signal	Input	Ignition switch ON	Give a voice.	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0	
76	_	Shield	_	_	_	_	
77 (B)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 + 1ms PKIB5039J	
78 (L)	_	CAN-H	Input/ Output	_	_	_	
79 (SB)	Ground	Dimmer signal	Input	Ignition switch ON	Either of the following conditions    Lighting switch is OFF    Lighting switch is 1st or 2nd, and the area around the vehicle is bright (shine a light on the optical sensor)	0 V	
					Lighting switch is 1st or 2nd, and the area around the vehicle is dark (block the light from the optical sensor)	Battery voltage	
80 (SB)	_	M CAN-H TRM	_	_	_	_	
91 (W)	Ground	AUX image signal	Input	Ignition switch ON	At front AUX image is displayed.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4	
92 (B)	Ground	AUX image signal ground	_	Ignition switch ON	_	0 V	
94	_	Shield	_	_	_	_	

	minal e color)	Description			0 1111	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
97				Ignition	Pressing the eject switch.	0 V
(Y)	Ground	Disk eject signal	Input	switch ON	Except for above.	5.0 V
98 (V)	Ground	Switch ground	_	Ignition switch ON	_	0 V
105 (W)	Ground	Composite image signal ground	_	Ignition switch ON	_	0 V
106	_	Shield	_	_	_	
107 (B)	Ground	Composite image signal	Output	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	(V) 0. 4 0 -0. 4 -0. 4 SKIB2251J
122 (B)	123 (W)	Sound signal guide	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
124 (B)	132 (W)	Sound signal sub woofer	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
125 (W)	133 (B)	Sound signal center	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
126 (Y)	_	Shield	_	_	_	_
131	_	Shield	_	_	_	_
137 (G)		V BUS signal	-		_	_
138 (W)	_	USB D+ signal	_	_	_	_
139 (R)	_	USB ground	_	_	_	_
140 (L)	_	USB D- signal	_	_	_	_

#### < ECU DIAGNOSIS INFORMATION >

## [BOSE AUDIO WITH SURROUND SOUND]

	minal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
141	_	Shield	_	_	_	_	
142 (B)	_	FM sub	Input	_	_	_	
143 (B)	Ground	Antenna amp. ON signal	Input	Ignition switch ON	_	Battery voltage	
144 (B)	_	AM-FM main	Input	_	_	_	
145 (W)	_	USB D-signal	Input	_	_	_	
146 (L)	_	USB VBUS signal	Input	_	_	_	
151 (B)	_	U-VOICE ground	Input	_	_	_	
152 (B)	_	U-VOICE signal	Input	_	_	_	
153 (B)	Ground	GPS antenna signal	Input	Ignition switch ON	Not connected GPS antenna connector.	5.0 V	
154	_	Shield	_	_	_	_	
156	_	Shield	_	_	_	_	
159	_	Shield	_	_	_	_	
160 (B)	_	D-VOICE signal	_	_	_	_	
161	_	Shield	_	_	_	_	
162	_	Shield	_	_	_	_	
163	_	Shield	_	_	_	_	
164 (B)	Ground	RGB digital image signal (-)	Output	Ignition switch ON	Not connected connector.	1.3 V	
165 (B)	Ground	RGB digital image signal (+)	Output	Ignition switch ON	Not connected connector.	1.3 V	
166	Ground	Satellite radio antenna signal	Input	Ignition switch ON	Not connected satellite antenna connector.	5.0 V	

Fail-Safe

When the ambient temperature becomes extremely low or extremely high, AV control unit displays a message and limits the function of the AV control unit.

## **FAIL-SAFE CONDITIONS**

When the ambient temperature is -20°C (-4°F) or lower, or when it is 70°C (158°F) or higher.

## Display

The following messages are displayed during fail-safe:

Revision: March 2012 AV-463 2013 Infiniti JX

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# < ECU DIAGNOSIS INFORMATION >

## [BOSE AUDIO WITH SURROUND SOUND]

Fail-safe mode	Display
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.

## **DESCRIPTION OF CONTROLS**

Function	Function Fail-safe mode activated			
	Operation	A/C and AV switch assembly can be operated.		
Air conditioner	Display	<ul> <li>LEDs of A/C and AV switch assembly illuminate.</li> <li>Temperature, mode and blower speed are displayed in a simplified mode.</li> </ul>		
Audio	Operation	Only ON/OFF and volume control operations of A/C and AV switch assembly are available.		
Audio	Display	"Fail-safe mode" is displayed.		
Camera	Operation	Image tone cannot be controlled.		
Carriera	Display	Cannot be superimposed. (warning display, tone control display)		
Hands-free phone	Operation	Inoperative.		
Navigation Operation Inoperative.		Inoperative.		
Self diagnosis		Displays in a simplified mode.		
CONSULT diagnosis		Inoperative.		

**Ability Operation Mode** 

If HDD data can be read, "Fail-safe mode" is displayed and functions listed above can be operated.

DTC Index

## SELF-DIAGNOSIS RESULTS DISPLAY ITEM

CONSULT Display	Reference Page		
U1000: CAN COMM CIRCUIT	AV-553, "AV CONTROL UNIT : DTC Logic"		
U1010: CONTROL UNIT (CAN)	AV-554, "AV CONTROL UNIT : DTC Logic"		
U1200: CONT UNIT	AV-555, "DTC Logic"		
U1201: GYRO NO CONN	AV-556, "DTC Logic"		
U1202: G-SENSOR NO CONN	AV-557, "DTC Logic"		
U1204: GPS COMM	AV-558, "DTC Logic"		
U1205: GPS ROM	AV-559, "DTC Logic"		
U1206: GPS RAM	AV-560, "DTC Logic"		
U1207: GPS RTC	AV-561, "DTC Logic"		
U1216: CAN CONT	AV-562, "DTC Logic"		
U1217: BLUETOOTH MODULE	AV-563, "DTC Logic"		
U1218: HDD CONN	AV-564, "DTC Logic"		
U1219: HDD READ	AV-565, "DTC Logic"		
U121A: HDD WRITE	AV-566, "DTC Logic"		
U121B: HDD COMM	AV-567, "DTC Logic"		
U121C: HDD ACCESS	AV-568, "DTC Logic"		
U121D: DSP CONN	AV-569, "DTC Logic"		
U121E: DSP COMM	AV-570, "DTC Logic"		
U1225: USB CONTROLLER	AV-571, "DTC Logic"		
U1227: DVD COMM	AV-572, "DTC Logic"		

## < ECU DIAGNOSIS INFORMATION >

CONSULT Display	Reference Page			
U1228: SUB CPU CONN	AV-573, "DTC Logic"			
U1229: iPod CERTIFICATION	AV-574, "DTC Logic"			
U122A: CONFIG UNFINISH	AV-575, "DTC Logic"	E		
U122E: Built-in AUDIO CONN	AV-576, "DTC Logic"			
U1231: AMP TEMP	AV-577, "DTC Logic"			
U1232: ST ANGLE SEN CALIB	AV-578, "DTC Logic"			
U1243: FRONT DISP CONN	AV-579, "DTC Logic"			
U1244: GPS ANTENNA CONN	AV-581, "DTC Logic"			
U1258: XM ANTENNA CONN	AV-582, "DTC Logic"			
U125A: 3RD DISP CONN	AV-583, "DTC Logic"			
U1263: USB OVERCURRENT	AV-584, "DTC Logic"	Е		
U1264: ANTENNA AMP TERMINAL (OPEN or SHORT)	AV-585, "DTC Logic"			
U1265: AMP ON TERMINAL (GND-SHORT or VB-SHORT)	AV-586, "DTC Logic"			
U1300: AV COMM CIRCUIT     U1240: SWITCH CONN	-	F		
U1300: AV COMM CIRCUIT     U124E: AMP CONN				
U1300: AV COMM CIRCUIT     U1246: VIDEO DIST CONN		F		
U1300: AV COMM CIRCUIT     U125B: AROUND CAMERA CONN		ı		
U1300: AV COMM CIRCUIT     U125C: SONAR CONN	AV-587, "Description"			
<ul> <li>U1300: AV COMM CIRCUIT</li> <li>U1240: SWITCH CONN</li> <li>U125C: SONAR CONN</li> <li>U125B: AROUND CAMERA CONN</li> <li>U1246: VIDEO DIST CONN</li> </ul>				
<ul> <li>U1300: AV COMM CIRCUIT</li> <li>U1240: SWITCH CONN</li> <li>U124E: AMP CONN</li> <li>U125C: SONAR CONN</li> <li>U125B: AROUND CAMERA CONN</li> <li>U1246: VIDEO DIST CONN</li> </ul>		k L		
U1310: CONTROL UNIT (AV)	AV-597, "DTC Logic"			
U1601: FL-DOOR WOOFER/TWEETER (OPEN, SHORT, GND-SHORT)		N		
U1603: FL-DOOR WOOFER/TWEETER (VB-SHOR)	N/500 ==== : : :			
U1609: FR-DOOR WOOFER/TWEETER (OPEN, SHORT, GND-SHORT)	AV-598, "DTC Logic"			
U160B: FR-DOOR WOOFER/TWEETER (VB-SHOR)		(		
U1627: F-INST L-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-599, "DTC Logic"	F		
U162F: F-INST R-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR)	200, 5 to Logio			
U162A: F-INST C-SQAWK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-600, "DTC Logic"			

## < ECU DIAGNOSIS INFORMATION >

CONSULT Display	Reference Page
U1684: 2L-DOOR SPEAKER/TWEETER (OPEN, SHORT, GND-SHORT)	
U1687: 2L-DOOR SPEAKER/TWEETER (VB-SHOR)	AV-601, "DTC Logic"
U162C: 2R-DOOR SPEAKER/TWEETER (OPEN, SHORT, GND-SHORT)	AV-001, DTC Logic
U162F: 2R-DOOR SPEAKER/TWEETER (VB-SHOR)	
U175D: R-LUGGAGE L-WOOFER (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-602, "DTC Logic"
U176A: R-ROOF L-WK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-603, "DTC Logic"
U1772: R-ROOF R-WK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-003. DTC Logic

## **DISPLAY UNIT**

## [BOSE AUDIO WITH SURROUND SOUND]

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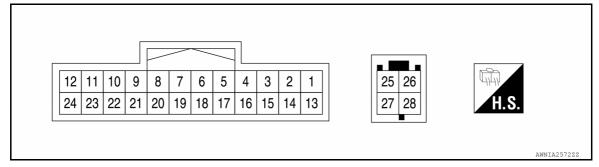
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# **DISPLAY UNIT**

Reference Value

## **TERMINAL LAYOUT**



## PHYSICAL VALUES

Terminal (Wire color)		Description			Condition	Reference value
		Signal name In				(Approx.)
6	_	Shield	_	_	_	_
7	_	Shield	_	_	_	_
8 (B)	Ground	Camera image signal	Input	Ignition switch ON	At camera image is displayed.	(V) 0. 4 0 -0. 4 -40μs skib2251J
9 (B)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 ***1ms
10 (W)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 2 0 +
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
12 (B)	Ground	Ground	_	Ignition switch ON	_	0 V

## **DISPLAY UNIT**

Terminal (Wire color)		Description		O differen		Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
18 (B)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	(V) 0.4 0 -0.4 → 40μs SKIB2251J	
19 (W)	Ground	Composite image signal ground	_	Ignition switch ON	_	0 V	
20 (R)	Ground	Composite image synchro- nizing signal	Input	Ignition switch ON	_	(V) 4 0 → 20µs SKIB0825E	
22	_	Shield	_	_	_	_	
23 (P)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
25	_	Shield	_	_	_	_	
26	_	Shield	_	_	_	_	
27 (B)	_	RGB digital image signal (–)	Input	_	_	_	
28 (B)	_	RGB digital image signal (+)	Input	_	_	_	

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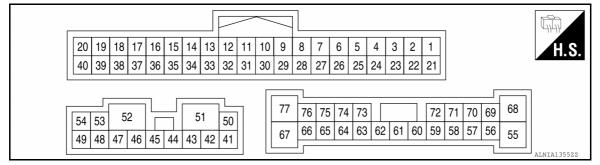
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### BOSE AMP.

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### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	rminal e color)	Description		Condition		Reference value	F
+	_	Signal name	Input/ Output		Condition	(Approx.)	
4 (W)	24 (B)	Sound signal	Input	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E	ŀ
						(V)	
5 (W)	25 (B)	Sound signal front LH	Input	Ignition switch ON	Sound output	O 2ms SKIB3609E	ŀ
							L
6 (W)	26 (B)	Sound signal front RH	Input	Ignition switch ON	Sound output	(V) 1 0	N
						→ 2ms SKIB3609E	A۱
7 (W)	27 (B)	Sound signal rear LH	Input	Ignition switch ON	Sound output	(V) 1 0 -1 → 2ms	F

### **BOSE AMP.**

	rminal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
8 (W)	28 (B)	Sound signal rear RH	Input	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
9 (W)	29 (B)	Sound signal	Input	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
10 (B)	30 (W)	Sound signal	Input	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
14 (LG)	_	M CAN-H TRM	_	_	_	_
15 (LG)	_	AV communication isignal (H)	_	_	_	_
16 (W)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
34 (SB)	_	M CAN-L TRM	_	_	_	_
35 (B/Y)	_	AV communication isignal (L)	_	_	_	_
39 (B)	_	Shield	_	_	_	_
41 (G)	42 (W)	Sound signal rear door speaker RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
43 (W)	44 (P)	Sound signal front door speaker RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E

### **BOSE AMP.**

### [BOSE AUDIO WITH SURROUND SOUND]

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	rminal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
45 (P)	46 (R)	Sound signal rear door speaker LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 **2ms SKIB3609E
47 (B)	_	Ground	_	Ignition switch ON	_	0 V
48 (R)	53 (G)	Sound signal front door speaker LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 **2ms SKIB3609E
49 (W)	54 (B)	Sound signal woofer	Output	Ignition switch ON	Sound output	(V) 1 0 -1 ** 2ms SKIB3609E
50 (LG)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
51 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
52 (B)	_	Ground	_	Ignition switch ON	_	0 V
55 (W)	Ground	Subwoofer amp. ON signal	Output	Ignition switch ACC	_	Battery voltage
56 (R)	69 (G)	Sound signal tweeter LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 2ms SKIB3609E
57 (P)	58 (R)	Sound signal center speaker	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms

### **BOSE AMP.**

	rminal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
59 (G)	72 (W)	Sound signal tweeter RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
62 (W)	73 (G)	Sound signal rear speaker LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E
63 (W)	74 (G)	Sound signal rear speaker RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms skib3609E
64 (G)	75 (W)	Sound signal tweeter LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 *** 2ms SKIB3609E
65	_	Shield	_	_	_	_
70 (W)	71 (R)	Sound signal tweeter RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E

< ECU DIAGNOSIS INFORMATION >

[BOSE AUDIO WITH SURROUND SOUND]

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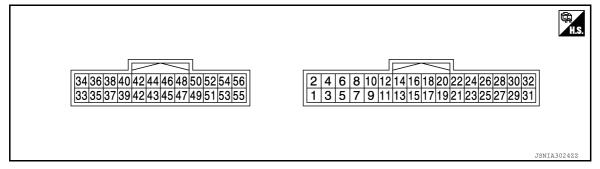
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# **VIDEO DISTRIBUTOR**

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### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (B)	_	Ground	_	Ignition switch ON	_	0 V
2 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
3 (B)	_	Ground	_	Ignition switch ON	_	0 V
4 (W)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
5 (BR)	Ground	Cont. ground for headrest display unit RH	_	Ignition switch ON	_	0 V
6	Ground	ACC signal for headrest display unit RH	Output	Ignition switch OFF	_	3.3 V
(L)	Ground			Ignition switch ACC	_	0 V
7 (SB)	Ground	Cont. ground for headrest display unit LH	_	Ignition switch ON	_	0 V
8	Cround	ACC signal for headrest	Output	Ignition switch OFF	_	3.3 V
(BR)	Ground	display unit LH	Output	Ignition switch ACC	_	0 V
9	Ground	Image switch signal for headrest display unit RH	lnout.	Ignition	When DVD, USB or front AUX image is displayed on headrest display unit RH.	0.5 V
(SB)	Giouila		Input	switch ON	When rear AUX image is displayed on headrest display unit RH.	4.5 V

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	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
10	Ground	Image switch signal for	Input	Ignition switch	When DVD, USB or front AUX image is displayed on headrest display unit LH.	0.5 V
(L)	Glound	headrest display unit LH	три	ON	When rear AUX image is displayed on headrest display unit LH.	4.5 V
14 (R)	15 (G)	Headphone sound signal RH for headrest display unit RH	Output	Ignition switch ON	Output headphone sound from headrest display unit RH to headphone.	(V) 1 0 -1 → 2ms SKIB3609E
16 (B)	17 (W)	Headphone sound signal LH for headrest display unit RH	Output	Ignition switch ON	Output headphone sound from headrest display unit RH to headphone.	(V) 1 0 -1 + 2ms SKIB3609E
18 (V)	Ground	AV ground for headrest display unit RH	_	Ignition switch ON	_	0 V
19 (V)	Ground	AV ground for headrest display unit LH	_	Ignition switch ON	_	0 V
20 (B)	21 (G)	Headphone sound signal RH for headrest display unit LH	Output	Ignition switch ON	Output headphone sound from headrest display unit LH to headphone.	(V) 1 0 -1 2ms SKIB3609E
22 (W)	23 (R)	Headphone sound signal LH for headrest display unit LH	Output	Ignition switch ON	Output headphone sound from headrest display unit LH to headphone.	(V) 1 0 -1 + 2ms SKIB3609E
27 (W)	Ground	Composite image signal ground for headrest display unit RH	_	Ignition switch ON	_	0 V
28 (B)	Ground	Composite image signal for headrest display unit RH	Output	Ignition switch ON	When DVD, USB, front AUX or rear AUX image is displayed on headrest dis- play unit RH.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4

### < ECU DIAGNOSIS INFORMATION >

### [BOSE AUDIO WITH SURROUND SOUND]

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	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
29	_	Shield	_	_	_	_
30	_	Shield	_	_	_	_
31 (P)	Ground	Composite image signal ground for headrest display unit LH	_	Ignition switch ON	_	0 V
32 (L)	Ground	Composite image signal for headrest display unit LH	Output	Ignition switch ON	When DVD, USB, front AUX or rear AUX image is displayed on headrest dis- play unit LH.	(V) 0. 4 0 -0. 4 -40μs
33 (W)	Ground	Composite image signal ground	_	Ignition switch ON	_	0 V
34 (B)	Ground	Composite image signal	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	(V) 0. 4 0 -0. 4 +40μs SKIB2251J
35	_	Shield	_	_	_	_
40 (B)	39 (W)	AUX image signal	Input	Ignition switch ON	When rear AUX image is displayed on headrest display unit LH or RH.	(V) 0. 4 0 -0. 4 -8 SKIB2251J
41	_	Shield	_	_	_	_
45 (W)	46 (R)	Sound signal LH	Input	Ignition switch ON	When DVD, USB or front AUX mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 + 2ms SKIB3609E
47 (B)	48 (G)	Sound signal RH	Input	Ignition switch ON	When DVD, USB or front AUX mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 + 2ms SKIB3609E
49	_	Shield	_	_	_	_
53	_	Shield	_	_	_	_

### < ECU DIAGNOSIS INFORMATION >

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
54 (B)	56 (W)	AUX sound signal LH	Input	Ignition switch ON	When rear AUX mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 + 2ms skib3609E	
55 (R)	56 (W)	AUX sound signal RH	Input	Ignition switch ON	When rear AUX mode is selected on headrest display unit LH or RH.	(V) 1 0 -1 → 2ms SKIB3609E	

### **HEADREST DISPLAY UNIT**

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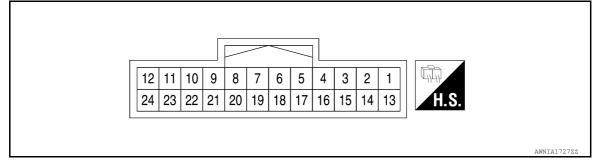
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### **HEADREST DISPLAY UNIT**

Reference Value

### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
3	_	Shield	_	_	_	_
4 (P)*1 4 (Y)*2	Ground	Composite image signal ground	_	Ignition switch ON	_	0 V
6 (SB)*1 6 (BR)*2	Ground	Cont. ground	_	Ignition switch ON	_	0 V
7 (L) <sup>*1</sup>	Ground	d Image switch signal	Output	Ignition switch	When DVD, USB or front AUX image is displayed on headrest display unit.	0.5 V
7 (LG) <sup>*2</sup>				ON	When rear AUX image is displayed on headrest display unit.	4.5 V
9 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_
10 (SB)	_	AV communication signal (H)	Input/ Output	_	_	_
12 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
13 (B)	1 (W)	Headphone sound signal LH	Input	Ignition switch ON	Headphone sound output.	(V) 1 0 -1 + 2ms SKIB3609E

### **HEADREST DISPLAY UNIT**

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
14 (R)	2 (G)	Headphone sound signal RH	Input	Ignition switch ON	Headphone sound output.	(V) 1 0 -1 + 2ms SKIB3609E
15	_	Shield	_		_	_
16 (L) <sup>*1</sup>				Ignition	When DVD, USB or front	(V) 0. 4
16 (O) <sup>*2</sup>	Ground Composite image signal	Input	switch ON	AUX image is displayed on headrest display unit.	-0. 4 + 40μs skib2251J	
17 (P)*1 17 (SB)*2	Ground	AV ground	_	Ignition switch ON	_	0 V
19	Ground	ACC signal	Input	Ignition switch OFF	_	3.3 V
(BR)	Ground	Acc signal	mput	Ignition switch ACC	_	0 V
20 <sup>*2</sup>	_	Shield	_	_	_	_
21 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_
22 (SB)	_	AV communication signal (H)	Input/ Output	_	_	
24 (SB)*1	Crownel	Pottory power comply	ln ~ · · t	Ignition		Pottonyvaltore
24 (Y)*2	Ground	ound Battery power supply	Input	switch OFF	_	Battery voltage

<sup>\*1:</sup> Driver seat

<sup>\*2:</sup> Passenger seat

< ECU DIAGNOSIS INFORMATION >

[BOSE AUDIO WITH SURROUND SOUND]

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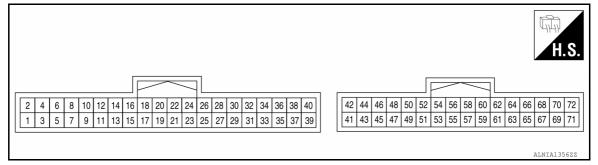
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### AROUND VIEW MONITOR CONTROL UNIT

Reference Value

### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	minal e color)	Description			O ditt	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 (LG)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
4 (P)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
11 (G)	_	Signal ground	_	_	_	_
13 (P)	_	Camera direct OFF	_	_	_	_
14 (BG)	_	RX	_	_	_	_
19 (B)	_	AV communication signal (H)	Input/ Output	_	_	_
20 (W)	_	AV communication signal (L)	Input/ Output	_	_	_
23	_	Shield	_	_	_	_
25				Ignition	R position	Battery voltage
(LG)	Ground	Reverse signal	Input	switch ON	Other than R position	0 V
27 (B)	_	V-CAN (H)	_	_	_	_
28 (W)	_	V-CAN (L)	_	_	_	_
29	_	Shield	_	_	_	_
30 (W)	_	Mirror signal 2	_	_	_	_

### < ECU DIAGNOSIS INFORMATION >

	minal e color)	Description			O a dilla a	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
32 (G)	_	Mirror signal 1	_	_	_	_
43 (B)	_	External video output	_	_	_	_
44	_	Shield	_	_	_	<u> </u>
47 (B)	Ground	Camera image signal	Output	Ignition switch ON	At camera image display	(V) 0. 4 -0. 4 -0. 4 SKIB2251J
48	_	Shield	_	_	_	_
49 (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
50 (B)	Ground	Rear camera power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V
52 (R)	Ground	Rear camera ground	_	Ignition switch ON	_	0 V
53 (G)	54	Rear camera image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μs JSNIA0834GB
55 (B)	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 1.0 μs JSNIA0836GB
56 (W)	Ground	Side camera driver side power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V
58 (G)	Ground	Side camera driver side ground	_	Ignition switch ON	_	0 V

### < ECU DIAGNOSIS INFORMATION >

	minal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	_
59 (R)	60	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	
61 (W)	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 μs JSNIA0836GB	
62 (B)	Ground	Side camera passenger side power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V	
64 (R)	Ground	Side camera passenger side ground	_	Ignition switch ON	_	0 V	
65 (G)	66	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	
67 (B)	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	
68 (W)	Ground	Front camera power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V	
70 (G)	Ground	Front camera ground	_	Ignition switch ON	_	0 V	
71 (R)	72	Front camera image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μs JSNIA0834GB	

< ECU DIAGNOSIS INFORMATION >

### [BOSE AUDIO WITH SURROUND SOUND]

DTC Index

CONSULT Display	Reference Page
U1302: CAMERA SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY	AV-589, "DTC Logic"
U1303: LED SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY	AV-593, "DTC Logic"
U1304: NON-COMPLETION OF THE CALIBRATION	AV-595, "DTC Logic"
U1305: NON-COMPLETION OF THE WRITE CONFIGURATION	AV-596, "DTC Logic"

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

< ECU DIAGNOSIS INFORMATION >

[BOSE AUDIO WITH SURROUND SOUND]

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# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

Reference Value

### VALUES ON THE DIAGNOSIS TOOL

CONSULT	

Monitor Item		Condition	Value/Status					
VEHICLE SPEED	While driving	Displays the vehicle speed						
SONAR C/U POWER SUPPLY	Engine running	Power supply voltage of the Sonar C/U						
SENSOR VOLTAGE	Engine running	Engine running						
DETECTION MODE	Ignition switch	Displays detection mode	Mode 1					
DETECTION MODE	ON	Displays detection mode	Mode 2					
SW OPRT AFTR IGN ON	Ignition switch	Switch operation after ignition ON	Yes					
OW OF ICE AF TICTION ON	ON	Switch operation after ignition on	No					
SONAR TEMPORARY OFF	Ignition switch	Sonar system not in use	Yes					
SONAIN TEINII ONAINT OTT	ON	Sonar system in use	No					
SONAR PERMANENT OFF	Ignition switch	Sonar system has malfunctioned	Yes					
OCIVICI EIGN/GVEIVI OIT	ON	Sonar system has no malfunction	No					
	Ignition switch	When the selector lever is in "P", "N" position	On					
P N RANGE	ON	When the selector lever is in any position other than "N", "P"	Off					
LED	Ignition switch	Led is illuminated	On					
LED	ON	Led is not illuminated	Off					
TRAILER CONNECT	Ignition switch	If trailer connector is in use	CON					
TIVALLET CONNECT	ON	If trailer connector is not in use	N CON					
REVERSE RANGE	Ignition switch	When the selector lever is in "R"	On					
NEVEROE NAMOE	ON	When the selector lever is in any position other than "R"	Off					
	Ignition switch	When a sensor is abnormal.	ERROR					
		When a sensor is not detection.	LV. 0					
COR[RL]		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1					
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2					
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3					
		When a sensor is abnormal.	ERROR					
		When a sensor is not detection.	LV. 0					
CEN[RL]/CEN[R]->	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1					
COR[RL]	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2					
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3					

### SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) [BOSE AUDIO WITH SURROUND SOUND]

### < ECU DIAGNOSIS INFORMATION >

Monitor Item		Condition	Value/Status
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CENIRI I/CENIRI	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CENIRI 1-> CENIRRI	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CENIRRI-> CENIRI I	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CEN IRRI	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
COR[RR]  COR[RR]-> CEN[RR]/	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CEN[RR]/CEN[R]->	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
COR[RR]	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		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 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
CEN[R]	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

< ECU DIAGNOSIS INFORMATION >

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Monitor Item		Condition	Value/Status
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
COR[RR]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
COR[FL]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
COR[FL]-> CEN[FL]/CEN[F]	Ignition switch ON	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
30. (t = 1		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CEN[FL]/CEN[F]-> COR[FL]	Ignition switch ON	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.7 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 1
CEN[FL]/CEN[F]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 2
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 3
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 4
		When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
CEN[FL]-> CEN[FR]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
Serting Octobrily	ÖN	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3

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### SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) [BOSE AUDIO WITH SURROUND SOUND]

### < ECU DIAGNOSIS INFORMATION >

Monitor Item		Condition	Value/Status	
		When a sensor is abnormal.	ERROR	
		When a sensor is not detection.	LV. 0	
CEN[FR]-> CEN[FL]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1	
o=()	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2	
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3	
		When a sensor is abnormal.	ERROR	
		When a sensor is not detection.	LV. 1	
CEN[FR]	Ignition switch ON	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 2	
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV.3	
		When a sensor is abnormal.	ERROR	
		When a sensor is not detection.	LV. 0	
CEN[FR]/CEN[F]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1	
->COR[FR]	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV.2	
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3	
		When a sensor is abnormal.	ERROR	
		When a sensor is not detection.	LV. 0	
COR[FR]-> CEN[FR]/ CEN[F]	Ignition switch ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 1	
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3	
		When a sensor is abnormal.	ERROR	
		When a sensor is not detection.	LV.0	
COR [FR]	Ignition switch	The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1	
	ON	The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2	
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3	
RVRB TIME COR[RL]		Corner rear left		
RVRB TIME COR[RR]		Corner rear right		
RVRB TIME CEN[RL]		Center rear left		
RVRB TIME CEN[RR]	Ignition switch	Center rear right	Distance in time to	
RVRB TIME COR[FL]	ŎN	Corner front left	obstacle (ms)	
RVRB TIME COR[FR]		Corner front right		
RVRB TIME CEN[FL]		Center front left		
RVRB TIME CEN[FR]		Center front right		

<sup>\*:</sup> Even when a buzzer (backward) is output condition, this item is indicated as OFF.

### SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

< ECU DIAGNOSIS INFORMATION >

[BOSE AUDIO WITH SURROUND SOUND]

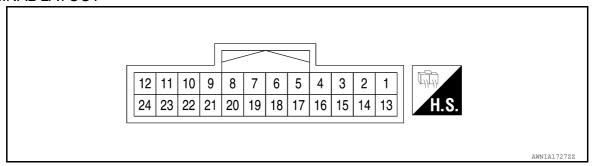
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### TERMINAL LAYOUT



### PHYSICAL VALUES

Terminal No. (Wire color)		Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
3 (R)	13 (B)	Outer 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)	13 (B)	Outer 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  JSNIA0837GB
5 (B)	_	V-CAN (H)	Input/ Output	_	_	_
6 (W)	_	V-CAN (L)	Input/ Output	_	_	_
9 (W)	14 (B)	Inner 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
10 (W)	14 (B)	Outer 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
12 (LG)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage

### SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) [BOSE AUDIO WITH SURROUND SOUND]

### < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description			Condition	Value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
15 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
19 (BR)	20 (LG)	Buzzer	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	Battery voltage	
21 (W)	14 (B)	Inner 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	
22 (W)	14 (B)	Outer 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	

**DTC Index** INFOID:0000000008376979

CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-553, "SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : DTC Logic"
U1010: CONTROL UNIT (CAN)	AV-554, "SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): DTC Logic"
B2720: REAR LEFT SIDE EXTERNAL SENSOR	AV-604, "DTC Logic"
B2721: REAR LEFT SIDE INTERNAL SENSOR	AV-605, "DTC Logic"
B2722: REAR RIGHT SIDE INTERNAL SENSOR	AV-606, "DTC Logic"
B2723: REAR RIGHT SIDE EXTERNAL SENSOR	AV-607, "DTC Logic"
B2724: ECU	AV-608, "DTC Logic"
B2725: REAR BUZZER	AV-609, "DTC Logic"
B2729: FRONT LEFT SIDE EXTERNAL SENSOR	AV-611, "DTC Logic"
B272C: FRONT RIGHT SIDE EXTERNAL SENSOR	AV-612, "DTC Logic"

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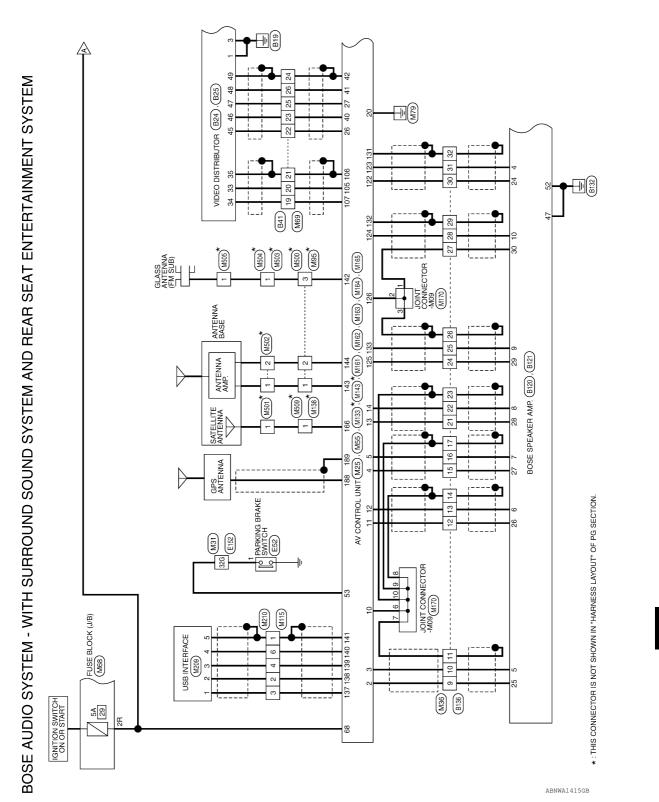
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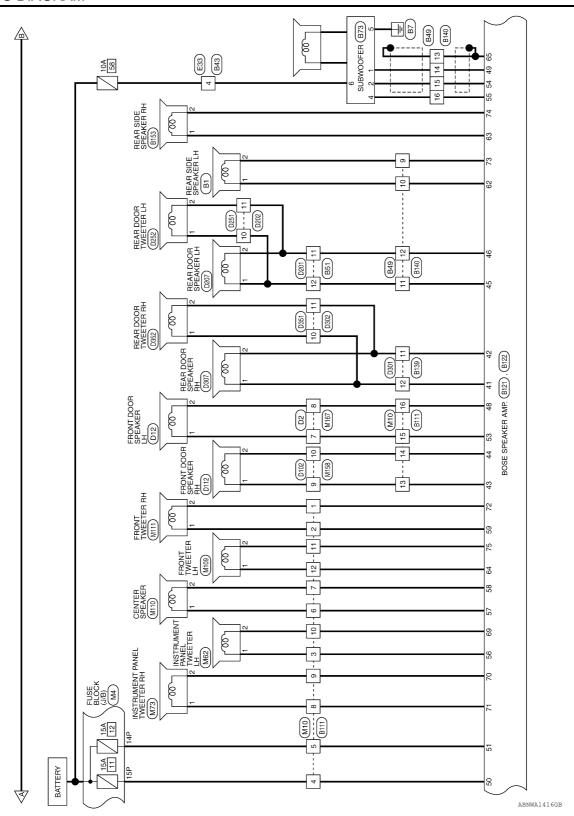
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# **WIRING DIAGRAM**

### **BOSE AUDIO WITH SURROUND SOUND**

Wiring Diagram





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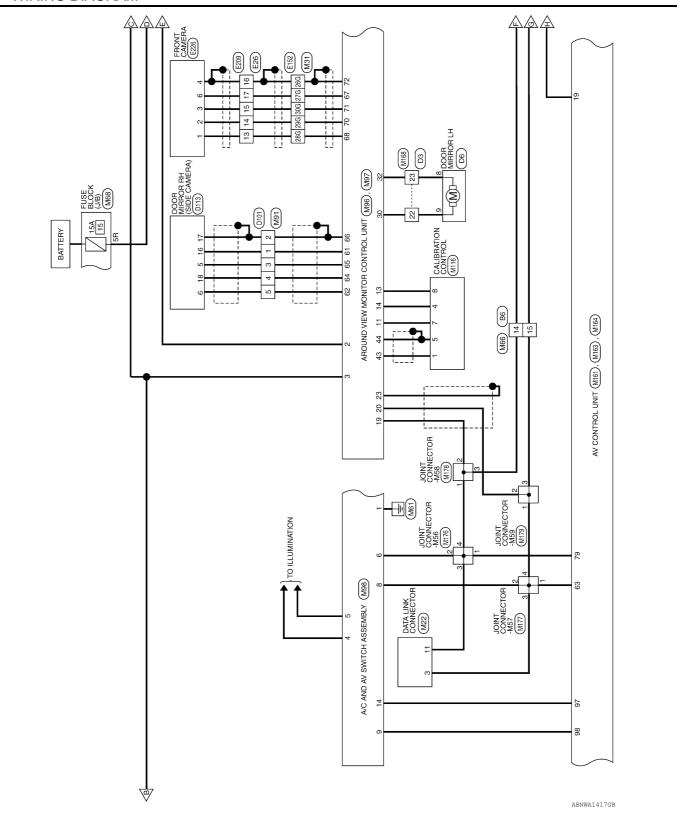
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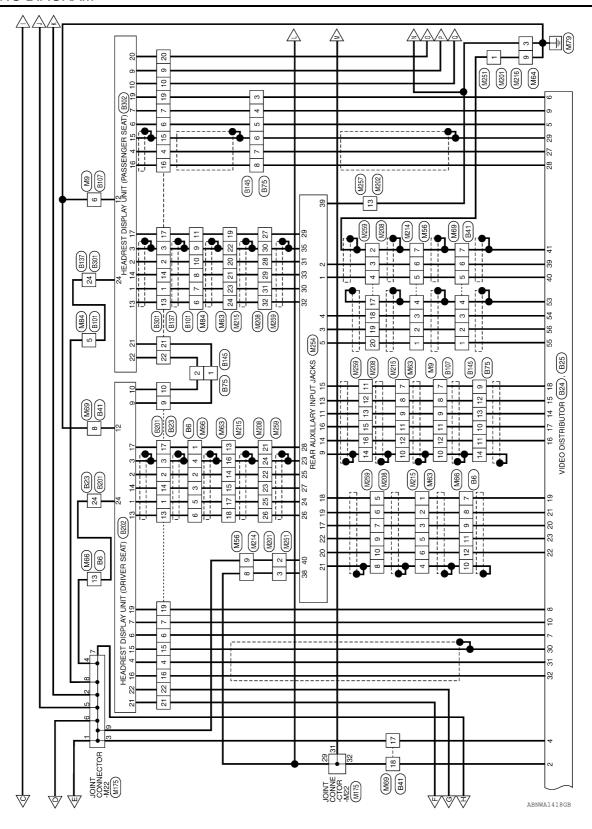
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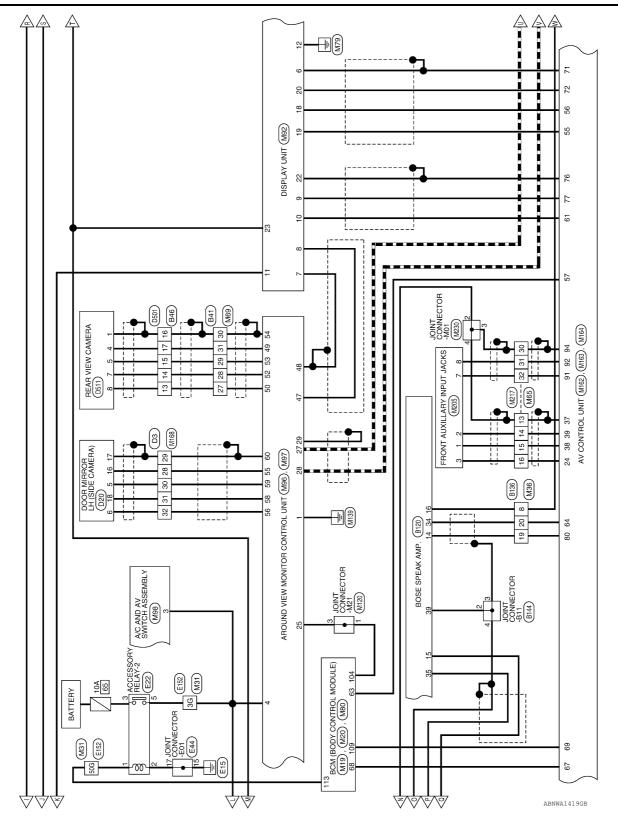
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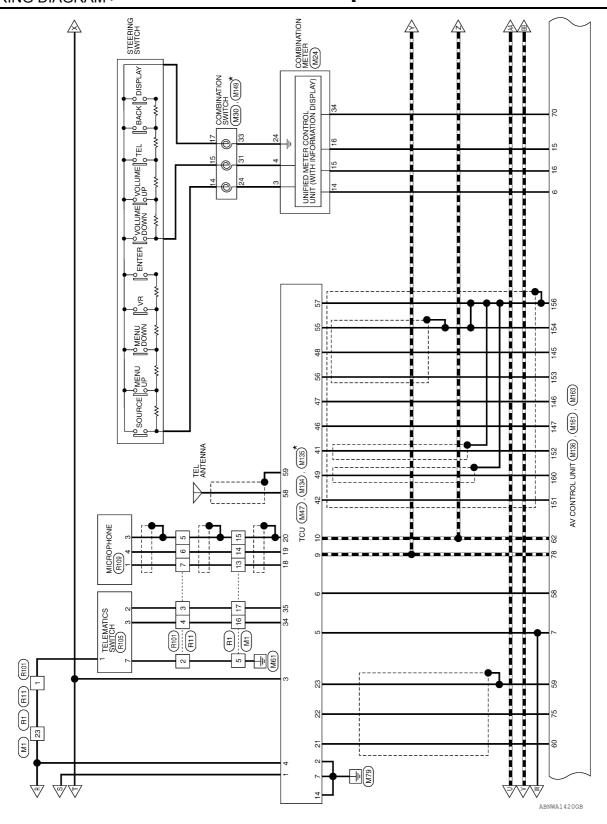
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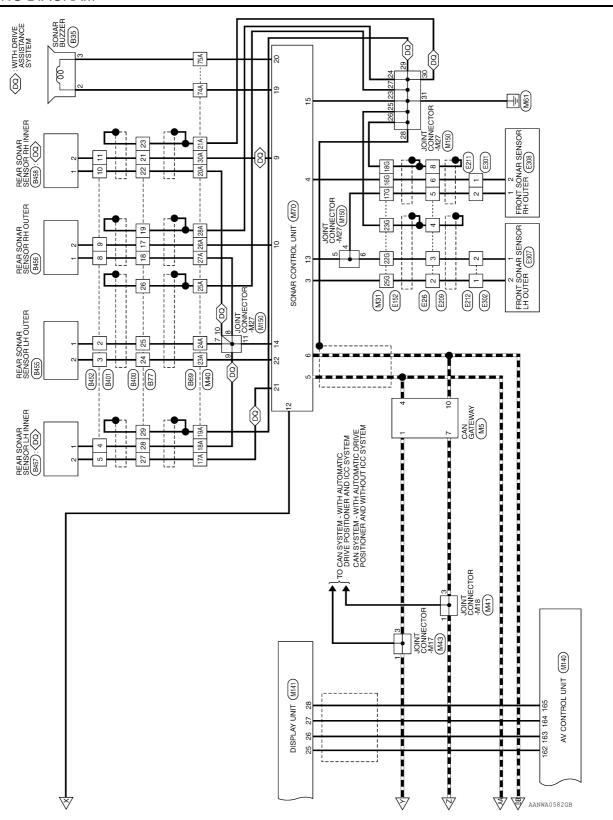
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Connector No. M5
Connector Name CAN GATEWAY

Connector Color WHITE

# BOSE AUDIO SYSTEM CONNECTORS - WITH SURROUND SOUND SYSTEM AND REAR SEAT ENTERTAINMENT SYSTEM

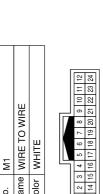
M1	WIRE TO WIRE	WHITE	
Connector No.	Connector Name   WIRE TO WIRE	Connector Color WHITE	

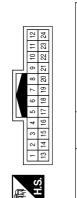
Connector Name FUSE BLOCK (J/B)

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Connector No.

Connector Color WHITE





Signal Name	I	ī	ı	_	ı	1
Color of Wire	В	>	В	знієгр	В	۵
Terminal No. Wire	2	13	14	15	16	23

Signal Name	ı	1	1	ı
Color of Wire		٦	Д	Ь
Terminal No.	-	4	7	10

Signal Name	I	ı	
Color of Wire	Y	٦	
Terminal No.	14P	15P	

Signal Name	-	ı	
Color of Wire	>	ــ	
erminal No.	14P	15P	

Signal Name	I	1	ı	ı	1	1	1	1	1
Color of Wire	g	Μ	Μ	ш	В	В	M	В	Μ
Terminal No. Wire	8	6	10	11	12	13	14	15	16

Connector No. M10 Connector Name WIRE TO WIRE Connector Color BROWN	M10	WIRE	
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WIRE TO WIRE	BROWN		H.S.	Signal Name	-	_	_	_	_	1	=
			6 5 14 15 14	Color of Wire	В	W	В	٦	У	G	Μ
Connector Name	Connector Color	[	v	Terminal No.	1	2	3	4	2	9	

Connector No.	M9
Connector Name   WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE
12 11 10 9	9 8 7 6 5 4 3 2 1
24 23 22	24 23 22 21 20 19 18 17 16 15 14 13
-	

7 6 5 4 3 2 1 19 18 17 16 15 14 13	Signal Name	1	1	1	1	ı	1	ı
23 22 21 20	Color of Wire	GR	>	g	Œ	SHIELD	M	В
(12 12 12 12 12 12 12 12 12 12 12 12 12 1	Terminal No.	9	7	8	6	10	11	12

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### [BOSE AUDIO WITH SURROUND SOUND]

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< WIRING DIAGRAM >

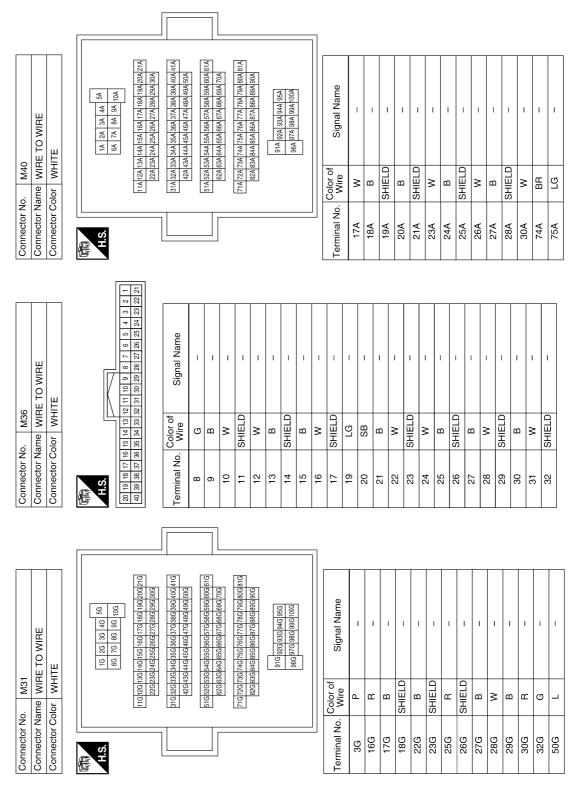
Connector No.   M22	Connector No.         M30           Connector Name         COMBINATION SWITCH           Connector Color         GRAY           H.S.         Eat 31 22 31 32 31 32 31 32 31 32 31 32 31 8 AUDIO STRG SW           Terminal No.         Color of Wire PEMOTE A REMOTE B           33         R AUDIO STRG SW GND           33         R AUDIO STRG SW GND
Connector No.   M20   Connector Name   BCM (BODY CONTROL   MODULE)   Connector Color   BLACK	Connector No. M25 Connector Name AV CONTROL UNIT Connector Color PINK  H.S. Freminal No. Wire B - 188 B - 189 SHIELD - 189
Connector No.   M19   Connector No.   M19   Connector Name   BCM (BODY CONTROL   MODULE)   Connector Color   BLACK	Connector No.   M24   Connector Name   COMBINATION METER   Connector Color   WHITE   Connector Color   WHITE   Connector Color   WHITE   Connector Color   White   Signal Name   Signa

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[BOSE AUDIO WITH SURROUND SOUND]

### < WIRING DIAGRAM >



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[BOSE AUDIO WITH SURROUND SOUND]

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Connector No.

Connector Name JOINT CONNECTOR-M18
Connector Color WHITE

Connector No.

Signal Name	I	ı	ı	I	I	I	I	ı	I	ECALL SW	LED A	I	ı	I	_	I
Color of Wire	1	1	1	1	ı	1	1	1	-	ш	*	-	1	1	_	-
erminal No.	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Connector Name	_	JOINT CONNECTOR-M17
Connector Color	olor WHITE	ПЕ
H.S.	4	3 2 1 []
Ferminal No.	Color of Wire	Signal Name
1	7	I
3	7	1
erminal No.	Color of Wire	Signal Name
8	ı	1
6	_	V-CAN H
10	Ь	V-CAN L
11	1	ı
12	ì	ı
13	ı	ı
14	В	AUDIO TYPE CONFIG 1
15	I	ı
16	ı	ı
17	ı	ı
18	8	MIC VCC
19	В	MIC SIG
20	SHIELD	MIC GND
21	Μ	MIC VCC DETECTION
22	В	DCM MIC SIG
23	знієгр	DCM MIC GND
24	-	I

Connector No.	M47
Connector Name TCU	TCU
Connector Color WHITE	WHITE
草	

Sign	GND
Color of Wire Wire P P B B G G G G G G G G G G G G G G G G	Ф
Terminal No. (2 2 3 3 3 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	7

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Color o Wire	d	Ы
Terminal No.	1	3

Signal Name

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[BOSE AUDIO WITH SURROUND SOUND]

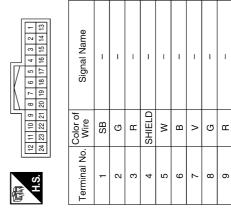
Signal Name	ı	I	ı	ı	1
Color of Wire	В	Α	SHIELD	۵	<b>\</b>
Terminal No.	2	9	7	8	6

Signal Name	ı	ı	ı	ı	I	ı	ı	ı	ı	ı	ı	ı	I	ı	I
Color of Wire	SHIELD	>	В	T	В	Œ	SHIELD	Μ	В	٦	ŋ	В	SHIELD	×	В
Terminal No.	10	11	12	13	14	15	16	17	18	19	20	12	22	23	24

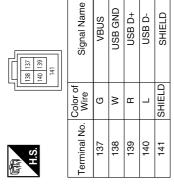
	:		L										
Connector No.	ė.		2	M56	,								
Connector Name WIRE TO WIRE	Nar	пe	>	Ħ	Щ.	임	≥		Ιш				
Connector Color WHITE	3	ō	^	¥	E								
偃				ī	$\ \cdot\ $	M	V	17					
Ų.	12	=	유	6	12 11 10 9 8	^	9	2	4	က	2	-	
9	24	ន	22	2	24 23 22 21 20 19 18 17 16 15 14 13	9	8	17	9	15	7	5	
		1			1	1	1	1	1	1	1	1	

Signal Name	ı	ı	ı	ı	
Color of Wire	Ж	8	В	SHIELD	
Terminal No.	-	2	3	4	

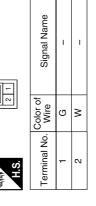
	Ε		
M63	WIRE TO WIR	WHITE	
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	



Connector No.	M55
Connector Name	Connector Name AV CONTROL UNIT
Connector Color BLUE	BLUE



M62	Connector Name INSTRUMENT PANEL TWEETER LH	BROWN	
Connector No.	Connector Name	Connector Color   BROWN	



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[BOSE AUDIO WITH SURROUND SOUND]

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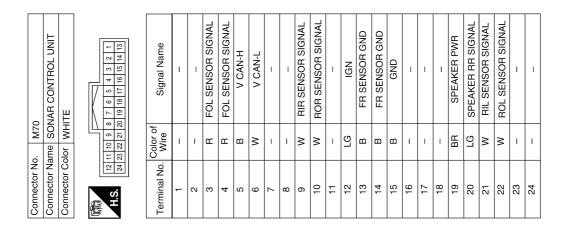
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### < WIRING DIAGRAM >

								Connector No. M68 Connector Name FUSE BLOCK (J/B)		_	[ TR 6R 5R 4R [ 3R 2R 1R ]	1 6 15 15 14 13 12 11 11 10 1 8 1 8 1 1 1 1 1 1 1 1 1 1 1			Terminal No. Wire Signal Name	2R LG -	5R Y –					
r No. M65 r Name WIRE TO WIRE r Color WHITE    15   14   13   12   11   10   9   8   7   6   5   4   3   2   1     25   31   30   29   28   27   28   25   29   19   18   17     32   31   30   29   28   27   28   25   29   29   19   18   17     33   31   30   29   28   27   28   25   29   29   19   18   17     34   35   35   35   35   35   35   35	Color of Signa Wire	SHELD			SHIELD -	В –		No. Wire Signal Name	SB	- 5	а П	SHIELD -		\ >	- X	SB -						
Connecto Connecto Connecto H.S.	Vame	13	15	16	30	31	32	Terminal No.	7	ω	6	3 2	15 14 13	12	Vame 13		15					
Connector No. M64  Connector Name WIRE TO WIRE  Connector Color WHITE  T 6 5 4	al No. Wire Signal	П П П П П П П П П П П П П П П П П П П						Connector No. M66 Connector Name WIRE TO WIRE	Connector Color WHITE	_		12 11 10 9 8 7 6 5	24 23 22 21 20 19 18 17 16	. (	Terminal No. Wire Signal Name	1	2 G	3 R	4 SHIELD –	- M	- B	

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_		_	_					_	_	_	_		_	
	Signal Name	-	_	ı	1	_	_	1	ı	_	-		ı	ı
	Color of Wire	В	×	SHIELD	>	Я	SHIELD	В	g	В	В	Б	SHIELD	*
	Terminal No.	19	20	21	22	23	24	25	26	27	28	29	30	31

			-	4										
	WIRE TO WIRE	ш	11 10 9 8 7 6 5 4 3 2	27 26 25 24 23 22 21 20 19 18	Signal Name	I	1	ı	ı		-	ı	I	I
. M69		lor WHITE	15 14 13 12 1	31 30 29 28 2	Color of Wire	Ж	8	В	SHIELD	В	M	SHIELD	В	>
Connector No.	Connector Name	Connector Color	191	88	Terminal No.	Į.	2	3	4	9	9	2	8	17

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[BOSE AUDIO WITH SURROUND SOUND]

### < WIRING DIAGRAM >

				<u>-</u>	17								
	RE TO WIRE	IIE		11 10 9 8 7 6 5 4 3 2	27 26 25 24 23 22 21 20 19 18	Signal Name	1	1	I	ı	1	1	
. M84	me WIF	lor WHITE		15 14 13 12	31 30 29 28 27 26 25	Color of Wire	<b>\</b>	В	M	В	SHIELD	G	
Connector No.	Connector Name WIRE TO WIRE	Connector Color	追	16	32	Terminal No.	5	9	7	8	6	10	
					_								

Signal Name	FRONT DISP IT	IT FRONT DISP	BATT	GND	1	ı	1	1	1	FRONT COMP +	FRONT COMP -	FRONT COMP SYNC	ı	SHIELD	ACC	
Color of Wire	В	*	>	В	1	1	-	1	1	В	Μ	æ	1	SHIELD	Д	
Terminal No.	6	10	F	12	13	14	15	16	11	18	19	20	21	22	23	24

Connector No.		0
Connector Name		BCM (BODY CONTROL MODULE )
Connector Color	olor BLACK	4CK
H.S. 116	1151141131 1271261251	
Terminal No.	Color of Wire	Signal Name
109	В	REVERSE SIGNAL
113	<u>~</u>	ACC BELAY OUT

	DISPLAY UNIT	WHITE		7 6 5 4 3 2 1	2	Signal Name	I	I	I	ı	ı	FRONT COMP SHIELD	SHIELD	R CAMERA COMP
. M92				12 11 10 9 8	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of Wire	1	1	ı	ı	ı	SHIELD	SHIELD	В
Connector No.	Connector Name	Connector Color	1	Ŋ.		Terminal No.	-	2	က	4	2	9	7	8

Connector No.	M73
Connector Name	Connector Name INSTRUMENT PANEL TWEETER RH
Connector Color BROWN	BROWN
i d	

Connector Name   INSTRUMENT PANEL   TWEETER RH	BROWN	2 1	Signal Name	ı	ı
INS IML IML			Color of Wire	ŋ	Μ
Connector Na	Connector Color	明 H.S.	Terminal No.	1	2

		_	1 7						
1	WIRE 10 WIRE		11 10 9 8 7 6 5 4 3 2 2 2 2 2 2 18 18	Signal Name	I	I	1	I	1
			30 29 28	Color of Wire	8	SHIELD	თ	œ	В
Connector No.	Connector Color		H.S. 16 15 32 31	Terminal No.	-	2	က	4	5
0	<u>ل</u> ر		_						

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**AV-503** Revision: March 2012 2013 Infiniti JX

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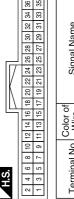
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Signal Name	ı	I	M-CAN GND	ı	REV	ı	V-CAN1 H	V-CAN1 L	V-CAN1 GND	MIRROR SIGNAL 2	I	MIRROR SIGNAL 1	I	I	ı	I	ı	ı	I	ı
Color of Wire	ı	1	SHIELD	ı	FG	ı	В	M	SHIELD	8	ı	ტ	ı	ı	1	1	-	1	ı	ı
Terminal No.	21	22	23	24	25	56	27	28	67	30	31	32	33	34	35	36	37	38	39	40

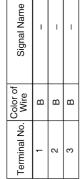
Connector No.	M96
Connector Name	Connector Name AROUND VIEW MONITOR CONTROL UNIT
Connector Color WHITE	WHITE
E SH	



Signal Name	GND	+B	IGN	ACC	ı	ı	ı	I	ı	ı	SIGNAL GND	Ι	CAMERA DIRECT OFF	RX	-	_	_	1	M-CAN-1H	M-CAN-1L
Color of Wire	В	Υ	PT	Ь	ı	ı	ı	1	ı	ı	Э	1	Ь	BG	1	_	_	_	В	W
Terminal No.	_	2	3	4	5	9	2	8	6	10	11	12	13	14	15	16	17	18	19	20

	RE		
M95	WIRE TO WII	GRAY	
Connector No.	Connector Name   WIRE TO WIR E	Connector Color GRAY	





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[BOSE AUDIO WITH SURROUND SOUND]

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### < WIRING DIAGRAM >

tor No. M98	tor Name A/C AND AV SWITCH ASSEMBLY	tor Color WHITE	2 4 6 8 10 12 14 16 11 13 15	Color of Signal Name	GR –	- П	١	В	SB	- 9T	>	>
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	1	3	4	2	9	8	o	7

Vame	EO +	EO -	L SIGNAL	WER		ER GND	)EO +	ER GND	L SIGNAL	WER		ER GND	)EO +	DEO -	- SIGNAL	WER		ER GND	EO +	)EO -
Signal Name	RV VIDEO	RV VIDEO	SV2 SERIAL SIGNAL	SV2 POWER	I	SV2 POWER GND	SV2 VIDEO +	SV2 POWER GND	SV1 SERIAL SIGNAL	SV1 POWER	ı	SV1 POWER GND	SV1 VIDEO +	SV1 VIDEO	FV SERIAL SIGNAL	FV POWER	'	FV POWER GND	FV VIDEO	FV VIDEO
Color of Wire	g	SHIELD	В	>	ı	g	н	SHIELD	8	В	ı	В	g	SHIELD	В	8	ı	9	н	SHIELD
Terminal No.	53	54	55	56	22	58	59	09	61	62	63	64	65	99	29	89	69	20	71	72

Connector No.	M97
Connector Name	Connector Name AROUND VIEW MONITOR CONTROL UNIT
Connector Color WHITE	WHITE

	Signal Name	I	I	EXTERNAL VIDEO OUTPUT +	EXTERNAL VIDEO OUTPUT -	I	I	VIDEO OUTPUT +	VIDEO OUTPUT -	RV SERIAL SIGNAL	RV POWER	ı	RV POWER GND
	Color of Wire	ı	ı	В	SHIELD	ı	1	В	SHIELD	M	В	_	æ
	Terminal No.	41	42	43	44	45	46	47	48	49	20	51	52

-	FRONT TWEETER RH	BROWN		Signal Name	1	ı
. M111				Color of Wire	Μ	В
Connector No.	Connector Name	Connector Color	麻 H.S.	Terminal No.	-	2

B
M110 CENTER SPEAKER BROWN  2 in signal Name re Signal Name
M110  M110  India CENTER  Slor BROWN  Color of Wire  G  G  G  G  G  G  G  G  G  G  G  G  G
Connector No. Connector Color H.S.  Terminal No. Ool

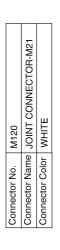
		l			l .	
60	FRONT TWEETER LH	BROWN	<u> </u>	Signal Name	1	ı
M109		_		Color of Wire	G	Œ
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No.	-	2

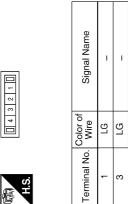
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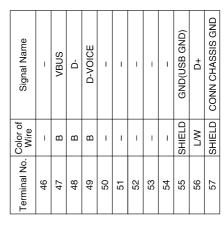
Revision: March 2012 AV-505 2013 Infiniti JX

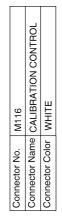
[BOSE AUDIO WITH SURROUND SOUND]

### < WIRING DIAGRAM >











	Signal Name	I	1	-	1	ı
Color of	Wire	В	BG	знієгр	9	Ъ
	Terminal No.	-	4	2	2	8

Connector No Connector Na Connector Co		Connector No. M134	Connector Name TCU	Connector Color WHITE			48 47 46 45 44 43 42 41	56 55 54 53 52 51 50 49	
--	--	--------------------	--------------------	-----------------------	--	--	-------------------------	-------------------------	--

Signal Name	U-VOICE	VOICE GND	_	1	1
Color of Wire	8	_	-	1	1
Terminal No. Wire	41	42	43	44	45





7 5 4 7 2	Signal Na	-	ı	-	I	1
	Color of Wire	SHIELD	Μ	G	ш	_
H.S.	Terminal No.	-	2	3	4	9

M133	/ CONTROL UNIT	NMOF	
Connector No. M	Connector Name AV CONTROL UNIT	Connector Color BROWN	





Signal Name	ı	
Color of Wire	В	
Terminal No.	166	

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## [BOSE AUDIO WITH SURROUND SOUND]

< WII	RING	DIA	GRA	M >

Signal Name	_	VBUS	-O	D-VOICE	-	_	-	-	_	GND (USB GND)	+Q	CONN CHASSIS GND
Color of Wire	_	В	В	В	1	-	_	ı	-	SHIELD	M	SHIELD
erminal No. Wire	150	151	152	153	154	155	156	157	158	159	160	161

	OL UNIT		3147146145 3155154153
M136	AV CONTR	WHITE	
Connector No.	Connector Name   AV CONTROL UNIT	Connector Color WHITE	H.S.





