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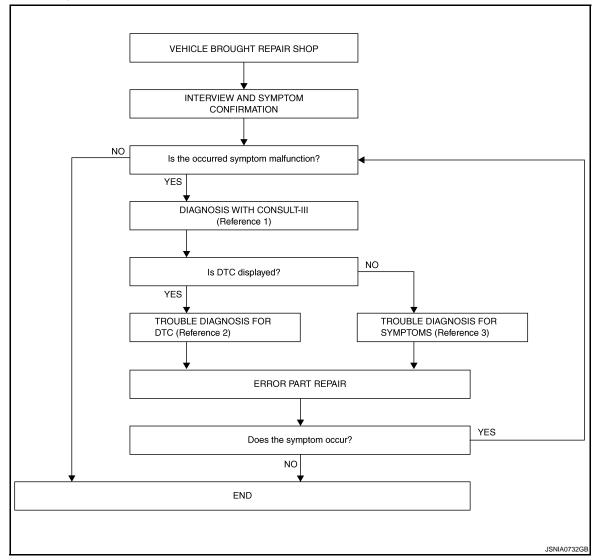
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# **BASIC INSPECTION**

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow INFOID:0000000003508362 В

### **OVERALL SEQUENCE**



- Reference 1... Refer to AV-37, "CONSULT-III Function (MULTI AV)".
- Reference 2··· Refer to <u>AV-99</u>, "<u>DTC Index</u>".
- Reference 3... Refer to AV-148, "Symptom Table".

### **DETAILED FLOW**

# 1.INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

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

### Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

2.DIAGNOSIS WITH CONSULT-III

### **DIAGNOSIS AND REPAIR WORKFLOW**

### < BASIC INSPECTION >

### [BASE AUDIO WITHOUT NAVIGATION]

Connect CONSULT-III and perform a self-diagnosis for "MULTI AV". Refer to AV-37, "CONSULT-III Function (MULTI AV)".

### NOTE:

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

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

### Is DTC displayed?

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

# 3. TROUBLE DIAGNOSIS FOR DTC

- 1. Check the DTC indicated in the self-diagnosis results.
- Perform the relevant diagnosis referring to the DTC Index. Refer to AV-99, "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-148, "Symptom Table"</u>.

>> GO TO 5.

# 5. ERROR PART REPAIR

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

#### NOTE:

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

3. Check that the symptom does not occur.

### Does the symptom occur?

YES >> GO TO 1.

NO >> INSPECTION END

## **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

>> END

[BASE AUDIO WITHOUT NAVIGATION]

INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL	А
ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description	В
WITH REAR VIEW MONITOR Always correct the center position of the predicted course line after disconnecting the battery negative terminal.	С
ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement	D
1. CORRECTION OF CENTER POSITION OF PREDICTED COURSE LINE  Refer to the following for details.	Е
>> Refer to AV-15, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Special Repair Requirement".  ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT	F
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description	G
When camera control unit is replaced, the center position of predicted course line shall be corrected.  ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement	Н
1. CORRECTION OF CENTER POSITION OF PREDICTED COURSE LINE	
Refer to the following for details.	J
>> Refer to AV-15, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Special Repair Requirement".  PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT	K
PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Description	L
Adjust the center position of the predicted course line of the rear view monitor if it is shifted.  PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Special Repair Requirement	M
1.STEERING OPERATION	AV
Steer the steering wheel to the leftmost and rightmost ends.	0
>> GO TO 2 2.DRIVING	Р
Drive the vehicle straight ahead 100 m (328.1 ft) or more at a speed of 30 km/h (18.6 MPH) or more.	

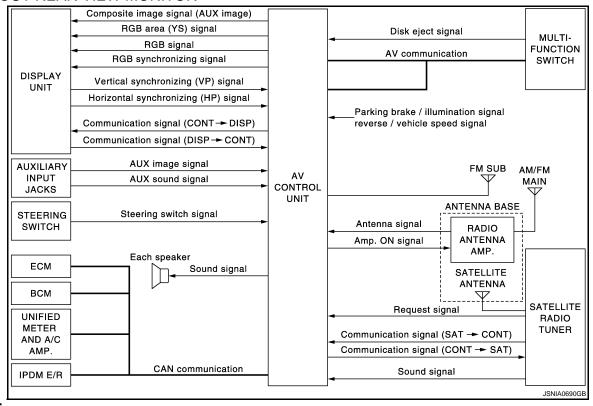
Revision: 2007 November AV-15 2008 EX35

# FUNCTION DIAGNOSIS

## **MULTI AV SYSTEM**

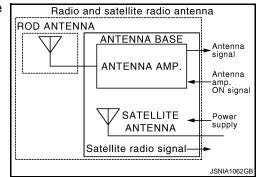
System Diagram

### WITHOUT REAR VIEW MONITOR



#### NOTE:

- The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.
- A radio antenna base integrated with radio antenna and satellite radio antenna is adopted.



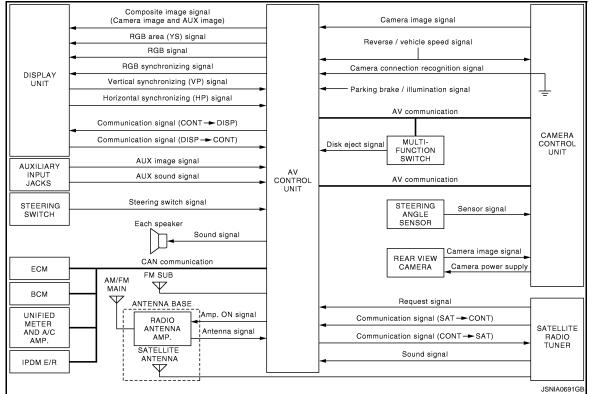
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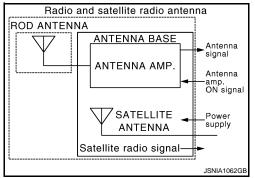
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### WITH REAR VIEW MONITOR



#### NOTE:

- The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.
- A radio antenna base integrated with radio antenna and satellite radio antenna is adopted.



INFOID:0000000003508364

# System Description

Multi AV system means that the following systems are integrated.

System name	System explanation
AUDIO SYSTEM	AV-21, "System Description"
VEHICLE INFORMATION SYSTEM	<ul> <li>Indicates the status of audio, climate control system, fuel economy and maintenance.</li> <li>AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM, unified meter and A/C amp.</li> <li>AV control unit is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> </ul>
AUXILIARY INPUT SYSTEM	Refer to "AUXILIARY INPUT SYSTEM" shown below.

- AV control unit functions by transmitting/receiving data one by one with each unit (slave unit) that configures
  them completely as a master unit by connecting between units that configure the MULTI AV system with two
  AV communication lines (H, L).
- Two AV communication lines (H, L) adopt a twisted pair line that is resistant to noise.

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

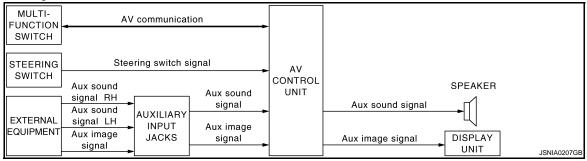
#### NOTE:

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

- CONSULT-III self-diagnosis: refer to <u>AV-37</u>, "CONSULT-III Function (MULTI AV)".
- On board self-diagnosis: refer to AV-28, "Diagnosis Description".

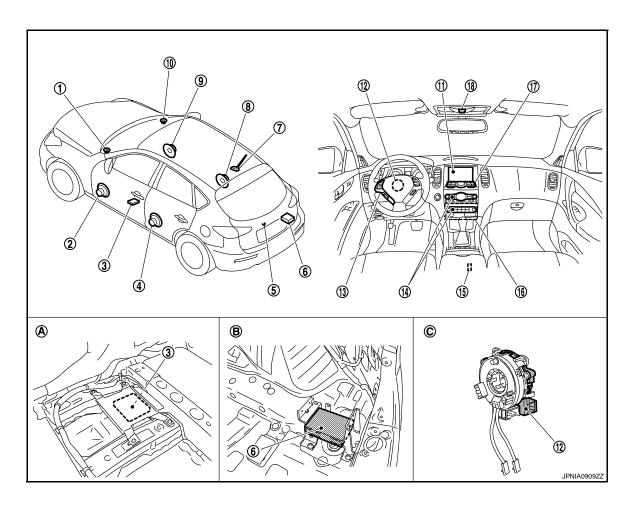
#### **AUXILIARY INPUT SYSTEM**

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



# Component Parts Location

INFOID:0000000003567035



### **MULTI AV SYSTEM**

### < FUNCTION DIAGNOSIS >

# [BASE AUDIO WITHOUT NAVIGATION]

1.	Front squawker LH	2.	Front door speaker LH	3.	Camera control unit	Α
4.	Rear door speaker LH	5.	Rear view camera	6.	Satellite radio tuner	
7.	Antenna base (antenna amp and satellite antenna)	8.	Rear door speaker RH	9.	Front door speaker RH	В
10.	Front squawker RH	11.	Display unit	12.	Steering angle sensor	
13.	Steering switch	14.	Preset switch	15.	Auxiliary input jacks	
16.	AV control unit	17.	Multifunction switch	18.	Microphone	C
A.	Under front seat (LH side)	B.	Luggage floor (RH side)	C.	Spiral cable part	

# **Component Description**

INFOID:0000000003508366

D

Part name	Description		
AV CONTROL UNIT	<ul> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by communication. It operates each system according to communication signals from AV control unit.</li> <li>AV control unit includes audio function and vehicle information function.</li> <li>It is connected to ECM and unified meter and A/C amp via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> <li>It inputs the illumination signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> <li>Auxiliary image signal is input from the auxiliary input jacks.</li> <li>Camera image signal is input from camera control unit.</li> <li>AV control unit recognizes the presence of camera system with camera connection recognition signal.</li> </ul>		
DISPLAY UNIT	<ul> <li>Display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal is input from AV control unit (RGB, RGB area and RGB synchronizing).</li> <li>Synchronizing signal (HP, VP) is output to AV control unit.</li> <li>Composite image signal is input from AV control unit.</li> </ul>		
FRONT DOOR SPEAKER	<ul><li>Outputs sound signal from AV control unit.</li><li>Outputs sound (mid and low range).</li></ul>		
REAR DOOR SPEAKER	<ul><li>Outputs sound signal from AV control unit.</li><li>Outputs sound (mid and low range).</li></ul>		
FRONT SQUAWKER	<ul><li>Outputs sound signal from AV control unit.</li><li>Outputs sound (high and mid range).</li></ul>		
MULTIFUNCTION SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio and auxiliary input operations are integrated.</li> <li>Connected with preset switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> </ul>		
PRESET SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio and air conditioner operations are integrated.</li> <li>Connected with multifunction switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> <li>The disk ejection operating signal is performed by hardwire.</li> </ul>		
CAMERA CONTROL UNIT	<ul> <li>Camera image signal is input from rear view camera. Camera image signal is output to AV control unit.</li> <li>Power (camera ON signal) is transmitted to rear view camera.</li> <li>Superimpose the guiding line and predicted course line to the camera image that outputs to AV control unit.</li> <li>Input the sensor signal from steering angle sensor, and then control the predicted course line.</li> <li>Camera control unit is connected via AV communication.</li> </ul>		
REAR VIEW CAMERA	<ul> <li>The image of vehicle rear view is transmitted to camera control unit.</li> <li>It receives power (camera ON signal) from camera control unit and operates.</li> </ul>		

### **MULTI AV SYSTEM**

### < FUNCTION DIAGNOSIS >

# [BASE AUDIO WITHOUT NAVIGATION]

Part name	Description
STEERING ANGLE SENSOR	Steering signal necessary for predicted course line control is transmitted to camera control unit.
STEERING SWITCH	<ul> <li>The operation of Audio, etc. can be performed.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>
AUXILIARY INPUT JACKS	The image signal of the auxiliary input is output via AV control unit to the display, and it outputs the sound signal to AV control unit.
ANTENNA BASE	A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.  ANTENNA AMP.  Radio signal received by rod antenna is amplified and transmitted to AV control unit.  Power (antenna amp. ON signal) is supplied from AV control unit.  SATELLITE RADIO ANTENNA  Receives the satellite radio waves and outputs it to satellite radio tuner.
SATELLITE RADIO TUNER	<ul> <li>Inputs the satellite radio signal from satellite radio antenna and outputs the sound signal to AV control unit.</li> <li>It is controlled with AV control unit and serial communication (communication signal and request signal).</li> </ul>

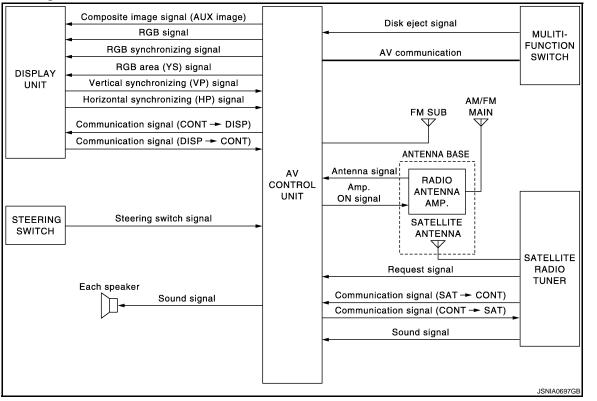
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INFOID:0000000003508367

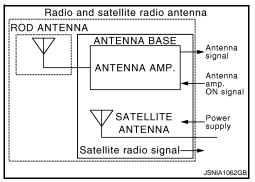
# **AUDIO SYSTEM**

System Diagram



#### NOTE:

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



INFOID:0000000003508368

# System Description

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

Function	
AM/FM radio	
Satellite radio	
CD	

### **FUNCTION DESCRIPTION**

### Operating signal

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

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

### < FUNCTION DIAGNOSIS >

#### Screen display

- The display is switched by communication signal between display and AV control unit.
- The image signal to display operating condition is performed by the RGB signal, RGB area signal and RGB image synchronizing signal.

#### AM/FM Radio Mode

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

#### Satellite Radio System

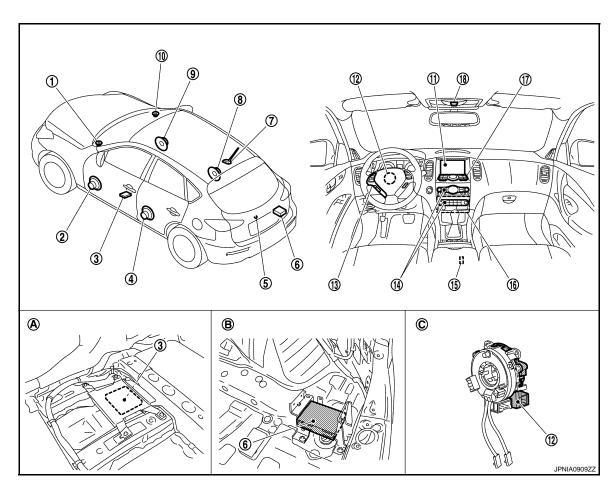
- Satellite radio tuner is controlled by communication signal and request signal with AV control unit.
- Satellite radio wave is received by satellite radio antenna and it is input to satellite radio tuner. Satellite radio tuner outputs satellite radio sound signal to AV control unit.
- AV control unit outputs satellite radio sound signal to each speaker.

#### CD Mode

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

### **Component Parts Location**

INFOID:0000000003579810



- 1. Front squawker LH
- 4. Rear door speaker LH
- Antenna base (antenna amp and sat- 8. ellite antenna)
- 10. Front squawker RH
- 13. Steering switch

- 2. Front door speaker LH
- 5. Rear view camera
- B. Rear door speaker RH
- 11. Display unit
- 14. Preset switch

- 3. Camera control unit
- Satellite radio tuner
- 9. Front door speaker RH
- 12. Steering angle sensor
- 15. Auxiliary input jacks

## **AUDIO SYSTEM**

## < FUNCTION DIAGNOSIS >

# [BASE AUDIO WITHOUT NAVIGATION]

- 16. AV control unit
- A. Under front seat (LH side)
- 17. Multifunction switch
- 18. Microphone
- B. Luggage floor (RH side)
- C. Spiral cable part

# Α

В

# **Component Description**

INFOID:0000000003508370

Part name	Description
AV CONTROL UNIT	<ul> <li>The AM/FM receiving function and the CD playing function are equipped.</li> <li>Outputs the audio signal to each speaker.</li> </ul>
DISPLAY UNIT	<ul> <li>Display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal (audio operation condition) is input from AV control unit.</li> </ul>
FRONT DOOR SPEAKER	<ul> <li>Outputs sound signal from AV control unit.</li> <li>Outputs sound (mid and low range).</li> </ul>
REAR DOOR SPEAKER	<ul> <li>Outputs sound signal from AV control unit.</li> <li>Outputs sound (mid and low range).</li> </ul>
FRONT SQUAWKER	<ul><li>Outputs sound signal from AV control unit.</li><li>Outputs sound (high and mid range).</li></ul>
MULTIFUNCTION SWITCH	<ul> <li>Each audio operation can be operated.</li> <li>Connected with preset switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> </ul>
PRESET SWITCH	<ul> <li>Each audio and air conditioner operation can be operated.</li> <li>Connected with multifunction switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> <li>The disk ejection operating signal is performed by hardwire</li> </ul>
STEERING SWITCH	<ul><li>Each audio operation can be operated.</li><li>Steering switch signal (operation signal) is output to AV control unit.</li></ul>
ANTENNA BASE	A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.  ANTENNA AMP  Radio signal received by rod antenna is amplified and transmitted to AV control unit.  Power (antenna amp. ON signal) is supplied from AV control unit.  SATELLITE RADIO ANTENNA  Receives the satellite radio waves and outputs it to satellite radio tuner.
SATELLITE RADIO TUNER	<ul> <li>Inputs the satellite radio signal from satellite radio antenna and outputs the sound signal to AV control unit.</li> <li>It is controlled with AV control unit and serial communication (communication signal and request signal).</li> </ul>

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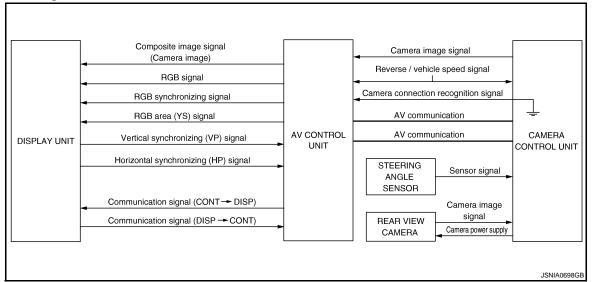
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# **REAR VIEW MONITOR SYSTEM**

### System Diagram

INFOID:0000000003160905



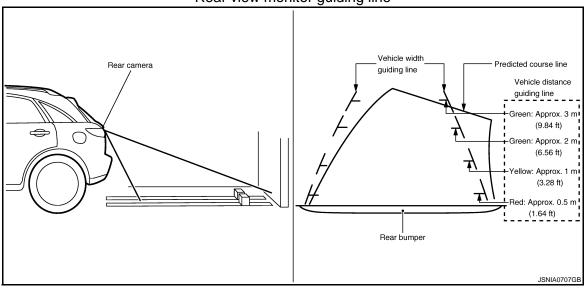
# System Description

INFOID:0000000003533916

### CAMERA IMAGE OPERATION PRINCIPLE

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

#### Rear view monitor guiding line



### **REAR VIEW MONITOR SYSTEM**

[BASE AUDIO WITHOUT NAVIGATION]

### < FUNCTION DIAGNOSIS >

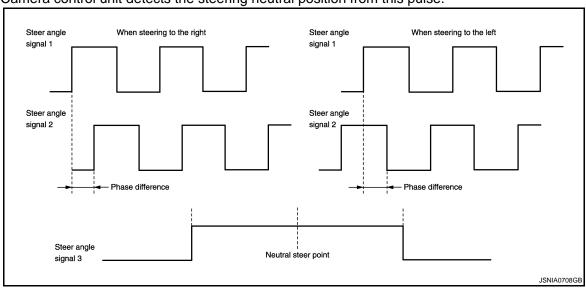
### PREDICTED COURSE LINE OPERATION PRINCIPLE

Detection of steering rotation direction

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

Detection of steering neutral position

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



Correction of steering neutral position

Camera control unit corrects the steering neutral position during driving according to the vehicle speed signal and sensor signal.

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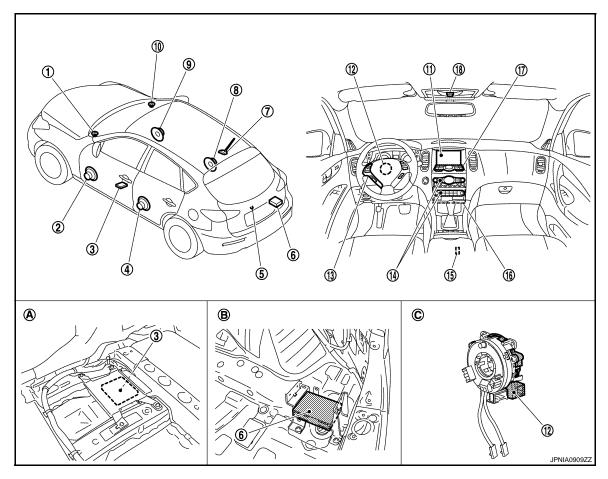
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# **Component Parts Location**

INFOID:0000000003579812



- 1. Front squawker LH
- 4. Rear door speaker LH
- 7. Antenna base (antenna amp and sat- 8. ellite antenna)
- 10. Front squawker RH
- 13. Steering switch
- 16. AV control unit
- A. Under front seat (LH side)

- 2. Front door speaker LH
- 5. Rear view camera
- 8. Rear door speaker RH
- 11. Display unit
- 14. Preset switch
- 17. Multifunction switch
- B. Luggage floor (RH side)

- 3. Camera control unit
- 6. Satellite radio tuner
- 9. Front door speaker RH
- 12. Steering angle sensor
- 15. Auxiliary input jacks
- 18. Microphone
- C. Spiral cable part

# **Component Description**

INFOID:0000000003534171

Part name	Description		
AV CONTROL UNIT	<ul> <li>Image on display is transmitted to rear view monitor image by serial communication between AV control unit and display unit.</li> <li>Warning displayed on the rear view monitor image is illustrated.</li> <li>AV control unit recognizes the presence of camera system with camera connection recognition signal.</li> </ul>		
DISPLAY UNIT	<ul> <li>Camera image signal is input from AV control unit.</li> <li>RGB signal for warning display is input from AV control unit.</li> <li>Rear view monitor image is changed by serial communication from AV control unit.</li> </ul>		

## **REAR VIEW MONITOR SYSTEM**

### < FUNCTION DIAGNOSIS >

# [BASE AUDIO WITHOUT NAVIGATION]

Part name	Description
CAMERA CONTROL UNIT	<ul> <li>Camera image signal is input from rear view camera. Camera image signal is output to AV control unit.</li> <li>Power (camera ON signal) is transmitted to rear view camera.</li> <li>Superimpose the guiding line and predicted course line to the camera image that outputs to AV control unit.</li> <li>Inputs the sensor signal from steering angle sensor, and then controls the predicted course line.</li> <li>Camera control unit is connected via AV communication.</li> </ul>
REAR VIEW CAMERA	<ul> <li>The image of vehicle rear view is transmitted to camera control unit.</li> <li>It receives power (camera ON signal) from camera control unit and operates.</li> </ul>
STEERING ANGLE SENSOR	Steering signal necessary for predicted course line control is transmitted to camera control unit.

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< FUNCTION DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

# DIAGNOSIS SYSTEM (AV CONTROL UNIT)

### **Diagnosis Description**

INFOID:0000000003508371

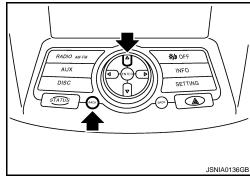
### MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

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

### Self-diagnosis mode

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

The hazard switch and CD eject switch cannot be checked.



#### Finishing self-diagnosis mode

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

#### MULTI AV SYSTEM ON BOARD DIAGNOSIS FUNCTION

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

#### ON BOARD DIAGNOSIS

#### Description

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

### On board diagnosis item

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

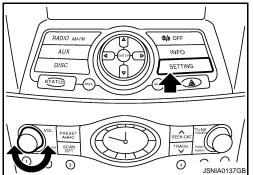
### < FUNCTION DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

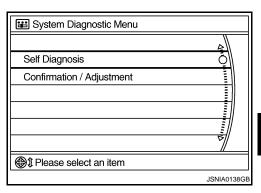
Mode		Description	
	Display Diagnosis	The confirmations of the tint with the color spectrum bar display and shading of color with the gradation bar display can be performed.	
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse.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

### STARTING PROCEDURE

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



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



**SELF-DIAGNOSIS MODE** 

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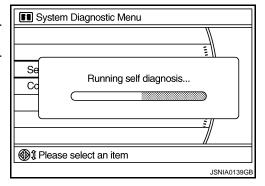
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### < FUNCTION DIAGNOSIS >

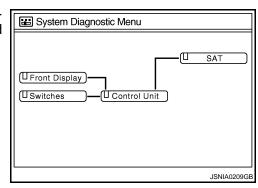
### [BASE AUDIO WITHOUT NAVIGATION]

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



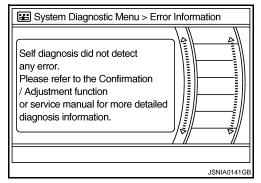
 Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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



#### NOTE:

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



### **SELF-DIAGNOSIS RESULTS**

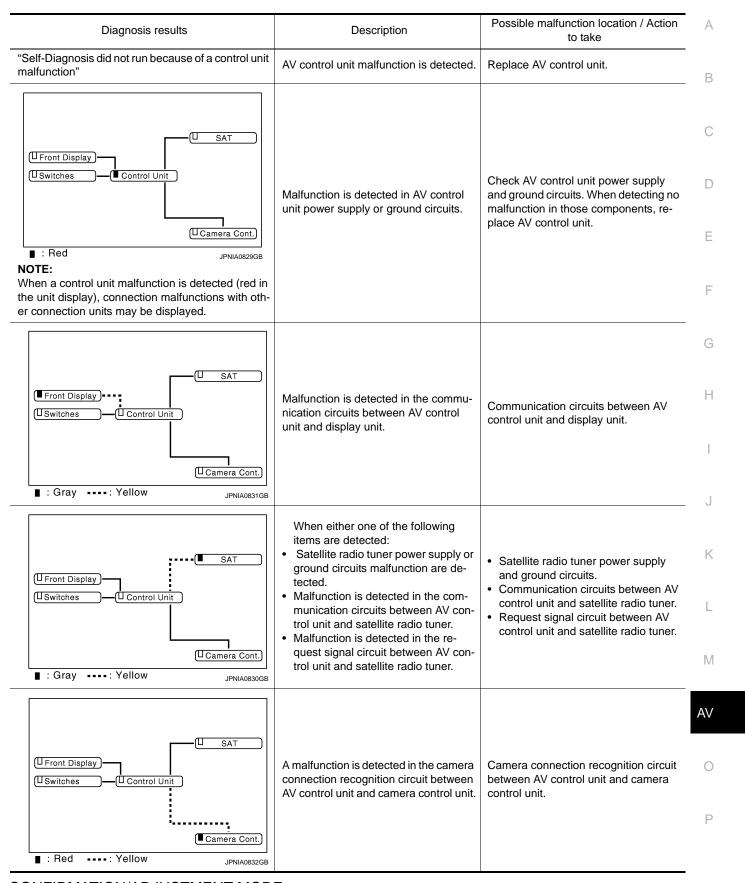
- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between the AV control unit and each unit, and the internal operation of AV control unit.
- Because the start condition of the diagnosis function is a switch operation, the on board diagnosis function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

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

Self-diagnosis result chart

### [BASE AUDIO WITHOUT NAVIGATION]



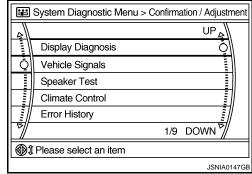
### CONFIRMATION/ADJUSTMENT MODE

1. Start the diagnosis function and select "Confirmation/Adjustment". The confirmation/adjustment mode indicates where each item can be checked or adjusted.

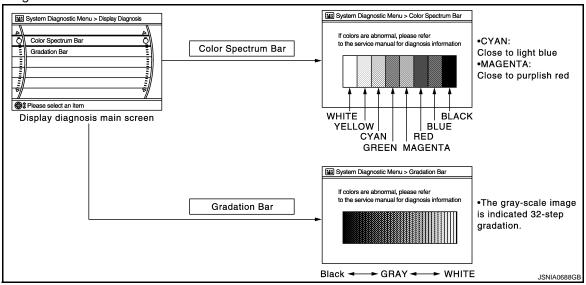
### < FUNCTION DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

 Select each switch on the "Inspection & Adjustment Mode" screen to display the relevant trouble diagnosis screen. Press the "RETURN" switch to return to the initial Inspection & Adjustment Mode screen.



#### Display Diagnosis



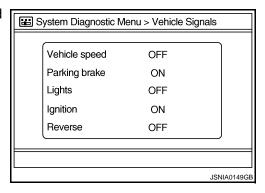
The tint of the color bar indication is as per the following list if a RGB signal error is detected.

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

B (blue) signal error : Yellow tint

### Vehicle Signals

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



Diagnosis item	Display	Vehicle status	Remarks	
Vehicle speed	ON	Vehicle speed > 0 km/h (0 MPH)		
veriicie speed	OFF	Vehicle speed = 0 km/h (0 MPH)	Changes in indication may be delayed. This is norm	
Parking brake	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.	
		Parking brake is released.		

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#### < FUNCTION DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

Diagnosis item	Display	Vehicle status	Remarks
Lights ON	ON	Light switch ON	_
	OFF	Light switch OFF	_
Ignition	ON	Ignition switch ON	
OFF	Ignition switch in the ACC position		
Reverse OFF	ON	Shift the selector lever to the "R" position	Changes in indication may be delayed. This is normal.
	Shift the selector lever to a position other than the "R" position	Changes in mulcation may be delayed. This is normal.	

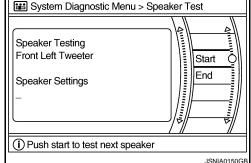
#### Speaker Test

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

#### NOTE:

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

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



#### Climate Control

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

#### **Error History**

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

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

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

#### Count up method B

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

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

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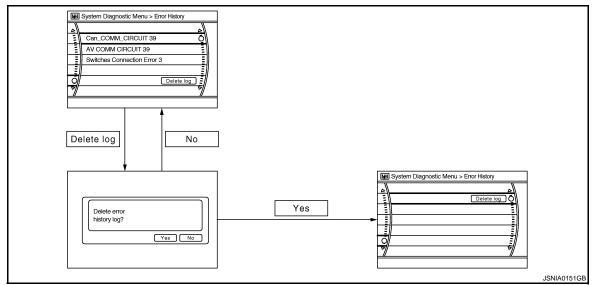
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<sup>\*:</sup> Squawker

## [BASE AUDIO WITHOUT NAVIGATION]



Error item

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

Error item	Description	Possible malfunction factor/Action to take	
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results.  Refer to AV-37, "CONSULT-III Function (MULTI AV)".	
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.		
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	Replace AV control unit.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.		
CAN Controller Memory Error	Av control unit manufiction is detected.		
Front Display Connection Error	<ul> <li>When either one of the following items are detected:</li> <li>Display unit power supply or ground circuits malfunction are detected.</li> <li>Malfunction is detected in the communication circuits between AV control unit and display unit.</li> </ul>	<ul> <li>Display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and display unit.</li> </ul>	
Camera Control Unit Connection Error	Malfunction is detected in the camera connection recognition circuit between AV control unit and camera control unit.	Camera-connection recognition circuits be- tween AV control unit and camera control unit.	
SAT Connection Error	<ul> <li>When either one of the following items are detected:</li> <li>Satellite radio tuner power supply or ground circuits malfunction are detected.</li> <li>Malfunction is detected in the communication circuits between AV control unit and satellite radio tuner.</li> <li>Malfunction is detected in the request signal circuits between AV control unit and satellite radio tuner.</li> </ul>	<ul> <li>Satellite radio tuner power supply and ground circuits.</li> <li>Communication circuits between AV control unit and satellite radio tuner.</li> <li>Request signal circuit between AV control unit and satellite radio tuner.</li> </ul>	

### < FUNCTION DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

Error item	Description	Possible malfunction factor/Action to take
AV COMM CIRCUIT     Switches Connection Error	When either one of the following items are detected:  Multifunction switch power supply or ground circuits malfunction are detected.  Malfunction is detected in the AV communication circuits between AV control unit and multifunction switch.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>
AV COMM CIRCUIT     Rear View Camera Connection Error	When either one of the following items are detected:  Camera control unit power supply or ground circuits malfunction are detected.  Malfunction is detected in the AV communication circuits between camera control unit and the junction between AV control unit and multifunction switch.	<ul> <li>Camera control unit power supply and ground circuits.</li> <li>AV communication circuits between camera control unit and the junction between AV control unit and multifunction switch.</li> </ul>
AV COMM CIRCUIT     Switches Connection Error     Rear View Camera Connection Error	Malfunction is detected in the AV communication circuits between AV control unit and the junction between multifunction switch and camera control unit.	AV communication circuits between AV control unit and the junction between multi-function switch and camera control unit.

### Vehicle CAN Diagnosis

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

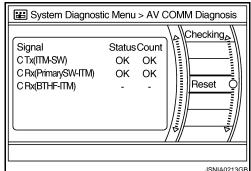
Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / UNKWN	OK / 0 – 39
Rx(ECM)	OK / UNKWN	OK / 0 – 39
Rx(Cluster)	OK / UNKWN	OK / 0 – 39
Rx(BCM)	OK / UNKWN	OK / 0 – 39
Rx(HVAC)	OK / UNKWN	OK / 0 – 39
Rx(USM)	OK / UNKWN	OK / 0 - 39

#### System Diagnostic Menu > Vehicle CAN... (\$)BACK Signal Status Count Tx(HVAC) OK OK Rx(ECM) OK OK Rx(Cluster) OK OK Reset Rx(BCM) OK OK Rx(HVAC) OK OK Rx(USM) OK OK JSNIA0080GE

### **AV COMM Diagnosis**

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

Items	Status (Current)	Counter (Past)
C Tx(ITM-SW)	OK / UNKWN	OK / 0 - 39
C Rx(PrimarySW-ITM)	OK / UNKWN	OK / 0 - 39
C Rx(XM–ITM)	_	_



#### Camera Cont.

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

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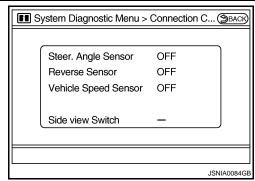
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### < FUNCTION DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

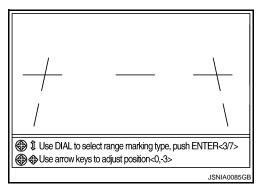
The steering angle sensor, reverse signal and vehicle speed sensor can be inspected.



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

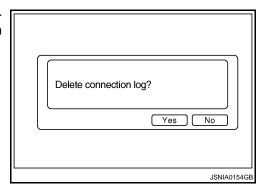
### ADJUST OFFSET OF REAR VIEW CAMERA

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



### **Delete Unit Connection Log**

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



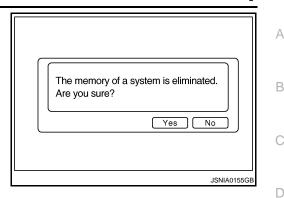
Initialize Settings

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

#### < FUNCTION DIAGNOSIS >

#### [BASE AUDIO WITHOUT NAVIGATION]

Initializes AV control unit memory.



## CONSULT-III Function (MULTI AV)

INFOID:0000000003508372

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

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

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

#### AV COMMUNICATION

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

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

#### **ECU IDENTIFICATION**

The part number of AV control unit is displayed.

#### SELF DIAGNOSIS RESULT

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

#### Self-diagnosis results display item

Error item	Description	Possible malfunction factor/Action to take	
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results.  Refer to AV-40, "Diagnosis Procedure".	M
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.		AV
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	Replace AV control unit.	0
Control Unit FLASH-ROM [U1200]	AV control unit malfunction is detected.		
CAN CONT [U1216]	Av control unit mailunction is detected.		Р
FRONT DISP CONN [U1243]	<ul> <li>When either one of the following items are detected:</li> <li>Display unit power supply or ground circuits malfunction are detected.</li> <li>Malfunction is detected in the communication circuits between AV control unit and display unit.</li> </ul>	<ul> <li>Display unit power supply and ground circuit.</li> <li>Communication circuit between AV control unit and display unit.</li> </ul>	

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

#### < FUNCTION DIAGNOSIS >

## [BASE AUDIO WITHOUT NAVIGATION]

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

#### **DATA MONITOR**

#### **ALL SIGNALS**

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

Display Item	Dis- play	Vehicle status	Remarks
VHCL SPD SIG	On	Vehicle speed > 0 km/h (0 MPH)	
VHOL SED SIG	Off	Vehicle speed = 0 km/h (0 MPH)	Changes in indication may be delayed. This is nor-
PKB SIG	On	Parking brake is applied.	mal.
FRB 3IG	Off	Parking brake is released.	
ILLUM SIG	On	Light switch ON	
ILLUM SIG	Off	Light switch OFF	
IGN SIG	On	Ignition switch ON	
IGN SIG	Off	Ignition switch in the ACC position	
REV SIG	On	Shift the selector lever to the "R" position	Changes in indication may be delayed. This is nor-
	Off	Shift the selector lever to a position other than the "R" position	mal.

#### **SELECTION FROM MENU**

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

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

## < FUNCTION DIAGNOSIS >

# [BASE AUDIO WITHOUT NAVIGATION]

Item to be selected	Description	
HCL SPD SIG		
(B SIG		
LUM SIG	The same as when "ALL SIGNALS" is selected.	
N SIG		
EV SIG		

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

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

# COMPONENT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

Description INFOID:0000000003508373

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

CAN Communication Signal Chart. Refer to LAN-27, "CAN System Specification Chart".

DTC Logic

#### DTC DETECTION LOGIC

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

## Diagnosis Procedure

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### 1. PERFORM SELF-DIAGNOSTIC

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

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

YES >> Refer to "LAN system". Refer to LAN-18, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI section. Refer to GI-38, "Intermittent Incident".

# **U1010 CONTROL UNIT (CAN)**

< COMPONENT DIAGNOSIS >

## [BASE AUDIO WITHOUT NAVIGATION]

# U1010 CONTROL UNIT (CAN)

Description INFOID:0000000003508376

Initial diagnosis of AV control unit.

DTC Logic

#### DTC DETECTION LOGIC

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

# Diagnosis Procedure

# 1. REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit.

>> INSPECTION END

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## **U1310 AV CONTROL UNIT**

## [BASE AUDIO WITHOUT NAVIGATION]

# **U1310 AV CONTROL UNIT**

Description INFOID:000000003508379

Replace the AV control unit if this DTC is displayed. Refer to AV-156, "Exploded View".

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

DTC Logic

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

## **U1200 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

## [BASE AUDIO WITHOUT NAVIGATION]

# **U1200 AV CONTROL UNIT**

Description INFOID:000000003508381

Replace the AV control unit if this DTC is displayed. Refer to AV-156, "Exploded View".

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

DTC Logic

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

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### **U1216 AV CONTROL UNIT**

## [BASE AUDIO WITHOUT NAVIGATION]

# **U1216 AV CONTROL UNIT**

Description INFOID:0000000003508383

Replace the AV control unit if this DTC is displayed. Refer to AV-156, "Exploded View".

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

DTC Logic

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

### **U1243 DISPLAY UNIT**

### < COMPONENT DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

## U1243 DISPLAY UNIT

**Description** 

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

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes	Е
U1243	FRONT DISP CONN [U1243]	When either one of the following items is detected: Display unit power supply and ground circuits malfunction is detected. Malfunction is detected in communication circuits between AV control unit and display unit.	Display unit power supply and ground circuits.     Communication circuits between AV control unit and display unit.	F

## Diagnosis Procedure

# 1. CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuits. Refer to <u>AV-51, "DISPLAY UNIT: Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# 2. CHECK CONTINUITY COMMUNICATION CIRCUIT

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

Display unit		AV control unit		Continuity	
Connector	Terminals	Connector Terminals		Continuity	
M71	11	M83	56	Existed	
IVI / I	22	IVIOS	44	Existed	

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

Displa	ay unit		Continuity
Connector Terminals		Ground	Continuity
M71	11	Glound	Not existed
IVI7 I	22	Not ex	Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

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

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

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### **U1243 DISPLAY UNIT**

### [BASE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

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

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

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

Check signal between display unit harness connector and ground.

(+)				
Displa	Display unit		Condition	Reference value
Connector	Terminal			
M71	22	Ground	When adjusting display brightness.	(V) 6 4 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace display unit.

### **U1250 CAMERA CONTROL UNIT**

< COMPONENT DIAGNOSIS >

#### [BASE AUDIO WITHOUT NAVIGATION]

## U1250 CAMERA CONTROL UNIT

Description INFOID:000000003529091

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

DTC Logic

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

## Diagnosis Procedure

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# 1. CHECK CAMERA-CONNECTION RECOGNITION SIGNAL CIRCUIT

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

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

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK AV CONTROL UNIT VOLTAGE

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

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

#### Is inspection result normal?

YES >> Replace camera control unit.

NO >> Replace AV control unit.

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#### [BASE AUDIO WITHOUT NAVIGATION]

## **U1255 SATELLITE RADIO TUNER**

**Description** 

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

DTC Logic

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

## Diagnosis Procedure

INFOID:0000000003508390

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

Check satellite radio tuner power supply and ground circuit. Refer to AV-54, "SATELLITE RADIO TUNER: Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# 2.CHECK CONTINUITY COMMUNICATION CIRCUIT AND REQUEST SIGNAL CIRCUIT

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

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

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

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

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

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

#### < COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

# 3. CHECK AV CONTROL UNIT VOLTAGE

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

	+) itrol unit	(–)	Voltage (Approx.)	
Connector Terminals			( , , , , , , , , , , , , , , , , , , ,	
M82	28	Ground	7.5 V	
IVIOZ	29	Giodila	7.0 V	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

# 4. CHECK SATELLITE RADIO TUNER

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

(-	+)		Voltage	
Satellite radio tuner		(–)	Voltage (Approx.)	
Connector Terminal			, , , ,	
M236	10	Ground	7.0 V	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace satellite radio tuner.

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### **U1300 AV COMM CIRCUIT**

#### [BASE AUDIO WITHOUT NAVIGATION]

## U1300 AV COMM CIRCUIT

Description INFOID:000000003508391

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

#### SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1300 U1240	r	When either one of the following items is detected:  Multifunction switch power supply and ground circuits malfunction is detected.  Malfunction is detected in AV communication circuits between AV control unit and multifunction switch.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits be- tween AV control unit and multi- function switch.</li> </ul>
U1300 U1252	AV COMM CIRCUIT [U1300]     REAR CAMERA CONN [U1252]	When either one of the following items is detected: Camera control unit power supply and ground circuits malfunction is detected. Malfunction is detected in AV communication circuits between camera control unit and the junction of AV control unit and AV control unit and multifunction switch.	Camera control unit power supply and ground circuits.     AV communication circuits between camera control unit and the junction of AV control unit and AV control unit and multifunction switch.
U1300 U1240 U1252	[U1240]	Malfunction is detected in AV communication circuits between AV control unit and the junction of camera control unit and multifunction switch.	AV communication circuits between AV control unit and the junction of camera control unit and multifunction switch.

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000003508392

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#### 1.CHECK FUSE

Check for blown fuses.

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

#### Is the inspection result normal?

>> GO TO 2. YES

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

## 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between AV control unit harness connectors and ground.

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

#### Is the inspection result normal?

YES >> GO TO 3.

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

## 3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M81	17	OFF	Existed
	M81	20		
	M85	85		

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

DISPLAY UNIT

# **DISPLAY UNIT: Diagnosis Procedure**

1. CHECK POWER SUPPLY CIRCUIT (DISPLAY SIDE)

Check voltage between display unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Inverter VCC	M71	2	2 3 ACC	9 V
Signal VCC	M71	3		

#### Is the inspection result normal?

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

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#### < COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

INFOID:0000000003508394

# 2.check power supply circuit (continuity)

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

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

4. Check continuity between display unit harness connectors and ground.

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

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

# 3.CHECK POWER SUPPLY CIRCUIT (AV CONTROL UNIT SIDE)

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Inverter VCC	M83	59	ACC	9 V
Signal VCC	IVIOS	47	700	3 V

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replacement of AV control unit.

# 4. CHECK GROUND CIRCUIT

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

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

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

#### MULTIFUNCTION SWITCH

# MULTIFUNCTION SWITCH: Diagnosis Procedure

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Ignition switch ACC or ON	19

#### Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK POWER SUPPLY CIRCUIT

#### < COMPONENT DIAGNOSIS >

#### [BASE AUDIO WITHOUT NAVIGATION]

Check voltage between multifunction switch harness connector and ground.

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

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between multifunction switch and fuse.

# 3.CHECK GROUND CIRCUIT

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

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

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

#### CAMERA CONTROL UNIT

## CAMERA CONTROL UNIT : Diagnosis Procedure

INFOID:0000000003652718

## 1. CHECK FUSE

Check for blown fuses.

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

#### Is inspection result normal?

YES >> GO TO 2.

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

# 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between camera control unit harness connector and ground.

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

#### Is inspection result normal?

YES >> GO TO 3.

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

# 3. CHECK GROUND CIRCUIT

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

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

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

#### SATELLITE RADIO TUNER

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#### < COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

# SATELLITE RADIO TUNER: Diagnosis Procedure

INFOID:0000000003508395

# 1. CHECK FUSE

Check for blown fuses.

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

#### Is the inspection result normal?

YES >> GO TO 2.

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

# 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between satellite radio tuner harness connector and ground.

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

#### Is the inspection result normal?

YES >> INSPECTION END

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

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

#### < COMPONENT DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

# RGB (R: RED) SIGNAL CIRCUIT

Description

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

## Diagnosis Procedure

#### INFOID:000000003508397

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

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M71	17	M83	40	Existed

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

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	17		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (R: RED) SIGNAL

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

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

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

# RGB (G: GREEN) SIGNAL CIRCUIT

**Description** 

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

## Diagnosis Procedure

INFOID:0000000003508399

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

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M71	6	M83	39	Existed

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

Displa	ay unit		Continuity
Connector	Connector Terminal		Continuity
M71	6		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (G: GREEN) SIGNAL

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

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

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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

#### < COMPONENT DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

# RGB (B: BLUE) SIGNAL CIRCUIT

Description

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

## **Diagnosis Procedure**

### INFOID:0000000003508401

# $\hbox{\bf 1.} \text{check continuity RGB (B: BLUE) SIGNAL CIRCUIT}$

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M71	18	M83	38	Existed

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

Displa	ay unit		Continuity
Connector	onnector Terminal		Continuity
M71	18		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (B: BLUE) SIGNAL

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

(+) Display unit		(-)	Condition	Reference value
Connector	Terminal			
M71	18	Ground	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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### **RGB SYNCHRONIZING SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

## **RGB SYNCHRONIZING SIGNAL CIRCUIT**

Description INFOID:000000003508402

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

## Diagnosis Procedure

INFOID:00000000003508403

# 1. CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M71	19	M83	41	Existed

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

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	19		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB SYNCHRONIZING SIGNAL

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

(+) Display unit		(–)	Reference value
Connector	Terminal		
M71	19	Ground	(V) 4 0 → 20 µs SKIB3603E

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

# RGB AREA (YS) SIGNAL CIRCUIT

Description INFOID:0000000003508404

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

## Diagnosis Procedure

# INFOID:0000000003508405

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

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M71	9	M83	43	Existed

Check continuity between display unit harness connector and ground.

Displa	ay unit		Continuity
Connector	Connector Terminal		Continuity
M71	9		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB AREA (YS) SIGNAL

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

(+) Display unit		(-)	Condition	Reference value (Approx.)
Connector	Terminal			( pp. 5)
			At RGB image is displayed	5.0 V
M71	9	Ground	At AUX image is displayed	(V) 6 4 2 0 +

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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

< COMPONENT DIAGNOSIS >

# HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Description INFOID:000000003508406

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

## Diagnosis Procedure

INFOID:0000000003508407

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

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M71	8	M83	45	Existed

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

Displa	ay unit		Continuity
Connector	Connector Terminal		Continuity
M71	8		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

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

(+)		( )	D. Constant	
Display unit  Connector Terminal		(–)	Reference value	
Connector	Terrinai			
M71	8	Ground	(V) 4 0 + + 20μs SKIB3601E	

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace display unit.

# VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

# VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description

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

## Diagnosis Procedure

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

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M71	20	M83	57	Existed

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

Displa	ay unit		Continuity
Connector	Connector Terminal		Continuity
M71	20		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

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

(+) Display unit		(-)	Reference value
Connector	Terminal		
M71	20	Ground	(V) 4 0 + 4ms SKIB3598E

#### Is the inspection result normal?

Revision: 2007 November

YES >> Replace AV control unit.

NO >> Replace display unit.

**AV-61** 

2008 EX35

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INFOID:0000000003508409

## **AUX IMAGE SIGNAL CIRCUIT**

[BASE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

## AUX IMAGE SIGNAL CIRCUIT

Description INFOID:0000000003508410

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

### Diagnosis Procedure

INFOID:0000000003508411

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

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

Auxiliary input jacks		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M154	7	M84	66	Existed

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

Auxiliary i	nput jacks		Continuity
Connector	Connector Terminal		Continuity
M154	7		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

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

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

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

#### Is the inspection result normal?

YES >> GO TO 3.

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

# 3.check continuity composite image signal circuit (av control unit and display unit)

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M71	15	M83	36	Existed

## **AUX IMAGE SIGNAL CIRCUIT**

#### < COMPONENT DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

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

Display unit			Continuity
Connector	Terminal	Ground	Continuity
M71	15		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

## 4. CHECK COMPOSITE IMAGE SIGNAL

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

	+) ay unit	(-)	Condition	Reference value
Connector	Terminal			
M71	15	Ground	At AUX image is displayed.	(V) 0.4 0 -0.4 • • 40μs SKIB2251J

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

# DISK EJECT SIGNAL CIRCUIT

Description INFOID:0000000003508412

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

## **Diagnosis Procedure**

INFOID:0000000003508413

2008 EX35

# 1. CHECK CONTINUITY DISK EJECT SIGNAL CIRCUIT

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

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

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

Multifunct	Multifunction switch		Continuity
Connector	Terminal	Ground	Continuity
M72	14		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# $2.\mathsf{CHECK}$ AV CONTROL UNIT VOLTAGE

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

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

#### Is the inspection result normal?

YES >> Replace preset switch.

NO >> Replace AV control unit.

## REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

## REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:000000003529077

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

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

## **Diagnosis Procedure**

#### INFOID:0000000003529078

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# 1. CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

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

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

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

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

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK CAMERA IMAGE SIGNAL

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

(+)					
Camera o	control unit	(-)	Condition	Reference value	
Connector	Terminal				
B50	6	Ground	At rear view camera image is displayed.	(V) 0. 4 0 -0. 4 → 40μs SKIB2251J	

#### Is inspection result normal?

YES >> Replace camera control unit.

NO >> Replace rear view camera.

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#### **REAR VIEW CAMERA POWER SUPPLY**

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

## REAR VIEW CAMERA POWER SUPPLY

Description INFOID:000000003529081

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

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

### **Diagnosis Procedure**

INFOID:0000000003529082

# 1. CHECK CONTINUITY CAMERA ON SIGNAL CIRCUIT

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

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

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

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

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VOLTAGE CAMERA ON SIGNAL

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

	(+) Camera control unit (-)		Condition	Reference value (Approx.)
Connector	Terminal			(лрргох.)
B50	8	Ground	Shift position is "R"	6.0 V

#### Is inspection result normal?

YES >> Replace rear view camera.

NO >> Replace camera control unit.

## CAMERA IMAGE SIGNAL CIRCUIT (CAMERA CONTROL UNIT TO AV CON-**TROL UNIT)**

### < COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

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

Description INFOID:0000000003529083

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

## Diagnosis Procedure

 ${f 1}$  .CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT (CAMERA CONTROL UNIT TO AV CONTROL UNIT)

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

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

Check continuity between camera control unit harness connector and ground.

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

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

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

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

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

#### Is inspection result normal?

YES >> Replace AV control unit.

NO >> Replace camera control unit.

**AV-67** Revision: 2007 November 2008 EX35 В

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INFOID:0000000003529084

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### **COMPOSITE IMAGE SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

## COMPOSITE IMAGE SIGNAL CIRCUIT

Description INFOID:000000003529085

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

### **Diagnosis Procedure**

INFOID:0000000003529086

# $1. {\sf CHECK\ CONTINUITY\ COMPOSITE\ IMAGE\ SIGNAL\ CIRCUIT\ (AV\ CONTROL\ UNIT\ TO\ DISPLAY\ UNIT)}$

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

AV control unit		Displa	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M83	36	M71	15	Existed

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

AV con	trol unit		Continuity
Connector	Connector Terminal		Continuity
M83	36		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

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

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

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

#### Is inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

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INFOID:0000000003508415

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

Description INFOID:0000000003508414

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

## Diagnosis Procedure

# 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

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

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

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

Satellite r	adio tuner		Continuity	
Connector	Terminals	Ground	Continuity	
B236	9	Giodila	Not existed	
B230	10		Not existed	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# $2. \text{CHECK COMMUNICATION SIGNAL (SAT} {\rightarrow} \text{CONT)}$

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

	+) radio tuner	(-)	Condition	Reference value
Connector	Terminal			
B236	9	Ground	When satellite radio mode is selected.	(V) 10 -10 + 1ms SKIA9300J

#### Is the inspection result normal?

YES >> GO TO 3.

Revision: 2007 November

NO >> Replace satellite radio tuner.

3.CHECK COMMUNICATION SIGNAL (CONT $\rightarrow$ SAT)

Check signal between satellite radio tuner harness connector and ground.

**AV-69** 

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

### < COMPONENT DIAGNOSIS >

## [BASE AUDIO WITHOUT NAVIGATION]

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

#### Is the inspection result normal?

YES >> Replace satellite radio tuner.

NO >> Replace AV control unit.

# REQUEST SIGNAL CIRCUIT (SAT→CONT)

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

# REQUEST SIGNAL CIRCUIT (SAT→CONT)

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

## Diagnosis Procedure

## .

# 1. CHECK CONTINUITY REQUEST SIGNAL CIRCUIT

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

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

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

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK COMMUNICATION SIGNAL

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

(+) Satellite radio tuner Connector Terminal		(-)	Condition	Reference value
B236	8	Ground	When satellite radio mode is selected.	(V) 10 0 -10 ++10ms SKIA9299J

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace satellite radio tuner.

Revision: 2007 November AV-71 2008 EX35

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INFOID:00000000003508417

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### STEERING ANGLE SENSOR SIGNAL CIRCUIT

[BASE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

## STEERING ANGLE SENSOR SIGNAL CIRCUIT

Description INFOID:000000003529087

• Steering angle sensor signal 1, 2 detects the turning direction and quantity of the steering and transmits it to the camera control unit.

- Steering angle sensor signal 3 detects the neutral position of the steering and transmits it to the camera control unit.
- Camera control unit performs the correction of neutral position with sensor signal 1, 2, 3 and vehicle speed signal.

### Diagnosis Procedure

INFOID:0000000003529088

# 1. CHECK CONTINUITY STEERING ANGLE SENSOR SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect camera control unit connector and steering angle sensor connector.
- Check continuity between camera control unit harness connector and steering angle sensor harness connector.

Camera control unit		Steering angle sensor		Continuity	
Connector	Terminals	Connector	Terminals	Continuity	
B50	23	M37	3	Existed	
	24		4		
	25		5		

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

Camera control unit			Continuity
Connector	Terminals		Continuity
B50	23	Ground	
	24		Not existed
	25		

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VOLTAGE CAMERA CONTROL UNIT

- Connect camera control unit connector.
- Turn ignition switch ON.
- Check voltage between camera control unit harness connector and ground.

(+)		(-)	Reference value (Approx.)
Camera control unit			
Connector	Terminals		,
B50	23		5.0 V
	24	Ground	
	25		

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace camera control unit.

# 3. CHECK STEERING ANGLE SENSOR SIGNAL

- 1. Turn ignition switch OFF.
- 2. Connect steering angle sensor connector.

# STEERING ANGLE SENSOR SIGNAL CIRCUIT

#### < COMPONENT DIAGNOSIS >

## [BASE AUDIO WITHOUT NAVIGATION]

3. Turn ignition switch ON.

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

(	+)			
Camera o	Camera control unit		Condition	Reference value
Connector	Terminals			
	23, 24	Ground	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2
B50	23, 24	Glound	Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2
	25	Ground	Turn the steering around the neutral position	A: Sensor signal 3 B: Sensor signal 1

Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering angle sensor.

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#### STEERING SWITCH SIGNAL A CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

## STEERING SWITCH SIGNAL A CIRCUIT

**Description** 

Transmits the steering switch signal to AV control unit.

### Diagnosis Procedure

INFOID:0000000003508419

# 1. CHECK STEERING SWITCH SIGNAL A CIRCUIT

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

AV con	trol unit	Spira	Continuity	
Connector	Terminal	Connector Terminal		Continuity
M81	6	M36	24	Existed

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

AV con	trol unit		Continuity	
Connector	Connector Terminal		Continuity	
M81	M81 6		Not existed	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK SPIRAL CABLE

Check spiral cable.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

# 3.CHECK AV CONTROL UNIT VOLTAGE

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

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

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

#### 4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to AV-75, "Component Inspection".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

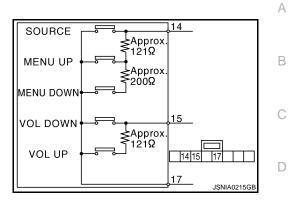
## STEERING SWITCH SIGNAL A CIRCUIT

#### < COMPONENT DIAGNOSIS >

## [BASE AUDIO WITHOUT NAVIGATION]

# Component Inspection

Measure the resistance between the steering switch connector.



INFOID:0000000003508420

Steering	Steering switch Steering switch		Condition	Resistance value	
Connector	Terminals	Connector	Terminal	Condition	$(\Omega)$
				SOURCE switch ON	0
	14			MENU UP switch ON	120 – 122
M303	M303	17	MENU DOWN switch ON	318 – 324	
	15			VOL DOWN switch ON	0
15		-	VOL UP switch ON	120 – 122	

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#### STEERING SWITCH SIGNAL B CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

## STEERING SWITCH SIGNAL B CIRCUIT

**Description** 

Transmits the steering switch signal to AV control unit.

### Diagnosis Procedure

INFOID:0000000003508422

# 1. CHECK STEERING SWITCH SIGNAL B CIRCUIT

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

AV con	AV control unit		Spiral cable		
Connector	Terminal	Connector Terminal		Continuity	
M81	16	M36	31	Existed	

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

AV con	trol unit		Continuity
Connector	Connector Terminal		Continuity
M81 16			Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK SPIRAL CABLE

Check spiral cable.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

# 3.CHECK AV CONTROL UNIT VOLTAGE

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

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

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

#### 4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-77, "Component Inspection"</u>.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

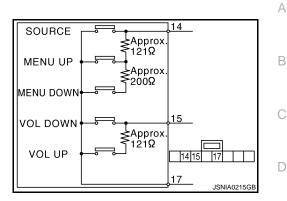
## STEERING SWITCH SIGNAL B CIRCUIT

#### < COMPONENT DIAGNOSIS >

## [BASE AUDIO WITHOUT NAVIGATION]

# Component Inspection

Measure the resistance between the steering switch connector.



INFOID:0000000003562718

Steering	Steering switch Steering switch		Condition	Resistance value	
Connector	Terminals	Connector	Terminal	Condition	$(\Omega)$
				SOURCE switch ON	0
	14			MENU UP switch ON	120 – 122
M303	M303	17	MENU DOWN switch ON	318 – 324	
	15			VOL DOWN switch ON	0
15		-	VOL UP switch ON	120 – 122	

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#### STEERING SWITCH SIGNAL GND CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO WITHOUT NAVIGATION]

## STEERING SWITCH SIGNAL GND CIRCUIT

**Description** 

Transmits the steering switch signal to AV control unit.

### Diagnosis Procedure

INFOID:0000000003508425

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# 1. CHECK STEERING SWITCH SIGNAL GND CIRCUIT

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

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

3. Connect AV control unit connector.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK SPIRAL CABLE

Check spiral cable.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

# 3. CHECK GROUND CIRCUIT

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

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

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

#### 4. CHECK STEERING SWITCH

- 1. Turn ignition switch OFF.
- 2. Check steering switch. Refer to AV-79, "Component Inspection".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

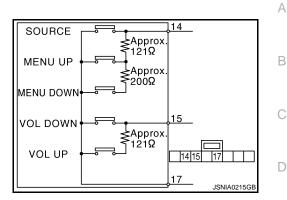
## STEERING SWITCH SIGNAL GND CIRCUIT

#### < COMPONENT DIAGNOSIS >

## [BASE AUDIO WITHOUT NAVIGATION]

# Component Inspection

Measure the resistance between the steering switch connector.



INFOID:0000000003562719

Steering	Steering switch Steering switch		Condition	Resistance value	
Connector	Terminals	Connector	Terminal	Condition	$(\Omega)$
				SOURCE switch ON	0
14			MENU UP switch ON	120 – 122	
M303	M303	M303	17	MENU DOWN switch ON	318 – 324
	15			VOL DOWN switch ON	0
15	15			VOL UP switch ON	120 – 122

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# **ECU DIAGNOSIS**

# AV CONTROL UNIT

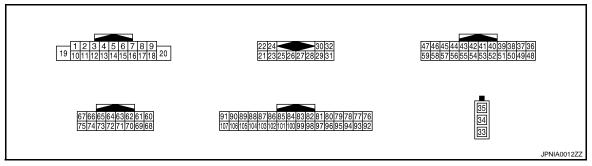
Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

#### CONSULT-III MONITOR ITEM

Display Item	Dis- play	Vehicle status	Remarks	
VHCL SPD SIG	On	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is nor-	
VIIOL OF DISIO	Off	Vehicle speed =0 km/h (0 MPH)	mal.	
PKB SIG	On	Parking brake is applied.	Changes in indication may be delayed. This is nor-	
PND SIG	Off	Parking brake is released.	mal.	
ILLUM SIG	On	Light switch ON		
ILLUM SIG	Off	Light switch OFF	_	
IGN SIG	On	Ignition switch ON		
IGN SIG	Off	Ignition switch in ACC position	_	
	On	Shift the selector lever to "R" position	Changes in indication may be delayed. This is nor-	
REV SIG	Off	Shift the selector lever other than "R" position	mal.	

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output			(Approx.)
2 (L)	3 (W)	Sound signal front door speaker LH and front tweet- er LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
4 (LG)	5 (L)	Sound signal rear door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 → 2ms SKIB3609E

# [BASE AUDIO WITHOUT NAVIGATION]

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	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
				lanitia a	Keep pressing SOURCE switch.	0 V
6 (P)	15 (B)	Steering switch signal A	Input	Ignition switch	Keep pressing $\Delta$ switch.	0.7 V
(F)	(Б)			ON	Keep pressing ∇ switch.	1.3 V
					Except for above.	3.3 V
7 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
9	Ground	Illumination signal	Input	OFF	Lighting switch is OFF.	0 V
(R)	Oround	mammation signal	mpat	011	Lighting switch is ON.	12.0 V
11 (BR)	12 (R)	Sound signal front door speaker RH and front tweeter RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
13 (L)	14 (P)	Sound signal rear door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
15 (B)	Ground	Steering switch signal ground	_	Ignition switch ON	_	0 V
16	15			Ignition	Keep pressing VOL DOWN switch.	0 V
(L)	(B)	Steering switch signal B	Input	switch ON	Keep pressing VOL UP switch.	0.7 V
					Except for above.	3.3 V
17 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
20 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
22 (B)	21 (W)	Satellite radio sound signal LH	Input	Ignition switch ON	When satellite radio mode is selected	(V) 1 0 -1 + 2ms SKIB3609E

				1		
	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
24 (G)	23 (R)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected	(V) 1 0 -1 + 2ms SKIB3609E
25	_	Shield	_	_	_	_
26	_	Shield	_	_	_	<del>_</del>
28 (W)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 ++10ms SKIA9299J
29 (B)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	(V) 10 -10 -10 
30 (R)	Ground	Communication signal (CONT→SAT)	Output	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 + 1ms SKIA9301J
33	_	FM sub	Input	_	_	_
34	_	AM-FM main	Input	_	_	_
35	Ground	Antenna amp. ON signal	Output	Ignition switch ACC	_	12.0 V
36 (SB)	Ground	Composite image signal	Output	Ignition switch ON	At rear view camera or AUX image display	(V) 0. 4 0 -0. 4 -0. 4 SKIB2251J
37 (V)	Ground	Composite image ground	_	Ignition switch ON	_	0 V

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
38 (P)	Ground	RGB signal (B: blue)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
39 (L)	Ground	RGB signal (G: green)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4 + 40μs SKIB2236J
40 (G)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4 -40μs SKIB2238J
41 (W)	Ground	RGB synchronizing signal	Output	Ignition switch ON	_	(V) 4 0 ++20 \(\mu\)skib3603E
42	_	Shield	_	_	_	_
					At RGB image display	5.0 V
43 (B)	Ground	RGB area (YS) signal	Output	Ignition switch ON	At AUX image display	(V) 6 4 2 0 + + 200μs PKIB4948J
44 (BR)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 + 1 ms PKIB5039J

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
45 (R)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON	_	(V) 4 0 → 20µs SKIB3601E
46 (LG)	Ground	Signal ground	_	Ignition switch ON	_	0 V
47 (O)	Ground	Signal VCC	Output	Ignition switch ACC	_	9.0 V
49	(Y)	Shield	_	_	_	_
50	_	Shield	_	_	_	_
55	_	Shield	_	_	_	_
56 (Y)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 ••••1ms
57 (G)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch ON	_	(V) 4 0 + 4ms SKIB3598E
58 (BR)	Ground	Inverter ground	_	Ignition switch ON	_	0 V
59 (Y)	Ground	Inverter VCC	Output	Ignition switch ACC	_	9.0 V
64	_	Shield	_	_	_	_
65 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4 -40μs SKIB2251J

	Terminal Wire color)  Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)
66 (G)	Ground	AUX image signal	Input	Ignition switch ON	When AUX mode is selected	(V) 0. 4 0 -0. 4 + 40μs SKIB2251J
68 (W)	Ground	Camera-connection recog- nition signal	_	Ignition switch ON	Connected to camera control unit connector  Not connected to camera	0 V
		-		ON	control unit connector	5.0 V
73	_	Shield	_		<u> </u>	<del>-</del>
74 (R)	Ground	AUX image signal ground	_	Ignition switch ON	_	0 V
85 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
86 (L)	_	CAN-H	Input/ Output	_	_	_
87 (P)	_	CAN-L	Input/ Output	_	_	_
88 (LG)	_	AV communication signal (H)	Input/ Output	_	_	_
89 (V)	_	AV communication signal (L)	Input/ Output	_	_	_
90 (L)*1 (G)*2	_	AV communication signal (H)	Input/ Output	_	_	_
91 (P)*1 (R)*2	_	AV communication signal (L)	Input/ Output	_	_	_
95 (B)	Ground	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is selected	(V) 1 0 -1 + 2ms SKIB3609E
96 (R)	Ground	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is selected	(V) 1 0 -1 ** 2ms SKIB3609E
97 (W)	Ground	AUX sound signal ground	_	Ignition switch ON	_	0 V

#### < ECU DIAGNOSIS >

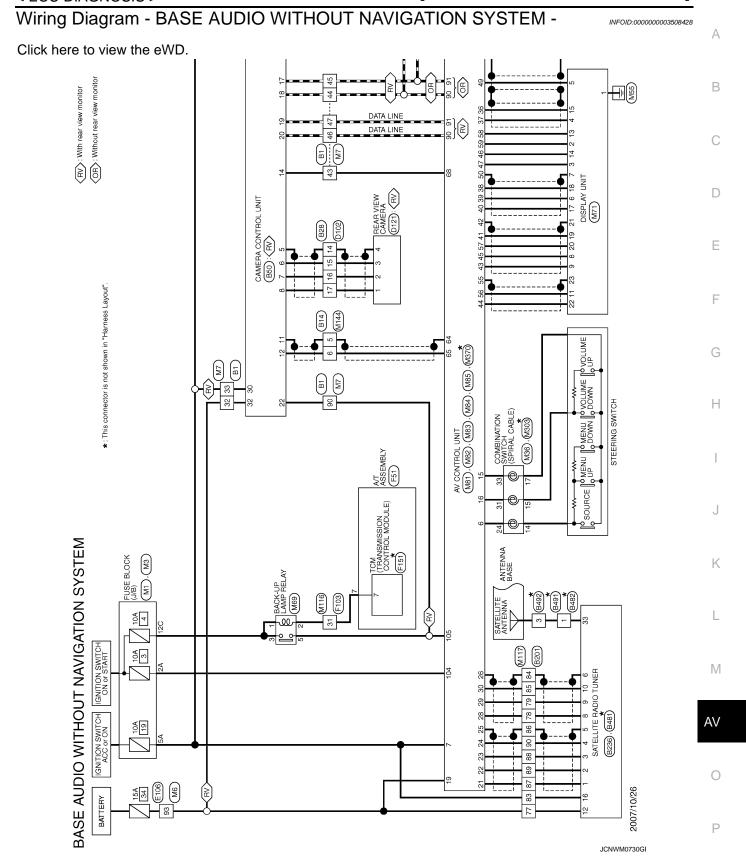
# [BASE AUDIO WITHOUT NAVIGATION]

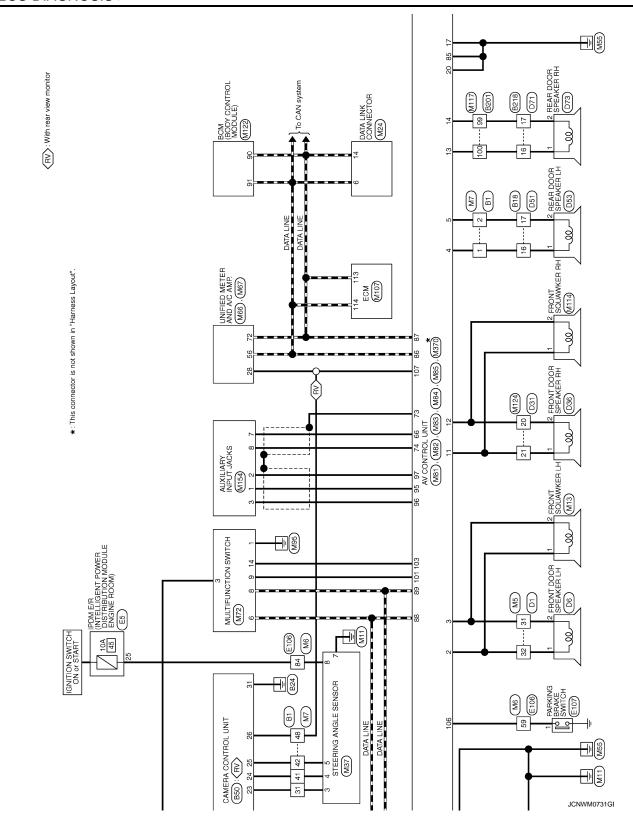
	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
101 (BR)	Ground	SW ground	_	Ignition switch ON	_	0 V
103	Ground	Disk eject signal	Input		Pressing the eject switch	0 V
(SB)	Giodila	DISK eject signal	input		Except for above	3.3 V
104 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
105		D		Ignition	R position	12.0 V
(O)	Ground	Reverse signal	Input	switch ON	Other than R position	0 V
					Parking brake ON	0 V
106 (V)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake OFF	(V) 8 4 0 10 ms JSNIA0007GB
107 (R)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25MPH)	NOTE:  Maximum voltage may be 12 V due to specifications (connected units).  (V)  4 2 0  ***20ms  SKIA6649J

#### NOTE:

<sup>\*1:</sup> Without rear view monitor.

<sup>\*2:</sup> With rear view monitor.





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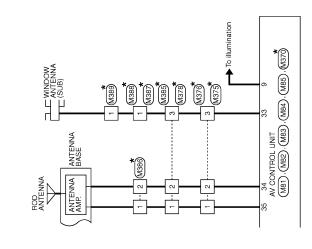
L

AV

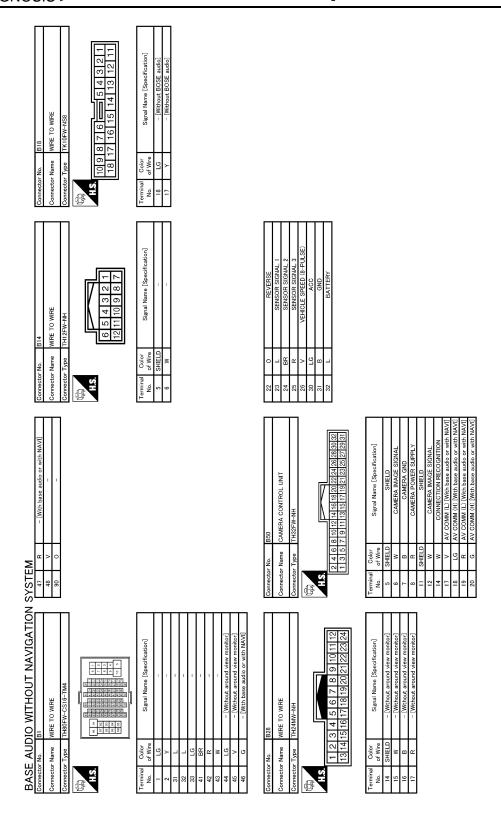
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\*: This connector is not shown in "Harness Layout".



JCNWM0733GE

	brien] (-) (-) (-) (-) (-) (-) (-) (-) (-) (-)		sien]		Α
E RADIO TUNER  12 14 12 14 12 14	Signal Name (Specification) SOUND SIGNAL LH () SOUND SIGNAL LH () SOUND SIGNAL RH (	R BASE	Signal Name [Specification] SAETLITE ANTENNA		В
Connector No. B236 Connector Name SATELLITE RADIO TUNER Connector Type A16FW    1   3   5   8   9   10	Objective of Wine of W	Connector No. B492 Connector Name ANTENNA BASE Connector Type GTIBC-IPP-HU  H.S.	Color of Wire		С
Connector No. Connector Nam Connector Typ	Terminal No. 1 2 2 4 4 4 6 6 6 6 10 10 110	Connector Non Connector Typ	Terminal No. 0		D
12 11 11 11 11 11 11 11 11 11 11 11 11 1	oecification) ISE audio]		oecification)		Е
No. 6218  Name WIRE TO WIRE  Type TK(10FW-NSS  10 9 8 7 6 5 4 13 18 17 16 15 14 13	Signal Name (Specification)  [Without BOSE audio]	B491 WIRE TO WIRE GTIGC-IPP-HU	Signal Name (Specification)		F
Connector No. 6218 Connector Name WIRE Connector Type TK10  10 9 8 7  18 17 1	I Color of Wire	2 0	O Wire		G
Connector No. Connector Na. H.S.	Terminal No. 16.	Connector No. Connector Typ	Terminal No.		Н
- [Without BOSE audio]			Signal Name [Specification]		I
- [Without		B482 WIRE TO WIRE GT16C-1S-HU	Signal Name		J
EW L		_ e _ e	Color		K
N SYSTEM 100 I		Connector No. Connector Typ	Terminal No.		
/IGATIO	stion]		NA NA		L
OUT NAV	Signal Name (Specification)	IO TUNER	Signal Name [Specification] SATELLITE ANTENNA		M
IO WITHOUT BEON WRE TO WRE THEOPY-CSIG-TM4	S. Signal	SATELLITE RADIO TUNER FAKRA	SATI		AV
BASE AUDIO WITHOUT NAVIGATIO Connector No. 6201 Connector Name WRE TO WRE Connector Type   H90FPV-CS16-TM4  H.S.	Color   Colo	Connector No. B	Color of Wire		0
Conne	Terminal To. 77 77 78 79 88 86 87 88 88 88 88 88	Conne	Terminal No. 833	JCNWM0734Gł	0
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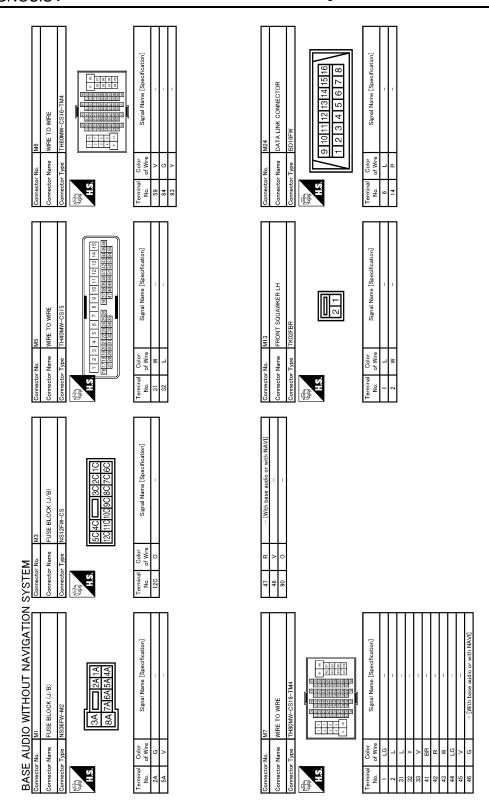
Revision: 2007 November AV-91 2008 EX35

BASE AUDIO WITHOUT NAVIGATION	SYSTEM	10 4 10 10 10 10 10 10 10 10 10 10 10 10 10	00 U 1
Connector Name WIRE TO WIRE	ne	ne	e e
Connector Type TH40FW-CS15	Connector Type NS02FW-CS	Connector Type TH40FW-CS15	Connector Type NS02FW-GS
13   13   12   11   10   9   7   0   5   4   3   2   1   1   1   1   1   1   1   1   1	H.S.	15   14   15   12   11   15   10   17   15   14   15   11   15   15   14   15   15	1.8 2 1
Terminal   Color   Signal Name [Specification]   No. of Wire	Terminal   Color   Signal Name [Specification]   1   G	Terminal   Color   Signal Name [Specification]   No. of Wire   - [Without around view monter]   20   R   - [Without around view monter]	Terminal   Color   Signal Name [Specification]   Orlor   Signal Name   Specification
Connector No. D51 Connector Name WIRE TO WIRE	Connector No. D53 Connector Name REAR DOOR SPEAKER LH	Connector No. D71 Connector Name WIRE TO WIRE	Connector No. D73 Connector Name REAR DOOR SPEAKER RH
Connector Type TK10MW-NS8	Connector Type NS0ZFW-CS	Connector Type TK10MW-NS8	Connector Type NS02FW-CS
H.S. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	H.S.	12345 (678910 1112131415 161718	H8.
Terminal Color   Signal Name (Specification)   No. of Wire   Signal Name (Specification)   1   1   Y - Withhout BOSE audio)   17   Y - Withhout BOSE audio)	Terminal   Color   Signal Name [Specification]   No. of Wire   1 LG   2 Y   -	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   16	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1 L   -   -

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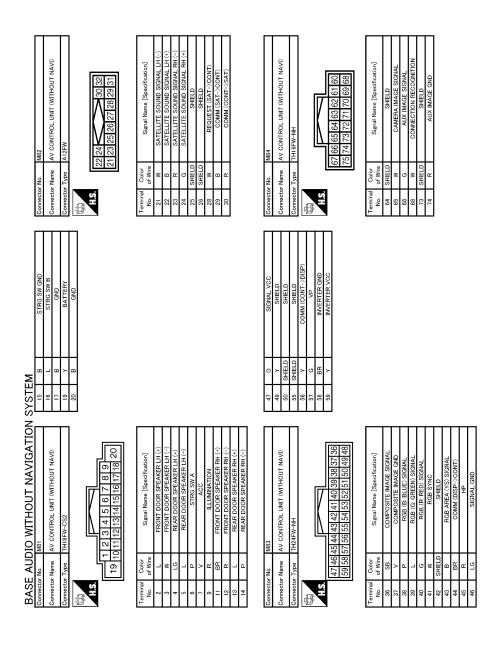
or No. E 106  Or Name WIRE TO WIRE  I H80FW-CS16-TM4	Color   Signal Name [Specification]   Color	Connector No.         F151           Connector Name         TCM (TRANSMISSION CONTROL MODULE)           Connector Type         SP10FBGY           TAS         TO 9 8 7 6 5 4 3 2 1	of Wire Signal Name [Specification] OREV LAMIP RLY		A B
Connector No. Connector Type	Terminal No. 98 84 84 84 84	Connector No. Connector Type Connector Type H.S.	Terminal No. 7		D
GINE ROOM) GINE ROOM) GINE ROOM) GINE ROOM GIN	feation]	0   0   0   0   0   0   0   0   0   0	feation]		Е
E5   POWER	Signal Name (Specification)	r Name WIRE TO WIRE  r Type TR38FW-NS10  GREBACHERING CHARACTER TO 1 1 1 7 1	Signal Name [Specification]		F
No. Type	of Wire	nector No. F103 Nector Name WIRE Fector Type TK366 September 1 K366	Color of Wire R		G
Connector No. Connector Type Connector Type The Connector Type Con	Terminal No. 25	Connector No. Connector Type Connector Type H.S.	Terminal No. 31		Н
RA T	Signal Name [Specification] CAMERA POWER SUPPLY CAMERA ROW CAMERA CAN SHIELD SHIELD		Signal Name [Specification]		I
DIZI THOMAWI-NH THOMAWI-NH	Signal IA CAMER CAMER	F51 A/T ASSEMBLY RK10FG-DGY 5 4 3 10 9 8	Signal N		J
No. Type	Color	Connector No. FF. Connector Type RR	No. of Wire		K
7	00 00 00 00 00 00 00 00 00 00 00 00 00				L
BASE AUDIO WITHOUT NAVIGATION Connector No. D102 Connector Type ITHZFFW-NH Connector Type ITHZFFW-NH  TRZ [12] [11] [10] [10] [10] [10] [10] [10] [10	Signal Name (Specification) Without around view monitor. Without around view monitor. Without around view monitor.	RAKE SWITCH	Signal Name [Specification]	_	M
DIO WITH DI02 WIRE TO WIRE TH24FW-NH DI09 8 7		PARKING B TB01FW		F	AV
BASE AUI Commettor Name Commettor Type H.S. 12 12 12	Terminal Color No. 91 Wile P. 114 SHELD 115 Y Y 116 L 117 G 117 G 117 C	Connector No. Connector Type	Terminal Color No. of Wire O		0
m©lolola	<u> -                                    </u>	[이 o lo] 명	[ <del>-</del> ] ]	JCNWM0736GI	Б
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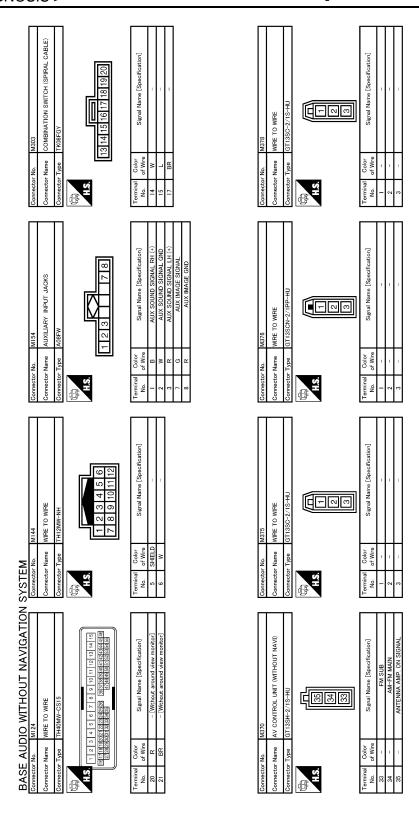
M67  TH32FW-NH  TH32FW-NH    14 45 46 147 48 40 90 51 120 53 54 55 58 160 107 17 17	Signal Name (Specification) CAN-H CAN-L	NOTION SWITCH NH    8   10   12   14   16     7   9   11   13   15     8   10   12   14   16     7   9   11   13   15     7   9   11   13   15     7   9   11   13   15     7   9   11   13   15     8   10   12   14   16     7   9   11   13   15     8   10   12   14   16     9   10   10   10     10   10   10   10     10   10		АВ
Connector No. M67  Connector Name UNIFIED METE  Connector Type ITH3ZFW-NH  M.S. S.	Terminal   Color   Signa   No.	M172   Connector No.   M172   Connector Name   MULTFUNCTION SWITCH   Connector Type   TH16FW-NH   MULTFUNCTION SWITCH   MULTFUNCTI		C
MOS TH40FW-NH TH40FW-NH	Signal Name (Specification) VEHICLE SPEED (8-PULSE)	SIGNAL GND COMPOSITE IMAGE SIGNAL RGB (R. RED) SIGNAL RGB S NUC VP SHELD COMM (SISP->CONT) SHELD		E F
Connector No. M66 Connector Name UNIFED ME Connector Type TH40FW-NH H.S. I 2 3 4 5 6 7 7 8 9 I 12 2 4 5 6 7 7 8 9	Terniral Color No. of Wire 28 R N	14 LG 15 SB C 16 SB C 19 W W 19 W W 19 W W 20 G 21 SHELD 22 SHELD 23 SHELD		G
M37 STEERING ANGLE SENSOR THOSPIW-NH  7 2 3 8 1 1 4 5	Signal Name [Specification] SENSORI SENSOR2 SENSOR2 OND IGN	TH24FW-NH		I
SYSTEM Connector No. Connector Name Connector Type H.S.	Terminal Color No. of Web 3 L 4 B 5 R 7 B 7 B 8 G	Connector No.   M71		K
BASE AUDIO WITHOUT NAVIGATION Somector No. M36 COMBINATION SWITCH (SPIRAL CABLE) Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TKOBFGY-1V  TKOBF	Signal Name [Specification]	MSGPL-W2 MSGPL-W2  Signal Name [Specification]	•	M
BASE AUDIO WITH Connector No. M35 Connector Name COMBINATIC Connector Type TKOSFCGV-1V  M3131313131313131313131313131313131313	Terminal Color No. of Wire 24 P P 33 B	Connector No.   M89		AV
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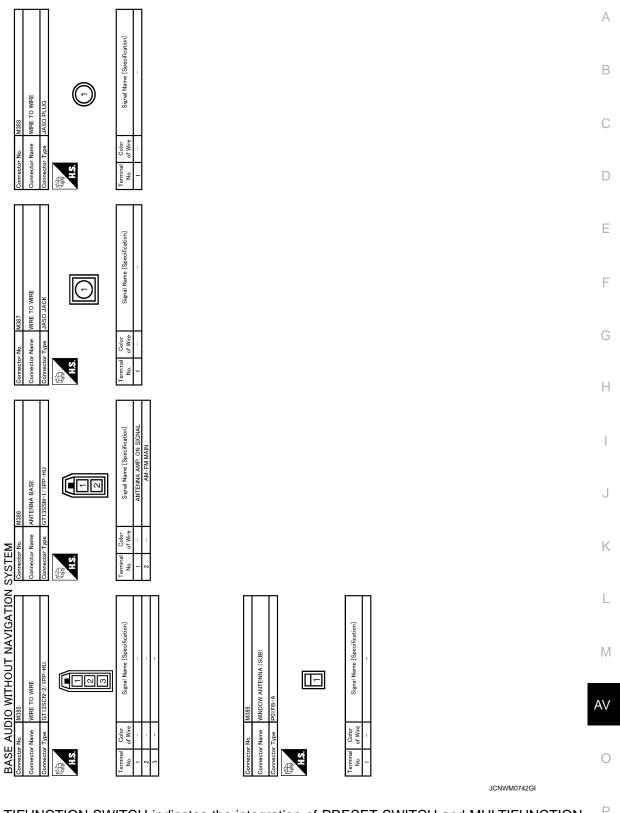
JCNWM0739GI

OUAWKER RH  21  Signal Name [Specification]  - [Without BOSE audio]  - [Without BOSE audio]	MI 22  BCM (BODY CONTROL MODULE)  TH40FB-NH  TH40FB-NH  Signal Name [Specification]  Signal Name [Specification]	АВ
Connector No. M114 Connector Name FRONT SOJAWKER RH Connector Type TK02FBR  Terminal Color Signal Name [5] No. of Wire Signal Name [5]  1 L - [Without B 2 W - [Without B	Connector No. M122 Connector Name BCM (BODY CON CON CONTECT THATOFE-NH  Connector Type TH40FE-NH  Terminal Color Of Wire Signal N  Of Wire Signal N  90 P	C
		Е
FGV-R28-R-LH-Z 122 III III III III III III III III III	- [Without BOSE audio]	F
ector No.  in all Color of Wire  4 1 2 P	d d 000	G
Trans A Trans Tran		Н
AUX SOUND SIGNAL GND SW GND DISK EJECT SIGNAL IGAITION REVERSE PARKING BRAKE VEHICLE SPEED (8-PULSE)	WIRE  CS 16-TM4  Signal Mamo [Specification]	I
AUX S		J
SYSTEM    101   104   105   10	MIT   Connector No.   MIT	К
NATION Integral integ		L
Mass	r No. M116  - Type   Tx30MM-NS10  - 12 0 4 5   United at specification   Or Wre  Color   Signal Name [Specification]	M
NIO WITI M85 AV CONTRO AV COMM	WIRE TO WIRE TK36MW-NS10 DISTRIBUTE OF DISTR	AV
Connector No.   Connector No.   Connector No.   Connector Type   Connect	Connector No. Connector Name Connector Type I 2 2 1 I 2 2 1 I 2 2 1 I 2 2 1 I 2 2 1 I 2 2 1 I 2 2 1 I 2 2 1 I 2 2 1 I 2 2 1 I 2 2 1 I 2 2 1 I 3 1 I W	0
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JCNWM0741GI



#### NOTE:

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

DTC Index

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

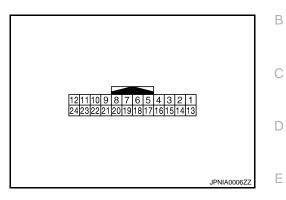
DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-40, "Diagnosis Procedure"
U1010	CONTROL UNIT (CAN) [U1010]	AV-41, "Diagnosis Procedure"
U1310	CONTROL UNIT (AV) [U1310]	AV-42, "DTC Logic"
U1200	Control Unit FLASH-ROM [U1200]	AV-43, "DTC Logic"
U1216	CAN CONT [U1216]	AV-44, "DTC Logic"
U1243	FRONT DISP CONN [U1243]	AV-45, "Diagnosis Procedure"
U1250	CAMERA CONT. CONN [U1250]	AV-47, "Diagnosis Procedure"
U1255	SAT CONN [U1255]	AV-48, "Diagnosis Procedure"
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	AV-50, "Description"
U1300 U1252	AV COMM CIRCUIT [U1300]     REAR CAMERA LAN CONN [U1252]	AV-50, "Description"
U1300 U1240 U1252	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]     REAR CAMERA LAN CONN [U1252]	AV-50, "Description"

## [BASE AUDIO WITHOUT NAVIGATION]

# **DISPLAY UNIT**

Reference Value

**TERMINAL LAYOUT** 



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INFOID:0000000003508430

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

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

#### **DISPLAY UNIT**

#### < ECU DIAGNOSIS >

# [BASE AUDIO WITHOUT NAVIGATION]

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

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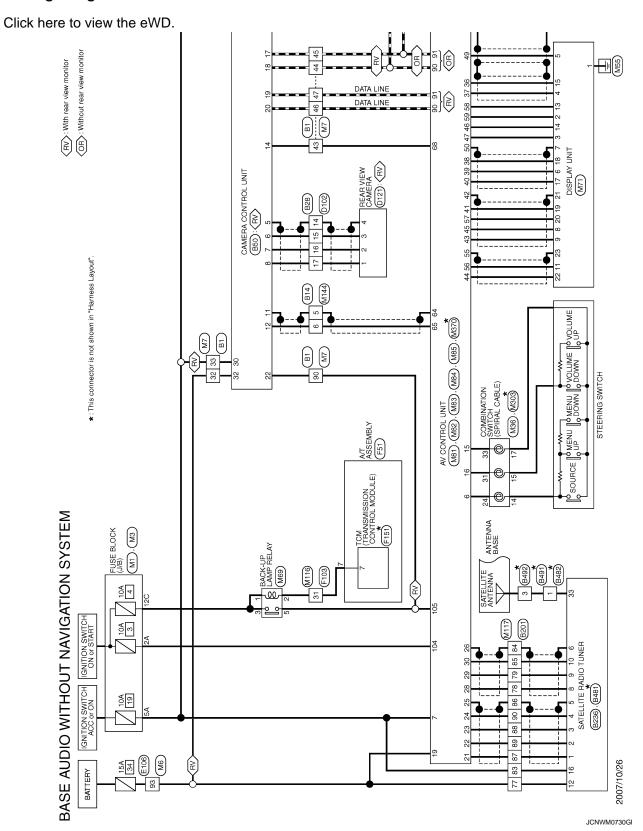
AV

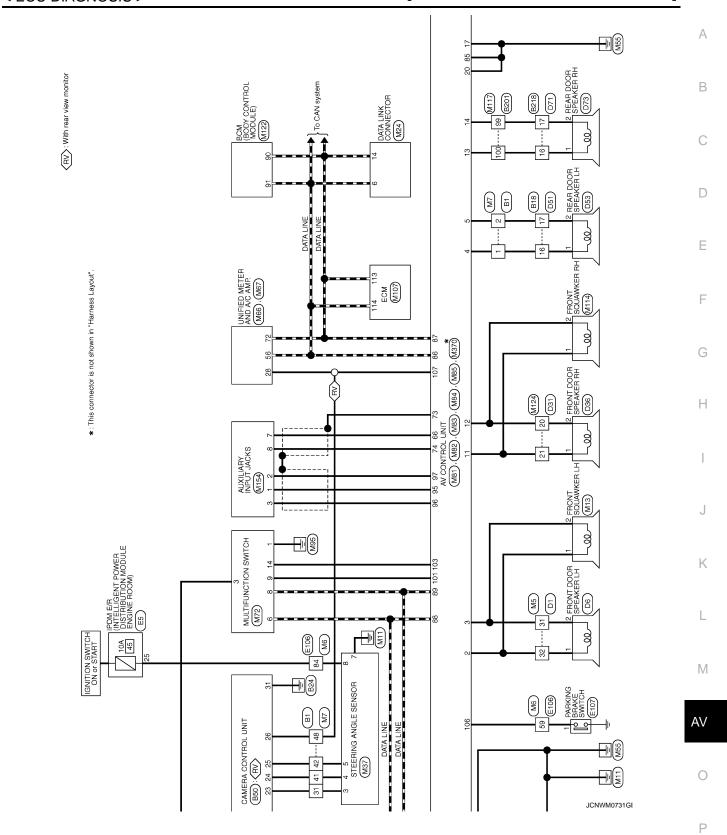
C

P

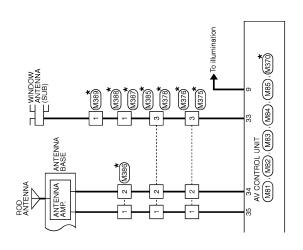
# Wiring Diagram - BASE AUDIO WITHOUT NAVIGATION SYSTEM -

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JCNWM0732GI

titlen]			А
NSB  NSB  15   4   3   2    15   14   13   12   1    15   14   13   12   1    16   14   13   12   1    17   14   13   12   1    18   14   13   12   1    19   14   13   12   1    10   14   13   12   1    10   14   13   12   1    10   14   13   12   1    10   14   13   12   1    10   14   13   12   1    11   14   13   12   1    12   14   13   12   1    13   15   14   13   12    14   15   14   13   12    15   14   13   12    16   14   13   12    17   14   13   12    18   14   13   12    19   14   13   12    10   14   13   12    10   14   13   12    10   14   13   12    10   14   13   12    10   14   13   12    10   14   13   12    10   14   13   12    10   14   13   12    10   14   13   13    10   14   13   13    10   14   13   13    10   14   13    10   14   13    10   14   13    10   14   13    10   14   13    10   14   13    10   14   13    10   14   13    10   14   13    10   14   13    10   14    10   14    10   14    10   14    10   14    10   14    10   14    10   15    10   14    10   15    1			В
B16   WRE TO   TK10FW-			С
Connector No.  Connector Type  Connector Type  10 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)			D
effication)	NAL 1 NAL 2 NAL 2 (3-PULSE)		Е
B14 WRE TO WIRE THI 2FW-NH  6 5 4 3 2 1  12 11 10 9 8 7  Signal Name (Specification)	REVERSE SENSOR SIGNAL 1 SENSOR SIGNAL 2 SENSOR SIGNAL 2 SENSOR SIGNAL 3 ACC ACC GND BATTERY		F
Name Type  Type  SHELD  W			G
Commector Na Commector Type Terminal Commector Type No. of State 6 5 5 1	32 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		Н
(With base audio or with NAVI)	CAMERA CONTROL UNIT		I
- (With bases au	CAMERA CONTROL UNIT   TH32FW-NH		J
SYSTEM  2-2 4-8 5-0 0-8 0-8 0-8 0-8 0-8 0-8 0-8 0-8 0-8 0	Connector No.   BSG		K
7	2 2 4 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2		L
March   Marc	7   8 9   10   11   19   20   21   22   23   14   14   18   19   10   11   19   14   14   14   14   15   14   15   15		M
B1 WRE TO WRE TH80FW-CS16-TM4 WRE TO WRE WRE TO WRE	WRE TH24		AV
BASE AUI   Connector Name   Connector Name   Connector Type   Connector	Connector No Connector Name Connector Type   1   2   1   2   1   2   1   2   1   2   1   2   1   2   1   2   1   2   1   2   1   2   1   2   1   2   1   2   1   2   1   2   1   2   2		0
		JCNWM0733Gf	Р

Revision: 2007 November AV-107 2008 EX35

	SYSTEM		
Connector No. B201	99 P – [Without BOSE audio]	Connector No. B218	Connector No. B236
Connector Name WIRE TO WIRE	100 L	Connector Name WIRE TO WIRE	Connector Name SATELLITE RADIO TUNER
Connector Type TH80FW-CS16-TM4		Connector Type TK10FW-NS8	Connector Type A16FW
		鹭	鹭
		HS. 109876 514321	HS. [2   4   6   7   12   14   16
		18 17 16 15 14 13 12 11	1 3 5 8 9 10
Terminal Color Signal Name [Specification]		Terminal Golor Signal Name [Specification]	Terminal   Color   Signal Name [Specification]   No.   of Wire
- Y 77		16 L –	1 G SOUND SIGNAL LH (-)
4		17 P – [Without BOSE audio]	œ
79 G			+
84 SHIFLD			S SHELD SHELD
T			
86 SHIELD –			8 L REQUEST (SAT->CONT)
87 G –			9 P COMM (SAT->CONT)
- W 88			G COM
89 R			- ×
- B B			16 V ACC
Connector No. B481	Connector No. B482	Connector No. B491	Connector No. B492
Connector Name SATELLITE RADIO TUNER	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name ANTENNA BASE
Connector Type FAKRA	Connector Type GT16C-1S-HU	Connector Type GT16C-1PP-HU	Connector Type GT16C-1PP-HU
H.S.	SH.	₹F	HS.
	7	7	
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification.]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]
33 – SATELLITE ANTENNA	Н	Н	Н

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### **DISPLAY UNIT**

## [BASE AUDIO WITHOUT NAVIGATION]

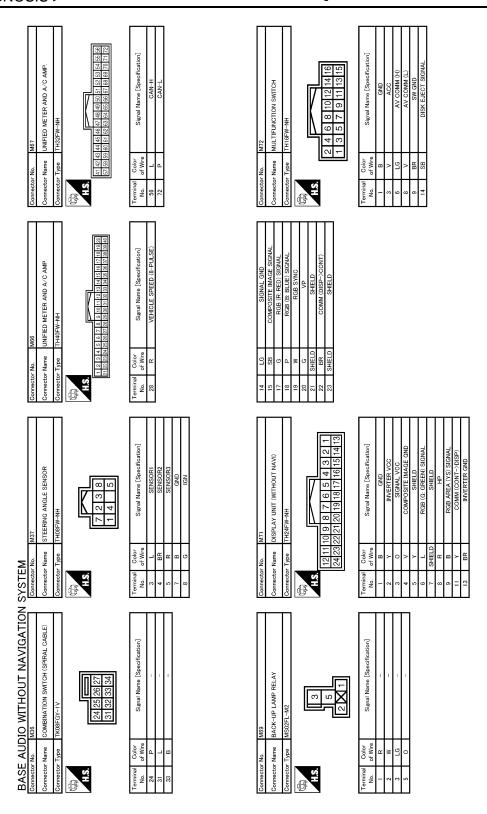
Connector No. D36 Connector Name BOSE SYSTEM) Connector Type NSUPPW-CS  H.S.	inial Color Signal Name [Specification] of Wire L BR	Connector No. D73  Connector Name REAR DOOR SPEAKER RH Connector Type NSOZHW-CS  ALS.	Terminal   Color   Signal Name [Specification]		A B C
Sector No.   D31   Sector No.   D31   Sector No.   D31   Sector Type   TH40PW-CS15   Sector Type   T1940PW-CS15   Sector Type   Sector Type	Terminal   Color   Signal Name [Specification]   Terminal No.   20   R   - [Without around view monitor]   1   1   2   2	ector No. D71 ector Type TK10MW-NS8  1 2 3 4 5 6 7 8 9 10  1 1 1 2 13 14 15 16 17 18	Terminal   Color   Signal Name (Specification)   No.   16   L   17   Y     12     2   2   2   2   2   2   2		D E F
Commetter Name	Terminal Golor Signal Name [Specification] To of Wire Signal Name [Specification] To Wire To William Signal Name [Specification] To Wil	Connector No. D53  Connector Name REAR DOOR SPEAKER LH  Connector Type NS02FW-CS  ALS.	Terminal Color Signal Name [Specification]  1 LG  2 Y		H I J K
BASE AUDIO WITHOUT NAVIGATION S Cornector Name WIRE TO WIRE Cornector Type   TH40FW-CS15	Terminal   Color   Signal Name [Specification]   Signal Name [Specification]   31   W	Connector No. DSI Connector Name WIRE TO WIRE Connector Type TKIOMW-NS8  TKIOMW-NS8  TKIOMW-1S8  TROUGH TO NIRE  TROUGH TO NIR	Terminal   Color   Signal Name [Specification]   16   LG   - [Without BOSE audio]   17   Y   - [Without BOSE audio]	JCNWM0735GI	M AV

Revision: 2007 November AV-109 2008 EX35

BASE AUDIO WITHOUT NAVIGATION	I SYSTEM		
Connector No. D102	Connector No. D121	Connector No. E5	Connector No. E106
Connector Name WIRE TO WIRE	Connector Name REAR VIEW CAMERA	Connector Name DISTRIBUTION MODULE ENGINE ROOM)	Connector Name WIRE TO WIRE
Connector Type TH24FW-NH	Connector Type TH04MW-NH	Connector Type TH20FW-CS12-M4-1V	Connector Type TH80FW-CS16-TM4
H.S.	H.S.		5
12 11 10 9 8 7 6 5 4 3 2 1 24 23 22 21 20 19 18 17 16 15 14 13	1234	9   10   11   12   13   14   12   12   14   15   15   15   15   15   15   15	
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]
т	1 G CAMERA POWER SUPPLY 2 I CAMERA GND	П	59 0
	CAM		Н
17 G – [Without around view monitor]	4 SHIELD SHIELD		
	ſ		
Connector No. E107	Connector No. F51	Connector No. F103	Connector No. F151
Connector Name PARKING BRAKE SWITCH	Connector Name A/T ASSEMBLY	Connector Name WIRE TO WIRE	Connector Name TCM (TRANSMISSION CONTROL MODULE)
Connector Type TB01FW	Connector Type RK10FG-DGY	Connector Type TK36FW-NS10	Connector Type SP10FBGY
		[[	<b>E</b>
<b>①</b>	5 4 3 2 1 0 9 8 7 6	0   0   0   0   0   0   0   0   0   0	10987654321
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	nal Color Signal Name of Wire	re Signa
	7 R -	31 R –	7 0 REV LAMP RLY

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WRE CSIG-TM4  CSIG-TM4  Signal Name [Specification]	M24 DATA LINK CONNECTOR BDISFW  9 10 11 12 13 14 15 16 7 8 1 2 3 4 5 6 7 8 8 Signal Name (Specification)	A B
Cornector No. M6 Connector Name WIRE TO WIRE Connector Type TH80MW-CSI6-TM4 H.S. TH80MW-CSI6-TM4 No. of Wire Signal Name [S 84 G 84 G 893 Y	Connector No. M24 Connector Name DATA LINK CONNECTOR Connector Type BD16FW  Connector Type BD16FW  Terminal Color Signal Name (Sp. No. of Wire 6. L. 14 P. F. 14 P. F	C
WIPE CS15 To a to tri	OUAWKER LH Signai Name [Specification]	E
Sector No. M5 ector Type TH40MW  T   2   4   5   6   ETWENDERS SERVERS  On of Wire  W W	ector No. MI3 ector Name FRONT S ester Type TK02FBB  V L L L L N	G
		Н
M3  FUSE BLOCK (J/B)  NS12FW-CS  SG 4C   10   30   20   10    120   10   10   90   80   70   60    Signal Name [Specification]	- (With base audio or with NAVI)	J
SYSTEM Connector No. M3 Connector Type NSI: Co	7	K
	offication]	L
BASE AUDIO WITHOUT NAVIGATION Connector Name FUSE BLOCK (J/B) Connector Type NSOFFV-MZ  ALS  San TABASA4A  San Name (Specification) No. 2a 6 5a V	WIRE TO WIRE TH80MW-CS16-TM4  TH80MW-CS16-TM4  TH T	AV
BASE AUDIC Gennector No. MI Connector Name FIS Connector Type NST Connector Type NST Connector Type October No. Connector Type October No. Connector Type NST Connect	Connector No.   M7	0
	JCNWM0737GI	Р



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Connector No.   M82	Terminal   Color   Signal Name (Specification)     21	Connector No. M84 Connector Type THISPW-NH  Connector Type THISPW-NH  H.S.  F. F	Terminal   Color   Signal Name (Specification)
15		47   0   SIGNAL VOC     49	
BASE AUDIO WITHOUT NAVIGATION SYSTEM    15   17   17   18   14   15   16   17   18   20      16   17   18   18   18   18   18   18   18	Signal Name (Specification) FRONT DOOR SPEAKER LH (+) FRONT DOOR SPEAKER LH (+) REAR DOOR SPEAKER LH (+) STRG SN A STRG SN A ACC LLUMINATOR FRONT DOOR SPEAKER RH (+) FRONT DOOR SPEAKER RH (+) FRONT DOOR SPEAKER RH (+) REAR DOOR SPEAKER RH (+)	No. M83  Name AV CONTROL UNIT (WITHOUT NAVI)  Types IT#24FW-NH  47 46 45 44 43 42 41 40 39 38 37 36 59 58 57 56 55 54 53 52 51 50 49 48	Signal Nane [Specification] COMPOSITE IMAGE SIGNAL COMPOSITE IMAGE SIGNAL RGB (G. GREEN) SIGNAL RGB (G. GREEN) SIGNAL RGB RR BCD SIGNAL RGB RR BCD SIGNAL RGB RR RGB YNC SHIELD RGB ARE. (YS) SIGNAL COMM IDISP->CONT) SIGNAL GND SIGNAL GND
BASE AUD Connector No. Connector Type H.S. H.S.	Terminal Color No. of Wire 2 V W 3 W H 4 LG 5 L LG 6 D P 7 V V 7 V V 11 BR 11 BR 12 R H 13 R H	Connector No. Connector Type H.S. 47 46 4 59 58 5	No.   Oolor

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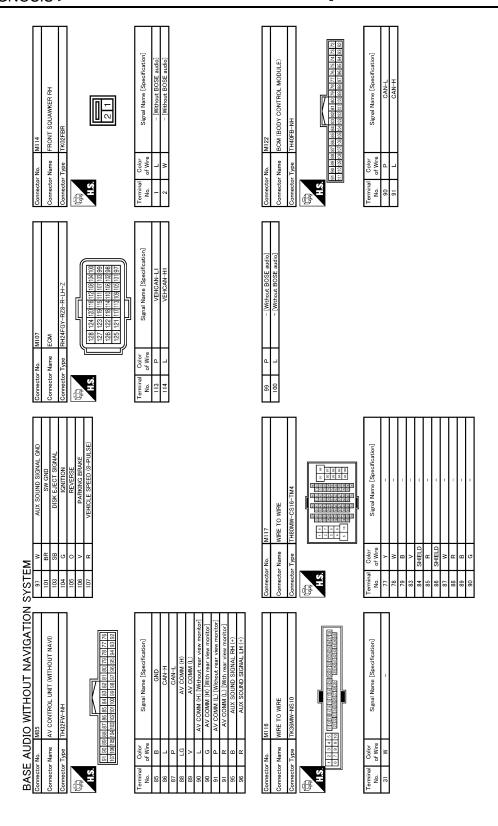
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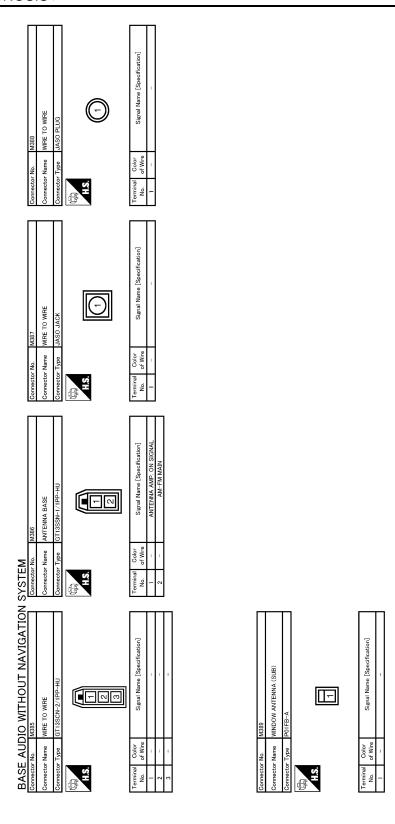


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### **DISPLAY UNIT**

## [BASE AUDIO WITHOUT NAVIGATION]

Connector No. M303 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TKG9FGY  13 14 15 16 17 18 19 20	Color   Signal Name [Specification]	Connector No.   M376   Connector Name   WIRE TO WIRE		A B C
	Terminal   Terminal   No.	HU (Specification)		D E
Connector No. M154 Connector Name AUXILIARY INPUT JACKS Connector Type A08FW  M.S. 11 2 3 1 7	Terminal   Color   No.	Connector No. M376 Connector Name WIRE TO WIRE Connector Type GT13SCN-2/IPP  Terminal Color No. of Wire  2 - 3 - 3 -		G H
MI 44 WIRE TO WIRE 11 2 3 4 5 6 7 8 9 10 11 12	Signal Name [Specification]	WIRE TO WIRE GT13SC-2./S-HU  Signal Name [Specification]		l J
SYSTEM Connector No. Connector Name Connector Type	Terminal Color No. of Wire 5 SHELD 6 W	Connector No. M375 Connector Name WIRE Connector Type GT13 H.S. Terminal Color No. of Wire 1 2 2 - 3 - 3		K
BASE AUDIO WITHOUT NAVIGATION Connector Num. Mrt24 Connector Type Mre TO WIRE Connector Type THAIDMY-CS.15  TAS TO 2 1 5 6 7 8 9 10 11 12 13 14 15  THAIDMY-CS.15  THAIDMY-CS.15	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] 20 R - [Without around view monitor] 21 BR - [Without around view monitor]	Connector No.   M370	JCNWM0741Gi	M AV
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#### NOTE:

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

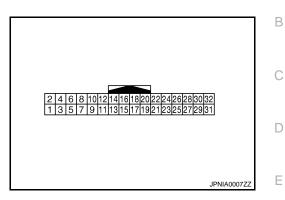
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[BASE AUDIO WITHOUT NAVIGATION]

# **CAMERA CONTROL UNIT**

Reference Value

**TERMINAL LAYOUT** 



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#### PHYSICAL VALUES

	Terminal (Wire color)  Description		Condition	Reference value			
+	_	Signal name	Input/ Output		Condition	(Approx.)	
5	_	Shield	_	_	_	_	
6 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4	
7 (B)	Ground	Camera ground	_	Ignition switch ON	_	0 V	
8			Ignition		R position	6.0 V	
(R)	Ground	Camera power supply	Output	tput switch ON	Other than R position	0 V	
11	_	Shield	_	_	_	_	
12 (W)	Ground	Camera image signal	Output	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4 -40μs SKIB2251J	
14	Ground	Camera-connection recog-		Ignition switch	Connected to camera control unit connector	0 V	
(W)	Giodila	nition signal	_	ON	Not connected to camera control unit connector	5.0 V	
17 (V)	_	AV communication signal (L)	Input/ Output	_	_	_	
18 (LG)	_	AV communication signal (H)	Input/ Output	_	_	_	
19 (R)	_	AV communication signal (L)	Input/ Output	_	_	_	

## [BASE AUDIO WITHOUT NAVIGATION]

Terminal Description (Wire color)				Deference value		
+	-	Signal name	Input/ Output		Condition	Reference value (Approx.)
20 (G)	_	AV communication signal (H)	Input/ Output	_	_	_
22	Craund	Dayaraa aigaal	lanut	Ignition	R position	12.0 V
(O)	Ground	Reverse signal	Input	switch ON	Other than R position	0 V
23	Ground	Sensor signal 1	Input	Ignition switch ON	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2
(L)	Glound	Sensor signal 1			Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2
24 (BR) Gro	Ground	Sensor signal 2	Input	Ignition switch ON	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2
	Ground	Sensor signal 2	Input		Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2
25 (R)	Ground	Sensor signal 3	Input	Ignition switch ON	Turn the steering around the neutral position	(V) 4 2 0 SKIB3829E A: Sensor signal 3 B: Sensor signal 1

< ECU DIAGNOSIS >

## [BASE AUDIO WITHOUT NAVIGATION]

	minal color)	Description		Condition		Condition Reference value		Reference value
+	_	Signal name	Input/ Output			(Approx.)		
26 (V)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE:  Maximum voltage may be 12 V due to specifications (connected units).  (V) 6 4 2 0  **20ms  SKIA6649J		
30 (LG)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage		
31 (B)	Ground	Ground	_	Ignition switch ON	_	0 V		
32 (L)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage		

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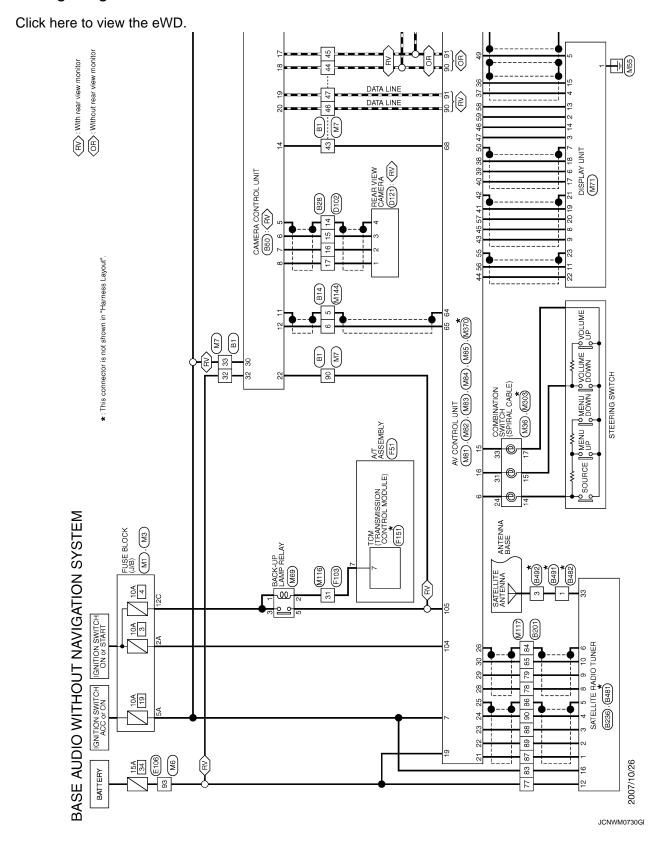
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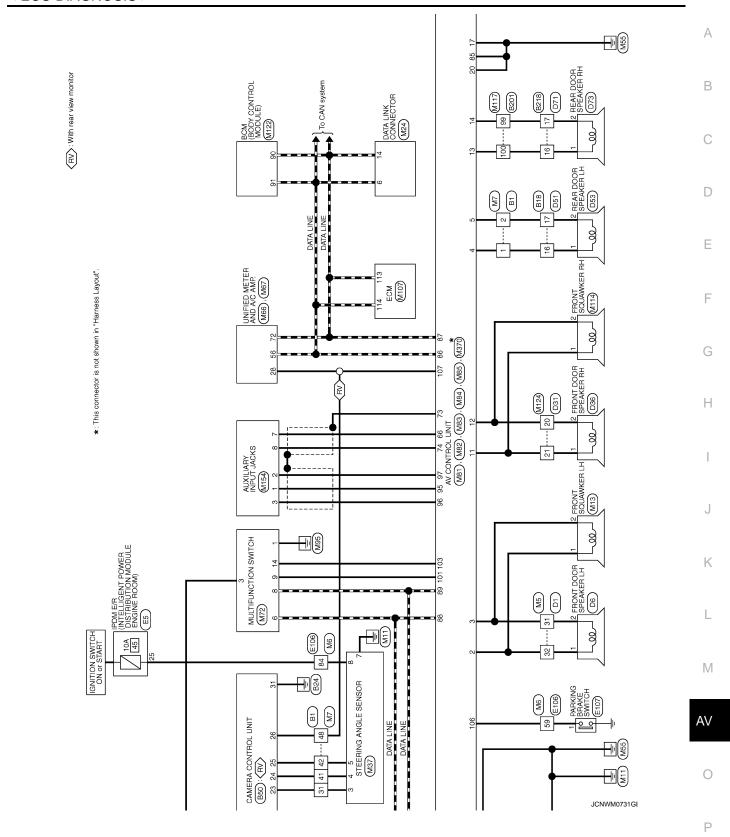
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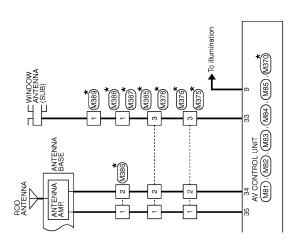
Wiring Diagram - BASE AUDIO WITHOUT NAVIGATION SYSTEM -

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Company   Comp	RE			В
Control   Cont	B18   WIRE TO   TK10FW-			С
1000 WITHOUT NAVIGATION SYSTEM   1000 WITHOUT NAVIGATION SYSTEM	Connector Connector Terminal No. 17			D
1000 WITHOUT NAVIGATION SYSTEM   1000   10	offication]	NAL 1 NAL 2 NAL 2 NAL 2 NAL 2 NAL 2 NAL 3 NAL 3 NAL 4 NAL 7		Е
1000 WITHOUT NAVIGATION SYSTEM   1000   10	O WIRE  11 10 9 8 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	REVERS SENSOR SIG SENS		F
MITHOUT NAVIGATION SYSTEM				G
WIRE TO WIRE	Connec Co			Н
WIRE TO WIRE	is or with MAVI]	NIT    12   22   26   30   32   31   32   32   32   32   33   33		I
WIRE TO WIRE	- (With base au	Signal Name   SHI   CAMERA IM   CAMERA IM   CAMERA IM   COMM (1)   With b   CO		J
WIRE TO WIRE		Connector No. BSI Connector Type TH  Connector Type		K
Connector Name   WIRE TO WIRE	z	[242] [242]		L
Connector Name   WIRE TO WIRE	F-TM4 TM4 TM4	7   8   9   10   11   11   12   23   23   24   24   24   24   25   24   25   25		M
Color   Colo	MIRE TO WITH  BI WIRE TO WIRE THEOPW-CSII THEOPW-CSII THEOPW-CSII THEOPW-CSII THEOPW-CSII THEOPW-CSII THEOPW-CSII THEOPW-CSII THEOPWIRE	BE28 WIFE 4 15 1 4 4 15 1 4		AV
	Connector Name   Connector Name   Connector Name   Connector Type   Color No.   Color No	Connector No.  Connector Name  Connector Type		0
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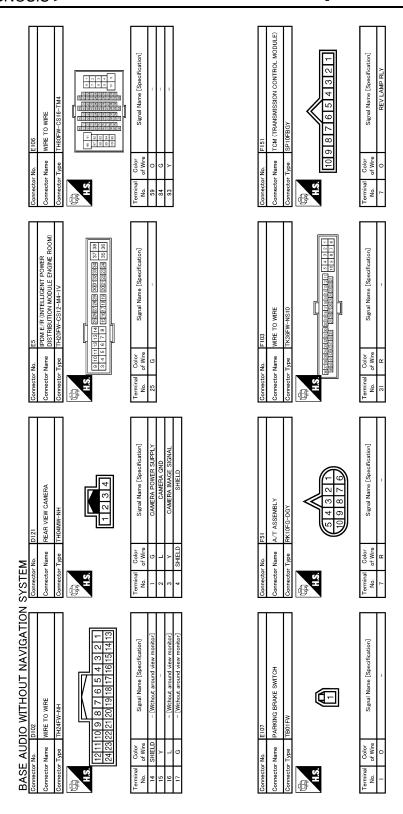
Revision: 2007 November AV-123 2008 EX35

Connector No. B236 Connector Name SATELLITE RADIO TUNER Connector Type A16FW	2 4 6 7 12 14 16 1 3 5 8 9 10	Terminal Oolor Signal Name [Specification]   No.   G SOUND SIGNAL LH (-)   2 R SOUND SIGNAL LH (+)	3 W SOUND SIGNAL RH (÷) 4 SHELD SHELD 5 SHELD SHELD	R   R   Request (SAT->CORT)	Connector No. B492 Connector Name ANTENNA BASE Connector Type GT16C-1PD-HU	RS.	Terminal Color No. of Wire Signal Name [Specification] 3 - SAETILITE ANTENNA
Connector No. B218 Connector Name WIRE TO WIRE Connector Type TK10FW-NS8	18 17 16 15 14 13 12 11	Terminal   Color   Signal Name [Specification]   Of Wire			Connector No. B491 Connector Name WIRE TO WIRE Connector Type GT16C-1PP-HU	H8 2	Terminal Color Signal Name [Specification] No. of Wire 1
SYSTEM - [Without BOSE audio] 100 L - [Without BOSE audio]					Connector No. B482 Connector Name WIRE TO WIRE Connector Type GT16C-1S-HU	H3.	Terminal Color Signal Name [Specification] No. of Wire
BASE AUDIO WITHOUT NAVIGATION Connector No. 8201 Connector Name WIRE TO WIRE Connector Type ITHS/GPN-CS16-TM4		Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   77 Y   78 L	73 G	86 SHIELD 88 89 W - 89 R R - 89 R - 89 R - 89 R - 89 R - 89 R R - 89 R R - 89 R R - 89 R - 89 R R - 89 R -	Connector No. B481 Connector Name SATELLITE RADIO TUNER Connector Type FAKRA	H.S.	Terminal   Color   Signal Name [Specification]   No.   of Wire   SantelLite Antenna   33   -   SatelLite Antenna

JCNWM0734GI

Connector No.   D36	Connector No. D73 Connector Name REAR DOOR SPEAKER RH Connector Type NS02FW-CS  H.S.   Color   Signal Name [Specification]  1	3
Connector Name   WIRE TO WIRE	Cornector No.   D71	=
Connector No.  Connector Name  Connector Name  Connector Type  MSG/2FH-CS  MSG/2FH-CS  MSG/2FH-CS  ALS  Terminal Golor  No. of Wire  Signal Name [Specification]	Connector No. D53 Connector Name REAR DOOR SPEAKER LH Connector Type NS02FW-CS  Terminal Golor Signal Name [Specification] 1 LG 2 V 7	J
BASE AUDIO WITHOUT NAVIGATION  Connector Name WIRE  Connector TH40FW-CS15  TH40FW-CS15  Teminal Color  Teminal Color  Tominal Color  Tominal Color  Teminal	Connector No.   DS1	V