M135	TCU	BROWN	
Connector No.	Connector Name TCU	Connector Color BROWN	



Signal Name	1	-	
Color of Wire	В	SHIELD	
Terminal No.	58	59	

VOICE GND

1

148 147

1

Signal Name U-VOICE

Color of Wire ≥

Terminal No.

145





25 26 27 28

M140	innector Name AV CONTROL UNIT	BLUE	
nnector No.	nnector Name	nnector Color BLUE	



163 162

Connector No.	M138
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color GREEN	GREEN
南	



Signal Name	GND	GND	GVIF+	GVIF-
Color of Wire	SHIELD	SHIELD	В	В
Terminal No. Wire	25	56	27	28

Signal Name	GND	GND	GVIF-	GVIF+
Color of Wire	SHIELD	SHIELD	В	В
Terminal No. Wire	162	163	164	165

Signal Name	1	
Color of Wire	В	
Terminal No.	1	

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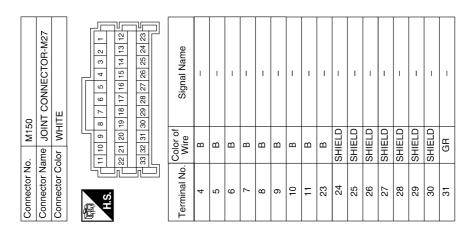
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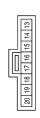
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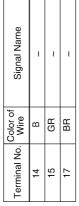
### [BOSE AUDIO WITH SURROUND SOUND]





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Signal Name	ANT MAIN	ANT +B	ANT SUB
Color of Wire	В	В	В
Terminal No.	142	143	144

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[BOSE AUDIO WITH SURROUND SOUND]

## < WIRING DIAGRAM >

Signal Name	ACC	ı	1	SHIELD	FR RH PRE+	FR RH PRE-	RR RH PRE+	RR RH PRE-	STRG SW GND	STRG SW B	ı	_	4B	GND
Color of Wire	5	ı	ı	BR	*	В	В	8	В	>	ı	1	>	GR
Terminal No.	7	80	6	10	11	12	13	14	15	16	17	18	19	20

Signal Name	AUX AUDIO-	HP1 LH-	HP1 RH-	HP1 SHIELD	ı	ı	_	ı	ı
Color of Wire	В	æ	g	SHIELD	ı	ı	ı	ı	ı
Terminal No.	39	40	41	42	43	44	45	46	47

Connector No.	M161
Connector Name	Connector Name AV CONTROL UNIT
Connector Color WHITE	WHITE

Signal Name	ı	FR LH PRE+	FR LH PRE-	RR LH PRE+	RR LH PRE-	STRG SW A	
Color of Wire	ı	В	M	В	M	5	
Terminal No. Wire	-	2	ဇ	4	5	9	

RR LH PRE-	STRG SW A		Signal Name	1	I	1	I	1	I	ı	I	ı	AUX SHIELD	AUX AUDIO RH
W	g		Color of Wire	ı	1	ı	-	-	ı	ı	_	ı	SHIELD	M
5	9		Terminal No.	28	59	30	31	32	33	34	35	36	37	38

Connector No.	M158
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE



Signal Name	I	ı	
Color of Wire	Б	W	
Terminal No.	6	10	

52	Connector Name AV CONTROL UNIT	WHITE	25 26 27 28 29 30 31 32 33 34 39 40 41 42 43 44 45 46 47 48		Signal Name	_	ı	1	AUX AUDIO LH	ĺ	HP1 LH+	HP1 BH+
M162	me AV		22 23 24 36 37 38		Color of Wire	1	1	1	œ	ı	≯	۳
Connector No.	Connector Na	Connector Color	H.S. 35	]	Terminal No.	21	22	23	24	25	26	27

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[BOSE AUDIO WITH SURROUND SOUND]

Connector No.	lo. M163	Connector No. M163	Terminal No.	Color of Wire	Signal Name	<u> </u>	Terminal No.	Color of Wire	Signal Name
Connector Color	color WH	WHITE	54	1	I		89	57	IGN
	_		55	×	NAVI COMP1-		69	Œ	REVERSE SIG
			56	В	NAVI COMP1+		20	BG	SPEED
U	49 50 51 52 53 54 55 56	57 58 59 60 61	22	BG	RESERVE 11		71	SHIELD	NAVI COMP1 SHIELD
=	69 69 69	70 71 72 73 74 75 76 77 78 79 80	28	g	RESERVE 12		72	Œ	GND
			69	SHIELD	MIC GND		73	1	ı
			09	8	MIC VCC		74	1	1
Terminal No.	Wire	Signal Name	61	8	IT-DISP		75	В	MIC SIG
49	-	ı	62	۵	V-CAN L		9/	SHIELD	DISP SHIELD
20	1	1	63	Pe	M-CAN L		22	В	DISP-IT
51	-	ı	64	P	M-CAN L TRM		78	7	V-CAN H
52	1	1	99	1	1		62	SB	M-CAN H
53	5	PKB SIG	99	1	1		80	SB	M-CAN H TRM
			29	۵	MR OUTPUT				
Connector No.	lo. M164	54	Terminal No.	Color of	Signal Name	Te	Terminal No.	Color of	Signal Name
Connector Name AV CONTRC	lame AV (	CONTROL UNIT	07			!	100	ב ב	
Connector Color   WHITE	olor   WE	HTE	8/	ı	1		cn L	>	NAVI COMP2-
			88	-	_		106	SHIELD	NAVI COMP2 SHIELD
			88	ı	_		107	В	NAVI COMP2+
2	L		06	ı	1		108	ı	1
		I/ L	91	Α.	AUX VIDEO+		109	1	ı
81 83 85 87 89 91 93 95 97 99 101 82 84 86 88 90 92 94 96 98 1001	9 91 93 95	93 95 97 99 101 103 105107 109 111 113 115 117 119 94 96 98 100 102 104 106 108 110 112 114 116 118 120	92	В	AUX VIDEO-		110	ı	ı
3	<u>,</u>	-11	66	-	_		111	1	ı
			94	SHIELD	VIDEO SHIELD		112	ı	ı
	Color of		95	1	_		113	ı	ı
rerminal No.	. Wire	Signal Name	96	-	_		114	ı	ı
84	1	ı	26	<b>\</b>	DVD EJECT		115	ı	ı
82	ı	ı	86	>	EJECT GND		116	ı	ı
83	ı	ı	66	1	ı		117	1	ı
84	ı	I	100	ı	_		118	ı	ı
82	1	ı	101	1	-		119	ı	ı
86	1	I	102	ı	1		120	ı	ı
			103	ı	1				
			104	1	I				

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## < WIRING DIAGRAM >

		125	Wire	OENTER PRE-	Connector Nar	-
Connector Color   WHITE		126	> >	CENIER PRE+	Connector Color	or WHITE
		127	- 1	CENTER SPIELU	ą	
121122123124125128127128		128	ı	1	MAIN	10 9 8 7 6 5
129 130 131 132 133 134 135 136		129	ı	1	Ģ.	
		130	ı	ı		
عن بران		131	SHIELD	GUIDE SHIELD		30,00
Wire Signal Name		132	M	SUB WOOFER PRE-	Terminal No.	Wire Signal Name
1		133	В	CENTER PRE-	7	1
B GUIDE+		134	ı	ı	8	
		135	-	1		
B SUB WOOFER PRE+		136	ı	ı		
Connector No. M168	ပြ	Connector No.	o. M170	0	Connector No.	M175
Connector Name WIRE TO WIRE	<u> </u> ŏ	onnector Na	ume JOIN	Connector Name JOINT CONNECTOR-M09	Connector Nar	Connector Name JOINT CONNECTOR-M22
Connector Color WHITE	ŭ	Connector Color WHITE	olor WHI	TE	Connector Color WHITE	or WHITE
	[	[				
			11 10 9	8 7 6 5 4 3 2 1	50	11 10 9 8 7 6 5 4 3 2 1
		o O	22 21 20 19 18	19 18 17 16 15 14 13 12	7.5. 7.22.21	21 20 19 18 17 16 15 14 13 12
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 2 2 2 2 4 2 2 2 2 2 2 2 2 2 2 2 2	<u> </u>		33 32 31 30	29 28	- F	32 31 30 29 28 27 26 25 24 23
	L					Color of Caraci Magazi
Terminal No. Wire Signal Name	Te	Terminal No.	Color of Wire	Signal Name	lerminal No.	Wire Signal Name
		1	SHIELD	1	- 0	
		2	>	1	ı m	
л В		က	SHIELD	1	4	\ >
SHIELD –		9	BB	1		
ı		7	SHIELD	1	9	\ \
			SHIELD	1		\ \
			SHIELD	ı	. 00	
		10	SHIELD	ı	6	\ \
					59	1
					31	- П
					32	- П

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Revision: March 2012 AV-511 2013 Infiniti JX

Connector Name WIRE TO WIRE Connector Color WHITE

Connector Name WIRE TO WIRE Connector Color WHITE

Connector Name JOINT CONNECTOR-59

Connector No. M179

Connector Color WHITE

Connector No. M201

Connector No. M202

[BOSE AUDIO WITH SURROUND SOUND]

Signal Name

Color of Wire

Terminal No.

Signal Name

Color of Wire

Terminal No.

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### < WIRING DIAGRAM >

Connector No. M178  Connector Name JOINT CONNECTOR-M58  Connector Color WHITE	2 1 0	Signal Name	ı	ı	1		
me JOIN	4 3	Solor of Wire	SB	SB	SB		
Connector No. M178 Connector Name JOINT C Connector Color WHITE	可到 H.S.	Color of Terminal No. Wire	-	2	က		
			1	1			1
Connector No. M177  Connector Name JOINT CONNECTOR-M57  Connector Color WHITE	2 1 0	Signal Name	1	ı	1	1	
me JOIN	4 3	Solor of Wire	FG	P	P	re	
Connector No. M177 Connector Name JOINT C Connector Color WHITE	明.S.	Terminal No. Wire	-	0	က	4	
Connector No. M176 Connector Name JOINT CONNECTOR-M56 Connector Color WHITE	210	Signal Name	1	ı	1	I	
me JOINT	4 3	Color of Wire	SB	SB	SB	SB	
Connector No. M176 Connector Name JOINT C Connector Color WHITE	响 H.S.	Terminal No. Wire	F	2	က	4	

 Terminal No.
 Color of Wire
 Signal Name

 1
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 2
 LG

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ABNIA3570GB

[BOSE AUDIO WITH SURROUND SOUND]

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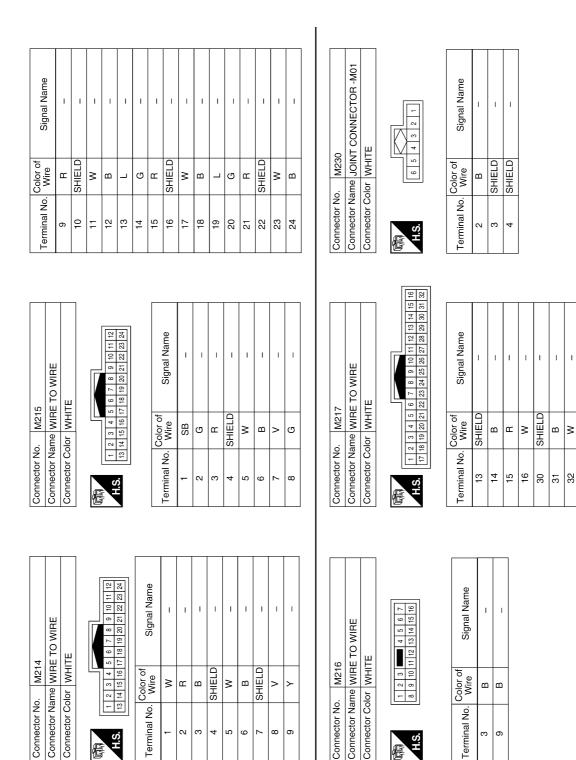
< WIRING DIAGRAM	>
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Connector No.	No. M205	JS TALIVII JABV	Connector No. M208 Connector Name IVIDE TO WIDE	o. M208	88 TO MIBE	<u>.                                    </u>	Terminal No.	Color of Wire	Signal Name	
	NP.	INPUT JACKS	Connector Color	olor WHITE	TF TF	-	14	SHIELD	ı	
Connector Color	Color WHITE	ITE				-	15	>	1	
						-	16	В	ı	
F		- 11		2 3 4 5	6 7 8 9 10 11 12 13 14 15	16	17	SHIELD	1	
H.S.	1 2 3	4 5 6 7 8	11	18 19 20 21	22 23 24 25 26 27 28 29 30 31	32	18	В	ı	
	10,20			30,000			19	ш	I	
Terminal No.	o. Wire	Signal Name	Terminal No.	Wire	Signal Name	<u> </u>	20	>	ı	
-	Œ	AUX AUDIO RH+	2	SHIELD	ı		21	l l	1	
2	В	AUX AUDIO GND	က	В	1		22	ŋ	1	
ო	>	AUX AUDIO LH+	4	8	1		23	œ	ſ	
7	>	AUX VIDEO+	5	SB	1		24	SHIELD	1	
8	В	AUX VIDEO-	9	g	1	1	25	8	I	
			7	Œ	ı		56	В	-	
			8	SHIELD	1		27	٦	I	
			6	3	1		28	ŋ	I	
			10	В	1	ı	59	Œ	ı	
			11	>	1	1	30	SHIELD	ı	
			12	g	1	·	31	8	ı	
			13	æ	1		32	В	ı	
Connector No.	No. M209	60	Connector No.	). M210						
Connector N	Vame USI	Connector Name USB INTERFACE	Connector Name WIRE TO WIRE	me WIRE	E TO WIRE					
Connector Color WHITE	Solor WH	IITE	Connector Color	olor GRAY	>-					
E	_	ď		-[						
H.S.		4 2 1	 H.S.		2 3					
					6 7					
Terminal No.	Color of	Signal Name	Terminal No.	Color of	Signal Name					
	Wire			Wire						
-	σ	ı		SHIELD	1					
2	>	ı	2	>	1					
က	œ	ı	3	ŋ	ı					
4	_	ı	4	Œ	I					
2	SHIELD	ı	 9	Γ	1					

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Revision: March 2012 AV-513 2013 Infiniti JX

[BOSE AUDIO WITH SURROUND SOUND]



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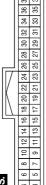
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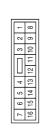
< WIRING DIAGRAM >

Signal Name	I	I	I	I	ı	ı	ı	_	ı	ı	ı	I	1	I	l	ı	ı	-	_	1	_	ı
Color of Wire	g	В	SHIELD	*	SHIELD	*	g	В	В	٦	Ь	*	В	В	В	-	SHIELD	_	-	Λ	В	¥
minal No.	19	20	21	22	23	24	25	26	27	28	59	30	31	32	33	34	35	36	37	38	39	40



ı		_	_		_	_	_	_			_	_	_	_	_				
	Signal Name	ı	ı	ı	I	I	-	ı	-	-	I	ı	ı	I	ı	I	_	I	_
	Color of Wire	Μ	В	В	æ	*	1	ı	1	SHIELD	ļ	н	ı	g	В	>	Μ	н	BG
	Terminal No.	-	2	8	4	5	9	7	8	6	10	7	12	13	14	15	16	17	18

Connector No.	M251
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE





Signal Name	I	ı	_
Color of Wire	В	>	^
Terminal No.	-	2	3

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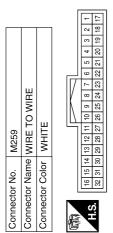
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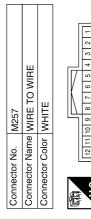
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ABNIA3573GB

Signal Name	ı	1	ı	1	1	ı	1	ı	ı	1	ı	-	1	1	-	ı	ı
Color of Wire	В	SHIELD	Œ	В	M	_	9	Œ	SHIELD	>	В	Ь	Э	В	знієгр	8	В
Ferminal No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32



Signal Name	1	ı	1	1	ı	ı	ı	ı	1	1	ı	1	ı	1
Color of Wire	SHIELD	В	>	BG	ŋ	œ	SHIELD	>	В	^	5	В	SHIELD	M
Terminal No. Wire	2	က	4	2	9	7	80	6	10	11	12	13	14	15



Signal Name	I	
Color of Wire	В	
Terminal No.	13	

ABNIA3574GB

[BOSE AUDIO WITH SURROUND SOUND]

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### < WIRING DIAGRAM >

							1	
Ο.	ENNA BASE	>:		Signal Name	1	ı		
M502	ne ANTI	or GRA		Solor of Wire	В	В		
Connector No.	Connector Name ANTENNA BASE	Connector Color GRAY	赋利 H.S.	Terminal No. Wire	1	2		
						ı		
	ENNA BASE	N		Signal Name	ı			
M501	le ANTE	r GREE		olor of Wire	В			
Connector No.	Connector Name ANTENNA BASE	Connector Color GREEN	(中)S.	Terminal No. Wire	1			
								1
-	E TO WIRE	<u></u>		Signal Name	1	ı	I	
M500	ne WIRE	or GRA		Solor of Wire	В	В	В	
Connector No.   M500	Connector Name WIRE TO WIRE	Connector Color GRAY	南 H.S.	Terminal No. Wire	1	2	က	

M505
Connector No. M505
M504
Connector No. M504
03
. M503
Connector No.

H.S.	Terminal N	-	
	Φ		
	Signal Name	_	
	Color of Wire	В	
H.S.	Terminal No. Wire	1	

ABNIA3575GB

**AV-517** Revision: March 2012 2013 Infiniti JX

[BOSE AUDIO WITH SURROUND SOUND]

## < WIRING DIAGRAM >

Connector No. M509	Connector No.	). E22		Connector No.		E26
<u> </u>	Connector Name		ACCESSORY RELAY-2	Connector Name		WIRE TO WIRE
Connector Color GREEN	Connector Color	1		Connector Color	-	WHITE
H.S.	原 H.S.	— [Ц]	2 × 1	H.S.	1 2 3 4 13 14 15 16	2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 20 21 22 23 24
	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	of Signal Name
Terminal No.   Color of   Signal Name   Wire	-	5	ı	2	>	ı
В .	2	В	1	က	В	1
	3	Ж	1	4	SHIELD	Q
	5	۵	ı	5	В	1
				9	۵	ı
				8	SHIELD	Q
				13	Œ	ı
				14	Ф	1
				15	g	1
				16	SHIELD	- Q
				17	8	
Connector No.   E33	Connector No.	). E44		Connector No.		E52
e	Connector Name		JOINT CONNECTOR-E01	Connector Name		PARKING BRAKE SWITCH
Connector Color WHITE	Connector Color	olor WHITE	ITE	Connector Color	-	BLACK
H.S. (5 4 ( ) 9 8 7 6	SH.	22 21 20 1	7 6 5 4 3 2 18 17 16 15 14 13	E.S.		-
		33 32 31 3	30 29 28 27 26 25 24 23			
Terminal No. Wire Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	of Signal Name
4 G –	15	GR	-	-	LG	-
	17	В	ı			

ABNIA3576GB

[BOSE AUDIO WITH SURROUND SOUND]

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## < WIRING DIAGRAM >

Connector No. E209 Connector Name WIRF TO WIRF		_		12	24 23 22 21 20 19 18 17 16 15 14 13	of the state of th	Terminal No. Wire Signal Name		3 В	4 SHIELD -	5 B	9	8 SHIELD -	- H	14 B -	15 G –	16 SHIELD –	17 W –	Connector No. E226	Connector Name FRONT CAMERA	Connector Color BLACK	H.S. (123456)	Terminal No.   Color of   Signal Name	т п	2 B –	3 G –	유	
Terminal No. Wire Signal Name	3G P –	16G R –	17G B –	18G SHIELD –	22G B –	23G SHIELD -	25G W –	26G SHIELD –	27G W –	28G R –	29G B –	306 G –	32G LG –	- e e e e e e e e e e e e e e e e e e e					Connector No.   E212	Connector Name WIRE TO WIRE	Connector Color GRAY	H.S.	Terminal No.   Color of   Signal Name	-	2 B –			
Connector No. E152 Connector Name WIRF TO WIRF	Connector Color   WHITE	_		56 00 00 00 00	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			30G/29G/27G/26G/25G/23G/22G	416406 396 376 366 356 336 326 316	506 496 476 466 456 446 436 426	61660158955895589558958958958	700 690 680 670 660 650 640 620 620	0+000000000000000000000000000000000000	90.0890.8850.8850.8450.826		95G 94G 93G 92G 91G	1000 990 980 970 960		Connector No.   E211	Connector Name WIRE TO WIRE	Connector Color GRAY	(五) (1 2 3 4 4 4 5 6 7 8 8 7 8 8 7 8 8 7 8 8 9 7 8 9 9 9 9 9	Terminal No. Wire Signal Name	- C	2 B –			

ABNIA3577GB

Revision: March 2012 AV-519 2013 Infiniti JX

[BOSE AUDIO WITH SURROUND SOUND]

### < WIRING DIAGRAM >

Connector No. E301 Connector Name WIRE TO WIRE Connector Color GRAY	E301 ne WIRE -	E TO WIRE	Connector No. E302 Connector Name WIRE TO WIRE Connector Color GRAY	5. E302 ame WIRE Dilor GRAY	E TO WIRE	<u> </u>	Connector No. Connector Name Connector Color		E307 FRONT SONAR SENSOR LH OUTER BLACK
可 H.S.	8 4 3	8 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	原 H.S.	4 8	7 8 7		H.S.	3 3 3	
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Ten	Terminal No.	Color of Wire	Signal Name
-	5	1	-	9	1		-	۵	1
2	<u>_</u>	1	2	۵	1		2	ŋ	1
Coppector No	E308		ol v stoodage	1 2		Con	Connector No.	Be	
Connector Name		FRONT SONAR	Connector Name	_	REAR SIDE SPEAKER LH	Co	Connector Name		WIRE TO WIRE
Connector Color	_	SOR RH OUTER	Connector Color	olor BROWN	NWO	Con	Connector Color	or WHITE	111
原 H.S.	- 9		是 H.S.	2 1			\Q`	2 3 4 5 6 14 15 16 17 18	6 7 8 9 10 11 12 18 19 20 21 22 23 24
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terr	Terminal No.	Color of Wire	Signal Name
-	۵	ı	1	W	_		1	۵	ı
2	ŋ	1	2	g	1		2	ŋ	ı
							3	Œ	ı
							4	SHIELD	ı
							2	8	ı
							9	В	1
							7	>	I
							8	G	1
							6	В	1
							10	SHIELD	1
							1	ш	ı
							12	*	1
							13	SB	ı
							14	SB	_
							15	LG	1

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## **BOSE AUDIO WITH SURROUND SOUND** [BOSE AUDIO WITH SURROUND SOUND]

Signal Name	1	1	1	ı	ı	ı	1	1	1	ı	1	-	1	1	1
Color of Wire	>	^	В	5	Μ	Œ	1	ı	-	8	В	знієгр	SHIELD	Ь	Γ
erminal No.	18	19	20	21	22	23	24	25	56	27	28	29	30	31	32

			_	32																			
	VIDEO DISTRIBUTOR	WHITE		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 11	Signal Name	1	I	1	ı	1	ı	1	ı	1	ı	1	ı	I	ı	ı	ı	ı
B24	-		-	6 8 10		Color of Wire	В	>	В	>	BB	_	SB	BB	SB	_	ı	1	ı	œ	G	В	>
Connector No.	Connector Name	Connector Color		H.S. 1 3		Terminal No.	-	2	က	4	S.	9	7	8	6	10	11	12	13	14	15	16	17

	RE TO WIRE	WHITE		8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13	Signal Name	ı	I	ı	1	1	I	ı	=	_	-	-	-	-	-	_	-	_	
. B23	me WIRE			11 10 9 23 22 21	Color of Wire	*	G	SHIELD	Д	SB	٦	ГG	SB	В	В	SHIELD	Γ	Ь	BB	-	ГG	SB	SB
Connector No.	Connector Name	Connector Color	Œ	H.S. 24	Terminal No.	-	2	က	4	9	7	6	10	13	14	15	16	17	19	20	21	22	24

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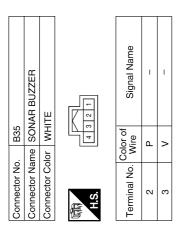
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Signal Name	1	1	I
Color of Wire	G	SHIELD	В
Terminal No.	59	30	31

Signal Name	ı	ı	I	I	I	ı	I	ı	I	I	ı	I	ı	I	I	ı
Color of Wire	SHIELD	ı	1	1	*	œ	В	9	SHIELD	ı	1	1	SHIELD	В	æ	Μ
Terminal No.	41	42	43	44	45	46	47	48	49	20	51	52	53	54	55	56

Signal Name	1	ı	I	1	1	ı	1	ı	ı	1	I	I	ı	ı	1
Color of Wire	Μ	SHIELD	В	^	8	В	Μ	SHIELD	Μ	В	SHIELD	В	G	×	В
Terminal No.	9	2	8	11	18	19	20	21	22	23	24	25	56	27	28

Connector No.	2	١.	Щ	B25	ا ـ ا							
Connector Name VIDEO DISTRIBUTOR	Na	me	_		Ĕ	O	S	TH	B	$\vdash$	OF	~
Connector Color WHITE	ပိ	ō	_	₹	ΙĒ	ш						
					\	[ <u> </u>	<i> </i>	- 17	_			
-	34	36	38 40 42 44 46 48 50 52 54	9	42	4	46	48	20	52	52	26
2	ಜ	35	33 35 37 39 41 43 45 47 49 51 53 55	39	4	43	45	47	49	51	53	55
		l		l	l	l	١	١	١	١	١	Ī

Signal Name	ı	ı	_	1	I	-	ı	1
Color of Wire	×	ဗ	SHIELD	1	1	-	>	В
Terminal No. Wire	33	34	35	36	37	38	39	40

WIRE	8 9 10 11 12 13 14 15 16 16 24 25 26 27 28 29 30 31 32	Signal Name	ı	ı	ı	ı	I
ne WIRE TO WIRE or WHITE	3 4 5 6 7	Color of Wire	ш	8	В	SHIELD	В
Connector No. Connector Name Connector Color	H.S.	Terminal No.	-	2	က	4	Ŋ

ABNIA3580GB

[BOSE AUDIO WITH SURROUND SOUND]

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## < WIRING DIAGRAM >

TO WIRE	12 11 10 9 8	Signal Name	-	1	I	1	1	1	_	1	Signal Name		1	ı	1	1	_	-	ı	1	_	1	1	I	1				
me WIRE T	7 6 5 4	Color of Wire	g	M	Ь	æ	SHIELD	В	*	>	Color of Wire	} ≥	В	SHIELD	8	SHIELD	W	В	SHIELD	8	В	SHIELD	В	۵.	>				
nector No nector Na nector Co	H.S.	Terminal No.	6	10	11	12	13	14	15	16	Terminal No.	17A	18A	19A	20A	21A	23A	24A	25A	26A	27A		30A	74A	75A				
														ſ														$\neg$	
B46 WIRE TO WIRE WHITE	6 7 8 9 10 11 12 7 18 19 20 21 22 23 24	Signal Name	-	ı	1	ı	ı					WIRE TO WIRE			5A 4A 2A 2A 1A	4A 9A 88		21A 20A 19A 18A 17A 16A 15A 14A 13A 12A 11A	28A 27A 26A 25A 24A 23A 22A	38A 37A 36A 35A 34A 33A 32A 31A	50A 49A 48A 47A 46A 45A 44A 43A 42A	58A 57A 56A 55A 54A 53A 52A 51A	70A 69A 68A 67A 66A 65A 64A 63A 62A	71 A 77 A 75 A 75 A 74 A 73 A 77 A 87	90A 89A 88A 87A 86A 85A 84A 83A 82A	914 Oct 000 000 014	35A 94A 35A 95A 96A	]	
b. B46 mme WIRE T	2 3 4 5 14 15 16 17	Color of Wire	W	ш	G	SHIELD	В						_		r)	=		21A 20A 19A	30A 29A	41A 40A 39A	50A 49A	61A 60A 59A	70A 69A	81A 80A 79A	90A 89A	[ 6	<u>8</u> [₽]		
Connector No. Connector Name Connector Color	H.S.	Terminal No.	13	14	15	16	17				Connector No.	Connector Name				6													
Connector No. B43 Connector Name WIRE TO WIRE Connector Color WHITE	6 7 8 9 10 111 12	Signal Name	-									Connector Name WIRE TO WIRE		•	10 9 8		Signal Name		ı	ı									
No. B43 Name WIR	6 7 8	Color of Wire	۵								No. B51	Vame WII		-	12 11		Color of	Wire	<u> </u>	ı.									
Connector No. Connector Name Connector Color	H.S.	Terminal No.	4								Connector No.	Connector Name		E		110	Terminal No		=	12									

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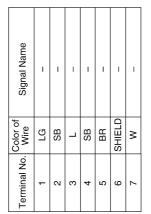
Revision: March 2012 AV-523 2013 Infiniti JX

[BOSE AUDIO WITH SURROUND SOUND]

Signal Name	ı	ı	1	ı	I	I	I
Color of Wire	В	^	M	В	g	В	SHIELD
Terminal No.	8	6	10	11	12	13	14

			13 14 15	28 29 30 31 32	ше							
_	WIRE TO WIRE	ІТЕ	6 7 8 9 10 11	22 23 24 25 26 27	Signal Name	ı	ı	ı	ı	1	1	
. B101	_	lor WHITE	3 4	18 19 20 21	Color of Wire	>	В	>	œ	SHIELD	ŋ	SB
Connector No.	Connector Name	Connector Color	<u>-</u>	=	Terminal No.	2	9	7	8	6	10	=

Connector No.	B75
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE



Signal Name	ı	1	ı	1	ı
Color of Wire	В	SHIELD	В	В	В
Terminal No.	25	56	27	28	59

	В		
B73	SUBWOOFE	GRAY	
Connector No.	Connector Name SUBWOOFER	Connector Color	

Signal Name	I	I	I	I	I
Color of Wire	В	Μ	M	В	ŋ
Terminal No. Wire	1	2	4	5	9

		32 16								
RE TO WIRE	ITE	22 23 24 25 26 27 28 29 30 31	Signal Name	I	-	I	_	I	-	-
me WIF	lor WHITE	2 3 4 5 18 19 20 21	Color of Wire	×	В	SHIELD	В	В	В	Μ
Connector Name   WIRE TO WIRE	Connector Color	S.	Terminal No.	17	18	19	21	22	23	24

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Connector No.

[BOSE AUDIO WITH SURROUND SOUND]

< \	۸/۱	RI	N	G	DI	Α	GI	RA	M	>

Signal Name	I	I	I	I	I	I	I	I	I	ı	I
Color of Wire	۵	œ	В	>	ŋ	ŋ	Ν	Μ	Ь	g	ш
Terminal No.	9	7	8	0	10	1	12	13	14	15	16

Terminal No. Wire Wire Wire Wire S5 B B 26 B B 28 B B 29 B S3 C C C C C C C C C C C C C C C C C C	Signal Name	I	I	1	1	1	I	1	ı	ı	1	-	1	1	ı	1	ı
Terminal No. 25 26 26 27 28 29 30 31 31 31 32 33 33 34 34 34 36 36 37 37 40	Color of Wire	В	В	В	В	В	8	I	ı	1	SB	В/Υ	1	Ι	1	В	ı
	Terminal No.	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Connector No.	). B111	1
Connector Name		WIRE TO WIRE
Connector Color	_	BROWN
H.S.	1 2 3 10 10	3
Terminal No.	Color of Wire	Signal Name
-	M	1
2	g	1
3	Ж	ı
4	ГG	ı
rC.	>	1

Signal Name	1	I	ı	1	1	1	-	ı	1	ı	ı	1	ı	1	1	ı
Color of Wire	В	1	ı	ı	ГG	LG	W	_	-	ı	_	ı	-	ı	-	В
Terminal No.	10	11	12	13	14	15	16	16	17	18	19	20	21	22	23	24

Connector No.	S		3	B107	7(								
Connector Name WIRE TO WIRE	Ra	ae	_	🚆	삝		>	₩	Щ				
Connector Color WHITE	ပိ	ō	_	ı	⊑	ш							
E C					Ш	II.	Ш	$\prod$	$\Box$				
<b>1</b>	-	2 3 4	3	4	2	5 6 7		ω	6	9 10 11 12	=	12	
ė į	13	13 14 15 16 17 18 19 20 21 22 23 24	12	16	17	18	10	2	7	2	23	24	

	5 6 7 8 9 10 11 12	17 18 19 20 21 22 23 24	Signal Name	1	1	ı	1	1	_	ı
	2 3 4	14 15 16	Color of Wire	В	>	ŋ	В	SHIELD	В	*
E	-	13.0 13.0	Terminal No. Wire	9	7	8	6	10	11	12

1	1	1	1	ı		
В	В	SHIELD	В	>		
8	6	10	11	12		
					'	

				22 21										
20	BOSE SPEAKER AMP.	WHITE		12 11 10 9 8 7 6 5 4 3 32 31 30 29 28 27 26 25 24 23 3	Signal Name	ı	ı	ı	-	1	_	ı	1	-
B120				14 13 34 33	Color of Wire	ı	ı	1	8	>	Ν	>	>	>
o.	ame	olor		35 35										
Connector No.	Connector Name	Connector Color	赋到 H.S.	20 19 18 17 16 40 39 38 37 36	Terminal No.	-	2	က	4	2	9	7	8	6

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[BOSE AUDIO WITH SURROUND SOUND]

Signal Name	I	_	-	_	_	_	_	_	_	_	_	
Color of Wire	ı	1	ı	g	Μ	æ	Μ	ŋ	Э	8	_	1
Terminal No.	99	29	89	69	20	71	72	73	74	75	92	77

ı												
	Signal Name	I	ı	1	ı	1	-	1	_	1	_	I
	Color of Wire	M	SHIELD	В	Μ	SHIELD	M	В	SHIELD	В	M	SHIELD
	Terminal No.	22	23	24	25	56	27	28	29	30	31	32

Connector Name BOSE SPEAKER AMP Connector Color BROWN	BOSE SPEAKER AN BROWN	IP.	
Connector Color BR	NMC		
[		L	
77 76 75 74 73	73 72 71 70 69		89
H.S. 67 66 65 64	66 65 64 63 62 61 60 59 58 57	26	55
   		7	1

Signal Name	ı	I	I	ı	I	ı	I	I	1	I	ı
Color of Wire	M	œ	Д	œ	ŋ	_	ı	Μ	8	В	SHIELD
Terminal No. Wire	55	56	57	58	59	09	61	62	63	64	65

Signal Name	_	ı	_	ı	_	-	-	I	_	I	-
Color of Wire	W	SHIELD	В	Μ	SHIELD	В	W	SHIELD	В	W	В
Terminal No.	10	11	12	13	14	15	16	41	19	20	21

B121	Connector Name BOSE SPEAKER AMP.	BROWN	
Connector No.	Connector Name	Connector Color BROWN	

45 44 43 42 41	Signal Name	ı	ı	-	ı	1	1	ı	-	ı	ı	ı	ı	_	1
53 52 48 47 46	Color of Wire	ŋ	>	M	Ь	Ь	В	В	Я	Μ	ГG	Y	В	В	В
H.S. 49	Terminal No.	41	42	43	44	45	46	47	48	49	50	51	52	53	54

	8 9 10 11 12 13 14 15 16 17 18 19 20	26 27 28 29 30 31 32 33 34 35 36 37 38 39 40	Color of Signal Name
	7 8	27 28	Terminal No. Wire
	9	56	Col
	2	22 23 24 25	ю.
	4	24	4
رة.	က	23	ina
E.S.	2		Į.
修	Ŀ	21	Te

Connector Name WIRE TO WIRE Connector Color WHITE

Connector No.

Signal Name	-	-	
Color of Wire	M	В	
Terminal No.	8	6	

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## [BOSE AUDIO WITH SURROUND SOUND]

< WIRING DIAGRAM >

Signal Name	1	ı	I	1	1	ı
Color of Wire	SB	SB	SHIELD	ГС	SB	>
Terminal No. Wire	17	19	20	21	22	24

	Signal Name	ı	1	ı	1	1	1
Color of	Wire	LG	SB	В	œ	SHIELD	0
	Terminal No. Wire	6	10	13	14	15	16

ector No. B137	Connector Name   WIRE TO WIRE	Connector Color WHITE	12 11 10 9 8 7 6 5 4 3 2 1 24 23 22 21 20 19 18 17 16 15 14 13
Connector No.	Connecto	Connecto	原 H.S.

Signal Name	I	ı	I	_	1	_
Color of Wire	Μ	G	SHIELD	٨	BR	ГG
Terminal No. Wire	-	2	3	4	9	7

Connector No.		B144
Connector Na	ume J	Connector Name JOINT CONNECTOR-B11
Connector Color WHITE	olor	VHITE
僵		4 3 2 1
H.S.		
Terminal No.	Color of Wire	of Signal Name
2	m	1
ဇ	SHIELD	- 07
4	SHIELD	- 07

	VIRE		4 5 6 7	13 14 15 16		
B140	or Name WIRE TO WIRE	WHITE	2 3	9 10 11 12 13 14 15 16		Color of
or No.	or Name	or Color	L	ω	]	000

Connector N	Connector N	Connector C	
O	O	O	

	3	Signal Na	1	1	I	1	I	I	1	ı	
lor WHITE	2 6 7	Color of Wire	ŋ	>	Ь	ш	SHIELD	Μ	В	W	
Connector Color	南 H.S.	Terminal No.	6	10	1	12	13	14	15	16	

					_	
		<b>-</b>	-	9	ıl	
뿚		c	J	7	ıl	
⋝		c	>	8	ıl	
0		F	ī	6	ıl	
<b>⊢</b>	ΤE	ΙĮL		10	ıl	
₩	WHITE	-	÷	11	ıl	
WIRE TO WIRE	≥	L	>	12	ı	
lame	Solor				٢	



Signal Name	-	ı	
Color of Wire	Μ	ŋ	
Terminal No.	11	12	

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Connector No.

Connector No.	B153	3
Connector Name		REAR SIDE SPEAKER RH
Connector Color		BROWN
H.S.	[ ]	
Terminal No.	Color of Wire	Signal Name
_	*	1
2	9	ı

Signal Name	ı	I	I	I	I	_	I	1
Color of Wire	>	0	۸	В	M	В	В	SHIELD
Terminal No. Wire	7	8	6	10	11	12	13	14

2	WIRE TO WIRE	ТЕ	5 6 7	2 13 14 15 16	Signal Name	ı		1	1	1	1
. B145		lor   WHITE	2 5	0	Color of Wire	LG	SB	SB	Γ	BR	SHIELD
Connector No.	Connector Name	Connector Color	明.S.H		Terminal No.	-	2	3	4	2	9

Signal Name	I	1	1	I	I	1	1	I	1	1	ı	1
Color of Wire	ГG	SB	В	Я	SHIELD	٦	Ь	BR	_	ГG	SB	SB
Terminal No.	6	10	13	14	15	16	41	19	50	12	22	54

_	WIRE TO WIRE	WHITE		5 6 7 8 9 10 11 12	3 17 18 19 20 21 22 23 24	Signal Name	-	-	_	ı	_	-
. B201				1 2 3 4	13 14 15 16 17	Color of Wire	>	ŋ	SHIELD	Д	SB	Τ
Connector No.	Connector Name	Connector Color		O E		Terminal No.	-	2	3	4	9	7

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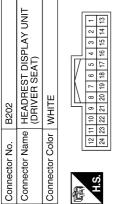
## **BOSE AUDIO WITH SURROUND SOUND** [BOSE AUDIO WITH SURROUND SOUND]

< WIRING DIAGRAM >

1	0000	
		HEADREST DISPLAY UNIT (PASSENGER SEAT)
Connector Co	Color WHITE	TE
H.S. 24	2 11 10 9 4 23 22 21	8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13
Terminal No.	Color of Wire	Signal Name
-	*	REAR 1 HP LH-
2	g	REAR 1 HP LRH-
3	SHIELD	REAR 1 HP SHIELD
4	٨	REAR 1 COMP -
5	_	-
9	BR	CONT GND
2	LG	AUX REQ. OUT
8	1	1
6	ГG	M-CAN 2 L
10	SB	M-CAN 2 H
11	1	ı
12	В	GND
13	В	REAR 1 HP LH+
14	н	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	0	REAR 1 COMP+
17	SB	AV GND
18	ı	I
19	SB	ACC DET. IN
20	SHIELD	SHIELD M-CAN
21	LG	M-CAN 1 L
22	SB	M-CAN 1 H
23	ı	ı
24	>	BAT

Connector No.	9	B301	5									
Connector Name WIRE TO WIRE	Vame	M	RE	$\perp$	^	ΛF	Щ					
Connector Color WHITE	Solor	≶		ш								
E			↰		١	I/		ப				
Ě	-	2 3	4	ß	9	7	8	6	9	9 10 11 12	12	
Ġ.	13	13 14 15 16 17 18 19 20 21 22 23 24	16	17	8	13	20	21	23	ಣ	24	
											]	

Signal Name	ı	ı	ı	I	I	ı	ı	I	I	I	ı	ı	I	ı	I	ı	ı	I
Color of Wire	>	9	SHIELD	Υ	BR	PT	ГG	SB	В	ш	SHIELD	0	SB	SB	SHIELD	PT	SB	<b>&gt;</b>
Terminal No.	-	2	3	4	9	2	6	10	13	14	15	16	17	19	20	21	22	24



Signal Name	REAR 1 HP LH-	REAR 1 HP LRH-	REAR 1 HP SHIELD	REAR 1 COMP -	ı	CONT GND	AUX REQ. OUT	ı	M-CAN 2 L	M-CAN 2 H	ı	GND	REAR 1 HP LH+	REAR 1 HP RH+	REAR 1 COMP SHIELD	REAR 1 COMP+	AV GND	ı	ACC DET. IN	1	M-CAN 1 L	M-CAN 1 H	_	BAT
Color of Wire	Μ	G	SHIELD	Ь	ı	SB	_	ı	P.	SB	I	В	В	н	SHIELD	_	Ь	ı	BR	_	ГG	SB	_	SB
Terminal No.	1	2	8	4	5	9	7	8	6	10	11	12	13	14	15	16	11	18	19	20	21	22	23	24

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**AV-529** Revision: March 2012 2013 Infiniti JX Α

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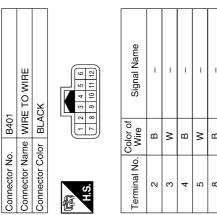
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## [BOSE AUDIO WITH SURROUND SOUND]

< WIRING DIAGRAM >



Signal Name	-	ı	_	ı	_	I	_	I		
Color of Wire	В	8	В	Μ	В	Μ	M	В		
Terminal No. Wire	2	က	4	5	8	6	10	11		

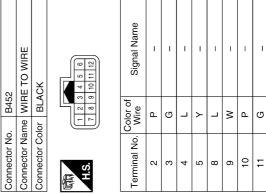
90	REAR SONAR SENSOR RH OUTER	4CK		Signal Name	ı	ı
. B456		lor BLACK		Color of Wire	_	W
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No.	-	0

Signal Name	I	1	I	I	_	-	1	ı	
Color of Wire	M	SHIELD	Μ	В	SHIELD	Μ	В	SHIELD	
Terminal No.	22	23	24	25	26	27	28	29	

			1 1 1						
0	IE TO WIRE	ITE	12 11 10 9 8 7 6 5 4 3 28 27 26 25 24 23 22 21 20 19	Signal Name	I	-	I	_	ı
. B400	me WIF	lor WHITE	15 14 13 31 30 29	Color of Wire	×	В	SHIELD	В	В
Connector No.	Connector Name WIRE TO WIRE	Connector Color	H.S.	Terminal No.	17	18	19	20	21

B455 REAR SONAR	ACK	<u></u>	Signal Name	I	1
e			Color of Wire	Д	ט
Connector No.	Connector Color	H.S.	Terminal No.	-	0

	) WIRE		5 6 111 112
B452	WIRE TO	BLACK	2 3 4 5 6 8 9 10 11 12
ctor No.	ctor Name WIRE TO WIRE	ctor Color	



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### < WIRING DIAGRAM >

H.S.	Connector Color BLA	BLACK	Connector Name	. + +	SENSOR RH INNER BLACK	Connector Color		WHITE  9 8 7 6 5 4 3 2 1  21 20 19 18 17 16 15 14 13
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
-	۵	1	-	۵	1	ιΩ	В	ı
2	g	ı	2	g	ı	13	>	ı
						41	В	ı
						15	SHIELD	- (
						16	Ь	_
						17	BG	ı
						24	8	ı
Connector No.	No. R11		Connector No.	No. R101	-	Connector No.	No. R105	05
Connector Name		WIRE TO WIRE	Connector Name		WIRE TO WIRE	Connector Name		TELEMATICS SWITCH
Connector Color	Color WHITE	HTE	Connector Color	_	WHITE	Connector Color	_	WHITE
H.S.	12 11 10 9 8 24 23 22 21 20	20 19 18 17 16 15 14 13	H.S.	3 14 15 16 17	6 7 8 9 10 11 12 18 19 20 21 22 23 24	用。 H.S.		8 4 4 3 5 1 1 2 1 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
-	g	ı	-	>	1	-	>	ı
2	Ж	ı	2	æ	I	2	ъ	ı
3	W	_	3	9	1	3	Ь	_
4	В	ı	4	۵	1	7	æ	1
2	SHIELD	ı	2	GR	1			
9	В	I	9	_	1			
9	8	ı	7	ш	I			

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**AV-531** Revision: March 2012 2013 Infiniti JX

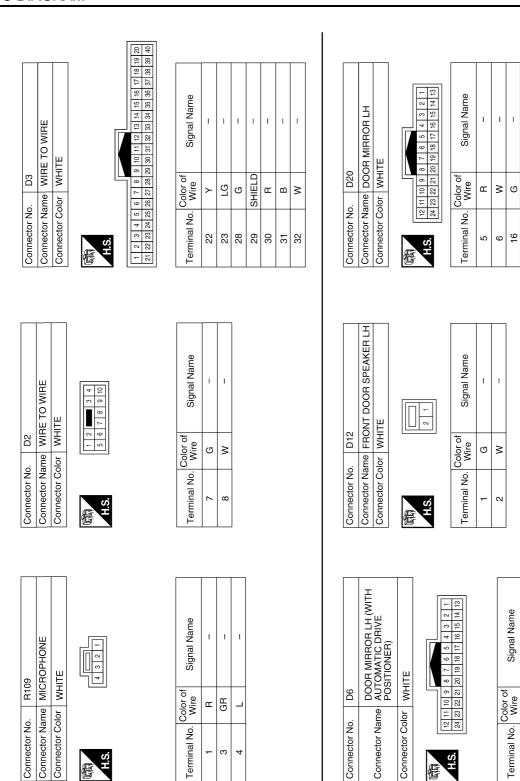
[BOSE AUDIO WITH SURROUND SOUND]

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[BOSE AUDIO WITH SURROUND SOUND]

### < WIRING DIAGRAM >

Connector No.   D102	Connector No. D112	Connector Name FRONT DOOR SPEAKER RH	Connector Color WHITE			H.S.	Terminal No. Vire Signal Name	1 G	2 W				
31 12 13 13 13 13 13 13 13 13 13 13 13 13 13	D102	WIRE TO WIRE	WHITE		e	6 7 8 9							
Vame		Connector Name	Connector Color		管		Terminal No. Wir						
						12 13 14 28 29 30	Name						
	Connector No. D101	Connector Name   WIRE TO WIRE	Connector Color WHITE	Ī	I	H.S. 17 18 19 20	Terminal No. Wire	1 G	2 SHIELD	3 R	4 B	2 W	

	_	_	į			
)2	RE TO WIRE		9 8 7 6	Signal Name	1	I
). D20	ıme WIF	lor WH	5 4 11 10 9	Color of Wire	LG	>
Connector No. D202	Connector Name WIRE TO WIRE	Connector Color WHITE	咸可 H.S.	Terminal No. Wire	10	11
		ı				
1	or Name WIRE TO WIRE	믵	6 7 8 9 10 11 12	Signal Name	ı	1
. D201	me WIR	or Color WHITE	6 7	No. Wire	>	FG
or No.	r Na	ပြိ		Š.		

ဇ	Connector Name DOOR MIRROR RH	<u></u>	20 19 18 17 16 15 14 13	Signal Name	-	-
. D113	me DO	lor WH	12 11 10 9 8 24 23 22 21 20	Color of Wire	Ж	×
Connector No.	Connector Na	Connector Color WHITE	H.S. 24 2	Terminal No. Wire	9	9
			<u> </u>			

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[BOSE AUDIO WITH SURROUND SOUND]

### < WIRING DIAGRAM >

Connector No. Connector Name Connector Color	to. D207 lame REAR D	Connector No. D207  Connector Name REAR DOOR SPEAKER LH  Connector Color BROWN	Connector No. Connector Color	or No. D251 or Name WIRE	Connector No. D251 Connector Name WIRE TO WIRE Connector Color WHITE	Connector No. Connector Name Connector Color	me REAR DC	Connector No. D252  Connector Name REAR DOOR TWEETER LH  Connector Color BROWN	
雨 H.S.		2 1	是 H.S.	2 1	3 9 6 10 11 12 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	是 H.S.	2		
Terminal No.	Color of Wire LG	Signal Name	Terminal No. 10 11	No. Wire LG BR	Signal Name	Terminal No.	Color of Wire LG BR	Signal Name -	
Connector No. D301 Connector Name WIRE T	lo. D301 lame WIRE	Connector No. D301 Connector Name WIRE TO WIRE Connector Color WHITE	Connector No. Connector Name Connector Color	or No. D3 or Name WII	Connector No. D302 Connector Name WIRE TO WIRE Connector Color WHITE	Connector No. Connector Name Connector Color		D307 REAR DOOR SPEAKER RH BROWN	
H.S.	- 0	2 3 4 5 7 8 9 10 11 12	H.S.	5 21 4	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	H.S.	Q		
Terminal No.	Color of Wire	Signal Name	Terminal No.	No. Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	
11	Ö	ı	10	W	1	-	M	ı	
12	8	ı	11	ŋ	1	2	ŋ	1	

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## [BOSE AUDIO WITH SURROUND SOUND]

-	WIRE TO WIRE	<u>=</u>		7 6 5 4 3 2	20 13 18 17 19 19 14 13	Signal Name	I	I	_	-	-
. D501		lor WH		10 9	23 22 21 5	Color of Wire	>	В	В	SHIELD	ŋ
Connector No.	Connector Name	Connector Color WHITE		12	*	erminal No.	13	14	15	16	17

Connector No.	D352	<u>8</u>
Connector Name	Connector Name REAR DOOR TWEETER RH	ပိ
Connector Color BROWN	BROWN	ပိ

Signal Nam	I	I
Color of Wire	ГG	BR
rminal No.	1	2

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Connector No.	). D351	
Connector Name WIRE TO WIRE	ume WIF	RE TO WIRE
Connector Color WHITE	olor WH	ITE
哥 H.S.	6 7 7 8 8	9 10 11 12
Terminal No.	Color of Wire	Signal Name
10	LG	ı

No. D511	Connector Name REAR VIEW CAMERA	Connector Color WHITE	4 80 6 8 7 7 0 8 1 2 0 8
Connector No.	Connector	Connector	雨 H.S.

<u>ω</u>	Signal Name	Ī	1	I	I	I
0 1	Color of Wire	SHIELD	5	Ж	В	Μ
H.S.	Terminal No.	-	4	5	7	α

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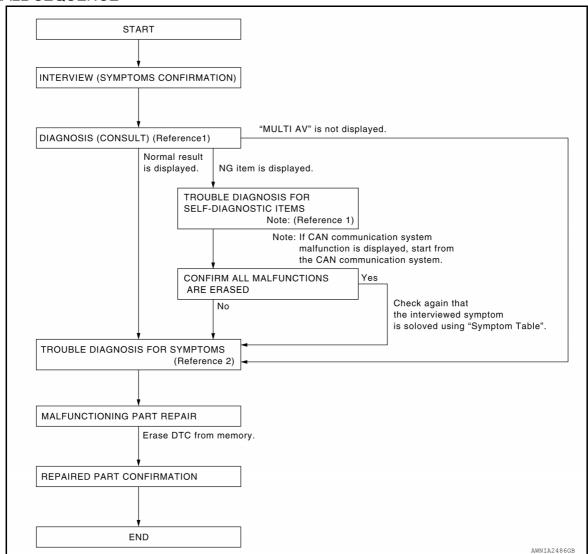
## **BASIC INSPECTION**

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow (Multi AV System)

INFOID:0000000008376943

### **OVERALL SEQUENCE**



Reference 1: Refer to AV-448, "CONSULT Function".

Reference 2: Refer to AV-657, "Symptom Table".

### **DETAILED FLOW**

## CHECK SYMPTOM

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.

### >> GO TO 2

## 2.SELF-DIAGNOSIS (CONSULT)

1. Connect CONSULT and perform "SELF-DIAGNOSIS" for "MULTI AV".

#### NOTE

- Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed.
- 2. Check if any DTC No. is displayed in the self-diagnosis results.

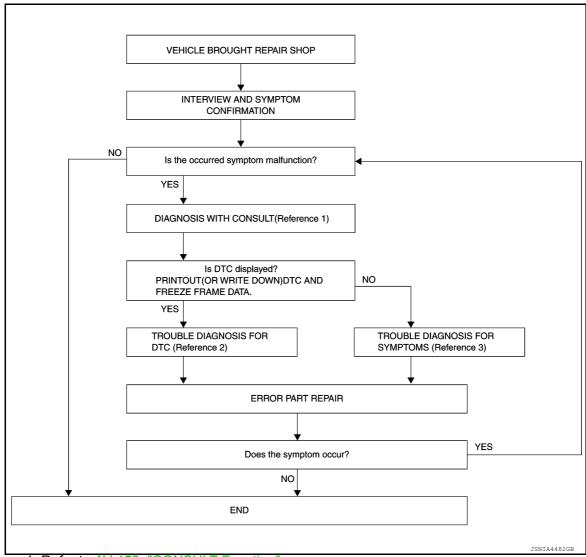
## **DIAGNOSIS AND REPAIR WORKFLOW**

< BASIC INSPECTION >	[BOSE AUDIO WITH SURROUND SOUND]
ls any DTC No. displayed? YES >> GO TO 3	
NO >> GO TO 4	
3. CHECK SELF-DIAGNOSIS RESULTS (CONSULT)	
<ol> <li>Check the DTC No. indicated in the self-diagnosis res</li> <li>Perform the relevant diagnosis referring to the DTC No.</li> </ol> NOTE:	
Start with the diagnosis for the CAN communication syste UNIT (CAN) [U1010]" is displayed.	em if "CAN COMM CIRCUIT [U1000] or CONTROL
>> GO TO 5	
4.PERFORM DIAGNOSIS BY SYMPTOM	
Perform the relevant diagnosis referring to the diagnosi <u>Table</u> ".	s chart by symptom. Refer to AV-657, "Symptom
>> GO TO 5	
5. REPAIR OR REPLACE MALFUNCTIONING PARTS	
Repair or replace the identified malfunctioning parts. <b>NOTE:</b>	
Erase the stored self-diagnosis results after repairing or replace indicated in the self-diagnosis results.	placing the relevant components if any DTC No. has
>> GO TO 6	
6.CHECK AFTER REPAIR	
1. Perform self-diagnosis for "MULTI AV" with CONSU	JLT after repairing or replacing the malfunctioning
parts. 2. Check if any DTC No. is displayed in the self-diagnosi	is results
Is any DTC No. displayed?	0.000.00
YES >> GO TO 3	
NO >> GO TO 7	
7.FINAL CHECK	
Perform the operation check to confirm that the malfuncti are present.	ion symptom is solved or that any other symptoms
Are any symptoms present?	
YES >> GO TO 4	
NO >> Inspection End.	

## Work Flow (Camera Assistance Sonar)

INFOID:0000000008376944

### **OVERALL SEQUENCE**



Reference 1: Refer to AV-452, "CONSULT Function".

Reference 2: Refer to AV-488, "DTC Index".

Reference 3: Refer to AV-657, "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

- Connect CONSULT and perform a self-diagnosis for "SONAR". Refer to <u>AV-452, "CONSULT Function"</u>.
   NOTE:
  - Skip to step 4 of the diagnosis procedure if "SONAR" is not displayed.
- . When DTC is detected, follow the instructions below:
- Record DTC and Freeze Frame Data.

### DIAGNOSIS AND REPAIR WORKFLOW

### < BASIC INSPECTION >

[BOSE AUDIO WITH SURROUND SOUND]

# 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-488, "DTC Index".

>> GO TO 5.

## 4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-657, "Symptom Table".

>> GO TO 5.

## 5. ERROR PART REPAIR

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

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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### INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE AUDIO WITH SURROUND SOUND]

## INSPECTION AND ADJUSTMENT

### ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT

## ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT: Description

INFOID:0000000008376945

### BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT configuration before replacement.

### NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing AV control unit.

### AFTER REPLACEMENT

#### **CAUTION:**

When replacing AV control unit, you must perform "After Replace ECU" with CONSULT.

- Complete the procedure of "After Replace ECU" in order.
- If you set incorrect "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

## ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT: Work Procedure

VEOID:0000000008376946

## 1. SAVING VEHICLE SPECIFICATION

### CONSULT

Enter "Re/Programming, Configuration" and perform "Before Replace ECU" to save or print current vehicle specification.

### NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing AV control unit.

>> GO TO 2.

## 2. REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

>> GO TO 3.

## 3. WRITING VEHICLE SPECIFICATION

### (P)CONSULT

- 1. Enter "Re/Programming, Configuration".
- 2. If "Before Replace ECU" operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press "Confirm" to write vehicle specification. Refer to <a href="AV-541">AV-541</a>, "CONFIGURATION (AV CONTROL UNIT): Work Procedure".
- 3. If "Before Replace ECU" operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to <a href="AV-541">AV-541</a>, "CONFIGURATION (AV CONTROL UNIT): Work Procedure".

>> GO TO 4.

### 4. OPERATION CHECK

Check that the operation of the AV control unit is normal.

>> Work End.

## CONFIGURATION (AV CONTROL UNIT)

< BASIC INSPECTION >

[BOSE AUDIO WITH SURROUND SOUND]

# CONFIGURATION (AV CONTROL UNIT): Description

INFOID:0000000008376947

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Vehicle specification needs to be written with CONSULT because it is not written after replacing AV control unit.