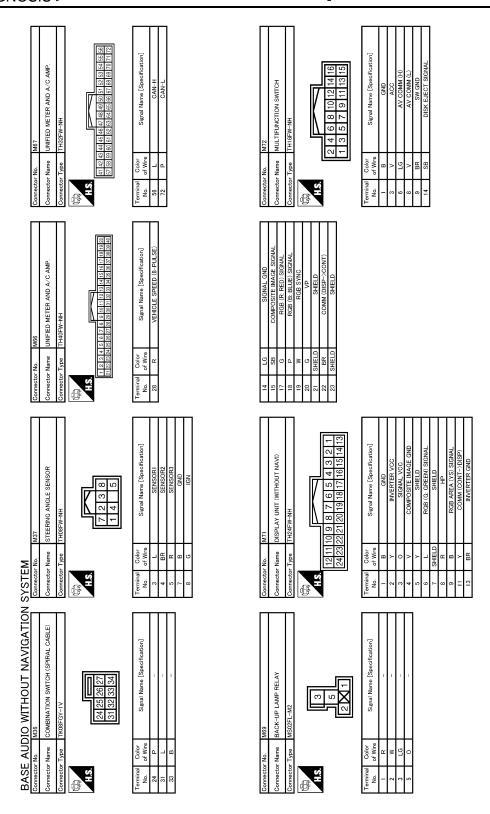
Revision: 2007 November AV-125 2008 EX35



JCNWM0736GI

Connector No. M6 Connector Type TH80MV-CSI6-TM4  L	of Wire Signal Name [Specification] of Wire V	Connector No.   M24	A B	}
Connectt Connectt Connectt H.S.	Terminal No. 59 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Connector Connector No. 6 6 14	D	)
91 93 93 93 93 93 93 93 93 93 93 93 93 93	offeation]	cifeation]	E	
Name   WIRE TO WIRE	Signal Name [Specification]	FRONT SOUAWKER LH TK02FBR  Signal Name [Specification]	F	•
2   M5   M5   M6   M7   M8   M8   M8   M8   M8   M8   M8	Odor Wire W	N N N N N N N N N N N N N N N N N N N	G	;
Connector No. Connector Type	Terminal C No. 31 31 32 32	Connector No. Connector Type Connector Type No.  I L.  2 Wire	Н	1
(a) (S) (S) (S) (S) (S) (S) (S) (S) (S) (S	Signal Name [Specification]	With base audio or with NAVI]	I	
M3 NSIZEW-CS NSIZEW-CS 50 40 30 20 10 120 110 100 90 80 70 60	Signal N	- (With bas	J	
Name Type	Terminal Color No. of Wire 12C O	47 R 90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	K	r L
NOTA		5	L	
BASE AUDIO WITHOUT NAVIGATION Connector No. MI Donnector Type NSGBFW-M2  CARACTER STATE  SAME SAIA  BATABASA4A	Signal Name (Specification)	WW-CS16-TM4  WW-CS16-TM4  WW-CS16-TM4  Signal Name [Specification]	M	1
NSOBEW-WZ  NSOBEW-WZ  NSOBEW-WZ  NSOBEW-WZ  NSOBEW-WZ	Ö	WIRE TO WIRE TH80MW-CS16  TH80MW-CS16  Signal  Signal	AV	,
BASE AUD Connector No. Connector Type Connector Type The	Terminal Color No. of Wire 2 A G 5A V	Connector No.	0	)
		JCI	WWM0737Gf	,
			Р	,

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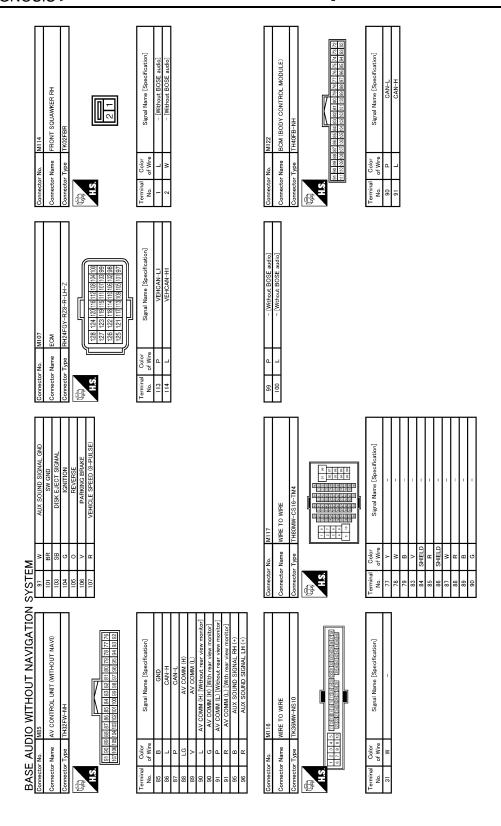
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Connector No.   Most
1   2   3   4   5   6   7   8   9   7   8   1   1   1   1   1   1   1   1   1
1   2   3   4   5   6   7   8   9   7   8   9   9   9   9   9   9   9   9   9
1   2   3   4   5   6   7   8   9   7   8   9   7   8   9   9   9   9   9   9   9   9   9
1   2   3   4   5   6   7   8   9     1   12   3   4   5   6   7   8   9     2   3   4   5   6   7   8   9     3   4   5   6   7   8   9     5   5   7   8   9     5   5   7   8   9     5   5   7   8   9     5   5   7   8   9     6   7   8   9     6   7   8   9     7   7   0     7   8   8     8   7     8   8   9     9   9     10   1   12   13   14   14   14     10   14   14   14   14     10   14   14   14     10   14   14   14     10   14   14     10   14   14     10
Signal Name (Specification)  FRONT DOOR SPEAKER LH (-)  FRONT DOOR SPEAKER LH (-)  FRANT DOOR SPEAKER LH (-)  FRANT DOOR SPEAKER LH (-)  FRANT DOOR SPEAKER HH (-)  FRONT DOOR SPEAKER HH (-)  FRONT DOOR SPEAKER HH (-)  FRONT DOOR SPEAKER RH (-)  FRONT DOOR SPEAKER RH (-)  FRONT DOOR SPEAKER RH (-)  FRANT DOOR SPEAKER
1   2   3   4   5   6   7   8   9     1   2   3   4   5   6   7   8   9     1   2   3   4   5   6   7   8   9
1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   15   17   16   20
Signal Name [Specification]   Signal Name [Specification]   FRONT DOOR SPEAKER LH (+)   FRONT DOOR SPEAKER LH (+)   FRONT DOOR SPEAKER LH (+)   STRG SW A
Signal Name [Specification]
Signal Name [Specification]
FRONT DOOR SPEAKER LH (+)     FRONT DOOR SPEAKER LH (+)     FRONT DOOR SPEAKER LH (+)     ARCS     A
FRONT DOOR SPEAKER LH (-)     REAP DOOR SPEAKER LH (-)     REAP DOOR SPEAKER LH (-)     REAP DOOR SPEAKER LH (-)     FRONT DOOR SPEAKER RH (-)     FRONT DOOR SPEAKER RH (-)     FRONT DOOR SPEAKER RH (-)     FRAN DOOR
REAR DOOR SPEAKER LH (+)     REAR DOOR SPEAKER LH (-)     STRG SW A
REAR DOOR SPEAKER LH (+)   STRG SW A   S
STRG SW A A A CONTROL UNIT (WITHOUT NAV)   SE SHELD
M83  M83  M84  M85  M87  M87  M87  M87  M87  M87  M87
FRONT DOOR SPEAKER RH (+)
FRONT DOOR SPEAKER RH (+)
REARD DOOR SPEAKER RH (-)   REARD DOOR SPEAKER RH (-)
NEAR DOOR SPEAKER RH (-)   NEAR DOOR SPEAKER RH (-)   NEAR DOOR SPEAKER RH (-)   NA CONTROL UNIT (WITHOUT NAV)   SO SHIELD
M63  W63  AV CONTROL UNIT (WITHOUT NAV)  AV CONTROL UNIT (WITHOUT NAV)  TH24FW-NH  66  77  67  67  67  68  68  7  68  7  68  7  68  68
M83 AV CONTROL UNIT (WITHOUT NAV)) 17424FW-NH 154 44 43   42   41   40   39   383   37   36   157 56   55   54   50   51   50   49   48
M83
AV CONTROL UNIT (WITHOUT NAV))  110.24 FW-NH  110.25 FW-NH
Control of the part of the p
THEAPW-NH   S5 SHIELD   S6 SHIELD   S7 C C   S7 C C C C C C C C C C C C C C C C C C
1.5
15 47 463 453 44 433 42 41 40 39 38 37 36 59 8 87 56 55 54 53 62 51 50 149 48
47 46 45 44 43 42 41 40 39 38 37 36       59 7       59 58 57 56 55 54 53 52 51 50 49 48
-
Terminal Oolor Signal Name [Specification]
36 SB COMPOSITE IMAGE SIGNAL
>
۵
_
40 G RGB (R: RED) SIGNAL
41 W RGB SYNC
42 SHIELD SHIELD
В
7
œ
46 LG SIGNAL GND

С D Е F G Н Κ M ΑV

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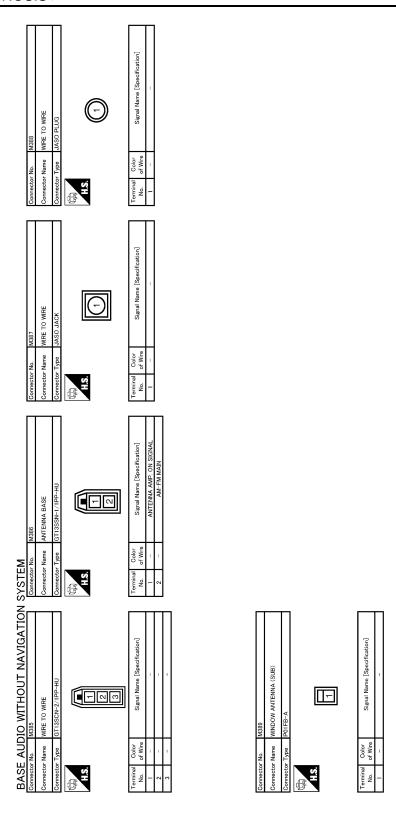
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Conceptor No.   Conceptor No.   Wild   Conceptor No.   Will   Conc	Connector No. M503  Connector Name COMBINATION SWITCH (SPIRAL CABLE)  Connector Type TROBFGY  (\$\text{M}\$)  13 14 15 16 17 18 19 20	Terminal Color   Signal Name [Specification]	Cornector No.   M378	A B C
Connector No.   Mi44	MISA AUXILARY INPUT JACKS AGBFW	Color of Wire B B B B B B B B B B B B B B B B B B B	MA276  e GT15SCA	F
VAVIGATION	M144 me WIRE TO WIRE THIZMW-NH T 2 3 4 5 T 2 8 9 10 11	Color SHELD W	MA375 WIRE TO FIG. 113SQ-	J
BASE AUDIO WITHOUT	SE AUD ector No. ector Type    Columbia   Co	Terminal Color   Signal Name [Specification]	9 9 9 Joj.	0

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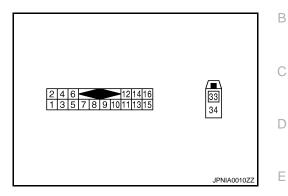


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#### NOTE:

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

Reference Value



#### PHYSICAL VALUES

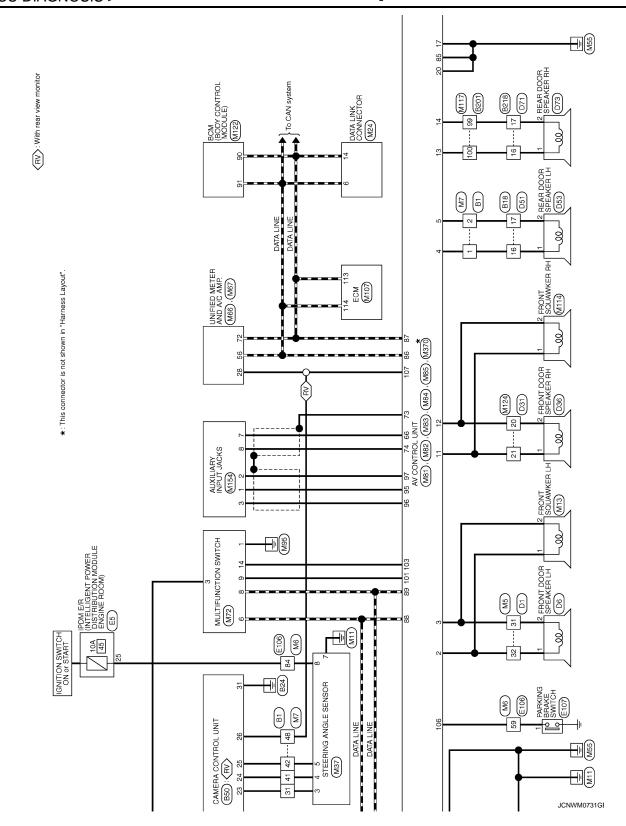
Ter	minal	Description				Deference welve
+	_	Signal name	Input/ Output		Condition	Reference value (Approx.)
2 (R)	1 (G)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	(V) 1 0 -1 + 2ms SKIB3609E
4 (B)	3 (W)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	(V) 1 0 -1 * 2ms SKIB3609E
5	_	Shield		_	_	_
6	_	Shield	_	_	_	_
8 (L)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 ++10ms SKIA9299J
9 (P)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	(V) 10 -10 + 1ms SKIA9300J

### < ECU DIAGNOSIS >

## [BASE AUDIO WITHOUT NAVIGATION]

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

Wiring Diagram - BASE AUDIO WITHOUT NAVIGATION SYSTEM -INFOID:0000000003737121 Α Click here to view the eWD. ⟨RV⟩: With rear view monitor
⟨OR⟩: Without rear view monitor **]**(6) В W35 \$ | | | | DATA LINE C DISPLAY UNIT D REAR VIEW CAMERA (D121): (RV) CAMERA CONTROL UNIT Е \*: This connector is not shown in "Harness Layout". F SOURCE OF UP SOUR SOURCE OF UP SOURCE \*(M370 G AV CONTROL UNIT
(M81) (M82) (M83) (M84) (M85), M<sub>P</sub> Н STEERING SWITCH COMBINATION SWITCH (SPIRAL CABLE) , (M303) (M36) AVT ASSEMBLY (F51) TCM (TRANSMISSION CONTROL MODULE) (F151) J BASE AUDIO WITHOUT NAVIGATION SYSTEM ANTENNA BASE FUSE BLOCK (J/B) (M1), (M3) K BACK-UP LAMP RELAY M116 L 10A  $(\stackrel{\scriptscriptstyle \triangle}{})$ IGNITION SWITCH ON or START 10A M SATELLITE RADIO TUNEF , B481 IGNITION SWITCH ACC or ON ΑV 10A 15A 34 (93 (M6) 0 87 We L 2007/10/26 83 BATTERY Р JCNWM0730GI



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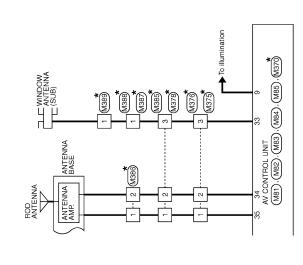
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AV

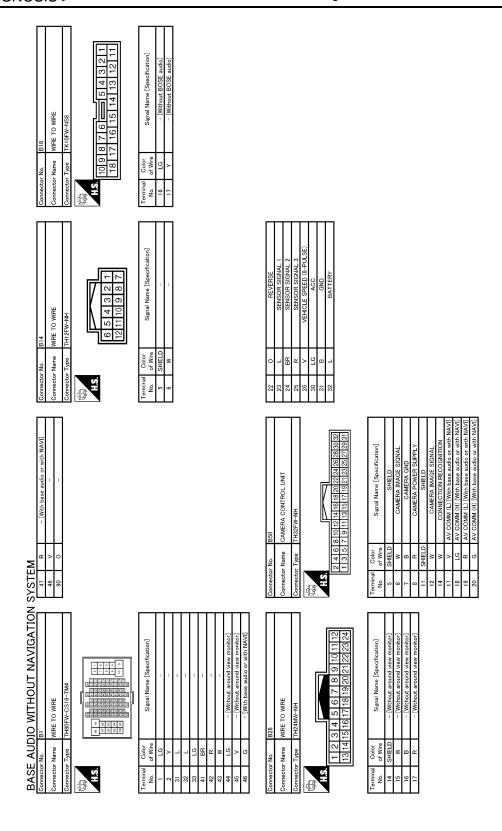
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\*: This connector is not shown in "Harness Layout".



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## [BASE AUDIO WITHOUT NAVIGATION]

### < ECU DIAGNOSIS >

TUNER 12 14 16 10 10 10 10 10 10 10 10 10 10 10 10 10	Signal Name (Specification) SOUND SIGNAL LH (-) SOUND SIGNAL LH (-) SOUND SIGNAL RH (-		Signal Name [Specification] SAETLITE ANTENNA		АВ
Name SATELLITE RADIO Type A16FW  2 4 6 6 8 9 9	Codor of Wire G G G G SHELD SHELD C C C C C C C C C C C C C C C C C C C	Connector No. B482 Connector Name ANTENNA BASE Connector Type GT16C-1PP-HU  M.S.	Color of Wire		С
Connector No. Connector Na. Connector Typ.	Terminal No. No. 1 2 2 2 3 3 3 3 3 9 6 6 6 6 6 9 9 9 9 10 11 2 11 2 11 2 11 2 11 2 11	Connector No. Connector Typ	Terminal No. 3		D
1 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SE audio]		veoffcatori)		Е
No. B218  Name WIRE TO WIRE  Type TKIOFW-NS8  10 9 8 7 6 6 6 4 13 18 17 16 15 14 13	Signal Name [Specification]  - (Without BOSE audio)	BABI WIRE TO WIRE GTIGG-IPP-HU	Signal Name [Specification]		F
	of Wire	rr No.	Of Wire		G
Connecto Connecto Connecto H.S.	Terminal No. 16 17 17	Connectt Connectt Connectt H.S.	Terminal No.		Н
- [Without BOSE audio]			Signal Name [Specification]		I
- [With		B482 WIRE TO WIRE GT16C-1S-HU	Signal N		J
SYSTEM 100 P P P P P P P P P P P P P P P P P P		Connector No. B482 Connector Name WIRE Connector Type GTI6	Terminal Color No. 1		K
ATION					L
BASE AUDIO WITHOUT NAVIGATION Connector No. B201 Connector Name WIRE TO WIRE Connector Type THEOFW-CS16-TM4  LAS  LAS  LAS  LAS  LAS  LAS  LAS  LA	Signal Name [Specification]	SATELLITE RADIO TUNER FAKRA	Signal Name [Specification] SATELLITE ANTENNA		M
UDIO WITHOUT DEZGI E WIRE TO WRE THEOFW-CSIG-TMA			Ш		AV
BASE AU Connector No. Connector Type Connector Type HS.	No. of Wire	Connector No. Connector Name Connector Type	Terminal Color No. of Wire 33		0
				JCNWM0734GI	
					Р

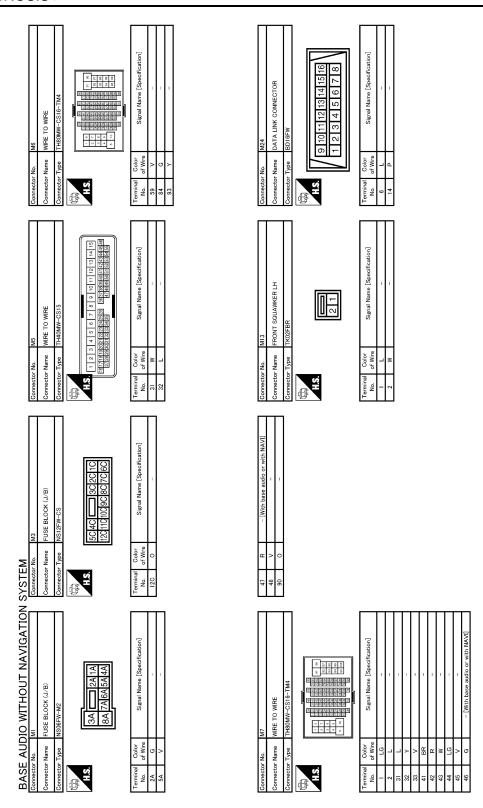
Revision: 2007 November AV-139 2008 EX35

BASE AUDIO WITHOUT NAVIGATION	J SYSTEM Connector No. 106	Connector No. D31	Connector No. D36
		П	П
Connector Type TH40FW-CS15	Connector Type NS02FW-CS	Connector Type TH40FW-CS15	Connector Type NS02FW-CS
1.5   14   13   12   11   10   3   6   7   6   6   4   3   2   1	H.S.	1.5   4   13   12   11   10   9   9   7   6   5   4   9   2   1	H.S.
Terminal   Color   Signal Name [Specification]   No. of Wire	Terminal   Color   Signal Name [Specification]   No.   of Wire     Grant   G	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   20   R   - [Without around view monitor]   21   BR   - [Without around view monitor]	Terminal   Color   Signal Name [Specification]
Gonnector No ID51	Connector No D53	Gonnaction No 1771	Gornector No 1073
- P	e e	e e	ne
Connector Type TK10MW-NS8	Connector Type NS02FW-CS	Connector Type TK10MW-NS8	Connector Type NS02FW-CS
H.S. 12345 = 678910 11121314151617118	₽ Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	HS 12345 678910 1112131415161718	#\$ Hs
Termina   Color   Signal Name [Specification]   No. of Wire   LG   - [Without BOSE audio]   17   Y   - [Without BOSE audio]	Terminal   Color   Signal Name [Specification]   No. of Wire   LG   LG   2   Y   -	Terminal   Color   Signal Name [Specification]   No.	Terminal   Color   Signal Name [Specification]   No. of Wire     L

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### TH80FW	of Wine Signal Name [Specification]	T No. F151  T Name T CM (TRANSMISSION CONTROL MODULE)  T Type SP10FBGY  T (10 9 8 7 6 5 4 3 2 1	Odlor Signal Name [Specification]  Of Wire REV LAMP RLY	A B C
Connector  Connector  Connector  Connector  ALS	Signal Name (Specification)  No.  - 89  84  83	Commetter No.  Commetter Name Commetter Type	Signal Name [Specification] No. No. 7	D E
No. E5	25 G G	Connector No. F103 Connector Name WIRE TO WIRE Connector Type TK36FW-NS10  WAS TRANSPORTED TO THE TRANSPORTE	Terminal Golor Signal Name 31 R R	F G
CAMERA 2 3 4	Signal Name (Specification) CAMERA CHOWER SUPPLY CAMERA INAIGE SIGNAL SHELD		Signal Name [Specification]	H I J
SYSTEM Connector No. 0121 Connector Name REAR VIE Connector Type THOLAW H.S.  H.S.	SHELD OF Wine	Connector No. F51 Connector Name A/T ASSEMBLY Connector Type RK10FG-DGY  H.S. F51 F51 F51 F52 F53	Terminal Codor No. of Wire 7 R R	K
≥	Signal Name (Specification)  - [Without around view monitor]  - [Without around view monitor]  - [Without around view monitor]	EIO7 TBOIFW TEOLEW	Signal Name [Specification]	M
BASE AUDIO V   Connector Name   WIRE 1   Connector Type   TH24F	No.   Output   No.   Output   No.   Output   No.   Output   No.   Output   No.   Output   O	Connector No. E107 Connector Name PARKIN Connector Type ITBDIFIN	Terminal Golor No. of Wire  1 0 0	0
				Р

Revision: 2007 November AV-141 2008 EX35



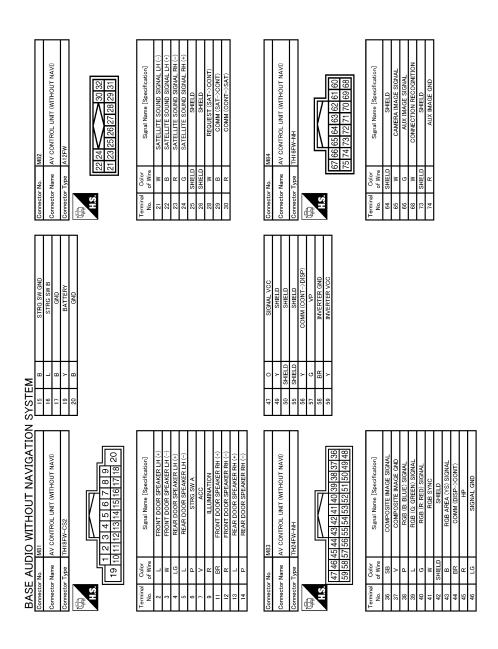
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## [BASE AUDIO WITHOUT NAVIGATION]

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BOCKNOWNOON  Section Section 19 (19 Compared to 19	C AMP.	pecification] H L	CH 16 14 16 13 15 13 15 15 15 15 15 15 15 15 15 15 15 15 15		A
BASE AUDIO WITHOUT NAVIGATION SYSTEM  Converted two properties and the properties of	29 63	Color of Wire L	MULTEU MULTEU 1 3 5 6 1 5 6 1 5 6 1 5 6 1 5 6 1 5 6 1 5 6 1 5 6 1 5 6 1 5 6 1 5 6 1 5		
BASE AUDIO WITHOUT NAVIGATION SYSTEM  Convention land distribution start of starts and the convention land of the	Connector Connector	Terminal No. 56 57 72	Connector Connector No. 1 1 3 8 8 8 9 9 9 14		D
BASE AUDIO WITHOUT NAVIGATION SYSTEM  Convention land distribution start of starts and the convention land of the	C AMP.	o (8-PULSE)	GND  SGENAL  SGENAL  NG SGNAL  NG CONT)  D  D  D		Е
BASE AUDIO WITHOUT NAVIGATION SYSTEM    Convention Pin   Column	METER ANIMAL STATE	Signal Name [S;	SIGNAL COMPOSITE IM RGB (R. BULD) RGB (R. BULD) SHEL SHEL SHEL SHEL SHEL SHEL SHEL SHEL		F
BASE AUDIO WITHOUT NAVIGATION SYSTEM  Conventor files in the Chapter of Speak Chapter of Sp	4 22	of Wire R R			G
BASE AUDIO WITHOUT NAVIGATION  Connector Name of Street Name (Swellcasted)  Terminal Color Street Name (Swell Name	Comm	1			Н
BASE AUDIO WITHOUT NAVIGATION SYSTEM  Connector Name   Co	SENSOR	e (Specification) ENSOR1 ENSOR2 GND IGN	THOUT NAV()  THOUT NAV()  5 4 3 2 1  17 16 15 14 13  TO 17 16 15 14 13  TO 18 15 14 14  TO 18 15 14		I
BASE AUDIO WITHOUT NAVIGATION SYSTEM  Connector Name Connector Nam	BEW-NH  7 2 3  1 4 4	Signal Nat	1   >		J
BASE AUDIO WITHOUT NAVIGATION  Commercian Name  Commercia	e e				K
JCNWM0738GI					L
JCNWM0738GI	HOUT NAVIGOR SPIRAL CA	Name [Specification]	AMP RELAY  3 3 5 5 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	_	M
JCNWM0738GI	DIO WIT  M36  COMBINATI  TK08FGY-11  24 2  31 3		MSOZFI-	A	٩V
JCNWM0738Gi	BASE AU Connector Name Connector Type H.S.		Connector No. Connector Name Connector Type Connector Type I R R 2 2 W Wren 3 1 L 6 5 0 0		0
				JCNWM0738GI	Р

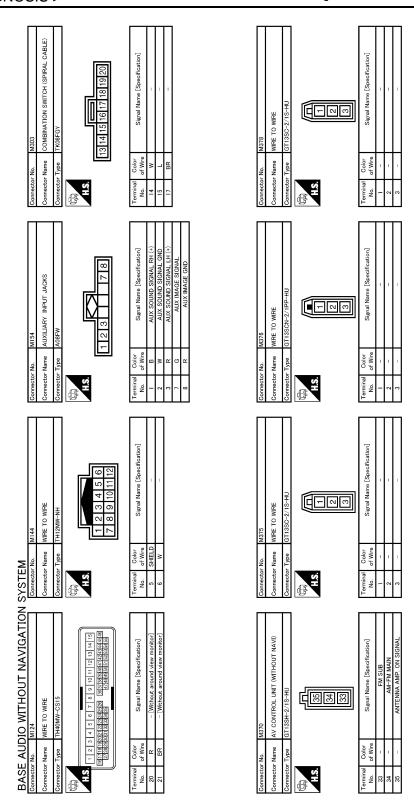
Revision: 2007 November AV-143 2008 EX35



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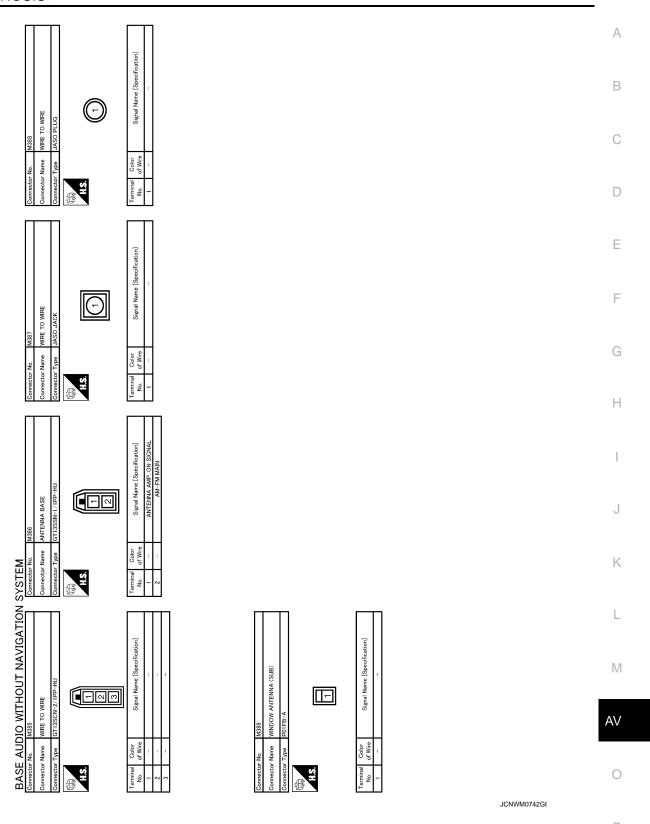
Connector No. MI 14  Connector Name FRONT SOLAWKER RH  Connector Type TX02FBR  TX02FBR  Terminal Color Signal Name [Specification]  No. of Wive Signal Name [Specification]  T L - [Without BOSE audio]  Z W - [Without BOSE audio]	Connector No. M122 Connector Name BCM (BODY CONTROL MODULE) Connector Type TH40FB-NH  TH40FB-NH  TH10FBINGS BE		A B C
1   1   1   1   1   1   1   1   1   1	- [Without BOSE audio] Com		E
Connector No. M107 Connector Name ECM Connector Type EM24FGV-RZ8-R-LH-1- H.S. [128 124 [27]: 8[12]:	M) - 100 001 000 001 000 001 000 000 000 0		G
AUX SOUND SIGNAL GND SW GND DISK EJECT SIGNAL GONTTON FEVERSE PARKING BRAKE VEHICLE SPEED (8-PULSE)	Mr-CS16-TM4  Mr-CS16-TM4  Signal Name (Specification)		I
SYSTEM  97  103  103  104  105  105  105  107  R	MI17   Cornector No.   MI17		J K
Connector Name	WRE NS 10  THE CONTROLL OF T		M
Connector Name   M85	Connector No. MI16 Connector Name WRE TO WRE Connector Type TR38MW-NS:10 H.S. H.S. L. S. L. S. L. S. L. S. L. S. Signal No. of Wire Signal Signal		AV
		JCNWM0740GI	Р

Revision: 2007 November AV-145 2008 EX35



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[BASE AUDIO WITHOUT NAVIGATION]



### NOTE:

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

## SYMPTOM DIAGNOSIS

### **MULTI AV SYSTEM SYMPTOMS**

Symptom Table

**OPERATION** 

INFOID:0000000000350843	4

Symptoms	Check items	Possible malfunction location / Action to take
Multifunction switch and preset switch operation does not work.	All switches cannot be operated.     "MULTI AV" is displayed with CON-SULT-III.	Multifunction switch power supply and ground circuit.     AV communication circuits between AV control unit and multifunction switch.  Perform CONSULT-III self-diagnosis. Refer to AV-37.  "CONSULT-III Function (MULTI AV)".
	All switches cannot be operated.     "MULTI AV" is not displayed on system selection screen the CONSULT-III is initialized.	AV control unit power supply and ground circuit malfunction. Refer to AV-51, "AV CONTROL UNIT: Diagnosis Procedure".
	Only specified switch cannot be operated.	Multifunction switch or preset switch malfunction. Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-52, "MULTIFUNCTION SWITCH: Diagnosis Procedure".

#### RELATED TO RGB IMAGE

Trouble diagnosis chart by symptom

Symptoms	Check items	Possible malfunction location / Action to take
	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-37, "CONSULT-III Function (MULTI AV)".
RGB image is not shown.	There is no malfunction in CONSULT-III self-diagnosis results.	<ul> <li>Display unit power supply and ground circuit.     Refer to AV-51, "DISPLAY UNIT: Diagnosis Procedure".</li> <li>Vertical synchronizing (VP) signal circuit.     Refer to AV-61, "Diagnosis Procedure".</li> </ul>
	Light blue (Cyan) tint.	RGB signal (R: red) circuit. Refer to AV-55, "Diagnosis Procedure".
Color of RGB image is not proper.	Purple (Magenta) tint.	RGB signal (G: green) circuit. Refer to AV-56, "Diagnosis Procedure".
	Screen looks yellowish.	RGB signal (B: blue) circuit. Refer to AV-57, "Diagnosis Procedure".
RGB screen is rolling.	_	RGB synchronizing signal circuit. Refer to AV-58, "Diagnosis Procedure".
Fuel conomy display is mal	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-37, "CONSULT-III Function (MULTI AV)".
Fuel economy display is mal- functioning.	There is no malfunction in CONSULT-III self-diagnosis results.	Ignition signal circuit malfunction.  Refer to AV-51, "AV CONTROL UNIT : Diagnosis Procedure".

#### **RELATED TO AUDIO**

Trouble diagnosis chart by symptom

Symptoms	Check items	Possible malfunction location / Action to take
The CD cannot be removed.	_	Disk eject signal circuit. Refer to AV-64, "Diagnosis Procedure".
Audio sound is not heard.	No sound from all speakers.	AV control unit malfunction.  Refer to AV-156, "Exploded View".
	Sound is not heard only from the specific places (RH front, RH rear, LH front and LH rear).	Sound signal circuit of malfunctioning system.

### **MULTI AV SYSTEM SYMPTOMS**

### < SYMPTOM DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

Symptoms	Check items	Possible malfunction location / Action to take	
Satellite radio is not received.	"ANTENNA" is not displayed even when the channel is turned to 0 in Satellite ra- dio mode.	Perform the following inspection procedure.  1. Check satellite radio antenna mounting nut for looseness.  NOTE:  Tightening torque: 6.5 N·m (0.66 kg-m, 58 in-lb.)  2. Visually check for satellite radio antenna feeder.  3. Replace the satellite radio antenna.  Refer to AV-162, "Exploded View".  4. Replace the satellite radio tuner.  Refer to AV-161, "Exploded View".	
Satellite faulo is not received.	"ANTENNA" is displayed when the channel is turned to 0 in Satellite radio mode.	<ol> <li>Perform the following inspection procedure.</li> <li>Check the connection between Satellite radio tuner and antenna feeder.</li> <li>Check the connection between Satellite radio antenna and antenna feeder.</li> <li>Check Antenna feeder for open circuit.</li> <li>Replace the satellite radio antenna.         Refer to AV-162. "Exploded View".     </li> <li>Replace the satellite radio tuner.         Refer to AV-161. "Exploded View".     </li> </ol>	
The sound of Satellite radio is not heard.	Other audio sounds are normal.	Satellite radio sound signal circuit malfunction between satellite radio tuner and AV control unit.	
It does not change to Satellite radio mode.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-37, "CONSULT-III Function (MULTI AV)".	
AM/FM radio is not received.	Other audio sounds are normal.	<ul><li>Antenna amp. ON signal circuit.</li><li>Antenna feeder.</li></ul>	

#### RELATED TO STEERING SWITCH

Trouble diagnosis chart by symptom

Symptoms	Inspection location / Probable malfunction location
None of the steering switch operations work.	Steering switch signal GND circuit.  Refer to AV-78, "Diagnosis Procedure".
Only specified switch (1) cannot be operated.	Steering switch.
"SOURCE", "MENU UP", "MENU DOWN" switches of steering switch are not operated.	Steering switch signal A circuit.  Refer to AV-74, "Diagnosis Procedure".
"VOL UP", "VOL DOWN" switches of steering switch are not operated.	Steering switch signal B circuit. Refer to AV-76, "Diagnosis Procedure".

#### RELATED TO AUXILIARY INPUT

#### NOTE:

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

Trouble diagnosis chart by symptom

Symptoms	Check items	Probable malfunction location
No voice sound is heard when AUX mode is selected.	Voice sound is heard when other modes are selected.	AUX sound signal circuits malfunction between auxiliary input jacks and AV control unit.

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### **MULTI AV SYSTEM SYMPTOMS**

#### < SYMPTOM DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

Symptoms	Check items	Probable malfunction location
— Image is not displayed when		<ul> <li>AUX image signal circuit malfunction between auxiliary input jacks and AV control unit. Refer to AV-62, "Diagnosis Procedure".</li> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and display unit. Refer to AV-60, "Diagnosis Procedure".</li> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit. Refer to AV-61, "Diagnosis Procedure".</li> <li>RGB area (YS) signal circuit malfunction between AV control unit and display unit. Refer to AV-59, "Diagnosis Procedure".</li> </ul>
AUX mode is selected.	Camera image is normal (with rear view monitor)	AUX image signal circuit malfunction between auxiliary input jacks and AV control unit.  Refer to AV-62, "Diagnosis Procedure".
Camera image is not displayed. (with rear view monitor)		<ul> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and display unit. Refer to AV-60, "Diagnosis Procedure".</li> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit. Refer to AV-61, "Diagnosis Procedure".</li> <li>RGB area (YS) signal circuit malfunction between AV control unit and display unit. Refer to AV-59, "Diagnosis Procedure".</li> </ul>
It does not change from AUX mode to other modes.	_	<ul> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-61. "Diagnosis Procedure".</li> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-60. "Diagnosis Procedure".</li> </ul>

### RELATED TO REAR VIEW MONITOR

Trouble diagnosis chart by symptom

Symptoms	Check items	Probable malfunction location
Camera image is not displayed (displayed in black and nothing can be displayed)	AUX image is not displayed.	<ul> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-60. "Diagnosis Procedure".</li> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-61. "Diagnosis Procedure".</li> </ul>
Camera image is not shown. (Guiding line is displayed.)	_	<ul> <li>Camera image signal circuit between camera control unit and rear view camera.     Refer to AV-65, "Diagnosis Procedure".</li> <li>Rear view camera power supply circuit.     Refer to AV-66, "Diagnosis Procedure".</li> </ul>
Camera image is not displayed. (Only warning message under area is displayed.)	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis. Refer to AV-37, "CONSULT-III Function (MULTI AV)".
	AUX image is normal.	Camera image signal circuit malfunction between camera control unit and AV control unit.  Refer to AV-67, "Diagnosis Procedure".
	AUX image is not displayed.	RGB area (YS) signal circuit malfunction between AV control unit and display unit.  Refer to AV-59, "Diagnosis Procedure".
	Select "Camera Cont." of "Confirmation/ Adjustment" mode, Reverse Sensor is not turned ON at "Connection Confirmation".	Reverse signal circuit (camera control unit).

### **MULTI AV SYSTEM SYMPTOMS**

### < SYMPTOM DIAGNOSIS >

### [BASE AUDIO WITHOUT NAVIGATION]

Symptoms	Check items	Probable malfunction location
Camera image is rolling.	AUX image is also rolling.	Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit.  Refer to AV-61. "Diagnosis Procedure".
Camera image does not switch.	Malfunction of self-diagnosis result is indicated.	Camera-connection recognition signal circuit Refer to AV-37, "CONSULT-III Function (MULTI AV)".
	Malfunction of self-diagnosis result is not indicated.	Reverse signal circuit (AV control unit).
The predicted course line display is malfunctioning.	_	Sensor signal circuit malfunction. Refer to AV-72, "Diagnosis Procedure".

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## NORMAL OPERATING CONDITION

Description INFOID:000000003508435

#### **BASIC OPERATIONS**

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

#### **RELATED TO AUDIO**

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

#### NOTE

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

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

### **NORMAL OPERATING CONDITION**

< SYMPTOM DIAGNOSIS >	[BASE AUDIO WITHOUT NAVIGATION]
Symptom	Cause and Counter measure
Move immediately to the next song when playing	When a non-MP3/WMA file has been given an extension of ".MP3", ".WMA", ".mp3", or ".wma", or when play is prohibited by copyright protection, the player will skip to the next song.
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.
sources, is not a malfunction.	eld strength, such as fading noise and multi-path noise, or external noise from trains and other
=	ecause of variations in the field strength in a narrow range due to mountains or buildings blocking
<ul><li>the signal.</li><li>Multi-path noise: This noise resul antenna and the waves reflected b</li></ul>	ts from a time difference between the broadcast waves directly from the station arriving at the y mountains or buildings.

**AV-153** Revision: 2007 November 2008 EX35

## **PRECAUTION**

### **PRECAUTIONS**

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

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

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIRBAG".
- 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.

### Precaution for Trouble Diagnosis

INFOID:0000000003508437

#### AV COMMUNICATION SYSTEM

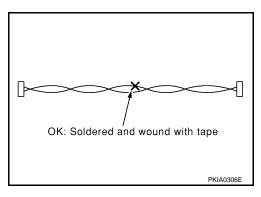
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

### Precaution for Harness Repair

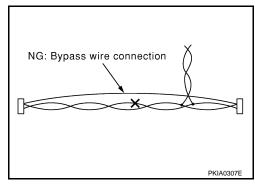
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#### AV COMMUNICATION SYSTEM

 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.)



### **PREPARATION**

< PREPARATION >

### [BASE AUDIO WITHOUT NAVIGATION]

## **PREPARATION**

### **PREPARATION**

### **Commercial Service Tools**

Tool name		Description
Power tool	PBIC0191E	Loosening screws

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## **ON-VEHICLE REPAIR**

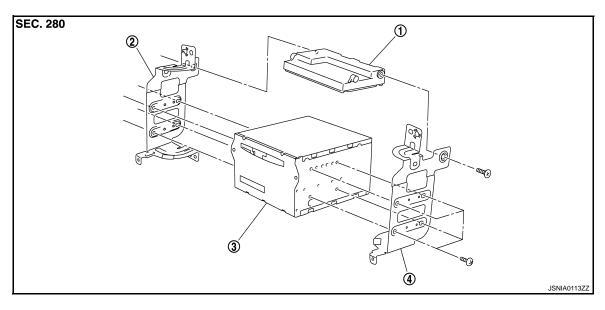
### AV CONTROL UNIT

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

**DISASSEMBLY** 



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

3. AV control unit

4. Bracket RH

#### Removal and Installation

INFOID:0000000003573681

#### **REMOVAL**

- 1. Remove display unit.
- 2. Remove AV control unit with a unified meter and A/C amp. as a single unit from the body.
- 3. Remove bracket screws, and then remove AV control unit.

#### **INSTALLATION**

Installation is the reverse order of removal.

#### **CAUTION:**

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

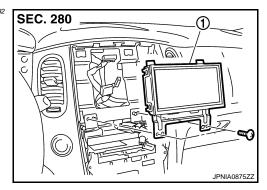
### **DISPLAY UNIT**

#### [BASE AUDIO WITHOUT NAVIGATION]

### **DISPLAY UNIT**

## **Exploded View**

INFOID:0000000003573682



1. Display unit

### Removal and Installation

**REMOVAL** 

- 1. Remove cluster lid D. Refer to IP-11, "Exploded View".
- 2. Remove display unit mounting screws.
- 3. Remove display unit.

#### **INSTALLATION**

Installation is the reverse order of removal.

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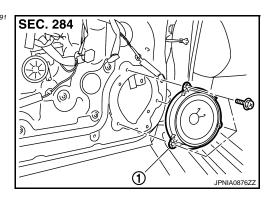
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### FRONT DOOR SPEAKER

**Exploded View** 

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Front door speaker

#### Removal and Installation

INFOID:0000000003573692

#### **REMOVAL**

- 1. Remove front door finisher. Refer to <a href="INT-11">INT-11</a>, "DRIVER SIDE: Exploded View" (driver side) or <a href="INT-14">INT-14</a>, "PASSENGER SIDE: Exploded View" (passenger side).
- 2. Remove front door speaker mounting bolts, disconnect the front door speaker connector.
- 3. Remove front door speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

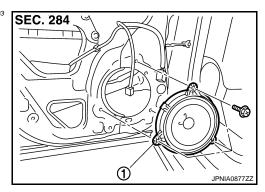
#### **REAR DOOR SPEAKER**

[BASE AUDIO WITHOUT NAVIGATION]

### **REAR DOOR SPEAKER**

### **Exploded View**

INFOID:0000000003573693



Rear door speaker

#### Removal and Installation

#### **REMOVAL**

- 1. Remove rear door finisher. Refer to <a href="INT-17">INT-17</a>, "Exploded View".
- 2. Remove rear door speaker mounting bolts, disconnect the rear door speaker connector.
- 3. Remove rear door speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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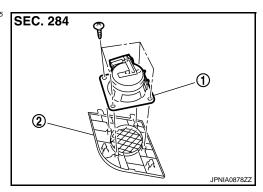
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### **FRONT SQUAWKER**

### **Exploded View**

INFOID:0000000003573695



- 1. Front squawker
- 2. Speaker grille

### Removal and Installation

INFOID:0000000003573696

#### **REMOVAL**

- 1. Lift up the speaker grille with squawker. Refer to IP-11, "Exploded View".
- 2. Disconnect the front squawker connector.
- 3. Remove front squawker mounting screws.
- 4. Remove front squawker.

#### **INSTALLATION**

Installation is the reverse order of removal.

**Exploded View** 

SEC. 280

- 1. TEL adapter unit
- 2. Bracket (front)

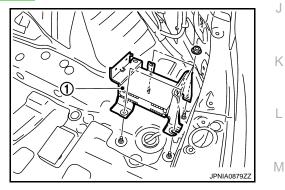
3. Satellite radio tuner

4. Bracket (rear)

#### Removal and Installation

#### **REMOVAL**

- Remove luggage floor spacer (RH). Refer to <u>INT-34, "Exploded View"</u>.
- 2. Remove nuts, and then satellite radio tuner (1).



#### **INSTALLATION**

Install in the reverse order of removal.

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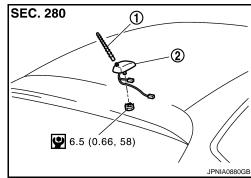
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### **ANTENNA BASE**

### **Exploded View**

INFOID:0000000003573738



- 1. Antenna rod
- 2. Antenna base

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

#### Removal and Installation

INFOID:0000000003573739

#### **REMOVAL**

- Remove headlining (rear). Keep a service area. Refer to <u>INT-26, "NORMAL ROOF: Exploded View"</u> (normal roof) or <u>INT-30, "SUNROOF: Exploded View"</u> (sunroof).
- 2. Remove antenna base mounting nut.
- 3. Remove antenna base.

#### **INSTALLATION**

Installation is the reverse order of removal.

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

#### **CAUTION:**

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

### **MULTIFUNCTION SWITCH**

### [BASE AUDIO WITHOUT NAVIGATION]

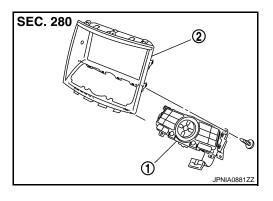
### **MULTIFUNCTION SWITCH**

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

DISASSEMBLY



- 1. Multifunction switch
- Cluster lid D

### Removal and Installation

INFOID:0000000003573719

#### **REMOVAL**

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

#### **INSTALLATION**

Installation is the reverse order of removal.

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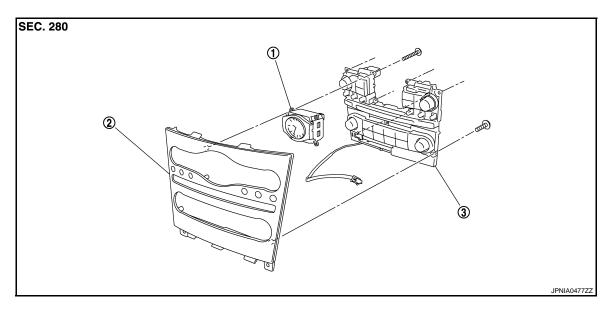
### PRESET SWITCH

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

#### **DISASSEMBLY**



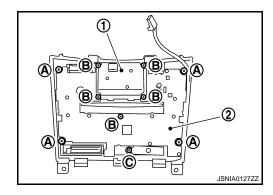
1. Clock 2. Cluster lid C 3. Preset switch

#### Removal and Installation

INFOID:0000000003573712

#### **REMOVAL**

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



#### **INSTALLATION**

Installation is the reverse order of removal.

#### NOTE:

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

### **AUXILIARY INPUT JACKS**

< ON-VEHICLE REPAIR >

[BASE AUDIO WITHOUT NAVIGATION]

### **AUXILIARY INPUT JACKS**

**Exploded View** 

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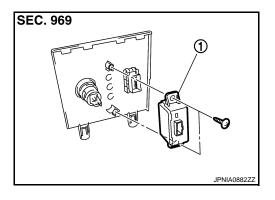
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**REMOVAL** 

Refer to IP-22, "Exploded View".

DISASSEMBLY



1. Auxiliary input jacks

#### Removal and Installation

INFOID:0000000003573706

#### **REMOVAL**

- 1. Remove console finisher. Refer to <a href="IP-22">IP-22</a>, "Exploded View".
- 2. Remove auxiliary mounting screws.
- 3. Remove auxiliary input jacks.

#### **INSTALLATION**

Installation is the reverse order of removal.

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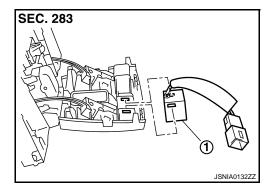
### **MICROPHONE**

Exploded View

#### **REMOVAL**

Refer to <u>INT-26, "NORMAL ROOF: Exploded View"</u> (normal roof) or <u>INT-30, "SUNROOF: Exploded View"</u> (sunroof).

**DISASSEMBLY** 



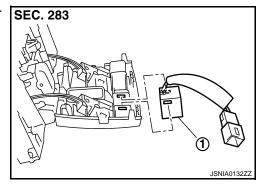
1. Microphone

#### Removal and Installation

INFOID:0000000003573726

#### **REMOVAL**

- 1. Remove map lamp assembly. Refer to <a href="INT-26">INT-26</a>, "NORMAL ROOF: Exploded View" (normal roof) or <a href="INT-30">INT-30</a>, "SUNROOF: Exploded View" (sunroof).
- 2. Remove microphone (1), stretching pawls of map lamp assembly.



#### **INSTALLATION**

Installation is the reverse order of removal.

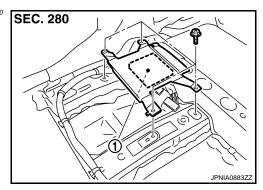
#### **CAMERA CONTROL UNIT**

[BASE AUDIO WITHOUT NAVIGATION]

### **CAMERA CONTROL UNIT**

**Exploded View** 

INFOID:0000000003573730



Camera control unit

#### Removal and Installation

#### **REMOVAL**

- 1. Remove front seat (LH side). Refer to SE-87, "Exploded View".
- 2. Remove floor carpet. Keep a service area.
- 3. Remove camera control unit.

### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- 2. Perform predicted course line center position adjustment. Refer to <u>AV-15</u>, "<u>PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT</u>: Special Repair Requirement".

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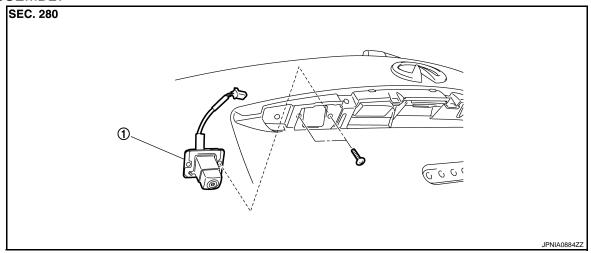
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### **REAR VIEW CAMERA**

Exploded View

#### DISASSEMBLY



1. Rear view camera

#### Removal and Installation

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#### **REMOVAL**

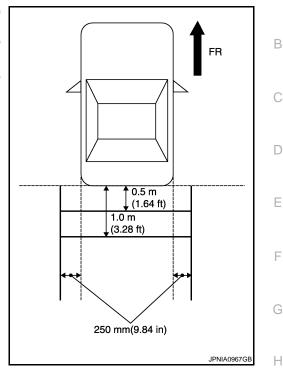
- 1. Remove back door finisher inner. Refer to <a href="INT-38">INT-38</a>, "Exploded View".
- 2. Remove back door outside finisher upper. Refer to EXT-48, "Exploded View".
- Remove back door outside finisher lower. Refer to <u>EXT-48</u>, "Exploded View".
- 4. Remove rear view camera mounting screws and rear view camera harness connector.
- 5. Remove rear view camera.

#### **INSTALLATION**

- Installation is the reverse order of removal.
- Adjust the guide line position if the guide line position is shifted after installing the rear view camera. Refer to <u>AV-169</u>, "<u>Adjustment"</u>.

Adjustment INFOID:0000000003579617

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

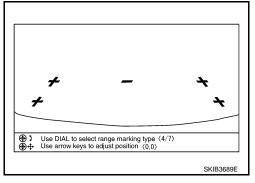


Rotate the center dial, and then select the guiding line pattern so that its angle is aligned with the correction line of the rear of the vehicle.

#### Selected pattern : 7

4. Make fine adjustment to the correction line of the rear of the vehicle with up/down/left/right switches so that its position is aligned with the guiding line. Press ""

> Up/Down adjustment range : **-20 - 20** Left/Right adjustment range = -20 - 20



#### **CAUTION:**

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

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

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

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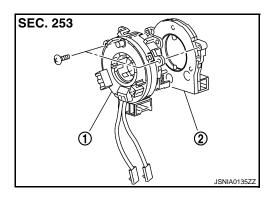
### STEERING ANGLE SENSOR

Exploded View

**REMOVAL** 

Refer to SR-6, "Exploded View".

**DISASSEMBLY** 



- 1. Spiral cable
- 2. Steering angle sensor

#### Removal and Installation

INFOID:0000000003573728

#### **REMOVAL**

- 1. Remove spiral cable.
- 2. Remove steering angle sensor mounting screws.
- 3. Remove steering angle sensor.

#### **INSTALLATION**

Installation is the reverse order of removal.

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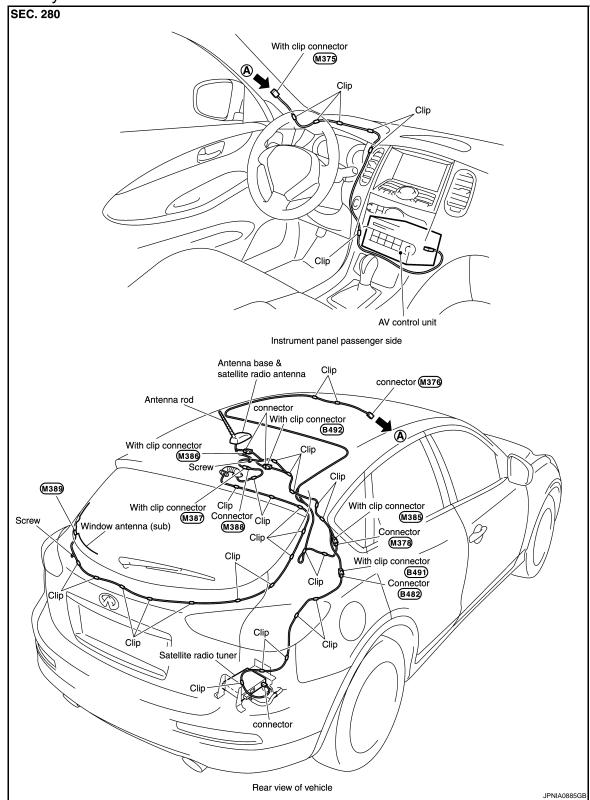
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### ANTENNA FEEDER

Harness Layout



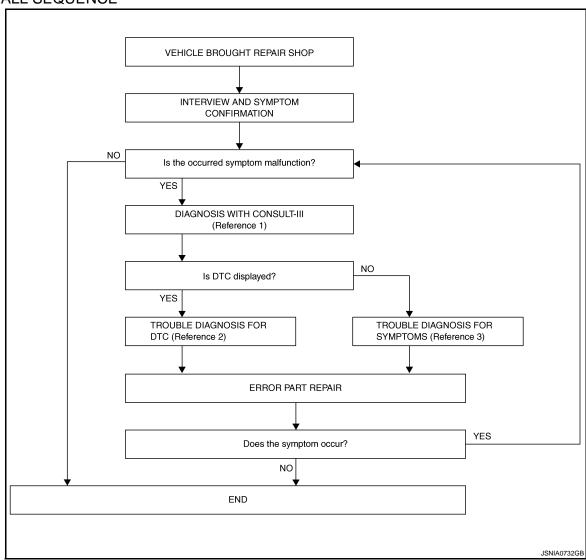
Revision: 2007 November AV-171 2008 EX35

### **BASIC INSPECTION**

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

#### **OVERALL SEQUENCE**



- Reference 1... Refer to <u>AV-201, "CONSULT-III Function (MULTI AV)"</u>.
- Reference 2··· Refer to <u>AV-278</u>, "<u>DTC Index</u>".
- Reference 3··· Refer to AV-403, "Symptom Table".

#### **DETAILED FLOW**

### 1.INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

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

#### Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

### 2.DIAGNOSIS WITH CONSULT-III

	DIAGNOSIS AND REPAIR WORKFLOW
< B	BASIC INSPECTION > [BOSE AUDIO WITHOUT NAVIGATION]
1.	Connect CONSULT-III and perform a self-diagnosis for "MULTI AV". Refer to AV-201, "CONSULT-III Func-
٠.	tion (MULTI AV)".
	NOTE:
	Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed.
2.	Check if any DTC is displayed in the self-diagnosis results.
ls [	OTC displayed?
Υ	ES >> GO TO 3.
Ν	O >> GO TO 4.
3.	TROUBLE DIAGNOSIS FOR DTC
1.	Check the DTC indicated in the self-diagnosis results.
2.	Perform the relevant diagnosis referring to the DTC Index. Refer to AV-278, "DTC Index".
	>> GO TO 5.
4	TROUBLE DIAGNOSIS FOR SYMPTOMS
	rform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-403, "Symptom
lat	<u>ole"</u> .
	>> GO TO 5.
5.	ERROR PART REPAIR
1.	Repair or replace the identified malfunctioning parts.
2.	Perform a self-diagnosis for "MULTI AV" with CONSULT-III.
	NOTE:
	Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC
^	has been indicated in the self-diagnosis results.
3.	Check that the symptom does not occur.

Does the symptom occur?

YES >> GO TO 1. NO >> INSPECTION END NO

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### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

[BOSE AUDIO WITHOUT NAVIGATION]

### INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

#### WITH REAR VIEW MONITOR

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

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement

1.correction of center position of predicted course line

Refer to the following for details.

>> Refer to <u>AV-174</u>, "<u>PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT</u>: Special Repair Requirement".

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000003528842

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

1. CORRECTION OF CENTER POSITION OF PREDICTED COURSE LINE

Refer to the following for details.

>> Refer to <u>AV-174</u>, "<u>PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT</u>: Special Repair Requirement".

#### PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT

PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Description

INFOID:0000000003528844

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

# PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Special Repair Requirement

### 1.STEERING OPERATION

Steer the steering wheel to the leftmost and rightmost ends.

>> GO TO 2

### 2.DRIVING

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

>> END

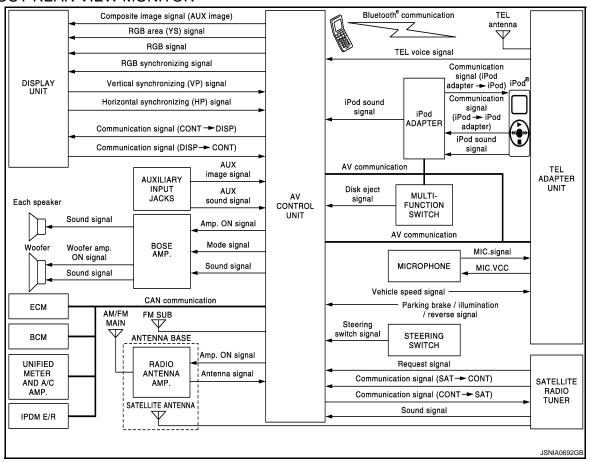
## **FUNCTION DIAGNOSIS**

### **MULTI AV SYSTEM**

System Diagram

## INFOID:0000000003508650

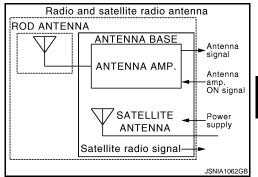
#### WITHOUT REAR VIEW MONITOR



#### NOTE:

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

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



**AV-175** Revision: 2007 November 2008 EX35

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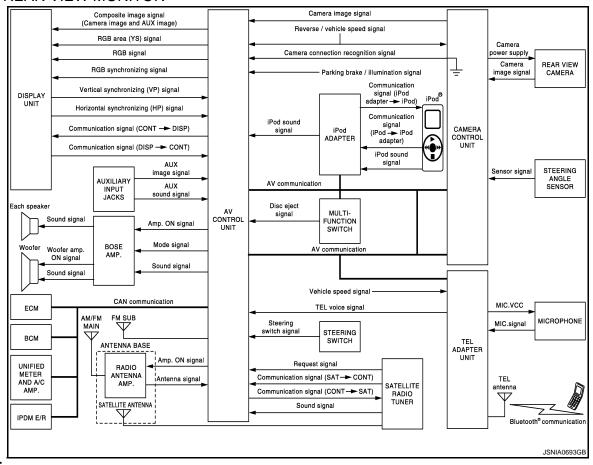
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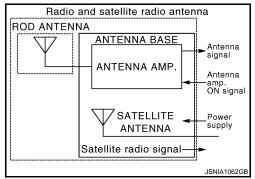
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#### WITH REAR VIEW MONITOR



#### NOTE:

- The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.
- A radio antenna base integrated with radio antenna and satellite radio antenna is adopted.