Configuration has three functions as follows:

Function	Description
"Before Replace ECU"	<ul><li>Reads the vehicle configuration of current AV control unit.</li><li>Saves the read vehicle configuration.</li></ul>
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

### **CAUTION:**

- When replacing AV control unit, you must perform "Select Saved Data List" or "After Replace ECU" with CONSULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- · Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new AV control unit.

# CONFIGURATION (AV CONTROL UNIT): Work Procedure

INFOID:0000000008376948

# 1. WRITING MODE SELECTION

(P)CONSULT

Select "Reprogramming, Configuration" of AV control unit.

When writing saved data>>GO TO 2.

When writing manually>>GO TO 3.

# PERFORM "SAVED DATA LIST"

(P)CONSULT

Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm".

>> Work End.

# 3.PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"

### (P)CONSULT

- Select "After Replace ECU" or "Manual Configuration".
- Identify the correct model and configuration list. Refer to AV-542, "CONFIGURATION (AV CONTROL UNIT): Configuration List".
- 3. Confirm and/or change setting value for each item.

### **CAUTION:**

Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.

4. Select "Next".

### **CAUTION:**

Make sure to select "Next", confirm each setting value and press "OK" even if the indicated configuration of brand new AV control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.

5. When "Completed", select "End".

>> GO TO 4.

# 4. OPERATION CHECK

Confirm that each function controlled by AV control unit operates normally.

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< BASIC INSPECTION >

[BOSE AUDIO WITH SURROUND SOUND]

>> Work End.

# CONFIGURATION (AV CONTROL UNIT): Configuration List

INFOID:0000000008376949

### CAUTION

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

MANUAL SETTING ITEM		
Items Setting value		
ENGINE TYPE	NORMAL ⇔ HYBRID	
SOUND SYSTEM	BOSE SURROUND ⇔ BOSE ⇔ BASE	

⇔: Items which confirm vehicle specifications

# ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT

# ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT: Description

### BEFORE REPLACEMENT

When replacing around view monitor control unit, save or print current vehicle specification with CONSULT configuration before replacement.

### NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing around view monitor control unit.

### AFTER REPLACEMENT

### **CAUTION:**

When replacing around view monitor control unit, you must perform "After Replace ECU" with CON-SULT.

- Complete the procedure of "After Replace ECU" in order.
- If you set incorrect "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

# ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL

**UNIT**: Work Procedure

INFOID:0000000008376951

# 1. SAVING VEHICLE SPECIFICATION

### (P)-CONSULT

Enter "Re/Programming, Configuration" and perform "Before Replace ECU" to save or print current vehicle specification.

### NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing around view monitor control unit.

>> GO TO 2.

# 2.REPLACE AROUND VIEW MONITOR CONTROL UNIT

Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".

>> GO TO 3.

# 3. WRITING VEHICLE SPECIFICATION

### (P)CONSULT

- 1. Enter "Re/Programming, Configuration".
- 2. If "Before Replace ECU" operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press "Confirm" to write vehicle

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### < BASIC INSPECTION >

### [BOSE AUDIO WITH SURROUND SOUND]

specification. Refer to AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Work Procedure".

If "Before Replace ECU" operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Work Procedure".

>> GO TO 4.

### 4. OPERATION CHECK

Check that the operation of the around view monitor control unit and camera images (fixed guide lines and predictive course lines) are normal.

>> Work End.

# CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT)

# CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Description

INFOID:0000000008376952

Vehicle specification needs to be written with CONSULT because it is not written after replacing around view monitor control unit.

Configuration has three functions as follows:

Function	Description	
"Before Replace ECU"	<ul> <li>Reads the vehicle configuration of current around view monitor control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>	
"After Replace ECU"	Writes the vehicle configuration with manual selection.	
"Select Saved Data List"	Writes the vehicle configuration with saved data.	

### **CAUTION:**

- When replacing around view monitor control unit, you must perform "Select Saved Data List" or "After Replace ECU" with CONSULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new around view monitor control unit.

# CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Work Procedure

INFOID:0000000008376953

# $oldsymbol{1}$ . WRITING MODE SELECTION

(P)CONSULT

Select "Reprogramming, Configuration" of around view monitor control unit.

When writing saved data>>GO TO 2. When writing manually>>GO TO 3.

# 2.PERFORM "SAVED DATA LIST"

(P)CONSULT

Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm".

>> Work End.

# ${f 3.}$ PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"

### (P)CONSULT

Select "After Replace ECU" or "Manual Configuration".

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< BASIC INSPECTION >

[BOSE AUDIO WITH SURROUND SOUND]

- 2. Identify the correct model and configuration list. Refer to <u>AV-544, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Configuration List"</u>.
- Confirm and/or change setting value for each item.

### **CAUTION:**

Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.

Select "Next".

### **CAUTION:**

Make sure to select "Next", confirm each setting value and press "OK" even if the indicated configuration of brand new around view monitor control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.

5. When "Completed", select "End".

>> GO TO 4.

# 4. OPERATION CHECK

Confirm that each function controlled by around view monitor control unit operates normally.

>> Work End.

### CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Configuration List

INFOID:0000000008376954

### **CAUTION:**

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

MANUAL SETTING ITEM		
Items Setting value		
BCI FUNCTION WITH ⇔ WITHOUT		

⇔: Items which confirm vehicle specifications

### ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT

### ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT: Description

INFOID:0000000008489509

### BEFORE REPLACEMENT

When replacing sonar control unit, save or print current vehicle specification with CONSULT configuration before replacement.

### NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing sonar control unit.

### AFTER REPLACEMENT

### **CAUTION:**

When replacing sonar control unit, you must perform "After Replace ECU" with CONSULT.

- Complete the procedure of "After Replace ECU" in order.
- If you set incorrect "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

# ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT: Work Procedure

# 1. SAVING VEHICLE SPECIFICATION

### P-CONSULT

Enter "Re/Programming, Configuration" and perform "Before Replace ECU" to save or print current vehicle specification.

### NOTE:

INSPECTION AND ADJUSTMENT [BOSE AUDIO WITH SURROUND SOUND] < BASIC INSPECTION > If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing sonar control unit. >> GO TO 2. 2.REPLACE SONAR CONTROL UNIT Replace sonar control unit. Refer to AV-691, "Removal and Installation". >> GO TO 3. 3.WRITING VEHICLE SPECIFICATION (P)CONSULT Enter "Re/Programming, Configuration". 2. If "Before Replace ECU" operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press "Confirm" to write vehicle specification. Refer to AV-545, "CONFIGURATION (SONAR CONTROL UNIT): Work Procedure". 3. If "Before Replace ECU" operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to AV-545, "CONFIGURATION (SONAR CONTROL UNIT) : Work Procedure". >> GO TO 4. 4. OPERATION CHECK Check that the operation of the sonar control unit is normal. >> Work End. CONFIGURATION (SONAR CONTROL UNIT)

# CONFIGURATION (SONAR CONTROL UNIT): Description

Vehicle specification needs to be written with CONSULT because it is not written after replacing sonar control unit.

Configuration has three functions as follows:

Function	Description
"Before Replace ECU"	<ul> <li>Reads the vehicle configuration of current sonar control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

### **CAUTION:**

- When replacing sonar control unit, you must perform "Select Saved Data List" or "After Replace **ECU" with CONSULT.**
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new sonar control unit.

# CONFIGURATION (SONAR CONTROL UNIT): Work Procedure

INFOID:0000000008489512

INFOID:0000000008489511

# WRITING MODE SELECTION

(P)CONSULT

Select "Reprogramming, Configuration" of sonar control unit.

When writing saved data>>GO TO 2. When writing manually>>GO TO 3.

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< BASIC INSPECTION >

[BOSE AUDIO WITH SURROUND SOUND]

# 2.PERFORM "SAVED DATA LIST"

### CONSULT

Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm".

>> Work End.

# ${f 3.}$ PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"

### CONSULT

- 1. Select "After Replace ECU" or "Manual Configuration".
- 2. Identify the correct model and configuration list. Refer to <u>AV-546, "CONFIGURATION (SONAR CONTROL UNIT)</u>: Configuration List".
- 3. Confirm and/or change setting value for each item.

### **CAUTION:**

Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.

Select "Next".

### **CAUTION:**

Make sure to select "Next", confirm each setting value and press "OK" even if the indicated configuration of brand new sonar control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.

5. When "Completed", select "End".

>> GO TO 4.

### 4. OPERATION CHECK

Confirm that each function controlled by sonar control unit operates normally.

>> Work End.

# CONFIGURATION (SONAR CONTROL UNIT): Configuration List

INFOID:0000000008489513

### **CAUTION:**

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

MANUAL SETTING ITEM		
Items Setting value		
BCI FUNCTION WITH ⇔ WITHOUT		

⇔: Items which confirm vehicle specifications

# PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT

### PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Description

INFOID:0000000008376955

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

### PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Work Procedure

INFOID:0000000008376956

# 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.

>> END

# CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

< BASIC INSPECTION >

### [BOSE AUDIO WITH SURROUND SOUND]

# CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Description

INFOID:0000000008489500

- Calibration must be performed after removing/replacing the cameras, removing parts (e.g. front grille, door mirror, and others) mounted on the cameras, or replacing the Around view monitor control unit.
- The use of CONSULT is required to perform calibration or writing of calibration results to 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): Work Procedure

VFOID:0000000008489501

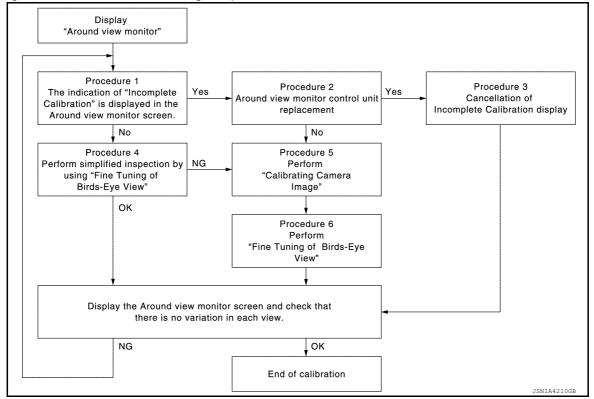
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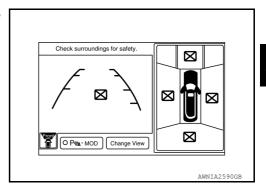
### CALIBRATION FLOWCHART

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



### NOTE:

View in the incomplete calibration state is indicated by "\sum" on the around view monitor.



### CALIBRATION PROCEDURE

 ${f 1}$  . AROUND VIEW MONITOR SCREEN CONFIRMATION

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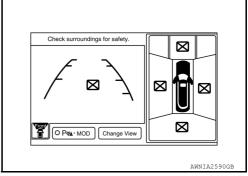
### < BASIC INSPECTION >

### [BOSE AUDIO WITH SURROUND SOUND]

Check that there is no indication of "Incomplete calibration".

Is the "Incomplete calibration" 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.cancel the indication of incomplete calibration (perform this only after replac-ING AROUND VIEW MONITOR CONTROL UNIT.)

(P)CONSULT work support

On the CONSULT screen, touch "CALIBRATING CAMERA IMAGE (FRONT CAMERA)", "CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)", "CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)", or "CALIBRATING CAMERA IMAGE (REAR CAMERA)" to accept the selection.

NOTE:

To cancel the indication of Incomplete calibration, select items based on the target camera.

2. On the adjustment screen of each camera, touch "APPLY" button. After this, touch "OK" button.

### **CAUTION:**

- · Never perform operations other than those mentioned above.
- Never perform "Initialize Camera Image Calibration".
- 3. Display the around view monitor screen to check that there is no errors, such as deviations among the camera images.

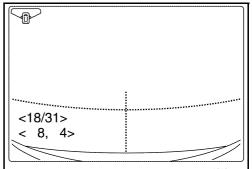
### Is there a malfunction?

YES >> Calibration end

NO



- 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)



### [BOSE AUDIO WITH SURROUND SOUND]

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# Preparation of simplified target line

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1. Target lines 1

- 2. Target lines 2
- A. Approx. 30 cm (11.8 in)
- B. Approx. 1.0 m (39.3 in)
- 3. CONSULT work support

Touch "FINE TUNING OF BIRDS-EYE VIEW" on the CONSULT screen.

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- 4. On the CONSULT screen, touch "SELECT" button to select right or left camera and perform camera calibration as instructed below:
- If the marker on the screen deviates from Target line 1, touch "AXIS X" button and "AXIS Y" button to adjust so that the marker is placed on the Target line 1.
- If Target line 2 is misaligned among the cameras, adjust each camera image to bring Target line 2 into a straight line.

### **CAUTION:**

Never adjust the front camera and rear camera. Only adjust the right and left cameras.

### Simplified target line adjustment method 4 4 ③ 1 $\odot$ 3 (3) 1 1 (3) (2) 1 3 4 4 4 2 **(4) (4)**

Target lines 1

2. Target lines 2

Marker for target line 1

- 4. Boundary between cameras
- 5. Crosshairs cursor (mark indicated the selected camera)
- A. Adjustment method for target lines 1 (right)
- B. Adjustment method for target lines 2 (right)
- 5. Adjust right and left cameras. Touch "APPLY" on the CONSULT screen to display adjustment results.
- 6. After adjusting right and left cameras, check that the marker is properly placed on the screen and there is no deviation in Target line 1.

### NOTE:

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

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### Is the difference corrected?

YES >> On the CONSULT screen, touch "OK" button to complete writing to the around view monitor control unit.

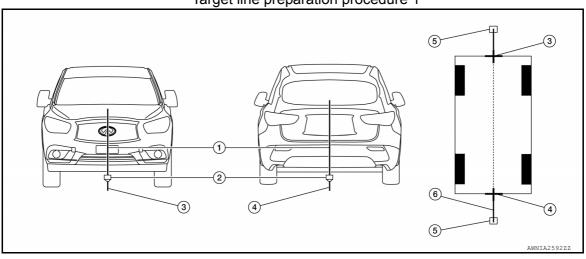
NO >> GO TO 5.

### PERFORM "CALIBRATING CAMERA IMAGE"

### Preparation of target line

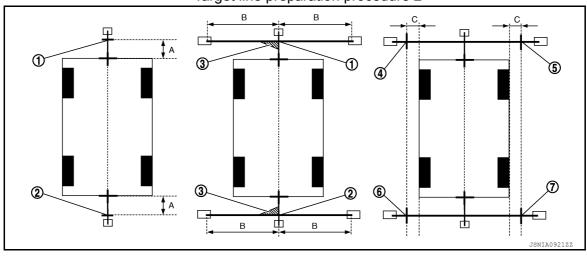
- 1. Hang a string with a weight as shown in the figure. Put the points FM0, RM0 (mark) on the ground at the center of the vehicle front end and rear end with white packing tape or a pen.
- 2. Route the vinyl string under the vehicle, and then pull and fix it on the point approximately 1.0 m (39.9 in)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

### Target line preparation procedure 1



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

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

- Triangle scale
- 6. Point RL (mark)

- Point RR (mark)
- 75 cm (29.5 in)

- Approx. 1.5 m (59 in)
- 30 cm (11.8 in)
- C. [Vehicle width/ 2 + 30 cm (11.8 in) from the points FM and RM]

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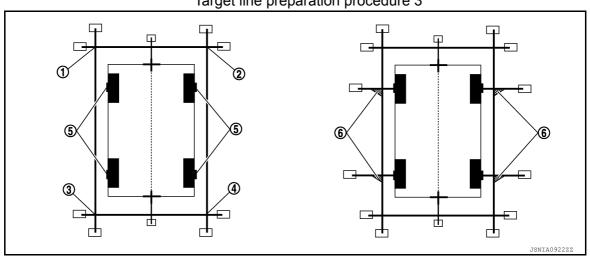
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- 6. Draw the lines of the points FL RL and FR RR with vinyl string, and fix it with packing tape.
- Put a mark on the center of each axle, draw vertical lines to the lines of the points FL RL and FR RR from the marks on the center of the axle using a triangle scale, and then fix the lines using packing tape.

Target line preparation procedure 3



Point FL 1.

Point FR 2

Point RR

- Center position of axle
- 3. Point RL
- Triangle scale

Perform "Calibrating Camera Image"

(P)CONSULT work support

On the CONSULT screen, touch "CALIBRATING CAMERA IMAGE (FRONT CAMERA)", "CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)", "CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)", or "CALIBRATING CAMERA IMAGE (REAR CAMERA)" to accept the selection.

NOTE:

To cancel the indication of Incomplete calibration, select items based on the target camera.

On the adjustment screen of each camera, adjust the parameter by touching the "AXIS X" button, "AXIS Y" button, and "ROTATE" button to place the calibration marker shown on the camera screen on the target line drawn on the ground.

Adjustment range

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

Upper/lower direction (upper/lower : -22 **-** 22 switch)

Left/right direction (left/right switch) : -22 - 22 <18/31> < 8, 4>

Touch "APPLY" button on the CONSULT screen, "PRCSNG" is displayed and adjustment results are shown on the camera screen.

**CAUTION:** 

Check that "PRCSNG" is displayed. Do never perform other operations while "PRCSNG" is dis-

Touch "OK" button on the CONSULT screen. "PRCSNG" is displayed and adjustment results are written to the around view monitor control unit.

**CAUTION:** 

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

>> GO TO 6.

O.PERFORM "FINE TUNING OF BIRDS-EYE VIEW"

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### < BASIC INSPECTION >

### [BOSE AUDIO WITH SURROUND SOUND]

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

(P)CONSULT work support

1. Select "FINE TUNING OF BIRDS-EYE VIEW" by touching CONSULT screen.

2. On the adjustment screen of each camera, adjust the parameter by touching the "AXIS X" button, "AXIS Y" button", and "ROTATE" button to place the calibration marker shown on the camera screen on the target line drawn on the ground.

NOTE:

Touch "SELECT" button on the CONSULT screen to select the target camera.

3. Touch "APPLY" button on the CONSULT screen. "PRCSNG" is displayed and adjustment results are shown on the camera screen.

# <14/31> < -8, -4> JSNIA42142Z

### **CAUTION:**

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

4. Touch "OK" button on the CONSULT screen. "PRCSNG" is displayed and adjustment results are written to the around view monitor control unit.

### **CAUTION:**

- Check that "PRCSNG" is displayed. Never perform other operations while "PRCSNG" is displayed.
- After pressing the "OK" button, never press buttons other than the "BACK" button. NOTE:
- It can be initialized to the NISSAN factory default condition with "Initialize Camera Image Calibration".
- The adjustment value is cancelled in this mode by performing "Initialize Camera Image Calibration".

>> Calibration end

### **U1000 CAN COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: DTC Logic

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### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000]	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

# AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000008376875

# ${f 1}$ .PERFORM SELF DIAGNOSTIC RESULT

- Turn ignition switch ON and wait for 2 seconds or more.
- Perform Self Diagnostic Result for MULTI AV.

### Is CAN COMM CIRCUIT displayed?

>> Refer to <u>LAN-22</u>, "<u>Trouble Diagnosis Flow Chart</u>". >> Refer to <u>GI-53</u>, "<u>Intermittent Incident</u>". YES

NO

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): DTC Logic INFOID:000000003376876

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000]	Sonar control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): Diagnosis Procedure

INFOID:0000000008376877

# PERFORM SELF DIAGNOSTIC RESULT

- Turn ignition switch ON and wait for 2 seconds or more.
- Perform Self Diagnostic Result for SONAR.

### Is CAN COMM CIRCUIT displayed?

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

NO >> Refer to GI-53, "Intermittent Incident". ΑV

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# **U1010 CONTROL UNIT (CAN)**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

U1010 CONTROL UNIT (CAN)

AV CONTROL UNIT

AV CONTROL UNIT: DTC Logic

INFOID:0000000008376878

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): DTC Logic INFOID-000000008376879

### **DTC DETECTION LOGIC**

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the sonar control unit if the malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# **U1200 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO WITH SURROUND SOUND]

# **U1200 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
CONT UNIT [U1200]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-668. "Removal and Installation - AV Control Unit".

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# **U1201 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# **U1201 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GYRO NO CONN [U1201]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

### **U1202 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO WITH SURROUND SOUND]

# **U1202 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
G-SENSOR NO CONN [U1202]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

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### **U1204 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO WITH SURROUND SOUND]

# **U1204 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GPS CONN [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# Diagnosis Procedure

INFOID:0000000008487465

# 1. PERFORM SELF DIAGNOSTIC RESULT

- Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

### Is DTC U1204 detected?

YES >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

NO >> Refer to GI-53, "Intermittent Incident".

### **U1205 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# **U1205 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ROM [U1205]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008487467

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

### Is DTC U1205 detected?

YES >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

NO >> Refer to GI-53, "Intermittent Incident".

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### **U1206 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# **U1206 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GPS RAM [U1206]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008487469

# 1. PERFORM SELF DIAGNOSTIC RESULT

- Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

### Is DTC U1206 detected?

YES >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

NO >> Refer to GI-53, "Intermittent Incident".

### **U1207 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO WITH SURROUND SOUND]

# **U1207 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GPS RTC [U1207]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668. "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008487471

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

### Is DTC U1207 detected?

YES >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

NO >> Refer to GI-53, "Intermittent Incident".

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# **U1216 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# **U1216 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
CAN CONT [U1216]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# **U1217 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO WITH SURROUND SOUND]

# **U1217 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
BLUETOOTH MODULE [U1217]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-668. "Removal and Installation - AV Control Unit".

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### **U1218 AV CONTROL UNIT**

### [BOSE AUDIO WITH SURROUND SOUND]

# **U1218 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
HDD CONN [U1218]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008487475

# 1. CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

### **U1219 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO WITH SURROUND SOUND]

# **U1219 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
HDD READ [U1219]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668. "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008487477

# 1. CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

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### **U121A AV CONTROL UNIT**

[BOSE AUDIO WITH SURROUND SOUND]

# **U121A AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
HDD WRITE [U121A]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008487479

# 1. CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

### **U121B AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO WITH SURROUND SOUND]

# **U121B AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
HDD COMM [U121B]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668. "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008487481

# 1. CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

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### **U121C AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO WITH SURROUND SOUND]

# **U121C AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
HDD ACCESS [U121C]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008487483

# 1. CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

### **U121D AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO WITH SURROUND SOUND]

# **U121D AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
DSP CONN [U121D]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008487485

1. CHECK CD PLAYBACK

Check the CD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the CD playback function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

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### **U121E AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# **U121E AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
DSP COMM [U121E]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008487487

# 1. CHECK CD PLAYBACK

Check the CD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the CD playback function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

### **U1225 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO WITH SURROUND SOUND]

# **U1225 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
USB CONTROLLER [U1225] [U1225]	USB connection malfunction is detected.	Check that connection to USB connector is normal.

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### **U1227 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO WITH SURROUND SOUND]

# **U1227 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
DVD COMM [U1227]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected.  Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

# **Diagnosis Procedure**

INFOID:0000000008487490

# 1. CHECK DVD PLAYBACK

Check the DVD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the DVD playback function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

### **U1228 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO WITH SURROUND SOUND]

# **U1228 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

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# **U1229 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# **U1229 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

### **U122A AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

### [BOSE AUDIO WITH SURROUND SOUND]

# **U122A AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
CONFIG UNFINISH [U122A]	Configuration data is incomplete.	Write configuration data.  Refer to AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Work Procedure".

# Diagnosis Procedure

INFOID:0000000008487494

1.PERFORM CONFIGURATION

When U122A is detected, configuration data must be written.

>> Write configuration data with CONSULT. Refer to <u>AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Work Procedure"</u>.

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# **U122E AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# **U122E AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

## U1231 BOSE AMP.

< DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

## U1231 BOSE AMP.

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
AMP TEMP [U1231]	BOSE amp. malfunction is detected.	Replace BOSE amp. if malfunction occurs constantly.  Refer to AV-674, "Removal and Installation".

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## **U1232 STEERING ANGLE SENSOR**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## U1232 STEERING ANGLE SENSOR

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of steering angle sensor is incomplete.	Adjust predictive course line center position of steering angle sensor.

## Diagnosis Procedure

INFOID:0000000008487498

# 1. ADJUST PREDICTIVE COURSE LINE CENTER POSITION OF STEERING ANGLE SENSOR

When U1232 is detected, the predictive course line center position of the steering angle sensor needs to be adjusted.

>> Adjust the predictive course line center position of steering angle sensor. Refer to <u>AV-546, "PRE-DICTED COURSE LINE CENTER POSITION ADJUSTMENT: Work Procedure"</u>.

## **U1243 DISPLAY UNIT**

< DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

## U1243 DISPLAY UNIT

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT DISP CONN [U1243]	When any of the following is detected.  display unit power supply or ground circuit malfunction.  serial communication circuit malfunction between front display unit and AV control unit.	Display unit power supply and ground circuits.     Serial communication circuits between front display unit and AV control unit.

## Diagnosis Procedure

INFOID:0000000008487500

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

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

Check display unit power supply and ground circuits. Refer to <u>AV-613, "DISPLAY UNIT : Diagnosis Procedure"</u>.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.check communication circuit continuity

- 1. Turn ignition switch OFF.
- 2. Disconnect display unit connector M92 and AV control unit connector M124.
- Check continuity between display unit connector M92 terminals 9, 10 and AV control unit connector M124 terminals 77, 61.

Display unit		AV control unit		Continuity
Connector	Terminals	Connector	Terminals	Continuity
M92		M124	77	Yes
10192	10	IVI 124	61	169

Check continuity between display unit connector M92 terminals 9, 10 and ground.

Display unit		Ground	Continuity
Connector	Terminals	Giodila	Continuity
M92	9		No
WISZ	10	_	NO

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# $3. \text{CHECK COMMUNICATION SIGNAL (DISP} {\rightarrow} \text{CONT})$

- 1. Connect display unit connector M92 and AV control unit connector M124.
- Turn ignition switch ON.
- Check signal between display unit connector M92 terminal 9 and ground.

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## **U1243 DISPLAY UNIT**

## [BOSE AUDIO WITH SURROUND SOUND]

Displ	ay unit	Ground			
(+)		( )	Condition	Reference value	
Connector	Terminal	(-)			
M92	9	_	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. Refer to AV-668, "Removal and Installation - AV Control Unit".

 $\textbf{4.} \textbf{CHECK COMMUNICATION SIGNAL (CONT} \rightarrow \textbf{DISP})$ 

Check signal between display unit connector M92 terminal 10 and ground.

Displa	Display unit			
(	(+)		Condition	Reference value
Connector	Terminal	(–)		
M92	10	_	When adjusting display brightness.	(V) 6 4 2 0 + 1ms PKIB5039J

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Replace display unit. Refer to AV-671, "Removal and Installation".

## **U1244 GPS ANTENNA**

< DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

## **U1244 GPS ANTENNA**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna disconnection.

## Diagnosis Procedure

INFOID:0000000008487502

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Regarding Wiring Diagram information, refer to AV-489. "Wiring Diagram".

## 1. GPS ANTENNA INSPECTION

Visually inspect the GPS antenna and antenna feeder. Refer to AV-697, "Removal and Installation".

## Is inspection result normal?

YES >> GO TO 2.

NO >> Replaceair malfunctioning parts.

# 2.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 terminal	Ground	Voltage
(+)	(-)	Voltage
188	_	5.0 V

#### Is inspection result normal?

YES >> Inspection End.

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

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## **U1258 SATELLITE RADIO ANTENNA**

< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

## U1258 SATELLITE RADIO ANTENNA

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.

## **Diagnosis Procedure**

INFOID:0000000008487504

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

## 1. SATELLITE RADIO ANTENNA INSPECTION

Visually inspect the satellite radio antenna and antenna feeder. Refer to <u>AV-695, "Location of Antennas"</u>. <u>Is inspection result normal?</u>

YES >> GO TO 2.

NO >> Replaceair malfunctioning parts.

# 2.CHECK AV CONTROL UNIT VOLTAGE

- 1. Disconnect AV control unit connector M133.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit terminal 166 and ground.

AV control unit terminal	Ground	Voltage
(+)	(–)	voltage
166	_	5.0 V

#### Is inspection result normal?

YES >> Inspection End.

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

## **U125A HEADREST DISPLAY UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## U125A HEADREST DISPLAY UNIT

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
3RD DISP CONN [U125A]	When any of the following is detected.  headrest display unit power supply or ground circuit malfunction.  AV communication circuit malfunction between headrest display units.	Headrest display unit power supply and ground circuits.     AV communication circuits between headrest display units.

## Diagnosis Procedure

INFOID:0000000008487506

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

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

Check headrest display unit power supply and ground circuits. Refer to <u>AV-618</u>, "<u>HEADREST DISPLAY UNIT</u>: <u>Diagnosis Procedure</u>".

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK AV COMMUNICATION CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect headrest display unit connectors.
- 3. Check continuity between headrest display unit (driver seat) connector B202 and headrest display unit (passenger seat) connector B302.

Headrest display	y unit (driver seat)	Headrest display u	nit (passenger seat)	Continuity
Connector	Terminals	Connector	Terminals	Continuity
B202	9	B302	21	Yes
6202	10	D302	22	168

4. Check continuity between headrest display unit (driver seat) connector B202 and ground.

Headrest display unit (driver seat)		Ground	Continuity
Connector	Terminals	Ground	Continuity
B202	9		No
	10	No	INO

#### Is the inspection result normal?

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YES >> Replace headrest display unit (passenger seat). Refer to AV-672, "Removal and Installation".

NO >> Repair or replace harness or connectors.

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## **U1263 USB**

#### [BOSE AUDIO WITH SURROUND SOUND]

## **U1263 USB**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
USB OVERCURRENT [U126]	Overcurrent in USB connector is detected.	Check USB harness between the AV control unit and USB connector.

## **Diagnosis Procedure**

INFOID:0000000008487508

## 1. CHECK USB INTERFACE HARNESS

Visually inspect USB interface harness.

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace USB interface harness. Refer to AV-683, "Removal and Installation".

# 2.CHECK USB INTERFACE HARNESS CONTINUITY

Check USB interface harness continuity. Refer to AV-648, "Diagnosis Procedure".

#### Is the inspection result normal?

YES >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

NO >> Replace USB interface harness. Refer to AV-683, "Removal and Installation".

## **U1264 ANTENNA AMP.**

< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

## U1264 ANTENNA AMP.

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
ANTENNA AMP TERMINAL [U1264]	Antenna amp. ON signal circuit open or short circuited.	Antenna amp. ON signal circuit between AV control unit and antenna amp.

## Diagnosis Procedure

INFOID:0000000008487510

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Regarding Wiring Diagram information, refer to AV-489. "Wiring Diagram".

# 1. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND ANTENNA BASE

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M143 and antenna base connector M502.
- 3. Check continuity between AV control unit connector M143 and antenna base connector M502.

AV con	AV control unit Antenna base Continuity		Antenna base	
Connector	Terminal	Connector	Terminal	Continuity
M143	143	M502	1	Yes

4. Check continuity between AV control unit connector M143 and ground.

AV control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M143	143	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2. CHECK AV CONTROL UNIT VOLTAGE

- Connect AV control unit connector M143.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit connector M143 and ground.

AV control unit		Ground	V 11
(+)		( )	Voltage (Approx.)
Connector	Terminal	(-)	( )
M143	143	_	Battery voltage

## Is the inspection result normal?

Revision: March 2012

YES >> Replace antenna base. Refer to AV-698, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

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#### U1265 BOSE AMP.

< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

## U1265 BOSE AMP.

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
AMP ON TERMINAL [U1265]	BOSE amp. ON signal circuit open or short circuited.	BOSE amp. ON signal circuit between AV control unit and BOSE amp.

## Diagnosis Procedure

INFOID:0000000008487512

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND BOSE SPEAKER AMP.

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M122 and Bose speaker amp. connector B130.
- 3. Check continuity between AV control unit connector M122 and Bose speaker amp. connector M130.

AV cor	AV control unit		Bose speaker amp.	
Connector	Terminal	Connector	Terminal	Continuity
M122	1	B130	60	Yes

4. Check continuity between AV control unit connector M122 and ground.

AV control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M122	1	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector M122.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit connector M122 and ground.

AV control unit		Ground	
(+)		( )	Voltage (Approx.)
Connector	Terminal	(-)	( ) ,
M122	1	_	Battery voltage

#### Is the inspection result normal?

YES >> Replace Bose speaker amp. Refer to AV-674, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

## **U1300 AV COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

## U1300 AV COMM CIRCUIT

Description INFOID:000000008487513

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

#### SELF DIAGNOSTIC RESULT DISPLAY ITEM

CONSULT Display	DTC Detection Condition	Possible Cause
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When any of the following is detected:  • A/C and AV switch assembly power supply or ground circuit malfunction.  • AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	A/C and AV switch assembly power supply and ground circuits.     Refer to AV-616, "A/C AND AV SWITCH ASSEMBLY: Diagnosis Procedure".      AV communication circuits between AV control unit and A/C and AV switch assembly.
AV COMM CIRCUIT [U1300]     AMP CONN [U124E]	When any of the following is detected: BOSE speaker amp. power supply or ground circuit malfunction.  AV communication circuits between AV control unit and BOSE speaker amp. are malfunctioning.	<ul> <li>BOSE speaker amp. power supply and ground circuits.         Refer to AV-614, "BOSE AMP.: Diagnosis Procedure".     </li> <li>AV communication circuits between AV control unit and BOSE speaker amp.</li> </ul>
AV COMM CIRCUIT [U1300]     VIDEO DIST CONN [U1246]	When any of the following is detected:  video distributor power supply or ground circuit malfunction.  headrest display unit (driver seat) power supply or ground circuit malfunction.  AV communication circuit malfunction between AV control unit and headrest display unit (driver seat).	Video distributor power supply and ground circuits.  Refer to AV-617, "VIDEO DISTRIBUTOR: Diagnosis Procedure".  Headrest display unit (driver seat) power supply and ground circuits.  Refer to AV-618, "HEADREST DISPLAY UNIT: Diagnosis Procedure".  AV communication circuits between AV control unit and headrest display unit (driver seat).
AV COMM CIRCUIT [U1300]     AROUND CAMERA CONN [U125B]	When any of the following is detected:     around view monitor control unit power supply or ground circuit malfunction.     AV communication circuit malfunction between AV control unit and around view monitor control unit.	Around view monitor control unit power supply and ground circuits.  Refer to AV-618, "AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure".      AV communication circuits between AV control unit and around view monitor control unit.
AV COMM CIRCUIT [U1300]     SONAR CONN [U125C]	When any of the following is detected:  sonar control unit power supply or ground circuit malfunction.  AV communication circuit malfunction between AV control unit and sonar control unit.	Sonar control unit power supply and ground circuits.     Refer to AV-619, "SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): Diagnosis Procedure".      AV communication circuits between AV control unit and sonar control unit.

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## **U1300 AV COMM CIRCUIT**

## < DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

CONSULT Display	DTC Detection Condition	Possible Cause
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]     SONAR CONN [U125C]     AROUND CAMERA CONN [U125B]     VIDEO DIST CONN [U1246]		
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]     AMP CONN [U124E]     SONAR CONN [U125C]     AROUND CAMERA CONN [U125B]     VIDEO DIST CONN [U1246]	AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	AV communication circuits between AV control unit and A/C and AV switch assembly.

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## U1302 CAMERA POWER VOLT

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause	0
CAMERA SUPPLY POWER SUPPLY VOLTAGE ABNOR- MALITY [U1302]	Short in camera power circuit.	Harness or connectors.     Camera.     Around view monitor control unit.	D

## Diagnosis Procedure

INFOID:0000000008376881

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Regarding Wiring Diagram information, refer to AV-489. "Wiring Diagram".

## 1. CHECK CAMERA DATA MONITOR

Check CAMERA IMAGE SIG, CAMERA COMM STATUS and CAMERA COMM LINE for each camera in "DATA MONITOR" of "AVM".

#### Is "OK" displayed for all cameras?

YES >> Refer to GI-53, "Intermittent Incident".

NO-1 (Front camera)>>GO TO 2.

NO-2 (Rear camera)>>GO TO 4.

NO-3 (LH side camera)>>GO TO 6.

NO-4 (RH side camera)>>GO TO 8.

# 2.CHECK FRONT CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

Turn ignition switch OFF.

2. Disconnect around view monitor control unit connector M97 and camera connectors.

 Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view mo	onitor control unit	Front camera		Continuity	
Connector	Terminal	Connector Terminal		_ Continuity	
M97	68	E226	1	Yes	
IVI97	70	E220	2	165	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M97	68	_	No

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- Connect around view monitor control unit connector M97 and front camera connector E226.
- 2. Turn ignition switch ON.
- Check voltage between around view monitor control unit connector M97 terminals.

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< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

Around view monitor control unit M97			Valtara
(+)	(–)	Condition	Voltage (Approx.)
Terminal	Terminal		, , ,
68	70	CAMERA switch is ON or shift position is R.	6.0 V

#### Is the inspection result normal?

- YES >> Replace front camera. Refer to AV-403, "Removal and Installation".
- NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

## 4. CHECK REAR CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and rear camera connector D511.
- Check continuity between around view monitor control unit connector M97 and rear camera connector D511.

Around view mo	Around view monitor control unit Rear came		camera	Continuity
Connector	Terminal	Connector Terminal		Continuity
M97	50	D511	8	Yes
IVI97	52	D311	7	165

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Giodila	
M97	50	_	No

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

## 5. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- 1. Connect around view monitor control unit connector M97 and rear camera connector D511.
- Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97			
(+)	(-)	Condition	Voltage (Approx.)
Terminal	Terminal		( FF - 7
50	52	CAMERA switch is ON or shift position is R.	6.0 V

#### Is the inspection result normal?

- YES >> Replace rear camera. Refer to AV-404, "Removal and Installation".
- NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

## 6. CHECK LH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
- Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

M97	56	D20	6	Ves
W97	58	D20	18	165

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M97	56	_	No

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness or connectors.

## .CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- Connect around view monitor control unit connector M97 and LH side camera connector D20.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97			
(+)	(-)	Condition	Voltage (Approx.)
Terminal	Terminal		, , ,
56	58	CAMERA switch is ON or shift position is R.	6.0 V

#### Is the inspection result normal?

YES >> Replace LH side camera. Refer to AV-405, "Removal and Installation".

NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

## 8. CHECK RH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
- Check continuity between around view monitor control unit connector M97 and RH side camera connector D113.

Around view mo	onitor control unit	RH side camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M97	62	D113	6	Yes
64	טווט	18	163	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M97	62	_	No

#### Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness or connectors.

## 9. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- 1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
- 2. Turn ignition switch ON.
- Check voltage between around view monitor control unit connector M97 terminals.

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#### < DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

Around view monitor control unit M97			
(+)	(-)	Condition	Voltage (Approx.)
Terminal	Terminal		
62	64	CAMERA switch is ON or shift position is R.	6.0 V

## Is the inspection result normal?

YES

>> Replace RH side camera. Refer to <u>AV-405, "Removal and Installation"</u>.
>> Replace around view monitor control unit. Refer to <u>AV-402, "Removal and Installation"</u>. NO

## **U1303 LED POWER SUPPLY VOLT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## U1303 LED POWER SUPPLY VOLT

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause	0
LED SUPPLY POWER SUP- PLY VOLTAGE ABNORMAL- ITY [U1303]		Harness or connectors.     Camera.     Around view monitor control unit.	D

## Diagnosis Procedure

INFOID:0000000008376883

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Regarding Wiring Diagram information, refer to AV-489. "Wiring Diagram".

## 1. CHECK CAMERA DATA MONITOR

Check CAMERA IMAGE SIG, CAMERA COMM STATUS and CAMERA COMM LINE for each camera in "DATA MONITOR" of "AVM".

#### Is "OK" displayed for all cameras?

YES >> Refer to GI-53, "Intermittent Incident".

NO-1 (LH side camera)>>GO TO 2.

NO-2 (RH side camera)>>GO TO 4.

# 2.CHECK LH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
- 3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view mo	Around view monitor control unit		LH side camera	
Connector	Terminal	Connector Terminal		Continuity
M97	56	D20	6	Yes
58	D20	18	165	

Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M97	56	_	No

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

## 3.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- Connect around view monitor control unit connector M97 and LH side camera connector D20.
- 2. Turn ignition switch ON.
- Check voltage between around view monitor control unit connector M97 terminals.

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## **U1303 LED POWER SUPPLY VOLT**

#### < DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

Around view monitor control unit M97			Mallan a
(+)	(-)	Condition	Voltage (Approx.)
Terminal	Terminal		( ) ; ; ; ;
56	58	CAMERA switch is ON or shift position is R.	6.0 V

#### Is the inspection result normal?

- YES >> Replace LH side camera. Refer to AV-405, "Removal and Installation".
- NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

## 4. CHECK RH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
- Check continuity between around view monitor control unit connector M97 and RH side camera connector D113.

Around view me	Around view monitor control unit		RH side camera		
Connector	Terminal	Connector	Terminal	Continuity	
M97	62	D113	6	Yes	
IVI97	64		18	165	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M97	62	_	No

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

## 5. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- Connect around view monitor control unit connector M97 and RH side camera connector D113.
- Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97				
(+)	(-)	Condition	Voltage (Approx.)	
Terminal	Terminal		(	
62	64	CAMERA switch is ON or shift position is R.	6.0 V	

#### Is the inspection result normal?

YES >> Replace RH side camera. Refer to AV-405, "Removal and Installation".

NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

## **U1304 CAMERA IMAGE CALIBRATION**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## **U1304 CAMERA IMAGE CALIBRATION**

DTC Logic

## DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
NON-COMPLETION OF THE CALIBRATION [U1304]	Camera calibration malfunction.	Cameras are not calibrated. Refer to AV-547, "CAL- IBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Work Procedure".

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## **U1305 CONFIG UNFINISH**

< DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

## **U1305 CONFIG UNFINISH**

DTC Logic

## DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
NON-COMPLETION OF THE WRITE CONFIGURA- TION [U1305]	Around view monitor control unit configuration malfunction.	Around view monitor control unit not configurated. Refer to AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT): Work Procedure".

## **U1310 AV CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

# **U1310 AV CONTROL UNIT**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit if malfunction occurs constantly.  Refer to AV-668, "Removal and Installation - AV Control Unit".

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## U1601, U1603, U1609, U160B FRONT DOOR SPEAKER/TWEETER [BOSE AUDIO WITH SURROUND SOUND]

< DTC/CIRCUIT DIAGNOSIS >

# U1601, U1603, U1609, U160B FRONT DOOR SPEAKER/TWEETER

**DTC Logic** INFOID:0000000008487515

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FL-DOOR WOOFER (OPEN, SHORT, GND-SHORT) [U1601] FL-DOOR WOOFER (VB-SHOR] [U1603]	When any of the following is detected: Sound signal circuit malfunction between BOSE speaker amp. and front door speaker LH. Sound signal circuit malfunction between BOSE speaker amp. and front tweeter LH.	<ul> <li>Sound signal circuits between BOSE speaker amp. and front door speaker LH. Refer to AV-627, "Diagnosis Procedure".</li> <li>Sound signal circuits between BOSE speaker amp. and front tweeter LH. Refer to AV-625, "Diagnosis Procedure".</li> </ul>
FR-DOOR WOOFER (OPEN, SHORT, GND-SHORT) [U1609] FR-DOOR WOOFER (VB-SHOR) [U160B]	When any of the following is detected: Sound signal circuit malfunction between BOSE speaker amp. and front door speaker RH. Sound signal circuit malfunction between BOSE speaker amp. and front tweeter RH.	<ul> <li>Sound signal circuits between BOSE speaker amp. and front door speaker RH. Refer to AV-627, "Diagnosis Procedure".</li> <li>Sound signal circuits between BOSE speaker amp. and front tweeter RH. Refer to AV-625, "Diagnosis Procedure".</li> </ul>

## **Diagnosis Procedure**

INFOID:0000000008487516

# 1. PERFORM SELF DIAGNOSTIC RESULT

- Perform Self Diagnostic Result for MULTI AV.
- Erase Self Diagnostic Result. Turn ignition switch OFF.
- Turn ignition switch ON. Perform Self Diagnostic Result again.

#### Is DTC U1601, U1603, U1609 or U160B detected?

YES >> Refer to AV-627, "Diagnosis Procedure". >> Refer to GI-53, "Intermittent Incident". NO

**AV-598** Revision: March 2012 2013 Infiniti JX

## **U1627, U162F TWEETER**

## < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

## **U1627, U162F TWEETER**

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
F-INST L-TWEETER (OPEN, SHORT, GND- SHORT or VB-SHOR) [U1627]	Sound signal circuit malfunction between BOSE speaker amp. and instrument panel tweeter LH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter LH.  Refer to AV-623, "Diagnosis Procedure".
F-INST R-TWEETER (OPEN, SHORT, GND- SHORT or VB-SHOR) [U162F]	Sound signal circuit malfunction between BOSE speaker amp. and instrument panel tweeter RH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter RH.  Refer to AV-623, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000008487518

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

#### Is DTC U1627 or U162F detected?

YES >> Refer to AV-623, "Diagnosis Procedure".

NO >> Refer to GI-53, "Intermittent Incident".

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## **U162A CENTER SPEAKER**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## **U162A CENTER SPEAKER**

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
F-INST C-SQUAWK (OPEN, SHORT, GND- SHORT, or VB-SHORT) [U162A]	Sound signal circuit malfunction between BOSE speaker amp. and center speaker.	Sound signal circuits between BOSE speaker amp. and center speaker.  Refer to AV-621, "Diagnosis Procedure".

## **Diagnosis Procedure**

INFOID:0000000008487520

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

## Is DTC U162A detected?

YES >> Refer to AV-621, "Diagnosis Procedure".

NO >> Refer to GI-53, "Intermittent Incident".

## U1684, U1687, U168C, U168F REAR DOOR SPEAKER/TWEETER [BOSE AUDIO WITH SURROUND SOUND]

## < DTC/CIRCUIT DIAGNOSIS >

# U1684, U1687, U168C, U168F REAR DOOR SPEAKER/TWEETER

**DTC Logic** INFOID:0000000008487521

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
2L-DOOR SPEAKER (OPEN, SHORT, GND- SHORT) [U1684] 2L-DOOR SPEAKER (VB- SHOR) [U1687]	When any of the following is detected:  sound signal circuit malfunction between BOSE speaker amp. and rear door speaker LH.  sound signal circuit malfunction between BOSE speaker amp. and rear door tweeter LH.	<ul> <li>Sound signal circuits between BOSE speaker amp. and rear door speaker LH. Refer to AV-631, "Diagnosis Procedure".</li> <li>Sound signal circuits between BOSE speaker amp. and rear door tweeter LH. Refer to AV-629, "Diagnosis Procedure".</li> </ul>
2R-DOOR SPEAKER (OPEN, SHORT, GND- SHORT) [U168C] 2R-DOOR SPEAKER (VB- SHOR) [U168F]	When either one of the following items are detected:  sound signal circuit malfunction between BOSE speaker amp. and rear door speaker RH.  sound signal circuit malfunction between BOSE speaker amp. and rear door tweeter RH.	<ul> <li>Sound signal circuits between BOSE speaker amp. and rear door speaker RH. Refer to AV-631, "Diagnosis Procedure".</li> <li>Sound signal circuits between BOSE speaker amp. and rear door tweeter RH. Refer to AV-629, "Diagnosis Procedure".</li> </ul>

## **Diagnosis Procedure**

INFOID:0000000008487522

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# 1. PERFORM SELF DIAGNOSTIC RESULT

- Perform Self Diagnostic Result for MULTI AV.
- Erase Self Diagnostic Result. Turn ignition switch OFF.
- Turn ignition switch ON. Perform Self Diagnostic Result again.

#### Is DTC U1684, U1687, U168C or U168F detected?

YES >> Refer to AV-631, "Diagnosis Procedure".

>> Refer to GI-53, "Intermittent Incident". NO

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**AV-601** Revision: March 2012 2013 Infiniti JX

## **U175D WOOFER**

## [BOSE AUDIO WITH SURROUND SOUND]

# U175D WOOFER

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
R-LUGGAGE L-WOOFER (OPEN, SHORT, GND- SHORT or VB-SHOR) [U175D]	Sound signal circuit malfunction between BOSE speaker amp. and subwoofer.	Sound signal circuits between BOSE speaker amp. and subwoofer. Refer to AV-635, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000008487524

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

## Is DTC U175D detected?

YES >> Refer to AV-635, "Diagnosis Procedure".

NO >> Refer to GI-53, "Intermittent Incident".

## U176A, U1772 ROOF SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## U176A, U1772 ROOF SPEAKER

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause	
R-ROOF L-SQAWK (OPEN, SHORT, GND- SHORT or VB-SHOR) [U176A]	Sound signal circuit malfunction between BOSE speaker amp. and rear side speaker LH.	Sound signal circuits between BOSE speaker amp. and rear side speaker LH.  Refer to AV-633, "Diagnosis Procedure".	
R-ROOF R-SQAWK (OPEN, SHORT, GND- SHORT or VB-SHOR) [U1772]	Sound signal circuit malfunction between BOSE speaker amp. and rear side speaker RH.	Sound signal circuits between BOSE speaker amp. and rear side speaker RH.  Refer to AV-633, "Diagnosis Procedure".	

## **Diagnosis Procedure**

INFOID:0000000008487526

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Perform Self Diagnostic Result for MULTI AV.
- 2. Erase Self Diagnostic Result. Turn ignition switch OFF.
- 3. Turn ignition switch ON. Perform Self Diagnostic Result again.

#### Is DTC U176A or U1772 detected?

YES >> Refer to AV-633, "Diagnosis Procedure".

NO >> Refer to GI-53, "Intermittent Incident".

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## **B2720 CORNER SENSOR [RL]**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## B2720 CORNER SENSOR [RL]

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR LEFT SIDE EXTER- NAL SENSOR [B2720]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Rear sonar sensor LH outer.</li></ul>

## Diagnosis Procedure

INFOID:0000000008376887

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK REAR SONAR SENSOR LH OUTER CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and rear sonar sensor LH outer connector.
- Check continuity between sonar control unit connector M70 and rear sonar sensor LH outer connector B455.

Sonar control unit		Rear sonar sensor LH outer		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M70	22	B455	2	Yes
IVI7O	14	D400	1	165

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M70	22	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK REAR SONAR SENSOR LH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

- Turn ignition switch ON.
- Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage
Connector	Terminal	Ground	(Approx.)
M70	22	_	0V

#### Is the inspection result normal?

YES >> Replace rear sonar sensor LH outer. Refer to AV-692, "Removal and Installation".

NO >> Repair or replace harness or connectors.

## **B2721 CENTER SENSOR [RL]**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# **B2721 CENTER SENSOR [RL]**

**DTC Logic** INFOID:0000000008376888

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR LEFT SIDE INTER- NAL SENSOR [B2721]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Rear sonar sensor LH inner.</li></ul>

## Diagnosis Procedure

INFOID:0000000008376889

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK REAR SONAR SENSOR LH INNER CIRCUIT CONTINUITY

Turn ignition switch OFF.

- Disconnect sonar control unit connector and rear sonar sensor LH inner connector.
- Check continuity between sonar control unit connector M70 and rear sonar sensor LH inner connector

Sonar co	Sonar control unit		Rear sonar sensor LH inner	
Connector	Terminal	Connector	Terminal	Continuity
M70	21	B457	2	Yes
M70	14	D437	1	165

Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M70	21	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK REAR SONAR SENSOR LH INNER SIGNAL CIRCUIT SHORT TO BATTERY

Turn ignition switch ON.

Check voltage between sonar control unit connector M70 and ground.

Sonar co	Sonar control unit		Voltage
Connector	Terminal	Ground (Approx.)	(Approx.)
M70	21	_	0V

#### Is the inspection result normal?

YES >> Replace rear sonar sensor LH inner. Refer to AV-692, "Removal and Installation".

NO >> Repair or replace harness or connectors.

**AV-605** Revision: March 2012 2013 Infiniti JX

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## **B2722 CENTER SENSOR [RR]**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## B2722 CENTER SENSOR [RR]

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR RIGHT SIDE INTER- NAL SENSOR [B2722]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Rear sonar sensor RH inner.</li></ul>

## Diagnosis Procedure

INFOID:0000000008376891

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK REAR SONAR SENSOR RH INNER CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and rear sonar sensor RH inner connector.
- 3. Check continuity between sonar control unit connector M70 and rear sonar sensor RH inner connector B458.

Sonar control unit		Rear sonar sensor RH inner		Continuity
Connector	Terminal	Connector	Terminal	Continuity
MZO	9	B458	2	Yes
M70	14	D400	1	165

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M70	9	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK REAR SONAR SENSOR RH INNER SIGNAL CIRCUIT SHORT TO BATTERY

- Turn ignition switch ON.
- Check voltage between sonar control unit connector M70 and ground.

Sonar co	Sonar control unit		Voltage
Connector	Terminal	Ground	(Approx.)
M70	9	_	0V

#### Is the inspection result normal?

YES >> Replace rear sonar sensor RH inner. Refer to AV-692, "Removal and Installation".

NO >> Repair or replace harness or connectors.

## **B2723 CORNER SENSOR [RR]**

< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

# **B2723 CORNER SENSOR [RR]**

DTC Logic INFOID:0000000008376892

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR RIGHT SIDE EXTER- NAL SENSOR [B2723]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Rear sonar sensor RH outer.</li></ul>

## **Diagnosis Procedure**

INFOID:0000000008376893

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK REAR SONAR SENSOR RH OUTER SIGNAL CIRCUIT CONTINUITY

Turn ignition switch OFF.

- Disconnect sonar control unit connector and rear sonar sensor RH outer connector.
- Check continuity between sonar control unit connector M70 and rear sonar sensor RH outer connector

Sonar co	Sonar control unit		Rear sonar sensor RH outer	
Connector	Terminal	Connector	Terminal	Continuity
M70	10	B456	2	Yes
M70	14	D430	1	165

Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M70	10	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK REAR SONAR SENSOR RH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

Turn ignition switch ON.

Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage
Connector	Terminal	(Approx.)	(Approx.)
M70	10	_	0V

#### Is the inspection result normal?

YES >> Replace rear sonar sensor RH outer. Refer to AV-692, "Removal and Installation".

NO >> Repair or replace harness or connectors.

**AV-607** Revision: March 2012 2013 Infiniti JX

## **B2724 SONAR CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## **B2724 SONAR CONTROL UNIT**

DTC Logic

## DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
ECU [B2724]	Sonar control module malfunction.	Replace sonar control module.

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INFOID:0000000008376896

## **B2725 REAR BUZZER**

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR BUZZER [B2725]	Buzzer is open or short circuited.     Buzzer malfunction.	Harness or connectors.     Buzzer.

## Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK SONAR BUZZER SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and sonar buzzer connector.
- 3. Check continuity between sonar control unit connector M70 and sonar buzzer connector B35.

Sonar co	Sonar control unit		Sonar buzzer	
Connector	Terminal	Connector	Terminal	Continuity
M70	20	B35	3	Yes

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M70	20	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2.CHECK SONAR BUZZER SIGNAL CIRCUIT SHORT TO BATTERY

- Turn ignition switch ON.
- Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage
Connector	Terminal	Ground	(Approx.)
M70	20	_	0V

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.CHECK SONAR BUZZER SIGNAL CIRCUIT SHORT TO BUZZER POWER

- Turn ignition switch OFF.
- 2. Check continuity between sonar control unit connector M70 terminals.

Sonar control unit connector M70		Continuity	
Terminal	Terminal Terminal		
19	20	No	

#### Is the inspection result normal?

## **B2725 REAR BUZZER**

## < DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

YES >> Replace sonar buzzer. Refer to AV-694, "Removal and Installation".

NO >> Repair or replace harness or connectors.

## **B2729 CORNER SENSOR [FL]**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# B2729 CORNER SENSOR [FL]

DTC Logic INFOID:0000000008376897

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT LEFT SIDE EXTER- NAL SENSOR [B2729]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Front sonar sensor LH outer.</li></ul>

## Diagnosis Procedure

INFOID:0000000008376898

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK FRONT SONAR SENSOR LH OUTER CIRCUIT CONTINUITY

Turn ignition switch OFF.

- Disconnect sonar control unit connector and front sonar sensor LH outer connector.
- Check continuity between sonar control unit connector M70 and front sonar sensor LH outer connector

Sonar co	ontrol unit	Front sonar sensor LH outer		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M70	M70	E307	2	Yes
IVI / O	13	<b>⊑307</b>	1	165

Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M70	3	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK FRONT SONAR SENSOR LH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

- Turn ignition switch ON.
- Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage
Connector	Terminal	Ground	(Approx.)
M70	3	_	0V

#### Is the inspection result normal?

YES >> Replace front sonar sensor LH outer. Refer to AV-692, "Removal and Installation".

NO >> Repair or replace harness or connectors.

**AV-611** Revision: March 2012 2013 Infiniti JX

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## **B272C CORNER SENSOR [FR]**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## B272C CORNER SENSOR [FR]

DTC Logic

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT RIGHT SIDE EX- TERNAL SENSOR [B272C]	<ul><li>Sensor is not configured.</li><li>Sensor is open or short circuited.</li><li>Sensor element malfunction.</li></ul>	<ul><li>Sensor configuration.</li><li>Harness or connectors.</li><li>Front sonar sensor RH outer.</li></ul>

## Diagnosis Procedure

INFOID:0000000008376900

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK FRONT SONAR SENSOR RH OUTER CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and front sonar sensor RH outer connector.
- Check continuity between sonar control unit connector M70 and front sonar sensor RH outer connector E308.

Sonar co	ontrol unit	Front sonar sensor RH outer		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M70	4	E308	2	Yes
IVI7O	13	E300	1	165

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
M70	4	_	No	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK FRONT SONAR SENSOR RH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

- Turn ignition switch ON.
- Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage
Connector	Terminal	Ground	(Approx.)
M70	4	_	0V

#### Is the inspection result normal?

YES >> Replace front sonar sensor RH outer. Refer to AV-692, "Removal and Installation".

NO >> Repair or replace harness or connectors.

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000008376901

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

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# 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
68	Ignition signal	29 (5A)
19	Battery power supply	15 (15A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT

Turn ignition switch OFF.

- Disconnect AV control unit connectors M161 and M163.
- Check voltage between AV control unit connectors and ground.

AV cor	ntrol unit	Ground	Condition	Voltage
Connector	Terminal	Ground	Condition	(Approx.)
M163	68		Ignition switch: ON	
M161	7	_	Ignition switch: ACC	Battery voltage
IVI TO I	19		Ignition switch: OFF	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.CHECK GROUND CIRCUIT

Turn ignition switch OFF.

Check continuity between AV control unit connector M161 terminal 20 and ground.

AV control unit		Ground	Continuity
Connector	Terminal	Orodila	Continuity
M161	20	_	Yes

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

DISPLAY UNIT

**DISPLAY UNIT: Diagnosis Procedure** 

INFOID:0000000008376902

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CHECK FUSE

Check that the following fuses are not blown.

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#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

Terminal No.	Signal name	Fuse No.
11	Battery power supply	15 (15A)
23	ACC power supply	65 (10A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect display unit connector.
- 3. Check voltage between display connector M92 and ground.

Displ	ay unit	Ground Condition		Voltage
Connector	Terminal	Ground	Condition	(Approx.)
M92	23		Ignition switch: ACC	Battery voltage
IVI9Z	11	_	Ignition switch: OFF	Ballery vollage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check continuity between display unit connector M92 terminal 12 and ground.

Display unit		Ground	Continuity
Connector	Terminal	Ordana	Continuity
M92	12	_	Yes

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

BOSE AMP.

# BOSE AMP.: Diagnosis Procedure

INFOID:0000000008376903

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
50	Battery power supply	11 (15A)
51		12 (15A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

- Disconnect BOSE speaker amp. connector B121.
- 2. Check voltage between BOSE speaker amp. connector B121 and ground.

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

BOSE speaker amp.		Ground	Voltage
Connector	Terminal	Ground	(Approx.)
B121	50	_	Battery voltage
	51	<del>_</del>	Dattery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check continuity between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp.		Cround	Continuity
Connector	Terminal	Ground	Continuity
B121	47	_	Yes
	52	_	165

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

#### **SUBWOOFER**

### SUBWOOFER: Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
6	Battery power supply	58 (10A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

### 2. CHECK POWER SUPPLY CIRCUIT

- Disconnect subwoofer connector.
- 2. Check voltage between subwoofer connector B73 and ground.

Subwoofer		Ground	Voltage
Connector	Terminal	Giodila	(Approx.)
B73	6	_	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Check continuity between subwoofer connector B73 and ground.

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#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

Subwoofer		Ground	Continuity
Connector	Terminal	Giodila	Continuity
B73	5	_	Yes

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY: Diagnosis Procedure

INFOID:0000000008376905

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
3	ACC power supply	65 (10A)

#### Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect A/C and AV switch assembly connector.
- 3. Check voltage between A/C and AV switch assembly connector M98 terminal 3 and ground.

A/C and AV s	witch assembly	Ground	Condition	Voltage	
Connector	Terminal	Ground	Condition	(Approx.)	
M98	3	_	Ignition switch: ACC	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.CHECK CONTROL UNIT GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M125.
- 3. Check continuity between A/C and AV switch assembly connector M98 terminal 9 and AV control unit connector M125 terminal 98.

A/C and AV s	A/C and AV switch assembly		AV control unit	
Connector	Terminal	Connector	Terminal	Continuity
M98	9	M125	98	Yes

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

#### 4. CHECK SWITCH GROUND CIRCUIT

Check continuity between A/C and AV switch assembly connector M98 terminal 1 and ground.

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

A/C and AV switch assembly		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M98	1	_	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

VIDEO DISTRIBUTOR

VIDEO DISTRIBUTOR: Diagnosis Procedure

INFOID:0000000008376906

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
2	ACC power supply	65 (10A)
4	Battery power supply	15 (15A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT

Turn ignition switch OFF.

- 2. Disconnect video distributor connector B24.
- 3. Check voltage between video distributor connector B24 and ground.

Video d	istributor	Ground	Ground Condition Voltage (Approx.)	Voltage
Connector	Terminal	Ground		(Approx.)
B24	2		Ignition switch: ACC	Pattery voltage
4	Ignition switch: OFF	Battery voltage		

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity
Connector	Terminal	Giodila	Continuity
B24	1	_	Yes
	3	_	163

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

HEADREST DISPLAY UNIT

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< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

**HEADREST DISPLAY UNIT: Diagnosis Procedure** 

INFOID:000000000837690

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
24	Battery power supply	15 (15A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT

- 1. Disconnect headrest display unit connector.
- 2. Check voltage between headrest display unit connector and ground.

Headrest displayl unit		Ground	Voltage
Connector	Terminal	Ground (A	(Approx.)
B202 (driver seat)	24		Battery voltage
B302 (passenger seat)	24	_	Dattery Voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check continuity between headrest display unit connector and ground.

Headrest displayl unit		Ground	Continuity
Connector	Terminal	Giodila	Continuity
B202 (driver seat)	12		Yes
B302 (passenger seat)	12	_	165

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

#### AROUND VIEW MONITOR CONTROL UNIT

## AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure

INFOID:0000000008376908

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
3	Ignition signal	29 (5A)

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

Terminal No.	Signal name	Fuse No.
4	ACC power supply	65 (10A)
2	Battery power supply	15 (15A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M96.
- Check voltage between around view monitor control unit connector M96 and ground.

Around view mo	onitor control unit	Ground	Condition	Voltage
Connector	Terminal	Ground	Condition	(Approx.)
	3		Ignition switch: ON	
M96	4	_	Ignition switch: ACC	Battery voltage
	2		Ignition switch: OFF	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M96	1	_	Yes

#### Is the inspection result normal?

YES >> Inspection End.

>> Repair or replace harness or connectors.

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
12	ACC power supply	65 (10A)

#### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

## CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect sonar control unit connector M70.
- Check voltage between sonar control unit connector M70 and ground.

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#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

Sonar co	ontrol unit	Ground Condition		Voltage
Connector	Terminal	Ground	Condition	(Approx.)
M70	12	_	Ignition switch: ACC	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal	Oround	Continuity
M70	15	_	Yes

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

### **CENTER SPEAKER**

# Diagnosis Procedure

INFOID:0000000008376910

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- · Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

# 2. CHECK CENTER SPEAKER SIGNAL CIRCUIT CONTINUITY

- 1. Disconnect BOSE speaker amp. connector B122 and center speaker connector.
- Check continuity between BOSE speaker amp. connector B122 and center speaker connector.

BOSE sp	eaker amp.	Center speaker		Continuity
Connector	Terminal	Connector Terminal		Continuity
B122	57	M110	1	Yes
D122	58	WITTO	2	165

3. Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal	Ground	Continuity
B122	57		No
0122	58	_	140

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

# 3. CHECK CENTER SPEAKER SIGNAL

- Connect BOSE speaker amp. connector B122 and center speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push AV control unit POWER switch.
- 4. Check signal between BOSE speaker amp. connector B122 and ground.

BOSE speaker an	np. connector B130		'
(+)	(-)	Condition	Reference value
Terminal	Terminal		
57	58	Audio signal output	(V) 1 0 -1 + 2ms SKIB3609E

Is the inspection result normal?

#### **CENTER SPEAKER**

#### < DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

YES

>> Replace center speaker. Refer to <u>AV-678, "Removal and Installation"</u>.
>> Replace BOSE speaker amp. Refer to <u>AV-674, "Removal and Installation"</u>. NO

#### **INSTRUMENT PANEL SPEAKER/TWEETER**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

### **INSTRUMENT PANEL SPEAKER/TWEETER**

### Diagnosis Procedure

INFOID:0000000008376911

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

# 2. CHECK INSTRUMENT PANEL TWEETER SIGNAL CIRCUIT CONTINUITY

Disconnect BOSE speaker amp. connector B122 and suspect instrument panel tweeter connector.

Check continuity between BOSE speaker amp. connector B122 and suspect instrument panel tweeter connector.

BOSE sp	eaker amp.	Instrument panel tweeter		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	56	M62 (LH)	MG2 (LU)	1	
B122	69		2	Yes	
	71	M73 (RH)	1	165	
	70		2		

Check continuity between BOSE speaker amp. connector B122 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal	Orodila	Continuity
	56		No
B122	69		
	71		
	70		

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

# 3. CHECK INSTRUMENT PANEL TWEETER SIGNAL

- Connect BOSE speaker amp. connector B122 and suspect instrument panel tweeter connector.
- Turn ignition switch to ACC. 2.
- Push AV control unit POWER switch. 3.
- Check signal between BOSE speaker amp. connector B122 and ground.

BOSE speaker amp.			_
(+)	(-)	Condition	Reference value
Terminal	Terminal		

**AV-623** Revision: March 2012 2013 Infiniti JX ΑV

### **INSTRUMENT PANEL SPEAKER/TWEETER**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

56	69		00
71	70	Audio signal output	1 0 -1 +2ms SKIB3609E

#### Is the inspection result normal?

>> Replace instrument panel tweeter. Refer to <u>AV-677, "Removal and Installation"</u>. >> Replace BOSE speaker amp. Refer to <u>AV-674, "Removal and Installation"</u>. YES

NO

#### **FRONT TWEETER**

< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

#### FRONT TWEETER

# Diagnosis Procedure

INFOID:0000000008376912

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

# 2.CHECK FRONT TWEETER SIGNAL CIRCUIT CONTINUITY

- Disconnect BOSE speaker amp. connector B122 and suspect front tweeter connector.
- Check continuity between BOSE speaker amp. connector B122 and suspect front door speaker connector.

BOSE sp	eaker amp.	Front tweeter		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	64	M109 (LH)	M100 (LLI)	1	
B122	75		2	Yes	
	59	M111 (RH)	1	165	
	72		2		

Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal	Ground	Continuity
B122	64		No
	75		
	59	_	
	72		

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

# 3. CHECK FRONT TWEETER SIGNAL

- Connect BOSE speaker amp. connector B122 and suspect front tweeter connector.
- Turn ignition switch to ACC. 2.
- Push AV control unit POWER switch.
- Check signal between BOSE speaker amp. connector B122 and ground.

BOSE speaker amp. connector B122			
(+)	(-)	Condition	Reference value
Terminal	Terminal		

**AV-625** Revision: March 2012 2013 Infiniti JX

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### **FRONT TWEETER**

#### < DTC/CIRCUIT DIAGNOSIS >

# [BOSE AUDIO WITH SURROUND SOUND]

64	75		(V)
59	72	Audio signal output	1 0 -1 + 2ms SKIB3609E

#### Is the inspection result normal?

YES

>> Replace front tweeter. Refer to <u>AV-676, "Removal and Installation"</u>.
>> Replace BOSE speaker amp. Refer to <u>AV-674, "Removal and Installation"</u>. NO

#### FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

# FRONT DOOR SPEAKER

# Diagnosis Procedure

INFOID:0000000008376913

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

# 2.CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

- Disconnect BOSE speaker amp. connector B121 and suspect front door speaker connector.
- Check continuity between BOSE speaker amp. connector B121 and suspect front door speaker connector.

BOSE sp	BOSE speaker amp.		Front door speaker			
Connector	Terminal	Connector	Terminal	Continuity		
	53	D12 (LH)	D12 (LU)	D12 (LU)	1	
B121	48		2	Yes		
	43	- D112 (RH)	1	163		
	44		2			

Check continuity between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal	Ground	Continuity
	53		No
B121	48		
	43		
	44		

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

# 3. CHECK FRONT DOOR SPEAKER SIGNAL

- Connect BOSE speaker amp. connector B121 and suspect front door speaker connector.
- Turn ignition switch to ACC. 2.
- 3. Push AV control unit POWER switch.
- Check signal between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp. connector B121			
(+)	(-)	Condition	Reference value
Terminal	Terminal		

**AV-627** Revision: March 2012 2013 Infiniti JX ΑV

### FRONT DOOR SPEAKER

#### < DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

53	48		
43	44	Audio signal output	(V) 1 0 -1 -2ms SKIB3609E

#### Is the inspection result normal?

YES

>> Replace front door speaker. Refer to <u>AV-675, "Removal and Installation"</u>. >> Replace BOSE speaker amp. Refer to <u>AV-674, "Removal and Installation"</u>. NO

#### **REAR DOOR TWEETER**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

### REAR DOOR TWEETER

# Diagnosis Procedure

INFOID:0000000008376959

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

# 2. CHECK REAR DOOR TWEETER SIGNAL CIRCUIT CONTINUITY

- Disconnect BOSE speaker amp. connector B121 and suspect rear door tweeter connector.
- Check continuity between BOSE speaker amp. connector B121 and suspect rear door tweeter connector.

BOSE sp	BOSE speaker amp. Rear door tweeter		Continuity			
Connector	Terminal	Connector	Terminal	Continuity		
	45	D252 (LH)	D252 (LLI)	D252 (LLI)	1	
B121	46		2	Yes		
DIZI	41	D252 (DLI)	1	165		
	42	D352 (RH)	2			

Check continuity between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal	Ground	Continuity
B121	45		No
	46		
	41	_	INO
	42		

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

# 3.CHECK REAR DOOR TWEETER SIGNAL

- 1. Connect BOSE speaker amp. connector B121 and suspect rear door tweeter connector.
- 2. Turn ignition switch to ACC.
- 3. Push AV control unit POWER switch.
- Check signal between BOSE speaker amp. connector B121 and ground.

BOSE speaker ar	np. connector B121	Condition	Reference value
(+)	(-)		
Terminal	Terminal		

**AV-629** Revision: March 2012 2013 Infiniti JX

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### **REAR DOOR TWEETER**

#### < DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

45	46		0.0
41	42	Audio signal output	(V) 1 0 -1 + 2ms SKIB3609E

#### Is the inspection result normal?

YES

>> Replace rear door tweeter. Refer to <u>AV-680, "Removal and Installation"</u>.
>> Replace BOSE speaker amp. Refer to <u>AV-674, "Removal and Installation"</u>. NO

#### REAR DOOR SPEAKER

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

### REAR DOOR SPEAKER

### Diagnosis Procedure

INFOID:0000000008376914

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

# 2. CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

- Disconnect BOSE speaker amp. connector B121 and suspect rear door speaker connector.
- Check continuity between BOSE speaker amp. connector B121 and suspect rear door speaker connector.

BOSE sp	eaker amp.	Rear door speaker		Continuity			
Connector	Terminal	Connector	Terminal	Continuity			
	45	D207 (LH)	D207 (LLI)	D207 (LLI)	D207 (LLI)	1	
B121	46		2	Yes			
	41	D307 (RH)	1	165			
	42		2				

Check continuity between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal	Ground	Continuity
	45		
B121	46		No
	41	_	INO
	42		

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

# 3.CHECK REAR DOOR SPEAKER SIGNAL

- 1. Connect BOSE speaker amp. connector B121 and suspect rear door speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push AV control unit POWER switch.
- Check signal between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp. connector B121		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

**AV-631** Revision: March 2012 2013 Infiniti JX

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#### **REAR DOOR SPEAKER**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

45	46		
41	42	Audio signal output	(V) 1 0 -1 + 2ms SKIB3609E

#### Is the inspection result normal?

YES

>> Replace rear door speaker. Refer to <u>AV-679, "Removal and Installation"</u>.
>> Replace BOSE speaker amp. Refer to <u>AV-674, "Removal and Installation"</u>. NO

#### **REAR SPEAKER**

< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

# **REAR SPEAKER**

# Diagnosis Procedure

INFOID:0000000008376915

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

#### Is the inspection result normal?

YES >> GO TO 2

>> Repair the terminals or connectors. NO

# 2. CHECK REAR SIDE SPEAKER SIGNAL CIRCUIT CONTINUITY

- Disconnect BOSE speaker amp. connector B122 and suspect rear side speaker connector.
- Check continuity between BOSE speaker amp. connector B122 and suspect rear side speaker connector.

BOSE sp	eaker amp.	Rear side speaker		Continuity		
Connector	Terminal	Connector	Terminal	Continuity		
	62	B1 (LH)	D4 (LLI)	D4 (LLI)	1	
B122	73		2	Yes		
D122	63	B153 (RH)	1	165		
	74		2			

Check continuity between BOSE speaker amp. connector B122 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal	Ground	Continuity
	62		
B122	73		No
	63	_	INO
	74		

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

# 3.CHECK REAR SIDE SPEAKER SIGNAL

- 1. Connect BOSE speaker amp. connector B122 and suspect rear side speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push AV control unit POWER switch.
- Check signal between BOSE speaker amp. connector B122 and ground.

BOSE speaker amp. connector B122		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

**AV-633** Revision: March 2012 2013 Infiniti JX

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### **REAR SPEAKER**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

62	73		(V)
63	74	Audio signal output	1 0 -1 + 2ms SKIB3609E

#### Is the inspection result normal?

YES

>> Replace rear side speaker. Refer to <u>AV-681, "Removal and Installation"</u>.
>> Replace BOSE speaker amp. Refer to <u>AV-674, "Removal and Installation"</u>. NO

#### **SUBWOOFER**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

### **SUBWOOFER**

### Diagnosis Procedure

INFOID:0000000008376916

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CONNECTOR CHECK

Check the BOSE speaker amp. and subwoofer connectors for the following:

- Proper connection
- Damage
- · Disconnected or looses terminals

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. VERIFY SUBWOOFER POWER SUPPLY AND GROUND

Check subwoofer power supply and ground. Refer to AV-615, "SUBWOOFER: Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.check subwoofer signal circuit continuity

- 1. Disconnect BOSE speaker amp. connector B121 and subwoofer connector.
- 2. Check continuity between BOSE speaker amp. connector B121 and subwoofer connector.

BOSE sp	eaker amp.	Subwoofer		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B121	49	B73	1	Yes
DIZI	54	673	2	165

3. Check continuity between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal	Ground	Continuity
B121	54		No
BIZI	49	_	140

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

#### 4. CHECK SUBWOOFER SIGNAL

- 1. Connect BOSE speaker amp. connector B121 and subwoofer connector.
- 2. Turn ignition switch to ACC.
- 3. Push AV control unit POWER switch.
- Check signal between BOSE speaker amp. connector B121 and ground.

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### **SUBWOOFER**

#### < DTC/CIRCUIT DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

BOSE speaker ar	BOSE speaker amp. connector B121		
(+)	(-)	Condition	Reference value
Terminal	Terminal		
54	49	Audio signal output	(V) 1 0 -1 + 2ms SKIB3609E

#### Is the inspection result normal?

YES

>> Replace subwoofer. Refer to <u>AV-682, "Removal and Installation"</u>.
>> Replace BOSE speaker amp. Refer to <u>AV-674, "Removal and Installation"</u>. NO

# FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT IIT DIAGNOSIS > [BOSE AUDIO WITH SURROUND SOUND]

< DTC/CIRCUIT DIAGNOSIS >

## FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008376917

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK AUX SOUND SIGNAL CIRCUIT CONTINUITY

- Turn ignition OFF.
- 2. Disconnect AV control unit connector M162 and front auxiliary input jacks connector.
- 3. Check continuity between AV control unit connector M162 and front auxiliary input jacks connector.

AV co	ntrol unit	Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M162	24	M205	3	Yes
W1102	38	IVIZUS	1	res

4. Check continuity between AV control unit connector M162 and ground.

AV control unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M162	24		No	
IVITOZ	38	_	INO	

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK AUX SOUND SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M162 and front auxiliary input jacks connector.

AV cor	ntrol unit	Front auxilia	ry input jacks	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M162	39	M205	2	Yes

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK AUX SOUND SIGNAL

- Connect AV control unit connector M162 and front auxiliary input jacks connector.
- 2. Turn ignition switch to ACC.
- Select AUX mode.
- Check signals between AV control unit connector M162 and ground.

AV control unit connector M162		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

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# FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT [BOSE AUDIO WITH SURROUND SOUND]

#### < DTC/CIRCUIT DIAGNOSIS >

24	39		(V)
38	39	AUX mode selected	1 0 -1 + 2ms SKIB3609E

#### Is the inspection result normal?

- YES
- >> Replace front auxiliary input jacks. Refer to <u>AV-684, "Removal and Installation"</u>.
  >> Replace AV control unit. Refer to <u>AV-668, "Removal and Installation AV Control Unit"</u>. NO

### **RGB DIGITAL IMAGE SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## RGB DIGITAL IMAGE SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008376918

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK RGB DIGITAL IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M140 and display unit connector M141.
- 3. Check continuity between AV control unit connector M140 and display unit connector M141.

AV cor	ntrol unit	Display unit		Continuity
Connector	Terminals	Connector	Terminals	Continuity
M140	165	N444	28	Voc
M140	164	M141	27	Yes

4. Check continuity between AV control unit connector M140 and ground.

AV control unit		Ground	Continuity
Connector	Terminals	Giodila	Continuity
M140	165	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

### 2.CHECK RGB DIGITAL IMAGE SIGNAL

- Connect AV control unit connector M140.
- 2. Turn ignition switch ON.
- 3. Check signal between display unit connector M141 and ground.

Display unit connector M141			V #
(+)	(-)	Condition	Voltage (Approx.)
Terminal	Terminal		( ) ,
28	27	Audio system is ON.	1.3 V

#### Is the inspection result normal?

YES >> Replace display unit. Refer to AV-671, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

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### COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DIS-PLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

Diagnosis Procedure

INFOID:0000000008376919

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M163 and display unit connector M92.
- 3. Check continuity between AV control unit connector M163 and display unit connector M92.

AV cor	ntrol unit	Displa	ay unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M163	56	M92	18	Yes
IVITOS	55	10192	19	165

4. Check continuity between AV control unit connector M163 and ground.

AV control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M163	56	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMPOSITE IMAGE SIGNAL

- 1. Connect AV control unit connector M163 and display unit connector M92.
- 2. Turn ignition switch ON.
- 3. Check signal between AV control unit connector M163 and ground.

AV control unit connector M163				
(+)	(-)	Condition	Reference value	
Terminal	Terminal			
56	55	DVD image is displayed.	(V) 0. 4 0 -0. 4 → 40µs SKIB2251J	

#### Is the inspection result normal?

YES >> Replace display unit. Refer to AV-671, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

## COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO VIDEO DISTRIB-UTOR)

### < DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO VIDEO DISTRIBUTOR)

Diagnosis Procedure

INFOID:0000000008376920

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M164 and video distributor connector B25.
- 3. Check continuity between AV control unit connector M164 and video distributor connector B25.

AV co	ntrol unit	Video d	istributor	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M164	107	B25	34	Yes
IVI 10 <del>4</del>	105		33	res

4. Check continuity between AV control unit connector M164 and ground.

AV control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M164	107	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMPOSITE IMAGE SIGNAL

- Connect AV control unit connector M164 and video distributor connector B25.
- Turn ignition switch ON.
- 3. Check signal between video distributor connector B25 and ground.

Video distributor connector B25				
(+)	(-)	Condition	Reference value	
Terminal	Terminal			
34	33	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	(V) 0. 4 0 -0. 4 -40\(\mu\)s	

#### Is the inspection result normal?

YES >> Replace video distributor. Refer to AV-689, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

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# COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO HEADREST DISPLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO HEAD-REST DISPLAY UNIT)

Diagnosis Procedure

INFOID:0000000008376921

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect video distributor connector B24 and headrest display unit connectors.
- 3. Check continuity between video distributor connector B24 and headrest display unit connectors.

Video d	Video distributor		istributor	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	32	P202 (driver cost)	16	Yes
B24	31	B202 (driver seat)	4	165
D24	28	B302 (passenger seat)	16	Yes
	27		4	165

4. Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity
Connector	Terminal	Ground	Continuity
B24	32		No
D2 <del>4</del>	28	_	INO

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK COMPOSITE IMAGE SIGNAL

- 1. Connect video distributor connector B24 and headrest display unit connectors.
- 2. Turn ignition switch ON.
- 3. Check signal between headrest display unit connectors and ground.

Headrest display unit				
Connector	(+)	(-)	Condition	Reference value
Connector	Terminal	Terminal		
B202 (driver seat)	32	31		
B302 (passenger seat)	28	27	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	0 -0. 4 -40 <i>u</i> s skib2251 <i>j</i>

#### Is the inspection result normal?

YES >> Replace headrest display unit. Refer to AV-407, "Removal and Installation".

NO >> Replace video distributor. Refer to AV-689, "Removal and Installation".

## AUX IMAGE SIGNAL CIRCUIT (FRONT AUXILIARY INPUT JACKS TO AV CON-TROL UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

# AUX IMAGE SIGNAL CIRCUIT (FRONT AUXILIARY INPUT JACKS TO AV **CONTROL UNIT)**

Diagnosis Procedure

INFOID:0000000008376922

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# $1.\mathsf{check}$ aux image signal circuit continuity

- Turn ignition switch OFF.
- Disconnect AV control unit connector M125 and front auxiliary input jacks connector M205.
- Check continuity between AV control unit connector M125 and front auxiliary input jacks connector M205.

AV co	ntrol unit	Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M125	91	M205	7	Yes
IVI 125	92	IVIZUS	8	res

Check continuity between AV control unit connector M125 and ground.

AV control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M125	91	_	No

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK AUX IMAGE SIGNAL

- Connect AV control unit connector M125 and front auxiliary input jacks connector M205.
- 2. Turn ignition switch ON.
- Check signal between front auxiliary input jacks connector M205 and ground.

Front auxiliary input jacks connector M205			
(+)	(–)	Condition	Reference value
Terminal	Terminal		
7	8	Front auxiliary input jacks image is displayed.	0.4 0 -0.4 -0.4 -0.4

#### Is the inspection result normal?

YES >> Replace front auxiliary input jacks. Refer to AV-684, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

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#### **IMAGE SWITCH SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

### IMAGE SWITCH SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008376923

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK CONTINUITY IMAGE SWITCH SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect video distributor connector B24 and headrest display unit connectors.
- 3. Check continuity between video distributor connector B24 and headrest display unit connectors.

Video d	istributor	Headrest display unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	10	B202 (driver seat)	7	
B24	7		6	Yes
D2 <del>4</del>	9	B302 (passenger seat)	7	165
	5		6	

Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
B24	10		No	
B24	9	_	INU	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK VIDEO DISTRIBUTOR VOLTAGE

- Connect video distributor connector B24 and headrest display unit connectors.
- 2. Turn ignition switch ON.
- Check voltage between video distributor connector B24 and ground.

Video distributo (+) Terminal	or connector B24  (-)  Terminal	Condition	Voltage (Approx.)
10	40		0.5 V
10	,	DVD, USB or rear auxiliary input jacks image is displayed on headrest display.	4.5 V
9	9 5		0.5 V
3	5	DVD, USB or rear auxiliary input jacks image is displayed on headrest display.	4.5 V

#### Is the inspection result normal?

YES >> Replace headrest display unit. Refer to AV-672, "Removal and Installation".

NO >> Replace video distributor. Refer to AV-689, "Removal and Installation".

### **DISK EJECT SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

### DISK EJECT SIGNAL CIRCUIT

# Diagnosis Procedure

INFOID:0000000008376924

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Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK DISK EJECT SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M164 and A/C and AV switch assembly connector.
- 3. Check continuity between AV control unit connector M164 terminal 97 and A/C and AV switch assembly connector M98 terminal 14.

AV cor	itrol unit	A/C and AV s	witch assembly	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M164	97	M98	14	Yes

4. Check continuity between AV control unit connector M125 terminal 978 and ground.

AV control unit			Continuity
Connector	Terminal	Ground	Continuity
M164	97		No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector M164 and A/C and AV switch assembly connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit connector M164 terminal 97 and ground.

AV cor	ntrol unit	Ground		
(+)		( )	Condition	Voltage (Approx.)
Connector	Terminal	(-)		( ) 1
M125	M125 97		Pressing eject switch	0 V
IVITZS			Except above	5.0 V

#### Is the inspection result normal?

YES >> Replace A/C and AV switch assembly. Refer to <u>AV-669</u>, "Removal and Installation - AV and AC <u>Switch Assembly"</u>.

NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

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#### [BOSE AUDIO WITH SURROUND SOUND]

## STEERING SWITCH

# Diagnosis Procedure

INFOID:0000000008376926

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

- 1. Turn ignition switch OFF.
- 2. Disconnect combination switch connector M149.
- 3. Check resistance between combination switch connector terminals.

Combination switch connector M149		Condition	Resistance $\Omega$
Terminal	Terminal	Condition	(Approx.)
		Depress SOURCE switch.	1
		Depress △ switch.	121
14		Depress ∇ switch.	321
		Depress "≨ switch.	723
		Depress ENTER switch.	2023
	17	Depress - ☐ switch.	1
		Depress ₵+ switch.	121
15		Depress 🗪 switch.	321
		Depress <b>5</b> switch.	723
		Depress DISP switch.	2023

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering wheel audio control switch. Refer to AV-670, "Removal and Installation".

# 2.CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

- 1. Disconnect combination meter connector M24 and combination switch connector M30.
- 2. Check continuity between combination meter connector M24 and combination switch connector M30.

Combination meter		Combination switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	3		24	
M24	24	M30	33	Yes
	4		31	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal	Giouna	Continuity
	3		
M24	24	_	No
	4		

#### Is the inspection result normal?

### STEERING SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

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YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3. CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M149.

	Combination switch			Continuity
Connector	Connector Terminal Connector Terminal			
	24	M149	14	Yes
M30	31		15	
	33		17	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace spiral cable. Refer to <u>SR-13, "Removal and Installation"</u>.

# 4. CHECK HARNESS BETWEEN COMBINATION METER AND AV CONTROL UNIT

- Disconnect AV control unit connector M122.
- 2. Check continuity between combination meter connector M24 and AV control unit connector M161.

Combination meter		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	14	M161	6	
M24	15		16	Yes
	16		15	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Connector Terminal		
	14		No
M24	15	_	
	16		

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

### 5. CHECK AV CONTROL UNIT VOLTAGE

- Connect combination meter connector M24 and AV control unit connector M161.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit connector M122.

	AV control unit M161		
Voltage (Approx.)	(-)	(+)	
	Terminal	Terminal	
5.0 V	15	6	
5.0 V	15	16	

#### Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-93. "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-668. "Removal and Installation - AV Control Unit".

#### **USB CONNECTOR**

#### [BOSE AUDIO WITH SURROUND SOUND]

# **USB CONNECTOR**

# Diagnosis Procedure

INFOID:0000000008376927

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK USB INTERFACE HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M55 and USB interface connector M209.
- 3. Check continuity between AV control unit connector M55 and USB interface connector M209.

AV cor	AV control unit USB interface		Continuity	
Connector	Terminal	Connector	Terminal	Continuity
	137		1	
	138	M209	2	
M55	139		3	Yes
	140		4	
	141		5	

4. Check continuity between AV control unit connector M55 and ground.

AV control unit		_	Continuity
Connector	Terminal		Continuity
M55	137	Ground	No
	139	Ground	140

#### Is the inspection result normal?

YES >> Replace the USB interface. Refer to AV-683, "Removal and Installation".

NO >> Repair or replace harness or connectors.

# FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008376928

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and front camera connector E226.
- 3. Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view mo	onitor control unit	Front camera		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M97	67	E226	6	Yes	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M97	67	_	No

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector M97 and front camera connector E226.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit connector M97 and ground.

Around view mo	onitor control unit	Ground			
(	+)	( )	Condition	Reference value	
Connector	Terminal	(-)			
M97	67	_	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. Refer to <u>AV-685</u>, "Removal and Installation".

NO >> Replace front camera. Refer to AV-686, "Removal and Installation".

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## FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## FRONT CAMERA IMAGE SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008376929

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK FRONT CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and front camera connector E226.
- 3. Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view mo	onitor control unit	Front camera		Continuity	
Connector	Terminals	Connector	Terminals	Continuity	
M97	71	E226	3	Yes	
IVIÐT	72	LZZO	4	165	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminals	Grodina	Continuity
M97	71	_	No

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK FRONT CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector M97 and front camera connector E226.
- Turn ignition switch ON.
- 3. Check signal between around view monitor control unit connector M97 terminals.

Around view mo	onitor control unit		
(+)	(-)	Condition	Reference value
Terminal	Terminal		
71	72	CAMERA switch is ON or shift position is R.	(V) 1 0 -1 40 μs JSNIA0834GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".

NO >> Replace front camera. Refer to AV-686, "Removal and Installation".

## REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008376930

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and rear camera connector D511.
- 3. Check continuity between around view monitor control unit connector M97 and front camera connector D511.

Around view mo	onitor control unit	Rear camera		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M97	49	D511	4	Yes	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view mo	Around view monitor control unit		Continuity
Connector	Terminal	- Ground	Continuity
M97	49	_	No

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector M97 and rear camera connector D511.
- 2. Turn ignition switch ON.
- Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground			
(	+)	( )	Condition	Reference value	
Connector	Terminal	(-)			
M97	49	_	CAMERA switch is ON or shift position is R.	(V) 5 4 3 2 1 1.0 μ s JSNIA0836GB	

#### Is inspection result normal?

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YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".

NO >> Replace rear camera. Refer to AV-687, "Removal and Installation".

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## REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## REAR CAMERA IMAGE SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008376931

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK REAR CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and rear camera connector D511.
- Check continuity between around view monitor control unit connector M97 and rear camera connector D511.

Around view m	onitor control unit	Rear camera		Continuity
Connector	Terminals	Connector	Terminals	Continuity
M97	53	D511	5	Yes
IVI97	54	D511	1	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminals	Ground	Continuity
M97	53	_	No

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK REAR CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector M97 and rear camera connector D511.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit connector M97 terminals.

Around view mo	onitor control unit		
(+)	(-)	Condition	Reference value
Terminal	Terminal		
53	54	CAMERA switch is ON or shift position is R.	(V) 1 0 -1 + 40 μs

#### Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".

NO >> Replace rear camera. Refer to AV-687, "Removal and Installation".

# SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008376932

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
- 3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view mo	onitor control unit	LH side camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M97	55	D20	16	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal	Ground	Continuity
M97	55	_	No

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground			
(	+)	( )	Condition	Reference value	
Connector	Terminal	(-)			
M97	55	_	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. Refer to AV-685, "Removal and Installation".

NO >> Replace LH side camera. Refer to AV-688, "Removal and Installation".

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## SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008376933

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK LH SIDE CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
- Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view mo	onitor control unit	LH side camera		Continuity
Connector	Terminals	Connector	Terminals	Continuity
M97	59	D20	5	Yes
IVI97	60	D20	17	165

Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminals	Grodina	Continuity
M97	59	_	No

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK LH SIDE CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
- 2. Turn ignition switch ON.
- Check signal between around view monitor control unit connector M97 terminals.

Around view mo	Around view monitor control unit		
(+)	(-)	Condition	Reference value
Terminal	Terminal		
59	60	CAMERA switch is ON or shift position is R.	(V) 1 0 -1 40 μs JSNIA0834GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".

NO >> Replace LH side camera. Refer to AV-688, "Removal and Installation".

# SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BOSE AUDIO WITH SURROUND SOUND]

## SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008376934

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
- 3. Check continuity between around view monitor control unit connector M97 and fRH side camera connector D113.

Around view monitor control unit		RH side camera		w monitor control unit RH side camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity		
M97	61	D113	16	Yes		

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view mo	Around view monitor control unit		Continuity
Connector	Terminal	- Ground	Continuity
M97	61	_	No

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground			
(	(+)	( )	Condition	Reference value	
Connector	Terminal	(-)			
M97	61	_	CAMERA switch is ON or shift position is R.	(V) 5 4 3 2 1 1.0 μ s JSNIA0836GB	

#### Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to <u>AV-685</u>, "<u>Removal and Installation</u>".

NO >> Replace RH side camera. Refer to AV-688, "Removal and Installation".

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# SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

## [BOSE AUDIO WITH SURROUND SOUND]

## SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000008376935

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

# 1. CHECK RH SIDE CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
- 3. Check continuity between around view monitor control unit connector M97 and fRH side camera connector D113.

Around view m	onitor control unit	RH side camera		Continuity
Connector	Terminals	Connector	Terminals	Continuity
M97	65	65 D113		Yes
IVIS /	M97 66		17	165

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminals	Grodina	Continuity
M97	65	_	No

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK RH SIDE CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit connector M97 terminals.

Around view mo	Around view monitor control unit		
(+)	(-)	Condition	Reference value
Terminal	Terminal		
65	66	CAMERA switch is ON or shift position is R.	(V) 1 0 -1 40 μs JSNIA0834GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".

NO >> Replace RH side camera. Refer to AV-688, "Removal and Installation".

## [BOSE AUDIO WITH SURROUND SOUND]

# SYMPTOM DIAGNOSIS

## **MULTI AV SYSTEM**

Symptom Table

### INFOID:0000000008376936

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## **AUDIO SYSTEM**

Symptom	Possible cause	Reference page
Inoperative	AV control unit power and ground circuit     AV control unit	• <u>AV-613</u> • <u>AV-435</u>
Steering switch does not operate	Steering switch     AV control unit	• <u>AV-646</u> • <u>AV-435</u>
All speakers do not sound	<ul> <li>Speaker circuit shorted to ground</li> <li>AV control unit power and ground circuit</li> <li>BOSE speaker amp. ON signal</li> <li>BOSE speaker amp. power and ground circuit</li> <li>BOSE speaker amp.</li> <li>AV control unit</li> </ul>	• AV-489 • AV-613 • AV-614 • AV-674 • AV-435
One or several speakers do not sound	<ul> <li>Front door speaker</li> <li>Front tweeter</li> <li>Center speaker</li> <li>Instrument panel speaker/tweeter</li> <li>Rear door speaker</li> <li>Rear speaker</li> <li>Subwoofer</li> </ul>	<ul> <li>AV-627</li> <li>AV-625</li> <li>AV-621</li> <li>AV-623</li> <li>AV-631</li> <li>AV-633</li> <li>AV-635</li> </ul>
Buzz/rattle sound from speaker	The majority of buzz/rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the buzz/rattle.	Refer to "SQUEAK AND RATTLE TROUBLE DIAG- NOSIS" in the ap- propriate interior trim section.

## **NAVIGATION SYSTEM**

Symptom	Possible cause	Reference page
Inoperative	AV control unit power and ground circuit     AV control unit	• AV-613 • AV-435
Steering switch does not operate	Steering switch     AV control unit	• <u>AV-646</u> • <u>AV-435</u>
Voice activated control does not operate	<ul><li> Microphone</li><li> Steering switch</li><li> AV control unit</li></ul>	<ul><li>AV-816</li><li>AV-646</li><li>AV-435</li></ul>

## HANDS-FREE PHONE SYSTEM

Symptom	Possible cause	Reference page
Inoperative	AV control unit power and ground circuit     AV control unit	• <u>AV-613</u> • <u>AV-435</u>
Steering switch does not operate	Steering switch     AV control unit	<ul><li>AV-646</li><li>AV-435</li></ul>
Voice activated control does not operate	<ul><li>Microphone</li><li>Steering switch</li><li>AV control unit</li></ul>	• AV-816 • AV-646 • AV-435

CD

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## **MULTI AV SYSTEM**

## [BOSE AUDIO WITH SURROUND SOUND]

Symptom	Possible cause	Reference page
CD cannot be inserted.		AV-435
CD cannot be ejected.	AV control unit	
The CD cannot be played.	AV control unit	
The sound skips, stops suddenly, or is distorted.		

## SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	<ul><li>AV control unit power supply or ground circuit</li><li>AV control unit</li></ul>	• <u>AV-613</u> • <u>AV-435</u>

## **DVD PLAYER**

Symptom	Possible cause	Reference page
DVD player inoperative	Power supply and ground circuits     DVD player	• <u>AV-613</u> • <u>AV-435</u>
No sound when playing a DVD	Audio signal circuits     DVD player	• <u>AV-457</u> • <u>AV-435</u>
Video monitor is inoperative/does not display properly	<ul><li>Power supply and ground circuits</li><li>Video out circuits</li><li>DVD player</li><li>Video monitor</li></ul>	<ul> <li>AV-618</li> <li>AV-457</li> <li>AV-435</li> <li>AV-672</li> </ul>
DVD remote control is inoperative/does not operate properly	DVD remote control     DVD player	• <u>AV-435</u>
Headphones inoperative	Headphone batteries     DVD player	• <u>AV-435</u>

### AROUND VIEW MONITOR

Symptom	Possible cause	Reference page
It does not switch to camera image even when the "CAMERA" switch is pressed or the selector lever is in the reverse position.	<ul> <li>Ignition signal circuit malfunction (around view monitor control unit).</li> <li>Around view monitor control unit power supply and ground circuits malfunction.</li> <li>AV communication circuits malfunction.</li> </ul>	<ul><li>AV-479</li><li>AV-618</li><li>AV-640</li></ul>
The screen switches when pressing the "CAMERA" switch or shifting the selector lever to the reverse position, however, all views are not displayed.	Camera image signal circuit between around view monitor control unit and front display unit malfunction     Communication circuit between AV control unit and front display unit malfunction	• <u>AV-640</u> • <u>AV-640</u>
Camera image is rolling.	Communication circuit between AV control unit and front display unit malfunction	AV-640
It cannot be switched to rear view monitor even when the selector lever is in the reverse position.	Reverse signal circuit malfunction. (AV control unit)	AV-479
The predicted course line display in front view and rear view is malfunctioning.	Steering angle sensor signal circuits.	<u>AV-479</u>
<ul> <li>The front view screen is not displayed.</li> <li>The front of Birds-Eye view screen is not displayed.</li> </ul>	<ul> <li>Front camera image signal circuit malfunction.</li> <li>Front camera power supply and ground circuits malfunction.</li> <li>Front camera communication signal circuit malfunction.</li> </ul>	<ul><li>AV-650</li><li>AV-618</li><li>AV-649</li></ul>
<ul> <li>The rear view screen is not displayed.</li> <li>The rear of Birds-Eye view screen is not displayed.</li> </ul>	<ul> <li>Rear camera image signal circuit malfunction.</li> <li>Rear camera power supply and ground circuits malfunction.</li> <li>Rear camera communication signal circuits malfunction.</li> </ul>	<ul><li>AV-652</li><li>AV-618</li><li>AV-651</li></ul>

## **MULTI AV SYSTEM**

## < SYMPTOM DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

Symptom	Possible cause	Reference page
<ul><li>The front-side screen is not displayed.</li><li>The passenger side of Birds-Eye view screen is</li></ul>	Side camera RH image signal circuit malfunction.     Side camera RH power supply and ground circuits malfunction.	<ul><li>AV-656</li><li>AV-618</li></ul>
not displayed.	Side camera RH communication circuit malfunction.	• <u>AV-655</u>
	Side camera LH image signal circuit malfunction.	• <u>AV-654</u>
The driver side of Birds-eye view screen is not displayed.	<ul> <li>Side camera LH power supply and ground circuits mal- function.</li> </ul>	• <u>AV-618</u>
	Side camera LH communication circuit malfunction.	• <u>AV-653</u>
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 circuit malfunction (around view monitor control unit).	<u>AV-479</u>

## CAMERA ASSISTANCE SONAR

Symptoms	Possible cause	Reference page
The malfunction is detected in only 1 indicator (Always displayed in red).	<ul> <li>Corner sensor malfunction in corresponding area.</li> <li>Corner sensor harness circuit in corresponding area.</li> </ul>	Perform CONSULT "self-diagnosis" of "SONAR". Refer to AV-452.
The malfunction is detected in all 4 indica-	Corner sensor ground circuit malfunction.	Perform CONSULT "self-diagnosis" of "SONAR". Refer to AV-452.
tors (Always displayed in red).	<ul> <li>Sonar control unit power supply and ground circuits malfunction.</li> <li>AV communication circuits malfunction.</li> </ul>	Perform CONSULT "self-diagnosis" of "MULTI AV". Refer to AV-448.

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[BOSE AUDIO WITH SURROUND SOUND]

## NORMAL OPERATING CONDITION

Description INFOID.000000008376937

The majority of the audio concerns are the result of outside causes (bad CD, electromagnetic interference, etc.).

#### **AUDIO SYSTEM**

The majority of the audio troubles are the result of outside causes (bad CD, electromagnetic interference, etc.).

#### Noise

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

- 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 the waves sent directly from the broadcast station arriving at the antenna at a different time from the waves which reflect off mountains or buildings.

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 determine the cause.

#### NOTE:

The source of the noise can be found easily by listening to the noise while removing the fuses of electrical components, one by one.

Type of Noise and Possible Cause

Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	Ignition components
The occurrence of the noise is lin	ked with the operation of the fuel pump.	Fuel pump condenser
Noise only occurs when various electrical components are oper-	A cracking or snapping sound occurs with the operation of various switches.	Relay malfunction, audio unit malfunction
ating.	The noise occurs when various motors are operating.	Motor case ground     Motor
The noise occurs constantly, not just under certain conditions.		Rear defogger coil malfunction     Open circuit in printed heater     Poor ground of antenna feeder line
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		<ul><li>Ground wire of body parts</li><li>Ground due to improper part installation</li><li>Wiring connections or a short circuit</li></ul>

### **NAVIGATION SYSTEM**

#### **Basic Operation**

Symptom	Cause	Remedy
No image is shown.	Display brightness adjustment is set fully to DARK side.	Adjust the display brightness.
No guide sound is heard.	Volume control is set to OFF, MIN or MAX.	Adjust the audio guide volume.
Audio guide volume is too low or too high.	Audio guidance is not available while the vehicle is driving on a dark pink route.	System is not malfunctioning.
Screen is too dark. Motion of the image is too slow.	Temperature inside the vehicle is low.	Wait until the temperature inside the vehicle reaches the proper temperature.
Small black or bright spots appear on the screen.	Symptom peculiar to a liquid crystal display (display unit).	System is not malfunction.

Vehicle Mark

## < SYMPTOM DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

Symptom	Cause	Remedy
Map screen and BIRDVIEW™ Name of the place vary with the screen.	Some thinning of the character data is done to prevent the display becoming to complex. In some cases and in some locations, the display contents may differ.  The same place name, street name, etc. may not be displayed every time on account of the data processing.	System is not malfunctioning.
Vehicle mark is not positioned correctly.	Vehicle is transferred by ferry or by towing after its ignition switch is turned to OFF.	Drive the vehicle for a while in the GPS satellite signal receiving condition.
Screen will not switch to nighttime mode after the lighting switch is turned ON.	The daytime screen is selected by the "SWITCH SCREENS" when the last time the screen dimming setting is done. Switching between daytime/nighttime screen may be inhibited by the automatic illumination adjustment function.	Perform screen dimming and select the nighttime screen by "SWITCH SCREENS".
Map screen will not scroll in accordance with the vehicle travel.	Current location is not displayed.	Press "MAP" button to display the current location.
Vehicle mark will not be shown.	Current location is not displayed.	Press "MAP" button to display the current location.
Accuracy indicator (GPS satellite mark) on the map screen stays	GPS satellite signal is intercepted because the vehicle is in or behind a building.	Move the vehicle out to an open space.
gray.	GPS satellite signal cannot be received because an obstacle is placed on top of the instrument panel.	Do not place anything on top of the meter display (instrument panel).
	GPS satellites are not visible from current location.	Wait until GPS satellites are visible by moving the vehicle.
Vehicle location accuracy is low.	Accuracy indicator (GPS satellite mark) on the map screen stays gray.	Current location is not determined.
	Vehicle speed setting by the vehicle speed pulse has been deviated (advanced or retarded) from the actual vehicle speed because tire chain is fitted or the system has been used on another vehicle.	Drive the vehicle for a while [for approx. 30 minutes at approx. 30 km/h (19 MPH)] and the deviation will be automatically adjusted. If advancement or retard still occur, perform the distance adjustment by CONFIRMATION/ADJUSTMENT mode of diagnosis function.
	Map data has error or omission. (Vehicle mark is always deviated to the same position.)	As a rule, an updated map DVD–ROM will be released once a year.

## Destination, Passing Points and Menu Items Cannot be Selected/Set

Symptom	Cause	Remedy	
Destination cannot be set.	Destination to be set is on an expressway.	Set the destination on an ordinary road.	
Passing point is not searched when re-searching the route.	The vehicle has already passed the passing point, or the system judged so.  To include the passing points that have passed into the route again, set the rougagin.		
Route information will not be displayed.	Route searching has not been done.	Set the destination and perform route searching.	
	Vehicle mark is not on the recommended route.	Drive on the recommended route.	
	Route guide is turned OFF.	Turn route guide ON.	
	Route information is not available on the dark pink route.	System is not malfunctioning.	
After the route searching, no guide sign will appear as the vehicle goes near the entrance/exit to the toll road.	Vehicle mark is not on the recommended route. (On the display, only guide signs related to the recommended route will be shown.)	Drive on the recommended route.	

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## < SYMPTOM DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

Symptom	Cause	Remedy
Automatic route searching is not possible.	Vehicle is driving on a highway (gray route), or no recommended route is available.	Drive on a road to be searched. Or re–search the route manually. In this case, however, the whole route will be searched.
Performed automatic detour search (or detour search). However, the result is the same as that of the previous search.	Performed search with every conditions considered. However, the result is the same as that of the previous search.	System is not malfunctioning.
Passing points cannot be set.	More than five passing points were set.	Passing points can be set up to five. To stop at more than five points, perform sharing in several steps.
When setting the route, the starting point cannot be selected.	The current vehicle location is always set as the starting point of a route.	System is not malfunctioning.
Some menu items cannot be selected.	The vehicle is being driven.	Stop the vehicle at a safe place and then operate the system.

### Voice Guide

Symptom	Cause	Remedy
Voice guide will not operate.	Note: Voice guide is only available at intersections that satisfy certain conditions (indicated by ● on the map). Therefore, guidance may not be given even when the route on the map changes direction.	System is not malfunctioning.
	The vehicle is not on the recommended route.	Return to the recommended route or research the route.
	Voice guide is turned OFF.	Turn voice guide ON.
	Route guide is turned OFF.	Turn route guide ON.
Voice guide does not match the actual road pattern.	Voice guide may vary with the direction to which the vehicle is turn and the connection of the road to other roads.	Drive in conformity to the actual traffic rules.

### Route Search

Symptom	Cause	Remedy
No route is shown.	No road to be searched is found around the destination.	Find wider road (orange road or wider) near- by and reset the destination and passing points onto it. Take care of the traveling direc- tion when there are separate up and down roads.
	Starting point and the destination are too close.	Set the destination at more distant point.
	Conditional traffic regulation (day of the week/ time of the day) is set at the area around the current location or the destination.	Turn the time-regulating search conditions OFF. Turn "Avoid regulation time" in the search conditions OFF.
Indicated route is intermittent.	In some areas, highways (gray routes) are not used for the search <sup>(Note)</sup> Therefore, the route to the current location or the passing points may be intermittent.	System is not malfunctioning.
When the vehicle has passed the recommended route, it is deleted from the screen.	A recommended route is controlled by each section. When the vehicle has passed the passing point 1, then the map data from the starting point up to the passing point 1 will be deleted. (The data may remain undeleted in some area.)	System is not malfunctioning.

#### < SYMPTOM DIAGNOSIS >

### [BOSE AUDIO WITH SURROUND SOUND]

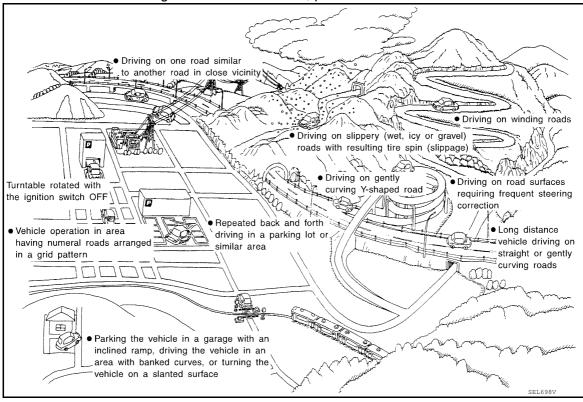
Symptom	Cause	Remedy
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, etc.) is set at the area around the starting point or the destination.	Slightly move the starting point or the destination, or set the passing point on the route of your choice.
	In the area where highways (gray routes) are used for the search, left turn has priority around the current location and the destination (passing points). For this reason, the recommended route may be detouring.	System is not malfunctioning.
Landmarks on the map do not match the actual ones.	This can be happen due to omission or error in the map data.	As a rule, an updated map DVD-ROM will be released once a year. Wait until the latest map has become available.
Recommended route is far from the starting point, passing points, and destination.	Starting point, passing points, and destination of the route guide were set far from the desired points because route searching data around these area were not stored.	Reset the destination onto the road nearby. If this road is one of the highways (gray routes), an ordinary road nearby may be displayed as the recommended route.

#### NOTE:

Except for the ordinance-designated cities. (Malfunctioning areas may be changed in the updated map disc.)

#### **Examples of Current-Location Mark Displacement**

Vehicle's travel amount is calculated by reading its travel distance and turning angle. Therefore, if the vehicle is driven in the following manner, an error will occur in the vehicle's current location display. If correct location has not been restored after driving the vehicle for a while, perform location correction.



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# [BOSE AUDIO WITH SURROUND SOUND]

Cause (cor	dition) –: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
	Y-intersections  ELK0192D	At a Y intersection or similar gradual division of roads, an error in the direction of travel deduced by the sensor may result in the current-location mark appearing on the wrong road.	
	Spiral roads	When driving on a large, continuous spiral road (such as loop bridge), turning angle error is accumulated and the vehicle mark may deviate from the correct location.	
Road config-	Straight roads  ELK0194D	When driving on a long, straight road and slow curve without stopping, map-matching does not work effectively enough and distance errors may accumulate. As a result, the vehicle mark may deviate from the correct location when the vehicle is turned at a corner.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform lo-
uration	Zigzag roads  ELK0195D	When driving on a zigzag road, the map may be matched to other roads in the similar direction nearby at every turn, and the vehicle mark may deviate from the correct location.	cation correction and, if necessary, direction correction.
	Roads laid out in a grid pattern	When driving where roads are laid out in a grid pattern, or where many roads are running in the similar direction nearby, the map may be matched to them by mistake and the vehicle mark may deviate from the correct location.	
	Parallel roads  ELK0197D	When two roads are running in parallel (such as highway and sideway), the map may be matched to the other road by mistake and the vehicle mark may deviate from the correct location.	

## < SYMPTOM DIAGNOSIS >

## [BOSE AUDIO WITH SURROUND SOUND]

Cause (co	ondition) –: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
	In a parking lot  Parking lot  SEL709V	When driving in a parking lot, or other location where there are no roads on the map, matching may place the vehicle mark on a nearby road. When the vehicle returns to the road, the vehicle mark may have deviated from the correct location. When driving in circle or turning the steering wheel repeatedly, direction errors accumulate, and the vehicle mark may deviate from the correct location.	
Place	Turntable	When the ignition switch is OFF, the navigation system cannot get the signal from the gyroscope (angular speed sensor). Therefore, the displayed direction may be wrong and the correct road may not be easily returned to after rotating the vehicle on a turntable with the ignition OFF.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
	Slippery roads	On snow, wet roads, gravel, or other roads where tires may slip easily, accumulated mileage errors may cause the vehicle mark to deviate from the correct road.	
	Slopes	When parking in sloped garages, when travelling on banked roads, or in other cases where the vehicle turns when tilted, an error in the turning angle will occur, and the vehicle mark may deviate from the road.	
	Road not displayed on the map screen  New road	When driving on new roads or other roads not displayed on the map screen, map matching does not function correctly and matches the location to a nearby road. When the vehicle returns to a road which is on the map, the vehicle mark may deviate	
	SEL699V	from the correct road.	
	Different road pattern (Changed due to repair)	If the road pattern stored in the map data and the actual road pattern are different, map matching the least function correctly	
	ELK0201D	and matches the location to a nearby road. The vehicle mark may deviate from the correct road.	
Vehicle	Use of tire chains	When tire chains are used, the mileage is not correctly detected, and the vehicle mark may deviate from the correct road.	Drive the vehicle for a while. If the distance still deviates, ad- just it by using the distance ad- justment function. (If the tire chain is removed, recover the original value.)

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#### < SYMPTOM DIAGNOSIS >

#### [BOSE AUDIO WITH SURROUND SOUND]

Cause (condition) -: While driving ooo: Display		Driving condition	Remarks (correction, etc.)
Precautions for driving	Just after the engine is started	If the vehicle is driven just after the engine is started when the gyroscope (angular speed sensor) correction is not completed, the vehicle can lose its direction and may have deviated from the correct location.	Wait for a short while before driving after starting the engine.
	Continuous driving without stopping	When driving long distances without stopping, direction errors may accumulate, and the current-location mark may deviate from the correct road.	Stop and adjust the orientation.
	Abusive driving	Spinning the wheels or engaging in other kinds of abusive driving may result in the system being unable perform correct detection, and may cause the vehicle mark to deviate from the correct road.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
How to correct location	Position correction accuracy  Within 1 mm (0.04 in)  SELTOIN	If the accuracy of location settings is poor, accuracy may be reduced when the correct road cannot be found, particularly in places where there are many roads.	Enter in the road displayed on the screen with an accuracy of approx. 1mm. Caution: Whenever possible, use detailed map for the correc- tion.
	Direction when location is corrected  Direction calibration adjustment	If the accuracy of location settings during correction is poor, accuracy may be reduced afterwards.	Perform direction correction.

Location Correction by Map-Matching is Slow

- The map-matching function needs to refer to the data of the surrounding area. It is necessary to drive some distance for the function to work.
- Because map-matching operates on this principle, when there are many roads running in similar directions in the surrounding area, no matching determination may be made. The location may not be corrected until some special feature is found.

#### Name of Road is Not Displayed

The current road name may not be displayed if there are no road names displayed on the map screen.

Contents of Display Differ for Birdview<sup>™</sup> and the (Flat) Map Screen

Difference of the BIRDVIEW™ screen from the flat map screen are as follows.

- The current place name displays names which are primarily in the direction of vehicle travel.
- The amount of time before the vehicle travel or turn angle is updated on the screen is longer than for the (flat) map display.
- The conditions for display of place names, roads, and other data are different for nearby areas and for more distant areas.
- Some thinning of the character data is done to prevent the display becoming too complex. In some cases and in some locations, the display contents may differ.
- The same place name, street name, etc. may be displayed multiple times.

#### Vehicle Mark Shows a Position Which is Completely Wrong

In the following cases, the vehicle mark may appear on completely different position in the map depending on the GPS satellite signal receiving conditions. In this case, perform location correction and direction correction.

- · When location correction has not been done
- If the receiving conditions of the GPS satellite signal is poor, if the vehicle mark becomes out of place, it may
  move to a completely different location and not come back if location correction is not done. The position will
  be corrected if the GPS signal can be received.
- · When the vehicle has traveled by ferry, or when the vehicle has been being towed

#### < SYMPTOM DIAGNOSIS >

### [BOSE AUDIO WITH SURROUND SOUND]

- Because calculation of the current location cannot be done when traveling with the ignition off, for example when traveling by ferry or when being towed, the location before travel is displayed. If the precise location can be detected with GPS, the location will be corrected.

#### Vehicle Mark Jumps

In the following cases, the vehicle mark may appear to jump as a result of automatic correction of the current location.

- When map matching has been done
- If the current location and the vehicle mark are different when map matching is done, the vehicle mark may seem to jump. At this time, the location may be "corrected" to the wrong road or to a location which is not on a road.
- · When GPS location correction has been done
- If the current location and the vehicle mark are different when the location is corrected using GPS measurements, the vehicle mark may seem to jump. At this time, the location may be "corrected" to a location which is not on a road.

#### Vehicle Mark is in a River or Sea

The navigation system moves the vehicle mark with no distinction between land and rivers or sea. If the vehicle mark is somehow out of place, it may appear that the vehicle is driving in a river or the sea.

#### Vehicle Mark Automatically Rotates

The system wrongly memorizes the rotating status as stopping when the ignition switch is turned ON with the turntable rotating. That causes the vehicle mark to rotate when the vehicle is stopped.

When Driving on Same Road, Sometimes Vehicle Mark is in Right Place and Sometimes it is in Wrong Place The conditions of the GPS antenna (GPS data) and gyroscope (angular speed sensor) change gradually. Depending on the road traveled and the operation of the steering wheel, the location detection results will be different. Therefore, even on a road on which the location has never been wrong, conditions may cause the vehicle mark to deviate.

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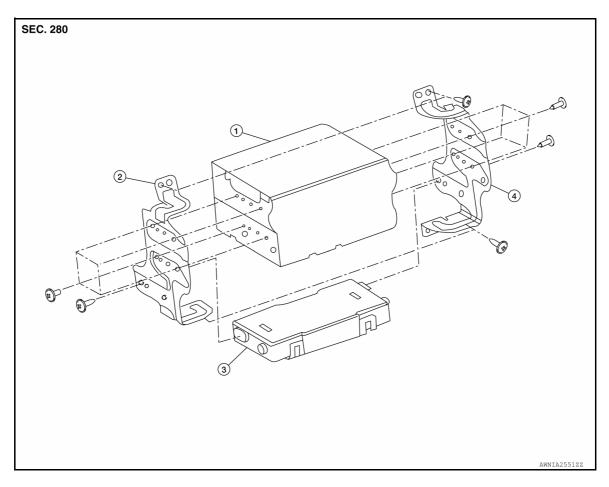
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# REMOVAL AND INSTALLATION

## AV CONTROL UNIT

Exploded View



1. AV control unit

- 2. AV control unit bracket LH
- 3. A/C auto amp.

4. AV control unit bracket RH

### Removal and Installation - AV Control Unit

INFOID:0000000008297208

### **REMOVAL**

#### **CAUTION:**

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to <a href="AV-541">AV-541</a>, "CONFIGURATION (AV CONTROL UNIT): Description".

- Disconnect the negative battery terminal. Refer to <u>PG-92. "Removal and Installation"</u>.
- 2. Remove cluster lid C upper. Refer to IP-21, "Removal and Installation Cluster Lid C Upper".
- Remove the screws, then pull out the AV control unit.
- 4. Disconnect the harness connectors from the AV control unit and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

### **CAUTION:**

• When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to <u>AV-541, "CONFIGURATION"</u>. TION (AV CONTROL UNIT): Description".

## **AV CONTROL UNIT**

## < REMOVAL AND INSTALLATION >

[BOSE AUDIO WITH SURROUND SOUND]

Removal and Installation - AV and AC Switch Assembly

### **REMOVAL**

#### **CAUTION:**

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to <u>AV-541</u>, "CONFIGURATION (AV CONTROL UNIT): <u>Description"</u>.

- Disconnect the negative battery terminal. Refer to <u>PG-92, "Removal and Installation"</u>.
- 2. Remove cluster lid C. Refer to IP-21, "Removal and Installation Cluster Lid C Upper"
- Remove the AV and AC switch assembly screws (A), then separate the cluster lid C from AV and AC switch assembly.
- 4. Release upper pawls and remove AV and AC switch assembly

#### INSTALLATION

Installation is in the reverse order of removal.

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## **STEERING SWITCH**

< REMOVAL AND INSTALLATION >

[BOSE AUDIO WITH SURROUND SOUND]

## STEERING SWITCH

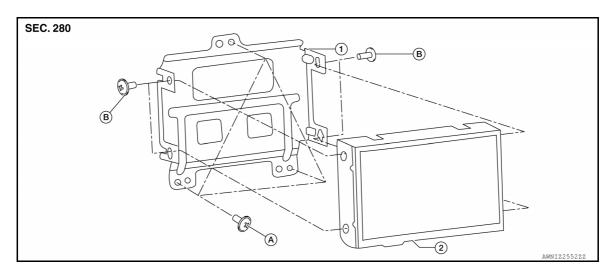
## Removal and Installation

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The steering switch and ICC steering switch are serviced as an assembly. Refer to <a href="CCS-190">CCS-190</a>, "Removal and <a href="Installation"</a>.