### System Description

INFOID:0000000003508651

Multi AV system means that the following systems are integrated.

System name	System explanation
AUDIO SYSTEM	AV-181, "System Diagram"
VEHICLE INFORMATION SYSTEM	<ul> <li>Indicates the status of audio, climate control system, fuel economy and maintenance.</li> <li>AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM, unified meter and A/C amp.</li> <li>AV control unit is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> </ul>

#### **MULTI AV SYSTEM**

#### < FUNCTION DIAGNOSIS >

#### [BOSE AUDIO WITHOUT NAVIGATION]

System name	System explanation
HANDS-FREE PHONE SYSTEM	AV-185, "System Description"
AUXILIARY INPUT SYSTEM	Refer to "AUXILIARY INPUT SYSTEM" shown below.

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

#### NOTE:

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

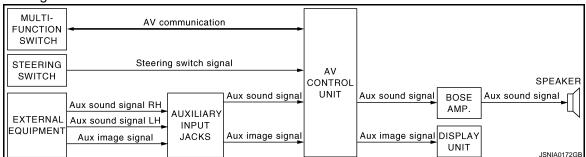
- CONSULT-III self-diagnosis: refer to AV-201, "CONSULT-III Function (MULTI AV)".
- On board self-diagnosis: refer to <u>AV-192, "Diagnosis Description"</u>.

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

Refer to AV-205, "Diagnosis Description" for on board self-diagnosis.

#### **AUXILIARY INPUT SYSTEM**

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



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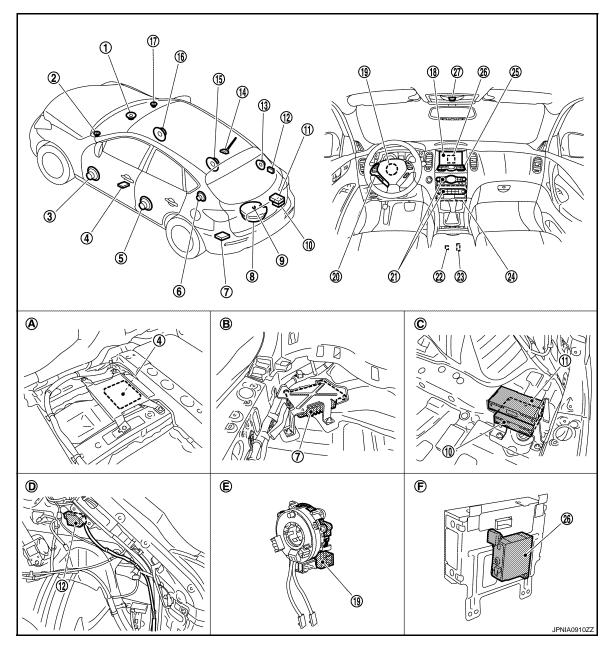
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### **Component Parts Location**

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- Center speaker
- Camera control unit
- BOSE amp. 7.
- 10. Satellite radio tuner
- 13. Rear squawker RH
- 16. Front door speaker RH
- 19. Steering angle sensor
- 22. iPod connector
- 25. Multifunction switch
- Under front seat (LH side)
- Luggage side RH

- Front squawker LH
- 5. Rear door speaker LH
- Woofer 8.
- 11. TEL adapter unit
- 14. Antenna base (antenna amp and sat- 15. Rear door speaker RH ellite antenna)
- 17. Front squawker RH
- 20. Steering switch
- 23. Auxiliary input jacks
- 26. iPod adapter
- B. Luggage floor (LH side)
- Spiral cable part

- Front door speaker LH
- 6. Rear squawker LH
- Rear view camera 9.
- 12. TEL antenna
- 18. Display unit
- 21. Preset switch
- 24. AV control unit
- 27. Microphone
- C. Luggage floor (RH side)
- Rear view of the display unit

### **MULTI AV SYSTEM**

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

Component Description

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

### **MULTI AV SYSTEM**

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

Part name	Description
STEERING ANGLE SENSOR	Steering signal necessary for possible route line control is transmitted to camera control unit.
STEERING SWITCH	<ul> <li>Operations such as audio and hands-free phone are possible.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>
MICROPHONE	<ul> <li>Used only when hands-free phone is operated.</li> <li>Outputs Mic. signal (TEL voice signal) to TEL adapter unit.</li> <li>The power (Mic. power supply) is supplied from TEL adapter unit.</li> </ul>
AUXILIARY INPUT JACKS	The image signal of the auxiliary input is output via AV control unit to display, and it outputs the sound signal to AV control unit.
ANTENNA BASE	<ul> <li>A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.     ANTENNA AMP.</li> <li>Radio signal received by glass antenna is amplified and transmitted to AV control unit.</li> <li>Power (antenna amp. ON signal) is supplied from AV control unit.     SATELLITE RADIO ANTENNA</li> <li>Receives the satellite radio waves and outputs it to satellite radio tuner.</li> </ul>
TEL ADAPTER UNIT	<ul> <li>Inputs the TEL voice signal from TEL antenna and outputs it to AV control unit.</li> <li>It is connected with AV control unit via AV communication and controlled with AV control unit.</li> </ul>
TEL ANTENNA	Receives the TEL voice signal and outputs it to TEL adapter unit.
SATELLITE RADIO TUNER	<ul> <li>Inputs the satellite radio signal from satellite radio antenna and outputs the sound signal to AV control unit.</li> <li>It is controlled with AV control unit and serial communication (communication signal and request signal).</li> </ul>
iPod ADAPTER	<ul> <li>Inputs iPod sound signal from iPod<sup>®</sup>, and outputs iPod sound signal to AV control unit.</li> <li>Receiving/transmitting of iPod<sup>®</sup> operation signals are performed as follows:         <ul> <li>between AV control unit and iPod adapter: AV communication.</li> <li>between iPod<sup>®</sup> and iPod adapter: serial communication.</li> </ul> </li> </ul>

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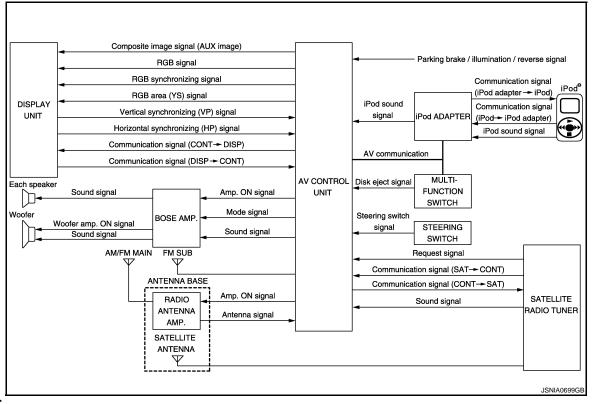
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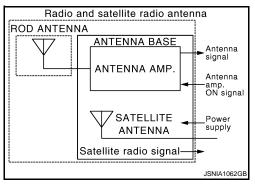
## **AUDIO SYSTEM**

System Diagram



### NOTE:

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



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## System Description

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

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

### **FUNCTION DESCRIPTION**

### Operating signal

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

### AUDIO SYSTEM

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

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

### Screen display

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

### AM/FM Radio Mode

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

### Satellite Radio System

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

#### CD Mode

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

#### iPod Connection

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

#### Driver's Audio Stage Mode

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

## **Component Parts Location**

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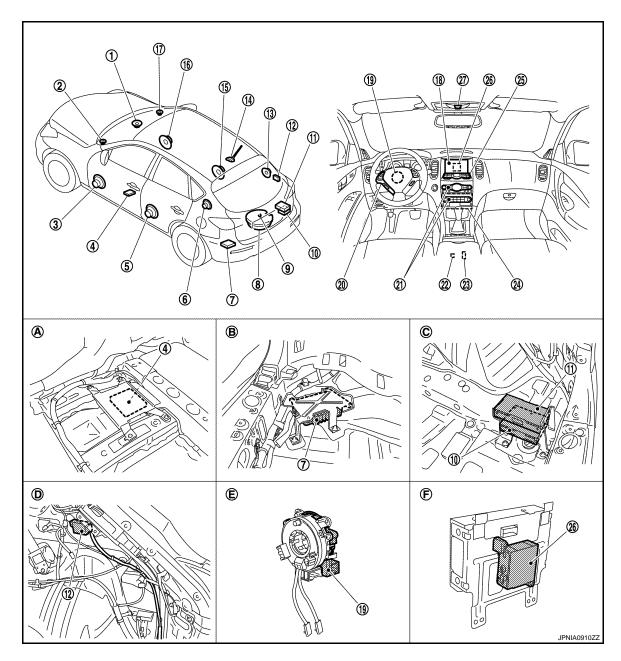
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- Center speaker
- Camera control unit
- BOSE amp. 7.
- 10. Satellite radio tuner
- 13. Rear squawker RH
- 16. Front door speaker RH
- 19. Steering angle sensor
- 22. iPod connector
- 25. Multifunction switch
- Under front seat (LH side) Α.
- Luggage side RH

- Front squawker LH
- 5. Rear door speaker LH
- 8. Woofer
- 11. TEL adapter unit
- 14. Antenna base (antenna amp and sat- 15. Rear door speaker RH ellite antenna)
- 17. Front squawker RH
- 20. Steering switch
- 23. Auxiliary input jacks
- 26. iPod adapter
- B. Luggage floor (LH side)
- Spiral cable part

- Front door speaker LH
- 6. Rear squawker LH
- 9. Rear view camera
- 12. TEL antenna
- 18. Display unit
- 21. Preset switch
- 24. AV control unit
- 27. Microphone
- C. Luggage floor (RH side)
- Rear view of the display unit

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## **AUDIO SYSTEM**

## < FUNCTION DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

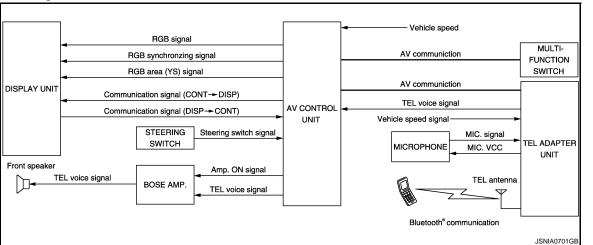
## **Component Description**

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

### HANDS-FREE PHONE SYSTEM

System Diagram



## System Description

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- TEL adapter unit is controlled with AV communication from AV control unit.
- The connection between portable telephone and TEL adapter unit is performed via Bluetooth<sup>®</sup> communication.
- The voice guidance signal is input from TEL adapter unit to AV control unit and output via BOSE amp. to front speaker when operating TEL.
- TEL adapter unit has the on board self-diagnosis function. Refer to AV-205, "Diagnosis Description".

### When receiving a call

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

### When a call is transmitted

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

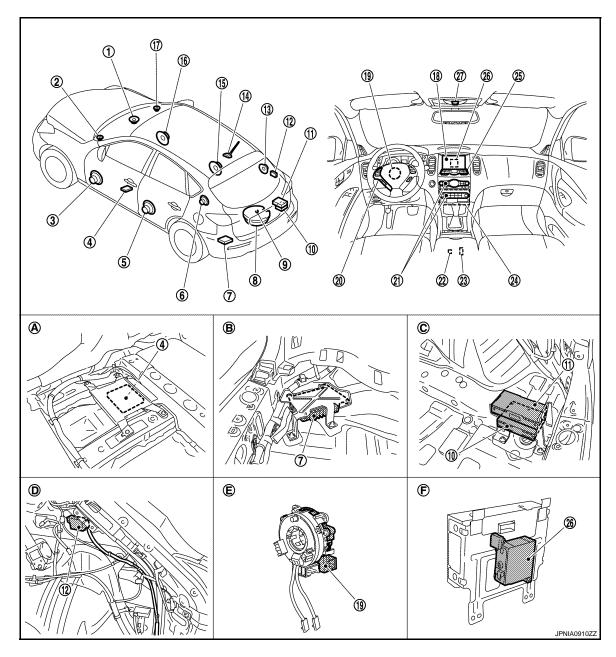
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## **Component Parts Location**

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- Center speaker
- Camera control unit
- BOSE amp. 7.
- 10. Satellite radio tuner
- 13. Rear squawker RH
- 16. Front door speaker RH
- 19. Steering angle sensor
- 22. iPod connector
- 25. Multifunction switch
- Under front seat (LH side)
- Luggage side RH

- Front squawker LH
- 5. Rear door speaker LH
- Woofer 8.
- 11. TEL adapter unit
- 14. Antenna base (antenna amp and sat- 15. Rear door speaker RH ellite antenna)
- 17. Front squawker RH
- 20. Steering switch
- 23. Auxiliary input jacks
- 26. iPod adapter
- B. Luggage floor (LH side)
- Spiral cable part

- Front door speaker LH
- 6. Rear squawker LH
- Rear view camera 9.
- 12. TEL antenna
- 18. Display unit
- 21. Preset switch
- 24. AV control unit
- 27. Microphone
- C. Luggage floor (RH side)
- Rear view of the display unit

## HANDS-FREE PHONE SYSTEM

## < FUNCTION DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

# Component Description

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

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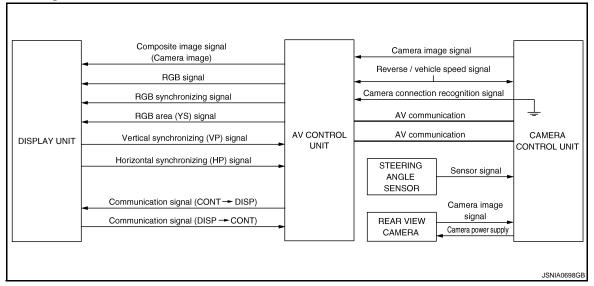
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## **REAR VIEW MONITOR SYSTEM**

### System Diagram

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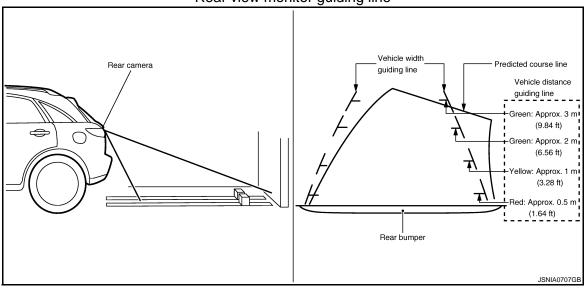
## System Description

INFOID:0000000003161228

### CAMERA IMAGE OPERATION PRINCIPLE

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

### Rear view monitor guiding line



### **REAR VIEW MONITOR SYSTEM**

[BOSE AUDIO WITHOUT NAVIGATION]

### < FUNCTION DIAGNOSIS >

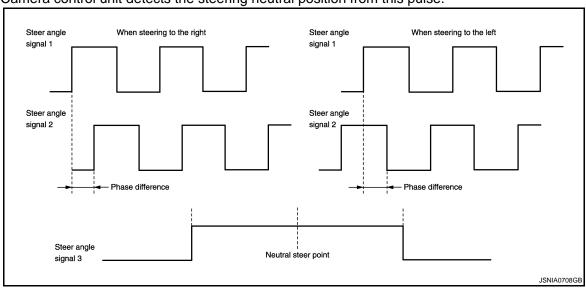
### PREDICTED COURSE LINE OPERATION PRINCIPLE

Detection of steering rotation direction

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

Detection of steering neutral position

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



Correction of steering neutral position

Camera control unit corrects the steering neutral position during driving according to the vehicle speed signal and sensor signal.

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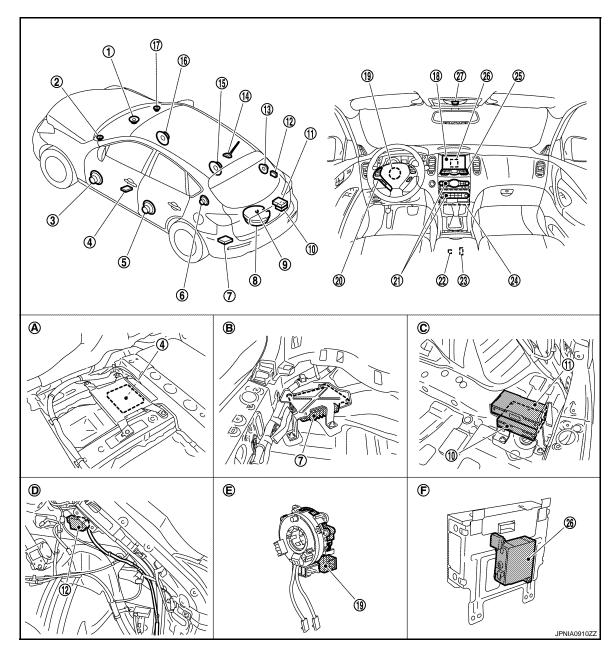
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## **Component Parts Location**

INFOID:0000000003579815



- Center speaker
- Camera control unit
- BOSE amp. 7.
- 10. Satellite radio tuner
- 13. Rear squawker RH
- 16. Front door speaker RH
- 19. Steering angle sensor
- 22. iPod connector
- 25. Multifunction switch
- Under front seat (LH side)
- Luggage side RH

- Front squawker LH
- 5. Rear door speaker LH
- Woofer 8.
- 11. TEL adapter unit
- 14. Antenna base (antenna amp and sat- 15. Rear door speaker RH ellite antenna)
- 17. Front squawker RH
- 20. Steering switch
- 23. Auxiliary input jacks
- 26. iPod adapter
- B. Luggage floor (LH side)
- Spiral cable part

- Front door speaker LH
- 6. Rear squawker LH
- Rear view camera 9.
- 12. TEL antenna
- 18. Display unit
- 21. Preset switch
- 24. AV control unit
- 27. Microphone
- C. Luggage floor (RH side)
- Rear view of the display unit

## **REAR VIEW MONITOR SYSTEM**

< FUNCTION DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

## Component Description

INFOID:0000000003534102

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

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< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## DIAGNOSIS SYSTEM (AV CONTROL UNIT)

## **Diagnosis Description**

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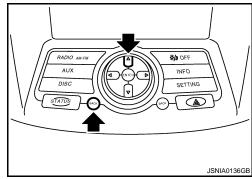
### MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

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

### Self-diagnosis mode

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

The hazard switch and disk eject switch cannot be checked.



### Finishing self-diagnosis mode

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

### MULTI AV SYSTEM ON BOARD DIAGNOSIS FUNCTION

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

### ON BOARD DIAGNOSIS

### Description

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

### On board diagnosis item

Mode	Description	
Self Diagnosis	AV control unit diagnosis     Perform the connection diagnosis between each of the units.	

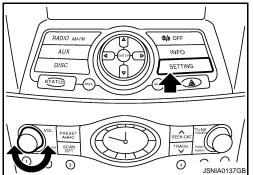
### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

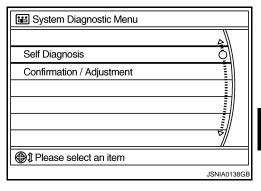
	Mode	Description	
Display Diagnosis  Vehicle Signals		The confirmations of the tint with the color spectrum bar display and shading of color with the gradation bar display can be performed.	
		Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse.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

### STARTING PROCEDURE

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



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



**SELF-DIAGNOSIS MODE** 

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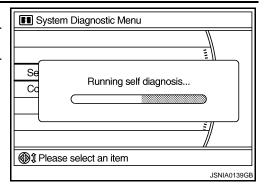
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### < FUNCTION DIAGNOSIS >

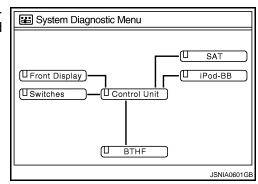
### [BOSE AUDIO WITHOUT NAVIGATION]

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



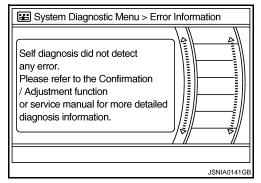
 Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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



#### NOTE:

- · Only the control unit (AV control unit) is displayed in red.
- Replace AV control unit if "Self-Diagnosis did not run because of a control unit malfunction" is indicated. The symptom is an AV control unit internal error. Refer to AV-412, "Exploded View".
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.
- The comments of the self-diagnosis results can be viewed with a component in the diagnosis result screen.



### **SELF-DIAGNOSIS RESULTS**

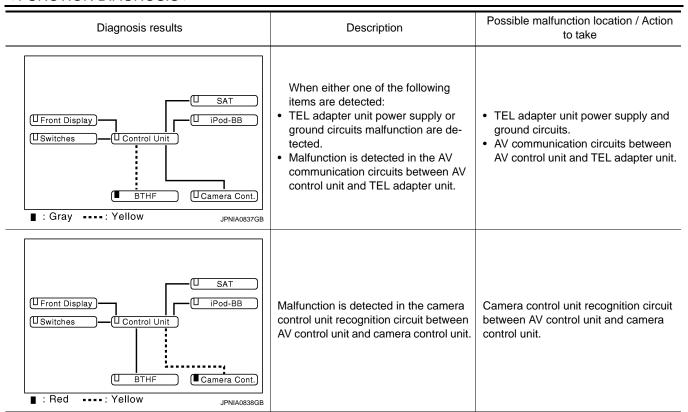
- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between AV control unit and each unit, and the internal operation of AV control unit.
- Because the start condition of the diagnosis function is a switch operation, the on board diagnosis function cannot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

Self-diagnosis result chart

## [BOSE AUDIO WITHOUT NAVIGATION]

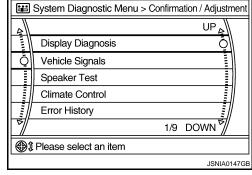
Diagnosis results	Description	Possible malfunction location / Action to take	
"Self-Diagnosis did not run because of a control unit malfunction"	AV control unit malfunction is detected.	Replace AV control unit.	
☐ Front Display ☐ iPod-BB	Malfunction is detected in AV control unit power supply or ground circuits.	Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.	
Front Display  Gray  Gray  U SAT  U iPod-BB  U Control Unit  U iPod-BB  U Camera Cont.  JPNIA0834GB	Malfunction is detected in the communication circuits between AV control unit and display unit.	Communication circuits between AV control unit and display unit.	
SAT  SAT  I Pod-BB  I Switches  I Control Unit  BTHF  UCamera Cont.  JPNIA0835GB	When either one of the following items are detected:  Satellite radio tuner power supply or ground circuits malfunction are detected.  Malfunction is detected in the communication circuits between AV control unit and satellite radio tuner.  Malfunction is detected in the request signal circuit between AV control unit and satellite radio tuner.	<ul> <li>Satellite radio tuner power supply and ground circuit.</li> <li>Communication circuits between AV control unit and satellite radio tuner.</li> <li>Request signal circuit between AV control unit and satellite radio tuner.</li> </ul>	
U SAT  U Front Display  U Switches  U Control Unit  U Camera Cont.  I : Gray ••••: Yellow  JPNIA0836GB	When either one of the following items are detected:  • iPod adapter power supply or ground circuits malfunction are detected.  • Malfunction is detected in the AV communication circuits between AV control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuit.</li> <li>AV communication circuits between AV control unit and iPod adapter.</li> </ul>	F

### [BOSE AUDIO WITHOUT NAVIGATION]

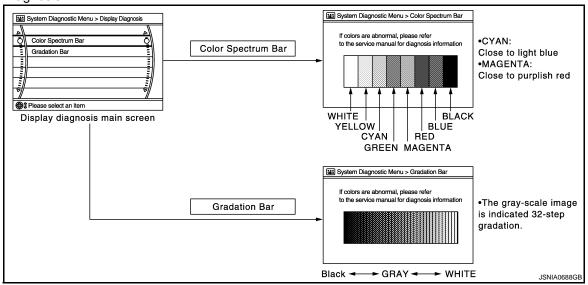


### CONFIRMATION/ADJUSTMENT MODE

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



### Display Diagnosis



### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

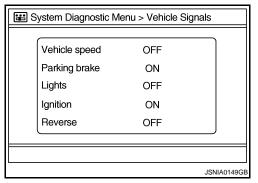
The tint of the color bar indication is as per the following list if a RGB signal error is detected.

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

B (blue) signal error : Yellow tint

### Vehicle Signals

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



Diagnosis item	Display	Vehicle status	Remarks
Mahiala anaad	ON	Vehicle speed > 0 km/h (0 MPH)	
Vehicle speed	ON	Vehicle speed = 0 km/h (0 MPH)	Olement in the first constant of the second
Dayking hyaka	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.
Parking brake	OFF	Parking brake is released.	
Lights	ON	Light switch ON	
	OFF	Light switch OFF	_
lanition	ON	Ignition switch ON	
Ignition	OFF	Ignition switch ACC	_
Reverse	ON	Shift the selector lever to the "R" position	Changes in indication may be delayed. This is normal.
	OFF	Shift the selector lever to a position other than the "R" position	Changes in indication may be delayed. This is normal.

#### Speaker Test

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

#### NOTE:

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

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

Climate Control

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

### **Error History**

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

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

Revision: 2007 November AV-197 2008 EX35

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Speaker Testing
Front Left Tweeter
Speaker Settings

Push start to test next speaker

<sup>\*:</sup> Squawker

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

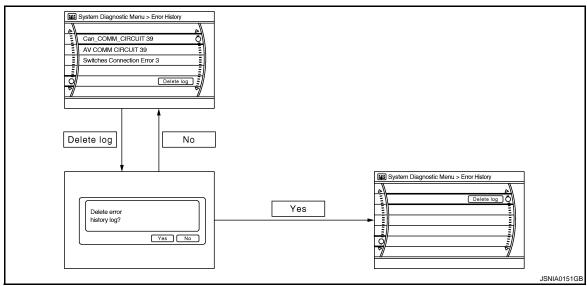
### Count up method A

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

### Count up method B

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

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



### Error item

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

Error item	Description	Possible malfunction factor/Action to take	
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair malfunctioning parts according to the diagnosis results.  Refer to AV-201, "CONSULT-III Function (MULTI AV)".	
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.		
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	Replace AV control unit.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.		
CAN Controller Memory Error	AV control unit mailunction is detected.		
Front Display Connection Error	When either one of the following items are detected: Display unit power supply or ground circuits malfunction are detected. Malfunction is detected in the communication circuits between AV control unit and display unit.	<ul> <li>Display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and display unit.</li> </ul>	

### < FUNCTION DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

Error item	Description	Possible malfunction factor/Action to take
SAT Connection Error	When either one of the following items are detected: Satellite radio tuner power supply or ground circuits malfunction are detected. Malfunction is detected in the communication circuits between AV control unit and satellite radio tuner. Malfunction is detected in the request signal circuit between AV control unit and satellite radio tuner.	<ul> <li>Satellite radio tuner power supply and ground circuits.</li> <li>Communication circuits between AV control unit and satellite radio tuner.</li> <li>Request signal circuit between AV control unit and satellite radio tuner.</li> </ul>
Camera Control Unit Connection Error	Malfunction is detected in the camera con- nection recognition circuit between AV con- trol unit and camera control unit.	Camera-connection recognition circuit between AV control unit and camera control unit.
AV COMM CIRCUIT     Switches Connection Error	When either one of the following items are detected:  Multifunction switch power supply or ground circuits malfunction are detected.  Malfunction is detected in the AV communication circuits between AV control unit and the junction between AV control unit and multifunction switch.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and the junction between AV control unit and multifunction switch.</li> </ul>
AV COMM CIRCUIT     iPod Connection Error	When either one of the following items are detected:  iPod adapter unit power supply or ground circuits malfunction are detected.  Malfunction is detected in the AV communication circuits between AV control unit and the junction between AV control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and the junction between AV control unit and iPod adapter.</li> </ul>
AV COMM CIRCUIT     Rear View Camera Connection Error	Camera control unit power supply or ground circuits malfunction is detected.	Camera control unit power supply and ground circuits.
AV COMM CIRCUIT	WITHOUT REAR VIEW MONITOR When either one of the following items are detected: TEL adapter unit power supply or ground circuits malfunction are detected. Malfunction is detected in the AV communication circuits between TEL adapter unit and the junction between AV control unit and multifunction switch.	<ul> <li>TEL adapter unit power supply and ground circuits.</li> <li>AV communication circuits between TEL adapter unit and the junction between AV control unit and multifunction switch.</li> </ul>
H/F Unit Connection Error	WITH REAR VIEW MONITOR When either one of the following items are detected: TEL adapter unit power supply or ground circuits malfunction are detected. Malfunction is detected in the AV communication circuits between camera control unit and TEL adapter unit.	<ul> <li>TEL adapter unit power supply and ground circuit.</li> <li>AV communication circuits between camera control unit and TEL adapter unit.</li> </ul>
<ul> <li>AV COMM CIRCUIT</li> <li>Rear View Camera Connection Error</li> <li>H/F Unit Connection Error</li> </ul>	Malfunction is detected in the AV communication circuits between camera control unit and the junction between camera control unit and multifunction switch.	AV communication circuits between camera control unit and the junction between camera control unit and multifunction switch.
<ul> <li>AV COMM CIRCUIT</li> <li>Switches Connection Error</li> <li>iPod Unit Connection Error</li> <li>H/F Unit Connection Error</li> </ul>	Malfunction is detected in the AV communication circuits between the AV control unit and the junction between AV control unit and multifunction switch.	AV communication circuits between AV control unit and the junction between AV control unit and multifunction switch.
<ul> <li>AV COMM CIRCUIT</li> <li>Switches Connection Error</li> <li>iPod Unit Connection Error</li> <li>Rear View Camera Connection Error</li> <li>H/F Unit Connection Error</li> </ul>	Malfunction is detected in the AV communication circuits between AV control unit and the junction between AV control unit and multifunction switch.	AV communication circuits between AV control unit and the junction between AV control unit and multifunction switch.

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

### Vehicle CAN Diagnosis

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

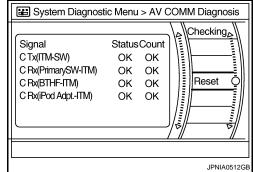
Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / UNKWN	OK / 0 - 39
Rx(ECM)	OK / UNKWN	OK / 0 - 39
Rx(Cluster)	OK / UNKWN	OK / 0 - 39
Rx(BCM)	OK / UNKWN	OK / 0 - 39
Rx(HVAC)	OK / UNKWN	OK / 0 - 39
Rx(USM)	OK / UNKWN	OK / 0 - 39

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

### **AV COMM Diagnosis**

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

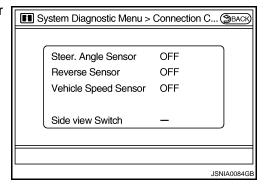
Items	Status (Current)	Counter (Past)
C Tx(ITM-SW)	OK / UNKWN	OK / 0 - 39
C Rx(PrimarySW-ITM)	OK / UNKWN	OK / 0 - 39
C Rx(BTHF–ITM)	OK / UNKWN	OK / 0 - 39
C Rx(iPod AdptITM)	OK / UNKWN	OK / 0 - 39



#### Camera Cont.

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

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



Diagnosis item	Display	Vehicle status	
ON		When steering the vehicle with ignition switch ON (remains ON until connection mode is stopped when it is turned ON)	
Steer. Angle Sensor	OFF	<ul><li>Ignition switch at ACC</li><li>No steering with ignition switch ON</li></ul>	
_		Malfunction detected in camera connection recognition signal	

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

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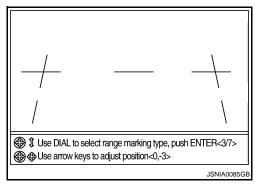
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Diagnosis item	Display	Vehicle status	
Reverse Sensor	ON	Selector lever is in "R" with ignition switch ON	
	OFF	<ul> <li>Ignition switch at ACC</li> <li>Selector lever is in position other than "R" with ignition switch ON</li> </ul>	
	_	Malfunction detected in camera-connection recognition signal	
Vehicle Speed Sensor	ON	Vehicle speed is more than 0 km/h (0 MPH) with ignition switch ON	
	OFF	Ignition switch at ACC     Vehicle speed is 0 km/h (0 MPH) with ignition switch ON	
	_	Malfunction detected in camera connection recognition signal	
Side view Switch	_	— Not used	

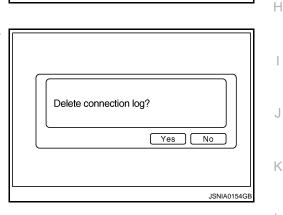
### ADJUST OFFSET OF REAR VIEW CAMERA

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



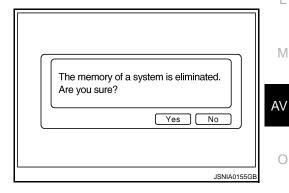
### Delete Unit Connection Log

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



### Initialize Settings

Initializes AV control unit memory.



INFOID:0000000003508663

## CONSULT-III Function (MULTI AV)

### CONSULT-III functions

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

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

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

### AV COMMUNICATION

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

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

### **ECU IDENTIFICATION**

The part number of AV control unit is displayed.

### SELF DIAGNOSIS RESULT

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

### Self-diagnosis results display item

Error item	Description	Possible malfunction factor/Action to take	
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results.  Refer to AV-207, "Diagnosis Procedure".	
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.		
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	Replace AV control unit.	
Control Unit FLASH-ROM [U1200]	AV control unit malfunction is detected.		
CAN CONT [U1216]	AV control unit mailunction is detected.		
FRONT DISP CONN [U1243]	When either one of the following items are detected: Display unit power supply or ground circuits malfunction are detected. Malfunction is detected in communication circuits between AV control unit and display unit.	<ul> <li>Display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and display unit.</li> </ul>	
SAT CONN [U1255]	When either one of the following items are detected: Satellite radio tuner power supply or ground circuits malfunction are detected. Malfunction is detected in communication circuits between AV control unit and satellite radio tuner. Malfunction is detected in request signal circuits between AV control unit and satellite radio tuner.	<ul> <li>Satellite radio tuner power supply and ground circuits.</li> <li>Communication circuits between AV control unit and satellite radio tuner.</li> <li>Request signal circuits between AV control unit and satellite radio tuner.</li> </ul>	
CAMERA CONT. CONN [U1250]	Malfunction is detected in camera connection recognition circuit between AV control unit and camera control unit.	Camera-connection recognition circuit between AV control unit and camera control unit.	

### < FUNCTION DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

Error item	Description	Possible malfunction factor/Action to take
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items are detected:  Multifunction switch power supply or ground circuits malfunction are detected.  Malfunction is detected in AV communication circuits between AV control unit and the junction between AV control unit and multifunction switch.	Multifunction switch power supply and ground circuits.     AV communication circuits between AV control unit and the junction between AV control unit and multifunction switch.
AV COMM CIRCUIT [U1300]     IPod CONN [U1254]	When either one of the following items are detected:  iPod adapter power supply or ground circuits malfunction are detected.  Malfunction is detected in AV control unit and the junction between AV control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and the junction between AV control unit and iPod adapter.</li> </ul>
WITH REAR VIEW MONITOR • AV COMM CIRCUIT [U1300] • REAR CAMERA LAN CONN [U1252]	Camera control unit power supply or ground circuits malfunction is detected.	Camera control unit power supply and ground circuits.
AV COMM CIRCUIT [U1300]     HAND FREE CONN [U1256]	WITHOUT REAR VIEW MONITOR When either one of the following items are detected:  TEL adapter unit power supply or ground circuit malfunction are detected.  Malfunction is detected in AV communication circuits between TEL adapter unit and the junction between AV control unit and multifunction switch.	TEL adapter unit power supply and ground circuits. AV communication circuits between TEL adapter unit and the junction between AV control unit and multifunction switch.
	WITH REAR VIEW MONITOR When either one of the following items are detected:  TEL adapter unit power supply or ground circuits malfunction are detected.  Malfunction is detected in AV communication circuits between camera control unit and TEL adapter unit.	<ul> <li>TEL adapter unit power supply and ground circuits.</li> <li>AV communication circuits between camera control unit and TEL adapter unit.</li> </ul>
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>REAR CAMERA LAN CONN [U1252]</li> <li>HAND FREE CONN [U1256]</li> </ul>	Malfunction is detected in AV communication circuits between camera control unit and the junction between AV control unit and multifunction switch.	AV communication circuits between camera control unit and the junction between AV control unit and multifunction switch.
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>IPod CONN [U1254]</li> <li>HAND FREE CONN [U1256]</li> </ul>	Malfunction is detected in AV communication circuits between AV control unit and the junction between AV control unit and multifunction switch.	AV communication circuits between AV control unit and the junction between AV control unit and multifunction switch.
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>REAR CAMERA LAN CONN [U1252]</li> <li>IPod CONN [U1254]</li> <li>HAND FREE CONN [U1256]</li> </ul>	Malfunction is detected in AV communication circuits between AV control unit and the junction between AV control unit and multifunction switch.	AV communication circuits between AV control unit and the junction between AV control unit and multifunction switch.

### **DATA MONITOR**

### **ALL SIGNALS**

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

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### < FUNCTION DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

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

### **SELECTION FROM MENU**

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

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

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

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

## **Diagnosis Description**

INFOID:0000000003508664

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### HANDS-FREE PHONE SYSTEM ON BOARD DIAGNOSIS

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

### On board diagnosis item

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

CAUTION:

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

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

### Self-diagnosis results

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

#### NOTE:

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

Self-diagnosis results

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

### The details of error count

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

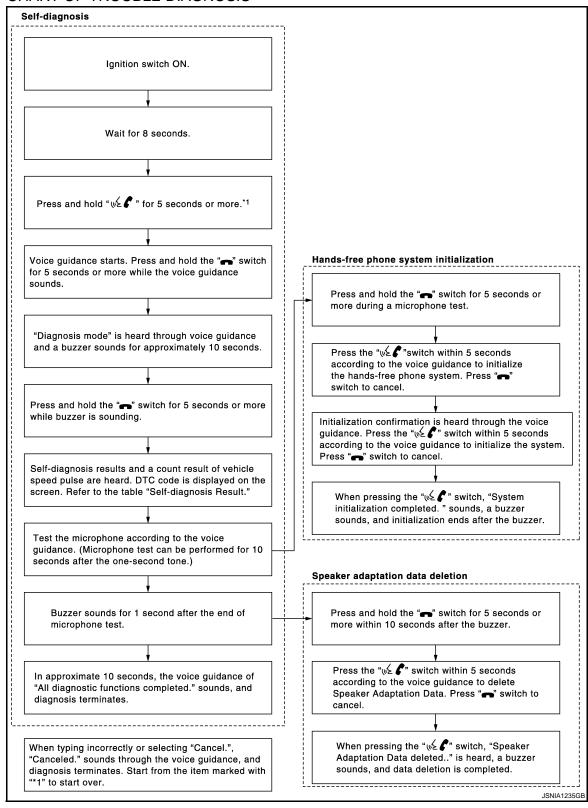
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### FLOW CHART OF TROUBLE DIAGNOSIS



### **U1000 CAN COMM CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

# COMPONENT DIAGNOSIS

## U1000 CAN COMM CIRCUIT

Description INFOID:0000000003544741

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

CAN Communication Signal Chart. Refer to LAN-27, "CAN System Specification Chart".

DTC Logic INFOID:0000000003544742

### DTC DETECTION LOGIC

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

## Diagnosis Procedure

INFOID:0000000003544743

## 1.PERFORM SELF-DIAGNOSTIC

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

### Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to "LAN system". Refer to LAN-18, "Trouble Diagnosis Flow Chart".

>> Refer to GI section. Refer to GI-38, "Intermittent Incident". NO

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

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

# U1010 CONTROL UNIT (CAN)

Description INFOID:000000003544744

Initial diagnosis of AV control unit.

DTC Logic

### DTC DETECTION LOGIC

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

## Diagnosis Procedure

INFOID:0000000003544746

## 1. REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit.

>> INSPECTION END

## **U1310 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

## **U1310 AV CONTROL UNIT**

Description INFOID:000000003544747

Replace the AV control unit if this DTC is displayed. Refer to AV-156, "Exploded View".

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

DTC Logic

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

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## **U1200 AV CONTROL UNIT**

[BOSE AUDIO WITHOUT NAVIGATION]

## **U1200 AV CONTROL UNIT**

Description INFOID:000000003544749

Replace the AV control unit if this DTC is displayed. Refer to AV-412, "Exploded View".

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

DTC Logic

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

## **U1216 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

## **U1216 AV CONTROL UNIT**

Description INFOID:000000003544751

Replace the AV control unit if this DTC is displayed. Refer to AV-412, "Exploded View".

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

DTC Logic

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

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## U1243 DISPLAY UNIT

**Description** 

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

DTC Logic

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

## Diagnosis Procedure

INFOID:0000000003544755

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

Check display unit power supply and ground circuits. Refer to AV-218, "DISPLAY UNIT: Diagnosis Procedure".

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

## 2.CHECK CONTINUITY COMMUNICATION CIRCUIT

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

Displa	y unit AV control unit		Display unit		AV control unit	
Connector	Terminals	Connector Terminals		Continuity		
M71	11	M83	56	Existed		
IVI7 I	22	IVIOS	44	LXISIEU		

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

Display unit			Continuity
Connector	Terminals	Ground	Continuity
M71	11		Not existed
	22		Not existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

## $3. \text{check communication signal (cont} \rightarrow \text{Disp)}$

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

### **U1243 DISPLAY UNIT**

### < COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

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

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

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

Check signal between display unit harness connector and ground.

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

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace display unit.

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### **U1250 CAMERA CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## U1250 CAMERA CONTROL UNIT

**Description** 

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

DTC Logic

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

## Diagnosis Procedure

INFOID:0000000003544758

# 1. CHECK CAMERA-CONNECTION RECOGNITION SIGNAL CIRCUIT

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

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

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK AV CONTROL UNIT VOLTAGE

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

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

### Is inspection result normal?

YES >> Replace camera control unit.

NO >> Replace AV control unit.

### **U1255 SATELLITE RADIO TUNER**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## **U1255 SATELLITE RADIO TUNER**

Description INFOID:0000000003544759

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

DTC Logic

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

## Diagnosis Procedure

1. CHECK SATELLITE RADIO TUNER POWER SUPPLY AND GROUND CIRCUIT

Check satellite radio tuner power supply and ground circuit. Refer to <u>AV-221, "SATELLITE RADIO TUNER:</u> Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

## 2.check continuity communication circuit and request signal circuit

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

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

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

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

### Is the inspection result normal?

YES >> GO TO 3.

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NO >> Repair harness or connector.

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INFOID:0000000003544761

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### **U1255 SATELLITE RADIO TUNER**

### < COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

# $\overline{3}$ .check av control unit voltage

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

(+) AV control unit		(-)	Voltage (Approx.)
Connector	Terminals		( 44.5)
M82	28	Ground	7.5 V
IVIOZ	29	Giouna	7.0 V

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

## 4. CHECK SATELLITE RADIO TUNER

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

(+)		(-)	Voltage (Approx.)
Satellite radio tuner			
Connector	Terminal		(11 - 7
M236	10	Ground	7.0 V

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace satellite radio tuner.

### **U1300 AV COMM CIRCUIT**

#### [BOSE AUDIO WITHOUT NAVIGATION]

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## U1300 AV COMM CIRCUIT

Description

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

#### SELF-DIAGNOSIS RESULTS DISPLAY ITEM

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

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000003508684

### 1.CHECK FUSE

Check for blown fuses.

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

#### Is the inspection result normal?

YES >> GO TO 2.

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

## 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between AV control unit harness connectors and ground.

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

#### Is the inspection result normal?

YES >> GO TO 3.

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

## 3. CHECK GROUND CIRCUIT

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

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

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

**DISPLAY UNIT** 

## DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000003544762

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

Check voltage between display unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Inverter VCC	M71	2	ACC	9 V
Signal VCC	IVI/ I	3	700	<i>3</i> V

#### Is the inspection result normal?

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

#### < COMPONENT DIAGNOSIS >

#### [BOSE AUDIO WITHOUT NAVIGATION]

# $\overline{2.}$ CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.

- Disconnect the harness connector between display unit and AV control unit.
- Check continuity between display unit harness connectors and AV control unit harness connector.

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

Check continuity between display unit harness connectors and ground.

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

#### Is the inspection result normal?

>> GO TO 3. YES

NO >> Repair harness or connector.

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

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Inverter VCC	M83	59	ACC	9 V
Signal VCC	iviOS	47	700	3 V

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replacement of AV control unit.

## 4. CHECK GROUND CIRCUIT

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

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

#### Is the inspection result normal?

YES >> INSPECTION END

>> Repair harness or connector.

#### MULTIFUNCTION SWITCH

## MULTIFUNCTION SWITCH: Diagnosis Procedure

## 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Ignition switch ACC or ON	19

#### Is the inspection result normal?

YES >> GO TO 2.

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

## 2.CHECK POWER SUPPLY CIRCUIT

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INFOID:0000000003544763

#### < COMPONENT DIAGNOSIS >

#### [BOSE AUDIO WITHOUT NAVIGATION]

Check voltage between multifunction switch harness connector and ground.

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

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between multifunction switch and fuse.

## 3.CHECK GROUND CIRCUIT

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

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

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

BOSE AMP.

## BOSE AMP.: Diagnosis Procedure

INFOID:0000000003508687

### 1.CHECK FUSE

Check for blown fuse.

Power source	Fuse No.
Battery	8

#### Is the inspection result normal?

YES >> GO TO 2.

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

## 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between BOSE amp. harness connector and ground.

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

#### Is the inspection result normal?

YES >> GO TO 3.

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

## 3. CHECK GROUND CIRCUIT

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

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

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

## iPod ADAPTER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## iPod ADAPTER: Diagnosis Procedure

INFOID:0000000003508689

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#### 1.CHECK FUSE

Check for blown fuses.

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

#### Is the inspection result normal?

YES >> GO TO 2.

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

## 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between iPod adapter harness connector and ground.

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

#### Is the inspection result normal?

YES >> INSPECTION END

>> Check harness between iPod adapter and fuse.

### SATELLITE RADIO TUNER

## SATELLITE RADIO TUNER: Diagnosis Procedure

INFOID:0000000003544764

## 1. CHECK FUSE

Check for blown fuses.

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

#### Is the inspection result normal?

YES >> GO TO 2.

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

#### 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between satellite radio tuner harness connector and ground.

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

#### Is the inspection result normal?

YES >> INSPECTION END

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

#### CAMERA CONTROL UNIT

## CAMERA CONTROL UNIT: Diagnosis Procedure

INFOID:0000000003652776

## 1.CHECK FUSE

Check for blown fuses.

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#### < COMPONENT DIAGNOSIS >

#### [BOSE AUDIO WITHOUT NAVIGATION]

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

#### Is inspection result normal?

YES >> GO TO 2.

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

## 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between camera control unit harness connector and ground.

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

#### Is inspection result normal?

YES >> GO TO 3.

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

## 3.CHECK GROUND CIRCUIT

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

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

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

#### **TEL ADAPTER UNIT**

## TEL ADAPTER UNIT: Diagnosis Procedure

INFOID:0000000003508691

## 1. CHECK FUSE

Check for blown fuses.

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

#### Is the inspection result normal?

YES >> GO TO 2.

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

## 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between TEL adapter unit harness connector and ground.

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

#### Is the inspection result normal?

YES >> GO TO 3.

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

#### < COMPONENT DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

# 3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B237	4, 14, 19	OFF	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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

[BOSE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

## RGB (R: RED) SIGNAL CIRCUIT

Description INFOID:000000003544765

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

## Diagnosis Procedure

INFOID:0000000003544766

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

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	17	M83	40	Existed

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

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	17		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

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

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

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

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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

#### < COMPONENT DIAGNOSIS >

#### [BOSE AUDIO WITHOUT NAVIGATION]

## RGB (G: GREEN) SIGNAL CIRCUIT

Description INFOID:0000000003544767

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

## Diagnosis Procedure

#### INFOID:0000000003544768

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

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M71	6	M83	39	Existed

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

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	6		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

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

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

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

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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

[BOSE AUDIO WITHOUT NAVIGATION]

# < COMPONENT DIAGNOSIS > RGB (B: BLUE) SIGNAL CIRCUIT

**Description** 

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

### Diagnosis Procedure

INFOID:0000000003544770

## $\hbox{\bf 1.} \text{check continuity RGB (B: BLUE) SIGNAL CIRCUIT}$

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

Displa	Display unit		AV control unit	
Connector	Terminal	Connector	Terminal	Continuity
M71	18	M83	38	Existed

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

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	18		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

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

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

(+) Display unit		(–)	Condition	Reference value
Connector	Terminal			
M71	18	Ground	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4  0

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

### **RGB SYNCHRONIZING SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## RGB SYNCHRONIZING SIGNAL CIRCUIT

Description INFOID:0000000003544771

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

## Diagnosis Procedure

#### INFOID:0000000003544772

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## 1. CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	19	M83	41	Existed

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

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	19		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK RGB SYNCHRONIZING SIGNAL

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

(+) Display unit		(–)	Reference value	
Connector	Terminal			
M71	19	Ground	(V) 4 0 → 20 µs SKIB3603E	

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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

< COMPONENT DIAGNOSIS > [BOSE AUDIO WITHOUT NAVIGATION]

## RGB AREA (YS) SIGNAL CIRCUIT

Description INFOID:000000003544773

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

### Diagnosis Procedure

INFOID:0000000003544774

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

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	9	M83	43	Existed

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

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	9		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK RGB AREA (YS) SIGNAL

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

(+) Display unit		(–)	Condition	Reference value (Approx.)	
Connector	Terminal			( + + )	
			At RGB image is displayed	5.0 V	
M71	9	Ground	At AUX image is displayed	(V) 6 4 2 0 → • 200 μ s PKIB4948J	

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

# HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT T DIAGNOSIS > [BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

## HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

**Description**INFOID:000000003544775

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

## Diagnosis Procedure

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

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	8	M83	45	Existed

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

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	8		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

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

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

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace display unit.

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# VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT [BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

## VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description INFOID:0000000035447777

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

## Diagnosis Procedure

INFOID:0000000003544778

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

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	20	M83	57	Existed

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

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	20		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

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

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

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace display unit.

### **AUX IMAGE SIGNAL CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

### AUX IMAGE SIGNAL CIRCUIT

Description INFOID:000000003544779

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

### **Diagnosis Procedure**

INFOID:0000000003544780

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

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

Auxiliary	Auxiliary input jacks		AV control unit	
Connector	Terminal	Connector	Terminal	Continuity
M154	7	M84	66	Existed

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

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

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

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

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

#### Is the inspection result normal?

YES >> GO TO 3.

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

## 3.check continuity composite image signal circuit (av control unit and display unit)

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

Display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	15	M83	36	Existed

## **AUX IMAGE SIGNAL CIRCUIT**

#### [BOSE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

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

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M71	15		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

## 4. CHECK COMPOSITE IMAGE SIGNAL

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

(+)					
Displa	ay unit	(–) Condition		Reference value	
Connector	Terminal				
M71	15	Ground	At AUX image is displayed.	0. 4 0 -0. 4 -80µs SKIB2251J	

#### Is the inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## DISK EJECT SIGNAL CIRCUIT

Description INFOID:0000000003544781

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

### Diagnosis Procedure

## 1. CHECK CONTINUITY DISK EJECT SIGNAL CIRCUIT

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

Multifunc	Multifunction switch		ntrol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M72	14	M85	103	Existed

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

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK AV CONTROL UNIT VOLTAGE

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

(	+)		Deference value
AV con	trol unit	(-)	Reference value (Approx.)
Connector	Terminal		, , ,
M85	103	Ground	3.3 V

#### Is the inspection result normal?

YES >> Replace preset switch.

NO >> Replace AV control unit.

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# REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT GNOSIS > [BOSE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

## REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:000000003544783

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

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

#### **Diagnosis Procedure**

INFOID:0000000003544784

## 1. CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

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

Camera control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B50	6	D121	3	Existed

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

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

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK CAMERA IMAGE SIGNAL

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

(+)					
Camera control unit		(-)	Condition	Reference value	
Connector	Terminal				
B50	6	Ground	At rear view camera image is displayed.	(V) 0. 4 0 -0. 4 → 40µs SKIB2251J	

#### Is inspection result normal?

YES >> Replace camera control unit.

NO >> Replace rear view camera.

### **REAR VIEW CAMERA POWER SUPPLY**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

### REAR VIEW CAMERA POWER SUPPLY

Description INFOID:0000000003544785

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

#### **Diagnosis Procedure**

#### INFOID:000000003544786

## 1. CHECK CONTINUITY CAMERA ON SIGNAL CIRCUIT

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

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

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

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

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK VOLTAGE CAMERA ON SIGNAL

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

(+) Camera control unit		(–)	Condition	Reference value	
Connector	Terminal			(Approx.)	
B50	8	Ground	Shift position is "R"	6.0 V	

#### Is inspection result normal?

YES >> Replace rear view camera.

NO >> Replace camera control unit.

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

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

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

**Description** 

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

### Diagnosis Procedure

INFOID:0000000003544788

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

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

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

Check continuity between camera control unit harness connector and ground.

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

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

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

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

(+) Camera control unit		( )	Condition	Reference value
Camera c	control unit	(–)	Condition	Reference value
Connector	Terminal			
B50	12	Ground	At rear view camera image is displayed.	0. 4 0 -0. 4 -8. SKIB2251J

#### Is inspection result normal?

YES >> Replace AV control unit.

NO >> Replace camera control unit.

### **COMPOSITE IMAGE SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

### COMPOSITE IMAGE SIGNAL CIRCUIT

Description INFOID:0000000003544789

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

## Diagnosis Procedure

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

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

	AV control unit		Displa	Continuity	
•	Connector	Terminal	Connector	Terminal	Continuity
•	M83	36	M71	15	Existed

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

AV con	trol unit		Continuity
Connector	Terminal	Ground	Continuity
M83	36		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

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

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

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

#### Is inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

Revision: 2007 November AV-237 2008 EX35

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INFOID:0000000003544790

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#### **MICROPHONE SIGNAL CIRCUIT**

[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

## MICROPHONE SIGNAL CIRCUIT

Description INFOID:000000003508710

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

#### **Diagnosis Procedure**

INFOID:0000000003508711

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

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

TEL adapter unit		Microphone		Continuity	
-	Connector	Terminals	Connector	Terminals	Continuity
-		7		1	
	B237	8	R17	2	Existed
		29		4	

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

TEL ada	apter unit		Continuity
Connector	Terminals	Ground	Continuity
B237	7	Glound	Not existed
	29		

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK VOLTAGE MICROPHONE VCC

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

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

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace TEL adapter unit.

## 3. CHECK MICROPHONE SIGNAL

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

## **MICROPHONE SIGNAL CIRCUIT**

#### < COMPONENT DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

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

#### Is the inspection result normal?

YES >> Replace TEL adapter unit.

NO >> Replace microphone.

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#### **CONTROL SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## **CONTROL SIGNAL CIRCUIT**

Description INFOID:0000000003508712

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

## Diagnosis Procedure

#### INFOID:0000000003508713

## 1. CHECK CONTINUITY CONTROL SIGNAL CIRCUIT

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

TEL ada	apter unit		O a satismosita o
Connector	Terminals		Continuity
	22	Ground	
B237	23		Existed
	24		

#### Is the inspection result normal?

YES >> Replace TEL adapter unit.

NO >> Repair harness or connector.

### MODE CHANGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## MODE CHANGE SIGNAL CIRCUIT

- AV control unit transmits the mode change signal to BOSE amp.
- Driver's Audio Stage controls the speaker's output characteristic by BOSE amp. so that the driver's seat is to be the center of sounds.

## **Diagnosis Procedure**

## 1. CHECK CONTINUITY MODE CHANGE SIGNAL CIRCUIT

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

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

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

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK MODE CHANGE SIGNAL

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

(-	+)		Reference value	
BOSE	amp.	(–)	Reference value (Approx.)	
Connector Terminal			(11 - )	
B41	17	Ground	8.5 V	

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace BOSE amp.

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INFOID:0000000003508715

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

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## COMMUNICATION SIGNAL CIRCUIT (CONT-SAT)

**Description** 

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

### Diagnosis Procedure

INFOID:0000000003544792

## 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

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

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

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

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## $2. \text{CHECK COMMUNICATION SIGNAL (SAT} {\rightarrow} \text{CONT)}$

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

(+) Satellite radio tuner		(-)	Condition	Reference value
Connector	Terminal			
B236	9	Ground	When satellite radio mode is selected.	(V) 10 -10 -10 -1ms SKIA9300J

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace satellite radio tuner.

3.CHECK COMMUNICATION SIGNAL (CONTightarrowSAT)

Check signal between satellite radio tuner harness connector and ground.

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

### < COMPONENT DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

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

#### Is the inspection result normal?

YES >> Replace satellite radio tuner.

NO >> Replace AV control unit.

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# REQUEST SIGNAL CIRCUIT (SAT—CONT) [BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

## REQUEST SIGNAL CIRCUIT (SAT→CONT)

Description INFOID:000000003544793

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

### Diagnosis Procedure

INFOID:0000000003544794

## 1. CHECK CONTINUITY REQUEST SIGNAL CIRCUIT

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

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

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

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK COMMUNICATION SIGNAL

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

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

#### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace satellite radio tuner.

### STEERING ANGLE SENSOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

### STEERING ANGLE SENSOR SIGNAL CIRCUIT

Description INFOID:0000000003544795

- Steering angle sensor signal 1, 2 detects the turning direction and quantity of the steering and transmits it to the camera control unit.
- Steering angle sensor signal 3 detects the neutral position of the steering and transmits it to the camera control unit.
- Camera control unit performs the correction of neutral position with sensor signal 1, 2, 3 and vehicle speed signal.

## **Diagnosis Procedure**

#### INFOID:0000000003544796

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## 1. CHECK CONTINUITY STEERING ANGLE SENSOR SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect camera control unit connector and steering angle sensor connector.
- Check continuity between camera control unit harness connector and steering angle sensor harness connector.

Camera control unit		Steering angle sensor		Continuity
Connector	Terminals	Connector Terminals		Continuity
	23		3	
B50	24	M37	4	Existed
	25		5	

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

Camera control unit			Continuity
Connector	Terminals		Continuity
	23	Ground	
B50	24		Not existed
	25		

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK VOLTAGE CAMERA CONTROL UNIT

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

(	+)		Defenses	
Camera control unit		(–)	Reference value (Approx.)	
Connector	Connector Terminals		, , ,	
	23			
B50	24	Ground	5.0 V	
	25			

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace camera control unit.

## 3. CHECK STEERING ANGLE SENSOR SIGNAL

- Turn ignition switch OFF.
- 2. Connect steering angle sensor connector.

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

(	+)			
Camera o	Camera control unit		Condition	Reference value
Connector	Terminals			
	23, 24	Ground	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2
B50	23, 24	Ground	Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2
	25	Ground	Turn the steering around the neutral position	A: Sensor signal 3 B: Sensor signal 1

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering angle sensor.

### STEERING SWITCH SIGNAL A CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

### STEERING SWITCH SIGNAL A CIRCUIT

Description INFOID:0000000003544797

Transmits the steering switch signal to AV control unit.

## Diagnosis Procedure

# 1. CHECK STEERING SWITCH SIGNAL A CIRCUIT

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

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

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

AV con	trol unit		Continuity
Connector	Connector Terminal		Continuity
M81	6		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK SPIRAL CABLE

Check spiral cable.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

## 3.CHECK AV CONTROL UNIT VOLTAGE

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

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

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

### 4. CHECK STEERING SWITCH

- 1. Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-248, "Component Inspection"</u>.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

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INFOID:0000000003544798

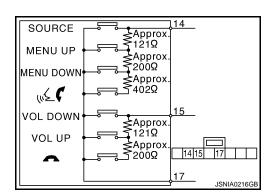
## STEERING SWITCH SIGNAL A CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## **Component Inspection**

Measure the resistance between the steering switch connector.



INFOID:0000000003508722

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

#### STEERING SWITCH SIGNAL B CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

### STEERING SWITCH SIGNAL B CIRCUIT

Description INFOID:000000003544799

Transmits the steering switch signal to AV control unit.

## Diagnosis Procedure

## 1. CHECK STEERING SWITCH SIGNAL B CIRCUIT

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

AV control unit		Spiral cable		Continuity
Connector	Terminal	Connector Terminal		Continuity
M81	16	M36	31	Existed

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

AV con	trol unit		Continuity
Connector	Terminal	Ground	Continuity
M81	16		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK SPIRAL CABLE

Check spiral cable.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

## 3.CHECK AV CONTROL UNIT VOLTAGE

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

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

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

### 4. CHECK STEERING SWITCH

- 1. Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-250, "Component Inspection"</u>.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

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INFOID:0000000003544800

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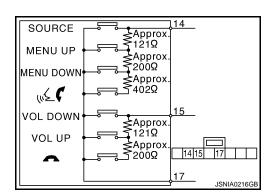
## STEERING SWITCH SIGNAL B CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

## Component Inspection

Measure the resistance between the steering switch connector.



INFOID:0000000003756525

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

### STEERING SWITCH SIGNAL GND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

### STEERING SWITCH SIGNAL GND CIRCUIT

Description INFOID:0000000003544801

Transmits the steering switch signal to AV control unit.

## Diagnosis Procedure

# 1. CHECK STEERING SWITCH SIGNAL GND CIRCUIT

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

AV control unit		Spiral cable		Continuity
Connector	Terminal	Connector Terminal		Continuity
M81	15	M36	33	Existed

3. Connect AV control unit connector.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK SPIRAL CABLE

Check spiral cable.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

## 3.CHECK GROUND CIRCUIT

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

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

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

#### 4. CHECK STEERING SWITCH

- 1. Turn ignition switch OFF.
- 2. Check steering switch. Refer to AV-252, "Component Inspection".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

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INFOID:0000000003544802

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## STEERING SWITCH SIGNAL GND CIRCUIT

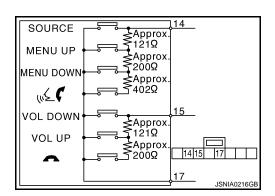
< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

INFOID:0000000003756526

## **Component Inspection**

Measure the resistance between the steering switch connector.



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

#### [BOSE AUDIO WITHOUT NAVIGATION]

# **ECU DIAGNOSIS**

# AV CONTROL UNIT

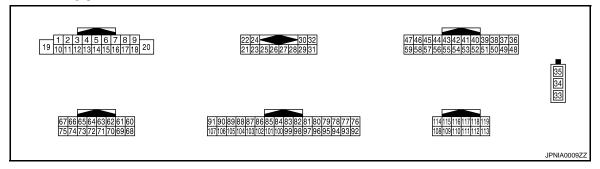
Reference Value

### values on the diagnosis tool

consult-III monitor item

Display Item	Dis- play	Vehicle status	Remarks	
VHCL SPD SIG	On	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is nor-	
VIIOL OF D OIG	Off	Vehicle speed =0 km/h (0 MPH)	mal.	
PKB SIG	On	Parking brake is applied.	Changes in indication may be delayed. This is nor-	
FRB SIG	Off	Parking brake is released.	mal.	
ILLUM SIG	On	Light switch ON		
ILLUM SIG	Off	Light switch OFF	_	
IGN SIG	On	Ignition switch ON		
IGN SIG	Off	Ignition switch in ACC position	_	
	On	Shift the selector lever to "R" position	Changes in indication may be delayed. This is nor-	
REV SIG	Off	Shift the selector lever other than "R" position	mal.	

### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
					Keep pressing SOURCE switch.	0 V
			Ignition	lanition	Keep pressing $\Delta$ switch.	0.7 V
6 (P)	15 (B) Steering switch signal A Input	switch	Keep pressing ∇ switch.	1.3 V		
(P)				ON	Keep pressing w≨ € switch.	2.0 V
					Except for above.	3.3 V
7 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
9	Ground	Illumination signal	Input	OFF	Lighting switch is OFF.	0 V
(R)	Giodila	munimation signal	input		Lighting switch is ON.	12.0 V

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	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
15 (B)	Ground	Steering switch signal Ground	_	Ignition switch ON	_	0 V
					Keep pressing VOL DOWN switch.	0 V
16 (L)	15 (B)	Steering switch signal B	Input	Ignition switch	Keep pressing VOL UP switch.	0.7 V
				ON	Keep pressing A switch.	1.3 V
					Except for above.	3.3 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
20 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
22 (B)	21 (W)	Satellite radio sound signal LH	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
24 (G)	23 (R)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 1 0 -1 ** 2ms SKIB3609E
25	_	Shield			_	_
26	_	Shield		_	_	_
27			_	Ignition	Driver's Audio Stage ON	0 V
(SB)	Ground	Mode change signal	Output	switch ON	Driver's Audio Stage OFF	8.5 V
28 (W)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 10 -10 + 10ms SKIA9299J
29 (B)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 10 -10 -1ms SKIA9300J

	rminal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
30 (R)	Ground	Communication signal (CONT→SAT)	Output	Ignition switch ON	When satellite radio mode is selected.	(V) 10 0 -10 + 1ms SKIA9301J
33	_	FM sub	Input		_	_
34	_	AM-FM main	Input	_	_	_
35	Ground	Antenna amp. ON signal	Output	Ignition switch ACC	_	12.0 V
36 (SB)	Ground	Composite image signal	Output	Ignition switch ON	At AUX image display	(V) 0. 4 0 -0. 4 + 40μs SKIB2251J
37 (V)	Ground	Composite image ground	_	Ignition switch ON	_	0 V
38 (P)	Ground	RGB signal (B: blue)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 4 40μs SKIB2237J
39 (L)	Ground	RGB signal (G: green)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4 -40\(\mu\)s SKIB2236J
40 (G)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4 • • • 40μs SKIB2238J

	minal color)	Description			O an aliting	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
41 (W)	Ground	RGB synchronizing signal	Output	Ignition switch ON	_	(V) 4 0 → 20 µs SKIB3603E
42	_	Shield	_	_	— At RGB image display	
43 (B)	Ground	RGB area (YS) signal	Output	Ignition switch ON	At AUX image display	(V) 6 4 2 0 +
44 (BR)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 
45 (R)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON	_	(V) 4 0 + 20μs SKIB3601E
46 (LG)	Ground	Signal ground	_	Ignition switch ON	_	0 V
47 (O)	Ground	Signal VCC	Output	Ignition switch ACC		9.0 V
49	_	Shield	_	_	_	_
50	_	Shield	_		_	_
55	_	Shield	_	_	_	_
56 (Y)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 ***-1ms

+					Condition	Reference value
	_	Signal name	Input/ Output		Condition	(Approx.)
57 (G)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch ON	_	(V) 4 0 → 4ms SKIB3598E
58 (BR)	Ground	Inverter ground		Ignition switch ON	_	0 V
59 (Y)	Ground	Inverter VCC	Output	Ignition switch ACC	_	9.0 V
64	_	Shield		_	_	_
65 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image display	0. 4 0 -0. 4 → 40μs
66 (G)	Ground	AUX image signal	Input	Ignition switch ON	At AUX image display	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4
68 (W)	Ground	Camera-connection recognition signal		Ignition switch	Connected to camera control unit connector	0 V
(**)		Tillion Signal		ON	Not connected to camera control unit connector	5.0 V
73	_	Shield	_	_	_	_
74 (R)	Ground	AUX image signal ground		Ignition switch ON	_	0 V
80 (L)	79 (P)	TEL voice signal	Input	Ignition switch ON	During voice guide output with the  switch pressed	(V) 1 0 -1 -2ms
		Shield	-			SKIB3609E

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
83 (B)	82 (G)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected	(V) 1 0 -1 + 2ms SKIB3609E
85 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
86 (L)	_	CAN-H	Input/ Output	_	_	_
87 (P)	_	CAN-L	Input/ Output	_	_	_
88 (LG)	_	AV communication signal (H)	Input/ Output	_	_	_
89 (V)	_	AV communication signal (L)	Input/ Output	_	_	_
90 (L) <sup>*1</sup> (G) <sup>*2</sup>	_	AV communication signal (H)	Input/ Output	_	_	_
91 (P) <sup>*1</sup> (R) <sup>*2</sup>	_	AV communication signal (L)	Input/ Output	_	_	_
95 (B)	Ground	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is selected	(V) 1 0 -1 + 2ms SKIB3609E
96 (R)	Ground	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is selected	(V) 1 0 -1 + 2ms SKIB3609E
97 (W)	_	AUX sound signal ground	_	_	_	_
99 (R)	98 (W)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected	(V) 1 0 -1 → • 2ms SKIB3609E

#### < ECU DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

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	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
101 (BR)	Ground	SW ground	_	Ignition switch ON	_	0 V
103 (SB)	Ground	Disk eject signal	Input	_	Pressing the eject switch	0 V
104 (G)	Ground	Ignition signal	Input	Ignition switch ON	Except for above —	3.3 V Battery voltage
105	Ground	Reverse signal	Input	Ignition switch	R position	12.0 V
(O)	Ground	rteverse signal	mput	ON	Other than R position	0 V
					Parking brake ON	0 V
106 (V)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake OFF	(V) 8 4 0 10 ms JSNIA0007GB
107 (R)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE:  Maximum voltage may be 12 V due to specifications (connected units).  (V) 6 4 2 0  *** *20ms  SKIA6649J
108 (BR)	114 (Y)	Sound signal rear RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
109 (R)	115 (G)	Sound signal front RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
110 (V)	Ground	Amp. ON signal	Output	Ignition switch ON	_	10.0 V
111	_	Shield	_	_	_	_

### [BOSE AUDIO WITHOUT NAVIGATION]

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
112 (V)	118 (SB)	Sound signal rear LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 +2ms SKIB3609E
113 (P)	119 (L)	Sound signal front LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 → 2ms SKIB3609E

#### NOTE:

# Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION SYSTEM -

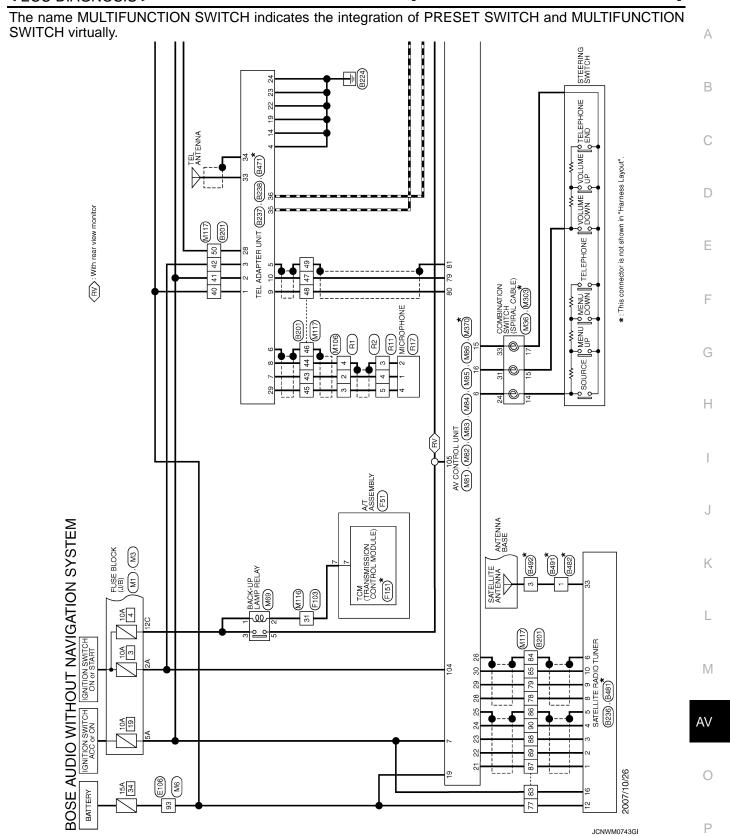
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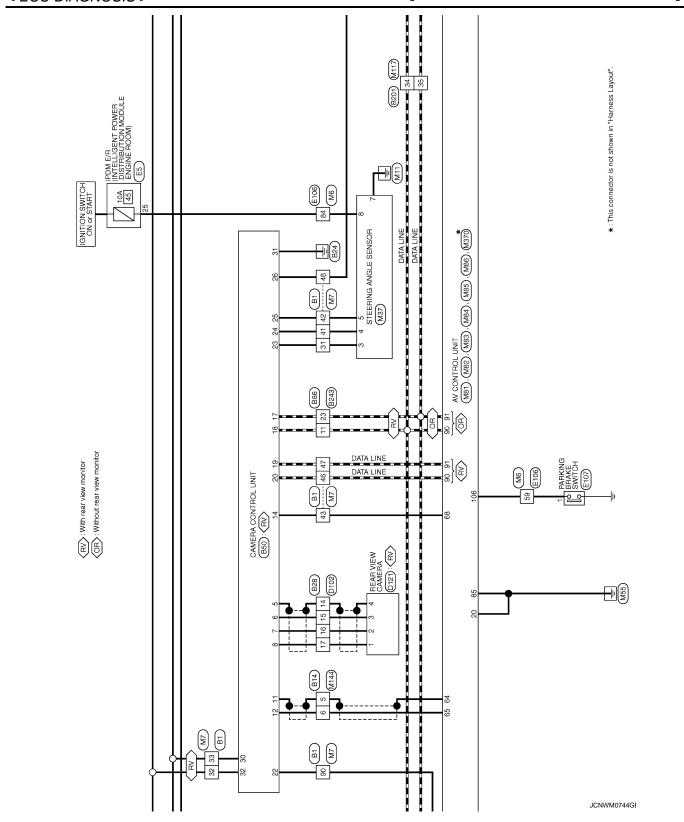
Click here to view the eWD.

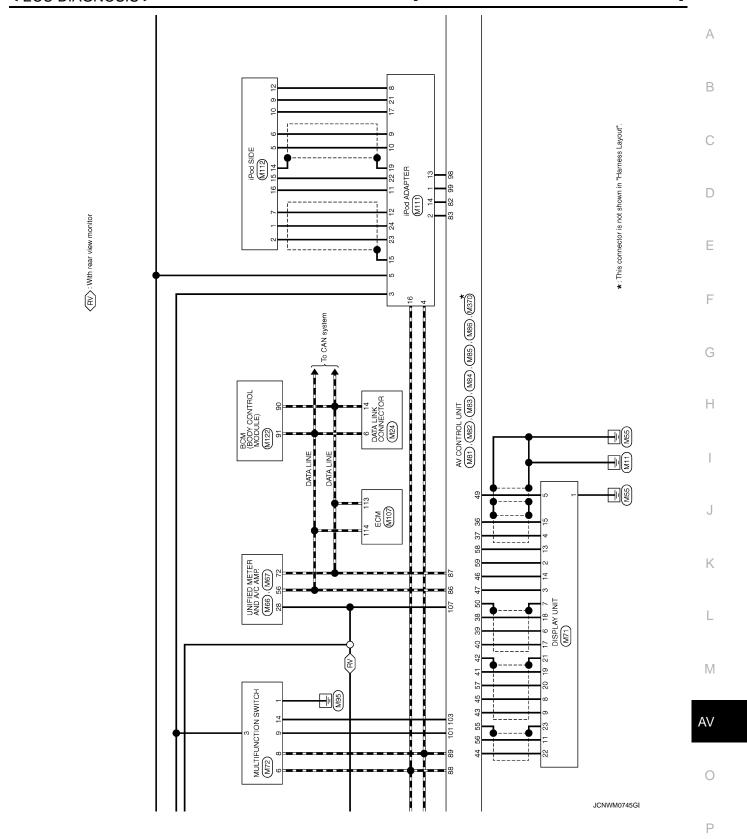
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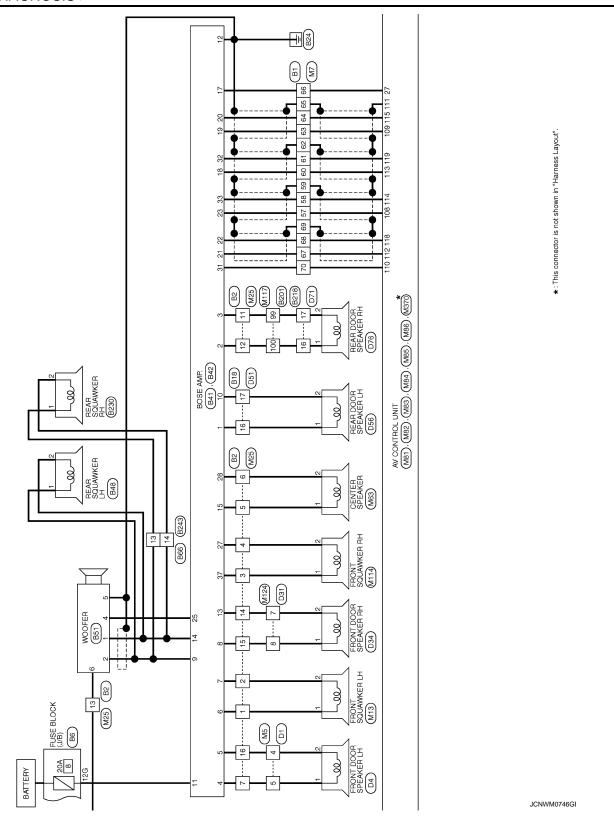
<sup>\*1:</sup> Without rear view monitor.

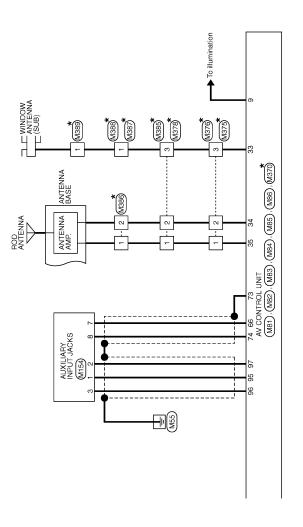
<sup>\*2:</sup> With rear view monitor.











★: This connector is not shown in "Harness Layout".

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BOSE AUDIO WITHOUT NAVIGATION	I SYSTEM	Connector No R2	2 U
Τ	SHILLED	T	2
Connector Name WIRE TO WIRE	1 1	Connector Name WIRE TO WIRE	- A
Connector Type TH80FW-CS16-TM4	69 SHELD	Connector Type NS16FW-CS	
1	t	L	
	╀	G G	
2	65 SHIELD -		
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8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	┨	16 15 14 13 12 11 10 9 8	
9 02 02 02 02 02 02 02 02 02 02 02 02 02	┪	0 01 11 71 01 1	
20 20 20 20 20 20 20 20 20 20 20 20 20 2	69 SHIELD –		
	70 W –		
Terminal Color Signal Name [Specification]	- 0 06	Terminal Color Signal Name [Specification]	
+		+	
1 10			
20 20 20 20 20 20 20 20 20 20 20 20 20 2		900	
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ς.			
-			
47 P – [With BOSE audio without NAVI]		$\dashv$	
48 V –		12 SB -	
57 BR –		13 W –	
J		14 Y –	
Connector No. B6	Connector No. B14	Connector No. B18	Connector No. B28
Τ	Τ	т	
Connector Name FUSE BLOCK (J/B)	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE
Connector Type NS12FBR-CS	Connector Type TH12FW-NH	Connector Type TK10FW-NS8	Connector Type TH24MW-NH
	香	香	香
		0 1 0 0	H.S.
30 40 30 20 10	6 5 4 3 2 1	18 / 6 - 5 4	5678910
	12 11 10 9 8 7	18 17 16 15 14 15 15 11	[13]14[15]16[17]18[19[20[21[22[23[24]
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]
t	T	╁	t
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			В

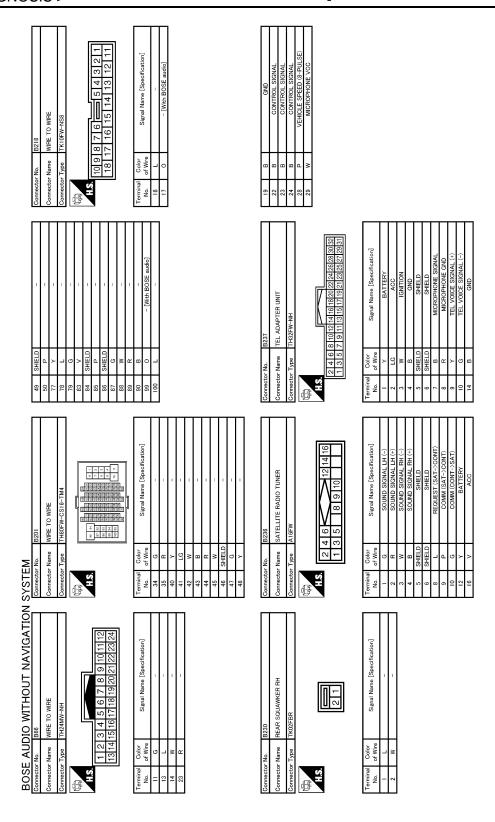
JCNWM0748GI

### [BOSE AUDIO WITHOUT NAVIGATION]

< ECU DIAGNOSIS >

12   B   GND   13   Y   SOUND SIGNAL PRONT DOOR SPEAKER RH (-)   14   R   SOUND SIGNAL WOOFER (-)		Cornector No. 851 Cornector Type RS08FGY-PR	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]		A B C
Connector No. 642 Connector Name BOSE AMP. Connector Type SGA/ZFBR-SJA2  H.S. 14 13 12 11 10  9 8 7 6 5 4 3 2 1	Terminal   Color   Signal Name [Specification]   Color   Color   Signal Name [Specification]   Y   SOUND SIGNAL REAR DOOR LH (+)   2   Sel   SOUND SIGNAL REAR DOOR RH (+)   3   V   SOUND SIGNAL REAR DOOR RH (+)   5   P   SOUND SIGNAL REAR DOOR RH (+)   5   P   SOUND SIGNAL REORIT COOR SEARCR LH (+)   5   L   SOUND SIGNAL REORIT SOUAMKER LH (+)   7   W   SOUND SIGNAL REORIT SOUAMKER LH (+)   7   W   SOUND SIGNAL REORIT SOUAMKER LH (+)   9   G   SOUND SIGNAL REORIT SOUAMKER LH (-)   9   G   SOUND SIGNAL REAR DOOR LH (-)   11   GR   BATTERY	22         0         REVERSE           23         L         SENSOR SIGNAL 1           24         BR         SENSOR SIGNAL 2           25         R         SENSOR SIGNAL 3           26         R         VEHICLE SPEED (8-PULSE)           30         LG         ACC           31         B         GND           32         L         BATTERY			E F G
31		Connector No. B50 Connector Name CAMERA CONTROL UNIT Connector Type TH32FW-NH  H.S.  Z 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 11   3 5 7 9 11   31 51 71 92 11   31 51 71 92   31 51 71 93   31 51 71 93   31 51 71 93   31 51 71 93   31 51 71 93   31 51 71 93   31 51 71 93   31 51 71 93   31 51 71 93   31 7	Color   Signal Name [Specification]   Color   SHELD   SHELD		J K
BOSE AUDIO WITHOUT NAVIGATION Connector No. B41 Connector Name BOSE AMP. Connector Type SCA19FBR-3GA4  MA  AT 37 3835 544 38 22 2 1 2 0 1 3 1 3 1 7 1 6 1 5 2 2 6 2 6 2 4 2 3 2 2 1 2 0 1 3 1 8 1 7 1 6 1 5 2 2 6 2 6 2 4 2 3 2 2 1 2 0 1 3 1 8 1 7 1 6 1 5 2 2 6 2 6 2 4 2 3 2 2 1 2 0 1 3 1 8 1 7 1 6 1 5 2 2 6 2 6 2 4 2 3 2 2 1 2 0 1 3 1 8 1 7 1 6 1 5 2 2 6 2 6 2 4 2 3 2 2 1 2 0 1 3 1 8 1 7 1 6 1 5 2 2 6 2 6 2 4 2 3 2 2 1 2 0 1 3 1 8 1 7 1 6 1 5 2 2 6 2 6 2 4 2 3 2 2 1 2 0 1 3 1 8 1 7 1 6 1 5 2 2 6 2 6 2 4 2 3 2 2 1 2 0 1 3 1 8 1 7 1 6 1 5 2 2 6 2 6 2 4 2 3 2 2 1 2 0 1 3 1 8 1 7 1 6 1 5 2 6 2 6 2 4 2 3 2 2 1 2 0 1 3 1 8 1 7 1 6 1 5 2 6 2 6 2 4 2 3 2 2 1 2 0 1 3 1 8 1 7 1 6 1 5 2 6 2 6 2 4 2 3 2 2 1	Terminal   Codor   Signal Name (Specification)	Connector No. B48 Connector Name REAR SOLUAWKER LH Connector Type TK02FBR	Terminal Color Signal Name [Specification] No. of Whre 1 L	JCNWM0749Gf	M AV
					Р

Revision: 2007 November AV-267 2008 EX35



JCNWM0750GE

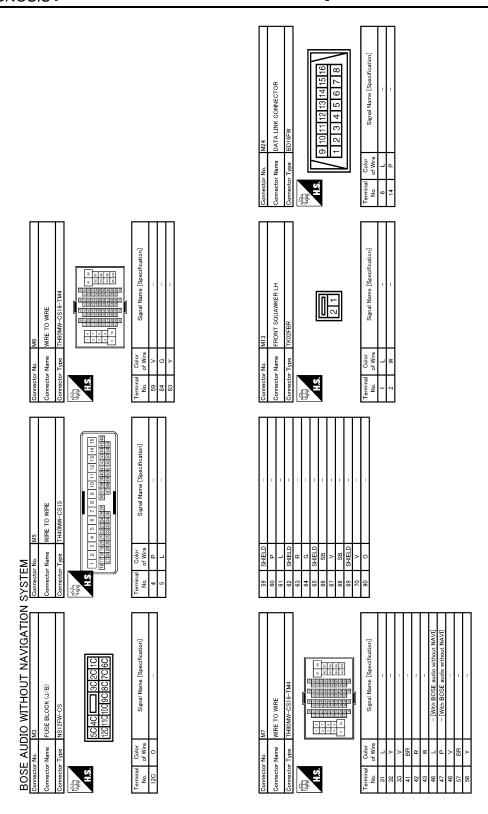
Connector No. 6461 Connector Name SATELLITE RADIO TUNER Connector Type FAKRA H.S.	Terminal Color No. of Wire Signal Name [Specification] 33 - SATELLITE ANTENNA	Connector Name WIRE TO WIRE Connector Type TH40FW-CS15	Terminal Color Signal Name [Specification]  4 W - 5 L -		A B C
Connector No. B471 Connector Name TEL ADAPTER UNIT Connector Type GT16C-1S-HU  ##.S.	Terminal   Color   Signal Name [Specification]   33	Connector No. B492 Connector Name ANTENNA BASE Connector Type GT16C-IPP-HU	Terminal Color   Signal Name [Specification]   No. of Wire   SARTILITE ANTEWNA   SARTILITE ANTEWNA		E F G
SYSTEM   Connector No.   8243   Connector No.   8243   Connector Name   WIRE TO WIRE   Connector Type   TH24FW-NH	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   13	Connector No. B481 Connector Name WRE TO WRE Connector Type GT16C-IPP-HU	Terminal Color No. of Wire Signal Name [Specification]		J K
BOSE AUDIO WITHOUT NAVIGATION Connector No. B238 Connector Name TEL ADAPTER UNIT Connector Type THOSFW-NH  MS  SS 38 40 42	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   35	Connector No. B482 Connector Name WIRE TO WIRE Connector Type GTI6C-IS-HU	Terminal Golor Signal Name [Specification] No of Wire Signal Name [Specification]	JCNWM0751GI	M AV

Connector No. D51 Connector Name WIRE TO WIRE Connector Tune TKI IMW-NS	7 II <del></del> -II	Terminal   Golor   Signal Mane [Specification]   No   Of Wire   Y   - [With BOSE audio]	Connector No. D102 Connector Name WIRE TO WIRE	Connector Type TH24FW-NH	H.S. [121110 9 8 7 6 5 4 3 2 1 242322212019181716151413	Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   14   SHELD   - [Without around view monitor]   5   V   - [Without around view monitor]   16   V   - [Without around view monitor]
Connector No. D34 Connector Name FRONT DOOR SPEAKER RH (WITH BOSE SYSTEM) Connector Tone NSYSTEMS.	1	Terminal   Color   Signal Name [Specification]   No. of Wire     BR   -	Connector No. D76 Connector Name REAR DOOR SPEAKER RH	Connector Type NS02FBR-CS	#S.	Terminal   Color   Signal Name [Specification]   No.   of Wire
SYSTEM Connector No. D31 Connector Name WIRE TO WIRE Connector Than THATPW-CS15	13	Terminal Color   Signal Name [Specification]   No.   of Wire   T   R   -	Connector No. D71 Connector Name WIRE TO WIRE	Connector Type TK10MW-NS8	HS. 12345 678910 1112131415 161718	Terminal   Color   Signal Name [Specification]   No. of Wire   L   -
BOSE AUDIO WITHOUT NAVIGATION Connector No. D4 Connector Name SYSTEM. Connector Type NSYSTEM. Connector Type NSYSTEM.	1	Terminal   Color   Signal Mame [Specification]   No. of Wire   Signal Mame [Specification]	Connector No. D56 Connector Name REAR DOOR SPEAKER LH	Connector Type NS02FBR-CS	#S.	Terminal   Color   Signal Name [Specification]   No. of Wire   Y

JCNWM0752GI

Cornector No. E107 Cornector Name PARKING BRAKE SWITCH Cornector Type TB01FW  THS  Terminal Color Signal Name [Specification]  No. of Wire Signal Name [Specification]	Cornector No.   M1	A B C
Connector No.   E106   Connector Name   WIRE TO WIRE   Connector Type   THEOFW-CS16-TM4   Connector Type   THEOFW-CS16-TM4   Connector Type   Theory   Connector Type   Connec	Connector No.   F151   Connector No.   F151   Connector Name   TOM (TRANSMISSION CONTROL MODULE)   Connector Type   SP10FBGY   Connector Type   SP10FBGY   Connector Type   Signal Name [Specification]   Terminal   Color   Color	E F G
Connector No. E5 Connector Name   PDM E/R (NTELLIGENT POWER   Connector Name   DISTRIBUTION MODULE ENGINE ROOM) Connector Type   THOPPW-CS12-M4-1V    Connector Type   THOPPW-CS12-M4-1V   Connector	Connector No. F103 Connector Name WRE TO WRE Connector Type TK36FW-NS10  WRE TO WRE  Connector Type TK36FW-NS10  WRE Connector Type TK36FW-NS10  Texture connector Type TK36FW-NS10  Signal Name [Specification]]	J K
BOSE AUDIO WITHOUT NAVIGATION	Connector No.   F51	AV O
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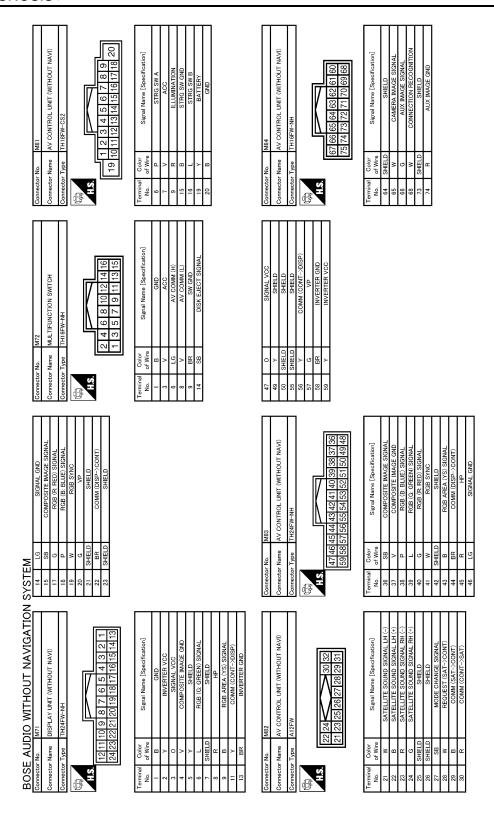
Revision: 2007 November AV-271 2008 EX35



JCNWM0754GI

Connector No.   M37	Connector No. M69 Connector Name BACK-UP LAMP RELAY Connector Type MSQ2FL-M2  H.S.  12 X 1	Color   Signal Name [Specification]		A B C
Name   COMBINATION SWITCH (SPIRAL CABLE)     Trype	r No. M67  r Name UNIFIED METER AND A/C AMP.  r Type TH3ZEW-NH  ff 12 k3 44 k5 k6 f7 k8 k9 65 k1 82 83 64 85 86 87 87 87 17 17 2	Color   Signal Name [Specification]   Terminal No.   L   CAN-H   1   1   1   1   1   1   1   1   1		D E F
SYSTEM  15 LG  Connecton  Connecton  Connecton  Connecton  Connecton  Solution  Terminal  No. 24  Solution  Solution  Terminal	Connector No.   M86   Connector No.   M86   Connector No.   Connector No.	Terminal   Color   Signal Name   Specification   Terminal No.   28   R   VEHICLE SPEED (8-PULSE)   56   72		H I J
Sose	Connector No. M63 Connector Name CENTER SPEAKER Connector Type TK02FBR H.S.	Terminal   Color   No. of Wire   Signal Name [Specification]		M AV
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Revision: 2007 November AV-273 2008 EX35



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### [BOSE AUDIO WITHOUT NAVIGATION]

< ECU DIAGNOSIS >

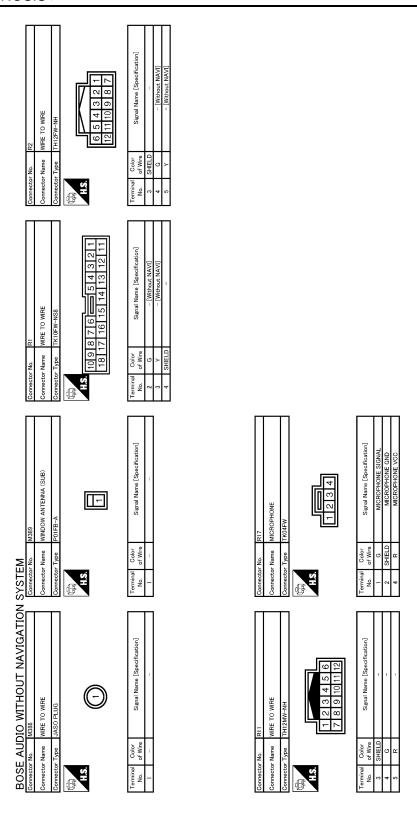
MIDS   MIDS   Connector Name   WIRE TO WIRE	MI   2   MI   3   MI   2   MI   2   MI   3   MI   2   MI   3   M	A B C
Connector No.   M86	14   C   Pod SOUND SIGNAL RH (+)     15   SHIELD   SHIELD     16   G   AV COMM (+)     17   ER   AV COMM (+)     19   SHIELD   SHIELD     19   SHIELD   SHIELD     21   W   Pod CONNECTION RECOGNITION     22   G   ACOCESSORY DETECT     23   W   Pod SOUND SIGNAL LH (+)     24   B   Pod SOUND SIGNAL LH (+)	E F G
SYSTEM	Connector Name   Pod ADAPTER   Connector Type   TH24FW-NH	H J K
Connector No.   M65	Connector Name   ECM   Connector Type   RR24FGY-R25-R-LH-Z   Connect	AV O

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BOSE AUDIO WITHOUT NAVIGATION	ISYSTEM						
Connector No. M114	Connector No. M116 Conn	Connector No.	M117	49	SHIELD	-	
Connector Name FRONT SOLIAWKER RH	Connector Name WIRE TO WIRE	Connector Name	WIRE TO WIRE	20	>	1	
				77	<b>&gt;</b>	-	
Connector Type TK02FBR	Connector Type TK36MW-NS10 Conn	Connector Type	TH80MW-CS16-TM4	78	٨	1	
				79	m	1	
				83	>	1	
		É	8 5	84	SHELD	1	
		į E	3 2 3	82	~	1	
0 1	1 2 3 4 5   1112/1314 (1514) 178 (1820) (2013) (2			98	SHIELD	1	
				87	Μ	ı	
			100 M	88	œ	1	
				88	В	ι	
-ea	lal Color Sizzal Nazza Consignation	Ferminal Color	Signal Name Constitution	90	9	1	
No. of Wire		No. of Wire	Ognal valle [Openication]	66	>	- [With BOSE audio]	
1 V - [With BOSE audio]	31 W - 3	34 LG	-	100	SB	- [With BOSE audio]	
2 LG - [With BOSE audio]	8	35 V	-				
	4	40 Y	-				
	4	41 G	-				
	4	42 0	-				
	4	43 B	-				
	4	44 R	-				
	4	45 W	1				
	4	46 SHIELD	1				
	4	47 P	1				
	4	48 L	,				
Connector No. M122	Connector No. M124 Conn	Connector No.	M144	Connector No.	or No.	M154	
_							
Connector Name BCM (BODY CONTROL MODULE)	Connector Name WIRE TO WIRE Conn	Connector Name	WIRE TO WIRE	Connec	Connector Name	AUXILIARY INPUT JACKS	
Connector Type TH40FB-NH	Connector Type TH40MW-CS15 Conn	Connector Type	TH12MW-NH	Connec	Connector Type	A08FW	
· · · · · · · · · · · · · · · · · · ·		Z.		E SE			
91 90 69 69 67 60 65 64 68 62 61 70 70 77 77 77 70 72 72 72 72 72 72 72 72 72 72 72 72 72	1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   7   18   9   10   11   12   13   14   15   17   18   18   18   18   18   18   18	1	1 2 3 4 5 6		<u>ا</u>	123 78	
			9 9 10		IJ		
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification] Term No. of Wire	Ferminal Color No. of Wire	Signal Name [Specification]	Terminal No.	d Color of Wire	Signal Name [Specification]	
Д	1	5 SHIELD	1	-	В	AUX SOUND SIGNAL RH (+)	
91 L CAN-H	8 LG -	M 9	1	2	>	AUX SOUND SIGNAL GND	
				6 1	ഷ ഗ	AUX SOUND SIGNAL LH (+) AUX IMAGE SIGNAL	

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BOSE ALIDIO WITHOUT NAVIGATION SYSTEM    Control with   Control wi	WIRE TO WIRE GT13SCN+2/IPP-HU  Signal Name [Specification]	OK  CAR  CAR  Signal Name [Specification]	А
BOSE AUDIO WITHOUT MAYIGATION SYSTEM    Control of the control of	M376 WIRE TO GT113SCR	MRE TO JASO JA	
BOSE AUDIO WITHOUT NAVIGATION SYSTEM  Connector like a Co	Inne (Specification)	HU  Specification  AMP. ON SIGNAL  M-FM MAIN	
BOSE AUDIO WITHOUT NAVIGATION SYSTEM  Connector have been consistent and consiste	No. M375  - Name Wife TO Type GT135C  - Color of Wire	MESS OF THE NAME O	
BOSE AUDIO WITHOUT NAVIGATION SYSTEM  Connector No. M003  Connecto	Connect Connect No.	Connect Connect From Termina No. 1 2	Н
BOSE AUDIO WITHOUT NAVIGATION SYSTEM  Connector No. M003  Connecto	2/1S-HU 2/1S-HU 35 34 38 FM SUB ANTENNA AMP. ON SIGNAL.	HZ/IPP-HU  LZ/IPP-HU  Signal Name [Specification]	I
JCNWM0759Gi	SYSTEM Connector No. Connector Name Connector Type No. No. System Color Syst		K
JCNWM0759Gi	ABLE)		L
JCNWM0759Gi	MITHOUT NAVIC  OY  15 16 17 18 19 20  Signal Name [Specification	O WIRE C-2/1S-HU    1   2   3   Signal Name   Specification	_
JCNWM0759Gi	AUDIO to Magag type Introger Type Triving BR BR		AV
	BOSE Connector1 Connector1 No. (1) 15 15 17	Connector   Connec	0
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JCNWM0760GI

DTC Index

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

#### < ECU DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

DTC	Display item	Refer to	F
U1000	CAN COMM CIRCUIT [U1000]	AV-207, "Diagnosis Procedure"	
U1010	CONTROL UNIT (CAN) [U1010]	AV-208, "Diagnosis Procedure"	Е
U1310	CONTROL UNIT (AV) [U1310]	AV-209, "DTC Logic"	
U1200	Control Unit FLASH-ROM [U1200]	AV-210, "DTC Logic"	
U1216	CAN CONT [U1216]	AV-211, "DTC Logic"	(
U1243	FRONT DISP CONN [U1243]	AV-212, "Diagnosis Procedure"	
U1250	CAMERA CONT. CONN [U1250]	AV-214, "Diagnosis Procedure"	
U1255	SAT CONN [U1255]	AV-215, "Diagnosis Procedure"	[
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	AV-217, "Description"	Е
U1300 U1252	AV COMM CIRCUIT [U1300]     REAR CAMERA LAN CONN [U1252]	AV-217, "Description"	·
U1300 U1254	AV COMM CIRCUIT [U1300]     IPOD CONN [U1254]	AV-217, "Description"	
U1300 U1256	AV COMM CIRCUIT [U1300]     HAND FREE CONN [U1256]	AV-217, "Description"	
U1300 U1252 U1256	<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>REAR CAMERA LAN CONN [U1252]</li> <li>HAND FREE CONN [U1256]</li> </ul>	AV-217, "Description"	(
U1300 U1240 U1254 U1256	<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>IPOD CONN [U1254]</li> <li>HAND FREE CONN [U1256]</li> </ul>	AV-217, "Description"	ŀ
U1300 U1240 U1252 U1254 U1256	<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>REAR CAMERA LAN CONN [U1252]</li> <li>IPOD CONN [U1254]</li> <li>HAND FREE CONN [U1256]</li> </ul>	AV-217, "Description"	,

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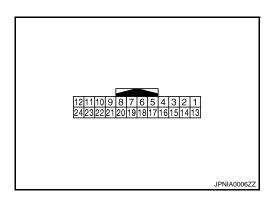
F

# **DISPLAY UNIT**

Reference Value

INFOID:0000000003528892

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

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

### **DISPLAY UNIT**

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
9 (B)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At RGB image display  At AUX image display	5.0 V
11 (Y)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 •••1ms
13 (BR)	Ground	Inverter ground	_	Ignition switch ON	_	0 V
14 (LG)	Ground	Signal ground	_	Ignition switch ON	_	0 V
15 (SB)	Ground	Composite image signal	Input	Ignition switch ON	At AUX image display	0. 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
17 (G)	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. 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
18 (P)	Ground	RGB signal (B: blue)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4  0  10  10  10  10  10  10  10  10  10

#### **DISPLAY UNIT**

#### < ECU DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

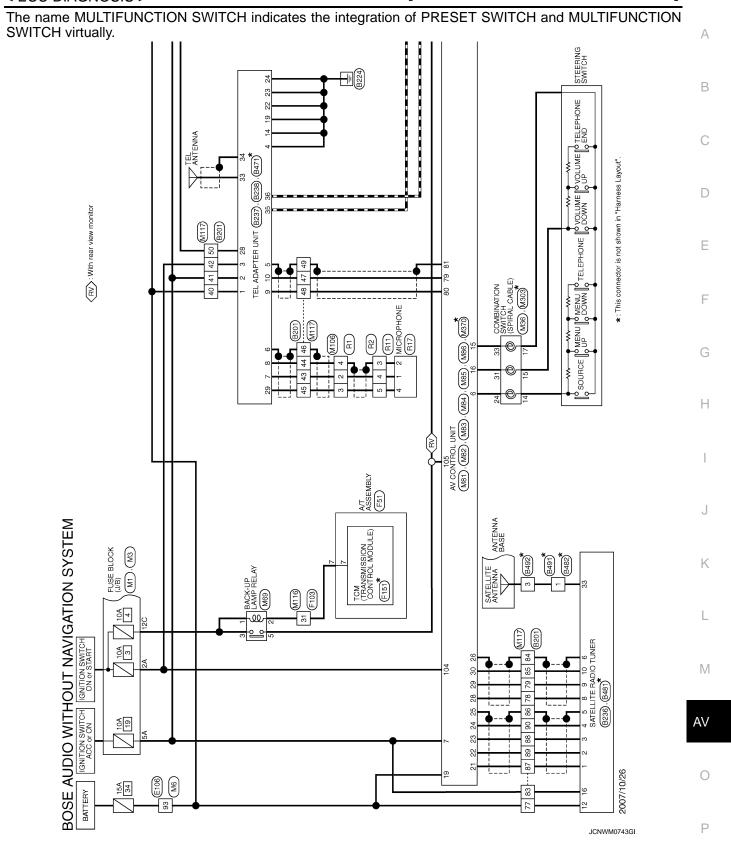
	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
19 (W)	Ground	RGB synchronizing signal	Input	Ignition switch ON	_	(V) 4 0 → 20 µs SKIB3603E
20 (G)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch On	_	(V) 4 0 ++4ms SKIB3598E
21	_	Shield	_	_	_	_
22 (BR)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 ++1ms PKIB5039J
23	_	Shield	_		_	_

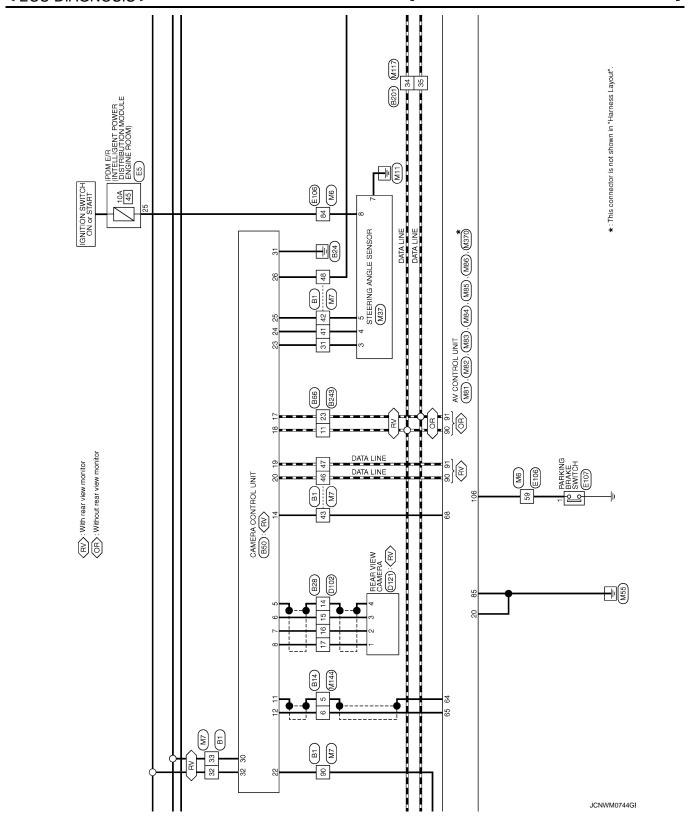
Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION SYSTEM -

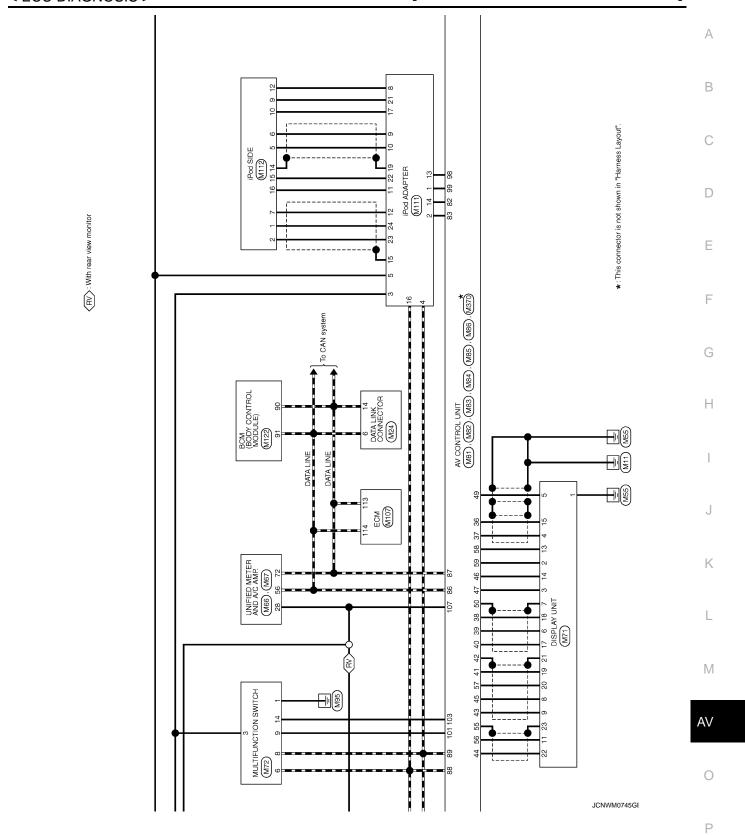
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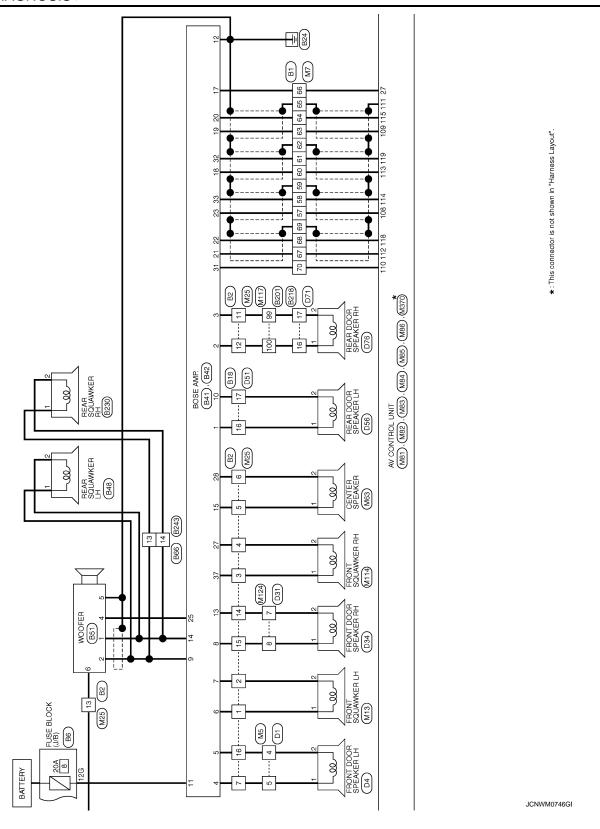
Click here to view the eWD.

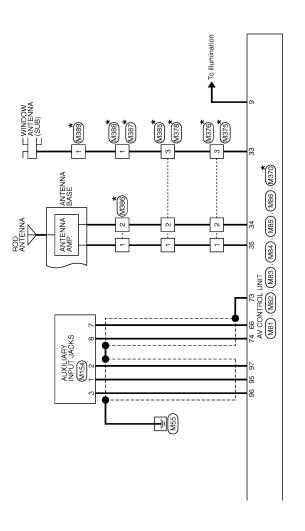
NOTE:











★: This connector is not shown in "Harness Layout".

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- 191 19 78	WIRE TO WIRE	NSI6FW-CS			7 6 5 4 3 2 1	1/ 13 10 11 10	ا0 B			Signal Name [Specification]			-	-			1				B18 Connector No.   B28	e WIRE TO WIRE Connector Name WIRE TO WIRE	TK10FW-NS8 Connector Type TH24MW-NH	9876 543211 1716 15 14 13 12 11 1314 15 16 17 18 19 20 21 22 32 4	Signal Name [Specification] No. of Wire Signal Name [Specification] No. of Wire Signal Name [Specification] 14 SHIFI D - IWith brost and view monther]	
Connector No.	Connector Name	Connector Type	đ	ANT	H.S.					Terminal Color No. of Wire	╈	2 W	3 BR	4	$\dashv$	9	7 B	+	12 SB	+	Connector No.	Connector Name	Connector Type	HS. 10 G	Terminal Golor No. of Wire	
SYSTEM	т	SHIELD	H	64 G = -	0	- A L9	- BS 89	69 SHIEFTD	- M 02	- 0 06											Connector No. B14	Connector Name WIRE TO WIRE	Connector Type TH12FW-NH	HS. 654321 121110987	Terminal Color Signal Name [Specification] of Wire SHIFI D	t
BOSE AUDIO WITHOUT NAVIGATION S	Je Je	Connector Type TH80FW-CS16-TM4	42			55 59 FL 56 60 FL 56	0.0 04 05 05 05 05 05 05 05 05 05 05 05 05 05	80 00 80 00 80 80 00 80 00 80 00 80 00 80 80 00 80 00 80 00 80 00 80 80 00 80 80 80 80 80 80 80 80 80 80 80 80 8		Terminal Color Signal Name [Specification]	t	32 L –	33 LG -	41 BR –	+	×	_	+	- A88 V	X .	Connector No. B6	Connector Name FUSE BLOCK (J/B)	Connector Type NS12FBR-CS	H.S. 5646 362616 12411410496867666	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification]	4

JCNWM0748GI

12   B   SOUND SIGNAL WOOFER (-)   14   R   SOUND SIGNAL WOOFER (-)   14   R   SOUND SIGNAL WOOFER (-)   15   SOUND SIGNAL WOOFER (-)   15   Signal Mane   Specification   15   Signal Mane   Specification   15   Signal Mane   Specification   15   Signal Mane   Signa	A B C
Connector No.   B42   Connector Name   BOSE AMP.   Connector Name   BOSE AMP.   Connector Type   SGA17ºBP-SJA2	E F G
SYSTEM    32	J K
BOSE AUDIO WITHOUT NAVIGATION	M AV

BOSE AUDIO WITHOUT NAVIGATION	SYSTEM Connector No.	П	B201	49	SHIELD	1 1		
Connector Name WIRE TO WIRE Connector Type TH24MW-NH	Connector Name	$\neg$	WIRE TO WIRE TH80FW-CS16-TM4	77 78 79	. > J 0	1 1 1	Connector Name WIRE TO WIRE Connector Type TK10FW-NS8	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	E.S.	<u> </u>		<del>                                     </del>	SHELD		H.S. 10 9 8 7 6 5 4 13 18 17 16 15 14 13	321
Color Signal Name [Specification] of Wire Care Care Care Care Care Care Care Ca	Terminal No. 34 35 40	Color of Wire G R	Signal Name [Specification]	100	- O B B	- [With BOSE sudio]	Terminal Golor   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]   16   L   - [With BOSE audio]	sation] iio]
· ·	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	SHELD × B B × CG	1 1 1 1 1 1 1 1					
Connector No. B230 Connector Name REAR SQLAWKER RH Connector Type TK02FBR  LAS.	Connector No. Connector Type		8-236 SATELLITE RADIO TUNER A16FW 1 6 7 12 14 16 5 5 8 9 10	Connector No. Connector Type H.S. H.S.    1 3   5   1   3   5   1   1   3   5   1   3   3	TEL ADA TH32FW TH32FW 6 8 10 12 5 7 9 11	PTER UNIT  NH  14 16 18 20 22 24 86 29 30 32 15 17 19 21 20 28 57 29 61	19   B   GND     22   B   CONTROL SIGNAL     23   B   CONTROL SIGNAL     24   B   CONTROL SIGNAL     25   W   WEHCLE SPEED (8-PULGE)     29   W   MICROPHONE VCC	20 ALL ALL ALL ALL ALL ALL ALL ALL ALL AL
Color Signal Name [Specification]  L  W	Terminal No. No. 2 2 3 3 3 4 4 4 4 6 6 6 6 6 6 6 7 10 110 116 116	Oolor of Wire Or Wire B B B W W W W C C C C C C C C C C C C C	Signal Name [Specification] SOUND SIGNAL LH (-) SOUND SIGNAL LH (-) SOUND SIGNAL RH (-	Terminal No No 1 2 2 2 4 4 4 4 5 5 5 6 6 6 6 6 9 9 9 9 9 9 9 9 9 9 9 9	of Wire V V LG LG SHIELD SH	Signal Name [Speoification] BATTERY ACC IGNITION GND SHIELD SHIELD MICROPHONE SIGNAL MICROPHONE SIGNAL MICROPHONE SIGNAL TEL VOICE SIGNAL GND GND GND GND		

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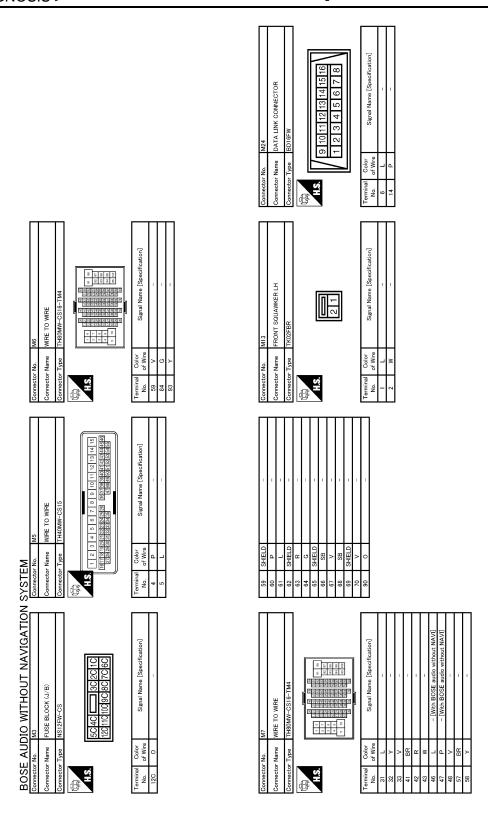
### **DISPLAY UNIT**

to B481  Isine SATELLITE RADIO TUNER  Type FAKRA	Color Signal Name [Specification]  - SATELLITE ANTENNA	Name   WIRE TO WIRE   TH40FW-CS15	of Wire Signal Name [Specification]  W -		A B
Connector No. Connector Name Connector Type H.S.	No. 33	Connector No. Connector Type Connector Type	No. of the last of		D
	eerfication] D D		NTENNA		Е
TEL ADAPTER UNIT GTIBG-15-HU  34	Signal Name (Specification) TEL ANTENNA SHIELD	A BASE	Signal Name [Specification] SAETILITE ANTENNA		F
	Color of Wire SHIELD	to. B482 lane ANTENNA BASE TIGC-IPP-HU Type GTIGC-IPP-HU	Color of Wire		G
Connector No. Connector Name Connector Type	Terminal No. 33 33 34 5	Connector No. Connector Name Connector Type H.S.	No. o		Н
922 WIRE TO WIRE  ТН24FW-NH  10 9 8 7 6 5 4 3 2 1  22 21 20 19 18 17 16 15 14 13	Signal Name [Specification]	WIRE TO WIRE GITIGO-IPP-HU	Signal Name [Specification]		I J
SYSTEM  Connector No. 6243  Connector Name WIRE 1  Connector Type ITH24P  M.S. 1211110   1211110   12423   12121   121	Terminal Color No. of Wire 11 L L 13 L 23 P	Connector No. B491 Connector Name WIRE Connector Type GT168 H.S.	No. ody Wire		K
					L
BOSE AUDIO WITHOUT NAVIGATION Connector No. 6238 Connector Name TEL ADAPTER UNIT THOSPW-NH TH.S. 55 37 39 41 36 38 40 42	Signal Name (Specification) AV COMM (L) AV COMM (L)	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name [Specification]	,	M
1 ТЕL ADAPTER UNIT ТПИЗБРР-ИН ТПИЗБРР-ИН ТВ 53 57 29 4 36 38 40 4	Ш	MRE TO W			AV
BOSE AU Connector Name Connector Type H.S.	Color   Color   Color	Connector No. Connector Type	No. of Wire		0
				JCNWM0751GI	Р

Cornector No.         D51           Connector Name         WIRE TO WIRE           Connector Type         TK10MW-NS8           H.S.         1   2   3   4   5   6   7   8   9   10           1   1   12   13   14   15   16   17   18	Terminal   Color   Signal Name [Specification]   Color   No.   Of Wire   Y   - [With BOSE audio]	Connector No. D102 Connector Name WIRE TO WIRE Connector Type TH24FW-NH  H.S. T2 11 10 9 8 7 6 5 4 3 2 1  24 23 22 21 20 19 18 17 16 15 14 13	Terminal   Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]   14   SHELD   - [Without around view monitor]
Comector No. D34 Connector Name SYSTEM) Connector Type NS02FBR-CS H.S.	Terminal   Color   No.   Of Wire   Signal Name   Specification     PR   -	Connector No. D76 Connector Name REAR DOOR SPEAKER RH Connector Type NSQZEBR-CS  H.S.	Terminal   Color   Signal Name (Specification)   1
Connector No.   D31	Terminal   Color   Signal Name [Specification]   No.   7   R       8   BR	Connector No. D71  Connector Name WIRE TO WIRE  Connector Type TK10MW-NS8  W. TK10MW-NS8  W. TK10MW-NS8  W. TK10MW-NS8	Terminal   Color   Signal Name (Specification)   16   L   -   17   Y   -
BOSE AUDIO WITHOUT NAVIGATION Connector Name FRONT DOOR SPEAKER LH (WITH BOSE Connector Type NS02FBR-CS H.S. H.S.	Terminal   Color   Signal Name [Specification]   1	Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NS02FBR-CS  ALS	Terminal   Color   Signal Name (Specification)   1

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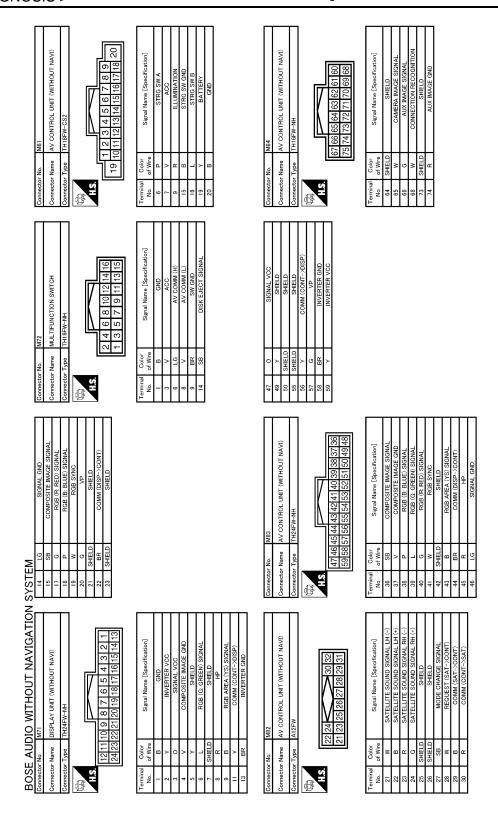
FIOT TBOIFW Signal Name (Specification)	OOK (J/B)	АВ
Corrector Na. E107 Corrector Name PARKING B Corrector Type TEBTEW H.S. H.S. Terminal Color Name Signature	Corrector No.   M1     Corrector Name   FUSE BLOCK (J/B)     Corrector Type   NS/06FW-M2	C
TO WRE	TOM (TRANSMISSION CONTROL MODULE) SPIGEGY Spring I Name [Specification] REV LAMP RLY	E
Connector No.   E106	Connector No.   F151	G
ES POWER POWER DISTRIBUTION MODULE ENGINE ROOM) THZOFW-CS12-M4-1V E 7 3 Signal Name (Specification) Signal Name (Specification)	RE TO WIRE  39FW-NS10  Compared to a contract of the contract	I .
SYSTEM  Commettor No.  E5 Connector Name IPON E7R (INTELLIGENT POWE Connector Type ITAZINY-CS12-M4-1V  Connector Type ITAZINY-CS12-M4-1V  STATE ITAZ	Connector No. F103 Connector Name WIRE TO WIRE Connector Type TK35FW-NS10 H.S. H.S. H.S. H.S. H.S. H.S. H.S. H.S.	J K
	DGY 4 3 2 1 9 8 7 6 Signul Name [Specification]	L M
BOSE AUDIO WITHOUT NAVIGATION Commetter Name REAR VIEW CAMERA  Connector Type The Manage of The Manage of The Manage of Manage	Connector No. F51 Connector Name A/T ASSEMBLY Connector Type RK10FG-DGY LLS Terminal Color No. of Wire Signal 1 R	AV
mlହା ହ  ହା  極 ▲	[전] 전 [전] (발) <b>시</b> [본 []	JCNWM0753GI



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### **DISPLAY UNIT**

Connector No. M37 Connector Name STEERING ANGLE SENSOR Connector Type TH0SFV-NH  T 2 3 8 T 2 3 8 T 4 5	Terminal   Color   Signal Name [Specification]	Connector No. M69 Connector Name BACK-UP LAMP RELAY Connector Type MS02FL-M2  M.S. 13  M.S. 2 11	Terminal   Color   Signal Name [Specification]	A B C
Connector No. M36 Connector Name COMBINATION SWITCH (SPIRAL CABLE)  Connector Type TK08FGY-IV  LAS 24 25 26 27 31 32 33 34	Terminal Color Signal Name [Specification] 24 P	Corrector No. M67  Corrector Name UNIFIED METER AND A/C AMP.  Corrector Type TH32PH-NH  H.S.	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   56	E F G
SYSTEM  15 LG  16 P		Connector No.   Mi66	Terminal Color Number [Specification] 28 R VEHICLE SPEED (8-POLSE)	J K
BOSE AUDIO WITHOUT NAVIGATION	Terminal Color No. of Wire Signal Name (Specification)  1	Connector No. M63 Connector Name CENTER SPEAKER Connector Type TK02FBR	Terminal   Color   Signal Name [Specification]	AV O JCNWM0755G8



JCNWM0756GE

NSS  1	1		A B
Connector No.   MIOS	Miles   Miles		C
AV CONTROL UNIT (WITHOUT NAVI)  THIEPW-NH  [114   115   116   117   118   119  [118   119   110   111   111   111  Signal Name (Specification)  Signal Name (Specification)  SOUND SIGNAL FROM TH (+)  SOUND SIGNAL FROM TH (-)	Pod SOUND SIGNAL, RH (+)  AV COMM (H)  AV COMM (H)  ACCESSORY DETECT  Pod SOUND SIGNAL LH (+)  Fload SOUND SIGNAL LH (+)		E
Connector No.   M86	14 G FP04 S 16 G G G G G G G G G G G G G G G G G G G		G
AV COMM (H) [With rear view monitor] AV COMM (L) [With rear view monitor] AV COMM (L) [With the rear view monitor] AVX SOUND SIGNAL LH (+) AUX SOUND SIGNAL LH (+) AUX SOUND SIGNAL LH (+) FIPAS SOUND S	1		H
SYSTEM  90	Connector No. MIII Connector Name Pod ADAPTER  Connector Type TH24PW-NH  Terminal Color Nie Signal No. of Wire Pod SO  2 B R Pod SO  3 V COMM (9)  10 COMM (9)  11 0 COMM (9)  11 0 COMM (1)  12 B R COMM (1)  1 0 COMM (1)  1 1 0 COMM (1)  1 1 0 ROGG		J K
	7.2 [Specification]		L
SSE AUD   SSE	MIO7  Wetch No.  MIO7  Wetch Manne ECM  Wetch Type RH24FG/  127 128  126 127  126 127  126 127  127 128  127 128  128 128  138 12		AV
DE LES PROPERTIES PROP	no on one of the control of the cont	JCNWM0757GI	Р

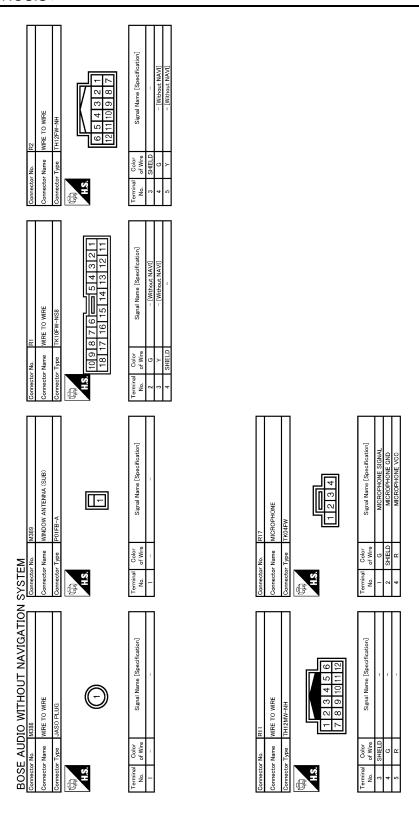
Revision: 2007 November AV-297 2008 EX35

BOSE AUDIO WITHOUT NAVIGATION	ISYSTEM					
Connector No. M114	Connector No. M116	Connector No.	M117	49	SHIELD	1
Connector Name FRONT SQUAWKER RH	Connector Name WIRE TO WIRE	Connector Name	WIRE TO WIRE	22	> >	
Connector Type TK02FBR	Connector Type TK36MW-NS10	Connector Type	TH80MW-CS16-TM4	78	. *	1
				79	В	1
厚	摩	IF	20 P	Н	>	1
H.S.	HS	ΗS	122	7	SHIELD	ı
	1 2 3 4 5   11 12 13 14 15 18 17 18 18 19 20 30 12 12 23 30 13 15 28 17 18 18 19 20 30 12 12 12 13 18 18 18 18 18 18 18 18 18 18 18 18 18		8 8	S 82	R CHIELD	1 1
	2		8 5 8 5 5 8	T	×	1
			10 00 00 00 00 00 00 00 00 00 00 00 00 0	88	œ	T.
				88	В	1
Terminal Color Signal Name [Specification]	-ea	-e	Signal Name [Specification]	06	9	T.
of Wire	of Wire	+		66	> 8	- [With BOSE audio]
7   With BOSE audio]	31 W	34 25 \	1 1	001	25	- [With BOSE audio]
2		40	1			
		41 G	-			
		42 0	-			
		43 B	_			
		44 R				
		45 W	-			
		46 SHIELD	-			
		47 P	1			
		48 L	-			
Connector No. M122	Connector No. M124	Connector No.	M144	Connector No.	No. M154	4
Connection Name BCM (BODY CONTBOL MODILLE)	Omer Manager All Milbe	Ometer Mana	adiw OF adiw	Omoto Nomo	-	ALIVITADY MONTH TACKS
		Collinector Ivallie	WIRE TO WIRE	Collinector		ILIART INPUT JACKS
Connector Type TH40FB-NH	Connector Type TH40MW-CS15	Connector Type	TH12MW-NH	Connector Type	Type A08FW	M=
H.S.	H.S. [1   2   3   4   5   6   7   8   9   10   11   12   13   14   15	野 H.S.		昼 H.S.		
91 00 00 00 00 00 00 00 00 00 00 00 00 00	(6) 16 16 16 16 16 16 16 16 16 16 16 16 16		1 2 3 4 5 6 7 8 9 10 11 12		1 2	2 3 7 8
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal No.	Color of Wire	Signal Name [Specification]
Ь	- Y T	5 SHIELD		-	В	AUX SOUND SIGNAL RH (+)
91 L CAN-H	- FG 8	M 9	1	2	×	AUX SOUND SIGNAL GND
				2	œ o	AUX SOUND SIGNAL LH (+) AUX IMAGE SIGNAL

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### **DISPLAY UNIT**

[tool]	A A
WIRE  1-2/1PP-HU  Signal Name (Specification)	Signal Name [Specification]
M376  WIRE TO  Ire  WIRE TO  WIRE TO  WIRE TO  WIRE TO	oo O
inal inal inal inal inal inal inal inal	Terminal No No D
ooiffeation]	coffication] HAIN
WIRE TO WIRE GT13SC-2/1S-HU Signal Name (Specification)  Signal Name (Specification)	Signal Name [Specification] AM-FM MAIN AM-FM MAIN
No.	minal Color of Wive 2 1 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Commecton  Oommecton  Oommecton  Oommecton  Oommecton	Teminal Teminal
TROL UNIT (WITHOUT NAVI)  -2/1S-HU  Signal Name [Specification]  FR SUB  ANTENNA AMP. ON SIGNAL  WIRE	Signal Name [Specification]
AV CONTROL UNIT (WITHOUT NAVI) GT13SH-2/1S-HU  Signal Name [Specification]  Signal Name [Specification]  AAFAM MAIN  ANTENNA AMP. ON SIGNAL  WIRE TO WIRE GT13SCN-2/1PP-HU	Section Name of the section of the s
TEM metror Name metror Name minal Odlor or of Wire  or Wi	Terminal Color No. of Wire 2 1 2 2 2 2 2 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4
BOSE AUDIO WITHOUT NAVIGATION	Signal Name (Specification)
DIO WITHO     M308	AV
BOSE AUI Gonnector Nume Gonnector Nume 14 N 15 L 17 BR Gonnector Nume 15 L 17 BR Gonnector Nume	H.S. Color No. 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	JCNWM0759GI



JCNWM0760GI

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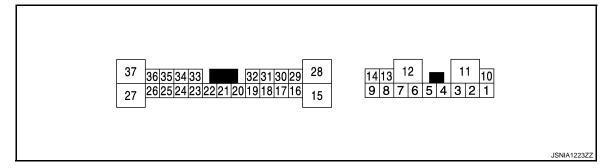
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Е

# BOSE AMP.

Reference Value

### TERMINAL LAYOUT



#### PHYSICAL VALUES

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

**AV-301** 

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

#### **BOSE AMP.**

#### < ECU DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

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

Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION SYSTEM -

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Click here to view the eWD.