## **DISPLAY UNIT**

Exploded View



- Display unit bracket
  - Display unit screws
- Display unit

A. Display unit bracket screws

### Removal and Installation

#### **REMOVAL**

- Remove cluster lid D. Refer to <u>IP-22, "Removal and Installation"</u>.
- 2. Remove the display unit screws, and then pull out the display unit and bracket.
- 3. Disconnect harness connector from the display unit, then remove the display unit and bracket.
- 4. Remove the display unit brackets screws, then remove the display unit from the display unit bracket.

#### **INSTALLATION**

Installation is in the reverse order of removal.

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## **HEADREST DISPLAY UNIT**

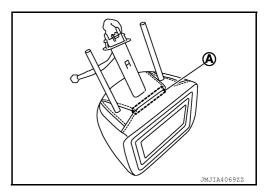
## Removal and Installation

#### INFOID:0000000008267002

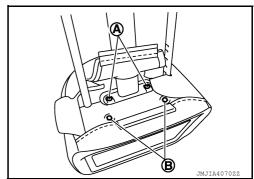
#### **REMOVAL**

#### **CAUTION:**

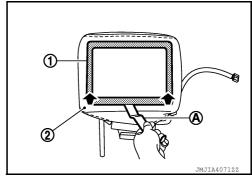
- Do not strongly press panel surface of display (glass area).
- Do not strongly press or pull out the movable part of display.
- 1. Remove the headrest trim retainer (A).



2. Remove the headrest display harness and upper tube screws (A), and then remove headrest display unit bolts (B).

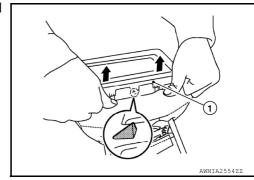


- 3. Remove the headrest display escutcheon and headrest display.
- a. Insert a suitable tool (A) between lower side of headrest display escutcheon (1) and headrest trim (2) and pull out lower side of escutcheon.



b. Pull out headrest display escutcheon (1) to the position that pawl is visible and disengage pawl.





c. Pull out lower side of headrest display escutcheon from headrest.

## **HEADREST DISPLAY UNIT**

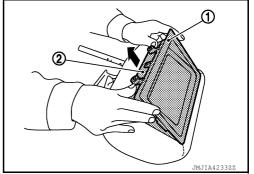
#### < REMOVAL AND INSTALLATION >

## [BOSE AUDIO WITH SURROUND SOUND]

#### **CAUTION:**

Be careful not damage pawls on upper side headrest display escutcheon.

d. Pull downward and remove headrest display escutcheon (1) and headrest display unit (2) by pulling them out and removing pins on upper side of display.



- e. Disconnect inner harness connector.
- f. Press headrest display escutcheon to the headrest display unit side. Disconnect pawls on upper side and remove headrest display escutcheon.
- 4. Remove the headrest display harness upper tube from headrest trim.

### **INSTALLATION**

Installation is in the reverse order of removal.

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## **BOSE SPEAKER AMP**

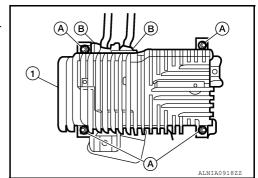
## **BOSE SPEAKER AMP**

## Removal and Installation

#### INFOID:0000000008266387

#### **REMOVAL**

- 1. Disconnect the negative battery terminal. Refer to PG-92, "Removal and Installation"
- 2. Remove third row seat. Refer to SE-95, "Removal and Installation".
- 3. Remove Bose speaker amp screws (A).
- 4. Disconnect the harness connectors (B) from the Bose speaker amp. and remove.



#### **INSTALLATION**

Installation is in the reverse order of removal.

## FRONT DOOR SPEAKER

## **Exploded View**

INFOID:0000000008267085

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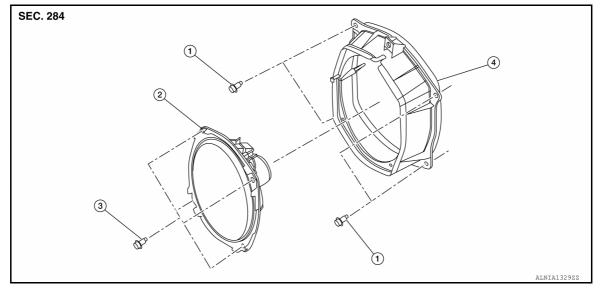
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- 1. Speaker bracket bolt
- 2. Front door speaker
- 3. Speaker bolt

4. Speaker bracket

### Removal and Installation

INFOID:0000000007913610

### **REMOVAL**

- 1. Remove front door finisher. Refer to <a href="INT-15">INT-15</a>, "Removal and Installation".
- Remove front door speaker bolts.
- Disconnect harness connector from front door speaker, then remove front door speaker from speaker bracket.
- 4. Remove speaker bracket bolts.
- 5. Remove speaker bracket from front door.

#### INSTALLATION

Installation is in the reverse order of removal.

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## **FRONT TWEETER**

[BOSE AUDIO WITH SURROUND SOUND]

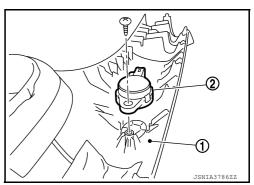
## FRONT TWEETER

## Removal and Installation

#### INFOID:0000000008266388

### **REMOVAL**

- 1. Remove front pillar finisher (LH/RH). Refer to <a href="INT-17">INT-17</a>, "FRONT PILLAR FINISHER: Removal and Installation"
- 2. Remove front tweeter screws (2).
- 3. Remove front tweeter (2) from front pillar finisher (1).



## **INSTALLATION**

Installation is in the reverse order of removal.

## **INSTRUMENT PANEL SPEAKER/TWEETER**

< REMOVAL AND INSTALLATION >

[BOSE AUDIO WITH SURROUND SOUND]

## **INSTRUMENT PANEL SPEAKER/TWEETER**

## Removal and Installation

#### INFOID:0000000008282659

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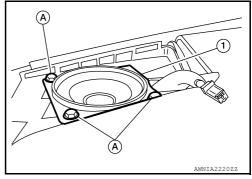
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#### **REMOVAL**

- 1. Remove instrument panel tweeter grille (LH/RH). Refer to IP-14, "Exploded View".
- 2. Remove the screws (A), then pull out the instrument panel tweeter (1).
- 3. Disconnect the harness connector and remove the instrument panel tweeter (1).



#### **INSTALLATION**

Installation is in the reverse order of removal.

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## **CENTER SPEAKER**

[BOSE AUDIO WITH SURROUND SOUND]

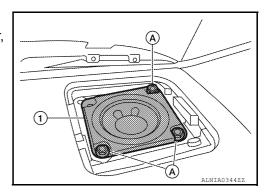
## **CENTER SPEAKER**

## Removal and Installation

#### INFOID:0000000007913616

## **REMOVAL**

- 1. Remove center speaker grille. Refer to IP-14, "Exploded View".
- 2. Remove the center speaker screws (A).
- 3. Pull out the center speaker (1), disconnect harness connector, then remove center speaker.

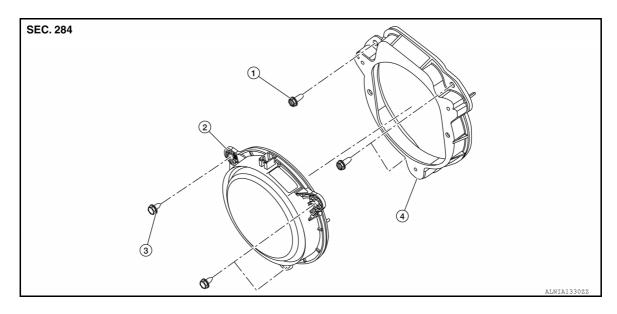


### **INSTALLATION**

Installation is in the reverse order of removal.

## **REAR DOOR SPEAKER**

Exploded View



- 1. Speaker bracket bolt
- 2. Rear door speaker
- 3. Speaker bolt

4. Speaker bracket

### Removal and Installation

REMOVAL

- 1. Remove rear door finisher. Refer to INT-16, "Removal and Installation".
- Remove rear door speaker bolts.
- 3. Disconnect harness connector from the rear door speaker, then remove rear door speaker from speaker bracket.
- 4. Remove speaker bracket bolts.
- Remove rear door speaker bracket.

#### **INSTALLATION**

Installation is in the reverse order of removal.

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## **REAR DOOR TWEETER**

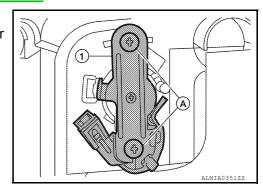
## **REAR DOOR TWEETER**

## Removal and Installation

#### INFOID:0000000007913614

## **REMOVAL**

- 1. Remove rear door finisher. Refer to INT-16, "Removal and Installation".
- 2. Disconnect connector harness from the rear door tweeter (1).
- 3. Remove the rear door tweeter screws (A), then remove rear door tweeter (1).



### **INSTALLATION**

Installation is in the reverse order of removal.

## **REAR SPEAKERS**

## [BOSE AUDIO WITH SURROUND SOUND]

## **REAR SPEAKERS**

## Removal and Installation

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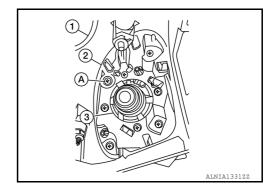
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### **REMOVAL**

1. Remove back pillar finisher. Refer to <a href="INT-30">INT-30</a>, "BACK PILLAR FINISHER: Removal and Installation". CAUTION:

Do not reuse back pillar finisher.

- 2. Remove rear speaker bolts (A).
- 3. Remove bracket (2), then remove rear speaker (3).



### **INSTALLATION**

Installation is in the reverse order of removal.

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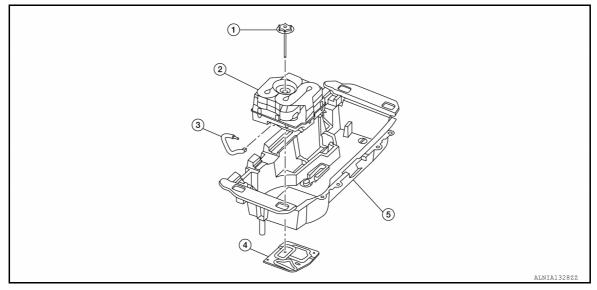
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# WOOFER

## **Exploded View**

INFOID:0000000008272178



- 1. Spare tire clamp
- 2. Woofer

3. Harness

4. Bracket

Rear storage box

## Removal and Installation

INFOID:0000000007913617

## **REMOVAL**

- 1. Open the storage box lid.
- 2. Remove the spare tire clamp.
- 3. Lift woofer to disconnect harness connector, then remove woofer.

#### **INSTALLATION**

Installation is in the reverse order of removal.

## **USB CONNECTOR**

### < REMOVAL AND INSTALLATION >

## [BOSE AUDIO WITH SURROUND SOUND]

## **USB CONNECTOR**

## Removal and Installation

#### INFOID:0000000007913627

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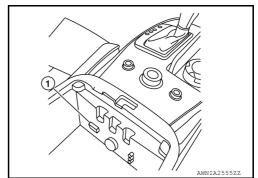
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### **REMOVAL**

- 1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
- 2. Disconnect harness connector from the USB connector.
- 3. Release the pawl from the back of USB connector (1), then remove USB connector (1).



#### **INSTALLATION**

Installation is in the reverse order of removal.

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## FRONT AUXILIARY INPUT JACKS

< REMOVAL AND INSTALLATION >

[BOSE AUDIO WITH SURROUND SOUND]

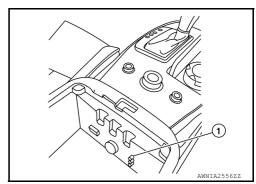
## FRONT AUXILIARY INPUT JACKS

## Removal and Installation

#### INFOID:0000000007913625

### **REMOVAL**

- 1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
- 2. Disconnect harness connector from the front auxiliary input jack.
- 3. Remove front auxiliary input jack screws, then remove front auxiliary input jack (1).



#### **INSTALLATION**

Installation is in the reverse order of removal.

## AROUND VIEW MONITOR CONTROL UNIT

< REMOVAL AND INSTALLATION >

[BOSE AUDIO WITH SURROUND SOUND]

# AROUND VIEW MONITOR CONTROL UNIT

# **Exploded View**

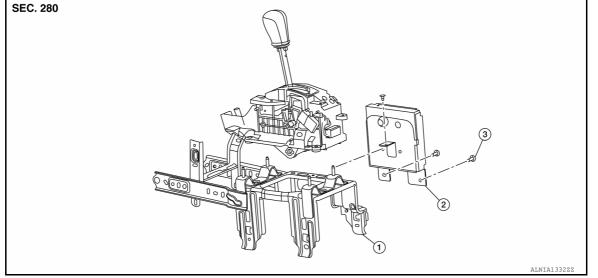


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1. Bracket

2. Around view monitor control unit

3. Screw

## Removal and Installation

INFOID:0000000007913630

#### **REMOVAL**

- 1. Remove center console. Refer to <a href="#IP-18">IP-18</a>, "Removal and Installation".
- 2. Remove the around view monitor control unit screws.
- 3. Disconnect harness connector from around view monitor control unit and remove.

## **INSTALLATION**

Installation is in the reverse order of removal.

#### NOTE:

Perform camera image calibration. Refer to <u>AV-547, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Work Procedure"</u>.

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## **FRONT CAMERA**

[BOSE AUDIO WITH SURROUND SOUND]

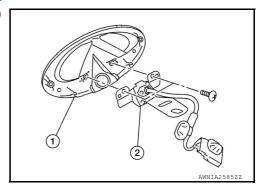
## FRONT CAMERA

## Removal and Installation

INFOID:0000000007913631

#### **REMOVAL**

- 1. Remove front grille. Refer to EXT-23, "Removal and Installation".
- 2. Remove front camera screws, then remove front camera (2) from front emblem (1).



## **INSTALLATION**

Installation is in the reverse order of removal.

#### NOTE:

Perform camera image calibration. Refer to <u>AV-547, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)</u>: Work <u>Procedure"</u>.

## **REAR CAMERA**

## < REMOVAL AND INSTALLATION >

## [BOSE AUDIO WITH SURROUND SOUND]

# **REAR CAMERA**

## Removal and Installation

INFOID:0000000007913632

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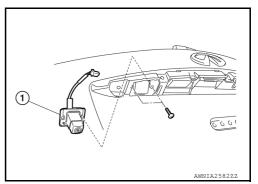
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## **REMOVAL**

- 1. Remove back door outer upper finisher. Refer to EXT-41, "Removal and Installation".
- 2. Remove rear camera screws, then remove rear camera (1).



## **INSTALLATION**

Installation is in the reverse order of removal.

#### NOTE:

Perform camera image calibration. Refer to <u>AV-547, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)</u>: Work <u>Procedure"</u>.

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# SIDE CAMERA

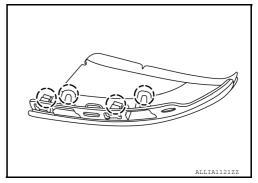
## Removal and Installation

#### INFOID:0000000008486340

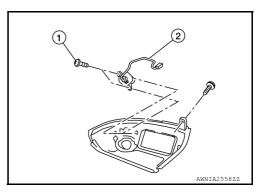
#### **REMOVAL**

- 1. Remove the door mirror assembly. Refer to MIR-29, "Removal and Installation".
- 2. Remove the door mirror rear finisher. Refer to MIR-31, "Removal and Installation".
- 3. Release the side camera finisher pawls using a suitable tool, disconnect the harness connector from the side camera, then remove the side camera finisher.

( ): Pawl



4. Remove the screws (1) and the side camera (2).



## **INSTALLATION**

Installation is in the reverse order of removal.

## **VIDEO DISTRIBUTOR**

< REMOVAL AND INSTALLATION >

[BOSE AUDIO WITH SURROUND SOUND]

# **VIDEO DISTRIBUTOR**

## Removal and Installation

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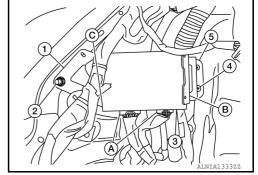
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#### **REMOVAL**

- 1. Remove luggage side lower finisher. Refer to <a href="INT-29">INT-29</a>, "LUGGAGE SIDE LOWER FINISHER: Removal and Installation".
- 2. Disconnect video distributor harness connectors (A).
- 3. Remove video distributor nuts (2) and bolts (4).
- 4. Remove video distributor (3) and brackets (1) (5) from the vehicle as a single unit.
- 5. Remove screws (B) (C), then remove video distributor (3).



### **INSTALLATION**

Installation is in the reverse order of removal.

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## **REAR AUXILIARY INPUT JACKS**

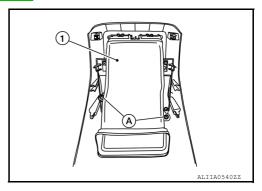
# **REAR AUXILIARY INPUT JACKS**

## Removal and Installation

#### INFOID:0000000007913626

## **REMOVAL**

- 1. Remove center console rear finisher. Refer to IP-18, "Exploded View".
- 2. Remove the screws (A) from the center ventilator duct (1).



- 3. Remove the center ventilator duct.
- 4. Remove rear auxiliary input jack screws, then remove rear auxiliary input jack.

## **INSTALLATION**

Installation is in the reverse order of removal.

# **SONAR CONTROL UNIT**

## < REMOVAL AND INSTALLATION >

[BOSE AUDIO WITH SURROUND SOUND]

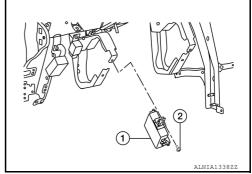
# **SONAR CONTROL UNIT**

# Removal and Installation

#### INFOID:0000000007913636

## **REMOVAL**

- 1. Remove instrument lower panel LH. Refer to IP-23, "Removal and Installation".
- 2. Remove sonar control unit bolt (2).
- 3. Disconnect harness connector from the sonar control unit, then remove sonar control unit (1).



## **INSTALLATION**

Installation is in the reverse order of removal.

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## **SONAR SENSOR**

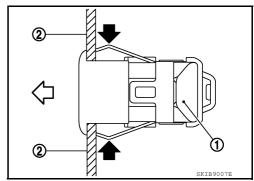
## Removal and Installation

#### INFOID:0000000007913637

#### **REAR SONAR SENSORS**

#### Removal

- 1. Remove rear bumper fascia assembly. Refer to EXT-20, "Removal and Installation".
- 2. Press sonar sensor spring (\(\bigsim\)).
- 3. Remove the sonar sensor (1) from rear bumper (2) as shown  $(\)$ .
- 4. Disconnect the harness connector from sonar sensor (1) and remove.



#### Installation

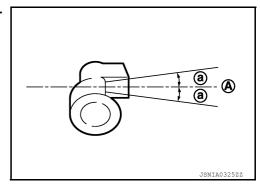
Installation is in the reverse order of removal.

#### **CAUTION:**

The connector direction is within  $\pm 10^{\circ}$  from the horizontal position when assembling the bumper.

(A) : Horizontal position

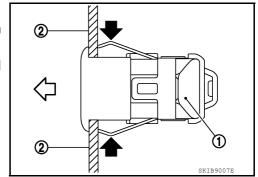
(a) : 10°



#### FRONT SONAR SENSORS

#### Removal

- 1. Remove front bumper fascia. Refer to EXT-17, "Removal and Installation".
- 2. Press sonar sensor spring ( ).
- 3. Remove the sonar sensor (1) from front bumper (2) as shown  $( \ \ )$ .
- 4. Disconnect harness connector from sonar sensor (1) and remove.



### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

# **SONAR SENSOR**

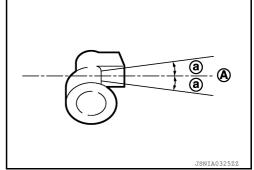
## < REMOVAL AND INSTALLATION >

## [BOSE AUDIO WITH SURROUND SOUND]

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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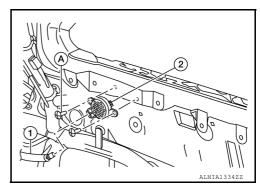
# **BUZZER**

# Removal and Installation

#### INFOID:0000000008266392

## **REMOVAL**

- 1. Remove luggage side lower finisher (RH). Refer to <a href="INT-29">INT-29</a>, "LUGGAGE SIDE LOWER FINISHER: Removal and Installation".
- 2. Disconnect harness connector (1) from the buzzer.
- 3. Remove buzzer screws (A), then remove buzzer (2).

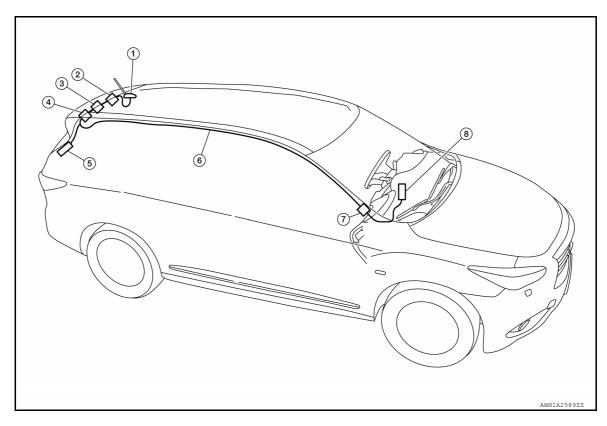


## **INSTLLATION**

Installation is in the reverse order of removal.

# **AUDIO ANTENNA**

# **Location of Antennas**



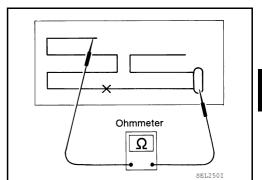
- Antenna base (satellite antenna and antenna amp)
- 4. M503, M504
- 7. M95, M138, M500, M509

- 2. M502
- 5. M505
- 8. AV control unit M133, M143
- 3. M501
- 6. Antenna Feeder

# Window Antenna Repair

## **ELEMENT CHECK**

1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



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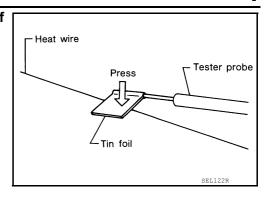
INFOID:0000000008487402

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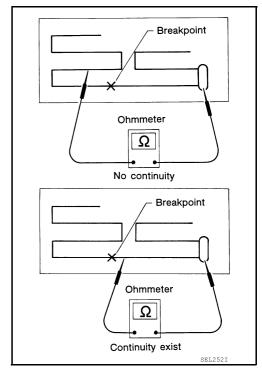
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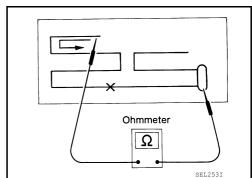
• When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



2. If an element is broken, no continuity will exist.



3. To locate a break, move probe along element. Tester indication will change abruptly when probe passes the broken point.



## **GPS ANTENNA**

## [BOSE AUDIO WITH SURROUND SOUND]

# **GPS ANTENNA**

## Removal and Installation

INFOID:0000000007913629

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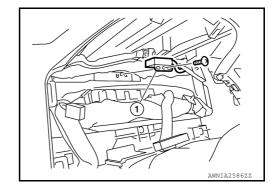
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## **REMOVAL**

- 1. Remove combination meter. Refer to IP-15, "Removal and Installation".
- 2. Disconnect harness connector from AV control unit.
- 3. Remove feeder clips.
- 4. Remove GPS antenna screws, then remove GPS antenna (1).



#### **INSTALLATION**

Installation is in the reverse order of removal.

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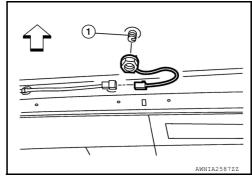
## SATELLITE RADIO ANTENNA

## Removal and Installation

INFOID:0000000007913621

#### **REMOVAL**

- 1. Pull headlining assembly (rear). Obtain a service area. Refer to INT-25, "Removal and Installation".
- 2. Disconnect harness connector from antenna feeder.
- 3. Remove nut (1) then remove satellite radio antenna and two connectors shown in art cover from the vehicle as a unit.
  - ⟨
    ⇒: Front



#### INSTALLATION

Installation is in the reverse order of removal.

#### **CAUTION:**

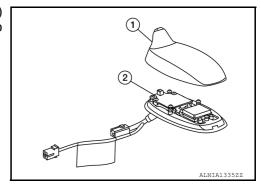
If the satellite radio antenna nut is not tightened to the specified torque, lower sensitivity of the antenna may be experienced. On the other hand, if the nut is tightened tighter than the specified torque, this will deform the roof panel.

## Disassembly and Assembly

INFOID:0000000007913622

#### DISASSEMBLY

Insert a suitable tool into gaps between satellite radio antenna (1) and the cover (2), and remove the cover (2) from satellite radio antenna (1).



#### **ASSEMBLY**

Assembly is in the reverse order of disassembly.

## **PRECAUTIONS**

< PRECAUTION >

[TELEMATICS SYSTEM]

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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 dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. Information necessary to service the system safely is included in the SR and SB section 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 SR section.
- 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 Airbag Diagnosis Sensor Unit or other Airbag 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.

Cautions in Removing Battery Terminal and AV Control Unit (Models with AV Control Unit)

#### **CAUTION:**

Remove battery terminal and AV control unit 30 seconds or more after turning the ignition switch OFF. NOTE:

After the ignition switch is turned OFF, the AV control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

# Precaution for Trouble Diagnosis

#### 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

AV COMMUNICATION SYSTEM

INFOID:0000000008360070

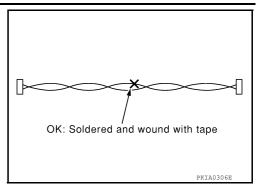
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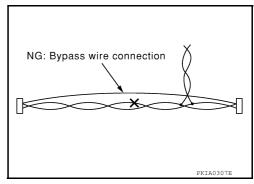
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Revision: March 2012 AV-699 2013 Infiniti JX

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



 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.)



## Precaution for Work

INFOID:0000000008360072

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- · Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
- Water soluble dirt: Dip a soft cloth into lukewarm water and wring the water out of the cloth to wipe the dirty area.
  - Then rub with a soft and dry cloth.
- Oily dirt: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the
  dirty area.
  - Then dip a cloth into fresh water and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- · For genuine leather seats, use a genuine leather seat cleaner.

## **PREPARATION**

## < PREPARATION >

# [TELEMATICS SYSTEM]

# **PREPARATION**

# **PREPARATION**

Special Service Tool

INFOID:0000000008360073

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Tool number (Kent-Moore No.) Tool name	Description
 (J-46534) Trim tool set	Removing trim components

# **Commercial Service Tools**

INFOID:0000000008360074

(Kent-Moore No.) Tool name		Description	<del></del> G
( — ) Power tools		Loosening nuts, screws and bolts	Н
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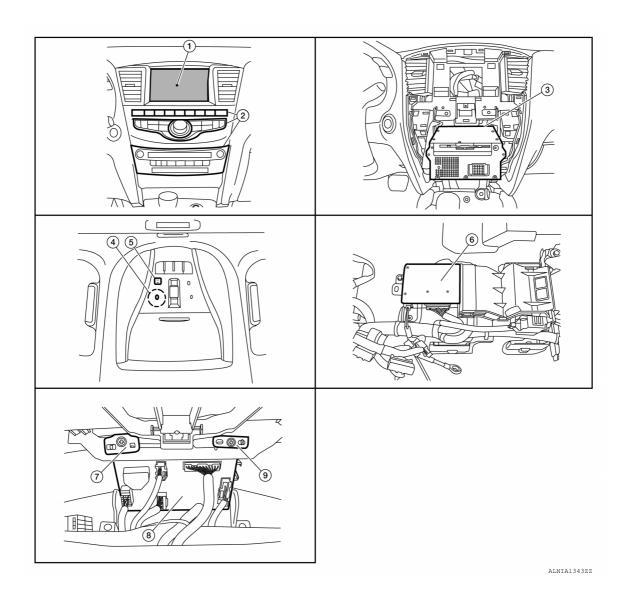
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# SYSTEM DESCRIPTION

## **COMPONENT PARTS**

## **Component Parts Location**

INFOID:0000000008233656



- 1. Display unit
- 4. Microphone
- GPS antenna

- 2. A/C and AV switch assembly
- 5. Telematics switch
- 8. BCM

- 3. AV control unit
- 6. Telematics control unit (TCU)

INFOID:0000000008233660

9. TEL antenna

# Component Description

## TELEMATICS CONTROL UNIT (TCU)

The telematics control unit (TCU) is connected to the AV control unit using a USB harness for sound signal input/output and USB communication. A radio communication terminal and SIM card are built into the TCU. Data is sent to and received from the INFNITI CONNECTIONS data center via the TEL antenna.

#### AV CONTROL UNIT

The AV control unit is connected to the telematics control unit (TCU) using a USB harness for sound signal input/output and USB communication. The AV control unit receives input signals from the A/C and AV switch assembly through the AV communication circuits and transmits them to the TCU.

#### A/C AND AV SWITCH ASSEMBLY

Revision: March 2012 AV-702 2013 Infiniti JX

## **COMPONENT PARTS**

## < SYSTEM DESCRIPTION >

[TELEMATICS SYSTEM]

The A/C and AV switch assembly transmits input signals to the AV control unit through the AV communication circuits.

## **GPS ANTENNA**

The GPS antenna is used for vehicle location.

## **TEL ANTENNA**

The TEL antenna is used for sending and receiving data.

## **TELEMATICS SWITCH**

The telematics switch is used to turn ON the telematics system.

## **MICROPHONE**

The microphone is used for interaction with the INFNITI CONNECTIONS data center.

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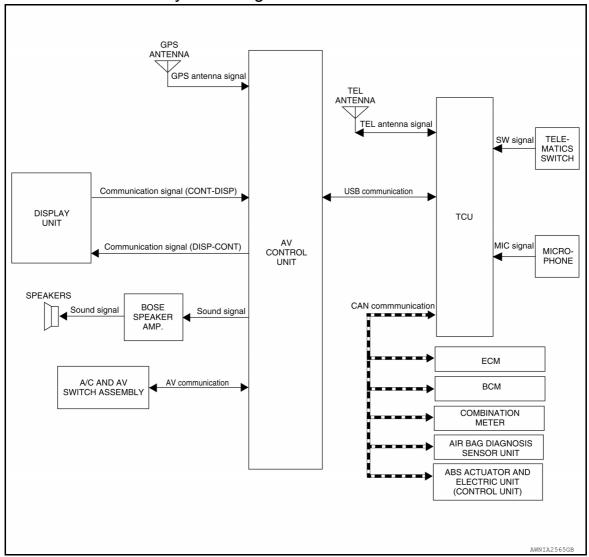
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## **SYSTEM**

## **TELEMATICS SYSTEM**

# TELEMATICS SYSTEM: System Diagram

INFOID:0000000008233663



# TELEMATICS SYSTEM: System Description

INFOID:0000000008233664

The telematics system interacts with the INFINITI CONNECTION data center using GPS and GSM/GPRS technologies. The telematics control unit (TCU) can send messages to and receive commands from the INFINITI CONNECTION data center. This allows the INFINITI CONNECTION data center to monitor the vehicle and obtain actual position coordinates and automatically detected events, as well as initiate certain services from outside the vehicle. In addition, the vehicle operator can initiate services from inside the vehicle.

#### NOTE:

For additional information on the Telematics system, refer to the NAVIGATION SYSTEM OWNER'S MANUAL.

# **DIAGNOSIS SYSTEM (TCU)**

## < SYSTEM DESCRIPTION >

## [TELEMATICS SYSTEM]

# **DIAGNOSIS SYSTEM (TCU)**

## **CONSULT Function**

#### INFOID:0000000008233669

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## **CONSULT FUNCTIONS**

CONSULT performs the following functions via communication with the TCU.

Direct Diagnostic Mode	Description
Ecu Identification	The AV control unit part number is displayed.
Self Diagnostic Result	The AV control unit self diagnostic results are displayed.
Data Monitor	The AV control unit input/output data is displayed in real time.
Work support	The settings for AV control unit functions can be changed.
CAN Diag Support Mntr	<ul> <li>The result of transmit/receive diagnosis of AV communication is displayed.</li> <li>The result of transmit/receive diagnosis of CAN communication is displayed.</li> </ul>

#### **ECU IDENTIFICATION**

The part number of TCU is displayed.

## SELF DIAGNOSTIC RESULT

Refer to AV-708, "DTC Index".

## **DATA MONITOR**

Monitor Item [Unit]	Description
HF TYPE [NO BT/]	HF type is displayed.
AUDIO UNIT TYPE [NAVI/]	AV control unit type is displayed.
CALL SWITCH TYPE [SOS/]	Call switch type is displayed.
ECHO CANCEL [TYPE 1/]	Echo cancel type is displayed.
NOISE CANCEL [TYPE 1/]	Noise cancel type is displayed.
TCU STANDBY TIME [2DAYS/14DAYS/30DAYS]	TCU standby time is displayed.
NAD OUTPUT STATUS [On/Off]	TCU activation is displayed.
ACN COMM SEQUENCE LOG [1-255]	ACN communication sequence log is displayed.
SOS COMM SEQUENCE LOG [1-10]	SOS communication sequence log is displayed.

#### **WORK SUPPORT**

Conditions	Description
SAVE VIN DATA	VIN data saved in TCU is stored in CONSULT.
CENTER CONNECTION SETTING	Connection to INFINITI CONNECTION data center can be set.
TOU ACTIVATE CETTING	Off: TCU activation Off.
TCU ACTIVATE SETTING	On: TCU activation On.
WRITE VIN DATA	VIN data from SAVE VIN DATA can be written to new TCU.
VIN REGISTRATION	VIN data can be manually written to new TCU.

### **CAN DIAG SUPPORT MNTR**

Refer to LAN-19, "CAN Diagnostic Support Monitor".

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Revision: March 2012 AV-705 2013 Infiniti JX

## **AV CONTROL UNIT**

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

# **ECU DIAGNOSIS INFORMATION**

# AV CONTROL UNIT

# List of ECU Reference

INFOID:0000000008233670

ECU	Reference
	AV-181, "Reference Value"
AV control unit (Bose Audio w/o Surround)	AV-187, "Fail-Safe"
	AV-187, "DTC Index"
	AV-457, "Reference Value"
AV control unit (Bose Audio with Surround)	AV-463, "Fail-Safe"
	AV-464, "DTC Index"

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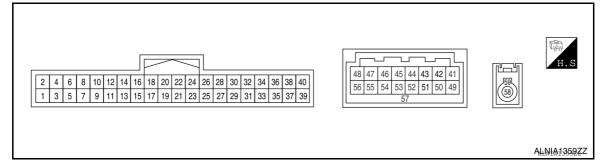
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# TCU

Reference Value

## **TERMINAL LAYOUT**



## INPUT/OUTPUT SIGNAL STANDARD

Terminal (Wire color)		Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery Voltage
2 (B)	_	Ground	_	_	_	_
3 (P)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery Voltage
4 (LG)	Ground	Ignition power supply	Input	Ignition switch ON	_	Battery Voltage
5 (G)	Ground	ACC OUT Output Ignition switch ACC		_	Battery Voltage	
6 (G)	Ground	AV ACC	Output	Ignition switch ACC	_	Battery Voltage
7 (B)	_	Ground	_	_	_	_
9 (L)	_	V-CAN (H)	Input/ Output	_	_	_
10 (P)	_	V-CAN (L)	Input/ Output	_	_	_
14 (B)	_	Ground	_	_	_	_
18 (W)	20	MIC VCC	Input	Ignition switch ON	-	-
19 (B)	20	MIC SIG	Input	Ignition switch ON	-	-
21 (W)	23	DCM MIC VCC	Input	Ignition switch ON	-	-

## < ECU DIAGNOSIS INFORMATION >

	minal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
22 (B)	20	DCM MIC SIG	Input	Ignition switch ON	-	_	
34 (R)	Ground	ECALL SW	Input	Ignition switch ON	Telematics switch pressed	Battery Voltage	
35 (W)	Ground	LED A	Output	Ignition switch ON	Telematics switch pressed	Battery Voltage	
41 (W)	42 (L)	U-VOICE signal	Input	_	_	_	
46 (V)	Ground	Manufacturer Specific signal	_	_	_	_	
47 (B)	55	USB V BUS signal	Input	Ignition switch ON	_	5 V	
48 (B)	55	USB D- signal	Input/ Output	_	_	_	
49 (B)	42 (L)	D-VOICE signal	Output	_	_	_	
56 (L/W)	55	USB D+ signal	Input/ Output	Ignition switch — ON		_	
57		Shield	_			_	
58 (B)	_	TEL antenna signal	Input	Ignition switch ACC	TEL antenna disconnected.	2.8 V	
59	_	Shield	_	_	_	_	

DTC Index

CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-806, "DTC Logic"
U1010: CONTROL UNIT (CAN)	AV-807, "DTC Logic"
U1A00: ACC NO CONN	AV-808, "DTC Logic"
U1A01: INTERNAL ERROR (TCU)	AV-809, "DTC Logic"
U1A02: TEL COMMUNICATION MODULE	AV-810, "DTC Logic"
U1A03: SIM CARD	AV-811, "DTC Logic"
U1A04: VIN UNFINISHED	AV-812, "DTC Logic"
U1A05: USB COMM	AV-813, "DTC Logic"
U1A07: TEL ANTENNA SHORT	AV-814, "DTC Logic"
U1A08: TEL ANTENNA NO CONN	AV-815, "DTC Logic"
U1A0B: MIC IN CONN	AV-816, "DTC Logic"
U1A0C: MIC OUT CONN	AV-818, "DTC Logic"
U1A0E: SOS SWITCH ON STUCK	AV-820, "DTC Logic"
U1A0F: SOS SWITCH NO CONN	AV-821, "DTC Logic"

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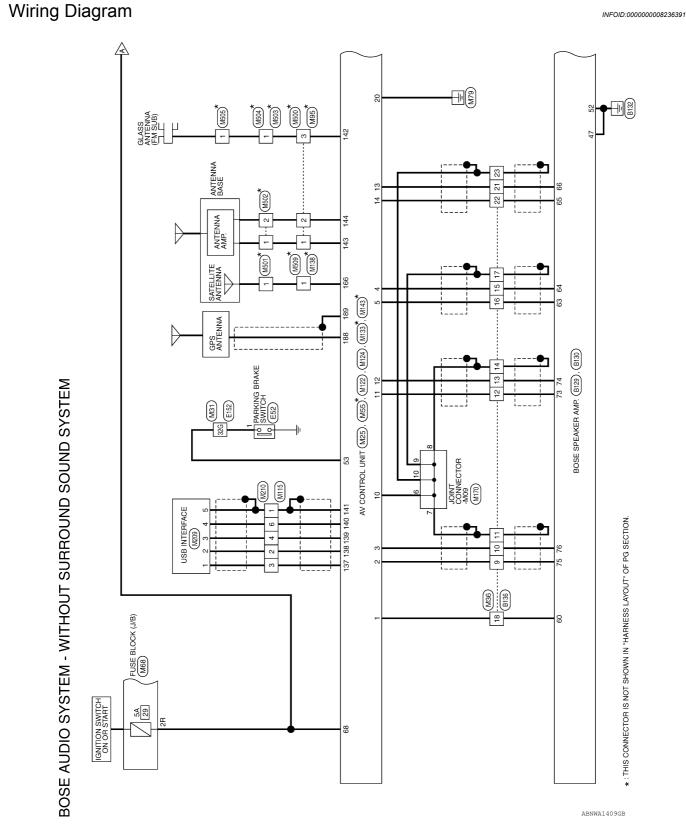
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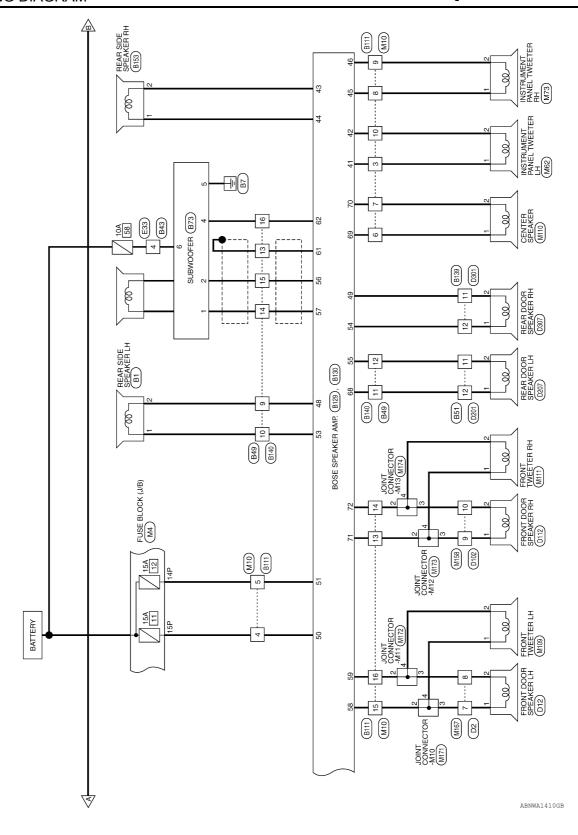
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# **WIRING DIAGRAM**

# **BOSE AUDIO W/O SURROUND SOUND**

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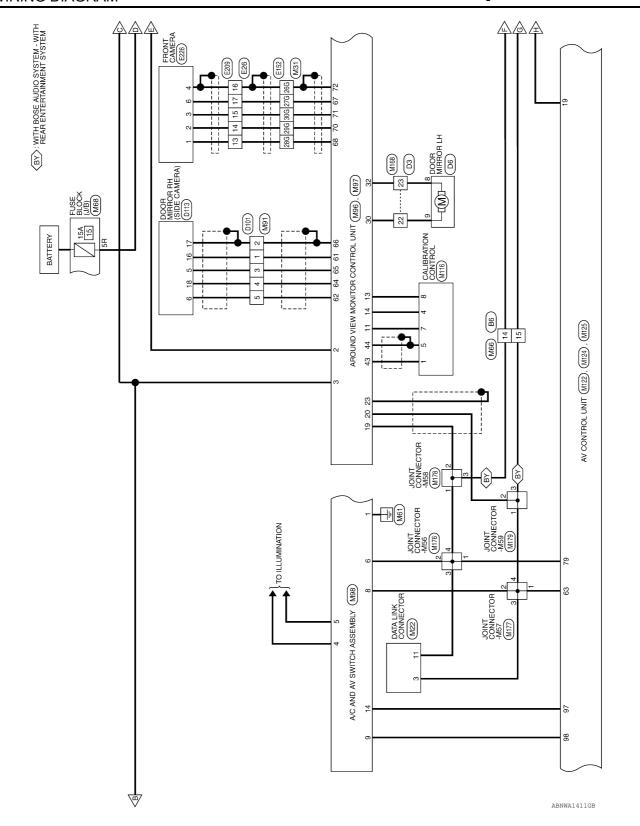
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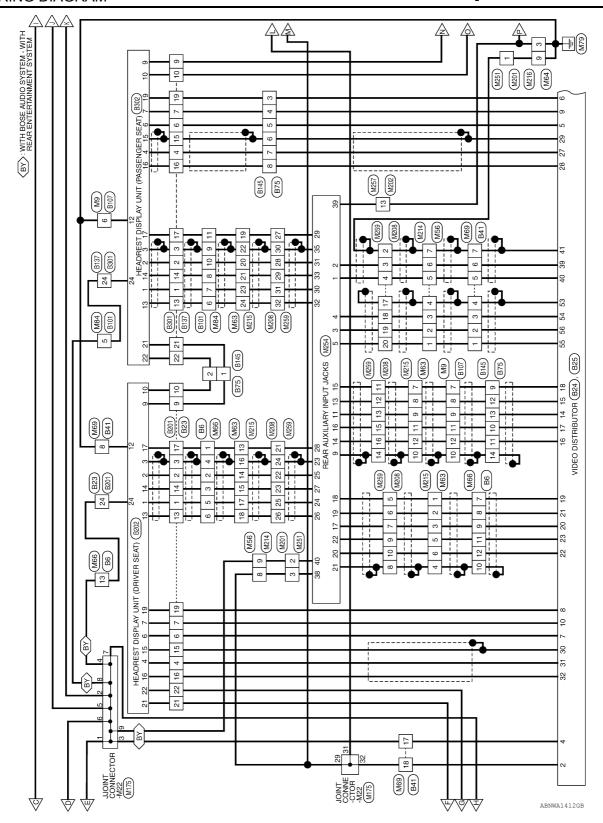
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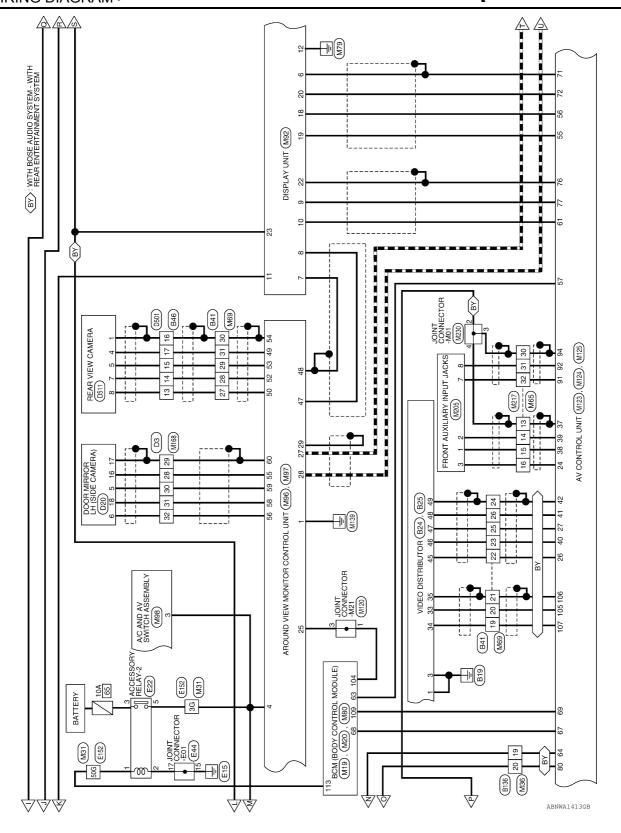
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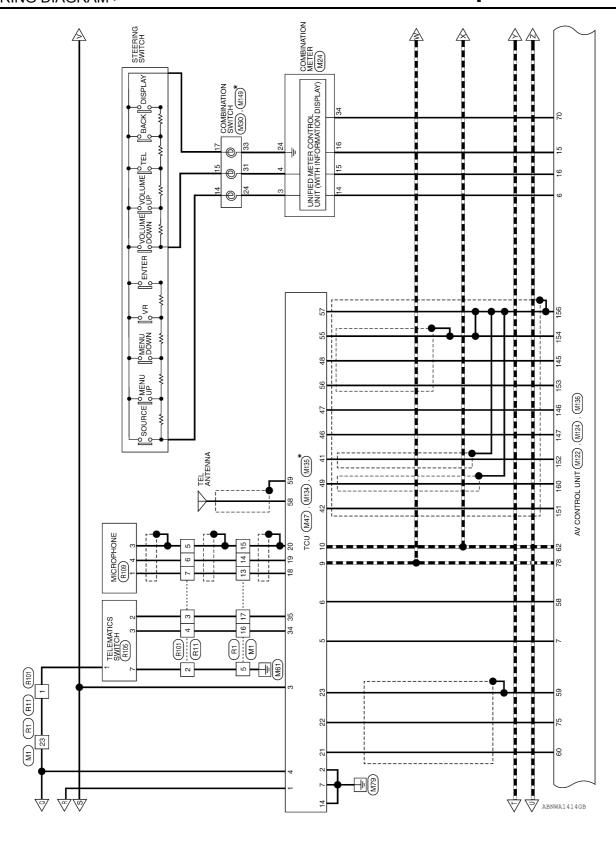
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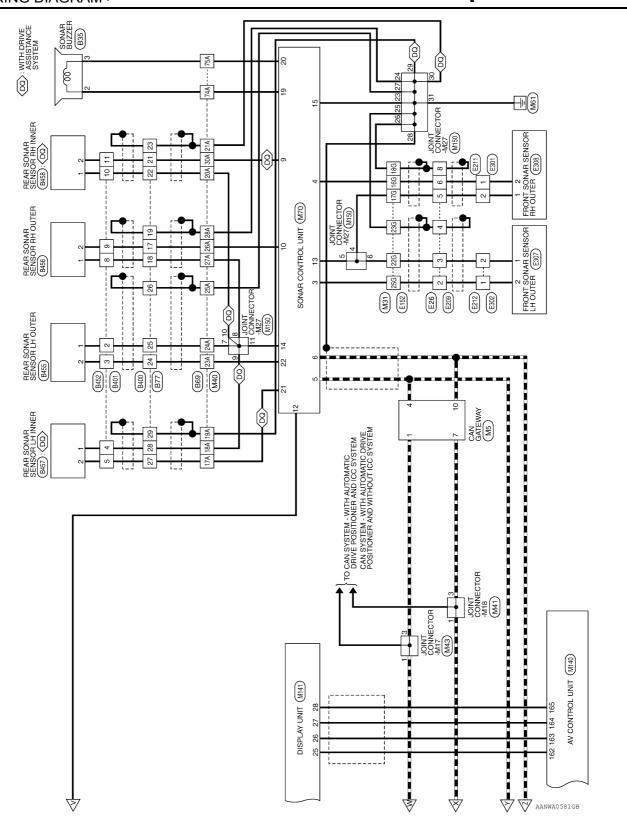
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# Signal Name Connector Name CAN GATEWAY Connector Color WHITE Д ۵ \_ Connector No. Terminal No. 9 4

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Signal Name	Ι	1	ı	_	1	ı
Color of Wire	В	В	G	W	Ь	Μ
Terminal No. Wire	11	12	13	14	15	16

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Connector Name FUSE BLOCK (J/B)  Connector Color WHITE		E BLOCK (J/B)		7P 6P 5P 4P 2P 1P 9P 8P 8P 8P 8P 8P	Signal Name	ı	I		
	7P 6P 5P 4P 16P 15P 14P 13P 1	Color of Wire	>	_					
OUND SC	Connector No.	Connector Nai	Connector Color WHITE	H.S.	Terminal No. Wire	14P	15P		
SURP									
BOSE AUDIO SYSTEM - WITHOUT SURROUND SOUND SYSTEM		E TO WIRE	ITE	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Signal Name	ı	ı	1	1
SXS.	Ξ	me WIR	or WHI	2 3 4 8 14 15 16	Color of Wire	В	>	В	SHIELD
SE AUDIO	Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Wire	2	13	14	15
BOS									

	WIRE TO WIRE	WHITE	5 4 3 2 1 14 13 12 11 10 9 8	Signal Name	ı	ı	ı	ı	ı	ı	ı	ı
. M10			7 6 15	Color of Wire	g	_	>	В	8	G	>	>
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	3	4	5	9	7	8	6	10

Connector No.	No.	6М									
Connector Name WIRE TO WIRE	Name	×	Щ.	잍	>	≝	ш				
Connector Color WHITE	Color	≱	╚								
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E	12 11 10 9	10	80	7	9	2	4	က	2	F	
H.S.	24 23 22 21 20 19 18 17 16 15 14 13	22 21	20	19	92	17	19	5	4	33	

Signal Name	ı	ı	_	ı	ı	1	1
Color of Wire	GR	>	В	В	SHIELD	M	В
Terminal No. Wire	9	7	8	6	10	11	12

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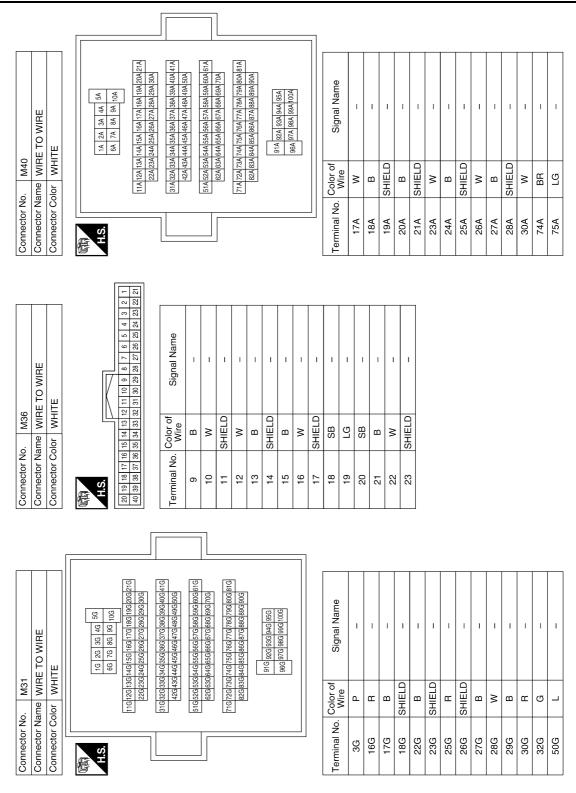
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nector No.		M19 BCM (BODY CONTROL MODULE) BLACK	Connector No. Connector Name Connector Color		M20 BCM (BODY CONTROL MODULE) BLACK	Connector No. Connector Name Connector Color	r No. M22 r Name DAT r Color WHI	Connector No. M22 Connector Name DATA LINK CONNECTOR Connector Color WHITE	
ý			H.S. 100	91 90 89	22 91 90 60 88 87 86 65 94 83 82 81 91 91 91 91 92 98 93 93 93 97 96 94 93 93 93 93 95 94 93	品S.	9 10	10 11 12 13 14 15 16 \\ 2 3 4 5 6 7 8 \\\	
9 58 57 56	56 55 54 53 5 76 75 74 73 7	77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 61 62 64	61						
ninal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	No. Color of Wire	Signal Name	
63	BG	素	104	LG	REVERSE LAMP OUT	m	LG	1	
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nector No.	o. M24	4	Connector No.	. M25		Connector No.	r No.   M30	0	
nector Name	ame CO	COMBINATION METER	Connector Name GPS ANTENNA	me GPS	: ANTENNA	Connecto	r Name CO	Connector Name COMBINATION SWITCH	
nector Color	olor WHITE	HTE	Connector Color	or PINK	\ \	Connector Color	r Color   GRAY	IAY	
Ø	L		是 H.S.			H.S.		25 24 31 32 33	
9 18 17 16	17 16 15 14 13 1 37 36 35 34 33 3	12 11 10 9 8 7 6 5 4 3 2 32 31 30 29 28 27 26 25 24 23 22	21-1						
ninal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	No. Color of Wire	Signal Name	
က	۵	STRG SW INPUT 1	188	В	ı	24	۵	ı	
4	BG	STRG SW INPUT 2	189	SHIELD	-	31	BG	1	
14	g	STRG SW OUTPUT 1				33	Ж	ı	
15	8	STRG SW OUTPUT 2							
16	В	STRG SW OUTPUT GND							
24	н	STRG SW GND							
34	GR	SPEED 8 P /R							

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Revision: March 2012 AV-717 2013 Infiniti JX

## **BOSE AUDIO W/O SURROUND SOUND**



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Signal Name	1	ı	ı	ı	ı	ı	ı	I	ı	ı	ECALL SW	LED A	_	ı	ı	_	ı
Color of Wire	1	-	-	-	ı	_	1	-	_	ı	В	M	_	-	-	_	1
erminal No.	24	25	26	27	28	59	30	31	32	33	34	35	36	37	38	39	40

SHIELD W
SHIELD W B SHIELD

		I	1	2 1		I		
		WHITE		12 11 10 9 8 7 6 5 4 3 32 31 30 29 28 27 26 25 24 23	Signal Name	B+	GND	ACC
. M47	Ime TCU			15 14 13 35 34 33	Color of Wire	>	В	۵
Connector No.	Connector Name	Connector Color	用.S.	20 19 18 17 16 15 14 13 12 11 10 9 4 4 0 39 38 37 38 37 38 38 39 39 39 39 39 39 39 39 39 39 39 39 39	Terminal No. Wire	-	2	e

Signal Name	B+	GND	ACC	IGN	ACC OUT	AV ACC
Color of Wire	Y	В	۵	ГG	G	G
Terminal No. Wire	1	2	က	4	5	9

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M43	tor Name JOINT CONNECTOR-M17	tor Color WHITE	
tor No.	or Name	or Color	





M41	Connector Name JOINT CONNECTOR-M18	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



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Color of Wire	۵	Ь
Terminal No.	1	3

Signal Name

Terminal No. Wire

**AV-719** 2013 Infiniti JX Revision: March 2012

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Connector No.	). M62	
Connector Na	ame INS	Connector Name INSTRUMENT PANEL TWEETER LH
Connector Color BROWN	olor BRC	NWC
是 H.S.		
Terminal No. Color of Wire	Color of Wire	Signal Name
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_	RE TO WIRE	WHITE	15 14 13 12 11 10 9 8	Signal Name	ı	ı
). M64	ıme WI		7 6 16 15	Color of Wire	В	В
Connector No.	Connector Name WIRE TO WIRE	Connector Color	高 H.S.	Terminal No. Wire	3	6

Connector No.	M56
Connector Name	Connector Name WIRE TO WIRE
Connector Color WHITE	WHITE
12 11 10	10 9 8 7 6 5 4 3 2 1
24 23	24 23 22 21 20 19 18 17 16 15 14 13
Terminal No. Color of	or of Signal Name

Signal Name	ı	ı	ı	I	1	ı	-	1	ı	
Color of Wire	В	M	В	SHIELD	В	8	SHIELD	Ь	_	
Terminal No. Wire	1	2	ဇ	4	5	9	2	8	6	

Signal Name	ı	ı	-	ı	I	-	ı	1	_	-	I	-	ı	I	=
Color of Wire	SHIELD	>	В	٦	ŋ	ш	SHIELD	×	В	٦	g	Я	SHIELD	8	В
Terminal No.	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Connector Name AV CONTROL UNIT	Connector No. M55	
Connector Color   BI LJF	Connector Name AV CO	ITROL UNIT
	Connector Color BLUE	

140 139 141 139	Signal Name	SNBA	ONB GND	+Q BSN	USB D-	CHIELD
	Color of Wire	g	≯	Œ	_	CHIELD
H.S.	Terminal No.	137	138	139	140	171

8	WIRE TO WIRE	WHITE	9 8 7 6 5 4 3 2 1	Signal Name	ı	ı	I	ı	ı	I	ı	ı	1
. M63		_	24 23 22 2	Color of Wire	SB	മ	ш	SHIELD	Χ	В	>	В	В
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	-	2	3	4	5	9	7	8	6

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onnector No.	o. M65	2	Terminal No.	Color of	Signal Name	Terminal No.	Color of	Signal Name	
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	_		14	В	1	31	В	1	
			15	æ	1	32	>	1	
19 1	16 15 14 13 12	2 11 10 9 8 7 6 5 4 3 2 1 2 27 26 26 24 32 2 3 2 1	16	M	ı		_		
<u>م</u> د	3	01 61 02 12 22 62 42 62 02 12							
nnector No.	o. M66	9	Terminal No	Color of	Signal Name	Connector No.	. M68		
onnector Name		WIRE TO WIRE	relillia No.	Wire	Olgilai Mallie	Connector Name	me FUSE	BLOCK (J/B)	
nnector Color		WHITE	7	SB	– (WITH REAR ENTERTAINMENT SYSTEM)	Connector Color		NN	
H.S.	12 11 10 9 24 23 22 21		7	3	- (WITHOUT REAR ENTERTAINMENT SYSTEM)	师 H.S.	7R 6R 5R 16R 15R 14R	7R 6R 5R 4R () 3R 2R 1R 16R 15R 14R 13R 12R 11R 10R 9R 8R	
rminal No.	Color of Wire	Signal Name	ω	ŋ	– (WITH REAR ENTERTAINMENT	Terminal No.	Color of Wire	Signal Name	
-		1			SYSTEM)	28		ı	
2	υ	1	80	В	- (WILHOUL REAK ENTERTAINMENT SCOTIN	5R	} >-	ı	
3	α	– (WITH REAR ENTERTAINMENT SYSTEM)	6	۳	- (WITH REAR ENTERTAINMENT				
က	>	- (WITHOUT REAR ENTERTAINMENT	C	Į.	- (WITHOUT REAR				
		SYSTEM)	ח	SHIELD	ENIEKIAINMENI SYSTEM)				
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		SYSTEM)	;	α	– (WITHOUT REAR ENTEBTAINMENT				
2	>	- (WITH REAR ENTERTAINMENT	=	ב	SYSTEM)				
2	2	SYSTEM)  – (WITHOUT REAR ENTERTAINMENT	12	В	– (WITH REAR ENTERTAINMENT SYSTEM)				
,		SYSTEM)	,	;	- (WITHOUT REAR				
9	В	– (WITH REAR ENTERTAINMENT	12	>	ENIERIAINMENI SYSTEM)				
		SYSTEM)	13	>	1				
u	ď	- (WITHOUT REAR ENTERTAINMENT	14	SB	1				
D	<u>5</u>	SYSTEM)	15	P	ı				

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Signal Name	I	I	1	-	I	ı
Color of Wire	ß	В	Œ	G	SHIELD	Α
Terminal No. Wire	26	22	28	59	08	31

Signal Name	ı	ı	ı	ı	ı	1	-	ı	ı	ı	ı	ı	-
Color of Wire	В	×	SHIELD	В	>	۵	В	×	SHIELD	8	ш	SHIELD	В
Terminal No.	2	9	7	8	17	18	19	20	21	22	23	24	25

	WIRE TO WIRE	TE		[7	8 7 6 5 4 3 2 1 24 23 22 21 20 19 18 17	Signal Name	ı	1	1	ı	
. M69		lor WHITE			10 9 26 25	Color of Wire	۳	8	В	SHIELD	
Connector No.	Connector Name	Connector Color	是 H.S.		16 15 14 13 12 11 32 31 30 29 28 27	Terminal No.	-	2	3	4	

Connector No.	M73
Connector Name	Connector Name INSTRUMENT PANEL TWEETER RH
Connector Color BROWN	BROWN
H.S.	2 1

of Signal Name	1	ROR SENSOR SIGNAL	1	IGN	FR SENSOR GND	RR SENSOR GND	GND	1	ı	-	SPEAKER PWR	SPEAKER RR SIGNAL	-	ROL SENSOR SIGNAL	-	
Color of Wire	1	≥	ı	ГG	В	m	<u>m</u>	ı	ı	ı	BB	ГG	ı	≯	ı	
Terminal No.	6	10	1	12	13	14	15	16	17	18	19	20	21	22	23	

Signal Name

Terminal No. Color of Wire

່ ຊ | ≥

Connector Color WHITE  Connector Color WHITE	Connector No.	No.	≥	M70									
Connector Color WHITE	Connector	Name	တ	Ó	¥	2	Ö	Ę	2	_	15	╘	
12 11 10 9 8 7 6 5 4 3 2 1 1 1	Connector	Color	>	Į₹	[쁜	l							
H.S.   12   11   10   9   8   7   6   5   4   3   2   1						IN	l IV	17					
24 23 22 21 20 19 18 17 16 15 14 13	-	12 1	1 10	6	ω	7	9	22	4	3	2	F	
	Ó.	24 2	3 22	21	20	19	8	17	91	15	14	13	

$\Box$	4	16	<del>a</del>
117	2	17	Signal I
W	9	18	S.
IN.	7	19	
Ш	8	23 22 21 20 19 18	
넉	9	21	<del>_</del>
	10	22	olor o Wire
	11	23	Color of Wire
	12	24	<del>-</del>
L			 8
	٥	į	rminal No.