NOTE:

ΑV

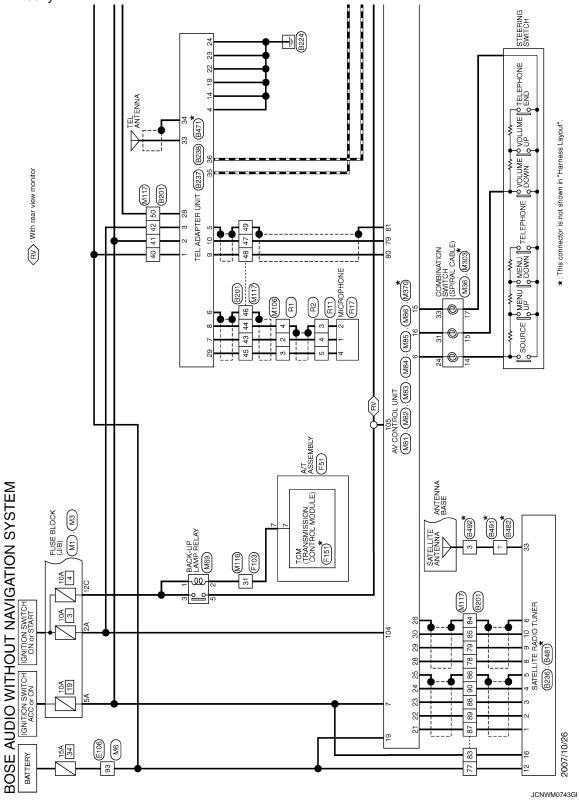
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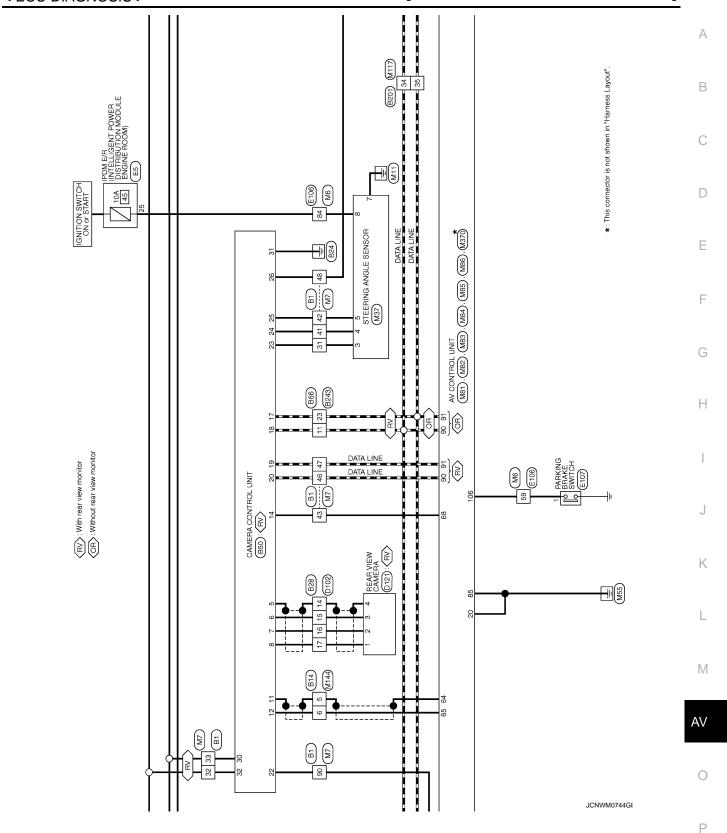
M

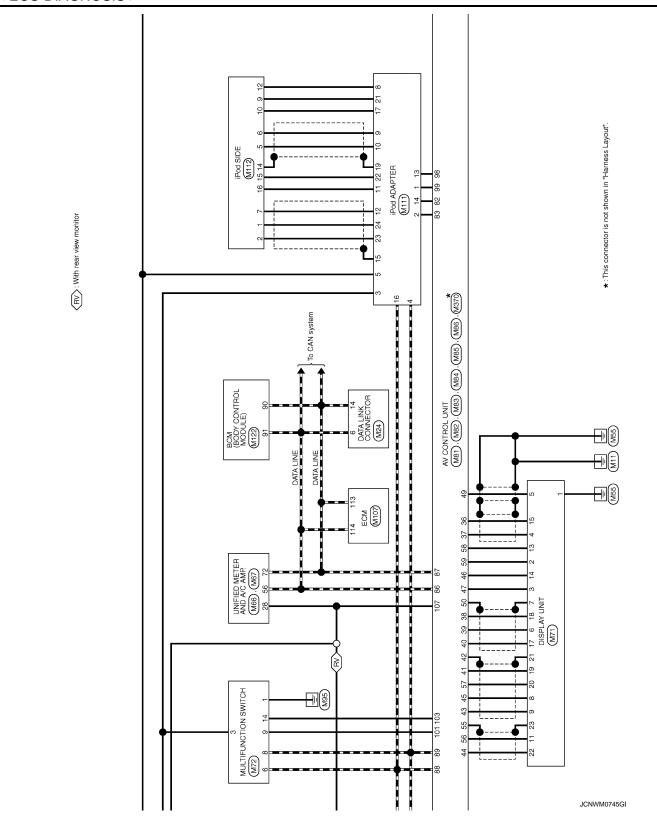
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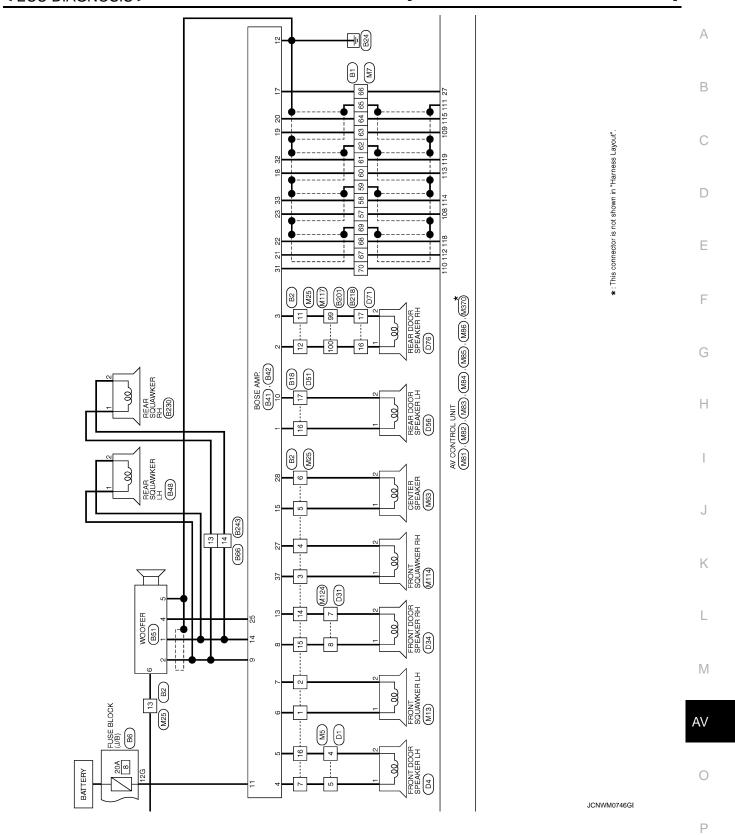
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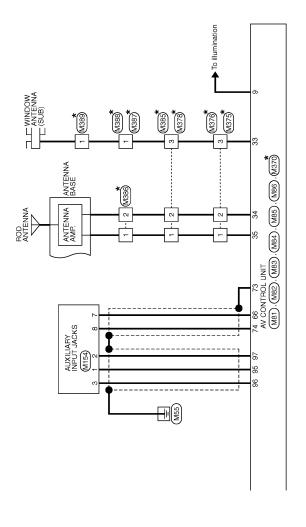
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.











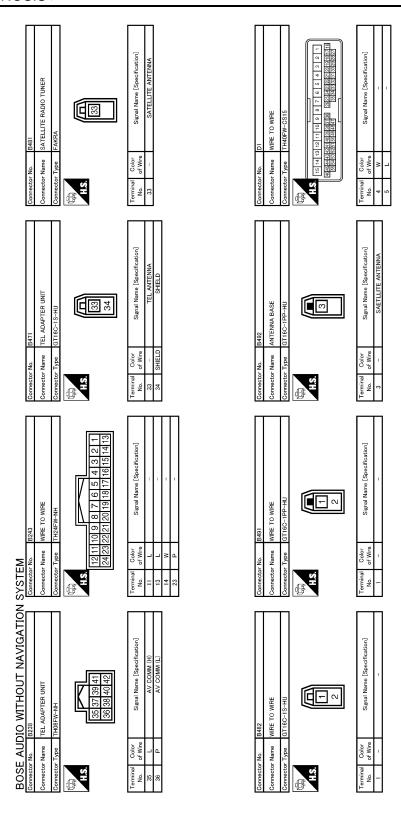
★: This connector is not shown in "Harness Layout".

16 P G 16 P G G G G G G G G G G G G G G G G G G		Connector Name WIRE TO WIRE  Connector Type TH24MW-NH  LS.  1 2 3 4 5 6 7 8 9 10 11 12  13 14 15 16 17 18 19 20 21 22 23 24	No.   Octor   Signal Name [Specification]   Octor   Signal Name [Specification]   14 SHELD   - [Without around view monitor]   15 W   - [Without around view monitor]   17 R   - [Without around view monitor]   17 R   - [Without around view monitor]   17   R   - [Without around view monitor]   18   - [Without around view monitor]   19   - [Without around view monitor		A B C
Toation]		3 2 1	'cation]		Е
6 PW-CS  5 4	1 1 1 1 1 1	14 13	Signal Name [Specification] - [With BOSE audio] - [With BOSE audio]		F
No. Name WIR Type NSI 1615	<del>                                     </del>	Connector No. B18 Connector Name WIRE TO WIRE Connector Type TK10FW-NS8 LS. 10 9 8 7 6 1 18 17 16 15	Color of Wire		G
Connecton Connec	6 6 6 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Conne	Terminal No.		Н
		E14 WRE TO WIRE THIZFW-NH  6 5 4 3 2 1  12 11 10 9 8 7	Signal Name [Specification]		J
SYSTEM		Connector No. B14 Connector Type TTHI Connector Type TTHI H.S.	Terminal Color No. of Wire 5 SHIELD 6 W		K
					L
BOSE AUDIO WITHOUT NAVIGATION		BB NSIZEBR-CS (J/B) NSIZEBR-CS SG4G	Signal Name [Specification]		M
BIO WITHOU	- [With	B6 FUSE BLOCK (J/B) NS12FBR-CS 5G4G 31 12G11G10G9G8	Ö		AV
BOSE AUD Commeter No. Commeter Type Commeter Type HS  Terminal Color No. of Wire 31 L 32 L 41 BR	Ş & ≥ ¬ ¬ ¬ > B >		of Wire GR		
BOSE A Connector No. Connector Operation of No. Of St.	42 43 46 47 47 48 57 57	Connector No. Connector Typ	Terminal No. 12G		0
				JCNWM0748GI	Р

BOSE AUDIO WITHOUT NAVIGATION S	31   W   AMP ON SIGNAL	Connector No. B42 Connector Name BOSE AMP. Connector Type SCA1ZFBR-SJA2  M.S. 14 13 12 11 10  9 8 7 6 5 4 3 2 1	12   B   GMD     13   Y   SOUND SIGNAL FRONT DOOR SPEAKER RH (-)   14   R   SOUND SIGNAL WOOFER (-)
Color   Signal Name [Specification]   Color   Signal Name [Specification]   17   Color   Signal Name [Specification]   18   South Signal Front File   South Signal Front Signal File   South Signal Front Signal File   South Signal F		Color   Color   Signal Mane [Specification]   Color   Color	
Connector No. B48 Connector Name REAR SQUAWKER LH Connector Type ITK02FER  LAS	Connector No. 650  Connector Name CAMERA CONTROL UNIT  Connector Type TH3ZFW-NH  1.3.  2.4 6 8 1012 14 16 18 20 22 24 28 28 30 22  1.3 5 7 9 111 13 15 17 19 11 13 13 17 29 11 13 13 17 19 11 13 13 17 19 11 13 13 17 19 11 19	22         0         REVERSE           23         L         SENSOR SIGNAL 1           24         BR         SENSOR SIGNAL 2           25         R         SENSOR SIGNAL 3           26         V         VEHICLE SPEED 8           30         LG         ACC           31         B         ACC           31         B         ACC           31         B         ACC           31         LC         ACC           32         L         BATTERY	Connector No. 851  Connector Name WOOFER  Connector Type RSIGNEGY-PR  H.S. 2 4 6
Terminal   Color   Signal Name [Specification]	No.   Order   Signal Name [Specification]		Color   Signal Name [Speedication]   Color   No.   Signal Name [Speedication]     R

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NS8  NS9    1	GND CONTROL SIGNAL CONTROL SIGNAL CONTROL SIGNAL CONTROL SIGNAL MICROPHONE VCC MICROPHONE VCC			АВ
Connector No. 6216 Connector Name WIRE TO WIRE Connector Type TK I GFW-NS8  LS 10 9 8 7 6 6 6 14  Terminal Color Signal Nam No. of Wire  LS 17 16 15 14  Terminal Color Signal Nam No. of Wire  16 L C - [With	19 B C C C S S B B C C C C S S B B C C C C			C
	NIT	Signal Mame (Specification) BATTERY ACC IGNITION GND SHEED SHEED SHEED SHEED THE VOICE SIGNAL (+) TTE VOICE SIGNAL (-) TTE VOICE SIGNAL (-) THE VOICE SIGNAL (-) THE VOICE SIGNAL (-) THE VOICE SIGNAL (-) THE VOICE SIGNAL (-)		E
SHELD   SHE	Connector No. 6237 Connector Name TEL ADAPTER UNIT Connector Type TH32FW-NH  TH32FW-NH  TH35FW-NH  TH35FW-NH	Color   Colo		G
2	Com	<u>5</u> 2		Н
Wine CSI 6-TM4	8236 SATELLITE RADIO TUNER A16FW 1 6 7 12 14 16 3 5 8 9 10	Signal Name [Specification] SOUND SIGNAL IH (+) SOUND SIGNAL IH (+		ı
19201 TH805PV-CS16-TM	8236 SATELLITE R/ A16FW 4 6 6 8 5 8 8 5 8 8 5 8 8 8 5 8 8 8 8 8 8	SS		J
Connector Name   Connector Name   Connector Name   Connector Name   Color Name	Connector No. 65 Connector Name SX Connector Type At	Terminal Color No Mine Color No Mine Color No Mine Color Color No Mine Color C		K
A LINE COLLEGE				L
HOUT NAVIG	REAR SOUAWKER RH TKOZFBR	Signul Name (Specification)		M
AUDIO WITT  Name WIRE TO WIR  Type TH24MW-NH  13 14 15 16 171  Color  Of Wire  Sign  NAME TO WIRE  Color  NAME TO WIRE  Sign  NAME TO WIRE	9 p	olor N		AV
BOSE AUI Connector No Connector Name Connector Type I 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Connector No. Connector Name Connector Type	Terminal Color No. of Wire 1 L. L. 2 W. W.		0
			JCNWM0750GI	
				Р



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Connector Name WIRE TO WIRE  Connector TK IOMW-NS3  TK I Z 3 4 5 6 6 7 8 9 10  11 2 13 14 15 16 17 18	Terminal   Color   Signal Name [Specification]   No.   Of Wire   V   - [With BOSE audio]     17   G   - [With BOSE audio]	Connector No. D102  Connector Name WRE TO WRE  Connector TH24PW-NH  12 11 10 9 8 7 6 5 4 3 2 1 2 1 2 2 2 2 2 1 2 0 1 9 1 8 1 7 16 1 5 1 4 13	Terminal   Color   Signal Name [Specification]     14   SHIELD  [Without around view monitor]     15   Y  [Without around view monitor]     17   G  [Without around view monitor]		A B C
Connector No. D34 Connector Name SYSTEM) Connector Type NSIGEBR-CS  H.S.	Terminal Color No. of Wire 1 BR 2 R	Connector Name REAR DOOR SPEAKER RH Connector Type NS02PBR-CS  A.S.	Terminal Color No. of Wire  1 L		E F G
Connector No.   D31   Connector No.   D31   Connector Type   TH40FW-CS15	Terminal   Color   Signal Name [Specification]	Connector No. D71  Connector Name WIRE TO WIRE  Connector Type TK10MM-NS8  H.S. T 2 3 4 5 6 7 8 9 10  T1 12 13 14 15 16 17 18	Terminal   Color   Signal Name [Specification]   16		J K
BOSE AUDIO WITHOUT NAVIGATION  Commetor No. D4  Commetor Name FRONT DOOR SPEAKER LH (WITH BOSE  Commetor Type INSQFSBR-CS  H.S.	Terminal Color No. of Wire 1 L 2 W	Connector No. D56  Connector Name REAR DOOR SPEAKER LH  Connector Type NS02/EBR-CS  H.S.	Terminal Color Signal Name [Specification]  No. 1 Y 2 G -	JCNWM0752GI	M AV

Connector No. E107	Connector Name PARKING BRAKE SWITCH Connector Type TB01FW	(SH)	Terminal Color No. of Wire Signal Name [Specification]	Connector No. M1 Connector Name FUSE BLOCK (J/B) Connector Type NSOSFW-NZ  MS. SA 241A  BA A 544A	Terminal Color No. of Wire Signal Name [Specification] 2A G 2A G 2A G
Connector No.   E106	Connector Name WIRE TO WIRE Connector Type TH80FW-CS16-TM4		Terminal Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Color	Connector No.   F151	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   7 O REV LAMP RLY
J SYSTEM Connector No. E5	Connector Name   IPDM E.P. (INTELLIGENT POWER   DISTRIBUTION MODULE ENGINE ROOM)   Connector Type   TH20FW-CS12-M4-IV	(4.8) (9) (4) (1) (1) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	Terminal Color No. of Wire Signal Name [Specification] 25 G	Cornector No. F103 Cornector Name WRE TO WIRE Cornector Type TR35FW-NS10  WR TO WIRE Cornector Type TR35FW-NS10  WAS TR35FW-NS10  WAS TR35FW-NS10	Terminal Color No. of Wire Signal Name [Specification] 31 R
BOSE AUDIO WITHOUT NAVIGATION	Connector Name REAR VIEW CAMERA Connector Type TH04MW-NH	1234	Terminal Color   Signal Name (Specification)	Connector No.  Connector Name A/T ASSEMBLY Connector Type RK10FG-DGY  A/S  (0 9 8 7 6)	Terminal   Color   Signal Name [Specification]   7   R

JCNWM0753GI

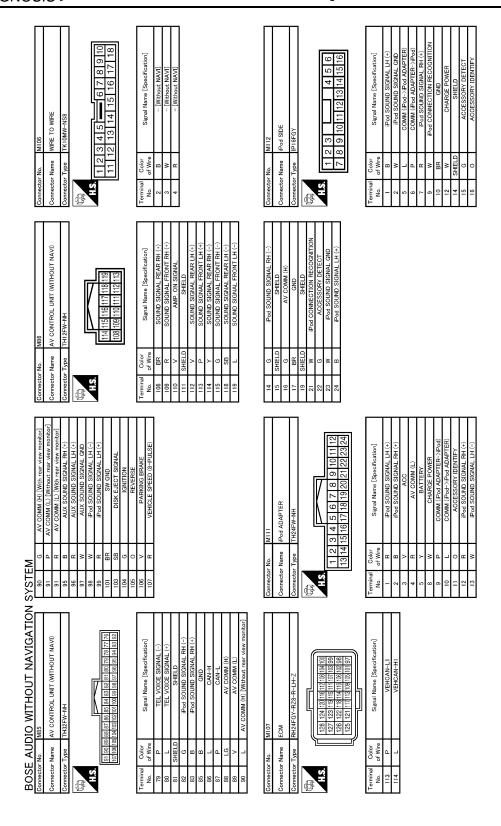
	M24	В
	Commettor No. Commettor Name Commettor Type H.S. H.S.  14 P. Of Wire 6	D
(cation)	[aution]	Е
THBOMW-CS16-TM4  THBOMW-CS16-TM4  THBOMW-CS16-TM4  THBOMM-CS16-TM4  Signal Name [Specification]	M13 FRONT SOUAWKER LH TKOZFBR Signal Name [Specification]	F
No. Name Type Color Color Color V V V V V V V V V V V V V V V V V V V	Name Tippe	G
Connector Connector Connector No. 88	Connecto Con	Н
Mane   MIS		I
M   M5   M5   M5   M8   M8   M8   M8		J
SYSTEM Connector No. MS Connector Name Will Connector Type ITH No. of Wire A P 5 L 5 L 5 L 5 L 5 L 6 L 6 L 6 L 6 L 6 L 6 L 6 L 7 L 7 L 7 L 7 L 7 L 7 L 7 L 7 L 7 L 7	No.	К
NOTA		L
BOSE AUDIO WITHOUT NAVIGATION	Signal Name [Specification]	M
Nation   N	WIRE TO	AV
BOSE AUC Connector No. Connector Type Connector Type M.S. H.S. Terminal Color No. of Wire 12C O	Connector No	0
	JC	CNWM0754GI

Connector No. M37  Connector Name STEERNG ANGLE SENSOR  Connector Type TH08FW-NH  H.S. 7 2 3 8 7 7 2 3 8 7 7 4 5 5 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 8 7 8 8 8 7 8	Terminal   Color   Signal Name [Specification]     No. of Wire   Signal Name [Specification]     3	Connector No. M89 Connector Name BACK-UP LAMP RELAY Connector Type MS02FL-M2  M.S. 3  13  14.S. 2  2 X 1	Terminal   Color   Signal Name [Specification]
Connector No. M36 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TK08FGY-IV  M.S. 24 25 26 27 31 32 33 34	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   24   P   -	Connector No.   M67	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   56   L   CANH   CAN
SYSTEM  15 LG  16 P		Connector No. M66  Connector Name UNIFIED METER AND A.C AMP.  Connector Type TH405P4-NH  A.S. 1.2 3 4 5 6 7 8 9 00 11 2 3 4 15 12 23 4 15 6 7 8 9 00 11 2 3 4 15 6 7 18 9 10 11 2 3 4 15 12 23 4 15 15 15 15 15 15 15 15 15 15 15 15 15	Terminal   Codor   Signal Name [Specification]   No. of Wire   NeHOLE SPEED (6-PULSE)
BOSE AUDIO WITHOUT NAVIGATION Commentor No. M25 Connector Name WIRE TO WIRE Connector Type NST6MW-CS  H.S.  H.S.  REP 10 11 12 13	Terminal   Color   Signal Name [Specification]     No. of Wire   Color     2	Connector No. M63 Connector Name CENTER SPEAKER Connector Type ITN0ZFBR  H.S.	Terminal   Color   Signal Name [Specification]   1   Y

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Connector No.   M81	9 R ILLUMINATION 15 B STRG SW GND 19 Y BATTERY 20 B GND  Connector No. M84  Connector Name AV CONTROL UNIT (WITHOUT NAV)  Connector Type THISPW-NH	1	A B C
Connector No.   M72	6   LG	+	E F G
14   LG   SIGNAL GND     15   SB   COMPOSITE NACE GIGNAL     17   G   RGB (R. RED.) SIGNAL     18   P   RGB SIGNAL     19   W   RGB SINC     20   G   VP     21   SHIELD   SHIELD     23   SHIELD   SHIELD     24   SHIELD   SHIELD     25   SHIELD   SHIELD     26   SHIELD   SHIELD     27   SHIELD   SHIELD     28   SHIELD   SHIELD     29   SHIELD   SHIELD     20   SHIELD   SHIELD     20   SHIELD   SHIELD     20   SHIELD   SHIELD     21   SHIELD   SHIELD     22   SHIELD   SHIELD     24   SHIELD   SHIELD     25   SHIELD   SHIELD     26   SHIELD   SHIELD     27   SHIELD   SHIELD     28   SHIELD   SHIELD     29   SHIELD   SHIELD     20   SHIELD   SHIELD     20   SHIELD   SHIELD     20   SHIELD   SHIELD     21   SHIELD   SHIELD     22   SHIELD   SHIELD     24   SHIELD     25   SHIELD   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     29   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     21   SHIELD     22   SHIELD     24   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     28   SHIELD     29   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     22   SHIELD     24   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     28   SHIELD     29   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     21   SHIELD     22   SHIELD     23   SHIELD     24   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     28   SHIELD     28   SHIELD     29   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     22   SHIELD     24   SHIELD     25   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD     28   SHIELD     28   SHIELD     28   SHIELD     28   SHIELD     20   SHIELD     20   SHIELD     21   SHIELD     21   SHIELD     21   SHIELD     22   SHIELD     24   SHIELD     25   SHIELD     25   SHIELD     26   SHIELD     27   SHIELD     28   SHIELD	Connector No. M83 Connector Name AV CONTROL UNIT (WITHOUT NAVI) Connector Type THZ4FW-NH	13   146   45   44   43   42   41   40   39   38   37   36   55   54   53   52   51   50   49   48   48   48   48   48   48   48	J
BOSE AUDIO WITHOUT NAVIGATION	V   COM   Y   Y   Y   Y   Y   Y   Y   Y   Y	122   24   24   25   26   27   28   29   31   21   23   25   26   27   28   29   31   25   25   26   27   28   29   31   25   25   26   27   28   29   31   22   22   24   25   25   25   25   25	AV O
			Р

Revision: 2007 November AV-317 2008 EX35



JCNWM0757GE

49 SHELD	Connector No.   M154	A B C	
Connector No. M117  Connector Name WIRE TO WIRE  Connector Type TH80MW-CS16-TM4  LS	Mitation   Mitation	E F G	
Commetter Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Type TK38MV-NS10  H.S.  Terminal Color No. of Wire Signal Name (Specification)	Miles   Miles   Miles   Connector No.   Miles   Connector Name   WiRE TO WIRE   Connector Type   TH40MM-CS15	J K	
Connector Name	Connector Name   BCM (BODY CONTROL MODULE)	AV O	
		Р	

Revision: 2007 November AV-319 2008 EX35

BOSE AU	BOSE AUDIO WITHOUT NAVIGATION	SYSTEM				
Connector No.	M303	Connector No.	M370	Connector No.	M375	Connector No. M376
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)	Connector Name	e AV CONTROL UNIT (WITHOUT NAVI)	Connector Name	WIRE TO WIRE	Connector Name WIRE TO WIRE
Connector Type	TK08FGY	Connector Type	GT13SH-2/1S-HU	Connector Type	GT13SC-2/1S-HU	Connector Type GT13SCN-2/1PP-HU
₹ H.S.	13 14 15 16 17 18 19 20	優 H.S.	<u>(8888</u>	E H.S.		H3.
of	Signal Name	Terminal Color No. of Wire 33 -		Terminal Color No. of Wire  1 2	Signal Name (Specification)	Terminal   Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]   2
17 BR	<u>'</u>	35	ANTENNA AMP. ON SIGNAL	8	1	
Connector No.	M378	Connector No.	M385	Connector No.	M386	Connector No. M387
Connector Name	WIRE TO WIRE	Connector Name	e WIRE TO WIRE	Connector Name	ANTENNA BASE	Connector Name WIRE TO WIRE
Connector Type	GT13SC-2/1S-HU	Connector Type	GT13SCN-2/1PP-HU	Connector Type	GT13SSN-1/1PP-HU	Connector Type JASO JACK
H.S.		H.S.		H.S.		SH B
Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color No. of Wire	or Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color Signal Name [Specification]
-	-	-	-	-	ANTENNA AMP. ON SIGNAL	-
2 -	I	2 -	IÍ	2 -	AM-FM MAIN	
r	_	r:	_			

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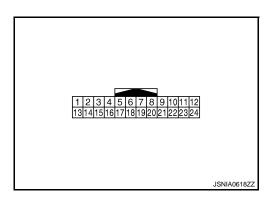
	lon]			А
H H H G G G G G G G G G G G G G G G G G	Signal Name (Specification)  [Without NAVI] - [Without NAVI]			В
R2 WRE TO W TH12FW-N	Color of Wire SHELD V			С
Connector No. Connector Name Connector Type H.S.	Terminal No of S			D
3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ification]			Е
14 13	Signal Name (Specification)  - [Without NAVI]  - [Without NAVI]			F
Cornector No. R1 Connector Name WIRE TO WIRE Connector Type TK10FW-NSS    10 9 8 7 6	Color of Wire SHIELD			G
Connector No. Connector San. H.S. 10	Terminal No. 2 2 2 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			Н
	pecification]	E Signal NE OND NE VCC		I
M389 WINDOW ANTENNA (SUB) POIFB-A	Signal Name (Specification)	MICROPHONE TRO4FW  TRO4FW  Signal Name [Specification] MICROPHONE SIGNAL MICROPHONE SIGNAL MICROPHONE SIGNAL MICROPHONE SIGNAL MICROPHONE CND MICROPHONE CND		J
TEM sector No. sector Name sector Type	Oolor Color	-No. Type Golor Golor Golor R R R		K
0) <del></del>	Terminal No.	Connector Connector No. No. 1		L
BOSE AUDIO WITHOUT NAVIGATIO Connector No. M388 Connector Name WIRE TO WIRE Connector Type JASO PLUG  H.S.	Signal Name [Specification]	NIPE 1 3 4 5 6 1 9 1 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 1		M
MASS WITHOL MASS WIRE TO WIRE TO WIRE TO WIRE	Signal Nam	R11 THIZMW-NH THIZMW-NH Signal Num		AV
BOSE AUDI Connector Name   W Connector Type   J Connector Type   J M.S.	No. of Wire	Connector No.  Connector Name  Connector Type  H.S.  H.S.  H.S.  H.S.  Golden  A. Golden		0
m[호] 호 [호] (종)	<u> -                                     </u>	[O] [O] [WE ] [F] [F]	JCNWM0760Gt	<u></u>
				Р

### **IPOD ADAPTER**

Reference Value

INFOID:0000000003513792

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

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

### **IPOD ADAPTER**

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

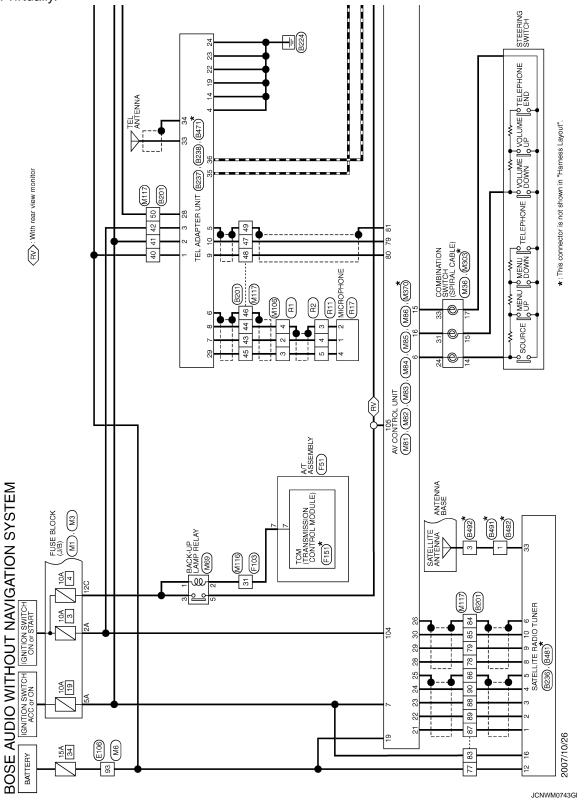
# Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION SYSTEM -

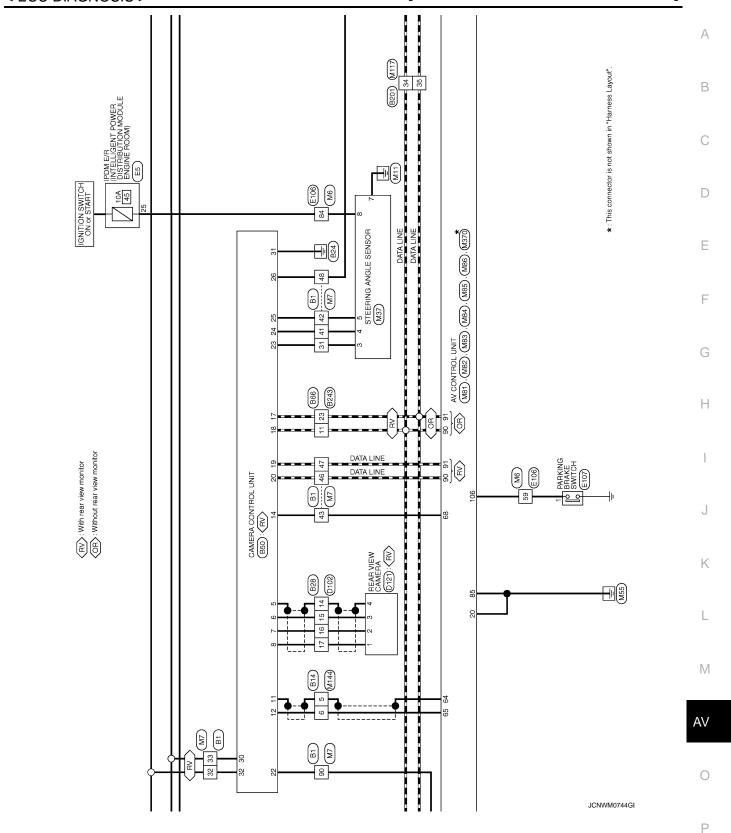
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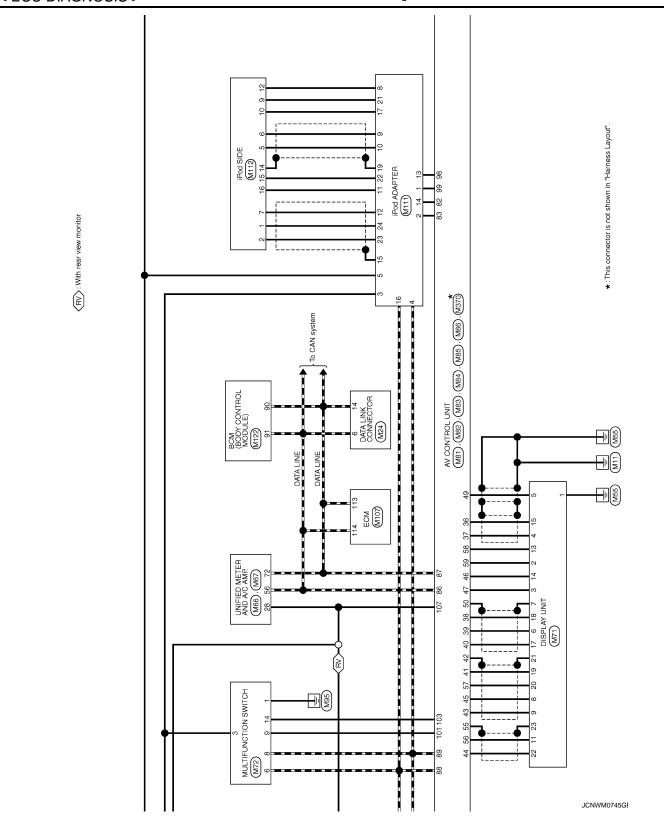
Click here to view the eWD.

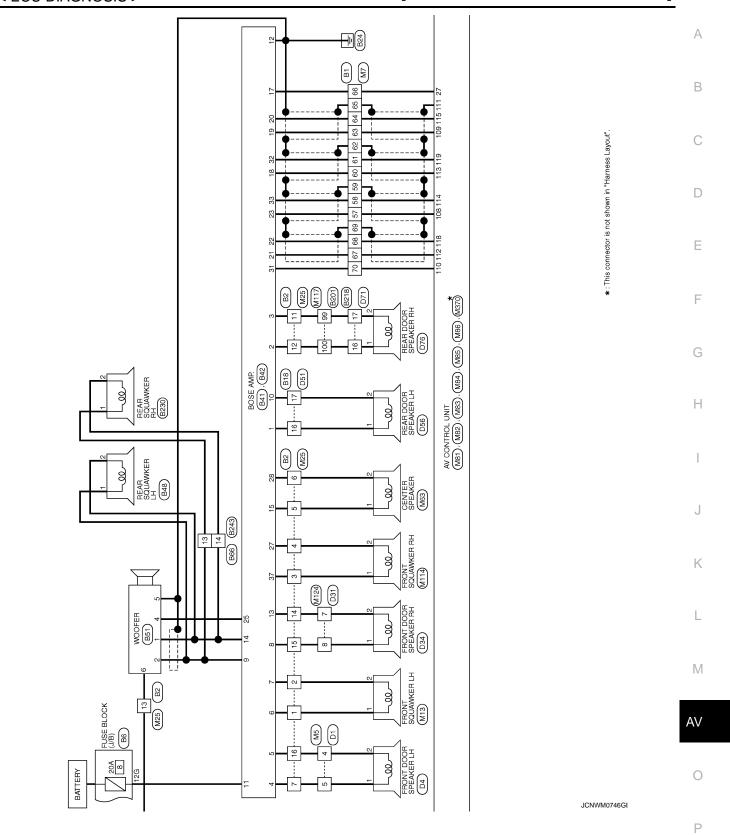
#### NOTE:

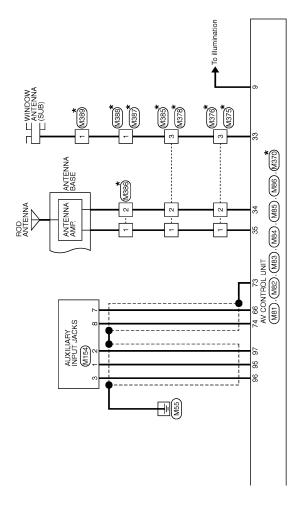
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.











★: This connector is not shown in "Harness Layout".

JCNWM0747GI

#### **IPOD ADAPTER**

	Connector No. 828  Connector Type III-24MW-NH  H.S.	Terminal Color		A B C
Connector No.   B2   Connector Name   WIRE TO WIRE   Connector Type   NISI6FW-CS	ector No. B18 ector Type ITK (IGFW-NS8  10 9 8 7 6	No. of Wire   Signal Name [Specification]   No. of Wire   Checification]   16   Y   - [With BOSE audio]   17   G   - [With BOSE audio]		E F G
SYSTEM  59 SHIELD  60 P P COMM  61 C C C C C C C C C C C C C C C C C C C	Connector No.         B14           Connector Name         WIRE TO WIRE           Connector Type         ITHIZFW-NH           Connector Type         Connector Type           MAS         E 5 4 3 2 1           E 5 4 3 2 1         ITZ ITI 10 9 8 7	Terminal Color No. of Wire Signal Name [Specification]  Signal Name [Specification]  W		H I J
BOSE AUDIO WITHOUT NAVIGATION SY Connector No.   B1   Connector Type   TH80FW-CS16-TM4	Connector No.   B6   Connector No.   B6   Connector Name   FUSE BLOCK (J/B)   Connector Type   NSIZFBR-CS   Connector Type	Terminal Color Signal Name (Specification) 12G GR –		M AV
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Connector Name   BOSE AMP	NAME ON SIGNAL   11	Connector No.   642	12   B   SOUND SIGNAL PROFIT BOOK SPEAKER RH (-)   14   R   SOUND SIGNAL WOOFER (-)
Color O'Wire O'Wire O'Wire W W	No. of Wire   Signal Name [Specification]		Terminal   Color   Signal Name [Specification]     1

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#### **IPOD ADAPTER**

12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	NE VOC SIGNAL SI			A
or No. B218  or Name WIRE TO WIRE  or Type TrK (IPFW-NS8  10 9 8 7 6	B CONTROL SIGNAL B CONTROL SIGNAL B CONTROL SIGNAL B CONTROL SIGNAL P VEHICLE SPEED (8-PULS) W MICROPHONE VCC			С
Connector No.  Connector Type  10  10  10  10  10  10  10  10  10  1	19 22 23 23 24 28 29 29			D
andiro]	126 28 30 32 126 27 29 31	offication]  Y  V  SIGNAL  E GND  INAL (+)		Е
- Dwith Bose	E237 TEL ADAPTER UNIT TH32PW-NH  E1012 14 16 18 20 22 24 F1 9 11 13 15 17 18 21 23	Signal Name [Specification]  BATTERY ACC IGNITON GND SHELD SHELD SHELD SHELD MICROPHONE SIGNAL MICROPHONE GND TEL VOICE SIGNAL TEL VOICE SIGNAL (-) TEL VOICE SIGNAL (-) TEL VOICE SIGNAL (-)		F
84 SHELD P P P P P P P P P P P P P P P P P P P	No. Name Type	No. of Wee of		G
				Н
WIRE CSIG-TM44  CSIG-TM44  Signal Name [Specification]	10 12 14 16	Signal Name [Specification] SOUND SIGNAL, LH (+) SOUND SIGNAL, LH (+) SOUND SIGNAL, EM (+) SO		I
E201  WIRE TO WIRE  TH80FW-CS16-TM4  Signal Mane [5]  Signal Mane [5]	8236 SATELLITE RADIO TUNER A15FW 12 16 16 17 18 18 19 10	Signal N SOUNI SOUNI SOUNI SOUNI COMM COMM		J
SYSTEM    Connector No.   Eg	Connector No.   62   Connector No.   62   Connector Name   SA   Connector Type   A1   Co	Terminal   Color     No. of Wire     1		K
				L
BOSE AUDIO WITHOUT NAVIGATION	AWKER RH	Signal Name [Specification]		M
DIO WITH   Bide   WIRE TO WIRE   TH24MW-NH   TH24MW-NH	B230 TK02FBR TRAZEBR			AV
Connector No.   Bids		Of Wire		
BOSE AL	Connector No. Connector Name Connector Type	Terminal No.		0
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				-

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	Connector Name Connector Type Connector Type 12 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Connector No.   B471	Cornector Name SATELLITE RADIO TUNER Connector Type FAKRA  Terminal Color No. of Wire Signal Name (Specification)  Sa - SATELLITE ANTENNA  Connector Na. DI Connector Na. DI Connector Name WIRE TO WIRE
Connector Type GT16C-1S-HU  H.S.	Connector Type GTT6C-IPP-HU H.S	Connector Type (TTIGO-IPP-HU	Connector Type
Color Signal Name [Specification]	Terminal Color Signal Name [Specification] No. of Wire 1	Terminal   Color   Signal Name [Specification]   No.   of Wire   SAETILITE ANTENNA   SAETILITE ANTENNA	Terminal   Color   Signal Name [Specification]   A   W

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#### **IPOD ADAPTER**

# [BOSE AUDIO WITHOUT NAVIGATION]

Signal Name [Specification]	АВ
Connector No.   D51	C
PRONT DOOR SPEAKER RH (WITH BOSE SYSTEM)  Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]	Е
	F G
Connector No.  Gonnector Name Connector Type Terminal Color No. Connector Name T	Н
Name   WIRE TO WIRE	I J
Connector Name   WIRE TO WIRE   Connector Type   TK10MW-NSS   TR10   T   T   T   T   T   T   T   T   T	К
	L
BOSE AUDIO WITHOUT NAVIGATION Commetter Name   FRONT DOOR SPEAKER LH (WITH BOSE   Signal Name [Specification]	M
Signal Name (Spo	AV
BOSE AUI Connector Name Connector Na	0
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BOSE AUDIO WITHOUT NAVIGATION	SYSTEM Connector No. E5	Connector No. E106	Connector No. E107
Connector Name REAR VIEW CAMERA	Connector Name DISTRIBUTION MODULE ENGINE ROOM)	Connector Name WIRE TO WIRE	Connector Name PARKING BRAKE SWITCH
Connector Type TH04MW-NH	Connector Type TH20FW-CS12-M4-1V	Connector Type TH80FW-CS16-TM4	Connector Type TB01FW
HS.		1   1   1   1   1   1   1   1   1   1	HS.
Terminal   Goldor   Signal Name [Specification]   No. of Wire   Commerce   Commerce	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] 25 G	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Signal	Terminal Color No. of Wire Signal Name [Specification]
Connector No. F51 Connector Name A/T ASSEMBLY Connector Type RK10FG-DGY	Connector No. F103 Connector Name WIRE TO WIRE Connector Type TK36FW-NS10  MA  HA  SEPREMBER OF TR36FW-NS10	Connector No. F151  Connector Name TOM (TRANSMISSION CONTROL MODULE)  Connector Type SP10FBGY  TAS  TOM TO B 7 7 R R 4 3 2 1	Connector No. MI Connector Name FUSE BLOCK (J/B) Connector Type NSOBFW-MZ  M.S. SAME ZAIA
Signal Ns	Terminal Color Signal Name [Specification]	Signal Name [Speci	BA \[ \frac{7A(6A[5A[4A]]}{7aminal   Oolor   Signal Name [Specification]   2A

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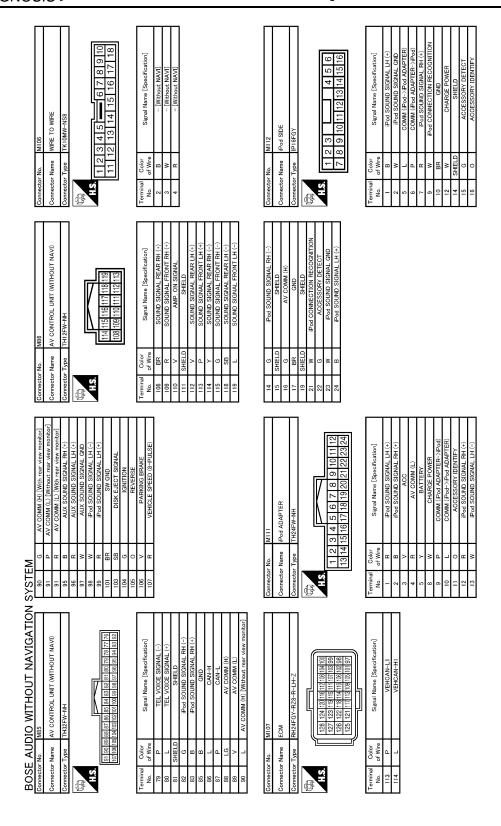
	Connector No. M24 Connector Name DATA LINK CONNECTOR Connector Type BD16FW Connector Type BD16FW  Connector Type BD16FW  Connector Type BD16FW  Terminal Color Signal Name (Specification) 6 L 14 P 14 P	A B C
WIRE TO WIRE THEOMW-CSI 6-TM4  THEOMW-CSI 6-TM4  THEOMW-CSI 6-TM4  THEOMW-CSI 6-TM4  Signal Name [Specification]	FRONT SOUAWKER LH  TK02FER  Signal Name [Specification]	E
Connector No. M6 Connector Name WIF Connector Type 1TH Connector Type 1TH Color No. of Wire 59 V V 84 G G V V V 88 G G V V V V V V V V V V V	Connector No.   MIS	G H
No   No   No   No   No   No   No   No		I J
Connector No.   M5	SHELD   SHEL	К
THOUT NAVIGATION  CS  CQC COCC  CQC CC	WINE TO WINE THBONW-CSIG-TMA  THE CONTROL IN Name [Specification]  Signal Name [Specification]  - [With BOSE audio without NAVI]	M
BOSE AUDIO WITT  Connector No. M3  Connector Name FUSE BLOOK  Connector Type NS12FW-CS  H.S. ECG/IC/IC/IC/IC/IC/IC/IC/IC/IC/IC/IC/IC/IC/	Connector No.   M7   Connector Name   MIRE TO   Color	AV
		Р

BOSE AUDIO WITHOUT NAVIGATION	SYSTEM		
Connector No. M25	LG	Connector No. M36	Connector No. M37
Connector Name WIRE TO WIRE	- d 91	Connector Name COMBINATION SWITCH (SPIRAL CABLE)	Connector Name STEERING ANGLE SENSOR
Connector Type NS16MW-CS		Connector Type TK08FGY-1V	Connector Type TH08FW-NH
45		48	
\$		H.S.	Hs
1 2 3 <b></b>		24 25 26 27 31 32 33 34	7 2 3 8
			1
Terminal Color Signal Name [Specification]		Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]
		24 P –	3 L SENSORI
2 W -		Н	
>		33 B –	is .
- T			GND GND
+			5
7 L – –			
H			
+			
- Y			
C	Necessary Neces	N	O
Connector No.	Connector No.	Connector No.	Connector No. Mos
Connector Name CENTER SPEAKER	Connector Name UNIFIED METER AND A/C AMP.	Connector Name UNIFIED METER AND A/C AMP.	Connector Name BACK-UP LAMP RELAY
Connector Type TK02FBR	Connector Type TH40FW-NH	Connector Type TH32FW-NH	Connector Type MS02FL-M2
嗲	呼	· · · · · · · · · · · · · · · · · · ·	<b></b>
2 1	71 22 04 5 6 7 8 9 10 11 12 10 14 15 16 17 18 19 20 21 12 20 24 125 125 17 28 28 89 89 81 28 28 38 48 68 63 78 89 89 40	41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 56 57 57 58 59 50 71 72	≠ <u>-</u> [ -
			2X1
Terminal Color Signal Name [Specification]	nal Color of Wire	nal Color Signal Na	Terminal Color Signal Name [Specification]
+	28 R VEHICLE SPEED (8-PULSE)	Г	+
2 G –		72 P GAN-L	$^{+}$
			3 LG

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# [BOSE AUDIO WITHOUT NAVIGATION]

Connector No. M81 Connector Name AV CONTROL UNIT (WITHOUT NAVI) Connector Type THIBFW-CS2 H.S. T.	No.   Color   Signal Name [Specification]   No.   of Wire   STRG SW A   ACC   Of No.   Of N	Connector No. M84  Connector Name AV CONTROL UNIT (WITHOUT NAVI)  Connector Type THISFW-NH  LA.S. FOR 66 65 64 63 62 61 60  75 74 73 72 71 70 69 68	No.   of Wire   Signal Name [Specification]     04 Wire   of Wire   SHELD     65 W		A B C
Connector No.         M72           Connector Name         MULTIFUNCTION SWITCH           Connector Type         THISPW-NH           TAS         TAS           TAS	Terminal   Color   Signal Name [Specification]   Old   Color   Signal Name [Specification]   Signal Name [Specification]   Signal Name [Specification]   Signal Name [Specification]   Signal Name	47   O   SIGNAL VCC     49   Y   SHIELD     50   SHIELD     56   SHIELD     56   Y   SHIELD     56   Y   SHIELD     57   SHIELD     58   SHIELD     59   SHIELD     50   SHIELD     50   SHIELD     50   SHIELD     51   SHIELD     52   SHIELD     53   SHIELD     54   SHIELD     54   SHIELD     55   SHIELD     56   SHIELD     57   SHIELD     58   SHIELD     59   SHIELD     50   SHI			E F G
SYSTEM           14         LG         SIGNAL GND           15         SB         COMPOSITE IMAGE SIGNAL           17         G         RGB (R. RED.) SIGNAL           18         P         RGB (B. R. LED.) SIGNAL           19         W         RGB SYNC           21         SHELD         SHELD           22         BR         COMM (DISP→CONT)           23         SHIELD         SHIELD           SHIELD         SHIELD		Connector No. M83  Connector Type THZ4FW-NH  LS. 1746 45 44 43 42 41 40 39 88 37 36 59 58 57 56 55 54 53 52 51 50 49 48	Terminal   Color   Signal Name [Specification]     10		J
Connector Name   DISPLAY UNIT (WITHOUT NAVIGATION	Terminal   Color   Signal Nane [Specification]   1   2   Y   GND   2   Y   COMPOSITE MAGE SIGNAL   2   Y   COMPOSITE MAGE SIND   2   Y   COMPOSITE SIND   3   Y   COMM (CONIT-DISE)   1   Y   Y   Y   Y   Y   Y   Y   Y   Y	Connector No.   MR2	Terminal   Color   Signal Name [Specification]	JCNWM0756GI	M AV
					Р

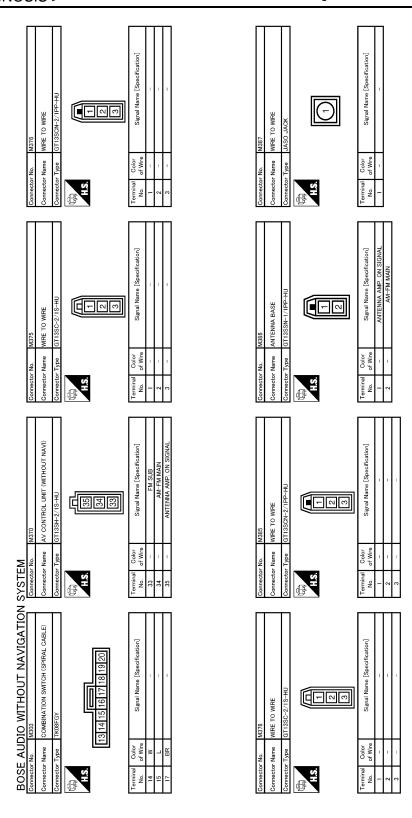


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#### **IPOD ADAPTER**

	AUXILARY INPUT JACKS A08FW	Signal Name [Specification] AUX SOUND SIGNAL RH (+) AUX SOUND SIGNAL GND AUX SOUND SIGNAL H (+) AUX MAGE SIGNAL AUX MAGE GND		АВ
20 SHELD 21 ST Y Y 22 W Y 23 W Y 24 SHELD 25 SHELD 26 SHELD 27 SHELD 28 SHELD 28 SHELD 29 SHELD 29 SHELD 20 SHELD 21 SHELD 22 SHELD 23 SHELD 24 SHELD 25 SHELD 26 SHELD 26 SHELD 26 SHELD 27 SHELD 28 SHE	Connector No. MII54 Connector Name AUXILLARY I Connector Type A08FW  H.S.	Terminal   Color   Sign     No. of Wire   AlIX     2		C D
WIRE TO WIRE THEOMY-CSIG-TM4  THEOMY-CSIG-TM4  THE TO WIRE  THE TO WIR	о wire 2 3 4 5 6 8 9 10 11 12	Signal Name (Specification)		E F
Commector No.   M117	Connector No. M144 Connector Name WIRE TO WIRE Connector Type TH12MW-NH H.S. 1 2 3	Terminal Golor No. of Wire 5 SHIELD 6 W		G
Fig. 1. Signal Name [Specification]  Odior  Of Wire  William Signal Name [Specification]	CS15  CS16  7   8   9   10   11   12   13   14   15   15   15   15   15   15   15	Signal Name [Specification]		I
Connected Connec	Connector No. M124 Connector Name WIRE TO WIRE Connector Type TH40MW-CS15 H.S.	Terminal Color No. of Wire 7 Y Y 8 LG		К
BOSE AUDIO WITHOUT NAVIGATION  Connector Name FRONT SOUAWKER RH  Connector Type TK02FBR  TW02FBR  LAS  Ferminal Color  No. of Wire  1 V - [With BOSE audio]  2 LG - [With BOSE audio]	M122 BOM (BODY CONTROL MODULE) TH40/FB-NH  TH60/FB-NH  TH60/FB-NH	Signal Name [Specification] CAN-H CAN-H		M
BOSE AUDIO WITGOME Connector Name   FRONT SO	Connector No. M122 Connector Name BOM (BODY Connector Type TH40/FB-NH  1.8. 1.0. 1.0. 1.0. 1.0. 1.0. 1.0. 1.0	Terminal Golor S 90 P P 91 L		AV
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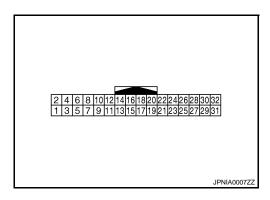


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	[looj]				А
RE 10 9 8 7 1 10 9 8 7 1	Signal Name (Specification)  - [Without NAVI]  - [Without NAVI]				В
e wire to w THIZEW-NN	Color Shign of Wine Shign of Wine Color of Wine Color of Wine Color of Wine Color of				С
Connector No. Connector Name Connector Type H.S.	Tominal Co				D
3 2 1 1 1 1 1 1 1	fration) VII				Е
14 13	Signal Name [Speeification] - [Without NAVI] - [Without NAVI]				F
	of Wire SHIELD				G
Connector Nor	Treminal 1	ПП			Н
IB)	Specification		Specification] NE SIGNAL NE CCC ONE VCC		I
M389 WINDOW ANTENNA (SUB) POIFEB-A	Signal Name [Specification]	R17 TKG4FW TTG4FW 11234	Signal Name [Specification] MICROPHONE SIGNAL MICROPHONE CND MICROPHONE VCC		J
SYSTEM Connector No. Connector Name WINDO Connector Type POTE H.S.	Terminal Codor No of Wife   1	Connector No. R17 Connector Name MICI Connector TK0 Connector Type TK0 MIS	Codor   Codo		K
0) <del></del>	$\overline{\square}$				L
DUT NAVIG	Signal Name (Specification)	100	Signal Name [Specification]		M
BOSE AUDIO WITHOUT NAVIGATIOI Connector No. M388 Connector Name WIRE TO WIRE Connector Type JASO PLUG  M.S.		MIRE TO WIRE THIZAW-NH 1 2 3 4 7 8 9 11			AV
BOSE AU Connector No. Connector Name Connector Type H.S.	Terminal Color No. of Wile I	Connector No. Connector Name Connector Type	Color   Color		0
				JCNWM0760Gł	Р

Reference Value

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

	minal color)	Description		Condition		Reference value
+	-	Signal name	Input/ Output		Condition	(Approx.)
5	_	Shield			_	
6 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
7 (B)	Ground	Camera ground		Ignition switch ON	_	0 V
8	Cround	Comoro nover ovenh	Outro ut	Ignition	R position	6.0 V
(R)	Ground	Camera power supply	Output	switch ON	Other than R position	0 V
11	_	Shield	_	_	_	_
12 (W)	Ground	Camera image signal	Output	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4
14	Ground	Camera-connection recog-		Ignition switch	Connected to camera control unit connector	0 V
(W)	3.54.14	nition signal		ON	Not connected to camera control unit connector	5.0 V
17 (R)	_	AV communication signal (L)	Input/ Output	_	_	<del>-</del>
18 (G)	_	AV communication signal (H)	Input/ Output	_	_	<del>-</del>
19 (P)	_	AV communication signal (L)	Input/ Output	_	_	_

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# [BOSE AUDIO WITHOUT NAVIGATION]

	minal e color)	Description			O an distant	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
20 (L)	_	AV communication signal (H)	Input/ Output	_	_	_
22 (O)	Ground	Reverse signal	Input	Ignition switch ON	R position Other than R position	12.0 V 0 V
23	Ground	Songer signal 1	locut	Ignition switch	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2
(L)	Ground	Sensor signal 1	Input	Switch ON	Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2
24	Cround	Sensor signal 2	lacut	Ignition switch	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2
(BR)	Ground	Sensor signal 2	Input	ON	Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2
25 (R)	Ground	Sensor signal 3	Input	Ignition switch ON	Turn the steering around the neutral position	A: Sensor signal 3 B: Sensor signal 1

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#### [BOSE AUDIO WITHOUT NAVIGATION]

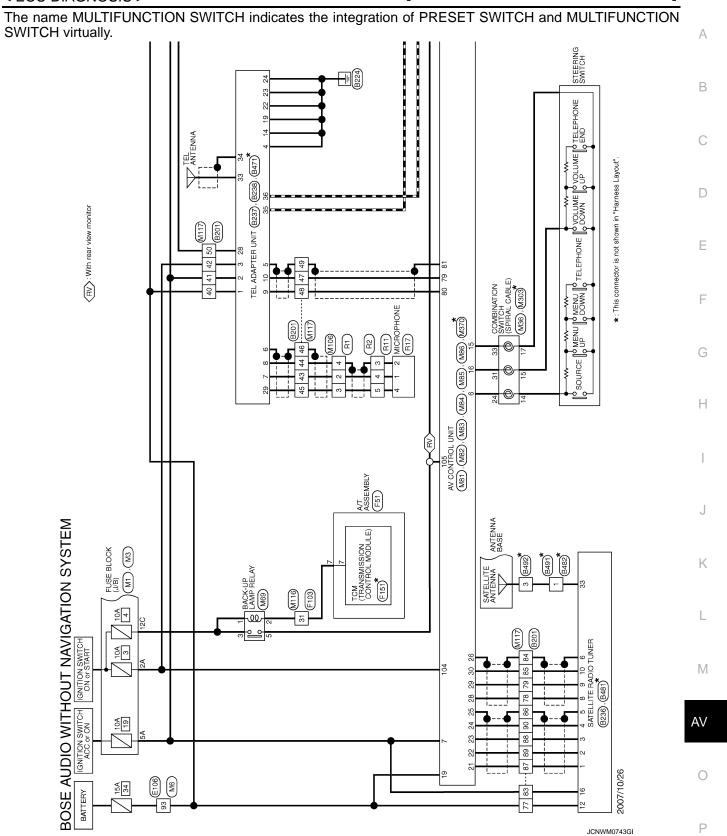
	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
26 (V)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE:  Maximum voltage may be 12 V due to specifications (connected units).  (V) 6 4 2 0 ***20ms  SKIA6649J
30 (LG)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
31 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
32 (L)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage

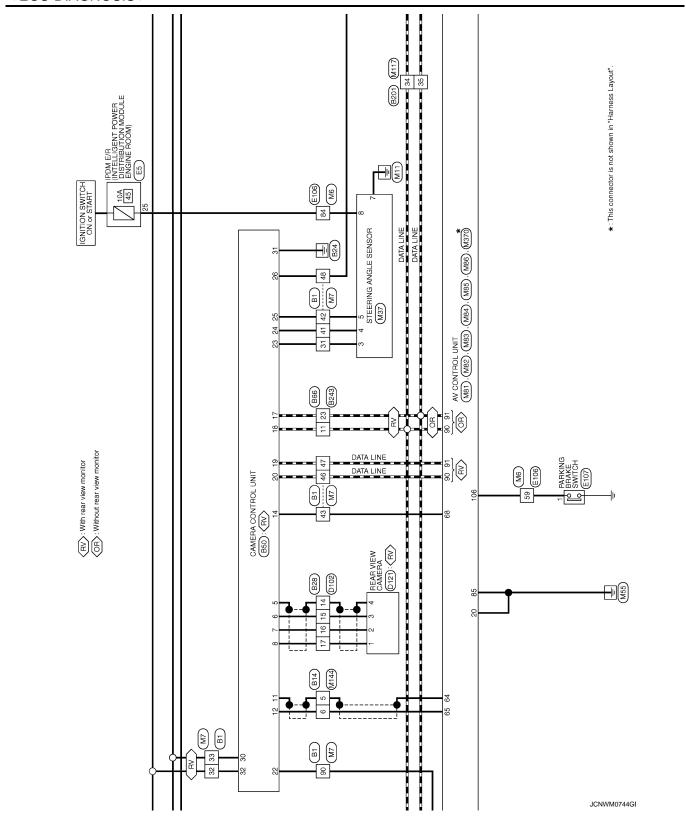
Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION SYSTEM -

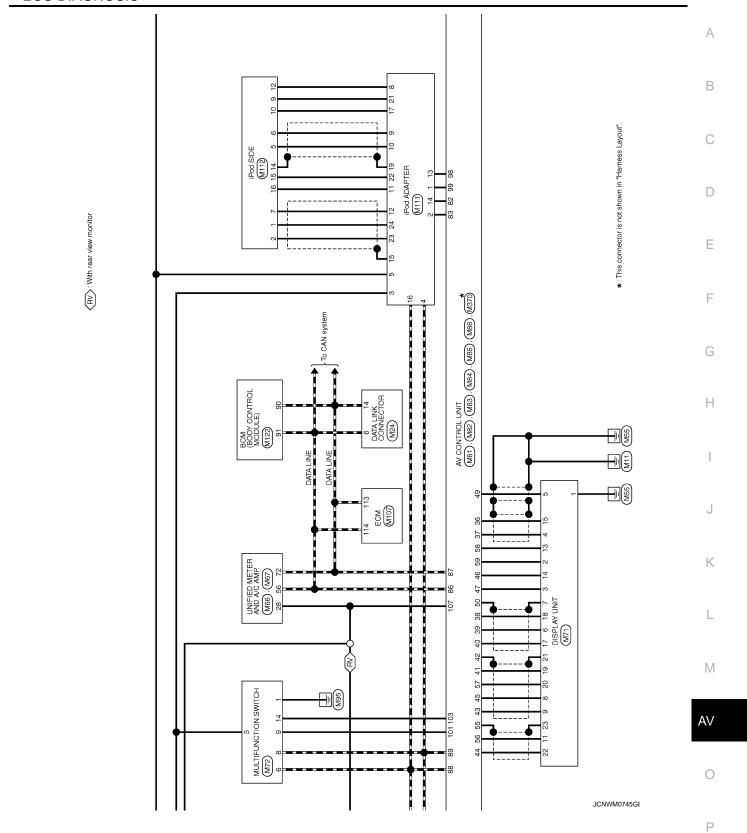
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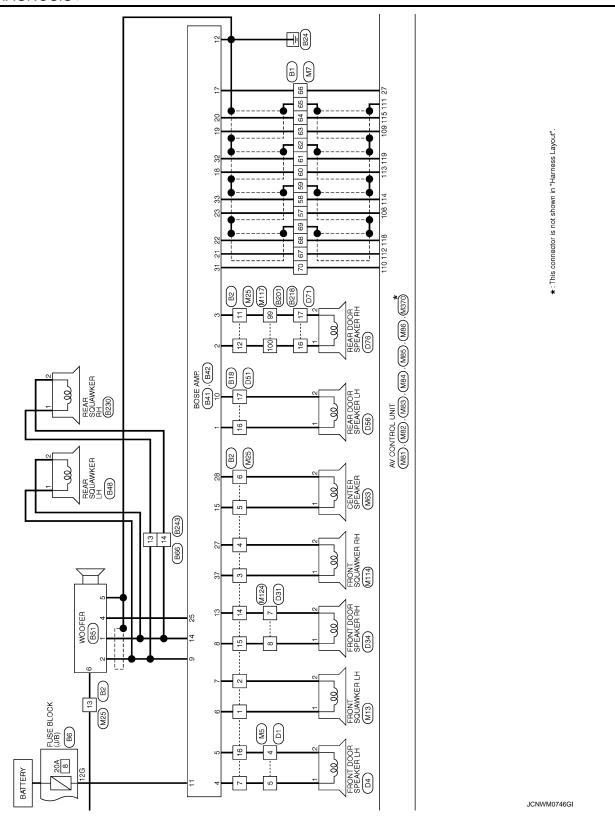
Click here to view the eWD.

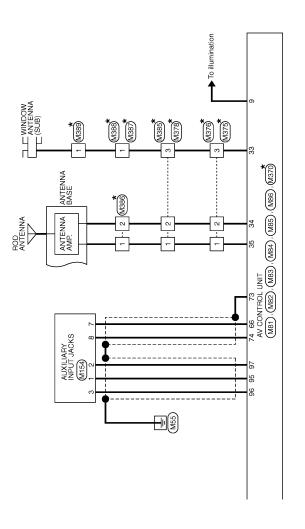
NOTE:











★: This connector is not shown in "Harness Layout".

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- 1 9 d d s 1 9 1	Connector Name WIRE TO WIRE  Connector Type TH24MW-NH  M.S.  1 2 3 4 5 6 7 8 9 1011 12  13 14 15 16 17 18 19 20 21 22 23 24	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   14 SHELD   -[Without around view monitor]   15 W   -[Without around view monitor]   16 B   -[Without around view monitor]   16   16   16   17   18   18   18   18   18   18   18
Sometor No.   B2   Sometor Name   WIRE TO WIRE	Connector Name WIRE TO WIRE  Connector Type TKIOFW-NSS  (10 9 8 7 6 5 5 4 3 2 1 1 18 17 16 15 14 13 12 11	Terminal   Color   Signal Name [Specification]   No. of Wire   Y   - [With BOSE audio]   17   G   - [With BOSE audio]
SYSTEM  SO SHIELD  SO	Connector No. B14  Connector Name WIRE TO WIRE  Connector Type TH12FW-NH  H.S.  E 5 4 3 2 1  12 11 10 9 8 7	Terminal Color   Signal Name [Specification]
Connector Name   WIRE TO WIRE	Connector No.   B6   Connector Name   FUSE BLOCK (J/B)   Connector Type   NSIZFBR-CS     Connector Type   NSIZFBR-CS     Connector Type     Connector Type	Terminal   Color   Signal Name [Specification]   No. of Wire   12G   GR   -

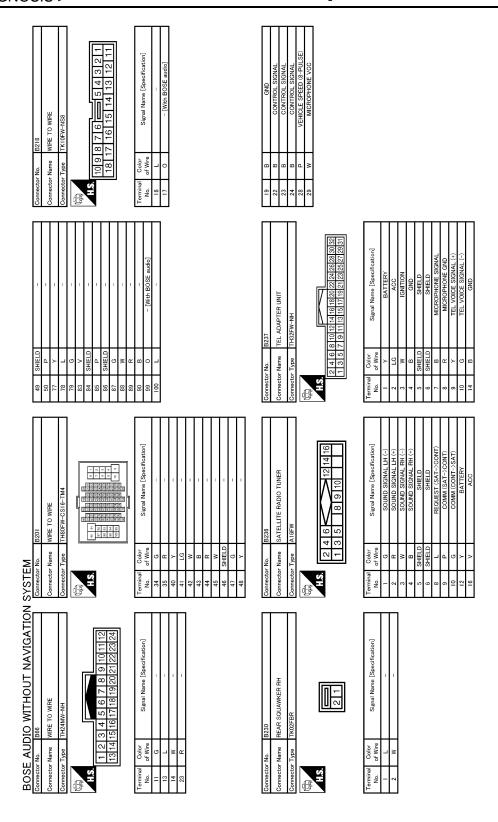
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# [BOSE AUDIO WITHOUT NAVIGATION]

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12   B   GND   FOND SIGNAL FRONT DOOR SPEAKER RH (-)   14   R   SOUND SIGNAL WOOFER (-)		Connector No. 651  Connector Type RS06FGY-PR  H.S.	Terminal   Color   Signal Name [Specification]     1		A B C
Connector Na. B42  Connector Name BOSE AMP.  Connector Type SGA12FBR-SJA2  H.S. 14 13 12 11 10  B R 7 6 5 4 3 2 1	Terminal   Color   Signal Name [Specification]   Orlor   Orl	22         0         REVERSE           23         L         SENSOR SIGNAL 1           24         BR         SENSOR SIGNAL 2           25         R         SENSOR SIGNAL 3           26         V         VEHICLE SPEED (8-PULSE)           30         LG         ACC           31         B         GND           32         L         BATTERY			E F G
SYSTEM		Connector No. B50  Connector Name CAMERA CONTROL UNIT  Connector Type TH32FW-NH  H.S.	Color   Signal Name (Specification)   Color   Signal Name (Specification)   Signal Name (Specification)   Signal Name (Specification)   SHIELD   SHIELD		I J K
BOSE AUDIO WITHOUT NAVIGATION	Terminal   Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]   No.   of Wire   SOUND SIGNAL CENTER (+)   17   O	Connector No. 848 Connector Name REAR SOUAWKER LH Connector Type TK02FBR	Terminal Color No. of Wire  1 L 2 W	JCNWM0749GI	M AV

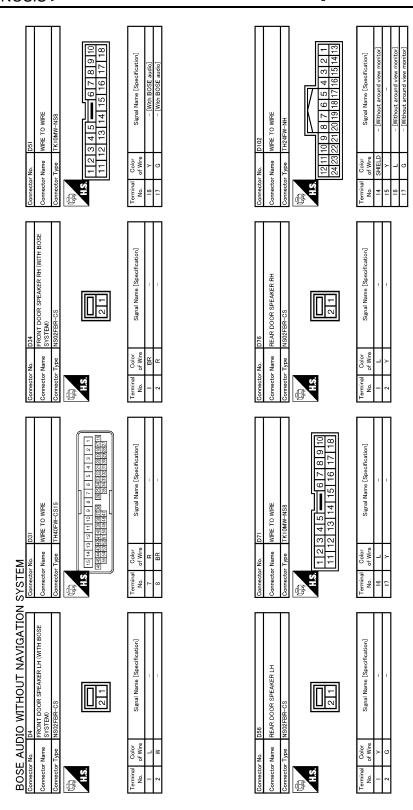
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Connector No. B481 Connector Name SATELLITE RADIO TUNER Connector Type FAKRA  LS.	Color   Color   Signal Name [Specification]   No. of Wire   SATELLITE ANTENNA   SATELLITE ANTENNA	Connector Name WIRE TO WIRE  Connector Type TH40FW-CS15  (Connector Type TH40FW-CS15  (Connector Type TH40FW-CS15  (Connector Name WIRE TO WIRE  (Connector Name WIRE TO WIRE TO WIRE  (Connector Name WIRE TO WIRE	Terminal Color No. of Wire Signal Name [Specification]  4 W		A B C
Connector No. B411 Connector Name TEL ADAPTER UNIT Connector Type GT16C-1S-HU HS  33	Terminal Color No. of Wire 33 — TELANTENNA 34 SHIELD SHIELD	Connector No. B492 Connector Name ANTENNA BASE Connector Type GT16C-IPP-HU GG HS.	Terminal Color Signal Name [Specification] 3 SAETILITE ANTENNA		E F G
SYSTEM   Connector No.   5243   Connector Name   WIRE TO WIRE   Connector Type   TH24FW-NH	Terminal   Color   Signal Name [Specification]   No. of Wire	Connector No. B491 Connector Name WIRE TO WIRE Connector Type GT16C-IPP-HU	Terminal Color No. of Wire Signal Name [Specification]		J K
BOSE AUDIO WITHOUT NAVIGATION Connector Name TEL ADAPTER UNIT Connector Type THOSFW-NH  Connector Type THOSFW-NH  S\$ 37 39 41  36 37 39 41	Terminal   Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]   35	Connector No. B482 Connector Name WIRE TO WIRE Connector Type GT16C-15-HU	Terminal Color No. of Wire Signal Name [Specification]	JCNWM0751Gt	M AV O

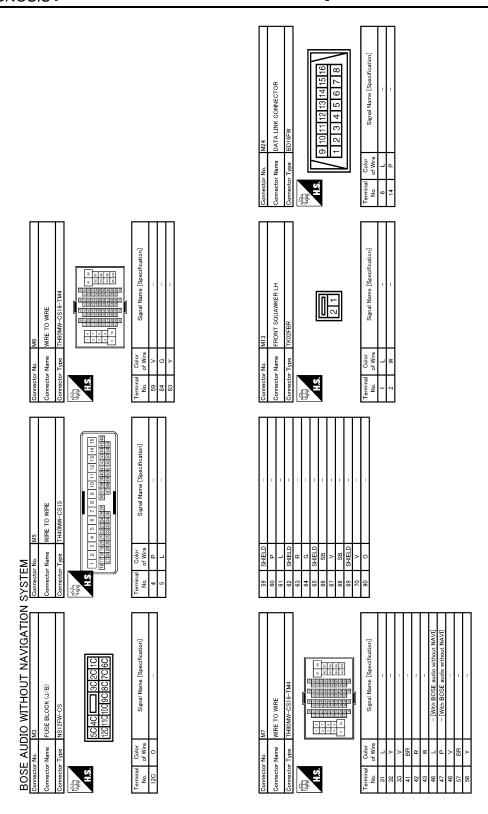
Revision: 2007 November AV-353 2008 EX35



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Cornector No. E107 Cornector Name PARKING BRAKE SWITCH Cornector Type TB01FW  THS  Terminal Color Signal Name [Specification]  No. of Wire Signal Name [Specification]	Cornector No.   M1	A B C
Connector No.   E106   Connector Name   WIRE TO WIRE   Connector Type   THEOFW-CS16-TM4   Connector Type   THEOFW-CS16-TM4   Connector Type   Theory   Connector Type   Connec	Connector No.   F151   Connector No.   F151   Connector Name   TOM (TRANSMISSION CONTROL MODULE)   Connector Type   SP10FBGY   Connector Type   SP10FBGY   Connector Type   Signal Name [Specification]   Terminal   Color   Color	E F G
Connector No. E5 Connector Name   PDM E/R (NTELLIGENT POWER   Connector Name   DISTRIBUTION MODULE ENGINE ROOM) Connector Type   THOPPW-CS12-M4-1V    Connector Type   THOPPW-CS12-M4-1V   Connector	Connector No. F103 Connector Name WRE TO WRE Connector Type TK36FW-NS10  WRE TO WRE  Connector Type TK36FW-NS10  WRE Connector Type TK36FW-NS10  Texture connector Type TK36FW-NS10  Signal Name [Specification]  Signal Name [Specification]	J K
BOSE AUDIO WITHOUT NAVIGATION	Connector No.   F51	AV O
		Р

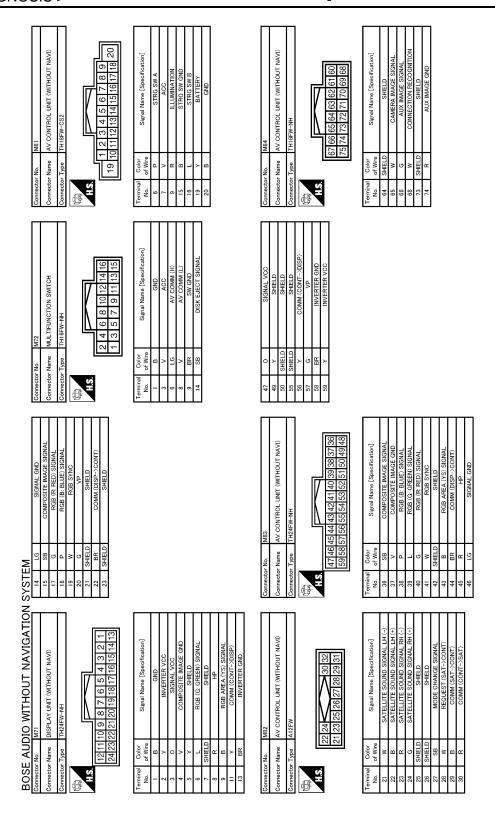
Revision: 2007 November AV-355 2008 EX35



JCNWM0754GI

MAT STEERING ANGLE SENSOR THOSPW-NM  7 2 3 8 1 4 5	Signal Name (Specification) SENSOR2 SENSOR3 GND IGN	M69 BACK-UP LAMP RELAY MS02FL-M2 5 5 7	Signal Name (Specification)		АВ
Connector No. M07 Connector Name STEEF Connector Type TH088 H.S.	Color   No.   Color   No.   Of Wire   S	Connector No. M69 Connector Name BACK Connector Type MSDZ	Color   No.   Color   No.   Of Wire		C D
(SPIRAL CABLE)	Specification)	/C AMP.	Specification] H-H H-L		Е
M36 COMBINATION SWITCH (SPIRAL CABLE) TK08FGY-IV  24 25 26 27 31 32 33 34	Signal Name [Specification]	M67  UNIFED METER AND A/C AMP  TH32FW-NH  M6 46 47 40 40 50 51 52 55 50 61 58 66 77 68 69 77 68 77 68 77 68 77 68 69 77 68 69 77 68 77	Signal Name [Specification] CAN-H CAN-L		F
Connector No. Connector Name Connector Type H.S.	Color   No.   Color   No.   Of Wire   24   P   P   S   S   S   S   B   S   S   Color   Color	Connector No. M67 Connector Name UNIFED A Connector Type IH42FW+  (A)	Color		G H
		V/C AMP.	(8-PULSE)		I
		AETER AND , NH   NH   NH   NH   NH   NH   NH   NH	Signal Name [Specification] VEHICLE SPEED (8-PULSE)		J
SYSTEM		Connector No. M66 Connector Name UNIFED A Connector Type TH40FWH  1.2 3 4 6 6 7 8 1.12 23 8 12 8 6 7 8	Terminal Color No. of Wire 28 R		K
7	ation]		ation		L
THOUT NA  WIRE  52  112 13 14 15	Signal Name [Specification]	реакев 21	Signal Name [Specification] -		M
BOSE AUDIO WITHOUT NAVIGATION Connector No. M25 Connector Name WRE TO WIRE  MSI SWW-CS  MSI SWW-CS  MSI SWW-CS  MSI SWW-CS  MS SWW-CS  MSI SWW-CS  MS SWW-CS  MS SWW-CS  MS SWW-CS	© 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Name CENTER SPEAKER - Type TROSPER	Color of Ville		AV
BOSE AU Connector No. Connector Name Connector Type	Terminal No. 10. 10. 11. 12. 13. 14. 14. 14. 16. 16. 17. 18. 18. 18. 18. 18. 18. 18. 18. 18. 18	Connector No. Connector Name Connector Type H.S.	Terminal No.	JCNWM0755Gi	0
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JCNWM0756GE

# [BOSE AUDIO WITHOUT NAVIGATION]

< ECU DIAGNOSIS >

MIDS   MIDS   Connector Name   WIRE TO WIRE	MI   2   MI   3   MI   2   MI   2   MI   3   MI   2   MI   3   MI   2   MI   3   M	A B C
Connector No.   M86	14   C   Pod SOUND SIGNAL RH (+)     15   SHIELD   SHIELD     16   G   AV COMM (+)     17   ER   AV COMM (+)     19   SHIELD   SHIELD     19   SHIELD   SHIELD     21   W   Pod CONNECTION RECOGNITION     22   G   ACOCESSORY DETECT     23   W   Pod SOUND SIGNAL LH (+)     24   B   Pod SOUND SIGNAL LH (+)	E F G
SYSTEM	Connector Name   Pod ADAPTER   Connector Type   TH24FW-NH	H J K
Connector No.   M65	Connector Name   ECM   Connector Type   RR24FGY-R25-R-LH-Z   Connect	AV O

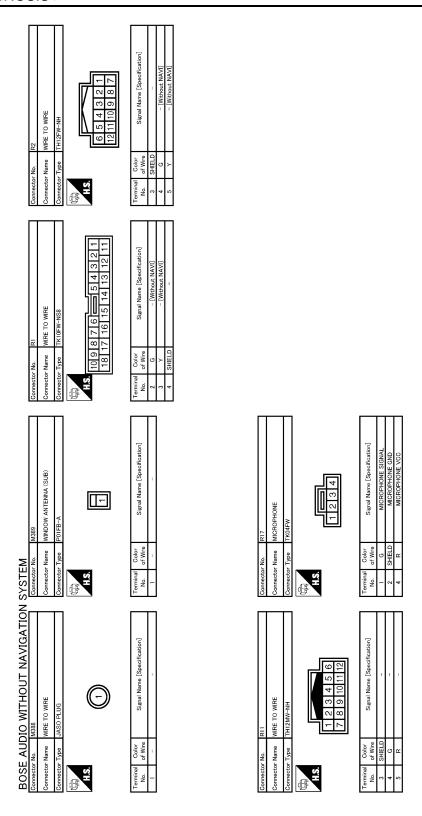
Revision: 2007 November AV-359 2008 EX35

BOSE AUDIO WITHOUT NAVIGATION	N SYSTEM						
Connector No. M114	Connector No. M116	Connector No.	M117	49	SHIELD	-	
Connector Name FRONT SOLIAWKER RH	Connector Name WIRE TO WIRE	Connector Name	WIRE TO WIRE	20	>	1	
				77	>		
Connector Type TK02FBR	Connector Type TK36MW-NS10	Connector Type	TH80MW-CS16-TM4	78	Μ	_	
¢	¢	¢		42	В	-	
10000000000000000000000000000000000000	10000000000000000000000000000000000000	图	G	83	^	-	
		SI.	2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	84	SHIELD	=	
	-		28 88 12 12 12 12 12 12 12 12 12 12 12 12 12	82	В	=	
100	6 7 8 9 10 2122222222222222222222222222222222		10 10 10 10 10 10 10 10 10 10 10 10 10 1	98	SHIELD	-	
			20 00 00 00 00 00 00 00 00 00 00 00 00 0	87	М	-	
				88	۳	_	
				88	В	ı	
æ	la	-e	Signal Name [Specification]	06	g	I	
ire	of Wire	٥		66	>	- [With BOSE audio]	
	31 W -	34 LG	1	001	SS	- [With BOSE audio]	
2 LG - [With BOSE audio]		35 ^	ı				
		40 Y	1				
		41 G	-				
		42 0	-				
		43 B	-				
		44 R	-				
		45 W	1				
		46 SHIELD	1				
		47 P	1				
		48 L	,				
Gonnector No M122	Connector No M124	Connector No	M144	Connector No	or No	M154	
Τ	T	ı					
Connector Name BCM (BODY CONTROL MODULE)	Connector Name WIRE TO WIRE	Connector Name	WIRE TO WIRE	Connec	Connector Name	AUXILIARY INPUT JACKS	
Connector Type TH40FB-NH	Connector Type TH40MW-CS15	Connector Type	TH12MW-NH	Connec	Connector Type	A08FW	
		匮		Œ			
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Ž.		~		<u>C</u>	
91 60 69 69 69 67 60 65 65 60 60 60 60 60 10 10 10 10 177 67 173 173 173 173 173 173 173 173 173 17	हित्तम् सम्बर्धाया स्थापना स्थ		1 2 3 4 5 6 7 8 9 10 11 12		ري	123	
Terminal Color Signal Name [Specification]	Terminal Color   Signal Name [Specification]   No.   of Wire	Terminal Color No. of Wire	Signal Name [Specification]	Terminal No.	al Color of Wire	Signal Name [Specification]	
Ь	7 Y -	5 SHIELD	-	-	В	AUX SOUND SIGNAL RH (+)	
91 L CAN-H	- FG -	M 9	-	2	≯	AUX SOUND SIGNAL GND	
				3	<u>د</u> ن	AUX SOUND SIGNAL LH (+) AUX IMAGE SIGNAL	

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## **CAMERA CONTROL UNIT**

Connector No.   M376	Connector No. M387 Connector Type JASO JACK  The Connector Type JASO JACK  The Connector Type JASO JACK  The Color Signal Name [Specification]	A B C
Connector No.   M375	Connector No. M386 Connector Type GTI3SSN-1/IPP-HU  H.S. Terminal Color Signal Name [Specification] No. of Wire AM-FM MAIN 1 - AM-FM MAIN	E F G
SYSTEM     Commetter No.   M370     Commetter Name   AV CONTROL UNIT (WITHOUT NAVI)     Commetter Type   GT13SH-2/1S-HU     M4.	Connector No. M385 Connector Name WIRE TO WIRE Connector Type GT13SCN-2/IPP-HU  MA. 1.	J K
BOSE AUDIO WITHOUT NAVIGATION Connector No.   M303	Connector No. M378 Connector Name WIRE TO WIRE Connector Type GTT13SC-2/1S-HU  H.S. Connector Type GTT13SC-2/1S-HU  Terminal Color Signal Name [Specification]  1	AV O JCNWM0759GI

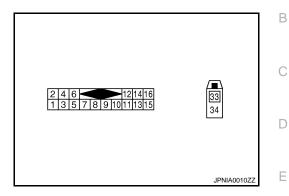


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Α

## **SATELLITE RADIO TUNER**

Reference Value



#### PHYSICAL VALUES

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

#### < ECU DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

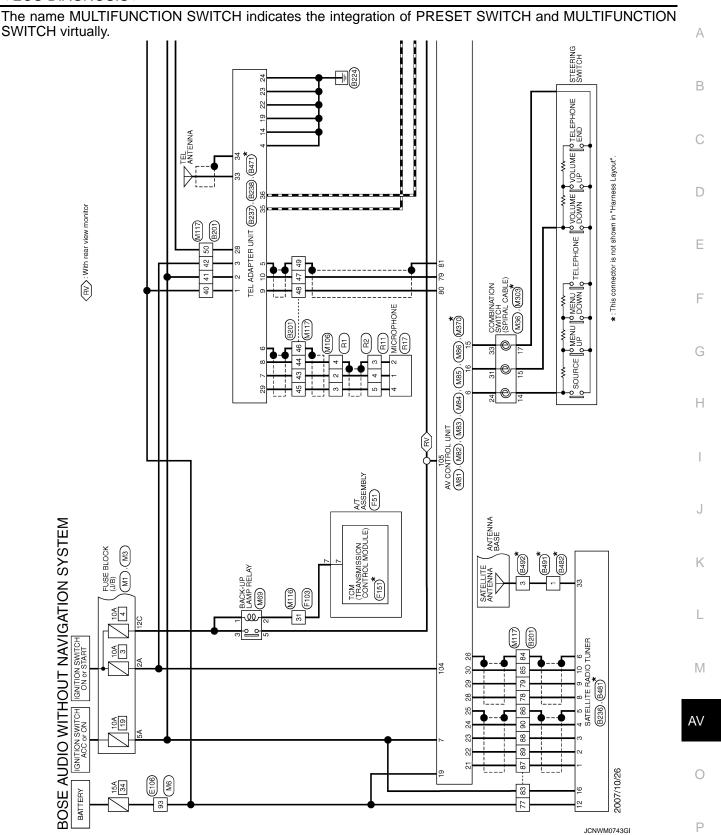
Teri	minal	Description				Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
10 (G)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 + 1ms SKIA9301J
12 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery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

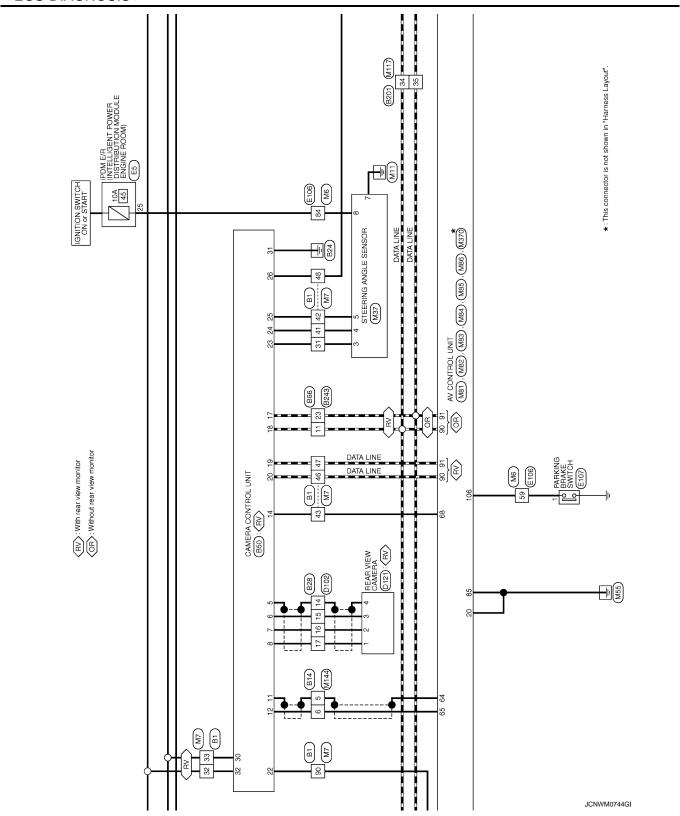
Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION SYSTEM -

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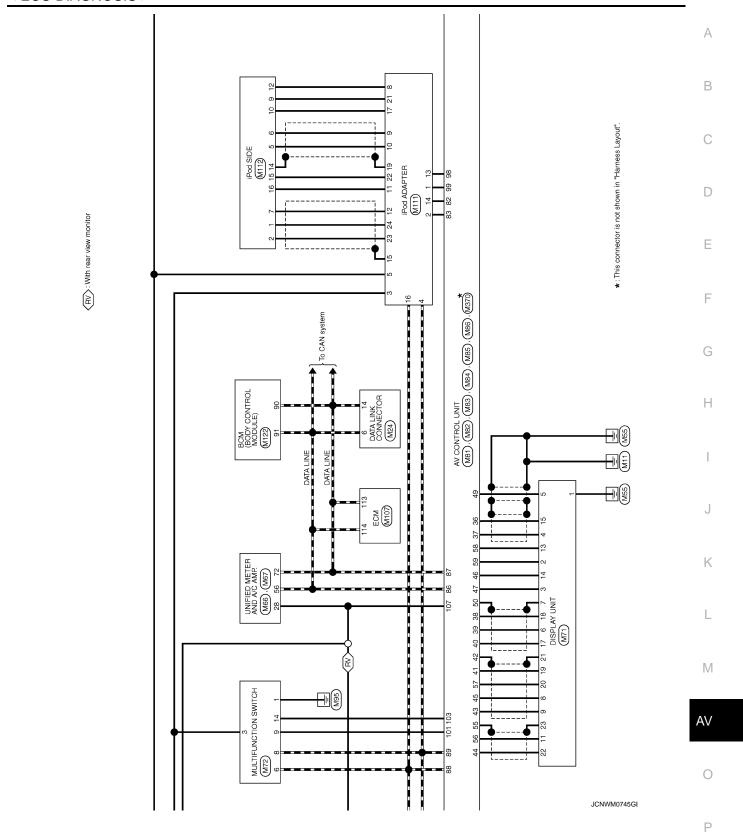
Click here to view the eWD.

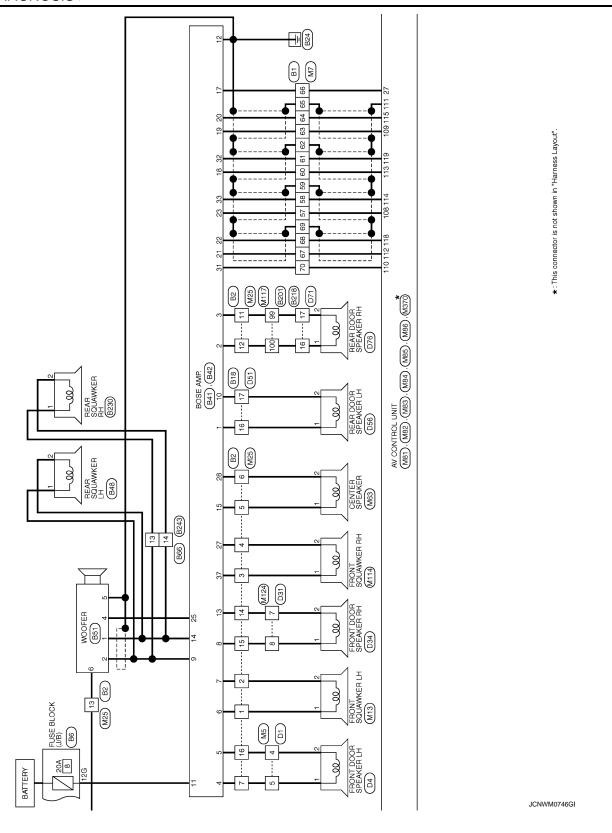
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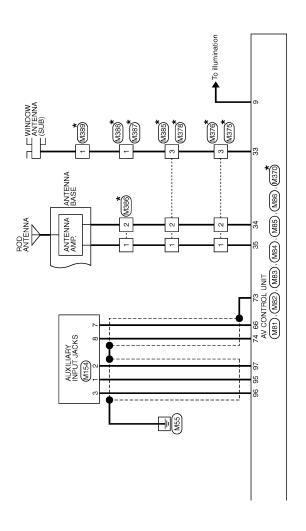




### [BOSE AUDIO WITHOUT NAVIGATION]







★: This connector is not shown in "Harness Layout".

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UDIO WITHOUT NAVIGATI	ON SYSTE		
Connector No. B1	59 SHIELD –	Connector No. B2	4
Connector Name WIRE TO WIRE	- d 09	Connector Name WIRE TO WIRE	- d 91
Connector Type TH80FW-CS16-TM4	62 SHIELD –	Connector Type NS16FW-CS	
4	63 R -	4	
	9	摩	
252 41 23	65 SHIELD –		
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	03	7654	
85 97 PG 85	> !	16 15 14 13 12 11 10 9 8	
88 38 48 58 58 58 58 58 58 58 58 58 58 58 58 58	SB		
95	- SHIELD		
Terminal Color Signal Name [Specification]	- 0 06	Terminal Golor Signal Name [Specification]	
+		+	
3	T		
J .		= 5	
	T	ž.,	
+		+	
42 R –		5 B	
43 W -		- C 9	
46 L - [With BOSE audio without NAVI]		7 B –	
۵			
>	T	SB	
57 BR -	<u> </u>	╀	
╀		╀	
	1		
2	7,00	2	, I
Connector No.	Connector No. D14	Connector No. BIS	Connector No. BZ8
Connector Name FUSE BLOCK (J/B)	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE
Connector Type NS12FBR-CS	Connector Type TH12FW-NH	Connector Type TK10FW-NS8	Connector Type TH24MW-NH
等	番	母	優
	SH SH		HS
	6 5 4 3 2 1	9876 - 154	1 2 3 4 5 6 7 8 9 10 11 12
129119106968617666	10	18 17 16 15 14 13 12 11	13 14 15 16 17 18 19 20 21 22 23 24
<u>e</u>	<u>e</u>	<u></u>	Terminal Color Signal Name (Specification)
of Wire	of Wire	of Wire	of Wire
12G GR -	히	> 0	SHIELD
		17 G – [With BOSE audio]	Α.
			16 B - [Without around view monitor]

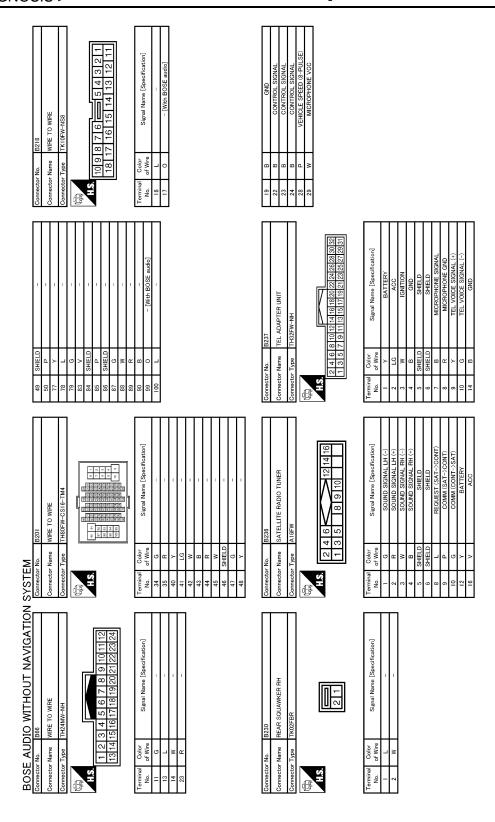
JCNWM0748GI

## [BOSE AUDIO WITHOUT NAVIGATION]

< ECU DIAGNOSIS >

GND SIGNAL FROM DOOR SFEAKER RH (-) SOUND SIGNAL WOOFER (-)	Wodern Rsouercy-PR	Signal Name (Specification) SOUND SIGNAL WOOPER (-) SOUND SIGNAL WOOPER (-) WOOFER AMP. ON SIGNAL BATTERY		A B
25 € 44 m > α	Connector No.	Terminal Color No. 1 Color S		D
11 10 3 2 1 1 5 2 1 1	SE SIAL 2 SIAL 3 SIAL 3 SI			Е
12FBR-SJA2  12   6 5 4 6  Signal Name [ Signal Name [ SOUND SIGNAL REONT DAND SIGNAL REONT SIGNAL	REVERSE SENSOR SIGNAL 1 SENSOR SIGNAL 2 SENSOR SIGNAL 3 VEHICLE SPED (6-PULSE) ACO GND BATTERY			F
Commetter Name   BOS	22 C C 24 E BR E B			G H
NALL H (-) ONT LH (-) GUAWKER RH (+)	25 05 32 52 52 52 53 53 55 55 55 55 55 55 55 55 55 55 55	ification] SiGNAL ND SURPLY SURPLY SURPLY CONTITION Union without NAVII union without NAVIII union without NAVII union without NAVIII union		I
AMP. ON SIGNAL. SOUND SIGNAL FRONT LH (-) SOUND SIGNAL FRONT SOUAWKER RH (-)	or No. B50  Or Name CAMERA CONTROL UNIT  Type TH32FW-NH  2 4 6 8 1012 416 18 20 22 24  1 3 5 7 9 111315 17139 2123	Signal Name (Specification) SHEED CAMERA MAGE SIGNAL CAMERA MAGE SIGNAL CAMERA GNO CAMERA MAGE SIGNAL CONNECTION RESULPLY CONNECTION RECOGNITION AV COMM L.) PRINE BOSE audo without NAVI) AV COMM L.) PRINE BOSE audo without NAVII AV COMM L.) PRINE BOSE BOSE AUDO AV COMM L.) AV COMM L.) PRINE BOSE BOSE AUDO AV COMM L.) PRINE BOSE BOSE BOSE AUDO AV COMM L.) PRINE BOSE BOSE BOSE BOSE BOSE BOSE BOSE BOS		J
SYSTEM    21	Connector No. B50 Connector Name CAI Connector Type TTHS  H.S.  H.S.  1 3 5 7 8	Terminal Color No. 5 SHELD of Wire S SHELD S SHELD S SHELD S SHELD S S SHELD S S SHELD S S S SHELD S S S SHELD S S S S S S S S S S S S S S S S S S S		K
				L
UT NAVIGORIA DE LA CONTRETA DI SOLO DE LA CONTRETA DI CONTRE	ликев ин	Signal Name (Specification)		M
BOSE AMP.     BOSE AMP.     BOSE AMP.     SCALIFFER-SGAM     SCALIFF	B48 REAR SQU TK02FBR			AV
Commetter Name   Color	Connector No. Connector Name Connector Type	Color   Colo		0
			JCNWM0749GI	D

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JCNWM0750GE

## [BOSE AUDIO WITHOUT NAVIGATION]

#### < ECU DIAGNOSIS >

BOSE AUDO WITHOUT MANGATON SYSTEM  Concentrate in classification in concentrate in conc	RADIO TUNER	Signal Name [Specification] SATELLITE ANTENNA	Name   WIRE   O WIRE	Signal Name [Specification]		АВ
SOSE AUDIO WITHOUT NAVIOATION SYSTEM   Contract Name   Contr	B481 SATELLTE FAKRA	Color of Wire	Connector No. D1 Connector Name WIPE TO WIPE Connector Type TH40FW-CS15 HS 15 14 13 12 11 10 9 E ENGLANDER STREET	Color of Wire W		
BOSE AUDIO WITHOUT NAVIGATION SYSTEM    Concessor Name   East   Concessor Name   Concessor		me (Speoffication)  E. ANTENNA SHIELD		ame [Specification] LLITE ANTENINA		
Convector Name   Display   Convector Name   Convector N	υ φ	Color of Wire SHIELD	B492 ne ANTENNA 1 CT16C-1PR	Color of Wire		
BOSE AUDIO WITHOUT NAVIGATION SYSTEM  Connector Na. 6236  Connecto	Connec	Termin No. 33 34 34	Connec	Termin No.		Н
BOSE AUDIO WITHOUT NAVIGATION SYSTEM  Connector Name IEL ADAPTER UNIT  IT No. of Wine  No.	65432	Signal Name [Specification]	PP-HU	Signal Name [Specification]		I
BOSE AUDIO WITHOUT NAVIGATIO  Connector Name   TEL. ADAPTER UNIT  Connector Type   TH08FW-NH    Connector Type   TH08FW-NH    Connector Name   Signal Name (Specification)    Connector Type   GT16C-1S-HU	SYSTE Connector Connector	Terminal   Color   No. of Wire   No.   11   L   13   L   14   W   23   P	9 9	Terminal Color No. of Wire		K
JCNWM0751Gt		ation]		ation]		L
JCNWM0751Gt	10UT NA 338 411 406 422	I Name [Specific AV COMM (H) AV COMM (L)		l Name [Specific		M
JCNWM0751Gt	DIO WITH B238 TEL ADAPTER THOSEW-NH THOSEW-NH	Ш	B482 WIRE TO WIF GT16C-1S-+			AV
JCNWM0751Gt	BOSE AU Johnector No. Johnector Name Johnector Type  H.S.		Sonnector No. Sonnector Type			0
	- <u>                                     </u>				JCNWM0751GI	P

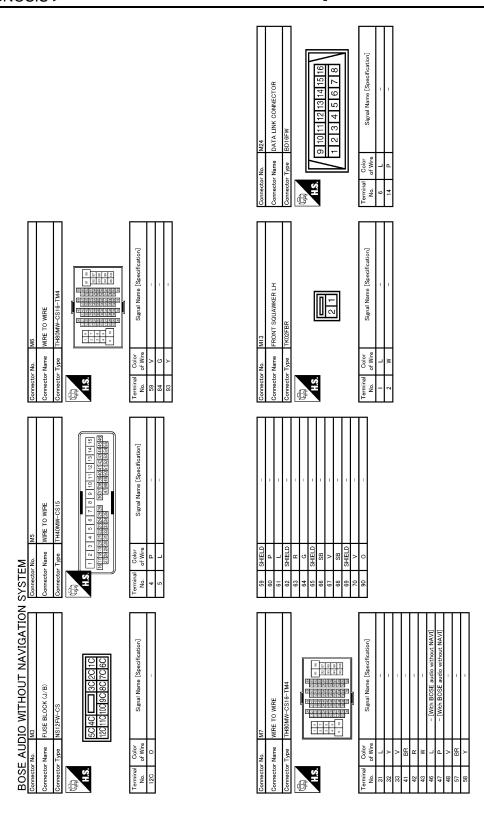
Revision: 2007 November AV-373 2008 EX35

Connector No. D51  Connector Name WRE TO WRE  Connector Type TK10AW-NS8  MS  1 2 2 4 1 5 1 8 1 1 1	13   14   15   16   17   1   17   1   17   1   17   1   1	Connector No. D102  Connector Name WIRE TO WIRE  Connector Type TTR24FW-NH  12   11   10   8   7   6   5   4   3   2   1   1   1   1   1   1   1   1   1	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   14   SHELD   - [Without around view monitor]   15   Y   16   L   - [Without around view monitor]   16   L   - [Without around view monitor]   17   18   L   - [Without around view monitor]   18   - [Without around view monitor]   18
Connector No. D34 Connector Name SYSTEM) Connector Type NS0ZFBR-CS  HS0ZFBR-CS	Terminal   Color   Signal Name [Specification]	Connector No. D76 Connector Name REAR DOOR SPEAKER RH Connector Type NSOPERE-CS	Terminal   Color   Signal Name [Specification]   No. of Wire   L   L   2   Y   -
SYSTEM   Connector No.		Connector No. D71  Connector Name WIRE TO WIRE  Connector Type Int (10MY-1838  M.S. 1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   9   10   11   12   13   14   15   16   17   18   9   10   11   12   13   14   15   16   17   18   10   10   10   10   10   10   10	Terminal   Color   Signal Name   Specification   No. of Wire   L   -   -
BOSE AUDIO WITHOUT NAVIGATION Connector Name FRONT DOOR SPEAKER LH (WITH BOSE SYSTEM) Connector Type NSGZFBR-CS  WHAS	Terminal Color   Signal Name [Specification]	Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NS02FBR-CS H.S.	Terminal   Color   Signal Name [Specification]

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BRAKE SWITCH  Signal Name [Specification]	M2 M2 TAGA SA4A Signal Name [Specification]	АВ
Connector No.   E107	Connector No. MI Connector Name FUSE BLOCK (J/B) Gornector Type INSOBFW-MZ  H.S. 3A	C
W-CSI6-TM4 W-CSI6-TM4 Signal Name (Specification)	SPIOFBGY SPIOFBGY SPIOFBGY SIgnal Name [Specification] REV LAMP RLY	E
Cornector No.   E106	Connector No. F151 Connector Name TOM (TRANSM Connector Type SP10FBGY MS. Terminal Color No. of Wre Signa No. of Wre	G
R R CO OM)		H
4   10   10   10   10   10   10   10	No. F103 Name WIRE TO Type TK38FW Golor Older R R	J K
<u> </u>		L
BOSE AUDIO WITHOUT NAVIGATIO	F51  RATASSEMBLY  RRUDG-DGY  5 4 3 2 1  0 9 8 7 6  Signal Name [Specification]	AV
BOSE AUC Connector Name Connector Type Connector Type Aux Color  Aux Aux Aux Aux Aux Aux Aux Aux Aux Au	Connector No. Connector Name Gonnector Type H.S. H.S.  Terminal Color No. of Wre	O JCNWM0753GI

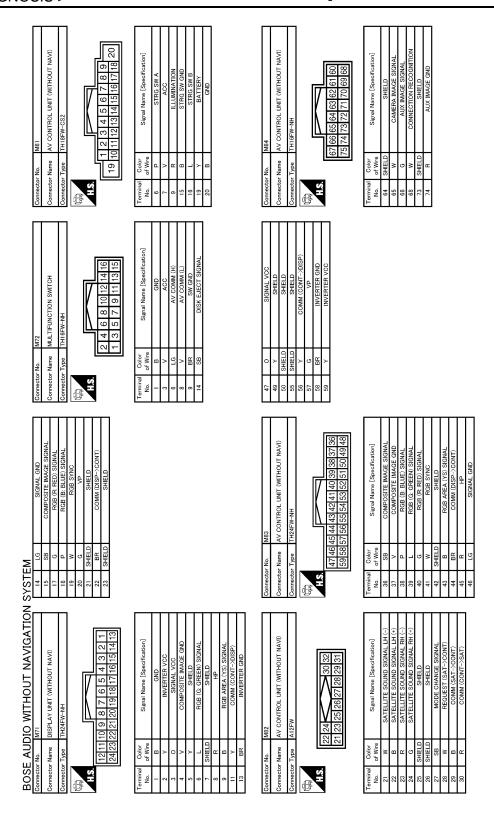
Revision: 2007 November AV-375 2008 EX35



JCNWM0754GI

Connector No.         M37           Connector Name         STEERING ANGLE SENSOR           Connector Type         TH08FW-NH           Terminal No.         T 2 3 8 7	Connector No. M69 Connector Name BACK-UP LAMP RELAY Connector Type MSQZFL-MZ  ALS  2 X 1	Color   Signal Name [Specification]	(	A B
No.   M36   No.   M36   No.   M36   No.   M36   No.   No.	r No. M67  r Name UNIFIED METER AND A/C AMP.  r Type TH3ZFW-NH  ft 12 43 44 45 46 47 48 49 60 51 52 53 64 65 66 677 88 69 70 71 72	Color   Signal Name [Specification]   Terminal No.   Color   L   CAN-H   2   2   2   3   3   4   5   5   5   5   5   5   5   5   5		D E G
SYSTEM  15	Connector No.   M66   Connector No.   M66   Connector Name   UMIFED METER AND A.O AMP.   Connector Connector Type   TH40FW-NH   Connector Type   TH40FW-NH   Connector Type   TH20FW-NH   TH20	Terminal   Color   Signal Name   Specification   Terminal No.   28   R   VEHICLE SPEED (8-PULSE)   56   72		H I J
BOSE AUDIO WITHOUT NAVIGATION Standards	Connector No. M63 Connector Name CENTER SPEAKER Connector Type TK02FBR  H.S.	Terminal Color   No. of Wire   Signal Name [Specification]	A	M V
			JCNWM0755Gł	P

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JCNWM0756GE

## [BOSE AUDIO WITHOUT NAVIGATION]

#### < ECU DIAGNOSIS >

MIO6   Connector Name   WIRE TO WIRE	Military   Pod SIDE	A B C
Connector No.   M86	14   G   Pod SOUND SIGNAL RH (-)   15 SHELD   SHELD   SHELD   SHELD   SHELD   17 SHELD   SHOWN SIGNAL GND   SIGNAL LIN (+)   SHOWN SIGNAL LIN (+)	E F G
SYSTEM    90   G   AV COMM (H) [With rear view monitor]    91   P   AV COMM (L) [Without car view monitor]    91   R   AV COMM (L) [Without car view monitor]    92   R   AV COMM (L) [Without HI (+)     93   W   AUX SOUND SIGNAL HI (+)     94   R   AUX SOUND SIGNAL LH (+)     95   R   AUX SOUND SIGNAL LH (+)     95   R   Pod SOUND SIGNAL LH (+)     101   ER   SOUND SIGNAL LH (+)     102   SS   SOUND SIGNAL LH (+)     103   R   Pod SOUND SIGNAL LH (+)     104   G   FREVERSE     105   O   REVERSE     106   O   REVERSE     107   R   VEHICLE SPEED (6-PULSE)	Connector No.   MIII   Pod ADAPTER	J K
Connector Name	Connector No.   MI 07	AV  O

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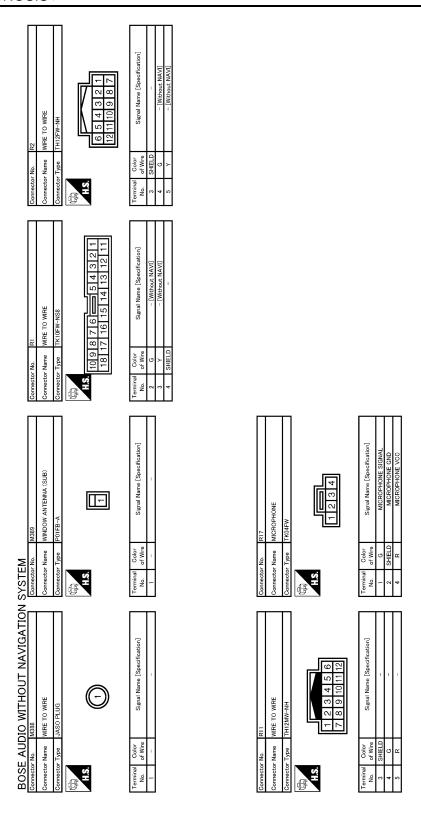
Revision: 2007 November AV-379 2008 EX35

BOSE AUDIO WITHOUT NAVIGATION	J SYSTEM Connector No. M116	Connector No. M117	Ī	49	SHIELD	ı	
Connector Name FRONT SOLIAWKER RH	9	Connector Name WIRE TO WIRE		50	>	_	
				77	Υ.	_	
Connector Type TK02FBR	Connector Type TK36MW-NS10	Connector Type TH80MW-CS16-TM4		78	W	1	
d	¢	¢		79	В	_	
10000000000000000000000000000000000000	<b>F</b>	3		83	>	1	
[	SH	F 2		84	SHIELD	_	
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		88 93 98 88 88 88 88 88 88 88 88 88 88 88 88		87	W	-	
		2 2 2 3		88	В	-	
				89	В	-	
lal	lal	Terminal Color Sizzal Nazza [Szzzzigzz]		06	5	_	
No. of Wire olginal marine Lopechication	No. of Wire Olgran Name Lapecincation	No. of Wire Signal Manne Lopechication	l l l	66	^	- [With BOSE audio]	
1 V – [With BOSE audio]	31 W -	34 LG -		100	SB	- [With BOSE audio]	
2 LG - [With BOSE audio]		35 V -					
		40 Y –					
		42 0 -					
		43 B -					
		- H					
		L					
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		T					
		48 L -					
Γ	N	N1444		II.	Ni- IMIEZ	7	
Collifector No.	T	١	1	Collinector	I	*5	
Connector Name BCM (BODY CONTROL MODULE)	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE		Connector Name		AUXILIARY INPUT JACKS	
Connector Type TH40FB-NH	Connector Type TH40MW-CS15	Connector Type TH12MW-NH		Connector Type	П	A08FW	
母	昏	等		優			
HS	H.S. 1 2 2 4 E E Z B 0 10 11 12 12 12 14 15	HS		H.S.			
91 BOD	18620 23 23 23 23 28 28 28 28 28 28 28 28 28 28 28 28 28	1     2     3     4     5     6       7     8     9     10     11     12			1 2	213 7 78	
Tarmina	Tarminal Color	Terminal		Terminal	rolog		
of Wire Signal Na		-	Jul]	No.	of Wire	Signal Name [Specification]	
Ь	7 Y -	5 SHIELD -		-	В	AUX SOUND SIGNAL RH (+)	
91 L CAN-H	8 LG -	- M 9		2	м	AUX SOUND SIGNAL GND	
				e 1	œ (	AUX SOUND SIGNAL LH (+)	
				_	G	AUX IMAGE SIGNAL	

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WIRE TO WIRE GT13SCN-2/IPP-HU  Signal Name [Specification]	WRE TO WRE JASO JACK  Signal Name [Specification]	В
Connector No. M377 Connector Name WIRE Connector Type GTIZ M.S.  Terminal Color No. 1 2 2 2 3 3	Connector No. MSB. Connector Name WIFE Connector Type JASC. H.S. H.S.  Terminal Color No. of Wire	C D
Specification)	Specification 2. ON SIGNAL IMAIN	Е
WIRE TO WIRE GT13SC-2/1S-HU Signal Name (Specification)	ANTENNA BASE GTI3SSN-1/IPP-HU  Signal Name [Specification] ANTENNA AMP. ON SIGNAL  AM-FM MAIN	F
No. Name Type	No. Name Type	G
Connector Connector Connector Connector I Terminal No. 1 2 3	Connector Connector Terminal No. 1 2 2	Н
AV CONTROL UNIT (WITHOUT NAVI) GT135H-Z.//S-HU  GT155H-Z.//S-HU  Signal Name [Specification] F. Masule  AMTENNIA AMP ON SIGNAL	WRE PZ/TPP-HU Signal Name [Specification]	I
MB370 GTT33H-Z/1S-HI GTT33H-Z/1S-HI Signal IN ANTENNI	WIRE TO WIRE GTISSCN-2/IPP-	J
Connector No. Connector No. Connector Type  Terminal Color No. 33 34 34 38	Connector No.  Connector Name Will  Connector Type GI  HS  HS  Terminal Color No. of Wire  2  3   3	K
ATION THE PATION N		L
BOSE AUDIO WITHOUT NAVIGATION	WRE 2/1S-HU  Signal Name [Specification]	М
AUDIO WIT No.   M303   M304   M305   M306	MR278  on WRE TO  of GT13SG-	AV
BOSE AUI Connector Name Connector Type Connector Ty	Connector No. Connector Name Connector Type Connector Type ILS ILS I	0
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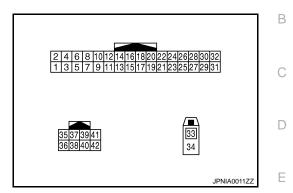


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### [BOSE AUDIO WITHOUT NAVIGATION]

## **TEL ADAPTER UNIT**

Reference Value



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INFOID:0000000003508742

#### PHYSICAL VALUES

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 (LG)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
3 (W)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage	
4 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
5	_	Shield	_	_	_	_	
6	_	Shield	_	-	_	_	
7 (B)	8 (R)	Microphone signal	Input	Ignition switch ON	Give a voice	(V) 2.5 2.0 1.5 1.0 0.5 0	
8 (R)	Ground	Microphone GROUND	_	Ignition switch ON	_	0 V	
9 (Y)	10 (G)	TEL voice signal	Output	Ignition switch ON	During voice guide output with the 🌾 🌈 switch pressed	(V) 1 0 -1 + 2ms SKIB3609E	

## **TEL ADAPTER UNIT**

#### [BOSE AUDIO WITHOUT NAVIGATION]

#### < ECU DIAGNOSIS >

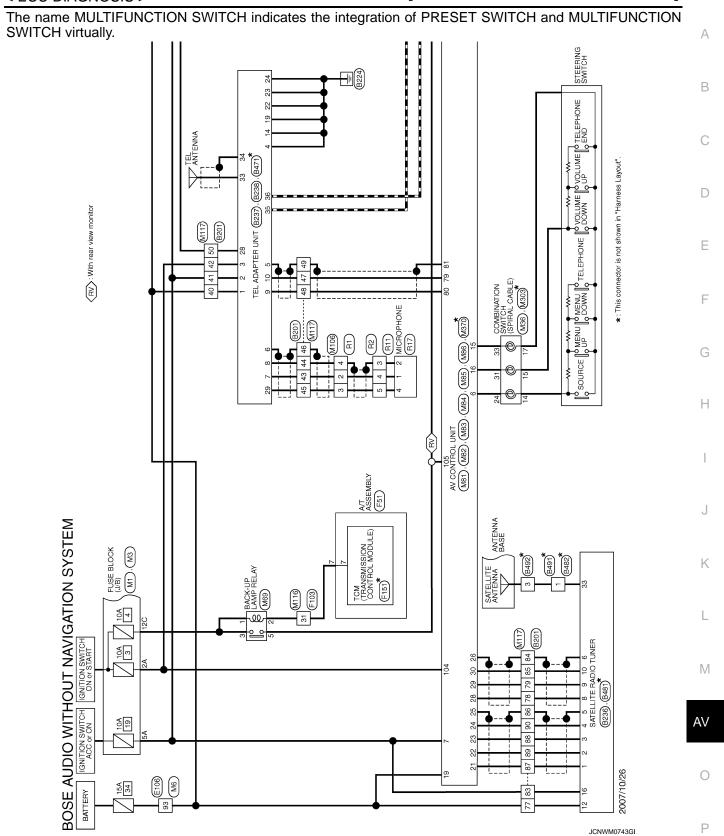
Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
14 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
19 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
22 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V	
23 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V	
24 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V	
28 (P)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25MPH)	NOTE:  Maximum voltage may be 12 V due to specifications (connected units).  (V) 6 4 2 0 ***20ms  SKIA6649J	
29 (W)	8 (R)	Microphone VCC	Output	Ignition switch ON	_	5.0 V	
33	_	TEL antenna	Input	_	_	_	
34	_	Shield	_		_	_	
35 (L)	_	AV communication signal (H)	Input/ Output	_	_	_	
36 (P)	_	AV communication signal (L)	Input/ Output	_	_	_	

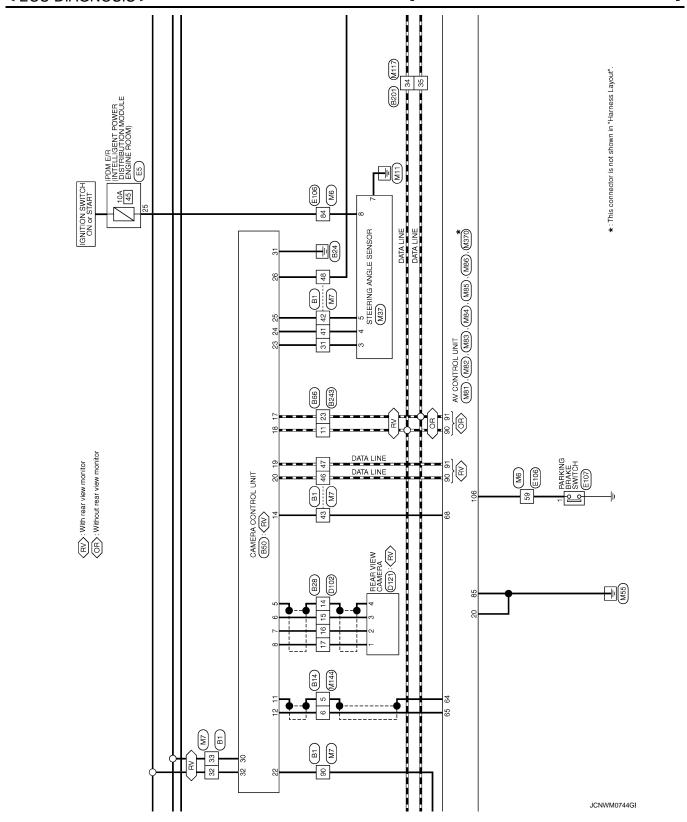
Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION SYSTEM -

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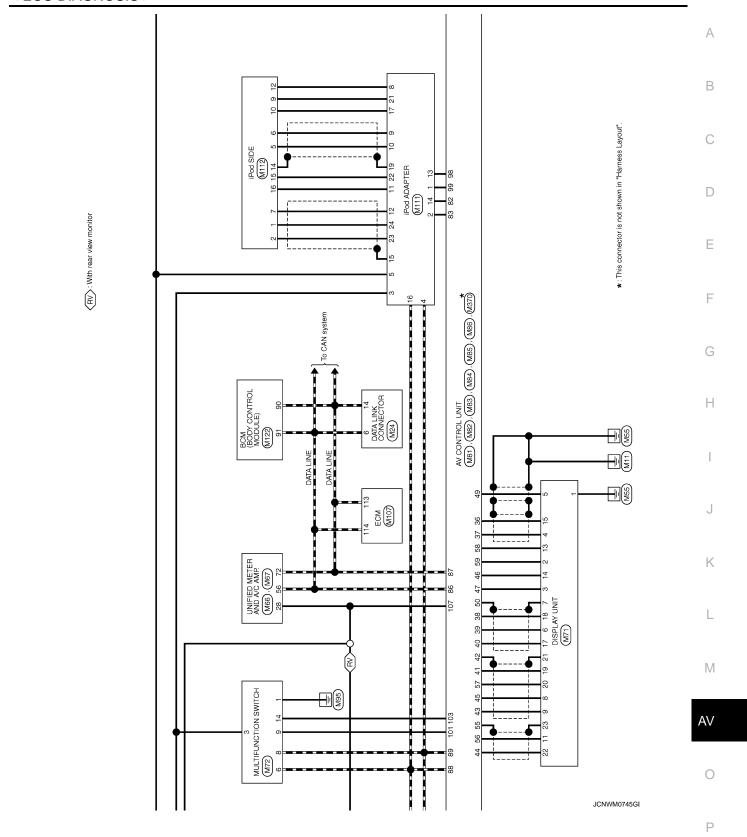
Click here to view the eWD.