Signal Name	1	1	FOL SENSOR SIGNAL	FOR SENSOR SIGNAL	V CAN-H	V CAN-L	I	ı
Color of Wire	ı	ı	œ	ш	В	>	1	ı
Terminal No. Color of Wire	-	2	3	4	5	9	2	8

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Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)	- (WITHOUT REAR ENTERTAINMENT SYSTEM)	– (WITH REAR ENTERTAINMENT SYSTEM)	- (WITHOUT REAR ENTERTAINMENT SYSTEM)	– (WITH REAR ENTERTAINMENT SYSTEM)	<ul><li>– (WITHOUT REAR ENTERTAINMENT SYSTEM)</li></ul>	-	1	ı
Color of Wire	В	<b>%</b>	M	ш	В	В	SHIELD	G	L
Terminal No.	9	9	2	7	8	89	6	10	11

	_	_	i			
	WIRE TO WIRE	==		24 23 22 21 20 19 18 17	Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)
. M84		lor WHITE		9 23	Color of Wire	<b>&gt;</b>
Connector No.	Connector Name	Connector Color	原 H.S.	32 31 30 29 28 27 26	Terminal No. Color of Wire	5

M80	Connector Name   BCM (BODY CONTROL MODULE)	or BLACK	128 178 178 178 179 179 178 179 178 179 178 179 178 179 178 179 178 179 178 179 178 178 179 178 178 178 178 178 178 178 178 178 178
Connector No.	Connector Name	Connector Color BLACK	H.S. (128/12)

Signal Name	REVERSE SIGNAL	ACC RELAY OUT	
Color of Wire	В	Г	
Terminal No.	109	113	

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				2	48
				က	19
				4	20
				2	21
			_	9	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
	ш		/	_	23
	₩		/	∞	24
	≤		\	6	52
	잍	١	[7	유	92
	Щ	ΙË	_	ΙŒ	27
M91	₩	¥		12	88
2	_>	>		13	29
	e e	5		7	30
ġ.	ā	ĕ		16 15 14 13 12 11 10	31
١٢	_	ž		16	32
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE			6

Signal Name	1	1	1	1	1
Color of Wire	<b>M</b>	SHIELD	5	Œ	В
Terminal No. Wire	-	2	8	4	9

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	Signal Name	ı	ı	1
Connector No. M95 Connector Name WIRE TO WIRE Connector Color GRAY  A.S.				
lor o	Color o Wire	В	<u> </u>	B
Connector No. M95 Connector Name WIRE Connector Color GRAY	Terminal No. Wire	-	2	8

		_	_										_		_		
Signal Name	ı	REV	I	V-CAN1 H	V-CAN1 L	V-CAN1 GND	MIRROR SIGNAL 2	ı	MIRROR SIGNAL 1	1	=	1	1	ı	1	ı	_
Color of Wire	-	LG	-	В	M	SHIELD	M	-	В	_	_	_	-	-	-	ı	_
Terminal No.	54	25	56	27	28	29	30	31	35	33	34	32	36	28	38	39	40

Signal Name	FRONT DISP IT	IT FRONT DISP	BATT	GND	1	1	I	1	I	FRONT COMP +	FRONT COMP -	FRONT COMP SYNC	I	SHIELD	ACC	-
Color of Wire	В	×	>	В	ı	1	ı	ı	ı	В	×	ш	_	SHIELD	Д	_
Terminal No.	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Signal Name	-	-	_	SIGNAL GND	-	CAMERA DIRECT OFF	RX	-	_	-	ı	MCAN-1H	MCAN-1L	_	_	MCAN GND
Color of Wire	1	1	1	ŋ	1	Д	BG	1	1	1	ı	В	*	_	_	SHIELD
Terminal No.	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23

2	DISPLAY UNIT	ПЕ		8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13	Signal Name	ı	Ι	_	_	Ι	FRONT COMP SHIELD	SHIELD	R CAMERA COMP
). M92		olor WHITE		2 11 10 9 4 23 22 21	Color of Wire	-	_	-	_	_	SHIELD	SHIELD	В
Connector No.	Connector Name	Connector Color	 	(所) H.S. 24	Terminal No.	1	2	3	4	2	9	7	8

			88 40 37 39								
OUND VIEW MONITOR NTROL UNIT	ПЕ		20 22 24 26 28 30 32 34 36 19 21 23 25 27 29 31 33 35	Signal Name	GND	+B	IGN	ACC	_	ı	I
	$\vdash$		14 16 13 15	Color of Wire	Ф	>	ല	▄	ı	ı	1
Connector Na	Connector Col	(京京) H.S.	2 4 6 8 10 1 3 5 7 9 1	Terminal No.	F	2	ဇ	4	5	9	7
	Connector Name AROUND VIEW MONITOR CONTROL UNIT			AROUND VIEW MONITOR CONTROL UNIT WHITE  WHITE  4 16 18 20 22 24 26 38 30 32 34 36 38 31 31 15 17 13 12 12 25 27 29 31 33 35 57 37	AROUND VIEW MONITOR   WHITE   WHITE   WHITE	AROUND VIEW MONITOR   WHITE   WHITE   WHITE	AROUND VIEW MONITOR   WHITE   WHITE   WHITE	AROUND VIEW MONITOR	AROUND VIEW MONITOR	AROUND VIEW MONITOR	AROUND VIEW MONITOR

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Connector No.	. M98	8
Connector Name		A/C AND AV SWITCH ASSEMBLY
Connector Color		WHITE
间 H.S.	2 1 3 4	6 8 10 12 14 16 15 15 15 15 15 15 15 15 15 15 15 15 15
Terminal No.	Color of Wire	Signal Name
-	GR	GND
3	۵	ACC
4	ш	ILL
5	В	ILL CONT
9	SB	M CAN-H
8	LG	M CAN-L
6	>	EJECT GND
14	>	CD(DVD)EJECT

Signal Name	RV POWER GND	RV VIDEO +	RV VIDEO -	SV2 SERIAL SIGNAL	SV2 POWER	ı	SV2 POWER GND	SV2 VIDEO +	SV2 POWER GND	SV1 SERIAL SIGNAL	SV1 POWER	I	SV1 POWER GND	SV1 VIDEO +	SV1 VIDEO -	FV SERIAL SIGNAL	FV POWER	ı	FV POWER GND	FV VIDEO +	FV VIDEO -
Color of Wire	œ	ŋ	SHIELD	В	>	1	ŋ	Œ	SHIELD	Ν	В	ı	В	ŋ	SHIELD	В	Α	1	g	В	SHIELD
Terminal No.	52	53	54	55	56	22	58	59	09	61	62	63	64	65	99	29	89	69	20	7.1	72

			72												
	AROUND VIEW MONITOR CONTROL UNIT	WHITE	52 54 56 58 60 62 64 66 68 70 51 53 55 57 59 61 63 65 67 69	Signal Name	1	1	EXTERNAL VIDEO OUTPUT +	EXTERNAL VIDEO OUTPUT -	1	-	VIDEO OUTPUT +	VIDEO OUTPUT -	RV SERIAL SIGNAL	RV POWER	1
. M97			46 48 50 3 45 47 49	Color of Wire	ı	,	В	SHIELD	ı	ı	В	SHIELD	>	В	1
Connector No.	Connector Name	Connector Color	H.S. 41 43	Terminal No.	41	42	43	44	45	46	47	48	49	50	51

Connector No.		M111
Connector Na	ame F	Connector Name FRONT TWEETER RH
Connector Color BROWN	olor B	ROWN
是 H.S.		2 1
Terminal No.   Color of Wire	Color o Wire	of Signal Name
-	თ	ı
2	≥	ı

Connector No.	). M110	0
Connector Na	ame CE	Connector Name   CENTER SPEAKER
Connector Color		BROWN
是 H.S.		<u> </u>
Terminal No. Color of Wire	Color of Wire	Signal Name
-	5	ı
	791	

60	Connector Name FRONT TWEETER LH	BROWN	2 1	Signal Name	_	1
. M109	ıme FR(			Color of Wire	Ь	M
Connector No.	Connector Na	Connector Color	原 H.S.	Terminal No.	1	٥

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Revision: March 2012 AV-725 2013 Infiniti JX

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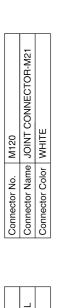
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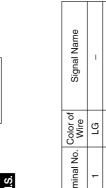
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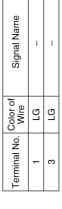
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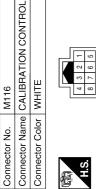
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Signal Name	ı	ı	-	ı	1
Color of Wire	В	BG	SHIELD	В	Р
Terminal No. Wire	1	4	5	7	8

5	WIRE TO WIRE	4	2 4 9 7	Signal Name	1	ı	1	-	1
M115		lor GRAY		Color of Wire	SHIELD	>	Э	В	_
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.   Color of Wire	-	2	3	4	9

Terminal No. Color of Wire	Color of Wire	Signal Name
12	В	FR RH PRE -
13	В	RR RH PRE +
14	М	RR RH PRE -
15	В	STRG SW GND
16	M	STRG SW B
17	_	-
18	ı	1
19	٨	(+)B
20	GR	GND

		_	_	_	_	_	_	_	_
Signal Name	FR LH PRE -	RR LH PRE +	RR LH PRE -	STRG SW A	ACC	ı	I	SHIELD	FR RH PRE +
Color of Wire	>	В	*	១	ច	ı	-	BR	>
Terminal No.	က	4	5	9	7	8	6	10	11

Connector No.	M122
Connector Name	Connector Name   AV CONTROL UNIT
Connector Color GRAY	GRAY
H.S.	1 2 3 4 5 6 7 8 9

Signal Name	AMP ON	FR LH PRE +	
Color of Wire	SB	В	
Terminal No.	1	2	

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Signal Name	AUX SHIELD	AUX AUDIO RH	AUX AUDIO	HP 1 LH-	HP 1 RH-	HP 1 SHIELD	ı	ı	ı	I	ı	-
Color of Wire	SHIELD	8	В	В	ŋ	SHIELD	-	ı	-	ı	-	-
Terminal No. Wire	37	38	39	40	41	42	43	44	45	46	47	48

Signal Name	1	HP 1 LH+	HP 1 RH-	ı	1	ı	ı	ı	ı	1	ı	-
Color of Wire	ļ	×	В	Ι	ı	I	_	ı	-	-	I	_
Terminal No. Wire	25	26	27	28	29	30	31	32	33	34	35	98

Connector No. M123  Connector Name AV CONTROL UNIT  Connector Color WHITE		ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı
Connector Name AV CONTROL UN Connector Color WHITE	Connector No.		Σ	23	~									
Connector Color WHITE	Connector Nan	e	A	C	Ó	Ę	R	٦(	5	$\vdash$				
TIPE 181 181 181 181 181 181 181 181 181 18	Connector Colc	_	∣⋝	두	Щ									
35 36 37 38 39 40 41 42 43 44 45 46 47 48	H.S. 35 36	37 23	7 8 8	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	8 9	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	82 24	62 84	8 4	15 45	8 8	88 74	8 8	

Signal Name	1	1	I	AUX AUDIO LH
Color of Wire	_	-	1	В
Terminal No. Wire	21	22	23	24

Signal Name	IGN	REVERSE SIG	SPEED	NAVI COMP 1 SHIELD	NAVI COMP 1 SYNC	ı	ı	MIC SIG	DISP SHIELD	DISP IT	CAN-H	M CAN-H	M CAN-H TRM
Color of Wire	r <sub>G</sub>	Œ	BG	SHIELD	Œ	1	ı	В	SHIELD	В	_	SB	SB
Terminal No.	89	69	70	71	72	73	74	75	9/	77	78	6/	80

Signal Name	1	NAVI COMP 1-	NAVI COMP 1+	I-KEY MEMORY	AV-ACC (DCM)	PKB SIGMIC GND	MIC VCC	IT DISP	CAN-L	M CAN-L	M CAN-L TRM	1	ı	MR OUTPUT
Color of Wire	1	8	В	BG	ŋ	SHIELD	8	Α	۵	LG	LG	1	-	Ь
Terminal No.	54	55	56	57	58	59	09	61	62	63	64	65	99	29

	TROL UNIT		7	55 56 57 58 59 60 61 62 63 64	70 71 72 73 74 75 76 77 78 79 80	Signal Name	1	ı	ı	1	013 070
. M124	me AV CON	lor WHITE		50 51 52 53 54 55	66 67 68 69 70 71	Color of Wire	ı	ı	ı	1	ر
Connector No.	Connector Name AV CONTROL UNIT	Connector Color WHITE		49	92	Terminal No.	49	50	51	52	Ę

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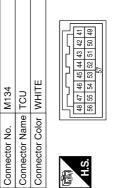
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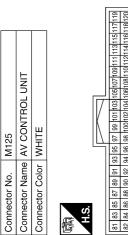
Signal Name	ı	NAVI COMP 2-	NAVI COMP 2 SHIELD	NAVI COMP 2+	ı	ı	ı	ı	I	-	ı	ı	_	ı	-	_	ı
Color of Wire	ı	>	SHIELD	В	ı	ı	ı	ı	ı	1	ı	1	1	ı	ı	_	ı
Ferminal No.	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120

Terminal No. Color of Wire 46 - 47 B B 48 B 49 B 50 - 52 - 52 54 - 54 5 54 - 55 54 54 - 55 54 54 - 55 54 54 - 55 54 54 54 54 54 54 54 54 54 54 54 54	Virgo of Mire of the control of the	Signal Name  - VBUS D- D-VOICE
55	SHIELD	GND(USB GND) D+
22	SHIELD	CONN CHASSIS GND

Signal Name	I	I	1	ı	AUX VIDEO+	AUX VIDEO-	1	VIDEO SHIELD	I	I	DVD EJECT	EJECT GND	-	1	ı	-	ı	
Color of Wire	ı	1	1	1	8	В	1	SHIELD	1	-	>	^	_	ı	-	1	I	
erminal No.	87	88	89	06	91	92	93	94	92	96	97	98	66	100	101	102	103	



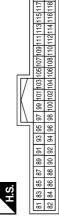
Signal Name	U-VOICE	VOICE GND	I	ı	_
Color of Wire	Μ	Т	-	ı	_
erminal No. Wire	41	42	43	44	45



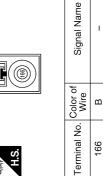
Connector Color WHITE

M125

Connector No.



Signal Name	1	İ	ı	I	ī	ı	
Color of Wire	ı	ı	ı	1	ı	1	
Terminal No. Wire	81	82	83	84	85	98	



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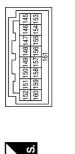
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Signal Name	ı	NBUS	-O	D-VOICE	1	-	-	ı	_	GND(USB GND)	D+	CONN CHASSIS GND
Color of Wire	ı	В	В	В	ı	1	1	ı	ı	SHIELD	M	SHIELD
Terminal No.	150	151	152	153	154	155	156	157	158	159	160	161

Connector No. M136 Connector Name AV COI Connector Color WHITE	Connector No. M136  Connector Name AV CONTROL UNIT  Connector Color WHITE
H.S.	120   150



Signal Name

Terminal No. Color of Wire

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147 149

VOICE GND U-VOICE

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Connector No.	o. M135	35
Connector Name TCU	ame TCL	ſ
Connector Color BROWN	olor BR0	NMC
原 H.S.		
Terminal No. Color of Wire	Color of Wire	Signal Name

Signal Name	I	-	
Color of Wire	В	SHIELD	
Terminal No.	58	29	

nector No.	M141	
ector Name	nector Name DISPLAY UNIT	
nector Color BROWN	BROWN	



M140	Sonnector Name   AV CONTROL UNIT	BLUE	
Connector No.	nnector Name	Connector Color BLUE	



TO WIRE	7	
1	E E	

Connector Color GRE
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M138

Connector No.

Signal Name	_	
Color of Wire	В	
ıal No.		

Signal Nan	GND	GND	GVIF+	GVIF-
Color of Wire	SHIELD	SHIELD	В	В
Terminal No. Color of Wire	25	26	27	28

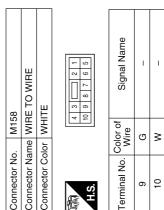
Signal Name	GND	GND	GVIF-	GVIF+
Color of Wire	SHIELD	SHIELD	В	В
Terminal No. Wire	162	163	164	165

Signal Name	_	
Color of Wire	В	
Terminal No.	1	

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	89	WIRE TO WIRE	31	4 3 2 1 10 9 8 7 6 5		Signal N	-	
	). M158	_	lor WHITE	[2]-		Color of Wire	G	
	Connector No.	Connector Name	Connector Color	语 图		Terminal No.	6	
		•			_			

Connector No.	). M149	6:
Connector Na	ame COI	Connector Name COMBINATION SWITCH
Connector Color WHITE	olor WH	TE
嘶 H.S.	20 1	20 19 18 17 16 15 14 13
Terminal No. Wire	Color of Wire	Signal Name
14	В	ı
15	ษย	-
17	НВ	1

Signal Name	ı	ı	ı	ı	ı	I	ı	ı	ı	ı	ı	I	ı	ı
Color of Wire	В	В	В	10	В	В	SHIELD	GR						
Terminal No.	7	∞	6	10	1	23	24	25	26	27	28	29	30	31

13	CONTROL UNIT	AY		Signal Name	ANT MAIN	ANT +B	ANT SHB
	ame AV	olor GR		Color of Wire	a	В	ď
Connector No	Connector Na	Connector Co	明.S.	Terminal No.	142	143	144
Connector No. M143	Connector Name AV CONTROL UNIT	Connector Color GRAY	FIS.	Terminal No. Wire			

20	JOINT CONNECTOR-M27	ITE	11 10 9 8 7 6 5 4 3 2 1 1 2 2 2 2 1 20 19 18 17 16 15 14 13 12 3 3 32 31 30 29 28 27 26 25 24 23	Signal Name	ı	1	1
	me JOI	lor WH	22 21 20 1	Color of Wire	В	В	В
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No.	4	9	9

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1   1   1   1   1   1   1   1   1   1	S. 9 18 17 16 9 38 37 36 minal No.	15   14   13   12   11   10   9   8   7   6   5   13   13   13   13   13   13   13	6 5 4 3 2 1 28 25 24 23 22 21 Ame	H.S.	22 21 20 19 18 17 16 5 33 32 31 30 29 28 27	22 [21] 20 [19] [18] [7] [6] [5] [4] [3] [1] [1] [3] [3] [3] [30 [29] [28] [27] [26] [25] [24] [25] [25] [25] [25] [25] [25] [25] [25
Signal Name	Terminal No. Co		lame		Color of	
5 %	_			Terminal No. Vire	Wire	Signal Name
- M	22	M		9	BB	ı
	23	9		7	SHIELD	ı
	28	В		8	SHIELD	ı
	29 SH	SHIELD -		6	SHIELD	ı
ζ.	30	- Н		10	SHIELD	ı
	31	5				
8	32	M				

Connector No.		M173
Connector Na	on ame	Connector Name JOINT CONNECTOR-M12
Connector Color WHITE	olor W	罪
H.S.		0 4 3 2 1 1
Terminal No. Wire	Color o Wire	Signal Name
2	G	ı
က	G	1
4	5	1

TTE TE	Signal Name	-	_	1
ime JOINT	Color of Wire	Μ	8	≥
Connector Name JOINT Connector Color WHITE H.S.	Terminal No. Color of Wire	2	3	4

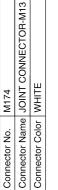
Connector No.	). M171	7
Connector Na	ame JOII	Connector Name JOINT CONNECTOR-M10
Connector Color WHITE	olor WH	<u> </u>
H.S.		3 2 1 0
Terminal No. Color of Wire	Color of Wire	Signal Name
2	Ъ	ı
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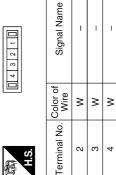
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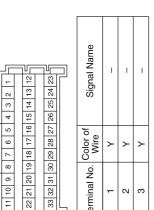
Revision: March 2012 AV-731 2013 Infiniti JX

Signal Name	_	1	ı	-	ı	I	-	1	ı
Color of Wire	>	>	>	<b>\</b>	>	>	Ь	۵	۵
Terminal No. Wire	4	5	9	2	8	6	58	31	32

Connector No.	M175
Connector Name	Connector Name JOINT CONNECTOR-M22
Connector Color WHITE	WHITE

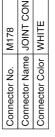


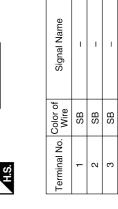


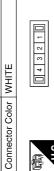


]	Signal Name	1	_	I	
	Color of Wire	У	У	Υ	
]	Terminal No. Wire	-	2	3	

M178	
JOINT CONNECTOR-M58	
WHITE	







Connector Name JOINT CONNECTOR-M57

M177

Connector No.

M176

Connector No.



Signal Name	-	1	ı	I
Color of Wire	PT	P	ГG	FG
Terminal No. Wire	1	2	3	4







Connector Color WHITE

ABNIA3540GB

#### **BOSE AUDIO W/O SURROUND SOUND**

## [TELEMATICS SYSTEM]

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< WIRING DIAGRAM >

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TO WIRE	3 2 1	Signal Name	I		Signal Name		ı	1	ı	ı	ı	1	ı	I	ı	ı	ı	ı	ı	ı	ı	ı	I	ı		
o. M202 ame WIRE	4	Color of Wire	В		Color of		3 >	>	SHIELD	В	æ	Μ		ŋ	œ	SHIELD	M	В	7	ŋ	œ	SHIELD	>	В		
Connector No. M202 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No.	13		Terminal No.	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		
TO WIRE		Signal Name	1	1 1		TO WIRE	ш				10 11 12 13 14 15	26 27 28 29 30 31 32	Signal Name		1	1	1	1	ı	1	1	1	1	ı	1	1
M201 ne WIRE T or WHITE	8 9 10	Color of Wire	В	> >	M208	ne WIRE	or WHIIE				7 8	22 23 24 25	Color of	Wire	SHIELD	В	>	SB	ŋ	ш	SHIELD	*	В	>	g	н
Connector No. M201  Connector Name WIRE TO WIRE  Connector Color WHITE	H.S.	Terminal No.	-	3 2	Connector No.	Connector Name WIRE TO WIRE	Connector Color		SH		2 3 4 5	17 18 19 20 21	Terminal No			ო	4	2	9	7	8	6	10	11	12	13
								_						·	·		·				·		·			
Connector No. M179  Connector Name JOINT CONNECTOR-M59  Connector Color WHITE	0 4 3 2 1 0	Signal Name	-	1 1		NT AUXILIARY T.IACKS	ļш		- 1 ⊢	4 5 6 7 8			Signal Name		AUX AUDIO RH+	AUX AUDIO GND	AUX AUDIO LH+	AUX VIDEO+	AUX VIDEO-							
me JOINT		Color of Wire	P	P I C	. M205	me FROI	lor WHITE		1	1 2 3			Color of	Wire	œ	В	>	8	В							
Connector No. M179 Connector Name JOINT (	H.S.	Terminal No.	-	3 2	Connector No.	Connector Name   FRONT AUXILI	Connector Color			H.S.			Terminal No		-	2	က	7	8							

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Revision: March 2012 AV-733 2013 Infiniti JX

			22 23 24 24 24	ne ne								
4	E TO WIRE	TE	2   3   4   5   6   7   8   9   10   11   12   12   13   14   15   16   17   18   19   20   21   22   23   24   24   24   24   24   24	Signal Name	1	I	ı	ı	ı	ı	ı	ı
o. M214	ame WIR	olor WH	1 2 3 4 15 16 16	Color of Wire	>	æ	В	SHIELD	*	В	SHIELD	>
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Color of Wire	-	2	က	4	2	9	7	8
	E TO WIRE	>	2 4 9 9 7 1	Signal Name	ı	ı	1	ı	ı			
. M210	me WIRE	lor GRA		Color of Wire	SHIELD	>	ŋ	æ	_			
Connector No.	Connector Name WIRE TO WIRE	Connector Color GRAY	同 H.S.	Terminal No. Wire	-	2	8	4	9			
			<del></del>							1		
6	tor Name USB INTERFACE	TE	<u>0</u> 4 π	Signal Name	ı	1	ı	ı	1			
). M209	ıme USB	tor Color WHITE		I No. Color of Wire	g	8	œ	_	SHIELD			
tor No.	tor Na	tor Cc		S								

Signal Name	_	1	-	=	-	-	_
Color of Wire	В	L	G	В	SHIELD	W	В
Terminal No. Wire	18	19	20	21	22	23	24

Signal Name	1	1	1	1	1	1	1	1	-	-	I	-	1
Color of Wire	>	В	>	G	ш	SHIELD	M	В	٦	G	œ	SHIELD	W
Terminal No. Wire	5	9	7	8	6	10	11	12	13	14	15	16	17

Connector No.		M215
Connector Na	ame W	Connector Name WIRE TO WIRE
Connector Color WHITE	olor W	НТЕ
ν <u>i</u>	1 2 3	4         5         6         7         8         9         10         11         12           16         17         18         19         20         21         22         23         24
Terminal No. Wire	Color o Wire	of Signal Name
-	SB	ı
2	G	ı
3	н	1
4	SHIELD	Q

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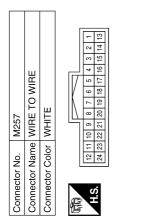
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1   2   3   1   1   2   3   4   5   6   7   8   9   10   1   1   2   3   4   5   6   7   8   9   10   1   2   3   4   5   6   7   8   9   10   1   2   3   4   5   6   7   8   9   10     2   3   4   5   5   6   7   8   9   10     2   3   4   5   5   6   7   8   9   10     2   3   4   5   5   6   7   8   9   10     3   4   5   6   7   8   9   10     3   4   5   6   7   8   9   10     3   4   4   6   7   8   9   10     3   4   4   6   7   8   9   10     3   4   4   6   7   8   9   10   10   10   10   10   10   10	22 23 24 25 26 27 28 29 30 31 32	H.S.	2 6 4 9 1 1
Color of Wire         Signal Name         Terminal No. Wire           B         -         13 SHIELD           B         -         14 B           15 R         R	Signal Name		
- 13 SHIELD 14 B 15 R		Terminal No. Color of Wire	Signal Name
- 14 B		2 B	-
œ		3 SHIELD	1
_	ı	4 SHIELD	1
- M 16 W			
- SHIELD	ı		
31 B	ı		
32 W	ı		

onnector Name WIRE TO WIRE	TE	3 4 5 6 7	11 12 13 14	Signal Name	ı	1	
me WIR	lor WHI	1 2	6	Color of Wire	В	<b>&gt;</b>	>
 onnector Na	onnector Color WHITE		H.S.	erminal No. Wire	-	2	c

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Signal Name	_
Color of Wire	В
Terminal No.	13

Signal Name	ı	I	ı	ı	_	I	-	_	_	-	-	1	_	ı	1	1	_	-	ı	_	-	_	1	-	I
Color of Wire	>	В	BG	ŋ	В	SHIELD	M	SHIELD	N	g	В	ш	٦	Д	M	9	В	ш	ı	SHIELD	1	-	>	В	>
Terminal No.	16	17	18	19	20	21	22	23	24	25	56	27	28	59	30	31	32	33	34	35	36	37	38	39	40

_	Connector No.	Ę	ect	Ö	ž	٠.	-	볼	M254												
-	ပိ	Connector Name REAR AUXILIARY INPUT JACKS	60	Ö	Ž	Ĕ	0	l₩ĕ	REAR /	₹ s	3	∃	₹	l≿	Z	l≅	⊢				
	ပြ	Connector Color WHITE	ect	ō	ပိ	힏	-	∣₹		ш											
	唇三	H.S.	(6)							I 1 N	l 1 <i>V</i>	l 107	_								
	2	4	9	∞	9	12	4	1 9	10 12 14 16 18 20 22 24 26 28 30 32 34 36	ನ	22	24	92	88	೫	었	뚕	98	38	9	_
-	-	3	2	7	6	Ξ	13	15	9 11 13 15 17 19 21 23 25 27 29 31 33 35 37	19	21	83	52	27	53	3	33	35	37	88	
-	]			1	1	1	1	1	1	1	1	1	1	1	1	1	ı	1	1	1	

Signal Name	ı	ı	1	ı	I	1	1	ı	1	Ι	1	1	I	1	I
Color of Wire	>	В	В	В	В	1	1	I	SHIELD	1	Œ	_	5	В	>
Terminal No.	-	2	3	4	5	9	7	8	6	10	11	12	13	14	15

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Connector No. M500 Connector Name WIRE TO WIRE	Color GBAY				100	]	Color of		۵ ۵	م د	Δ									No. M503	Connector Name WIRE TO WIRE	Color GRAY		Color of Wire	В	
Connector No.	Connector Color		E C	U			Terminal No.	-	- 0	7 0	2									Connector No.	Connector	Connector Color	H.S.	Terminal No.	-	
Signal Name	ı	ı	1	ı	ı	1	ı	ı	ı	ı	ı	1	ı	1	ı	ı	1	1	ı		ENNA BASE	>		Signal Name	1	1
Solor of Wire	SHIELD	3	В	SHIELD	æ	В	>	_	ŋ	æ	SHIELD	>	В	۵	G	ш	SHIELD	3	В	M502	me ANTE	lor GRAY		Color of Wire	В	В
Terminal No. Color of Wire	41	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		31	32	Connector No.	Connector Name ANTENNA BASE	Connector Color	哥 H.S.	Terminal No.	-	8
				4 3 2 1	20 19 18 17		10.																	0		
TO WIRE	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	_		11 10 9 8 7 6 5	27 26 25 24 23 22 21	CmcM loani	olgilai ivalile	ı	1	ı	1	I	1	I	ı	I	1	I	ı		ENNA BASE	EN EN		Signal Name	1	
). M259	NHI I			15 14 13 12 1	32 31 30 29 28 2	Color of		SHIELD	В	8	BG	ŋ	æ	SHIELD	>	В	^	D	ш	D. M501	ame ANTE	olor GREEN		Color of Wire	В	
Connector No. M259 Connector Name WIRE TO WIRE	Connector Color WHITE			16		Todimico	leiiiiiai NO.	2	3	4	2	9		8	6	10	11	12	13	Connector No.	Connector Name ANTENNA BASE	Connector Color	原 H.S.	Terminal No.	-	

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α	SHIELD	SHIELD	Connector Name WIRE TO WIRE  Connector Color of Signal Name  Terminal No. Wire  Connector Name WIRE TO WIRE  Connector Color of Signal Name  Terminal No. Color of Signal Name  4 G	Signa Signa	Color of Wire B B B B B WIRE DIOR WHITE DIOR WHITE DIOR WHITE DIOR WIRE Color of Wire B B B B B B B B B B B B B B B B B B B	Terminal No.  Connector N. Connector
<u> </u>	13 R I				SHIELD W	0 0 4 U O O
	В	ш ш			SHELD SHELD W	2 6 4 6 9 8 5 4
SHIELD	В О	B B 5			SHELD SHELD G	2 8 8 8 1 1 4 4 1 5 1 5 1
	Ф О <u>п</u>	R B B E			SHELD SHELD W	2 8 4 5 9 8 2 1 21 21 4
SHIELD	- [			1 1	SHIELD	ω 4
6 B B SHELD	m & [	n a a			≥ a [	0 0 5
6 B B C C C C C C C C C C C C C C C C C	SHELD SHELD STATES	4 ro co		1	<b>≥</b>	ი ო
- 4 SHELD 6 R 6 R 7 SHELD	SHELD	A SHIELD			>	2
3 B SHELD 6 SHIELD 7	SHIELD SHIELD B B B B B B B B B B B B B B B B B B B	3 B SHIELD 6 B 8 B 8 B 8 B 8 B 8 B 8 B 8 B 8 B 8 B		_	_ : L	
2 W 4 SHELD	W SHELD I I I I I I I I I I I I I I I I I I I	2 W - 4 3 B 4 4 SHIELD 6 5 B 6	Wire	Signal Name	Wire	l erminal ivo.
Signal Name         Terminal No. Mire         Signal Name         Terminal No. Wire           -         2         W         -         4           -         3         B         -         4           -         5         B         -         6           6         R         -         -           13         B         -         -           8         SHIELD         -           13         B         -	Terminal No. Color of Signal Name   Terminal No. Wire   Signal Name   Terminal No. Wire   Wire	Terminal No.   Color of   Signal Name   Terminal No.   Color of   Wire	S.	7 8 9 10	2 4	Ø;
Signal Name	H.S.	Terminal No.   Color of   Signal Name   Terminal No.   Signal Name   Terminal Name   Te	Connector No. E33 Connector Name WIRE TO WIRE Connector Color WHITE	TO WIRE E	ame WIRE	Connector N Connector N
Connector Name   WIRE TO WIRE	Connector Name   WIRE TO WIRE	Connector Name   WIRE TO WIRE				Connector N
Connector No.   E26   Connector Name   WIRE TO WIRE	Connector No.   E26   Connector No.   E33   Connector No.   E33   Connector No.   E33   Connector Name   WIRE TO WIRE	Connector No.   E26   Connector No.   E33   Connector No.   E33   Connector No.   E33   Connector Name   WIRE TO WIRE				
Connector No.   E26   Connector Name   WIRE TO WIRE	Connector No.   E26   Connector No.   E33   Connector Name   WIRE TO WIRE   Connector Name   WIRE TO WIRE   Connector Color   WHITE   Connector Color   Connector Color   WHITE   Connector Color   Co	Connector No.   E26   Connector No.   E33   Connector Name   WIRE TO WIRE   Connector Name   WIRE TO WIRE   Connector Color   WHITE   Color of	1 B	ı	В	-
Connector No.   E26   Connector Name   WIRE TO WIRE	1   B   —     1   B   —       B	1   B   —   1   B   —       B	Color of Wire	Signal Name	Color of Wire	Terminal No.
Terminal No.   Color of   Signal Name   Connector Name   WIRE TO WIRE   Connector Color   WHITE   Connector Color   WHITE	Terminal No.   Color of   Signal Name   Terminal No.   Color of   Terminal No.   Color of   Signal Name   Terminal No.   Color of   Signal Name   Connector No.   E33   Connector No.   E33   Connector No.   E33   Connector No.   E34   Signal Name   Connector Color   WHITE   Connector Color   WHITE   Connector Color   WHITE   Connector Color   White   Signal Name   Color of   Terminal No.   White   Color of   Signal Name   Color of   Co	Terminal No.   Color of   Signal Name   Terminal No.   Wire   Wire	<u> </u>			
Terminal No.   Color of   Signal Name   Connector No.   E26   Connector Name   WIRE TO WIRE   Connector Color   WHITE   Signal Name   Color of	Terminal No. Color of Connector No.   E26   Connector No.   E36   Connector No.   E36   Connector Name   WIRE TO WIRE   Connector Color   WHITE   Signal Name   Color of	Terminal No.   Color of   Signal Name   Terminal No.   Color of   Connector No.   E26   Connector No.   E33   Connector Name   WIRE TO WIRE   Connector Name   WIRE TO WIRE   Connector Color   WHITE   Connector Color   WHITE   Connector Name   WIRE TO WIRE   Connector Name   WIRE TO WIRE   Connector Color   WHITE   Connector Color   WHITE   Connector Color   WHITE   Connector Name   WIRE TO WIRE TO WIRE TO WIRE TO WHITE   Connector Name   Wire   Signal Name   Color of   Terminal No.   Color of   Colo	, cj			
Connector No.   E26   Connector Name   Terminal No.   Color of   Signal Name   Connector Name   WIRE TO WIRE   Connector Color   WHITE   To wire   Signal Name   Terminal No.   Color of   Signal Name   Color of   C	Terminal No.   Color of   Signal Name   Terminal No.   Color of   Terminal No.   Color of   Connector Name   Wife   Connector Color   WHITE   Connector   Color of   C	Terminal No.   Color of   Signal Name   Terminal No.   Color of   Terminal No.   Color of   Terminal No.   Color of   Terminal No.   Color of   Connector Name   WIRE TO WIRE   Connector Name   WIRE TO WIRE   Connector Color   WHITE   Connector Color   Connector Colo	Connector Color GREEN	Γ		H.S.
Connector Color of Signal Name   1   B   Connector No.   E26   Connector Name   WIRE TO WIRE   Connector Color   WHITE   Connector   Connector Color   WHITE   Connector   C	Connector Color   GRAY   Connector Color   GREEN	Signal Name   Connector Color   GRAY   Connector Color   GREN	Connector Name   WIRE 10 WIRE		olor GRAY	Connector C
Connector Name   GLASS ANTENNA (FM SUB)	Connector Name   GLASS ANTENNA (FM SUB)   Connector Name   WIRE TO VILLE	Connector Name   GLASS ANTENNA (FM SUB)   Connector Name   WIRE TO VIDE		SS ANTENNA (FM SUB)	ame GLAS	Connector No Connector Gonnector Gonnector Gonnector Gonnector Gonnector Gonnector No Connector
Connector No.   M505   Connector Name   GLASS ANTENNA (FM SUB)   Connector Name   GLASS ANTENNA (FM SUB)   Connector Color   GRAY	Connector No.   M505	Connector No.   M505	Connector No. M509	S ANTENNA (FM SUB)	ame GLAS	Connector Ni Connector Ni Connector Connector Connector Connector Connector Connector Connector Connector Connector Ni Con

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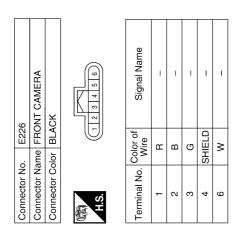
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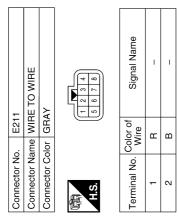
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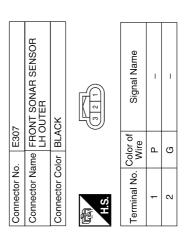
			E209	ne WIRE TO WIRE	or WHITE			20 19 18 17 16 15		Solor of Signal Name									J	HIELD -	- M
			Connector No.	Connector Nan	Connector Cold			U.	_	Terminal No.		1 ("			o (c			5 4	15	16	17
-	Signal Name	-	Signal Name	Olginal Ivalille	1	ı	-	-	1	1	1	ı	1	ı	ı	1	ı	ı			
	Color of Wire	ΓG	Color of	Wire	۵	œ	В	SHIELD	В	SHIELD	×	SHIELD	*	æ	В	ŋ	re	g			
H.S.	Terminal No.	-			36	16G	17G	18G	22G		25G	26G	27G	28G	29G	30G	32G	50G			
							Г														
22 21 20 19 18 17 16 15 14 13 12 2 3 32 31 30 29 28 27 26 25 24 23	Color of Signal Name Wire	GR –	Jo. E152	Jame WIRE TO WIRE	Solor WHITE			56	5		216206196186176166156146136126116	300 230 230 210 20 20 20 20	416 406 396 386 376 366 356 346 336 326 316	50G49G48G47G46G45G44G43G42G	61 G 60 G 59 G 58 G 57 G 56 G 55 G 54 G 53 G 52 G 51 G	709 699 689 679 669 659 649 639 629	81G80G/79G/78G/76G/75G/74G/73G/2G/71G	90G89G88G87G86G85G84G83G82G	000000000000000000000000000000000000000	100G 99G 98G 97G 9AG	
HS	Terminal No.	15	Connector No	Connector Na	Connector Co			S													
	S. H. 1 10 9 8 7 6 5 4 3 2 1 1	S.	1   10   9   8   7   6   5   4   3   2   1   1   1   1   1   1   1   1   1	1   10   9   7   6   5   4   3   2   1   1   1   1   1   1   1   1   1	Signal Name   Terminal No.   Color of   Signal Name   Terminal No.   Color of   Signal Name   Terminal No.   Color of   Signal Name   Terminal No.   Wire   Color of   Signal Name   Terminal No.   Color of   Signal Name   Terminal No.   Color of   Signal Name   Terminal No.   Color of   Signal Name   Connector No.   Connector Name   Connector	1   10   9   8   7   6   5   4   3   2   1   1   1   1   1   1   1   1   1	Signal Name	Signal Name	Signal Name	1   10   8   7   6   5   4   3   2   1   1   1   1   1   1   1   1   1	S	1   10   8   7   6   4   3   2   1   1   1   1   1   1   1   1   1	1   10   9   7   10   12   12   12   13   13   13   13   13	Terminal No.   Color of   Signal Name	11   10   10   12   12   12   13   14   13   12   15   14   13   12   15   14   13   12   15   14   13   12   15   14   13   12   15   14   13   12   15   14   13   12   15   14   13   12   15   14   13   12   15   14   13   12   15   14   13   12   15   14   13   12   15   14   13   12   15   14   13   14   14	Title   0   0   1   10   10   10   10   10	Titing   2   1   2   2   2   2   2   2   2   2	Terminal No. Color of   Signal Name   Terminal No. Color of   Terminal No. Color of   Signal Name   Terminal No. Color of   Terminal No. Color o	Terminal No.   Color of   Signal Name   Signal Name   Terminal No.   Color of   Signal Name   Terminal Name   Signal Name   Signal Name   Terminal Name   Terminal Name   Signal Name   Terminal Name   Signal Name   Terminal Name	Terminal No.   Color of   Signal Name   Term	15   6   7   6   6   7   6   6   1   1   1   1   1   1   1   1

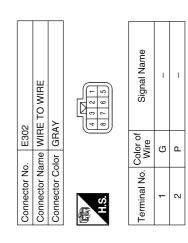
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2	RE TO WIRE	47	1 S S S S S S S S S S S S S S S S S S S	Signal Name	-	_
. E212	me WIF	lor GR,		Color of Wire	_	В
Connector No.	Connector Name WIRE TO WIRE	Connector Color GRAY	崎 H.S.	Terminal No. Wire	-	2







Connector No.	). E301	
Connector Name WIRE TO WIRE	me WIF	IE TO WIRE
Connector Color GRAY	olor GR,	47
画 H.S.		4 8 8 7 5 6 7 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
Terminal No. Wire	Color of Wire	Signal Name
1	១	-
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Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)	- (WITHOUT REAR ENTERTAINMENT SYSTEM)	1	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	ı	ı	ı	ı
Color of Wire	В	SHIELD	SHIELD	ш	В	8	SB	SB	9
Ferminal No. Color of Wire	6	6	10	11	11	12	13	14	15

Terminal No. Wire	Color of Wire	Signal Name
2	M	– (WITH REAR ENTERTAINMENT SYSTEM)
5	А	- (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	В	– (WITH REAR ENTERTAINMENT SYSTEM)
9	٨	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	>	– (WITH REAR ENTERTAINMENT SYSTEM)
7	W	- (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	В	– (WITH REAR ENTERTAINMENT SYSTEM)
8	В	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

			1							
	IE TO WIRE	31		5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24		Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	– (WITH REAR ENTERTAINMENT SYSTEM)	<ul><li>– (WITHOUT REAR ENTERTAINMENT</li></ul>
. B6	me WIF	lor WH		2 3 4 8 14 15 16		Color of Wire	ш	>	SHIELD	α
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE		H.S.	]	Terminal No.	3	က	4	_

ABNIA3549GB

Connector No.	). B1	
Connector Na	ame RE/	Connector Name REAR SIDE SPEAKER LH
Connector Color BROWN	olor BRC	NMC
H.S.		2 1
Terminal No. Wire	Color of Wire	Signal Name

	AR SIDE SF	NWC	2 1	ußiS		
B	RE/	BRC		color of Wire	>	G
Ċ	зте	흗		ပ္ပိ>		
Connector No.	Connector Name REAR SIDE SF	Connector Color BROWN	恒	Terminal No. Wire	-	2

**AV-741** Revision: March 2012 2013 Infiniti JX Α

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Signal Name		-	-	_	-	-	-	_
Color of Wire	SHIELD	٦	Ь	BR	_	ГG	SB	SB
Terminal No. Wire	15	16	17	19	20	21	22	24

Signal Name	-	_	1	_	_	_
Color of Wire	SB	٦	ГG	SB	В	Œ
Terminal No. Wire	9	7	6	10	13	14

07 00 00 00 00 00 00 00 00 00 00 00 00 0
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8 7 6 5 4 3 2 1	24 23 22 21 20 19 18 17 16 15 14 13		Signal Name	-	ı	I	I
12 11 10 9	24 23 22 21		Color of Wire	Μ	G	SHIELD	Ь
-		J	Terminal No. Wire	1	2	3	4

Signal Name	ı	1	ı	1	1	1	1	1	I	1	1	1	1	1	1	1	ı	1	I	
Color of Wire	1	æ	g	В	Α	>	۸	В	G	Α	ш	ı	ı	1	M	В	SHIELD	SHIELD	Ь	Γ
Terminal No.	13	14	15	16	17	18	19	20	21	22	23	24	25	26	22	28	29	30	31	32

				31 83											
	VIDEO DISTRIBUTOR	믵		12 14 16 18 20 22 24 26 28 30 11 13 15 17 19 21 23 25 27 29	Signal Name	_	I	_	1	1	-	ı	1	1	
. B24		lor WHITE		6 8 10 5 7 9	Color of Wire	В	^	В	Μ	BR	٦	SB	BR	SB	
Connector No.	Connector Name	Connector Color	E	H.S. 1 3	Terminal No.	1	2	3	4	5	9	7	8	6	

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ame Connector No. B35 Connector Name SONAR BUZZER	Connector Color WHITE			4 3 2 1			Terminal No. Color of Signal Name	2	. >	- -							Connector No.		Connector Color WHITE		2 2 9			Terminal No. Color of Signal Name								
Color of Signal Name	SHIELD -	1	1	-	- M	ı	В	l B	SHIELD -	1	1	1	SHIELD -	В	В	M	Color of Signal Name		) )		M	SHIELD -	M	ر د	SHIELD -	В	J 5	M	ا د		SHIELD -	<u> </u>
Terminal No. W	41 SHI	45	43	44	45	46	47	48	49 SHI	20	51	- 25		54	22	56 \	Terminal No. W	7			20 /	21 SHI	22	23								7.
O DISTRIBUTOR	Щ			52	39 41 43 45 47 49 51 53 55		Signal Name	1	1	1	1	1	1	1	1			E IO WIKE	<u></u>		6 7 8 9 10 11 12 13 14 15	22 23 24 25 26 27 28 29 30 31 32		Signal Name	1	1	1	1	ı	1	1	
o. B25 ame VIDE	Jor WHIT			38	33 35 37 39		Color of Wire	3		SHIFLD	1	1	1	3	· m		o. B41	ame WIRE	olor WHITE		3 4 5	19 20 21		Color of Wire	<u></u>	×	: B	SHIELD	В	3	SHIELD	
Connector No. B25 Connector Name VIDEO DISTRIBU	Connector Color WHITE			ď			Terminal No.	33	34	32	98	37	38	39	40		Connector No.	Connector Name WIRE 10 WIRE	Connector Color	£	<u>_</u>	17		Terminal No.	-	2	ေ	4	2	9	7	

ABNIA3551GB

# **BOSE AUDIO W/O SURROUND SOUND**

[TELEMATICS SYSTEM]

Connector No. B49  Connector Name WIRE TO WIRE  Connector Color WHITE  Connector Color WHITE  Terminal No. Color of 15 14 13 12 11 10 9 8  10 W	Connector No. B51  Connector Color WHITE	5 4 3 2 1 12 11 10 9 8 7 6	Terminal No.   Color of   Signal Name	- H	12 P –							Connector No. B73	Connector Name SUBWOOFER		_		2 4 6		Color of	l erminal No. Wire Signal Name	1 B	2 W -	4 W –	5 B –	- 5 9			
No.   SHIELD   SHIE	E TO WIRE	13 12 11 10 9	Signal Name	ı	ı	ı	ı	ı	ı	ı	ı	Signal Name		ı	ı	ı	I	ı	1	ı	ı	ı	I	ı	1	I	1	
	tor No. B49 tor Name WIR tor Color WHI	7 6 5 116 15 14	I No. Color of Wire	ŋ		Д.																						
	E TO WIRE	5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24	Signal Name	ı	-	ı	ı	-					E TO WIRE	1			\ ₹	9A 8A		N 18A 17A 16A 15A 14A 13A 12A 11A	\  28A 27A 26A 25A 24A 23A 22A	138A37A36A35A34A33A32A31A	1 48A 47A 46A 45A 44A 43A 42A	458A 57A 56A 55A 54A 53A 52A 51A	168A 67A 66A 65A 64A 63A 62A	A 17 A 27	90A 89A 88A 87A 86A 85A 84A 83A 82A	95A 94A 93A 92A 91A 100A 99A 98A 97A 96A
MRETO WIRE	Connector No. B46 Connector Name WIRE TO WIRE Connector Color WHITE	H.S. 13 14 15 16 17	Terminal No. Color of Wire	13 W	14 R	15 G	16 SHIELD	17 B				Connector No. B69	Connector Name WIRE TO WIRE	Connector Color WHITE			<u></u>	] <del>-</del>		21A 20A 19A	30A[29A	41A 40A 39A	20A 49A	61A 60A 59A	70A 69A	814 804 794	908 898	

ABNIA3552GB

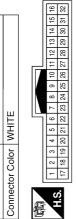
Vame	REAR INMENT EM)	JT REAR INMENT EM)			
Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	I	I	I
Color of Wire	Œ	BG	SHIELD	В	SB
Terminal No. Wire	8	8	6	10	11

Signal Name	– (WITH REAR ENTERTAINMENT SYSTEM)	– (WITHOUT REAR ENTERTAINMENT SYSTEM)	I	-	I
Color of Wire	Œ	BG	SHIELD	В	SB
Terminal No. Wire	∞	80	6	10	11

Signal Name	I	1	ı	I	ı	ı	1	ı	1	-	1
Color of Wire	SB	BR	SHIELD	Μ	В	^	M	В	G	В	SHIELD
Terminal No. Wire	4	2	9	7	8	6	10	11	12	13	14

I		
SHIELD		. B101
14		Connector No.

Connector Name WIRE TO WIRE



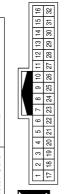
Terminal No. Color of Wire	Color of Wire	Signal Name
5	٨	– (WITH REAR ENTERTAINMENT SYSTEM)
2	>	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	В	– (WITH REAR ENTERTAINMENT SYSTEM)
6	Р	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	M	– (WITH REAR ENTERTAINMENT SYSTEM)
7	ГG	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

	RE TO WIRE	ТЕ	7 6 5 4 3 2 1 15 14 13 12 11 10 9	Signal Name	ı	ı	-
, B75	me WIF	lor WF	8 91	Color of Wire	FG	SB	٦
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Wire	1	2	3

Connector Name   WIRE TO WIRE	lor WHITE		
r Name WIRE 1	Connector Color WHITE		
Connector	Connector	唇	

B77

Connector No.



Signal Name	ı	ı	-	ı	ı	1	I	1	1	ı	1	1
Color of Wire	>	В	SHIELD	В	В	В	×	В	SHIELD	В	В	В
Terminal No.	17	18	19	21	22	23	24	25	26	27	28	29

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**AV-745** Revision: March 2012 2013 Infiniti JX В

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Signal Name	1	1	1	1	ı	-	1	I	-	1	I	-	I	-	
Color of Wire	æ	ŋ	ŋ	Μ	ŋ	Μ	В	g	Μ	ЬLG	<b>&gt;</b>	В	Μ	G	
Terminal No. Wire	41	42	43	<b>7</b> 7	45	46	47	48	49	92	51	25	23	54	

Signal Name	-	-	1	-	-	1	-	ı	1
Color of Wire	Д	В	8	Ь	В	8	В	8	ı
Terminal No. Wire	69	20	71	72	73	74	75	9/	77

B111	IRE TO WIRE	NWOF	3 8 4 5 6 7	10 11 12 13 14 15 16	
Connector No. B	Connector Name WIRE TO WIRE	Connector Color BROWN	1 2	8 8	

Signal Name	1	ı	I	ı	ı	1	1	ı	1	ı	I	1	
Color of Wire	æ	ГG	>	۵	æ	В	Μ	ŋ	Μ	۵	ŋ	н	
Terminal No. Wire	3	4	5	9	7	8	6	10	13	14	15	16	

										_
Signal Name	_	_	ı	_	_	ı	_	ı	-	_
Color of Wire	ш	Μ	SHIELD	Μ	Μ	В	Μ	В	1	Ь
Terminal No. Color of Wire	59	09	61	62	63	64	99	99	29	68

13 14 15 16 17 18 19 20 21 22 23 24
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5 6 7 8 9 10 11 12	13 14 15 16 17 18 19 20 21 22 23 24		Signal Name	-	I	-	I	ı	_	I
1 2 3 4	3 14 15 16		Color of Wire	В	>	ŋ	В	SHIELD	В	Μ
· ·	į.	J	Terminal No. Wire	9	7	8	6	10	11	12

Connector No.	b. B130	01
Connector Na	ame BO	Connector Name BOSE SPEAKER AMP.
Connector Color		BROWN
	77 76 75 7	74 73 72 71 70 69 68 64 63 62 61 60 59 58 57 56 cc
_	1	
Terminal No.	Color of Wire	Signal Name
22	ш	ı
99	В	-
22	8	ı
58	5	I

ABNIA3553GB

	61	RE TO WIRE		12 11 10 9 8 7 6	Signal Name		
	b. B139	me WIF	olor WH	12	Color of Wire	>	g
	Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	file H.S.	Terminal No. Wire	1	12

Signal Name	-	1	ı	1	1	1	-	1	1	1	1	1
Color of Wire	В	Μ	SHIELD	В	×	SHIELD	Μ	В	Μ	В	Μ	SHIELD
Terminal No.	12	13	14	15	16	17	18	19	20	21	22	23

	) WIRE			10     11     12     13     14     15     16     17     18     19     20       30     31     32     33     34     35     36     37     38     39     40	Signal Name	ı	ı	ı
. B136	me WIRE TO WIRE	lor WHITE		6 7 8 9 26 27 28 29	Color of Wire	В	8	CHIELD
Connector No.	Connector Name	Connector Color WHITE	雨 H.S.	1 2 3 4 5 21 22 23 24 25	Terminal No.	6	10	-

Signal Name	I	_	ı	ı	_	ı	_	ı	ı	_	ı	I
Color of Wire	FG	SB	В	ш	SHIELD	0	SB	SB	SHIELD	FG	SB	<b>\</b>
Terminal No. Wire	6	10	13	14	15	16	17	19	20	21	22	24

Signal Name	ı	ı	ı	-	ı	1
Color of Wire	>	ŋ	SHIELD	>	BB	Pe
Terminal No.	-	2	က	4	9	7
	Color of Wire	Color of Wire	Color of Wire W	Color of Wire W G	Color of Wire W G G SHIELD	Color of Wire W G G SHIELD Y Y BR

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Revision: March 2012 AV-747 2013 Infiniti JX

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Signal Name	1	ı	I	ı	1	1	ı	_
Color of Wire	>	0	^	В	Μ	ŋ	æ	SHIELD
Terminal No. Wire	7	8	6	10	11	12	13	14

Signal Name	I	ı	ı	-	I	I	-	I	-	I	I	-
Color of Wire	ГG	SB	В	В	SHIELD	٦	Ь	BR	-	ЫLG	SB	SB
Terminal No.	6	10	13	14	15	16	11	19	20	21	22	24

Connector No.	). B145	5
Connector Name	ame WIF	WIRE TO WIRE
Connector Color WHITE	olor WH	TE
Œ		
H.S.	9 10	2 3 4 5 6 7 8 10 11 12 13 14 15 16
Terminal No.	Color of Wire	Signal Name
-	FG	ı
2	as	1
က	SB	ı
4	٦	I
5	BR	1

Connector No. B201 Connector Name WIRE TO WIRE Connector Color WHITE	H.S. 12 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Terminal No. Color of Signal Name
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E TO WIRE	ПЕ	5 6 7 8 9 10 11	17 18 19 20 21 22 23	Signal Name	_	_	_	_	_	-
ne WIF	or WH	2 3 4	14 15 16	Color of Wire	W	G	SHIELD	Ь	SB	٦
Connector Name   WIRE TO WIRE	Connector Color WHITE	-	13.	Terminal No.	1	2	8	4	9	7

Connector No.		B1	B140							
Connector Name WIRE TO WIRE	ē	⋝	뿚	ř	0	₹	뿠			
Connector Color WHITE	_	∣≶	≒	ш						
偃	-	2	က			4	5 6	9	_	
O II	8	6	8 9 10 11 12 13 14 15 16	Ξ	12	55	14	15	16	
2	l	ı	l	l	ı	ı	ı	ı	l	

Signal Name	I	I	ı	I	I	ı	I	ı	
Color of Wire	G	Μ	۵	н	SHIELD	8	В	Μ	
Terminal No. Wire	6	10	11	12	13	14	15	16	

Signal Name	I	-	I	ı	I	ı	ı	-	
Color of Wire	g	Μ	Ь	н	SHIELD	8	В	M	
Terminal No. Color of Wire	6	10	11	12	13	14	15	16	

SHIELD

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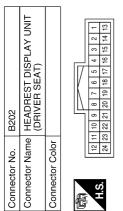
3	Connector Name REAR SIDE SPEAKER RH	NWC	<u> </u>	Signal Name	ı	
. B153	me RE/	lor BRC		Color of Wire	>	
Connector No.	Connector Na	Connector Color BROWN	H.S.	Terminal No.	F	

ABNIA3590GB

Connector Na	Name HEA (PA	HEADREST DISPLAY UNIT (PASSENGER SEAT)
Connector Co	Color	
į	L	
	11 10 9	8 7 6 5 4 3 2 1
1.S.	23 25	19 18 17 16 15 14 1
Terminal No.	Color of Wire	Signal Name
1	М	REAR 1 HP LH-
2	9	REAR 1 HP LRH-
3	SHIELD	REAR 1 HP SHIELD
4	>	REAR 1 COMP -
5	Ι	I
6	BR	CONT GND
7	LG	AUX REQ. OUT
8	_	_
6	ГВ	M-CAN 2 L
10	SB	M-CAN 2 H
11	ı	I
12	В	GND
13	В	REAR 1 HP LH+
14	ш	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	0	REAR 1 COMP+
17	SB	AV GND
18	_	-
19	SB	ACC DET. IN
20	SHIELD	SHIELD M-CAN
21	LG	M-CAN 1 L
22	SB	M-CAN 1 H
23	ı	1
24	Υ	BAT

Connector No.	Š.	B301	=									
Connector Name WIRE TO WIRE	Name	×	쀭	۲	>	≝	Щ					
Connector Color WHITE	Color	×	I≣	l								
			f	Ш	II.	И		$\square$				
É	-	2 3	4	2	9	7	∞	6	9 10 11 12	Ξ	12	
Ġ	€	13 14 15 16 17 18 19 20 21 22 23 24	16	17	8	19	20	21	22	23	24	
								l		l		

Signal Name	I	ı	I	I	I	I	1	I	1	I	I	I	I	1	ı	I	ı	ı
Color of Wire	Μ	G	SHIELD	Υ	BR	FG	FG	SB	В	ш	SHIELD	0	SB	SB	SHIELD	ГG	SB	Υ
Terminal No.	1	2	3	4	9	2	6	10	13	14	15	16	17	19	20	21	22	24



Signal Name		REAR 1 HP LH-	REAR 1 HP LRH-	REAR 1 HP SHIELD	REAR 1 COMP -	I	CONT GND	AUX REQ. OUT	ı	M-CAN 2 L	M-CAN 2 H	-	GND	REAR 1 HP LH+	REAR 1 HP RH+	REAR 1 COMP SHIELD	REAR 1 COMP+	AV GND	-	ACC DET. IN	_	M-CAN 1 L	M-CAN 1 H	I	BAT
Color of	Wire	8	g	SHIELD	Ь	1	SB	_	1	57	SB	1	В	В	В	SHIELD	_	Ь	_	BR	_	ГG	SB	1	SB
Terminal No		-	2	3	4	5	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

ABNIA3591GB

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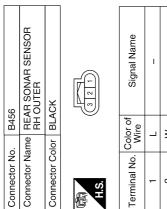
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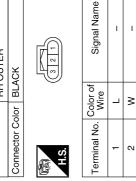
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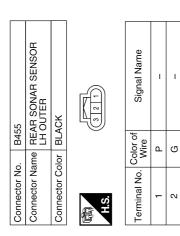
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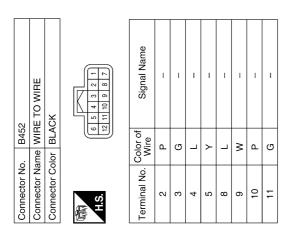
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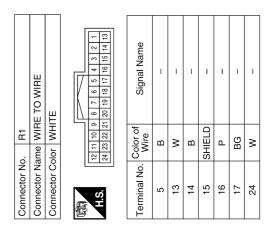
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Connector No.		B458
Connector Name	ame R	REAR SONAR SENSOR RH INNER
Connector Color		BLACK
原列 H.S.		3 2 1
Terminal No. Wire	Color o Wire	of Signal Name
-	۵	1
2	တ	ı

7	Connector Name REAR SONAR LH INNER	CK	3 2 1	Signal Name	ı	I
. B457	me RE/	lor BLACK		Color of Wire	Τ	Y
Connector No.	Connector Na	Connector Color	原 H.S.	Terminal No. Wire	-	2

ABNIA3592GB

#### **BOSE AUDIO W/O SURROUND SOUND**

< WIRING DIAGRAM >

## [TELEMATICS SYSTEM]

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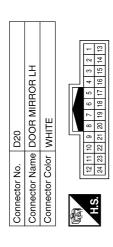
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Connector No.   R101		Connector No. R11  Connector Name WIRE TO WIRE  Connector Color WHITE  Terminal No. Wire  6 W		Connector Name         WIRE TO WIRE         Connector Name         TELEMATICS SWITCH           Connector Color         WHITE         Connector Color         WHITE	S. (1   2   3   4   5   6   7   8   9   10   11   11   15   16   17   18   19   20   21   22   23	Color of Wire	ш о	- d	GR	- H		Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE	Connector Color   WHITE	1 2 m 3 4 5 6 7 8 9 10 H.S.	Color of Signal Name 21 22 22 24 25 26 27 28 29 30 31 32 33 34 35 36 37 Wire	9		, 97	28 G –	29 SHIELD –	30 R –	
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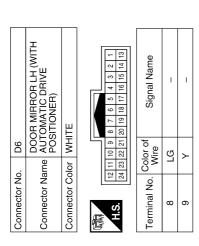
Revision: March 2012 AV-751 2013 Infiniti JX



Signal Name	I	-	1	ı	_
Color of Wire	ш	Μ	G	SHIELD	В
Terminal No. Wire	5	9	16	17	18

Signal Name	ı	ı	ı	ı	1	
Color of Wire	œ	×	g	SHIELD	В	
Terminal No. Color of Wire	5	9	16	17	18	
ame						

	Connector Name FRONT DOOR SPEAKER LH	ТЕ	2 1	Signal Name	_	_
). D12	ıme FR(	lor WH		Color of Wire	១	×
Connector No.	Connector Na	Connector Color WHITE	赋 H.S.	Terminal No. Wire	-	2



2	Connector Name FRONT DOOR SPEAKER RH	TE		Signal Name	-	-
. D112	me FR0	lor WH		Color of Wire	ŋ	8
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No.	1	7

			4 01	Signal Name		
D102	Connector Name WIRE TO WIRE	HITE	1 2 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8			
	me W	lor		Color o Wire	g	≥
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No. Wire	6	10

				16	33
			1	15	8
				14	೫
				13	ಣ
				12	8
				8 9 10 11 12 13 14 15 16	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
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	≥				24
	임			7	23
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D101	₩	Ŧ		5	21
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ne	lue	ne		٥	2
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE		7	1
$\overline{}$	$ ule{}$	$\Box$			3

Signal Name	I	1	_	I	-
Color of Wire	g	знієгр	В	В	Μ
Terminal No. Vire	-	2	3	4	2

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Connector No.         D201         Connector No.         D207	Connector Name WIRE TO WIRE Connector Name REAR DOOR SPEAKER LH	Connector Color WHITE Connector Color BROWN	(南) (123	Terminal No. Color of Signal Name Terminal No. Wire Signal Name	11 Y - 1 LG -	12 LG			
	A MIRROR RH	Щ	0 19 18 17 16 15 14 13	Signal Name	ı	1	ı		1
Jo. D113	Connector Name DOOR MIRROR I	color WHITE	24 23 22 21 20	Color of Wire	Œ	>	ŋ	_	SHIELD
Connector No.	Connector N	Connector Color WHITE	H.S.	Terminal No. Color of Wire	2	9	16		17

			1	_
D501	WIRE TO WIRE	WHITE	24 23 22 21 20 19 18 17 16 15 14 13	r of
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S. 24 23 22 21	Tolor of

Signal Name	I	_	ı	I	1
Color of Wire	Μ	В	н	SHIELD	В
Terminal No. Wire	13	14	15	16	17

Connector Name REAR DOOR SPEAKER RH	NWC		Signal Name
me RE/	lor BROWN		Color of Wire
Connector Na	Connector Color	雨 H.S.	Terminal No.

D307

Connector No.

Connector Name WIRE TO WIRE

Connector No. D301

Connector Color WHITE

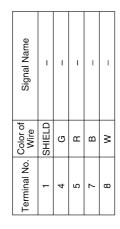
[	Si		
	Color of Wire	W	C
H.S.	Terminal No.	1	c

Signal Name	ı	_	
Color of Wire	ŋ	Μ	
nal No.	_	2	

Signal Name	1	1
Color of Wire	G	W
Terminal No.	11	12

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Connector No.	D511
Connector Name	Connector Name   REAR VIEW CAMERA
Connector Color WHITE	WHITE
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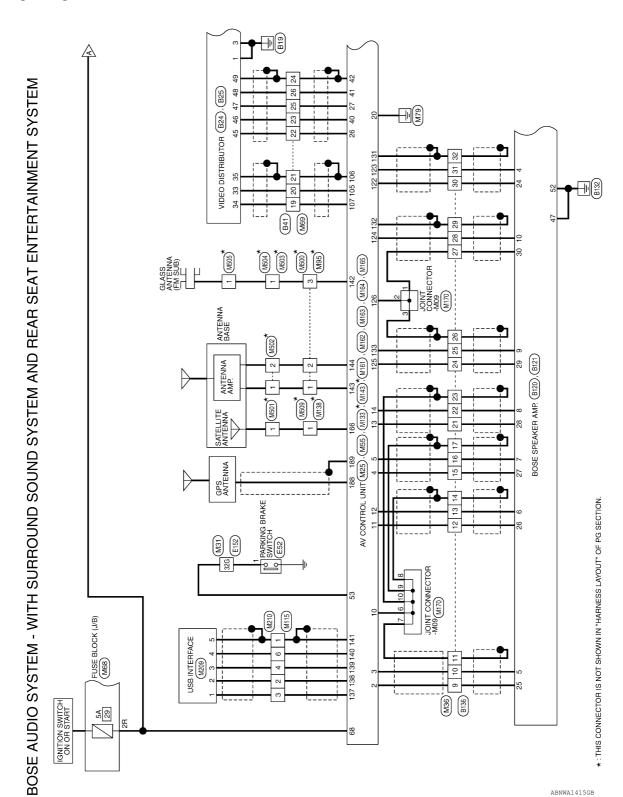
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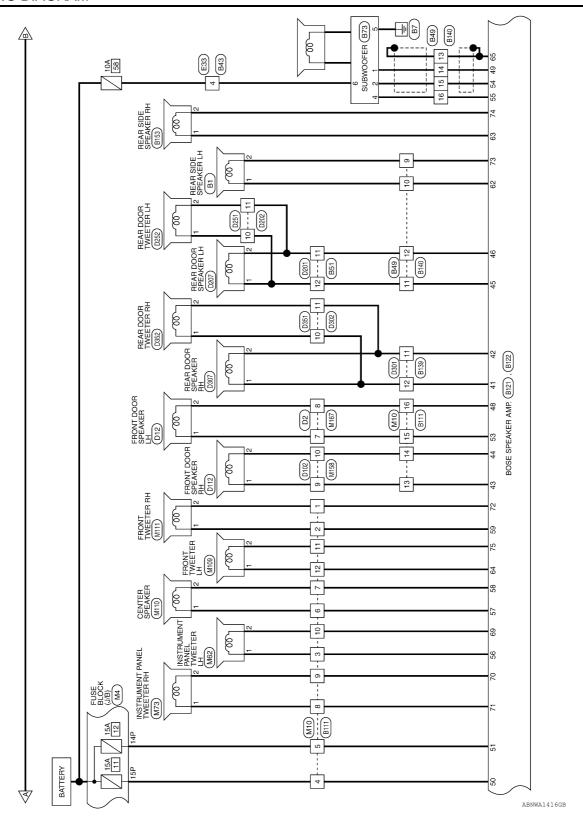
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# **BOSE AUDIO WITH SURROUND SOUND**

Wiring Diagram





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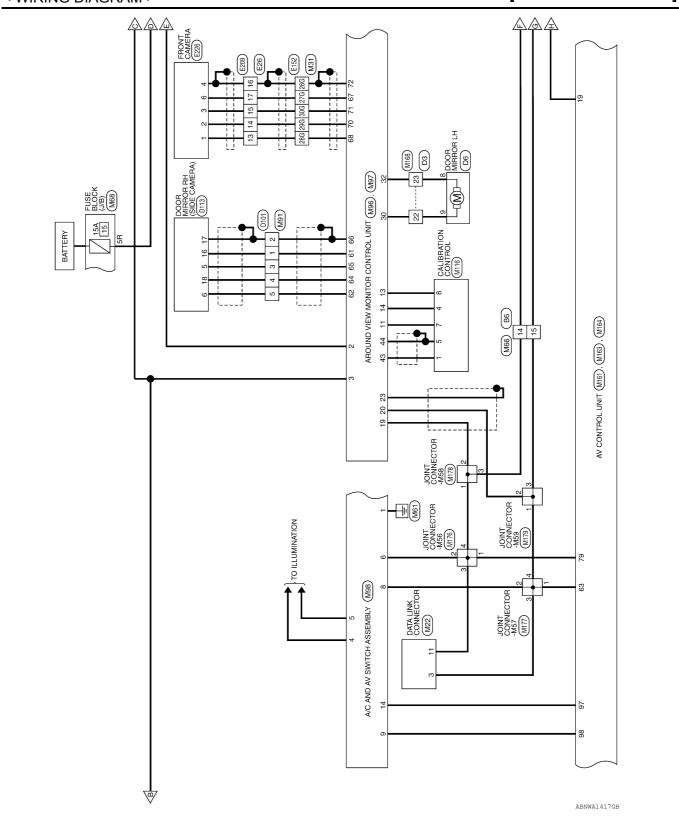
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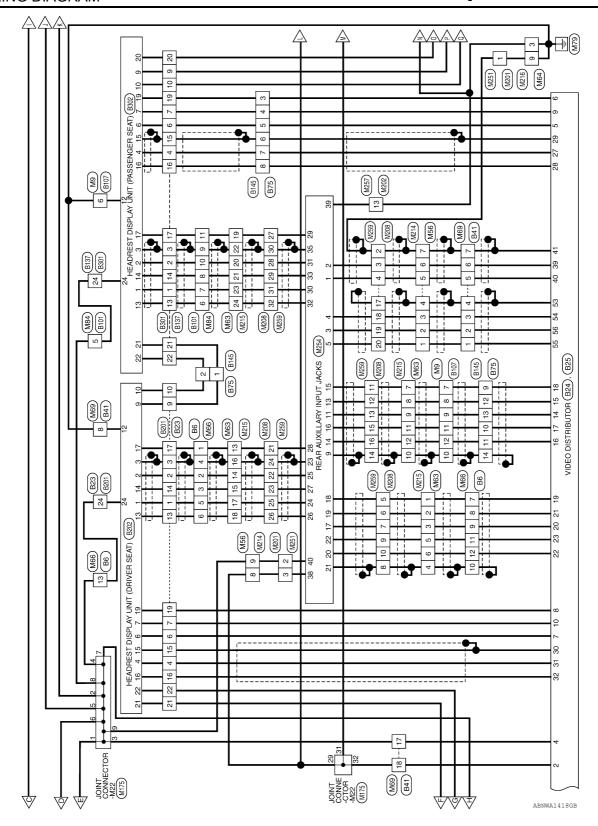
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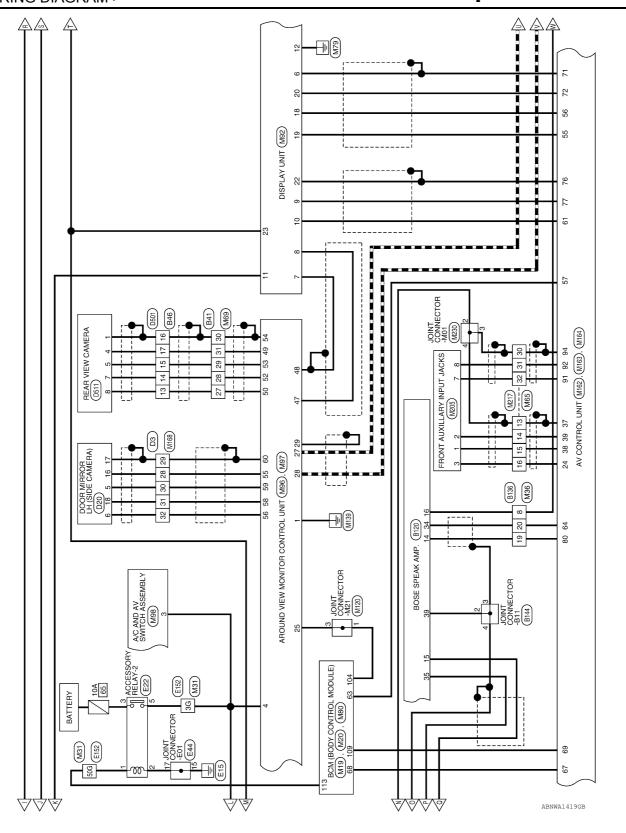
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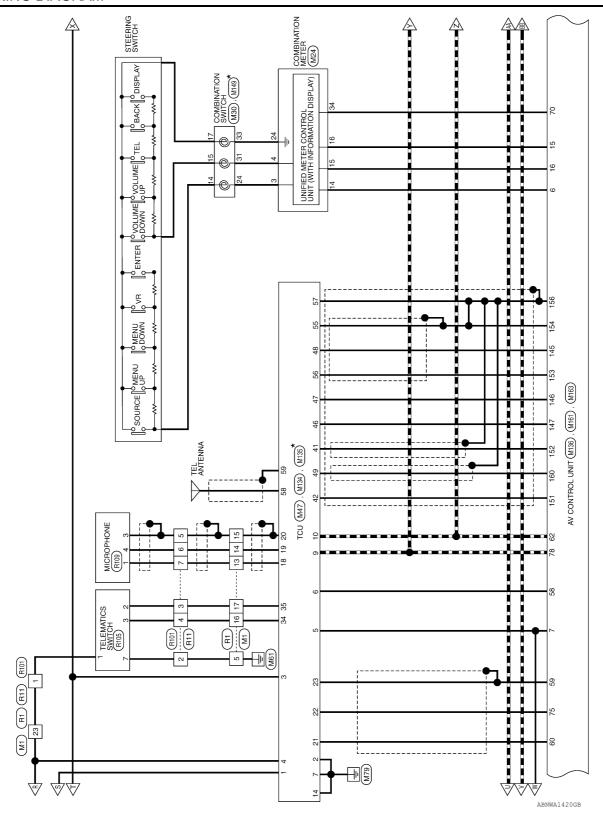
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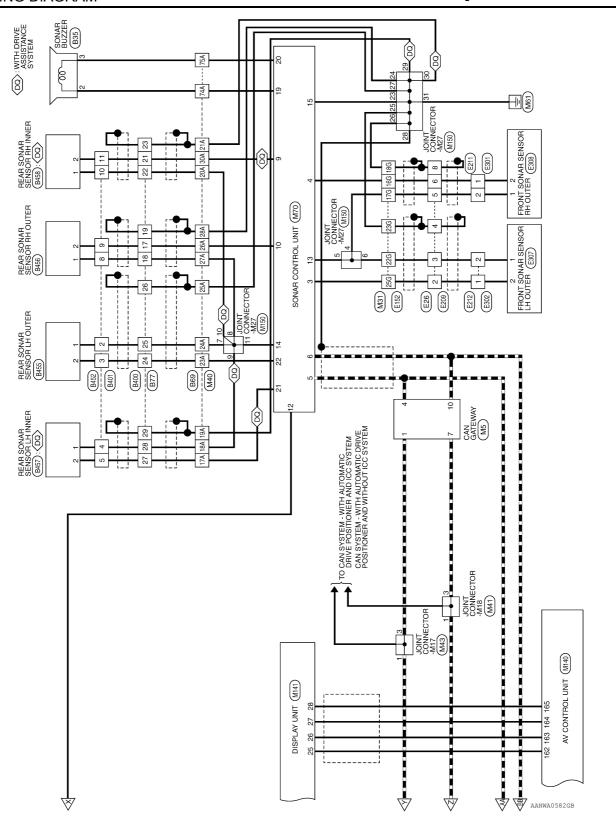
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Connector No. M5
Connector Name CAN GATEWAY

Connector Color WHITE

# BOSE AUDIO SYSTEM CONNECTORS - WITH SURROUND SOUND SYSTEM AND REAR SEAT ENTERTAINMENT SYSTEM

Connector Name FUSE BLOCK (J/B)

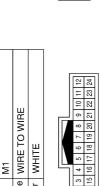
Ψ

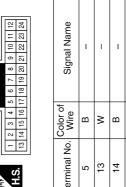
Connector No.

Connector Color WHITE

7P 6P 5P 4P 3P 2P 1P 1P 1SP 1SP 1P 8P

		M1  WINE TO WINE  WHITE	Connector No. Connector Nam Connector Colo
	e	r WHITE	Connector Colo
Connector Color WHITE		e WIRE TO WIRE	Connector Nam
Connector Name WIRE TO WIRE Connector Color WHITE		M1	Connector No.



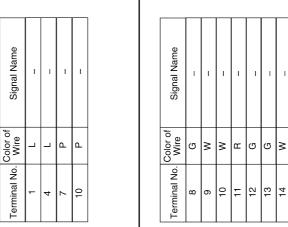


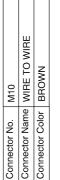
Signal Name

Color of Wire

Terminal No. 14P 15P

Signal Name	I	1	ı	_	1	ı
Color of Wire	В	>	В	SHIELD	н	Ь
Terminal No. Wire	5	13	14	15	16	23



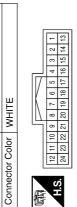


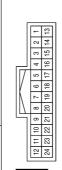


Signal Name	ı	ı	1	_	1	1	ı
Color of Wire	В	M	g	7	У	G	Μ
Terminal No. Wire	-	2	3	4	2	9	7

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	6	21
	10	22
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	12	24
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Connector Name WIRE TO WIRE

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Connector No.

Signal Name	1	ı	I	1	I	_	ı
Color of Wire	GR	>	В	ш	SHIELD	Μ	В
Terminal No. Wire	9	7	8	6	10	11	12

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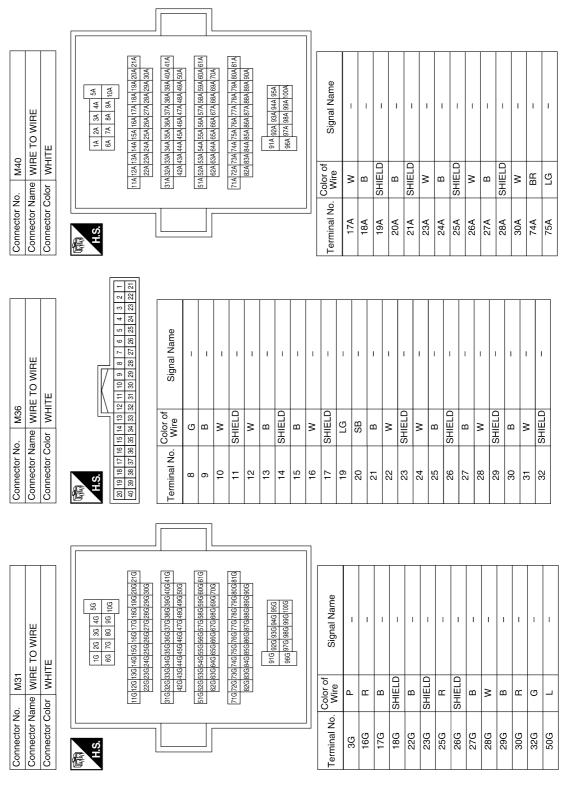
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Mass	Terminat No. Color of Signal Name 3 LG – 11 SB –	Connector No. M30 Connector Name COMBINATION SWITCH Connector Color GRAY	(京) (1.5. (	Terminal No. Color of Signal Name	24 P AUDIO STRG SW REMOTE A	31 BG AUDIO STRG SW REMOTE B	33 R AUDIO STRG SW GND			
M20   Connector Name   BCM (BODY CONTROL MODULE)   Connector Color   BLACK	Terminal No. Wire Signal Name 104 LG REVERSE LAMP OUT	Connector No. M25 Connector Name AV CONTROL UNIT Connector Color PINK	H.S.	Terminal No. Color of Wire Signal Name	188 B	2 - 1 1 1				
Connector No. M19  Connector Name BCM (BODY CONTROL MODULE)  Connector Color BLACK  H.S.  H.S.    M19	Color of Signal Name Wire BG I-KEY LINK SIGNAL P MR OUTPUT	Connector No. M24 Connector Name COMBINATION METER Connector Color WHITE	77 16 15 144 13 12 111 10 9 8 7 6 5 4 3 2 1 37 38 38 34 33 32 31 30 29 28 27 26 25 24 23 22 21	Color of Signal Name	P STRG SW INPUT 1	STRG SW OUT	W STRG SW OUTINPUT 2 B STRG SW OUTPUT GND		GR SPEED 8P/R	
Connector Name Connector Color Connector Color H.S.  (80 59 58 57 56 55 58 58 58 58 58 58 58 58 58 58 58 58	Terminal No. 63	Connector No. Connector Name	H.S.  20 19 18 17 16 15 14 13 40 39 38 37 38 35 34 38	Terminal No.	e -	4 4	15	24	34	

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Connector No.

Connector Name JOINT CONNECTOR-M18

Connector No.

Connector Color WHITE

Signal Name

Terminal No.

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Signal Name	ı	ı	ı	I	ı	ı	ı	ı	ı	ECALL SW	LED A	I	I	I	_	ı
Color of Wire	1	ı	1	1	ı	1	1	1	-	ш	*	-	1	1	_	ı
erminal No.	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Connector Na Connector Co	Connector Name JOINT	JOINT CONNECTOR-M17 WHITE
	4	3 2 1 1
0	Color of Wire	Signal Name
	_	1
	٦	1
۸ ده	Color of Wire	Signal Name
	1	I
		V-CAN H
	Ь	V-CAN L
	1	1
	1	_
	1	1
	В	AUDIO TYPE CONFIG 1
	ı	I
	1	-
	1	_
	*	MIC VCC
	В	MIC SIG
SH	SHIELD	MIC GND
	M	MIC VCC DETECTION
	В	DCM MIC SIG
Зŀ	знієгр	DCM MIC GND
		ı

Terminal No. Wire Signary Name    1   3   6   7   9   11   13   15   17   19   21   22   24   26   28   30   32   34   35   37   39	_			1				
Terminal No. Wire Signal Name  2 4 6 8 10 12 14 16 18 120 22 24 26 28 28 30 22 34 36 38 36 37 27 28 31 33 35 37 37 38 35 37 37 38 35 37 38	l	9	33					
Terminal No. Wire Signal Name  2 4 6 8 10 12 14 16 15 17 19 21 24 26 28 30 32 34 36  Terminal No. Wire Signal Name  2 8 8 GND  ACC	l	88	37			_		_
2   4   6   8   10   12   14   16   18   20   22   24   25   28   30   32   34     1   3   5   7   9   11   13   15   17   19   21   23   25   27   29   31   33     Terminal No.	l	98	33					
2   4   6   8   10   12   14   16   18   20   22   24   26   28   30   32   27   29   21   29   27   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   31   29   29   29   29   29   29   29   2	l	34	88			l		
Terminal No. Wire Signal Nam  2   4   6   8   10   12   14   16   18   20   22   24   26   28   30    1   3   5   7   9   11   13   15   17   19   21   23   25   27   29    Terminal No. Wire Signal Nam  2   B +   Chor of Signal Nam  3   P   ACC	l	32	31		<u>o</u>			
Terminal No. Wire B. Signal N. 22 B. 32 B.	l	8	83		ᇤ			١.,
Terminal No. Wire Signary 2 B G G G G G G G G G G G G G G G G G G	l	78	27		Ž	<u></u>	뉟	।ଧ
Terminal No. Wire Signary Average Signary Aver		92	52		na	"	മ	⋖
Terminal No. Wire    1   3   5   7   9   11   13   15   17   19   21		24	ಣ		) ig			
Terminal No. Wire 2 B B Color of 2 B B Color of 3 S A Color of 3 S		প্র	21		0,			
Terminal No. Wire 2 B B B C C C C C C C C C C C C C C C C		8	19					
Terminal No. Wire  2 4 6 8 10 12 14 16  1 3 5 7 9 11 13 15  Color of Wire  2 8 8 9		9	17			<u> </u>		_
Terminal No. Wir. Y	1	16	15		و ق			
Terminal No. Co. 2	l	14	13		ਫ਼ੵਫ਼	≻	m	╚
Terminal No.	l	12	#		[8 <sup>-</sup>			
Terminal N	l	10	6		0.			
Termina T	l	∞	7		Z	l		
Termi	l				l a	-	N	က
Tel Tel	l		က		] [			
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Signal Name	I	I	1	ı	_
Color of Wire	В	M	SHIELD	Ь	У
Terminal No.	2	9	2	8	6

Signal Name	ı	I	ı	ı	I	ı	ı	1	I	1	I	ı	ı	1	I
Color of Wire	SHIELD	×	В	7	G	В	SHIELD	W	В	٦	G	В	SHIELD	W	В
Terminal No.	10	11	12	13	14	15	16	17	18	19	20	21	22	23	54

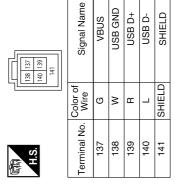
Connector No.	8 S		2	M56	۱,,							
Connector Name WIRE TO WIRE	Nai	πe	>	/F	Щ.	2	≥	Ē	ш			
Connector Color WHITE	8	ō	^	l₹	ΙË							
Æ							l IV	17	_			
3	12	Œ	9	6	12 11 10 9 8	7	9	2	4	6	2	-
Ģ.	24	23	22	2	24 23 22 21 20 19 18 17 16 15 14 13	19	8	17	9	15	7	5
				l		l	l	l	l	l	l	l

Signal Name	I	1	ı	ı	
Color of Wire	ш	8	В	SHIELD	
Terminal No.	-	2	3	4	

	M63	WIRE TO WIRE	WHITE	
	Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	

_														
	WIRE TO WIRE	WHITE		8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13	Signal Name	1	_	ı	ı	_	_	1	_	1
				23 22 21	Color of Wire	SB	G	В	SHIELD	W	В	^	G	В
	Connector Name	Connector Color		H.S. 12	Terminal No.	-	2	3	4	2	9	2	8	6

Connector Name AV CONTROL UNIT	
1	OL UNIT
Confinector Color   BLUE	



	Connector Name INSTRUMENT PANEL TWEETER LH	NWC		Signal Name	ı	1
. M62	me INST	lor BROWN	2	Color of Wire	В	<b>M</b>
Connector No.	Connector Na	Connector Color	E.S.	Terminal No.	-	0

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Connector No.	No. M64	4	Connector No.	No. M65					
Connector Name	lame WIF	WIRE TO WIRE	Connector Name		WIRE TO WIRE				
Connector Color	_	WHITE	Connector Color		WHITE				
	7 6 5	4							
H.S.	16 15 14 13	12 11 10	υj	16 15 14 13 12 32 31 30 29 28	11 10 9 8 7 6 5 4 3 2 1 27 28 25 24 23 22 21 20 19 18 17				
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name				
ဧ	В	1	13	SHIELD	ı				
6	В	-	14	В	1				
			15	В	1				
			16	×	1				
			30	SHIELD	1				
			31	В	1				
			32	W	1				
Connector No.	Jo. M66	9		Color of		Connector No.	o. M68		
Connector N	Jame WIF	Connector Name WIRE TO WIRE	lerminai No.		Signal Name	Connector Name		FUSE BLOCK (J/B)	
Connector Color	Solor WHITE	ITE ITE	7	SB	_	Connector Color	+	BROWN	
			80	g	_		-		7
			6	В	_		7R 6R 5R	4R   3R 2R 1R	
U II	12 11 10 9	8 7 6 5 4 3	10	SHIELD	-	O I	16R 15R 14R	16R15R14R13R12R11R10R 9R 8R	
	24 23 22 2	21 20 19 18 17 16 15 14 13	=======================================	8	1				
	100		12	Υ	-		9 7 7 7		
Terminal No.	. Wire	Signal Name	13	>	1	Terminal No.	Wire	Signal Name	
-	_	ı	14	SB	1	2R	PC	1	
2	G	1	15	LG	ı	5R	У	1	
ဇ	Œ	ı							
4	SHIELD	ı							
5	M	ı							
9	В	1							

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Connector No.	). M70	
Connector Name	_	SONAR CONTROL UNIT
Connector Color	olor WHITE	TE
H.S. 24	11 10 9 8 23 22 21 20	7 6 5 4 3 2 1 19 18 17 16 15 14 13
Terminal No.	Color of Wire	Signal Name
-	ı	ı
2	1	ı
8	В	FOL SENSOR SIGNAL
4	В	FOL SENSOR SIGNAL
2	В	V CAN-H
9	Μ	V CAN-L
2	_	1
8	_	ı
6	Μ	RIR SENSOR SIGNAL
10	Μ	ROR SENSOR SIGNAL
11	1	1
12	97	IGN
13	В	FR SENSOR GND
14	В	FR SENSOR GND
15	В	GND
16	_	1
17	1	1
18	ı	1
19	BR	SPEAKER PWR
20	ГG	SPEAKER RR SIGNAL
21	Μ	RIL SENSOR SIGNAL
22	M	ROL SENSOR SIGNAL
23	ı	1
24	ı	1

Signal Name	1	I	-	ı	_	1	1	I	ı	1		_	1
Color of Wire	В	M	SHIELD	>	ш	SHIELD	В	ŋ	В	Я	9	SHIELD	8
Terminal No.	19	20	21	22	23	24	25	26	27	28	59	30	31

Connector No.	M69	
Connector Name	Connector Name WIRE TO WIRE	
Connector Color WHITE	WHITE	
-	16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	
32 31 30	31 30 29 28 27 26 25 24 23 22 21 20 19 18 17	
Terminal No. Wire	lor of Signal Name	

Signal Name	1	1	_	1	-	_	-	I	1	I
Color of Wire	В	M	В	SHIELD	В	M	SHIELD	В	>	Ь
Terminal No.   Wire	-	2	3	4	2	9	7	8	17	18

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# [TELEMATICS SYSTEM]

< WIRING DIAGRAM >

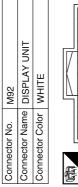
					-	
					-	17
			1		2	18
					3	19
					4	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
					2	21
					9	22
	ш			11/	^	23
	₩			W	15 14 13 12 11 10 9 8 7	24
	>			IN.	6	25
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M84	\	I₹			12	88
2	>	>			13	59
	le l	5			14	8
9	ā	즛			15	31
=	چا	چا			16	83
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE				Ġ.

Signal Name	1	1	I	1	-	1	I
Color of Wire	<b>\</b>	В	8	н	SHIELD	В	_
Terminal No. Wire	5	9	7	8	6	10	11

Signal Name	FRONT DISP IT	IT FRONT DISP	BATT	GND	I	ı	1	ı	ı	FRONT COMP +	FRONT COMP -	FRONT COMP SYNC	ı	SHIELD	ACC	
Color of Wire	В	*	>	В	1	ı	1	1	ı	В	>	Ж	ı	SHIELD	Ь	
Terminal No.	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

30	BCM (BODY CONTROL MODULE )	BLACK	128 127 126 128 124 123 123 121 120 119 118 117	f Signal Name	REVERSE SIGNAL	
. M80	me BC		115114113	Color of Wire	В	
Connector No.	Connector Name	Connector Color	H.S. 116	Terminal No.	109	

9105	117		пе	REVERSE SIGNAL	ACC RELAY OUT	
116 115 114 113 112 111 110 109 108 107 106 105	128 127 126 125 124 123 122 121 120 119 118 117		Signal Name	E SI	LAY	
108	120		gna	RS	뮖	
9	2121		Š	NE:VE	ဗ္ဂ	
듣	23 12			RE	¥	
112	1241					
133	125	Color of	e e			
5114	7126	응	Wire	В	Œ	
10	12					
÷	=	Ш	ž			
,	Ā		Terminal No.	109	113	
Ę	Ó		E.	1	_	
1	₹		Ĕ			l



8 7 6 5 4 3 2 1	20 19 18 17 16 15 14 13	Signal Name	I	I	I	I	I	FRONT COMP SHIELD	SHIELD	R CAMERA COMP
12 11 10 9	22 21	Color of Wire	1	ı	1	1	ı	SHIELD	SHIELD	В
12 1	24 23	Terminal No.	1	2	က	4	5	9	7	8

M73	Connector Name INSTRUMENT PANEL TWEETER RH	BROWN	
Connector No.	Connector Name	Connector Color BROWN	

2 1	Signal Name	1	-
	Color of Wire	G	M
H.S.	Terminal No.	1	0

Signal Name	ı	ı	
Color of Wire	ŋ	>	
Terminal No. Wire	1	2	

			3 2 1 19 18 17						
_	WIRE TO WIRE	BLACK	15 14 13 12 11 10 9 8 7 6 5 4 31 30 29 28 27 26 25 24 23 22 21 20	Signal Name	ı	ı	1	ı	1
. M91	me WII		15 14 13 12 11 31 30 29 28 27	Color of Wire	×	SHIELD	თ	æ	В
Connector No.	Connector Name	Connector Color	<b>ن</b> ا	Terminal No.	-	2	က	4	5

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**AV-769** Revision: March 2012 2013 Infiniti JX В

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Signal Name	ı	I	M-CAN GND	ı	REV	ı	V-CAN1 H	V-CAN1 L	V-CAN1 GND	MIRROR SIGNAL 2	-	MIRROR SIGNAL 1	-	1	1	-	ı	ı	I	1
Color of Wire	ı	1	SHIELD	ı	P.	ı	В	M	SHIELD	W	ı	9	1	-	1	-	I	1	I	-
Terminal No.	21	22	23	24	25	26	27	28	59	30	31	32	33	34	32	36	37	38	39	40

[				]			3 38 40 5 37 39	Г							
		AROUND VIEW MONITOR CONTROL UNIT	WHITE				18 20 22 24 26 28 30 32 34 36 17 19 21 23 25 27 29 31 33 35		Signal Name	GNÐ	<b>8</b> +	NÐI	OOA	-	
	. M96						12 14 16 1		Color of Wire	В	<b>\</b>	PT	Ь	1	
	Connector No.	Connector Name	Connector Color		昏	H.S.	2 4 6 8 10 1 3 5 7 9		Terminal No.	1	2	3	4	2	9

Connector No.		M95	
Connector Name		WIR	WIRE TO WIR E
Connector Color	olor	GRAY	٨t
E SH			
Terminal No.	Color of Wire	or of re	Signal Name
-	В	3	I
2	В	3	1
3	В	8	1

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	A/C AND AV SWITCH ASSEMBLY	TE	8 10 12 14 16 7 9 11 13 15	Signal Name	I	ı	1	1	1	-	I	-
. M98		olor WHITE	4 8 6 6 7 5 6 9 6 9 6 9 6 9 9 9 9 9 9 9 9 9 9 9 9	Color of Wire	GR	۵	ď	В	SB	97	>	У
Connector No.	Connector Name	Connector Color	赋 H.S.	Terminal No.	-	3	4	2	9	8	6	14

Signal Name	RV VIDEO +	RV VIDEO -	SV2 SERIAL SIGNAL	SV2 POWER	I	SV2 POWER GND	SV2 VIDEO +	SV2 POWER GND	SV1 SERIAL SIGNAL	SV1 POWER	I	SV1 POWER GND	SV1 VIDEO +	SV1 VIDEO -	FV SERIAL SIGNAL	FV POWER	ı	FV POWER GND	FV VIDEO +	FV VIDEO -
Color of Wire	В	SHIELD	В	W	ı	В	В	SHIELD	W	В	-	В	Б	SHIELD	В	W	_	G	В	SHIELD
Terminal No.	53	54	55	56	22	58	59	09	61	62	63	64	65	99	29	89	69	70	7.1	72

				77													
7	AROUND VIEW MONITOR CONTROL UNIT	WHITE		50 52 54 56 58 60 62 64 66 68 70 49 51 53 55 57 59 61 63 65 67 69	Signal Name	-	-	EXTERNAL VIDEO OUTPUT +	EXTERNAL VIDEO OUTPUT -	1	ı	VIDEO OUTPUT +	VIDEO OUTPUT -	RV SERIAL SIGNAL	RV POWER	-	RV POWER GND
. M97				44 46 48 5	Color of Wire	1	ı	В	SHIELD	1	ı	В	SHIELD	*	В	I	ش
Connector No.	Connector Name	Connector Color	•	H.S. 41 4	Terminal No.	41	42	43	44	45	46	47	48	49	50	51	52

			1			
	FRONT TWEETER RH	BROWN		Signal Name	-	1
. M111	me FR			Color of Wire	8	В
Connector No.	Connector Name	Connector Color	雨 H.S.	Terminal No. Wire	-	2

[							
	01	CENTER SPEAKER	BROWN		Signal Name	-	1
	. M110			2	Color of Wire	g	>
	Connector No.	Connector Name	Connector Color	明.S.	Terminal No.	-	٥

Connector No.		M109	
Connector Name		FRONT TWEETER LH	
Connector Color	_	BROWN	
品S.		\( \alpha \)	
Terminal No.	Color of Wire	r of Signal Name	
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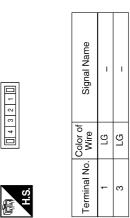
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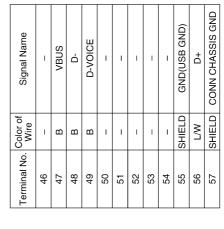
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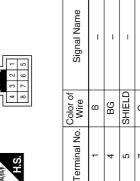
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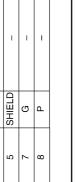


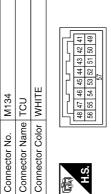


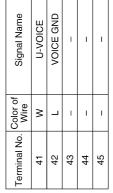


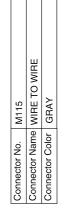


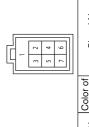












Signal Na	1	'	1		
Color of Wire	SHIELD	×	9	Н	٦
Terminal No. Wire	-	2	3	4	9

M133	Sonnector Name AV CONTROL UNIT	BROWN	
Connector No.	Connector Name	Connector Color BROWN	

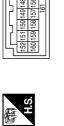




Signal Name	1	
Color of Wire	В	
Terminal No.	166	

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Signal Name	1	VBUS	D-	D-VOICE	1	-	1	ı	-	GND(USB GND)	D+	CONN CHASSIS GND
Color of Wire	-	В	В	В	1	-	-	1	-	SHIELD	N/	SHIELD
Terminal No. Wire	150	151	152	153	154	155	156	157	158	159	160	161



Signal Name

Terminal No. Color of Wire

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VOICE GND U-VOICE

145 146 147

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148

	MN	

M135	TCU	BROWN	
Connector No.	Connector Name TCU	Connector Color BROWN	



Signal Name	ı	1	
Color of Wire	В	SHIELD	
Terminal No.	58	59	

Connector No.	M141
Connector Name DISPLAY UNIT	DISPLAY UNIT
Connector Color BROWN	BROWN

25 26 27 28

Connector No.	M140
Connector Name	Connector Name AV CONTROL UNIT
Connector Color BLUE	BLUE



163 162

ctor No. M138
ctor Name WIRE TO WIRE

Connector	Connector	Connector	E	H.S.
			_	

Signal Name	GND	GND	GVIF+	GVIF-
Color of Wire	SHIELD	SHIELD	В	В
Terminal No. Wire	25	56	27	28

			_	
Signal Name	GND	GND	GVIF-	GVIF+
Color of Wire	SHIELD	SHIELD	В	В
Terminal No. Wire	162	163	164	165

Signal Name	-	
Color of Wire	В	
erminal No.	1	

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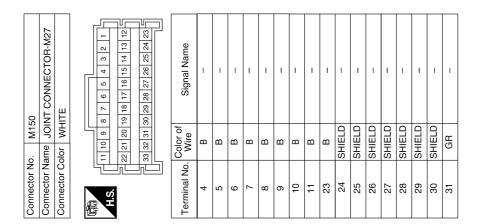
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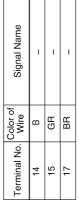
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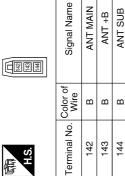


Connector No.	M149
Connector Name	Connector Name COMBINATION SWITCH
Connector Color WHITE	WHITE





Connector No.	M143
Connector Name	Connector Name   AV CONTROL UNIT
Connector Color GRAY	GRAY



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[TELEMATICS SYSTEM]

< WIRING DIAGRAM >

	_											_	_	
Signal Name	ACC	-	ı	SHIELD	FR RH PRE+	FR RH PRE-	RR RH PRE+	RR RH PRE-	STRG SW GND	STRG SW B	1	-	4B	GND
Color of Wire	g	1	ı	BR	Μ	В	В	Μ	В	M	1	1	Ь	GR
Terminal No.	7	8	6	10	=	12	13	14	15	16	17	18	19	20

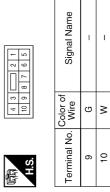
Signal Name	AUX AUDIO-	HP1 LH-	HP1 RH-	HP1 SHIELD	ı	ı	1	ı	ı	1
Color of Wire	В	Œ	ŋ	SHIELD	ı	ı	ı	ı	ı	1
Terminal No.	39	40	41	42	43	44	45	46	47	48

Connector No.	M161
Connector Name Av CON	Connector Color WHITE

Signal Name	ı	FR LH PRE+	FR LH PRE-	RR LH PRE+	RR LH PRE-	STRG SW A	
Color of Wire	ı	В	Μ	В	Μ	g	
Terminal No. Wire	-	2	3	4	5	9	

	_										$\overline{}$
Signal Name	ı	I	I	I	-	1	ı	1	_	AUX SHIELD	AUX AUDIO RH
Color of Wire	ı	ı	-	-	-	ı	ı	_	_	SHIELD	8
Terminal No.	28	59	30	31	32	33	34	35	36	37	38

Connector No.	M158
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE



M162	Connector Name AV CONTROL UNIT	WHITE	
Connector No.	Connector Name	Connector Color WHITE	

	Signal Name	1	_	-	AUX AUDIO LH	1	HP1 LH+	HP1 RH+
	Color of Wire	1	_	I	В	ı	M	В
	Terminal No.	21	22	23	24	25	26	27

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Connector N	ame AV	Connector Name AV CONTBOLLINIT		l erminal No.	Wire	Signal Name		erminai No.	Wire	Signal Name
Connector Color	olor WF	WHITE		54	-	1		89	FG	IGN
	_			55	×	NAVI COMP1-		69	œ	REVERSE SIG
			<u></u>	26	В	NAVI COMP1+		20	BG	SPEED
ď	50 51 52 53	49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64		22	BG	RESERVE 11		71	SHIELD	NAVI COMP1 SHIELD
=	96 67 68 69	70 71 72 73 74 75 76 77 78 79 80	1	58	ŋ	RESERVE 12		72	œ	GND
			<u> </u>	59	SHIELD	MIC GND		73	-	_
				09	8	MIC VCC		74	1	-
Terminal No.	Wire	Signal Name	<u> </u>	61	8	IT-DISP		75	В	MIC SIG
49	1	ı		62	۵	V-CAN L		92	SHIELD	DISP SHIELD
20	ı	ı		63	9	M-CAN L		27	В	DISP-IT
51	1	ı		64	P	M-CAN L TRM		78	L	V-CAN H
52	1	1	<u> </u>	65	1	1		62	SB	M-CAN H
53	g	PKB SIG		99	I	1		80	SB	M-CAN H TRM
				29	₽	MR OUTPUT				
Connector No.	o. M164	64	Ľ	Terminal No.	Color of Wire	Signal Name	Tern	Terminal No.	Color of Wire	Signal Name
Connector Name	ame AV	Connector Name AV CONTROL UNIT		87	1	ı		105	>	NAVI COMP2-
				88	1	ı		106	SHIELD	NAVI COMP2 SHIELD
				89	1	1		107	В	NAVI COMP2+
	L			06	1	1		108	1	1
	٦	/		91	8	AUX VIDEO+		109	1	1
87 84 86 88 90 97 87 84 86 88 90 97	93 95	95 97 99 101 103 105 107 109 111 113 115 117 119 96 98 100 102 104 106 108 110 112 114 116 118 120	9   8	95	В	AUX VIDEO-		110	1	I
<u>:</u>				93	_	_		111	1	1
				94	SHIELD	VIDEO SHIELD		112	1	ı
Togiamio T	Color of			95	1	ı		113	-	-
eriiliilai No.	Wire	oigilai		96	ı	1		114	1	I
8	1	ı		97	<b>&gt;</b>	DVD EJECT		115	ı	ı
82	ı	ı		86	>	EJECT GND		116	1	ı
83	ı	ı		66	1	1		117	1	1
84	ı	ı		100	1	1		118	1	1
82	ı	1		101	1	ı		119	1	I
98	1	ı		102	-	1		120	1	1
				103	ı	ı				

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< WIRING DIAGRAM >

Connector No. M167 Connector Name WIRE TO WIRE	TI T	-	4 3 7 6 1	9 8 7			30,000	Wire Signal Name	- 9	- M			M175	Connector Name JOINT CONNECTOR-M22	WHITE	0 9 8 7 6 5 4 3 2 1	20 19 18 17 16 15 14	33 32 31 30 29 28 27 26 25 24 23	Color of Signal Name	- -	- λ	I >-			\ \	- -	\ >	٨	- П	- П	- П
Connector No.	Connector Color			0 -	П.Э.			Terminal No.	7	ω			Connector No.	Connector Name	Connector Color		H.S.	333	Terminal No.	-	2	က	4	2	9	7	80	6	29	31	32
Signal Name	CENTER PRE+	CENTER SHIELD	ı	ı	1	1	GUIDE SHIELD	SUB WOOFER PRE-	CENTER PRE-	1	ı	ı		Connector Name JOINT CONNECTOR-M09	E E		18 17 16 15 14 13	30 29 28 27 26 25 24 23	Signal Name		1 1	1	1	1	1		ı	ı			
Terminal No. Wire	125 W	126 Y	127 –	128 –	129 –	130 -	131 SHIELD	132 W	133 B	134 –	135 –	136 –	Connector No. M170	nector Name JOIN	Connector Color WHITE		H.S.	33 32 31 3	Terminal No Color of		- SHIELD			<del>0</del>				IO SHIELD			
Ter		<u> </u>					<u> </u>		<u> </u>		<u> </u>	+	S	S	S		7	3 2 1 23 22 21	Ter		<u> </u>			<u> </u> 			1				
Connector No. M165 Connector Name AV CONTROL UNIT	TF	1	[	3124125126127128	129130131132133134135136			Signal Name	ı	GUIDE+	GUIDE-	SUB WOOFER PRE+	89	E TO WIRE	WHITE			12     11     10     9     8     7     6     5     4       32     31     30     29     28     27     26     25     24	Signal Name			ı	1		1						
o. M165 ame AV CO	olor WHITE		Ш	121 122 123	129 130 13		بال بال	Wire	ı	В	>	В	o. M168	_				14 13 34 33	Color of	D 3	} (	o m	SHIELD	<u> </u>	: (	5 ≥	^				
Connector No.	Connector Color			011	6			Terminal No.	121	122	123	124	Connector No.	Connector Na	Connector Color		H.S.	20 19 18 17 16 15 40 39 38 37 36 35	Terminal No	22	23	28	29	30	31	33	35				

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Connector No. Connector Name Connector Color	o. M176 ame JOINT olor WHIT	Connector No. M176 Connector Name JOINT CONNECTOR-M56 Connector Color WHITE		Connector No. Connector Name Connector Color	2. M177 ame JOINT C	Connector No. M177  Connector Name JOINT CONNECTOR-M57  Connector Color WHITE		Connector No. Connector Name Connector Color	ame JOINT C	Connector No. M178 Connector Name JOINT CONNECTOR-M58 Connector Color WHITE
明.S.	4 9	3 2 1		H.S.	4	2 1 0		明 H.S.	4 3	2 1
Terminal No.	Color of Wire	Signal Name		Terminal No.	Color of Wire	Signal Name	<u> </u>	Terminal No.	Color of Wire	Signal Name
-	SB	ı		-	PI	1	<u> </u>	-	SB	1
2	SB	ı	•	2	Pl	1		2	SB	I
က	SB	ı	•	ဇ	PI	1	<u> </u>	3	SB	ı
4	SB	ı		4	PI	1	J			
Connector No.	o. M179	62		Connector No.	). M201	-	O	Connector No.	o. M202	20
Connector Na	ame JOII	Connector Name JOINT CONNECTOR-59	•	Connector Name WIRE TO WIRE	ame WIRE	E TO WIRE	O	Connector Name WIRE TO WIRE	ame WIR	E TO WIRE
Connector Color		WHITE		Connector Color	olor WHITE	ITE	0	Connector Color	olor WHITE	ITE
原列 H.S.	4	3 2 1 1		H.S.	9 10 8	4 5 6 7		H.S.	23 22 21	8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13
Terminal No.	Color of Wire	Signal Name		Terminal No.	Color of Wire	Signal Name	<u> </u>	Terminal No.	Color of Wire	Signal Name
-	ΓG		•———	-	В	ı	<u> </u>	13	В	1

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Terminal No. Wire Signal Name	14 SHIELD –	15 W –	16 B –	17 SHIELD –	18 B –	19 R –	20 W –	21 L –	22 G –	23 R –	24 SHIELD –	25 W –	26 B –	27 L –	28 G –	29 R	30 SHIELD -	31 W –	32 B –										
8 30 Miles	E IO WINE			7 8 9 10 11 12 13 14 15	22 23 24 25 26 27 28 29 30 31 32		Signal Name		1	1	1	1		1	1		1		1		E TO WIRE	<u></u>	2 4 5 3	7	Signal Name	ı	ı	ı	
Connector No. M208	Connector Color WHITE		E	U	17 18 19 20 21 22		Terminal No. Wire	2 SHIELD	3 B	W 4	5 SB		7 R	8 SHIELD	M 6	10 B	> 11	12 G	13 R	Connector No. M210	Connector Name WIRE TO WIRE	Connector Color GRAY	H.S.	9	Terminal No. Color of Wire	1 SHIELD	2 W	3	0
	<u>'</u>				4 5 6 7 8		Signal Name	AUX AUDIO RH+	AUX AUDIO GND	AUX AUDIO LH+	AUX VIDEO+	AUX VIDEO-			•	•	•	1					2 4 S S S S S S S S S S S S S S S S S S		Signal Name	ı	ı	1	
Connector No. M205	INPUT JACKS	Connector Color WHITE			H.S. 1 2 3 4	_	Terminal No. Wire	т ш	2 B	3 M	M 2	8 8								Connector No.   M209	Connector Name USB INTERFACE	Connector Color WHITE	H.S.		Terminal No. Color of Wire	1 0	2 W	3 R	-

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Signal Name	1	1	ı	ı	ı	ı	ı	1	ı	ı	1	1	ı	ı	ı	1
Color of Wire	Œ	SHIELD	8	В	_	ŋ	ш	SHIELD	>	В	٦	g	В	SHIELD	Μ	В
Terminal No.	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

0	Connector Name JOINT CONNECTOR -M01	2	2 C C C C C C C C C C C C C C C C C C C	Signal Name	I	ı
M230	IIOF ami	olor WHI	6 5	Color of Wire	В	SHIELD
Connector No.	Connector Na	Connector Color WHITE	崎 H.S.	Terminal No.	2	3

Connector No.	ž	ا ز	-	잏	M215								
Connector Name WIRE TO WIRE	ž	Ě	0	₹	뿠		2	∣≒	끭				
Connector Color WHITE	ő	흥		l≱		ш							
E				믁	Ш	Ν			لے				
2	_	2 3 4 5 6 7	3	4	rC	9	7	8	6	9 10 11 12	=	12	
į.	73	13 14 15 16 17 18 19 20 21 22 24	5	16	17	ž	ō	S	2	20	23	77	

Signal Name	ı	ı	ı	ı	1	ı	1	ı
Color of Wire	SB	G	œ	SHIELD	M	В	^	g
Terminal No. Wire	-	2	3	4	2	9		8

Connector No.	lor	o.		ž	M217	_										
Connector Name WIRE TO WIRE	or N	au	e_	∣₹	₩		0	∣⋝	22	١						
Connector Color WHITE	oro	8	×	⋝	╘	Ш										
E							1	l l	M		_					
	-	2	e	4	r.	9	7	∞	6	9	Ι=	12	13	4	9 10 11 12 13 14 15 16	19
Ģ.	17	7 18 19 20 21 22 23 24 25 26 27 28 29	6	8	12	23	g	24	52	26	27	82	53	30 31		83

Signal Name	I	I	1	1	_	ı	ı
Color of Wire	SHIELD	В	В	Μ	SHIELD	В	M
Terminal No. Wire	13	14	15	16	30	31	32

	VIRE		
M214	WIRE TO V	WHITE	
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	

5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24	Signal Name	ı	1	ı	ı	ı	ı	1	1	I
2 3 4 4 15 16	Color of Wire	×	æ	В	SHIELD	M	В	SHIELD	>	<b>\</b>
H.S.	Terminal No.	-	2	က	4	5	9	2	8	6

	ļ								
Connector No.	Σ	M216	9						
Connector Name WIRE TO WIRE	3	≝	Щ.	2	≥	₩	ш		
Connector Color WHITE	^	₹	빝						
	2 3	е			4	4 5 6	9	_	
8	6	10	8 9 10 11 12 13 14 15 16	12	13	14	15	16	

Signal Name	-	I	
Color of Wire	В	В	
Ferminal No.	3	6	

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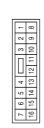
Signal Name	ı	ı	I	I	ı	I	ı	ı	ı	ı	1	ı	ı	ı	ı	1	1	1	ı	1	I	1
Color of Wire	g	В	SHIELD	*	SHIELD	*	g	В	ш	L	Ь	8	В	В	æ	1	SHIELD	ı	I	>	В	<b>&gt;</b>
Terminal No.	19	20	21	22	23	24	25	56	27	28	59	30	31	32	33	34	35	36	37	38	39	40

Connector No.	M254
Connector Name	Connector Name REAR AUXILIARY INPUT JACKS
Connector Color WHITE	WHITE



Signal Name	1	1	I	1	ı	1	ı	ı	-	ı	ı	ı	ı	1	1	1	I	I
Color of Wire	8	В	В	æ	8	1	ı	ı	SHIELD	ı	ш	ı	5	В	>	M	ш	BG
Terminal No.	-	2	င	4	2	9	7	8	6	10	11	12	13	14	15	16	17	18

100	NZ3 I	WIRE TO WIRE	WHITE	
Connector No		Connector Name WIRE TO WIRE	Connector Color WHITE	





Signal Name	I	ı	Ι
Color of Wire	В	>	^
Terminal No.	-	2	3

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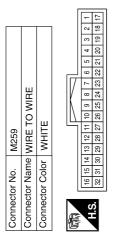
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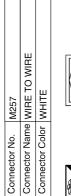
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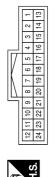
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Signal Name	1	1	1	ı	ı	1	1	ı	1	ı	1	1	ı	I	1	ı	1
Color of Wire	В	SHIELD	æ	В	Μ	7	g	Œ	SHIELD	>	В	۵	g	æ	SHIELD	M	В
Terminal No.	16	17	18	19	20	21	22	23	24	25	56	27	28	59	30	31	32



Signal Name	ı	1	ı	ı	1	1	-	I	1	1	ı	1	I	1
Color of Wire	SHIELD	В	>	BG	5	Œ	знієгр	>	В	^	5	В	SHIELD	M
Terminal No. Wire	2	ဇ	4	2	9	2	8	6	10	11	12	13	14	15





Signal Name	I	
Color of Wire	В	
Terminal No.	13	

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20	TENNA BASE	47		Signal Name	=	_		
M502	ne AN	or GR/		Solor of Wire	В	В		
Connector No.	Connector Name ANTENNA BASE	Connector Color GRAY	H.S.	Terminal No. Wire	1	2		
						Ī		
10	Connector Name ANTENNA BASE	EEN		Signal Name	-			
M501	me AN	or GRI		Solor of Wire	В			
Connector No.	Connector Nar	Connector Color GREEN	国 H.S.	Terminal No. Wire	1			
	E TO WIRE	<b>&gt;</b>		Signal Name	-	1	ı	
M500	ne WIRE	or GRA		Color of Wire	В	В	В	
Connector No.	Connector Name WIRE TO WIRE	Connector Color GRAY	H.S.	Terminal No. Wire	1	2	က	

Connector No. M505	Connector Name GLASS ANTENNA (FM SUB)	Connector Color GRAY	-	Terminal No. Color of Wire Signal Name	В
Connect	Connect	Connect	E K	Termina	_
M504	WIRE TO WIRE	GRAY		r of Signal Name	-
Connector No. M504	Connector Name WIRE TO WIRE	Connector Color GRAY	H.S.	Terminal No. Color of Wire	1 B
M503	WIRE TO WIRE	SRAY		of Signal Name	ı
	lame M	color GRAY		Color of Wire	В

33	RE TO WIRE	47		Signal Name	_
. M503	me WIF	lor GR,		Color of Wire	В
Connector No.	Connector Name WIRE TO WIRE	Connector Color GRAY	原 H.S.	Terminal No. Wire	1

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Connector No. M509	Connector No.	E22		Connector No.	Jo. E26	
e	Connector Nar	ne ACC	Connector Name ACCESSORY RELAY-2	Connector	Jame WIRI	Connector Name WIRE TO WIRE
Connector Color GREEN	Connector Color	or BLUE	Ш	Connector Color	Solor WHITE	TE
H.S.	是 H.S.	— [Ц]	2 2 2 3	原 H.S.	13 14 15 16 17	5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24
	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
Terminal No. Color of Signal Name	-	5	ı	2	M	ı
- B	2	В	1	3	В	1
-	8	æ	1	4	SHIELD	1
	5	Ь	Ī	5	В	ı
				9	н	1
				8	SHIELD	-
				13	Я	I
				14	В	ı
				15	ŋ	1
				16	SHIELD	-
				17	8	
Connector No. E33	Connector No.	. E44		Connector No.	Vo. E52	
Connector Name WIRE TO WIRE	Connector Nar	me JOII	Connector Name JOINT CONNECTOR-E01	Connector	Vame PAR	Connector Name PARKING BRAKE SWITCH
Connector Color WHITE	Connector Color	lor   WHITE	TE	Connector Color	Color BLACK	CK
H.S.	ة. ك	11 10 9	8 7 6 5 4 3 2 1	H.S.		<u> </u>
	<u>-</u> -	2 21 20 1	22 21 20 19 18 17 16 15 14 13 12			
		3 32 31 3	33 32 31 30 29 28 27 26 25 24 23			
Terminal No.   Color of   Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
- 6	15	GR	ı	-	9 <sub>1</sub>	ı
	17	В	1			

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< WIRING DIAGRAM >

E209 WIRE TO WIRE		1		6	22 21 20 19 18 17 16 15 14 13		Wire Signal Name		 	SHIELD -	- I	В –	SHIELD -		В		SHIELD -	M	900L	_	FHON! CAMERA BLACK		1 2 3 4 4 5 6	Color of Signal Name	1	- I	- B	SHIELD	
Connector No.	Connector Color			ď	24 23 22	ולט ביים ביים ביים ביים ביים ביים ביים ביים	Terminal No.	2		4 SH	2	9	8 SH	13	14	15	16 SHI	17	N software N	Collifector No.	Connector Name		斯.S.	Terminal No. W	-	2	3	4 SHI	9
Signal Name	ı	ı	I	ı	I	ı	1	ı	ı	ı	_	ı	-	ı						L	NITE I			Signal Name	1	ı			
No. Wire	۵	Œ	В	SHIELD	В	SHIELD	Μ	SHIELD	M	Œ	В	ŋ	re	g					040	_	GRAY		5 1 2 3 4 7 3 4 8	Color of Si.		В			
Terminal No.	36	16G	17G	18G	22G	23G	25G	26G	27G	28G	29G	30G	32G	50G					2	Collinector INC.	Connector Name		用.S.	Terminal No.	-	2			
Connector No. E152 Connector Name WIRE TO WIRE	Connector Color WHITE	_		56 46 36 26 16	106 96 86 76			30G 29G 28G 27G 26G 25G 24G 23G 22G		50G49G48G47G46G45G44G43G42G	61960959958957956959695959		0+5 000 000 000 000 000 000 000 000 000	90G89G88G87G86G85G84G83G82G		95G 94G 93G 92G 91G	1000 996  986  966		N Total	_	Connector Color GRAY	-	H.S. (1 2 3 4 4 5 6 7 8 4 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	Terminal No. Wire Signal Name	т.	2 B			

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Revision: March 2012 AV-785 2013 Infiniti JX

Connector No. Connector Name	Vo. E301 Vame WIRE	Connector No. E301 Connector Name WIRE TO WIRE Connector Color GRAY	Conr	Connector No. Connector Name		E302 WIRE TO WIRE GRAY	Conne	Connector No. Connector Name Connector Color		E307 FRONT SONAR SENSOR LH OUTER BLACK
师 H.S.	4 8 8	7 6 2 1	是 H.S.	Ó	8 4 8	2 1	南南 H.S.			
Terminal No.	Color of Wire	Signal Name	Term	Terminal No.	Color of Wire	Signal Name	Terminal No.		Color of Wire	Signal Name
- 8	O U	1 1		- 2	0 0	1 1	1 2		<u>а</u> б	1 1
				1						
Connector No.	No. E308	80	Conr	Connector No.	18		Connec	Connector No.	B6	
Connector Name	-	FRONT SONAR SENSOR RH OUTER	Con	Connector Name		REAR SIDE SPEAKER LH	Connec	Connector Name Connector Color	WIRE T WHITE	WIRE TO WIRE WHITE
Connector Color		BLACK							-	
高.S.H.S.			H.S.	Ø	2 1		南 H.S.	13 14	3 4 5 15 16 17	6 7 8 9 10 11 12 18 19 20 21 22 23 24
Terminal No.	Color of Wire	Signal Name	Term	Terminal No.	Color of Wire	Signal Name	Terminal No.		Color of Wire	Signal Name
-	Ь	-		1	×	1			۵	1
7	Ö	ı		2	ō	ı	2		ŋ	1
							8		œ	1
							4		SHIELD	1
							2		*	1
							9		В	ı
							7		>	1
							8		ŋ	1
							6		В	1
							10		SHIELD	1
							11		ш	1
							12	0,	*	1
							13		SB	1
							14		SB	1
							15		LG	1

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[TELEMATICS SYSTEM]

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Signal Name	1	ı	1	ı	1	1	1	ı	1	ı	1	1	1	-	1
Color of Wire	>	>	В	g	>	а	1	ı	-	8	В	SHIELD	SHIELD	Ь	7
Terminal No.	18	19	20	21	22	23	24	25	56	27	28	59	30	31	32

	IBUTOR		12 14 16 18 20 22 24 28 28 30 32 11 13 15 17 19 21 23 25 27 29 31	Signal Name	1	1
B24	VIDEO DISTRIBUTOR	WHITE	8 10 12 14 16 18 20 22 24 26 7 7 9 111 13 15 17 19 21 23 25	J.		
		lor	3 5 7	Color of Wire	В	>
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No. Wire	1	2

11 13 15 17 19 21 23 25	Signal Name	ı	ı	1	ı	ı	ı	ı	ı	ı	ı	ı	1	I	I	1	1		
3 5 7 9	Color of Wire	<u> </u>	>	В	>	BR	_	SB	BR	SB	_	ı	1	1	œ	9	В	M	
H.S.	Terminal No.		2	က	4	5	9	2	8	6	10	11	12	13	14	15	16	17	

Connector No.	Š.		В	B23									
Connector Name   WIRE TO WIRE	Nar	ne	>	₹	뜻	2	>	/IR	ш				
Connector Color WHITE	Ö	5		I₹	E								
				L					-				
				╗	1	١	V	Π					
è	12	12 11 10 9	5	6	8	7	9	2	4	т	2	-	
Ġ.	24	24 23 22 21 20 19 18 17 16 15 14 13	য়	21	20	19	18	17	16	15	4	೮	

Signal Name	I	ı	ı	1	ı	I	ı	ı	Í	_	ı	ı	I	1	-	_	1	ı	
Color of Wire	>	ŋ	SHIELD	۵	SB	7	re	SB	В	В	SHIELD	٦	۵	BR	_	ГG	SB	SB	
Terminal No.	-	2	က	4	9	7	6	10	13	14	15	16	17	19	20	21	22	24	

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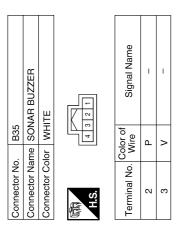
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Signal Name	ı	ı	1	
Color of Wire	ŋ	SHIELD	В	
Terminal No.	29	30	31	

Signal Name	I	ı	I	ı	I	ı	ı	ı	I	I	ı	I	ı	I	I	ı
Color of Wire	SHIELD	ı	ı	1	8	œ	В	9	SHIELD	1	ı	-	SHIELD	В	В	Ν
Terminal No.	41	42	43	44	45	46	47	48	49	20	51	52	53	54	22	26

Signal Name	ı	ı	ı	-	1	I	_	ı	1	1	I	-	ı	-	ı
Color of Wire	Μ	SHIELD	В	^	8	В	Μ	SHIELD	Μ	Œ	SHIELD	В	G	Χ	В
Terminal No.	9	7	8	11	18	19	20	21	22	23	24	25	56	27	28

Connector No.	B25
Connector Name	Connector Name VIDEO DISTRIBUTOR
Connector Color WHITE	WHITE
	22 172 102 103 104 104 104 104 104 105 104 105 104 105 104 105 104 105 105 105 105 105 105 105 105 105 105

			ı							
42 44 46 48 50 52 54 56	41 43 45 47 49 51 53 55	Signal Name	1	ı	_	1	ı	-	ı	=
36 38 40	35 37 39	Color of Wire	W	ß	SHIELD	-	-	-	W	В
8	S. S.	Terminal No.	33	34	32	36	37	38	39	40

	32						
IE TO WIRE	C   7   8   9   10   11   12   13   14   15   12   13   14   15   12   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   15   15   15   15   15   15	Signal Name	_	-	ı	I	ı
me WIF	2 3 4 5 18 19 20 21	Color of Wire	Ж	Μ	В	SHIELD	В
Connector No. B41 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No.	-	2	က	4	5

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# [TELEMATICS SYSTEM]

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< WIRING DIAGRAM >

3E TO WIRE  HITE  4   3   2   1   10   9   8	Signal Name	Signal Name
Me WIRE NOT WHIT 16 15 14 13 14 14 13 14 14 14 14 14 14 14 14 14 14 14 14 14	Color of Wire G G Wire P P P B B W W	Color of Wire Wire Wire Wire Wire Wire Wire Wire
Connector No. B49  Connector Name WIRE TO WIRE  Connector Color WHITE	10 11 12 13 15 15 16 16 16 16 16 16 16 16 16 16 16 16 16	Terminal No. 17A 18A 19A 20A 23A 25A 26A 27A 28A 30A 74A 75A
Connector No. B46  Connector Name WIRE TO WIRE  Connector Color WHITE      2   3   4   5   7   8   9   10   11   12   14   5   6   7   8   9   10   11   12   14   15   16   17   18   19   20   21   22   32   24   24   24   24   24   24	Signal Name	B69
No. B46  Name WIRE To Color WHITE	Color of Wire R R R R R B B B	No.   B69   NIRE T
Connector No. Connector Name Connector Color H.S.	Terminal No. 13 14 15 16 17	Connector No. Connector Color H.S. H.S.  81A
Connector No. B43 Connector Name WIRE TO WIRE Connector Color WHITE  T 2 3	Signal Name	Connector No. B51  Connector Name WIRE TO WIRE  Connector Color WHITE  Terminal No. Wire Signal Name  12 P
No. B43 Name WIR Color WHI	O Color of Wire	No. Name WIR Color of Color of Ref. 12 11 11 11 11 11 11 11 11 11 11 11 11
Connector No. B43 Connector Name WIRE T Connector Color WHITE	Terminal No.	Connector No. Connector Name Connector Color H.S. 11 11 12

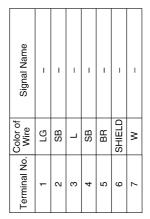
ABNIA3581GB

Revision: March 2012 AV-789 2013 Infiniti JX

	_	_		_	_		_
Signal Name	-	-	-	l	_	l	-
Color of Wire	В	۸	M	В	g	В	SHIELD
Color of Wire	8	6	10	11	12	13	14

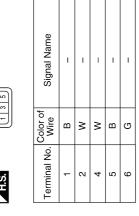
			16	32								
	) WIRE		7 8 9 10 11 12 13 14 15	23 24 25 26 27 28 29 30 31	Signal Name	1	-	ı	ı	1	ı	ı
B101	e WIRE TO WIRE	r WHITE	3 4 5 6	19 20 21 22 2	Color of Wire	<b>\</b>	В	8	æ	SHIELD	5	SB
Connector No.	Connector Name	Connector Color	1 2	11.5.	Terminal No.	2	9	7	8	6	10	1

Connector No.	B75
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE



Signal Name	ı	ı	ı	_	_
Color of Wire	В	SHIELD	В	В	В
Terminal No.	25	26	27	28	53

B73	SUBWOOFER	GRAY	
Connector No.	Connector Name SUBWOOFER	Connector Color GRAY	



		32 16								
E TO WIRE	ITE	6         7         8         9         10         11         12         13         14         15           22         23         24         25         26         27         28         29         30         31	Signal Name	I	-	I	_	Ι	-	-
me WIF	lor WHITE	2 3 4 5 18 19 20 21	Color of Wire	×	В	SHIELD	В	В	В	Μ
Connector Name   WIRE TO WIRE	Connector Color	S.	Terminal No.	17	18	19	21	22	23	24

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B77

Connector No.

# [TELEMATICS SYSTEM]

< WIRING DIAGRAM >

Signal Name	I	ı	ı	ı	ı	ı	ı	ı	ı	ı	1
Color of Wire	۵	œ	В	>	5	ŋ	M	*	Ь	g	Я
Terminal No.	9	7	8	6	10	11	12	13	14	15	16

Signal Name	1	ı	ı	1	-	-	-	I	_	ı	_	I	I	ı	_	_
Color of Wire	В	В	В	В	В	Μ	1	1	ı	SB	В/Υ	1	ı	1	В	_
Terminal No.	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Connector No.		B111	
Connector Name		WIR	WIRE TO WIRE
Connector Color	olor	BROWN	NWO
H.S.	1 8 8	9	4 5 6 7 11 12 13 14 15 16
Terminal No.	Color of Wire	r of re	Signal Name
-	8		1
2	g		I
3	В		1
4	LG	(T	ı
ĸ	^		I

Signal Name	1	I	1	ı	ı	1	1	ı	1	ı	1	ı	ı	ı	ı	1
Color of Wire	В	1	-	ı	LG	LG	Μ	_	1	-	_	1	-	ı	ı	В
Terminal No.	10	11	12	13	14	15	16	16	17	18	19	50	21	22	23	24

Connector No.	B107
ctor Name	Connector Name   WIRE TO WIRE
Connector Color	WHITE
13 14 15 16	3 4 5 6 7 8 9 10 11 12 15 16 17 18 19 20 21 22 23 24
Terminal No. Wire	Color of Signal Name

Signal Name	ı	1	ı	1	1	_	I	
Color of Wire	В	>	ŋ	ш	SHIELD	В	>	
Terminal No. Wire	9	7	8	6	10	11	12	

				2 1 22 21										
50	BOSE SPEAKER AMP.	WHITE		12     11     10     9     8     7     6     5     4     3       32     31     30     29     28     27     26     25     24     23	Signal Name	ı	ı	ı	ı	ı	ı	ı	ı	ı
. B120				15 14 13 35 34 33	Color of Wire	ı	ı	ı	≥	>	>	>	Χ	>
Connector No.	Connector Name	Connector Color	呵荷 H.S.	20 19 18 17 16 40 39 38 37 36	Terminal No.	-	2	က	4	5	9	7	8	6

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Signal Name	-	1	-	_	ı	_	_	_	_	-	=	_
Color of Wire	ı	1	ı	g	×	В	W	g	В	M	_	-
Terminal No.	99	29	89	69	70	71	72	73	74	75	92	22

Signal Name	1	ı	ı	ı	-	-	ı	-	ı	ı	1
Color of Wire	8	SHIELD	В	Μ	SHIELD	M	В	SHIELD	В	×	SHIELD
Terminal No.	22	23	24	25	56	27	28	59	30	31	32

stor No.	В	B122	Λ.									
tor Name BOSE SPEAKER AMP	В	so	Щ	SP	/E	ΥK	ΞH	A	٩Þ			
tor Color		BROWN	≥	z								
										'		1 1
	1	1	1	1	1	1	1	1	1	5		_
77 76	76 75 74 73	74	73	ш		$\equiv$	72	7	72 71 70 69	69	89	
99 29	66 65 64 63 62 61 60 59 58	64	63	62	61	9	59	58	57	99	55	
<u>ן</u>				ı	ı			ı	ı	7		_

Signal Name	1	1	-	=	I	-	1	1	1	1	ı
Color of Wire	M	œ	Ь	Я	ŋ	_	ı	Μ	8	В	SHIELD
Terminal No.	55	56	22	28	59	09	61	62	63	64	65

Signal Name	-	ı	-	ı	-	ı	-	ı	_	-	I
Color of Wire	M	SHIELD	В	Μ	SHIELD	В	M	SHIELD	В	M	В
Terminal No.	10	11	12	13	14	15	16	17	19	20	21

tor No. B121	Connector Name BOSE SPEAKER AMP.	Connector Color BROWN	
Connector No.	Connector Na	Connector Co	

Signal Name	1	ı	_	1	-	_	ı	_	1	1	_	ı	_	_	
Color of Wire	ŋ	>	M	Ь	Д	В	В	Ж	Μ	LG	У	В	G	В	
Terminal No.	41	42	43	<b>7</b> 7	45	46	47	48	49	20	51	52	53	54	

						1
				8	9	
			1	19 20	88	
				8	88	
				1	37	
				19	36	
				15	32	
				4	뚕	
	果			9 10 11 12 13 14 15 16 17 18	29 30 31 32 33 34 35 36 37	
	₹			12	32	
	$\sim$			=	31	
	$\vdash$	ш		10	98	
36	뮕	≒		6	53	
B136	₹	∣≱∣		00	22 23 24 25 26 27 28	
_	0	Ė.		7	27	
٠.	Ĭ.	<u> </u>		9	56	
ž	Ra	ပြ		2	25	
ō	o	5		4	24	
Sc	Sct	었		က	23	
Ĕ	ű	Ĕ	H.S.	2	22	
Connector No.	Connector Name   WIRE TO WIRE	Connector Color WHITE	唇干	lL-	7	
						,

Signal Name	_	1
Color of Wire	M	В
Terminal No.	8	6

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### **BOSE AUDIO WITH SURROUND SOUND**

[TELEMATICS SYSTEM]

< WIRING DIAGRAM >

Signal Name	1	1	ı	1		ı
Color of Wire	SB	SB	SHIELD	FG	SB	<b>\</b>
Terminal No. Wire	17	19	20	17	22	54

Signal Name	I	1	I	ı	ı	1
Color of Wire	LG	SB	В	ш	SHIELD	0
Terminal No. Wire	6	10	13	14	15	16

Connector No.	Š.		ш	B137	2							
Connector Name   WIRE TO WIRE	Nan	ЭС		ΥF	믗	7	>	₹	Щ			
Connector Color WHITE	Colc		_	I₹	۱Ē	ш						
H.S.	12   11   10   9   8   7   6   5   4   3   2   1	- 2	1 0 8	500	\ ∞ 8	\ r \$	ဖ ့	1 2	4 4	ω <del>μ</del>	2 2	- 5
	1	7	1	-	3	2	2	:	2	2	7	2

Signal Name	1	-	ı	_	-	_
Color of Wire	>	G	SHIELD	У	BR	ГG
Terminal No. Wire	-	2	3	4	9	7

Connector No.		B144	4
Connector Name		g	JOINT CONNECTOR-B11
Connector Color		WHITE	TE
原 H.S.		8	2 1 0
		Ī	
Terminal No.	Color of Wire	r of	Signal Name
2	В		ı
ဧ	SHIELD	i.D	1
4	SHIFLD	<u>ا:</u>	1

	WIRE TO WIRE	TE TE	3	Signal Name	I	ı	ı	1	ı	1	1
B140	<u>e</u>	lor WHITE	1 8 2 9 2 2	Color of Wire	ŋ	*	Ь	ш	SHIELD	*	В
Connector No	Connector Name	Connector Color	H.S.	Terminal No.	6	10	11	12	13	14	15

6	WIRE TO WIRE	ITE	2 4	Signal Name	ı	
. B139	me WIR	lor WH	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of Wire	>	ď
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No.	=	ç

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Connector No.		B153
Connector Name		REAR SIDE SPEAKER RH
Connector Color		BROWN
向 H.S.		
Terminal No.	Color of Wire	f Signal Name
-	≥	1
c	C	

Signal Name	ı	ı	I	ı	I	_	I	-
Color of Wire	>	0	^	В	Μ	g	н	SHIELD
Terminal No.	7	8	6	10	11	12	13	14

2	WIRE TO WIRE	ТЕ	5 6 7	12   13   14   15   16	Signal Name	1		1	ı	1	ı
. B145		lor   WHITE	2 5	01 6	Color of Wire	LG	SB	SB	Τ	BR	SHIELD
Connector No.	Connector Name	Connector Color	H.S.		Terminal No.	-	2	3	4	2	9

Signal Name	-	ı	I	I	I	I	I	ı	ı	I	I	-
Color of Wire	ГG	SB	В	Я	SHIELD	٦	Ь	BR	_	ГG	SB	SB
Terminal No.	6	10	13	14	15	16	17	19	20	21	22	24

Vo. B201	Name WIRE TO WIRE	Connector Color WHITE	1 2 3 4 5 6 7 8 9 10 11 12   13 14 15 16 17 18 19 20 21 22 23 24	Color of Signal Name	- М	(	ا.	SHIELD -	SHELD -	SHIELD P - SHIELD
		WHIT	3 4 15 16	lor of Vire	  ≱	ر ص		IIELD	ELD P	IIELD P SB
No.	r Name	r Color						SF	<u>w</u>	<u> </u>
Connector No.	Connector Name	Connector	画 H.S.	Terminal No.	-	2	c	3	ນ 4	ۍ <mark>4</mark> ه

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ACC DET. IN SHIELD M-CAN

SHIELD

S | S | >

SB

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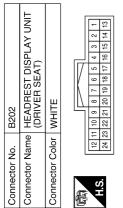
M-CAN 1 L M-CAN 1 H

BAT

Connector No.	o. B302	2
Connector Name		HEADREST DISPLAY UNIT (PASSENGER SEAT)
Connector Color	H	TE TE
E		
H.S. 12	2 11 10 9 4 23 22 21	8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13
]		
Terminal No.	Color of Wire	Signal Name
1	W	REAR 1 HP LH-
2	G	REAR 1 HP LRH-
3	SHIELD	REAR 1 HP SHIELD
4	У	REAR 1 COMP -
5	_	_
9	BR	CONT GND
7	ГG	AUX REQ. OUT
8	-	-
6	ГG	M-CAN 2 L
10	SB	M-CAN 2 H
11	_	_
12	В	GND
13	В	REAR 1 HP LH+
14	В	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	0	REAR 1 COMP+
17	SB	AV GND
18	1	1

Connector No.	No.	B301	=									
Connector Name WIRE TO WIRE	Name	WI	兆	7	× (	/IF	Щ					
Connector Color WHITE	Color	×	I≣	l								
E			Ħ	II۱	L	И		ப				
2	-	3	4	9 9	9	7	8	6	우	9 10 11 12	12	
6.	13 1	13 14 15 16 17 18 19 20 21 22 23 24	16	17	8	19	20	21	23	83	24	
											7	

Signal Name	ı	1	ı	I	I	ı	1	I	I	I	ı	ı	I	I	I	ı	1	I
Color of Wire	>	В	SHIELD	Υ	BR	PT	ЫLG	SB	В	ш	SHIELD	0	SB	SB	SHIELD	PT	SB	<b>&gt;</b>
Terminal No.	-	7	3	4	9	2	6	10	13	14	15	16	17	19	20	21	22	24



	Signal Name	REAR 1 HP LH-	REAR 1 HP LRH-	REAR 1 HP SHIELD	REAR 1 COMP -	ı	CONT GND	AUX REQ. OUT	ı	M-CAN 2 L	M-CAN 2 H	ı	GND	REAR 1 HP LH+	REAR 1 HP RH+	REAR 1 COMP SHIELD	REAR 1 COMP+	AV GND	I	ACC DET. IN	_	M-CAN 1 L	M-CAN 1 H	I	BAT
Color of	Wire	W	G	SHIELD	Ь	1	SB	_	I	P.	SB	ı	В	В	ш	SHIELD	٦	Ь	ı	BR	_	ГG	SB	ı	SB
	l erminal No.	1	2	3	4	5	9	7	8	6	10	1	12	13	14	15	16	17	18	19	20	21	22	23	24

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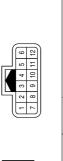
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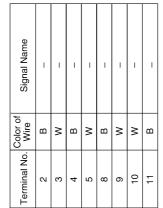
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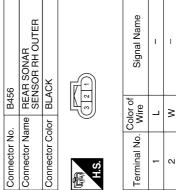
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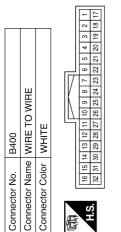




B456	onnector Name   REAR SONAR   SENSOR RH OUTER	BLACK	
onnector No.	onnector Name	nnector Color BLACK	



Signal Name	1	1	I	1	-	1	1	1
Color of Wire	8	SHIELD	8	В	SHIELD	×	В	SHIELD
Terminal No.	22	23	24	25	26	27	28	56



Signal Name	I	-	I	-	I
Color of Wire	Α	В	SHIELD	В	В
Terminal No. Wire	17	18	19	20	21

Connector No.	B455
Connector Name REAR SONAR SENSOR LH O	REAR SONAR SENSOR LH OUTE
Connector Color BLACK	BLACK



Signal Name	I	1	
Color of Wire	۵	В	
Terminal No.	-	2	

WIRE		(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
WIRE TO	BLACK	2 3 4 5 10 11 11 11
Connector Name WIRE TO WIRE	Connector Color	H.S.

B452

Connector No.



Signal Name	ı	ı	I	ı	ı	-	1	1
Color of Wire	Ь	G	٦	Υ	٦	W	Ь	G
Terminal No.	2	3	4	5	8	6	10	11

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R1 WIRE TO WIRE	ITE	7 6 5 4 3 2 1 19 18 17 16 15 14 13	Signal Name	ı	ļ	I	I	_	l	1
e	lor WHITE	24 23 22 21 20	Color of Wire	В	8	В	SHIELD	Ь	BG	Μ
Connector No. Connector Name	Connector Color	H.S. (24)	Terminal No.	5	13	14	15	16	17	24

	F	ļ
Connector No.	. H105	)5
Connector Name		TELEMATICS SWITCH
Connector Color	_	WHITE
高 H.S.		8 7 6 5 1
Terminal No.	Color of Wire	Signal Name
-	>	ı
2	g	ı
3	Ь	1
2	α	1

B458	ne REAR SONAR SENSOR RH INNER	or BLACK	3 2 1
Connector No.	Connector Name	Connector Color	E

	Signal Na	1	-
)	Color of Wire	Ь	В
i.S.	rminal No.	1	2

	REAR SONA SENSOR RH	BLACK	2 1	Sign		
-				Color of Wire	Ь	G
	ame	흥				
	Connector Name	Connector Color	「所 H.S.	Terminal No.	1	6

Connector No.	. B457	25
Connector Name		REAR SONAR LH INNER
Connector Color	-	BLACK
H.S.		
Terminal No.	Color of Wire	Signal Name
-	Д	ı
0	9	1

R101 WIRE TO WIRE	6 7 8 9 10 11 12 25 25 24	Signal Name	ı	I	_	_	ı	I	ı
e s	2 3 4 5 7 17 15 16 17	Color of Wire	>	۳	g	Ь	GR	_	Я
Connector No. Connector Name Connector Color	H.S.	Terminal No.	-	2	3	4	2	9	7

Connector No.	D. R11	
Connector Name		WIRE TO WIRE
Connector Color	_	WHITE
H.S. 24 23	11 10 9 8 23 22 21 20	7 6 5 4 3 2 1 1 9 18 17 16 15 14 13
Terminal No.	Color of Wire	Signal Name
-	ŋ	ı
2	В	1
3	M	1
4	В	1
2	SHIELD	1
9	В	1
9	W	ı

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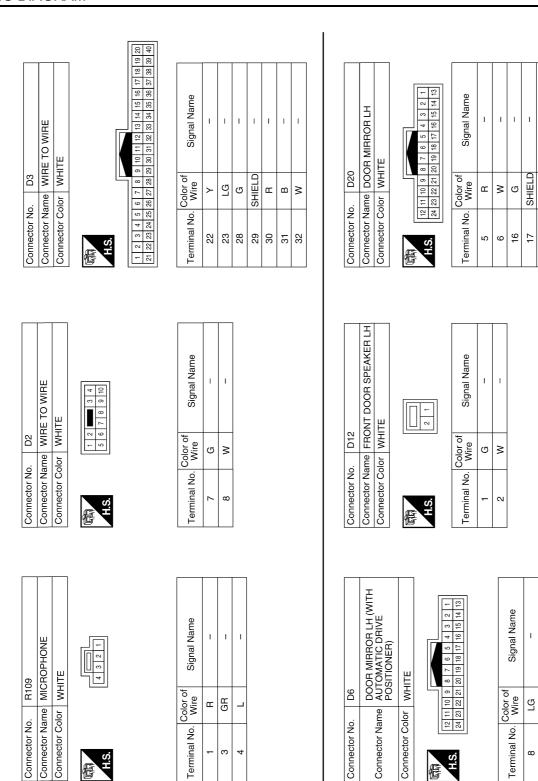
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Connector No. D112 Connector Name FRONT DOOR SPEAKER RH Connector Color WHITE		Signal Name	1	ı				
D112 ne FRON or WHIT	2	Solor of Wire	G	>				
Connector No. D112 Connector Name FRONT Connector Color WHITE	H.S.	Terminal No. Wire	-	2				
E TO WIRE	7 8 9 10	Signal Name	ı	1				
D102 ne WIRE or WHIT	2 9 2	Solor of Wire	ŋ	>				
Connector No. D102 Connector Name WIRE TO WIRE Connector Color WHITE	是 H.S.	Terminal No. Wire	6	10				
	32							
: TO WIRE	6 7 8 9 10 11 12 13 14 15 22 23 24 25 26 27 28 29 30 31 3	Signal Name	1	1	1	1	1	
D101 ne WIRE or WHIT	3 4 5 19 20 21	Solor of Wire	ŋ	SHIELD	н	В	>	
Connector No. D101 Connector Name WIRE TO WIRE Connector Color WHITE	H.S. 17 18	Terminal No. Wire	-	2	3	4	r.	

32	Connector Name WIRE TO WIRE	IITE	5 4	Signal Name	ı	I
). D202	ıme WI	lor WF	12 11 11	Color of Wire	LG	>
Connector No.	Connector Na	Connector Color WHITE	南 H.S.	Terminal No. Wire	10	11
01	stor Name WIRE TO WIRE	IITE	1 2 3	Signal Name	ı	1
. D201	me WIF	stor Color WHITE	1 9	al No. Wire	>	LG
ctor No.	tor Na	ctor Co		al No.		

2	Connector Name DOOR MIRROR RH	<u>=</u>		20 19 18 17 16 15 14 13	Signal Name	I	_	ı	_	1
. D113	me DO	lor WH		12 11 10 9 8 7 24 23 22 21 20 19	Color of Wire	œ	W	១	SHIELD	α
Connector No.	Connector Na	Connector Color WHITE	·	ν; —	Terminal No.	5	9	16	<b>41</b>	25

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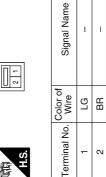
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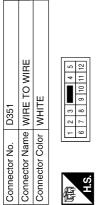
	ОВ ТWEETER LH		Signal Name	1			OOR SPEAKER RH		Signal Name	1
tor No. D252	Connector Name REAR DOOR TWEETER LH Connector Color BROWN	2	Color of Wire	re le	for No	100.1	Connector Name   REAR DOOR SPEAKER RH Connector Color   BROWN	<u>-</u> \	al No. Wire	8
Connector No.	Connect	原 H.S.	Terminal No.	- (	Connector No		Connect	H.S.	Terminal No.	_
	TO WIRE	9 10 11 12	Signal Name	1			TO WIRE	10 9 8 7 6	Signal Name	1
). D251	ame WIRE T	6 7 8 9	Color of Wire	E LG	0300		ame WIRE	5 1 10	Color of Wire	*
Connector No. D251 Connector Name WIRE TO WIRE Connector Color WHITE	是 H.S.	是 H.S.	Terminal No.	10	Connector No		Connector Name WIRE TO WIRE	H.S.	Terminal No.	7
	Connector Name REAR DOOR SPEAKER LH Connector Color BROWN	2 1	Signal Name	1			Connector Name   WIRE TO WIRE	7 8 9 10 11 12	Signal Name	
lo. D207	lame REAR D		Color of Wire	P ;	0301	2	Connector Name   WIRE T	1 0 2 1	Color of Wire	ď
Connector No.	Connector Name	H.S.	Terminal No.	- 0	Connector No		onnector I	明.S.H	Terminal No.	7

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D501	WIRE TO WIRE	WHITE		9     8     7     6     5     4     3     2     1       21     20     19     18     17     16     15     14     13	r of Signal Name	1	1	ı	ITD	1
		lor W		11 10 9 23 22 21	Color of Wire	Χ	В	æ	SHIELD	g
Connector No.	Connector Name	Connector Color WHITE	E	H.S. 24 8	Terminal No.	13	14	15	16	17

Connector No.	D352
Connector Name	Connector Name REAR DOOR TWEETER RH
Connector Color   BROWN	BROWN





Signal Name	-	_
Color of Wire	ГG	BR
Terminal No.	10	11

9 L	Connector Name REAR VIEW CAMERA	Connector No. D511	D511 REAR VIEW CAMERA WHITE	Connector No. Connector Name Connector Color
-----	---------------------------------	--------------------	-----------------------------	--

#	Q 2 - 1 - Q	Signal Name	Ì	Ì	Ī	1	1
NOT WHILE	4 8 6	Color of Wire	SHIELD	ß	В	В	W
John Color	H.S.	Ferminal No.	1	4	5	7	8

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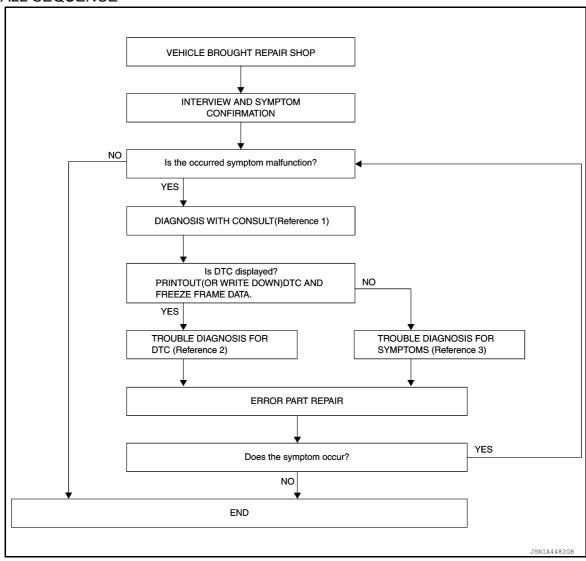
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# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

### **OVERALL SEQUENCE**



- Reference 1··· Refer to <u>AV-705</u>, "CONSULT Function".
- Reference 2··· Refer to AV-708, "DTC Index".
- Reference 3··· Refer to AV-823, "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

### **DIAGNOSIS AND REPAIR WORK FLOW**

# < BASIC INSPECTION > [TELEMATICS SYSTEM] Connect CONSULT and perform a self-diagnosis for "TELEMATICS". Refer to AV-705, "CONSULT Function". When DTC is detected, follow the instructions below: Record DTC and Freeze Frame Data.

### Is DTC displayed?

YES >> GO TO 4. NO >> GO TO 5.

# 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-708, "DTC Index".

>> GO TO 6.

# 4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the symptom table. Refer to AV-823. "Symptom Table".

>> GO TO 6.

# 5. ERROR PART REPAIR

- 1. Repair or replace the identified malfunctioning parts.
- 2. Perform a self-diagnosis for "TELEMATICS" with CONSULT.
- 3. Check that the symptom does not occur.

#### Does the symptom occur?

YES >> GO TO 1.

NO >> Inspection End.

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### INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[TELEMATICS SYSTEM]

# INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REPLACING TCU

### ADDITIONAL SERVICE WHEN REPLACING TCU: Description

INFOID:0000000008233680

When TCU is replaced, TCU activation operation is required.

Preparation before activation operation

- · Subscribe to telematics service
- Preregister user ID and password (can be performed from owner homepage)

### ADDITIONAL SERVICE WHEN REPLACING TCU: Work Procedure

INFOID:0000000008233681

# 1. READING OF VIN DATA

### ©CONSULT work support

Select SAVE VIN DATA, then START on SAVE VIN DATA screen to save the VIN data stored in replaced TCU in CONSULT. If it cannot be saved, writing operation must be performed manually.

>> GO TO 2.

### 2.TCU REPLACEMENT

Replace TCU. Refer to AV-827, "Removal and Installation".

>> GO TO 3.

# 3.NOTICE TO CARRIER ATX HELP DESK

Contact ATX help desk to notice the termination of replaced TCU and connection of new TCU. (VIN is required)

### Can ID data be saved to CONSULT at 1st step?

YES >> GO TO 4.

NO >> GO TO 5.

# 4. AUTOMATIC WRITING OF VIN DATA TO TCU

### CONSULT work support

Select WRITE VIN DATA, then START at WRITE SAVED VIN DATA screen to write the VIN data saved in CONSULT into new TCU.

>> GO TO 6.

# 5. MANUAL WRITING OF VIN DATA TO TCU

#### CONSULT work support

Select VIN REGISTRATION, WRITE VIN DATA then START on changing screen to write the VIN data saved into new TCU.

>> GO TO 6.

### 6.TCU ACTIVATION

### ©CONSULT work support

- 1. Wait for 5 seconds or more after turning the power switch ON.
- Touch TELEMATICS on the CONSULT screen.
- 3. After performing System Call of CONSULT, touch the Work support tab.
- 4. On the work support screen of CONSULT, select TCU ACTIVATE SETTING and touch Start.
- 5. On the TCU ACTIVATE SETTING screen, touch Start to set to ON. Touch End.
- Exit from CONSULT.
- 7. Turn the power switch OFF.
- 8. Wait (at least 10 seconds) until the power switch indicator turns OFF to shut down TCU.

# **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

[TELEMATICS SYSTEM]

>> WORK END.

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### **U1000 CAN COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

# **DTC/CIRCUIT DIAGNOSIS**

# U1000 CAN COMM CIRCUIT

DTC Logic

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000]	TCU is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

# **Diagnosis Procedure**

INFOID:0000000008233686

# 1. PERFORM SELF DIAGNOSTIC RESULT

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 2. Perform Self Diagnostic Result for TELEMATICS.

### Is CAN COMM CIRCUIT displayed?

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

NO >> Refer to GI-53, "Intermittent Incident".

# U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

# [TELEMATICS SYSTEM]

# U1010 CONTROL UNIT (CAN)

DTC Logic

# DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace TCU if malfunction occurs constantly.  Refer to AV-827, "Removal and Installation".

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### [TELEMATICS SYSTEM]

# **U1A00 TCU**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
ACC NO CONN [U1A00]	No input of ACC signal	ACC power circuit.     TCU.

# **Diagnosis Procedure**

INFOID:0000000008233689

Regarding Wiring Diagram information, refer to <u>AV-709</u>, "Wiring <u>Diagram"</u> (Bose Audio w/o Surround Sound) or <u>AV-755</u>, "Wiring <u>Diagram"</u> (Bose Audio with Surround Sound).

# 1. CHECK ACC POWER CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect TCU connector M47.
- 3. Check voltage between TCU connector and ground.

T	TCU		Condition	Voltage
Connector	Terminal	Ground	Condition	(Approx.)
M47	3	_	Ignition switch: ACC	Battery voltage

### Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".

NO >> Repair or replace harness or connectors.

# **U1A01 TCU**

# < DTC/CIRCUIT DIAGNOSIS >

# [TELEMATICS SYSTEM]

# U1A01 TCU

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
INTERNAL ERROR (TCU) [U1A01]	Malfunction in TCU is detected.	Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

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# **U1A02 TCU**

# [TELEMATICS SYSTEM]

# U1A02 TCU

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
TEL COMMUNICATION MODULE [U1A02]	Malfunction in communication module of TCU is detected.	Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

# **U1A03 TCU**

# < DTC/CIRCUIT DIAGNOSIS >

# [TELEMATICS SYSTEM]

# U1A03 TCU

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
SIM CARD [U1A03]	SIM card not inserted or unable to read.	<ul> <li>Check SIM card installation.</li> <li>Replace TCU if malfunction occurs constantly. Refer to <u>AV-827</u>, "Removal and Installation".</li> </ul>

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# **U1A04 TCU**

# [TELEMATICS SYSTEM]

# U1A04 TCU

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
VIN UNFINISHED [U1A04]	Unwritten VIN number is detected.	Write VIN number using CONSULT.     Refer to AV-804, "ADDITIONAL SERVICE.     WHEN REPLACING TCU: Work Procedure".     Replace TCU if malfunction occurs constantly.     Refer to AV-827, "Removal and Installation".

### [TELEMATICS SYSTEM]

### U1A05 TCU

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
USB COMM [U1A05]	Malfunction in USB communication between TCU and AV control unit.	Harness or connectors.     Replace TCU if malfunction occurs constantly. Refer to AV-827. "Removal and Installation".

# **Diagnosis Procedure**

INFOID:0000000008233695

Regarding Wiring Diagram information, refer to <u>AV-709</u>, "Wiring <u>Diagram"</u> (Bose Audio w/o Surround Sound) or <u>AV-755</u>, "Wiring <u>Diagram"</u> (Bose Audio with Surround Sound).

# 1. CHECK USB CIRCUITS CONTINUITY

- Turn ignition switch OFF.
- Disconnect TCU connector M134 and AV control unit connector M136.
- 3. Check continuity between TCU connector M134 and AV control unit connector M136.

TC	CU	AV conf	trol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	41		152	
	42		151	
	46		147	
	47		146	
M134	48	M136	145	Yes
	49		160	
	55		154	
	56		153	
	57		156	

4. Check the continuity between TCU connector M134 and ground.

TCU		Cround	Continuit
Connector	Terminal	Ground	Continuity
	41		
	46		
M424	47	_	No
M134	48		No
	49		
	56		

### Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".

NO >> Repair or replace harness or connectors.

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### **U1A07 TEL ANTENNA**

### [TELEMATICS SYSTEM]

# **U1A07 TEL ANTENNA**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
TEL ANTENNA SHORT [U1A07]	TEL antenna short circuit.	TEL antenna harness or connector.     Replace TEL antenna if malfunction occurs constantly.     Refer to AV-830, "Removal and Installation".

# Diagnosis Procedure

INFOID:0000000008233697

Regarding Wiring Diagram information, refer to <u>AV-709</u>, "Wiring <u>Diagram"</u> (Bose Audio w/o Surround Sound) or <u>AV-755</u>, "Wiring <u>Diagram"</u> (Bose Audio with Surround Sound).

# 1. CHECK TEL ANTENNA CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect TEL antenna connector.
- 3. Check continuity between TEL antenna connector M135 terminals.

TEL antenna connector M135 terminals		Continuity
58	59	No

### Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".

NO >> Replace TEL antenna. Refer to AV-830, "Removal and Installation".

### **U1A08 TEL ANTENNA**

### < DTC/CIRCUIT DIAGNOSIS >

### [TELEMATICS SYSTEM]

# **U1A08 TEL ANTENNA**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
TEL ANTENNA NO CONN [U1A08]	No TEL antenna connection.	<ul> <li>TEL antenna.</li> <li>Replace TCU if malfunction occurs constantly. Refer to <u>AV-827</u>, "Removal and Installation".</li> </ul>

# **Diagnosis Procedure**

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Regarding Wiring Diagram information, refer to <u>AV-709</u>, "Wiring <u>Diagram"</u> (Bose Audio w/o Surround Sound) or <u>AV-755</u>, "Wiring <u>Diagram"</u> (Bose Audio with Surround Sound).

# 1. CHECK AV CONTROL UNIT VOLTAGE

- 1. Turn ignition switch ON.
- 2. Check voltage between TEL antenna connector M135 and ground.

TEL a	antenna	Ground	
(+)		( )	Reference value
Connector	Terminal	(-)	
M135	58	_	2.8 V

### Is the inspection result normal?

YES >> Replace TEL antenna. Refer to <u>AV-830, "Removal and Installation"</u>.

NO >> Replace TCU. Refer to AV-827, "Removal and Installation".

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### **U1A0B MICROPHONE**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
MIC IN CONN [U1A0B]	No input of microphone circuits.	<ul> <li>Harness or connectors.</li> <li>Microphone.</li> <li>Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".</li> </ul>

### Diagnosis Procedure

INFOID:0000000008333563

Regarding Wiring Diagram information, refer to <u>AV-709</u>, "Wiring <u>Diagram"</u> (Bose Audio w/o Surround Sound) or <u>AV-755</u>, "Wiring <u>Diagram"</u> (Bose Audio with Surround Sound).

# 1. CHECK MIC IN SIGNAL CIRCUIT AND MIC VCC CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect TCU connector M47 and microphone connector.
- 3. Check continuity between TCU connector M47 and microphone connector R109.

TCU		Microphone		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M47	18			1	
	19	R109	4	Yes	
	20		3		

4. Check the continuity between TCU connector M47 and ground.

TCU		Ground	Continuity
Connector	Terminal	Ground	Continuity
M47	18	<u> </u>	No
IVI47	19		INU

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK MIC VCC VOLTAGE

- 1. Connect TCU connector M47 and microphone connector.
- 2. Turn ignition switch ON.
- Check voltage between TCU connector M47 terminals.

TCU connector M47		
(+)	(-)	Voltage (Approx.)
Terminal	Terminal	(
18	20	5.0 V

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace TCU. Refer to AV-827, "Removal and Installation".

# 3.CHECK MIC IN SIGNAL

Check signal between TCU connector M47.

### **U1A0B MICROPHONE**

### < DTC/CIRCUIT DIAGNOSIS >

# [TELEMATICS SYSTEM]

TCU connector M47				
(+)	(–)	Condition	Reference value	
Terminal	Terminal			-
19	20	Speak into microphone.	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0	(

### Is the inspection result normal?

YES

>> Replace TCU. Refer to <u>AV-827, "Removal and Installation"</u>.
>> Replace microphone. Refer to <u>AV-828, "Removal and Installation"</u>. NO

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### **U1A0C MICROPHONE**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
MIC OUT CONN [U1A0C]	No output of microphone circuits.	<ul> <li>Harness or connectors.</li> <li>Microphone.</li> <li>Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".</li> </ul>

### Diagnosis Procedure

INFOID:0000000008333565

Regarding Wiring Diagram information, refer to <u>AV-709</u>, "Wiring <u>Diagram"</u> (Bose Audio w/o Surround Sound) or <u>AV-755</u>, "Wiring <u>Diagram"</u> (Bose Audio with Surround Sound).

# 1. CHECK DCM MIC SIGNAL CIRCUIT AND DCM MIC VCC CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect TCU connector M47 and AV control unit connector M122.
- 3. Check continuity between TCU connector M47 and AV control unit connector M122.

T	CU	AV cor	ntrol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	21		60	
M47	22	M122	75	Yes
	23		59	

4. Check the continuity between TCU connector M47 and ground.

TCU		Ground	Continuity
Connector	Terminal	Orduna	Continuity
M47	21		No
W4 <i>1</i>	22	_	INO

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2.CHECK DCM MIC VCC VOLTAGE

- 1. Connect TCU connector M47 and AV control unit connector M122.
- 2. Turn ignition switch ON.
- Check voltage between AV control unit connector M122 terminals.

AV control unit connector M122		Voltage (Approx.)
(+)	(+) (-)	
Terminal	Terminal	( 44)
60	59	5.0 V

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace TCU. Refer to AV-827, "Removal and Installation".

# 3. CHECK DCM MIC SIGNAL

Check signal between AV control unit connector M122.

### **U1A0C MICROPHONE**

### < DTC/CIRCUIT DIAGNOSIS >

# [TELEMATICS SYSTEM]

AV control unit	connector M122			/
(+)	(–)	Condition	Reference value	
Terminal	Terminal			_ [
60	59	Speak into microphone.	(V) 2.5 2.0 1.5 1.0 0.5 0	)

### Is the inspection result normal?

YES

>> Replace TCU. Refer to <u>AV-827, "Removal and Installation"</u>.
>> Replace AV control unit. Refer to <u>AV-825, "Removal and Installation - AV Control Unit"</u>. NO

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### **U1A0E TELEMATICS SWITCH**

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

# **U1A0E TELEMATICS SWITCH**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
SOS SWITCH ON STUCK [U1A0E]	ECALL SW short circuit.	<ul> <li>Harness or connectors.</li> <li>Telematics switch.</li> <li>Replace TCU if malfunction occurs constantly. Refer to AV-827. "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000008333567

Regarding Wiring Diagram information, refer to <u>AV-709</u>, "Wiring <u>Diagram"</u> (Bose Audio w/o Surround Sound) or <u>AV-755</u>, "Wiring <u>Diagram"</u> (Bose Audio with Surround Sound).

# 1. CHECK ECALL SW CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect TCU connector M47 and telematics switch connector.
- 3. Check the continuity between TCU connector M47 and ground.

TCU		Ground	Continuity
Connector	Terminal	Giodila	Continuity
M47	34	_	No

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK TELEMATICS SWITCH

Check continuity between telematics switch terminals.

Telematics switch		Condition	Continuity
Terminal	Terminal	Condition	Continuity
3	7	Switch pressed	Yes
3	1	Switch released	No

### Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".

NO >> Replace telematics switch.

### **U1A0F TELEMATICS SWITCH**

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

INFOID:0000000008333569

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# **U1A0F TELEMATICS SWITCH**

DTC Logic

CONSULT Display	DTC Detection Condition	Possible Cause
SOS SWITCH NO CONN [U1A0F]	LED A open circuit.	<ul> <li>Harness or connectors.</li> <li>Telematics switch.</li> <li>Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".</li> </ul>

# **Diagnosis Procedure**

Regarding Wiring Diagram information, refer to <u>AV-709, "Wiring Diagram"</u> (Bose Audio w/o Surround Sound) or <u>AV-755, "Wiring Diagram"</u> (Bose Audio with Surround Sound).

# 1. CHECK LED A CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect TCU connector M47 and telematics switch connector.
- 3. Check continuity between TCU connector M47 and telematics switch connector R105.

Т	CU	Telemati	ics switch	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M47	35	R105	2	Yes

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

# 2. CHECK TELEMATICS SWITCH

Check continuity between telematics switch terminals.

Telematics switch		Condition	Continuity
Terminal	Terminal	Condition	Continuity
2	7	Switch pressed	Yes
2	/	Switch released	No

### Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".

NO >> Replace telematics switch.

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### POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

### POWER SUPPLY AND GROUND CIRCUIT

# Diagnosis Procedure

INFOID:0000000008233700

Regarding Wiring Diagram information, refer to <u>AV-709</u>, "Wiring <u>Diagram"</u> (Bose Audio w/o Surround Sound) or <u>AV-755</u>, "Wiring <u>Diagram"</u> (Bose Audio with Surround Sound).

# 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
1	Battery power supply	15 (15A)
3	ACC power supply	65 (10A)
4	Ignition signal	29 (5A)

### Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect TCU connector M47.
- Check voltage between TCU connector and ground.

AV control unit		Ground	Condition	Voltage
Connector	Terminal	2.2		(Approx.)
M47	1	_	Ignition switch: OFF	Battery voltage
	3		Ignition switch: ACC	
	4		Ignition switch: ON	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

# 3.CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check continuity between TCU connector M47 and ground.

TCU		Ground	Continuity
Connector	Terminal	Giodila	Continuity
	2		Yes
M47	7	_	
	14	-	

### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

### **TELEMATICS SYSTEM**

< SYMPTOM DIAGNOSIS >

# [TELEMATICS SYSTEM]

# SYMPTOM DIAGNOSIS

# **TELEMATICS SYSTEM**

Symptom Table

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# **TELEMATICS SYSTEM**

Symptom	Display icon	Error message	Possible cause
Telematics operation not available.	_	Telematics unit is not connected.	Perform self-diagnosis with CONSULT. Refer to AV-705, "CONSULT Function".
	**	The connection to the center failed.	Check ON/OFF status of TCU using the data monitor of CONSULT.  Replace TCU if it is ON. Refer to AV-827, "Removal and Installation".  Turn it ON again if it is OFF. Replace TCU if ON is switched to OFF. Refer to AV-827, "Removal and Installation".
		No service.	Use a cellular phone to check reception.  If service is available, replace TCU or TEL antenna.  For TCU replacement, refer to AV-827, "Removal and Installation".  For TEL antenna replacement, refer to AV-830, "Removal and Installation".  If the service is not available, move the vehicle to the position where service is available and perform the operation again.
		Service inoperative due to poor reception.	<ul> <li>Use a cellular phone to check reception.</li> <li>If it is OK, there may be a cause at the INFINITI CONNECTION Data Center. Check connection after a short period of time. If there is no problem at the INFINITI CONNECTION Data Center, replace TCU or TEL antenna.</li> <li>For TCU replacement, refer to AV-827, "Removal and Installation".</li> <li>For TEL antenna replacement, refer to AV-830, "Removal and Installation".</li> <li>If it is NG, check connection again after a short period of time.</li> </ul>
		Service not registered.	Check input of user ID and password from the navigation setting screen. If malfunction such as input or no memory despite input is detected, replace AV control unit.  Refer to AV-388, "Removal and Installation - AV Control Unit" (Bose Audio w/o Surround Sound) or AV-668, "Removal and Installation - AV Control Unit" (Bose Audio with Surround Sound).
		TCU line is used.	Check connection after a short period of time. Replace TCU if it is frequently displayed. Refer to AV-827, "Removal and Installation".
		The connection to the center failed.	There may be a cause at the INFINITI CONNECTION Data Center. Check connection after a short period of time. If there is no problem at the INFINITI CONNEC- TION Data Center, replace TCU or TEL antenna.  • For TCU replacement, refer to AV-827, "Removal and Installation".  • For TEL antenna replacement, refer to AV-830, "Removal and Installation".

### **NORMAL OPERATING CONDITION**

< SYMPTOM DIAGNOSIS >

[TELEMATICS SYSTEM]

# NORMAL OPERATING CONDITION

Description INFOID:000000008233702

### NOTE:

For Telematics system operation detail information, refer to Navigation system Owner's Manual.

Symptom	Possible cause	Possible solution
The system cannot connect to the Infiniti CONNECT Data Center.	A subscription for the CONNECT service has not been established.	Sign up for a subscription to the CON- NECT service. For details about subscrip- tions, contact an Infiniti dealer or visit the Infiniti CONNECT Data Center website.
	The user ID and password are not entered.	Enter the user ID and password.
	The communication line is busy.	Try again after a short period of time.
	The vehicle is in a location where reception is difficult.	When the vehicle moves to an area where radio waves can be transmitted sufficiently, communication will be restored. When the icon on the display shows that the vehicle is inside the communication area, the system can be used.
	TCU reception is insufficient.	When the vehicle moves to an area where radio waves can be transmitted sufficiently, communication will be restored. When the icon on the display shows that the vehicle is inside the communication area, the system can be used.
Some of the items that are displayed on the menu screen cannot be selected.	The vehicle is being driven and some menu items are	The vehicle is being driven. Stop the vehicle in a safe location and apply the parking brake before operating the functions.
Some parts of the screen are not displayed	disabled.	Operate the system after stopping the vehicle in a safe location and applying the parking brake.
The system does not announce information.	The volume level is set to the minimum.	Adjust the volume level by operating the VOL switches located on the control panel or on the steering wheel switch while the system is announcing information.

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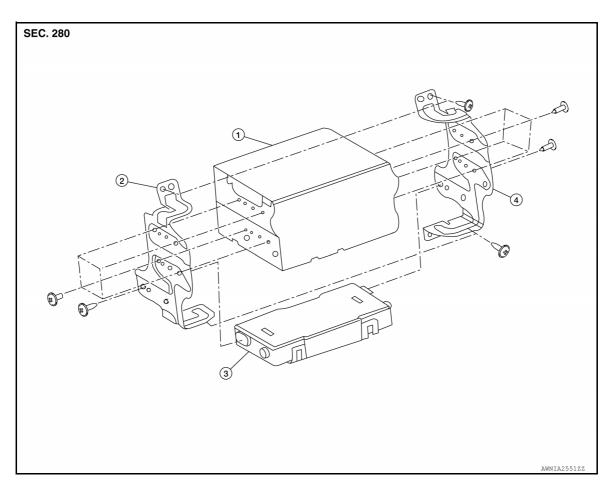
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# REMOVAL AND INSTALLATION

### AV CONTROL UNIT

Exploded View



1. AV control unit

- 2. AV control unit bracket LH
- 3. A/C auto amp.

AV control unit bracket RH

### Removal and Installation - AV Control Unit

INFOID:0000000008297257

### **REMOVAL**

#### **CAUTION:**

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to <a href="AV-541">AV-541</a>, "CONFIGURATION (AV CONTROL UNIT): Description".

- Disconnect the negative battery terminal. Refer to <u>PG-92, "Removal and Installation"</u>.
- 2. Remove cluster lid C upper. Refer to IP-21, "Removal and Installation Cluster Lid C Upper".
- Remove the screws, then pull out the AV control unit.
- 4. Disconnect the harness connectors from the AV control unit and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

#### **CAUTION:**

• When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to <u>AV-541, "CONFIGURATION (AV CONTROL UNIT)</u>: <u>Description"</u>.

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### **AV CONTROL UNIT**

### < REMOVAL AND INSTALLATION >

[TELEMATICS SYSTEM]

Removal and Installation - AV and AC Switch Assembly

INFOID:0000000008297258

### **REMOVAL**

#### **CAUTION:**

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to <u>AV-541, "CONFIGURATION (AV CONTROL UNIT): Description"</u>.

- Disconnect the negative battery terminal. Refer to <u>PG-92, "Removal and Installation"</u>.
- 2. Remove cluster lid C. Refer to IP-21, "Removal and Installation Cluster Lid C Upper"
- 3. Remove the AV and AC switch assembly screws (A), then separate the cluster lid C from AV and AC switch assembly.
- 4. Release upper pawls and remove AV and AC switch assembly

#### INSTALLATION

Installation is in the reverse order of removal.

### TCU

### Removal and Installation

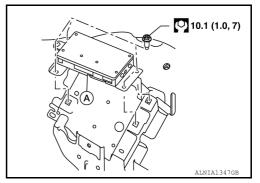
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### REMOVAL

- 1. Check the SIM ID. Refer to AV-705, "CONSULT Function".
- 2. Remove the CVT shift selector. Refer to TM-171, "Removal and Installation".
- Disconnect the harness connectors from TCU.
- 4. Remove the TCU screws and then remove TCU (A) with the bracket attached.
- 5. Remove the bracket screw and remove the bracket from TCU (A).

#### NOTE:

If it is difficult to remove the harness clip and the antenna feeder clip, remove the screw first and pull TCU forward together with the bracket. Be careful not to apply a load to the harness.



#### INSTALLATION

Installation is in the reverse order of removal.

#### NOTE:

- When TCU is replaced, perform activation. Refer to <u>AV-804, "ADDITIONAL SERVICE WHEN REPLACING TCU: Work Procedure".</u>
- When replacing the TCU, it is necessary to contact the communications service provider to activate the new TCU. Please refer to the appropriate Nissan Technical Service Bulletin for the correct TCU activation procedure and communications provider contact information.

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# **MICROPHONE**

### Removal and Installation

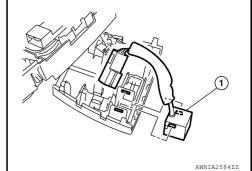
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### **REMOVAL**

- 1. Remove the front room/map lamp assembly. Refer to <a href="INT-25">INT-25</a>, "Removal and Installation".
- 2. Remove the microphone (1) from the front room/map lamp assembly.

### **CAUTION:**

Carefully handle the pawl that retain the microphone because the pawl is fragile.



### **INSTALLATION**

Installation is in the reverse order of removal.

#### NOTE:

Check the microphone for looseness after installation.

### **GPS ANTENNA**

### < REMOVAL AND INSTALLATION >

### [TELEMATICS SYSTEM]

# **GPS ANTENNA**

### Removal and Installation

#### INFOID:0000000008297259

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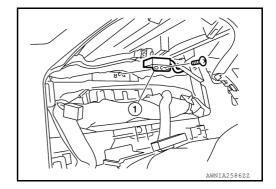
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### **REMOVAL**

- 1. Remove combination meter. Refer to IP-15, "Removal and Installation".
- 2. Disconnect harness connector from AV control unit.
- 3. Remove feeder clips.
- 4. Remove GPS antenna screws, then remove GPS antenna (1).



### **INSTALLATION**

Installation is in the reverse order of removal.

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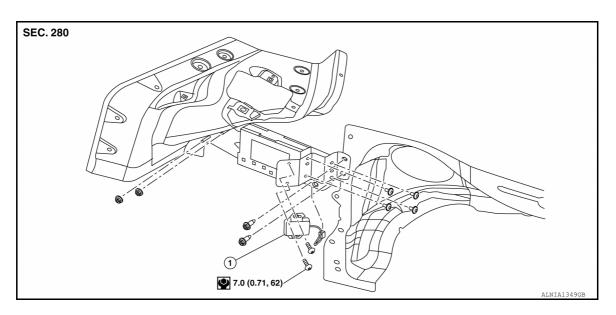
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# TEL ANTENNA

Exploded View



1. Tel antenna

### Removal and Installation

INFOID:0000000008233709

### **REMOVAL**

- 1. Remove luggage side lower finisher (LH). Refer to <a href="INT-29">INT-29</a>, "LUGGAGE SIDE LOWER FINISHER: Removal and Installation".
- 2. Disconnect harness connector from Bluetooth Control Unit.
- 3. Remove screws and then remove TEL antenna.

### **INSTALLATION**

Installation is in the reverse order of removal.