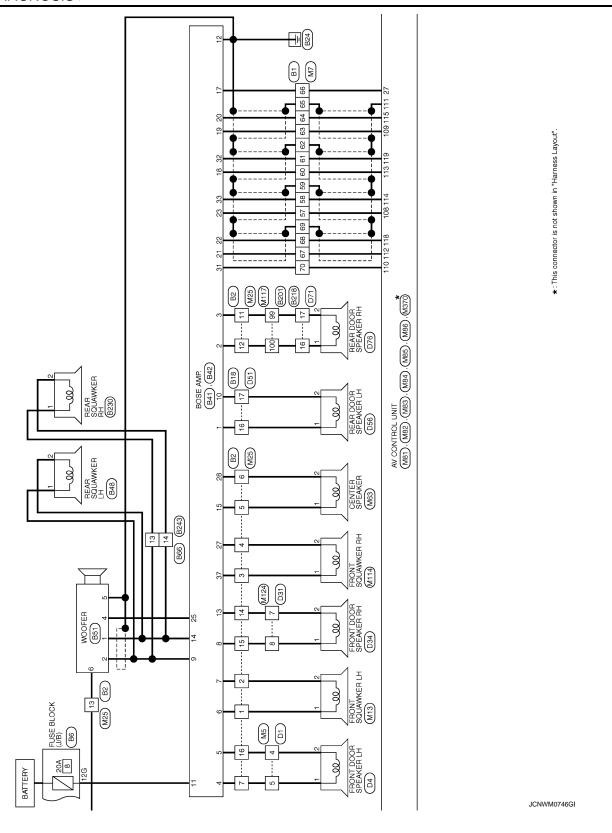
NOTE:

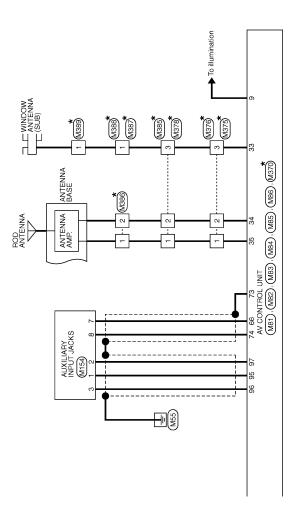




### [BOSE AUDIO WITHOUT NAVIGATION]







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

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BOSE AUDIO WITHOUT NAVIGATION	SYSTEM		
Connector No. B1	Š	Connector No. B2	$\exists$
Connector Name WIRE TO WIRE		Connector Name WIRE TO WIRE	
Connector Type TH80FW-CS16-TM4	62 SHIELD –	Connector Type NS16FW-CS	
	63 R		
	Н	10000000000000000000000000000000000000	
1	တ်		
2 Z 2 Z 2 Z 2 Z 2 Z 2 Z 2 Z 2 Z 2 Z 2 Z	+	7 6 5 4 3 2 1	
8 S S S S S S S S S S S S S S S S S S S	+	16 15 14 13 12 11 10 9 8	
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	+	2	
	φ		
	$\dashv$		
Terminal Color Signal Name [Specification]	- 0 06	Terminal Color Signal Name [Specification]	
+		+	
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No.		+	
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Connector No. B6	Connector No. B14	Connector No. B18	Connector No. B28
Γ	г	Γ	
Connector Name FUSE BLOCK (J/B)	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE
Connector Type NS12FBR-CS	Connector Type TH12FW-NH	Connector Type TK10FW-NS8	Connector Type TH24MW-NH
E	6	<b>E</b>	1
	7		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
5646	654321	10 9 8 7 6 5 4 3 2 1	123456789
2	12 11 10 9 8 7	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	13 14 15 16 17 18 19 20 21 22 23 24
Color	Tarminal Color	Tarminal	Tarminal Color
No. of Wire Signal Name [Specification]		-	
12G GR –	φ	<b>&gt;</b>	SHIELD
	M 9	17 G - [With BOSE audio]	15 W - [Without around view monitor] 16 B - [Without around view monitor]

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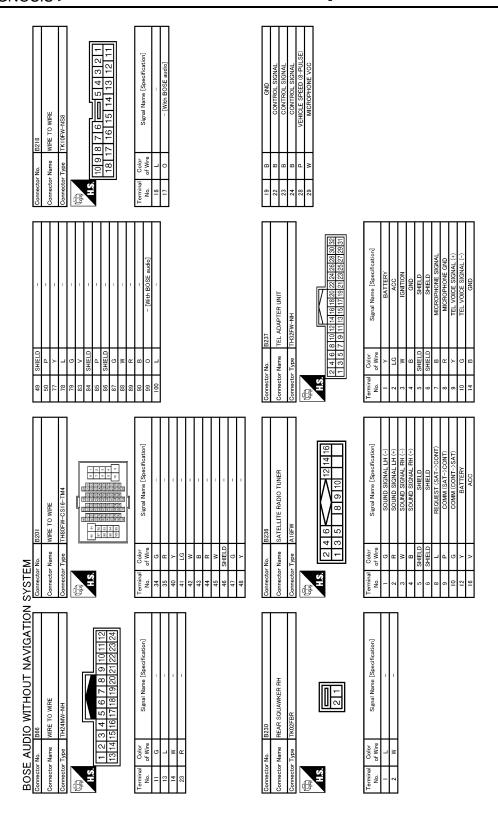
### **TEL ADAPTER UNIT**

## [BOSE AUDIO WITHOUT NAVIGATION]

< ECU DIAGNOSIS >

2   B   GND   SOUND SIGNAL FROM TOOR SPEAKER PH (-)   14   R   SOUND SIGNAL WOOFER (-)		Connector Name WOOFER Connector Type RSOBFCY-PR  H.S.	Color   Signal Name [Specification]		A B C
Connector No. B42 Connector Name BOSE AMP.  Connector Type SGA IZFBR-SJA2  H.S.  14 13 12 110  9 8 7 6 5 4 3 2 1	Terminal   Color   Signal Name [Specification]	22 O REVERSE 23 L SENSOR SIGNAL 1 24 BR SENSOR SIGNAL 2 25 R SENSOR SIGNAL 2 26 V VEHICLE SPEED (8-PULSE) 30 LG ACC 31 B GAN 31 B GAN 32 L BATTERY			E F G
37   SOUND SIGNAL   SOUND SIGNAL   SOUND SIGNAL   FRONT LH (-)   SOUND SIGNAL   FRONT LH (-)   SOUND SIGNAL   FRANT SOUAWKER RH (+)   SOUND SIGNAL FRONT SOUAWKER RH (+)   SOUND SIGNAL FRONT SOUAWKER RH (+)   SOUND SIGNAL FRONT SOUAWKER RH (+)   SOUAWKER RH (+)   SOUAWKER RH (-)   SOUAWKER RH (-)		Connector No. 850 Connector Name CAMERA CONTROL UNIT Connector Type ITH32FW-NH  H.S.	Color   Sigrul Name [Specification]   Color   Sigrul Name [Specification]   SHIELD   SHIELD		I J K
BOSE AUDIO WITHOUT NAVIGATION Connector Name BOSE AMP. Connector Type SCA19FBR-SGA4    1.8   37   36   35   34   38   38   38   38   38   38   38	Terminal   Color   Signal Name [Specification]	Connector No. 848 Connector Name REAR SQUAWKER LH Connector Type TK02FBR	Terminal Color No. of Wire  1 L 2 W	JCNWM0749GI	M AV

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### **TEL ADAPTER UNIT**

Connector No. B481 Connector Name SATELLITE RADIO TUNER Connector Type FAKRA  LS.	Color   Color   Signal Name [Specification]   No. of Wire   SATELLITE ANTENNA   SATELLITE ANTENNA	Connector Name WIRE TO WIRE  Connector Type TH40FW-CS15  (Connector Type TH40FW-CS15  (Connector Type TH40FW-CS15  (Connector Name WIRE TO WIRE  (Connector Name WIRE TO WIRE TO WIRE  (Connector Name WIRE TO	Terminal Color No. of Wire Signal Name [Specification]  4 W		A B C
Connector No. B411 Connector Name TEL ADAPTER UNIT Connector Type GT16C-1S-HU HS  33	Terminal Color No. of Wire 33 — TELANTENNA 34 SHIELD SHIELD	Connector No. B492 Connector Name ANTENNA BASE Connector Type GT16C-IPP-HU GG HS.	Terminal Color Signal Name [Specification] 3 SAETILITE ANTENNA		E F G
SYSTEM   Connector No.   5243   Connector Name   WIRE TO WIRE   Connector Type   TH24FW-NH	Terminal   Color   Signal Name [Specification]   No. of Wire	Connector No. B491 Connector Name WIRE TO WIRE Connector Type GT16C-IPP-HU	Terminal Color No. of Wire Signal Name [Specification]		J K
BOSE AUDIO WITHOUT NAVIGATION Connector Name TEL ADAPTER UNIT Connector Type THOSFW-NH  Connector Type THOSFW-NH  S\$ 37 39 41  36 37 39 41	Terminal   Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]   35	Connector No. B482 Connector Name WIRE TO WIRE Connector Type GT16C-15-HU	Terminal Color No. of Wire Signal Name [Specification]	JCNWM0751Gt	M AV O

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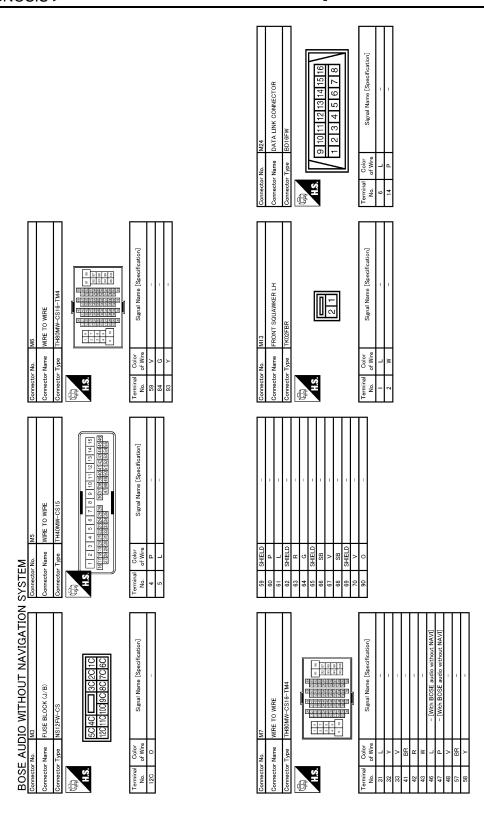
Connector No. D51  Connector Type TK 10MY-NS3  H.S. T 2 3 4 5 6 7 8 9 10  11 2 13 14 15 16 17 18	Terminal   Color   Signal Nane (Specification)   No.   of Wire   Signal Nane (Specification)   16   Y   - [With BOSE audio]   17   G   - [With BOSE audio]	Connector No. D102 Connector Type TH24FW-NH  TH2 T1 T10 9 8 7 6 5 4 3 2 1 1 24 23 22 21 20 19 18 17 16 15 14 13	Terminal   Color   Signal Name [Specification]   14   SHELD   - [Without around view monitor]   15   L   L   Without around view monitor]   15   L   L   L   L   L   L   L   L   L
Connector No. D04 Connector Name SYSTEM) Connector Type NSWFBR-CS  Line Line Line Line Line Line Line Lin	Terminal   Color   Signal Name   Specification   Color	Connector No. D76  Connector Name REAR DOOR SPEAKER RH Connector Type NSQPERR-CS  LLS  LLS	Terminal   Color   Signal Name   Specification
Connector No.   D31	Terminal   Color   Signal Name [Specification]   No.   7   R   -	Connector No. D71  Connector Type TK10MW-NS8  M.S. 1 2 3 4 5 6 7 8 9 10  11 12 13 14 15 16 17 18	Terminal   Color   Signal Name [Specification]   No. of Wire   Lip   L
BOSE AUDIO WITHOUT NAVIGATION Connector Name   PROTECTION SPEAKER LH (WITH BOSE   Connector Type   NS207ER-CS   LAS   Last Connector Type   Last Connector	Terminal Color Signal Name [Specification] No. of Wire 1 L 2 W -	Connector No. DS6 Connector Name REAR DOOR SPEAKER LH Connector Type NS02F8R-CS MAS.	Terminal   Color   Signal Name [Specification]   No. of Wire   Y   -

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### **TEL ADAPTER UNIT**

## [BOSE AUDIO WITHOUT NAVIGATION]

Cornector No. E107 Cornector Name PARKING BRAKE SWITCH Cornector Type TB01FW  HS. All Scient Signal Name [Specification]  Terminal Color Signal Name [Specification]	Cornector Name	A B C
Connector No.   E106	Connector No.   F151	E F G
Connector No. E5 Connector Name (PDM E7 (NTELLIGENT POWER OF NOT STATE OF NOT STATE OF OF	Connector No. F103 Connector Name WIRE TO WIRE Connector Type TK38FW-NS10  The Connector Type TK38FW-NS10  Terminal Color No. of Wire Signal Name (Specification)  31 R	J K
BOSE AUDIO WITHOUT NAVIGATION	Connector Name	AV O
		Р



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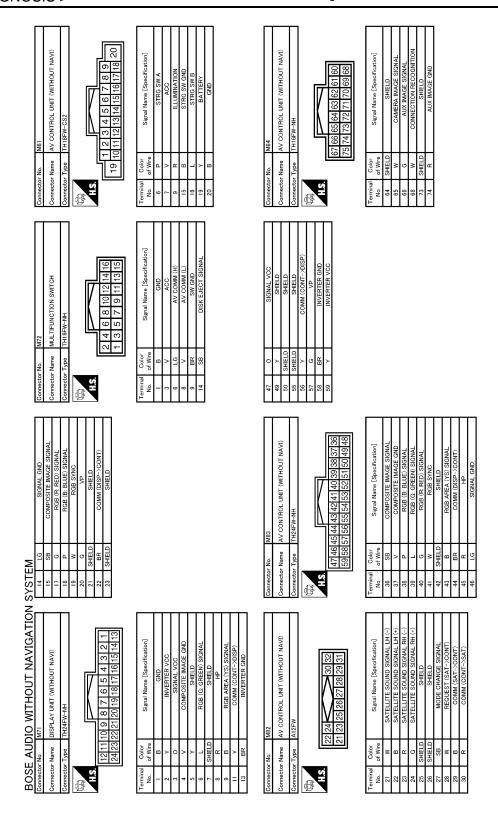
# **TEL ADAPTER UNIT**

# [BOSE AUDIO WITHOUT NAVIGATION]

# < ECU DIAGNOSIS >

Section MATHOUT NAVIGATION SYSTEM  Section Like   Section of Section S	MS7 STEFRING ANGLE SENSOR THOSEW-NH 7 2 3 8 1 4 5	Signal Name [Specification]  SENSORI SENSOR2 SENSOR3 GND IGN	MAGS BACK-UP LAMP RELAY MSGZFL-MZ	Signal Name [Specification]		АВ
BOSE AUDIO WITHOUT NAVIGATION SYSTEM    Concept Plan   Without   Other   Concept Plan		Color of Wine L L Res		O O O O O O O O O O O O O O O O O O O		
BOSE AUDIO WITHOUT NAVIGATION SYSTEM    Concept Plan   Without   Other   Concept Plan	ON SWITCH (SPIRAL CABLE)	nal Name [Specification]	1ER AND A/C AMP.	ral Name [Specification] CAN-H CAN-L		
BOSE AUDIO WITHOUT NAVIGATION SYSTEM    Commonder No.   With   Commo		Color of Wire B	9 15 43 15 24 43	Color L		
BOSE AUDIO WITHOUT NAVIGATION SYSTEM   Connector Name   Wite TO Wite			ER AND A/C AMP.	ol Name [Specification]		I
Connector No.   M25   Connector No.   M25   Connector No.   M25   Connector No.   M25	3YSTEM 15 LG 16 P		4 2	Dolor R Wire		
JCNWM0755GI	Z	dame [Specification]		lame [Specification]		L M
JCNWM0755GI	3OSE AUDIO WITH( ornector No. M25 onnector Name WIRE TO WIRE onnector Type INSTEMW-CS  ALS  (1 2 3 6 6 7 10 11 12	0 WWn of Wwn of SB × × × × × SB × × × × × × SB	M63 Pe CENTER S E TK02FBR	Color Color		
	m <u>@  @  @   %</u>	<u> -                                     </u>	이 3 이 명	<u> -                                     </u>	JCNWM0755Gł	Р

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# **TEL ADAPTER UNIT**

# [BOSE AUDIO WITHOUT NAVIGATION]

# < ECU DIAGNOSIS >

MID6   MID6   Connector No   MID6   Connector Name   WIFE TO WIFE   Connector Type   TKI DMW-NS9   MID6   MID6	Connector Name	A B C
Connector No.   M86	14   G   Pod SOUND SIGNAL PH (·)   15   SHIELD   SHIELD   SHIELD   17   SHIELD   18   SHIELD   19   SHIELD   19   SHIELD   SHIELD   19   SHIELD   SHIELD   19   SHIELD   19   SHIELD   19   SHIELD   10   SHIELD	E F G
SYSTEM	Connector No.   Mill	J K
Connector Name	Connector No.   M107	AV O

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<b>BOSE AUDIO WITHOUT NAVIGATION</b>	ISYSTEM						
Connector No. M114	Connector No. M116	Connector No.	M117	49	SHIELD	-	_
Connector Name FRONT SQUAWKER BH	Connector Name WIRE TO WIRE	Connector Name	WIRE TO WIRE	20	>	1	_
П	╗			77	×	1	_
Connector Type TK02FBR	Connector Type TK36MW-NS10	Connector Type	TH80MW-CS16-TM4	78	≯	I	_
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B	陈药	匮		83	>	1	_
[	I SI	SE'	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	84	SHIELD	-	
	1 2 3 4 5		8 3	82	В	=	_
1 0	6 7 8 9 10 212222242228272823 38 04 42 04 44 05 05		88	98	SHIELD	=	_
			2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	87	M	-	_
			<u>.</u>	88	В	-	_
				88	В	-	_
-ea	e	lar	Signal Name [Specification]	90	g	1	_
No. of Wire	of Wire	₽	7	66	>	- [With BOSE audio]	_
	31 W -	7	1	100	SB	- [With BOSE audio]	_
2 LG – [With BOSE audio]		35 ^	T				
		+	1				
		+					
		+	1				
		4	1				
		$\dashv$	1				
		45 W	-				
		46 SHIELD	1				
		47 P	1				
		48 L	1				
Gonnector No. M122	Gonnector No. M124	Connector No.	M144	Connector No.		M154	_
Т	т				I		_
Connector Name BCM (BODY CONTROL MODULE)	Connector Name WIRE TO WIRE	Connector Name	WIRE TO WIRE	Connec	Connector Name	AUXILIARY INPUT JACKS	_
Connector Type TH40FB-NH	Connector Type TH40MW-CS15	Connector Type	TH12MW-NH	Connec	Connector Type	A08FW	_
HS.	H.S. 1   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15	EHS.		優 HS.			
01 00 00 00 00 00 10 100 00 00 00 00 00	242526 56 57 58 57 5444 348 59 51 57 58 55 56 57 57 58 58 58 58 58 58 58 58 58 58 58 58 58		1 2 3 4 5 6 7 8 9 10 11 12		رت	123 78	
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal No.	I Color of Wire	Signal Name [Specification]	
Ь	7 Y -	5 SHIELD	1	-	В	AUX SOUND SIGNAL RH (+)	_
91 L CAN-H	8 LG =	M 9	1	2	Α	AUX SOUND SIGNAL GND	_
				2 3	w o	AUX SOUND SIGNAL LH (+) AUX IMAGE SIGNAL	

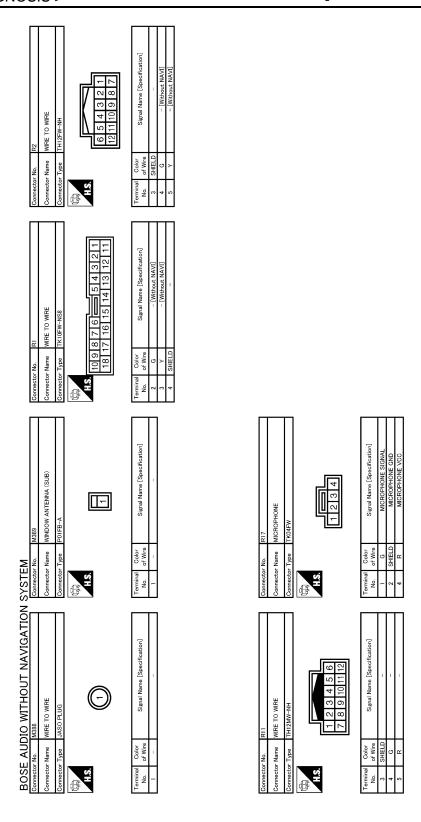
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# **TEL ADAPTER UNIT**

# [BOSE AUDIO WITHOUT NAVIGATION]

Connector No.   M376   Connector No.   M376   Connector Name   WIRE TO WIRE	Connector No. M387  Connector Name WIFE TO WIFE  Connector Type JASO JACK  H.S. Terminal Color Signal Name [Specification]  1	В
Connector Connector Connector No. No. 1	Connector Connector Connector Terminal No.	D
offcation]	offication] NN SIGNAL AIN	Е
WIRE TO WIRE GTI3SC-2/1S-HU  Signal Name [Specification]	AVITENNA BASE GTI3SSN-I/IPP-HU  Signal Name (Specification) ANTENNA AMP. ON SIGNAL  AM-FM MAIN	F
	e e e Vire	G
Connector No. Connector Name Connector Type M.S. H.S.  Terminal Color No. of Wire 1 2 2 2 3 3	Connector No. Connector Type Connector Type H.S. H.S.  H.S.  1 Color No. of Wire 2	Н
AV CONTROL UNIT (WITHOUT NAVI) GTTI35H-2.1S-HU  [35] [34] [35] FM Subsection on Signal Name [Specification]  FM Subsection on Signal Name [Specification]	WIRE PZ/IPP-HU Signal Name [Specification]	I
M370 AV CONTROL UNI GITI38H-2/15-H  GIGGIA Signal IN A A A A A A A A A A A A A A A A A A A		J
Connector No.   M370	Connector No.   M385	K
		L
BOSE AUDIO WITHOUT NAVIGATION  Connector Name Combination Switch (SPIRAL CABLE)  Tomeror Type TKOBFGY  H.S.  Terminal Color  No. of Wire  13 14 15 16 17 18 19 20  14 W  15 BR  17 BR	WRE 2/15-HU  2/15-HU  Signal Name [Specification]	M
NA303 COMBINATI TROBEGY 13 14 15 1	M878  WIRE TO WIRE GT13SC-2/1S-H  1 2 3 Signal IN	AV
AUDI   Name   Color   Type   Type		
BOSE AU Connector Na. Connector Name Connector Type In Mark Mark In Mark In BR	Connector No. Connector Name Connector Type Connector Type No. Of Wire Solow Of Wire Solow	0
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JCNWM0760GI

# SYMPTOM DIAGNOSIS

### MULTI AV SYSTEM SYMPTOMS

Symptom Table

#### INFOID:0000000003508744

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#### **OPERATION**

Symptoms	Check items	Possible malfunction location / Action to take
	All switches cannot be operated.     "MULTI AV" is displayed on system selection screen when the CONSULT-III is started.	Multifunction switch power supply and ground circuit.     AV communication circuit between AV control unit and multifunction switch.     Perform CONSULT-III self-diagnosis.     Refer to AV-201. "CONSULT-III Function (MULTI AV)".
Multifunction switch and preset switch operation does not work.	All switches cannot be operated.     "MULTI AV" is not displayed on system selection screen when the CONSULT-III is started.	AV control unit power supply and ground circuit malfunction. Refer to AV-218, "AV CONTROL UNIT : Diagnosis Procedure".
	Only specified switch cannot be operated.	Multifunction switch or preset switch malfunction. Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-219, "MULTIFUNCTION SWITCH: Diagnosis Procedure".

#### RELATED TO HANDS-FREE PHONE

**Basic Inspection** 

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

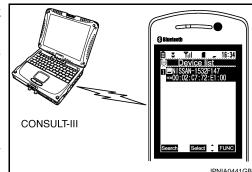
There is a case that malfunction occurs due to the version change of the phone type, etc. even though it is a
corresponding type. Therefore, confirm it by changing the cellular phone to another corresponding type
phone, and check that it operates normally. It is necessary to distinguish whether the cause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

Simple check for Bluetooth® communication

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

NOTE:

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



On board self-diagnosis of hands-free phone system

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

Trouble diagnosis chart by symptom

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# [BOSE AUDIO WITHOUT NAVIGATION]

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection. (No connection is displayed on the display at the guide.)	Repeat the registration of cellular phone.	TEL adapter unit malfunction. Refer to AV-432, "Exploded View".
Hands-free phone cannot be established.	Both the reception and the speech cannot be performed.	Perform CONSULT-III self-diagnosis. Refer to AV-201, "CONSULT-III Function (MULTI AV)".  No malfunction. TEL adapter unit malfunction. Refer to AV-432, "Exploded View".  Malfunction is detected. Refer to AV-201, "CONSULT-III Function (MULTI AV)".
The other party's voice cannot	The operation of the " 🕊 🌈 " switch can be performed.	TEL voice signal circuit malfunction between TEL adapter unit and AV control unit.
be heard by hands-free phone.	The operation of the "v\( \infty \) " switch cannot be performed.	Control signal circuit. Refer to AV-240, "Diagnosis Procedure".
Originating sound is not heard by the other party with hands-	Sound operation function is normal.	TEL adapter unit. Refer to AV-432, "Exploded View".
free phone communication.	Sound operation function does not work.	Microphone signal circuit.  Refer to AV-238, "Diagnosis Procedure".

### **RELATED TO RGB IMAGE**

Trouble diagnosis chart by symptom

Symptoms	Check items	Possible malfunction location / Action to take
	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-201, "CONSULT-III Function (MULTI AV)".
RGB image is not shown.	There is no malfunction in CONSULT-III self-diagnosis results.	<ul> <li>Display unit power supply and ground circuit.     Refer to <u>AV-218</u>, "<u>DISPLAY UNIT</u>: <u>Diagnosis Procedure</u>".</li> <li>Vertical synchronizing (VP) signal circuit.     Refer to <u>AV-230</u>, "<u>Diagnosis Procedure</u>".</li> </ul>
	Light blue (Cyan) tint.	RGB signal (R: red) circuit. Refer to AV-224, "Diagnosis Procedure".
Color of RGB image is not proper.	Purple (Magenta) tint.	RGB signal (G: green) circuit. Refer to AV-225, "Diagnosis Procedure".
	Screen looks yellowish.	RGB signal (B: blue) circuit. Refer to AV-226, "Diagnosis Procedure".
RGB screen is rolling.	_	RGB synchronizing signal circuit. Refer to AV-227, "Diagnosis Procedure".
Fuel economy display is mal-	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-201, "CONSULT-III Function (MULTI AV)".
functioning.	There is no malfunction in CONSULT-III self-diagnosis results.	Ignition signal circuit malfunction.  Refer to AV-218, "AV CONTROL UNIT : Diagnosis Procedure".

### **RELATED TO AUDIO**

Trouble diagnosis chart by symptom

Symptoms Symptoms	Check items	Possible malfunction location / Action to take
The CD cannot be removed.	_	Disk eject signal circuit.  Refer to AV-233, "Diagnosis Procedure".

#### < SYMPTOM DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

Symptoms	Check items	Possible malfunction location / Action to take
	No sound from all speakers.	BOSE amp. power supply and ground circuit. Refer to AV-220, "BOSE AMP. : Diagnosis Procedure".     Amp. ON signal circuit
Audio sound is not heard.	Sound is not heard from woofer.	<ul> <li>Woofer power supply and ground circuit.</li> <li>Sound signal woofer circuit between BOSE amp. and woofer.</li> <li>Woofer ON signal circuit between BOSE amp. and woofer.</li> </ul>
	Sound is not heard from center speaker.	Sound signal center speaker circuit.
	Sound is heard only from specific places (RH front, RH rear, LH front and LH rear).	Sound signal circuit of malfunctioning system.
It does not change to "Driver's Audio Stage" mode.	_	Mode change signal circuit. Refer to AV-241, "Diagnosis Procedure".
	"ANTENNA" is not displayed even when the channel is turned to 0 in Satellite ra- dio mode.	Perform the following inspection procedure.  1. Check satellite radio antenna mounting nut for looseness.  NOTE:  Tightening torque: 6.5 N·m (0.66 kg-m, 58 in-lb.)  2. Visually check for satellite radio antenna feeder.  3. Replace the satellite radio antenna.  Refer to AV-422, "Exploded View".  4. Replace the satellite radio tuner.  Refer to AV-421, "Exploded View".
Satellite radio is not received.	"ANTENNA" is displayed when the channel is turned to 0 in Satellite radio mode.	<ol> <li>Perform the following inspection procedure.</li> <li>Check the connection between Satellite radio tuner and antenna feeder.</li> <li>Check the connection between Satellite radio antenna and antenna feeder.</li> <li>Check Antenna feeder for open circuit.</li> <li>Replace the satellite radio antenna.         Refer to AV-422, "Exploded View".     </li> <li>Replace the satellite radio tuner.         Refer to AV-421, "Exploded View".     </li> </ol>
The sound of Satellite radio is not heard.	Other audio sounds are normal.	Satellite radio sound signal circuit between AV control unit and satellite radio tuner.
It does not change to Satellite radio mode.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-201, "CONSULT-III Function (MULTI AV)".
AM/FM radio is not received.	Other audio sounds are normal.	Antenna amp. ON signal circuit.     Antenna feeder.

# RELATED TO iPod®

Trouble diagnosis chart by symptom

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

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

Symptoms	Check items	Possible malfunction location / Action to take
The sound of iPod <sup>®</sup> is not heard.	Other audio sounds are normal.	<ul> <li>iPod sound signal circuit between AV control unit and iPod adapter.</li> <li>iPod sound signal circuit between iPod<sup>®</sup> and iPod adapter.</li> </ul>
It does not change to iPod mode.	There is malfunction in the CONSULT-III self-diagnosis.	Perform CONSULT-III self-diagnosis. Refer to AV-201, "CONSULT-III Function (MULTI AV)".
"iPod is not connected" is dis- played when it comes to iPod mode.	Connected to iPod <sup>®</sup> .	iPod connection recognition signal circuit between iPod® and iPod adapter.

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# < SYMPTOM DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

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

#### RELATED TO STEERING SWITCH

Trouble diagnosis chart by symptom

Symptoms	Probable malfunction location
None of the steering switch operations work.	Steering switch signal GND circuit. Refer to AV-251, "Diagnosis Procedure".
Only specified switch cannot be operated.	Steering switch.
"SOURCE", "MENU UP", "MENU DOWN", " * " switches of steering switch are not operated.	Steering switch signal A circuit. Refer to AV-247, "Diagnosis Procedure".
"VOL UP", "VOL DOWN", "  " switches of steering switch are not operated.	Steering switch signal B circuit. Refer to AV-249, "Diagnosis Procedure".

#### **RELATED TO AUX**

#### NOTE:

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

Trouble diagnosis chart by symptom

Symptoms	Check items	Probable malfunction location
No voice sound is heard when AUX mode is selected.	Voice sound is heard when other modes are selected.	AUX sound signal circuits malfunction between auxiliary input jacks and AV control unit.
Image is not displayed when AUX mode is selected.		<ul> <li>AUX image signal circuit malfunction between auxiliary input jacks and AV control unit. Refer to AV-231, "Diagnosis Procedure".</li> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and display unit. Refer to AV-229, "Diagnosis Procedure".</li> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit. Refer to AV-230, "Diagnosis Procedure".</li> <li>RGB area (YS) signal circuit malfunction between AV control unit and display unit. Refer to AV-228, "Diagnosis Procedure".</li> </ul>
	Camera image is normal (with rear view monitor)	AUX image signal circuit malfunction between auxiliary input jacks and AV control unit.  Refer to AV-231, "Diagnosis Procedure".
	Camera image is not displayed. (with rear view monitor)	<ul> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and display unit. Refer to AV-229. "Diagnosis Procedure".</li> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit. Refer to AV-230, "Diagnosis Procedure".</li> <li>RGB area (YS) signal circuit malfunction between AV control unit and display unit. Refer to AV-228, "Diagnosis Procedure".</li> </ul>
It does not change from AUX mode to other modes.		<ul> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-230, "Diagnosis Procedure".</li> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-229, "Diagnosis Procedure".</li> </ul>

#### RELATED TO REAR VIEW MONITOR

### < SYMPTOM DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

Trouble diagnosis chart by symptom

Symptoms	Check items	Probable malfunction location
Camera image is not displayed (displayed in black and nothing can be displayed)	AUX image is not displayed.	<ul> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-229, "Diagnosis Procedure".</li> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-230, "Diagnosis Procedure".</li> </ul>
Camera image is not shown. (Guiding line is displayed.)	_	<ul> <li>Camera image signal circuit between camera control unit and rear view camera.</li> <li>Rear view camera power supply circuit.</li> <li>Refer to <u>AV-235</u>, "<u>Diagnosis Procedure</u>".</li> </ul>
Camera image is not displayed. (Only warning message under area is displayed.)	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis.  Refer to AV-201, "CONSULT-III Function (MULTI AV)".
	AUX image is normal.	Camera image signal circuit malfunction between camera control unit and AV control unit.  Refer to AV-236, "Diagnosis Procedure".
	AUX image is not displayed.	RGB area (YS) signal circuit malfunction between AV control unit and display unit.  Refer to AV-228, "Diagnosis Procedure".
	Select "Camera Cont." of "Confirmation/ Adjustment" mode, Reverse Sensor is not turned ON at "Connection Confirmation".	Reverse signal circuit (camera control unit).
Camera image is rolling.	AUX image is also rolling.	Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit.  Refer to AV-230, "Diagnosis Procedure".
Camera image does not switch.	Malfunction of self-diagnosis result is indicated.	Camera-connection recognition signal circuit Refer to AV-201, "CONSULT-III Function (MULTI AV)".
	Malfunction of self-diagnosis result is not indicated.	Reverse signal circuit (AV control unit).
The predicted course line display is malfunctioning.	_	Sensor signal circuit malfunction. Refer to AV-245, "Diagnosis Procedure".

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### NORMAL OPERATING CONDITION

Description INFOID:000000003508745

Vehicle operation information, refer to Owner's Manual.

#### **BASIC OPERATIONS**

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

#### RELATED TO VOICE RECOGNITION

#### Related to telephone

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

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

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

#### **RELATED TO AUDIO**

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

#### NOTE:

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

### NORMAL OPERATING CONDITION

#### < SYMPTOM DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

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

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

#### NOTE:

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

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Revision: 2007 November AV-409 2008 EX35

# **PRECAUTION**

### **PRECAUTIONS**

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

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

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIRBAG".
- 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.

# Precaution for Trouble Diagnosis

INFOID:0000000003508747

#### AV COMMUNICATION SYSTEM

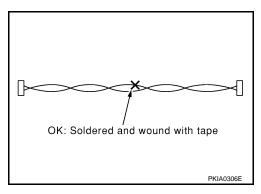
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

### Precaution for Harness Repair

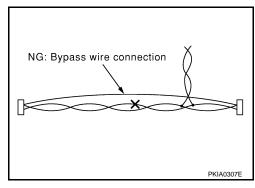
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#### AV COMMUNICATION SYSTEM

 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.)



### **PREPARATION**

# < PREPARATION >

# [BOSE AUDIO WITHOUT NAVIGATION]

# **PREPARATION**

# **PREPARATION**

# **Commercial Service Tools**

Tool name		Description
Power tool	PBIC0191E	Loosening screws

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# **ON-VEHICLE REPAIR**

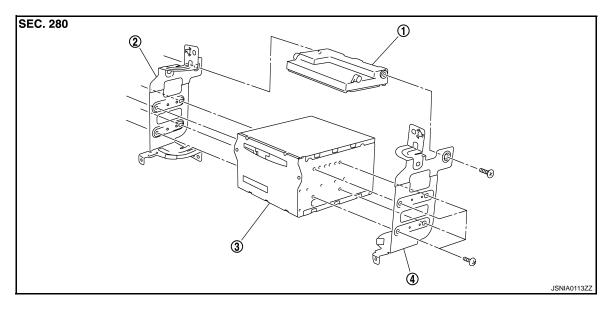
# AV CONTROL UNIT

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

**DISASSEMBLY** 



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

3. AV control unit

4. Bracket RH

#### Removal and Installation

INFOID:0000000003573744

### **REMOVAL**

- 1. Remove display unit.
- 2. Remove AV control unit with a unified meter and A/C amp. as a single unit from the body.
- 3. Remove bracket screws, and then remove AV control unit.

#### **INSTALLATION**

Installation is the reverse order of removal.

#### **CAUTION:**

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

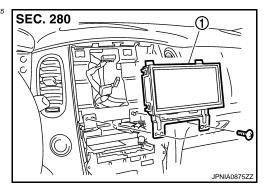
### **DISPLAY UNIT**

### [BOSE AUDIO WITHOUT NAVIGATION]

# **DISPLAY UNIT**

# **Exploded View**

INFOID:0000000003573745



1. Display unit

# Removal and Installation

**REMOVAL** 

- 1. Remove cluster lid D. Refer to IP-11, "Exploded View".
- 2. Remove display unit mounting screws.
- 3. Remove display unit.

### **INSTALLATION**

Installation is the reverse order of removal.

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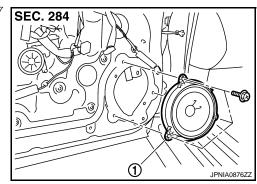
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2008 EX35

# FRONT DOOR SPEAKER

# **Exploded View**

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Front door speaker

### Removal and Installation

INFOID:0000000003573748

### **REMOVAL**

- 1. Remove front door finisher. Refer to <a href="INT-11">INT-11</a>, "DRIVER SIDE: Exploded View" (driver side) or <a href="INT-14">INT-14</a>, "PASSENGER SIDE: Exploded View" (passenger side).
- 2. Remove front door speaker mounting bolts, disconnect the front door speaker connector.
- 3. Remove front door speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

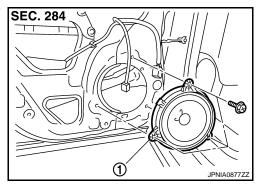
### **REAR DOOR SPEAKER**

[BOSE AUDIO WITHOUT NAVIGATION]

# **REAR DOOR SPEAKER**

# **Exploded View**

INFOID:0000000003573749



Rear door speaker

### Removal and Installation

#### **REMOVAL**

- 1. Remove rear door finisher. Refer to INT-17, "Exploded View".
- 2. Remove rear door speaker mounting bolts, disconnect the rear door speaker connector.
- 3. Remove rear door speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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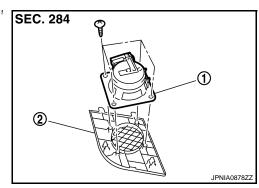
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# **FRONT SQUAWKER**

# **Exploded View**

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- 1. Front squawker
- 2. Speaker grille

# Removal and Installation

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### **REMOVAL**

- 1. Lift up the speaker grille with squawker. Refer to IP-11, "Exploded View".
- 2. Disconnect the front squawker connector.
- 3. Remove front squawker mounting screws.
- 4. Remove front squawker.

#### **INSTALLATION**

Installation is the reverse order of removal.

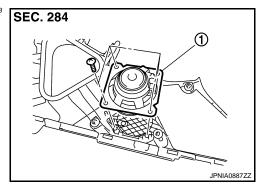
# **REAR SQUAWKER**

### [BOSE AUDIO WITHOUT NAVIGATION]

# **REAR SQUAWKER**

**Exploded View** 

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Rear squawker

### Removal and Installation

#### **REMOVAL**

- 1. Remove luggage side finisher upper. Refer to <a href="INT-34">INT-34</a>, "Exploded View".
- 2. Remove rear squawker mounting screws.
- 3. Remove rear squawker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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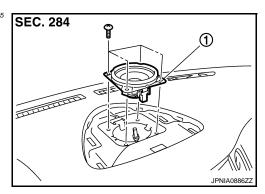
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# **CENTER SPEAKER**

**Exploded View** 

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Center speaker

### Removal and Installation

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#### **REMOVAL**

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

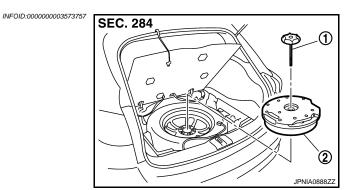
#### **INSTALLATION**

Installation is the reverse order of removal.

### [BOSE AUDIO WITHOUT NAVIGATION]

# **WOOFER**

# **Exploded View**



- 1. Woofer clamp
- 2. Woofer

# Removal and Installation

### **REMOVAL**

- 1. Remove Luggage finisher center. Refer to INT-34, "Exploded View".
- 2. Remove woofer clamp.
- 3. Remove harness clip and woofer connector.
- 4. Remove woofer.

#### **INSTALLATION**

Installation is the reverse order of removal.

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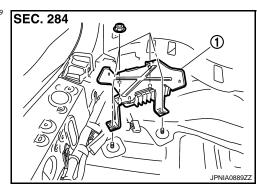
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# [BOSE AUDIO WITHOUT NAVIGATION]

BOSE AMP.

**Exploded View** 

INFOID:0000000003573759



BOSE amp.

### Removal and Installation

INFOID:0000000003573760

#### **REMOVAL**

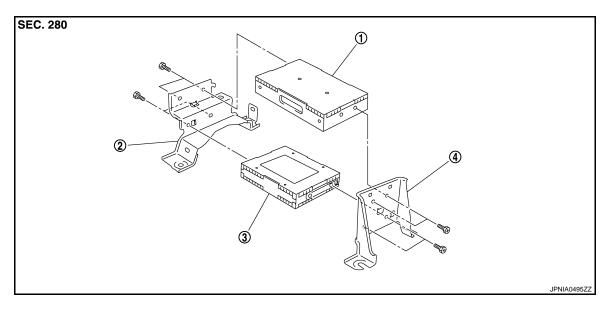
- 1. Remove Luggage floor spacer (LH). Refer to <a href="INT-34">INT-34</a>, "Exploded View".
- 2. Remove BOSE amp. mounting nuts.
- 3. Remove BOSE amp..

#### **INSTALLATION**

Installation is the reverse order of removal.

# SATELLITE RADIO TUNER

Exploded View



- 1. TEL adapter unit
- 2. Bracket (front)

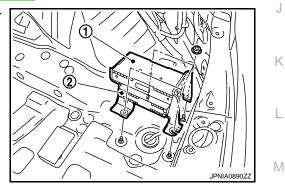
3. Satellite radio tuner

4. Bracket (rear)

**REMOVAL** 

#### Removal and Installation

- Remove luggage floor spacer (RH). Refer to <u>INT-34, "Exploded View"</u>.
- 2. Remove nuts, and then remove TEL adapter unit (1) and satellite radio tuner (2).



#### **INSTALLATION**

Install in the reverse order of removal.

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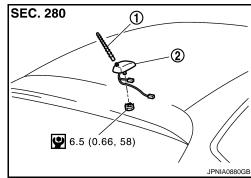
INFOID:0000000003508773

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### **ANTENNA BASE**

# **Exploded View**

INFOID:0000000003508774



- 1. Antenna rod
- 2. Antenna base

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

#### Removal and Installation

INFOID:0000000003569877

#### **REMOVAL**

- Remove headlining (rear). Keep a service area. Refer to <u>INT-26, "NORMAL ROOF: Exploded View"</u> (normal roof) or <u>INT-30, "SUNROOF: Exploded View"</u> (sunroof).
- 2. Remove antenna base mounting nut.
- 3. Remove antenna base.

#### **INSTALLATION**

Installation is the reverse order of removal.

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

#### **CAUTION:**

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

### **MULTIFUNCTION SWITCH**

### [BOSE AUDIO WITHOUT NAVIGATION]

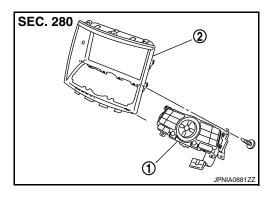
# **MULTIFUNCTION SWITCH**

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

DISASSEMBLY



- 1. Multifunction switch
- Cluster lid D

### Removal and Installation

INFOID:0000000003573762

INFOID:0000000003573761

#### **REMOVAL**

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

#### **INSTALLATION**

Installation is the reverse order of removal.

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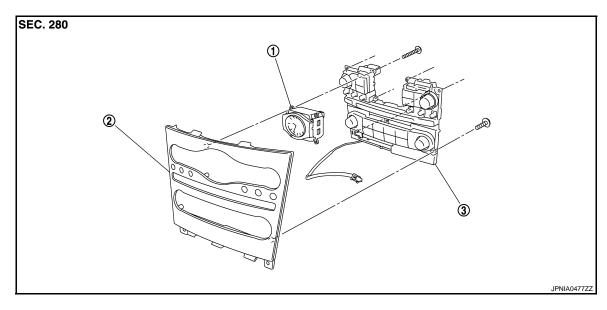
# PRESET SWITCH

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

#### **DISASSEMBLY**



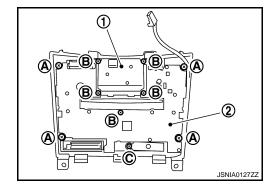
1. Clock 2. Cluster lid C 3. Preset switch

### Removal and Installation

INFOID:0000000003573764

#### **REMOVAL**

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



#### **INSTALLATION**

Installation is the reverse order of removal.

#### NOTE:

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

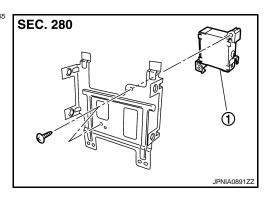
# **IPOD ADAPTER**

### [BOSE AUDIO WITHOUT NAVIGATION]

# **IPOD ADAPTER**

**Exploded View** 

INFOID:0000000003573765



1. iPod adapter

### Removal and Installation

REMOVAL

- 1. Remove display unit with bracket. Refer to IP-11, "Exploded View".
- 2. Remove display from display bracket.
- 3. Remove iPod adapter mounting screws.
- 4. Remove iPod adapter.

#### **INSTALLATION**

Install in the reverse order of removal.

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### [BOSE AUDIO WITHOUT NAVIGATION]

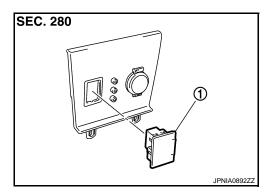
# **IPOD CONNECTOR**

Exploded View

**REMOVAL** 

Refer to IP-22, "Exploded View".

**DISASSEMBLY** 



iPod connector

### Removal and Installation

INFOID:0000000003573768

#### **REMOVAL**

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

#### **INSTALLATION**

Install in the reverse order of removal.

### **AUXILIARY INPUT JACKS**

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

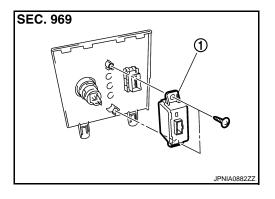
# **AUXILIARY INPUT JACKS**

Exploded View

**REMOVAL** 

Refer to IP-22, "Exploded View".

DISASSEMBLY



1. Auxiliary input jacks

### Removal and Installation

**REMOVAL** 

- 1. Remove console finisher. Refer to <a href="IP-22">IP-22</a>, "Exploded View".
- 2. Remove auxiliary mounting screws.
- 3. Remove auxiliary input jacks.

#### **INSTALLATION**

Installation is the reverse order of removal.

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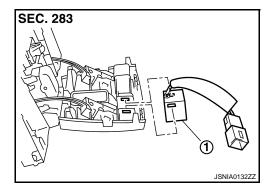
### **MICROPHONE**

Exploded View

#### **REMOVAL**

Refer to <u>INT-26, "NORMAL ROOF: Exploded View"</u> (normal roof) or <u>INT-30, "SUNROOF: Exploded View"</u> (sunroof).

**DISASSEMBLY** 



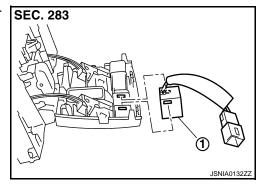
1. Microphone

#### Removal and Installation

INFOID:0000000003573773

### **REMOVAL**

- Remove map lamp assembly. Refer to <u>INT-26</u>, "NORMAL ROOF: Exploded View" (normal roof) or <u>INT-30</u>, "SUNROOF: Exploded View" (sunroof).
- 2. Remove microphone (1), stretching pawls of map lamp assembly.



#### **INSTALLATION**

Installation is the reverse order of removal.

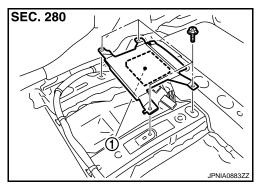
### **CAMERA CONTROL UNIT**

[BOSE AUDIO WITHOUT NAVIGATION]

# **CAMERA CONTROL UNIT**

**Exploded View** 

INFOID:0000000003573774



. Camera control unit

### Removal and Installation

#### **REMOVAL**

- 1. Remove front seat (LH side). Refer to SE-87, "Exploded View".
- 2. Remove floor carpet. Keep a service area.
- 3. Remove camera control unit.

### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- 2. Perform predicted course line center position adjustment. Refer to <u>AV-174, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Special Repair Requirement"</u>.

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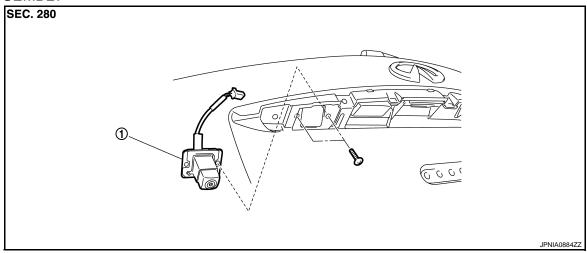
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# **REAR VIEW CAMERA**

Exploded View

#### DISASSEMBLY



1. Rear view camera

#### Removal and Installation

INFOID:0000000003573778

#### **REMOVAL**

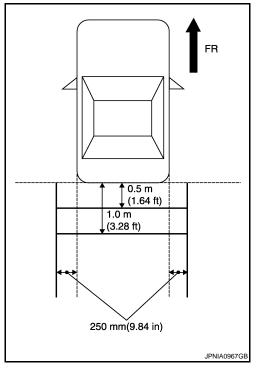
- 1. Remove back door finisher inner. Refer to <a href="INT-38">INT-38</a>, "Exploded View".
- 2. Remove back door outside finisher upper. Refer to EXT-48, "Exploded View".
- 3. Remove back door outside finisher lower. Refer to EXT-48, "Exploded View".
- 4. Remove rear view camera mounting screws and rear view camera harness connector.
- 5. Remove rear view camera.

#### **INSTALLATION**

- Installation is the reverse order of removal.
- Adjust the guide line position if the guide line position is shifted after installing the rear view camera. Refer to AV-431, "Adjustment".

Adjustment

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

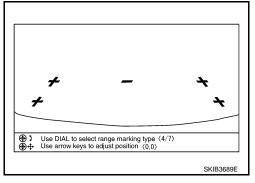


 Rotate the center dial, and then select the guiding line pattern so that its angle is aligned with the correction line of the rear of the vehicle.

### Selected pattern : 7

4. Make fine adjustment to the correction line of the rear of the vehicle with up/down/left/right switches so that its position is aligned with the guiding line. Press ""

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



### **CAUTION:**

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

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

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

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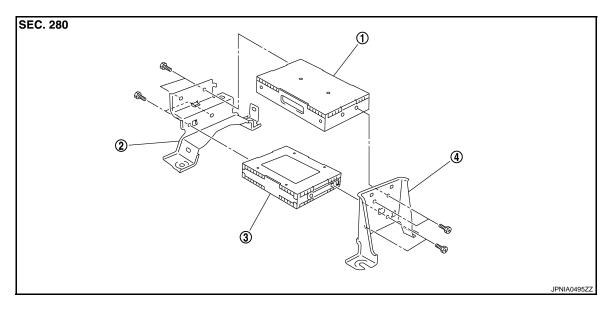
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# **TEL ADAPTER UNIT**

Exploded View



- 1. TEL adapter unit
- 2. Bracket (front)

3. Satellite radio tuner

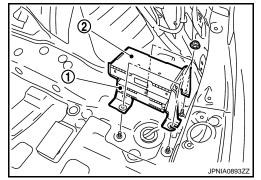
4. Bracket (rear)

### Removal and Installation

INFOID:0000000003508791

#### **REMOVAL**

- 1. Remove luggage floor spacer (RH). Refer to INT-34, "Exploded View".
- 2. Remove nuts, and then remove satellite radio tuner (1) and TEL adapter unit (2).



#### **INSTALLATION**

Install in the reverse order of removal.

# STEERING ANGLE SENSOR

# [BOSE AUDIO WITHOUT NAVIGATION]

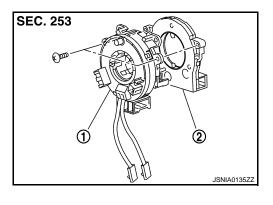
# STEERING ANGLE SENSOR

Exploded View

**REMOVAL** 

Refer to SR-6, "Exploded View".

**DISASSEMBLY** 



- 1. Spiral cable
- 2. Steering angle sensor

# Removal and Installation

INFOID:0000000003573781

INFOID:0000000003573780

### **REMOVAL**

- 1. Remove spiral cable.
- 2. Remove steering angle sensor mounting screws.
- 3. Remove steering angle sensor.

# **INSTALLATION**

Installation is the reverse order of removal.

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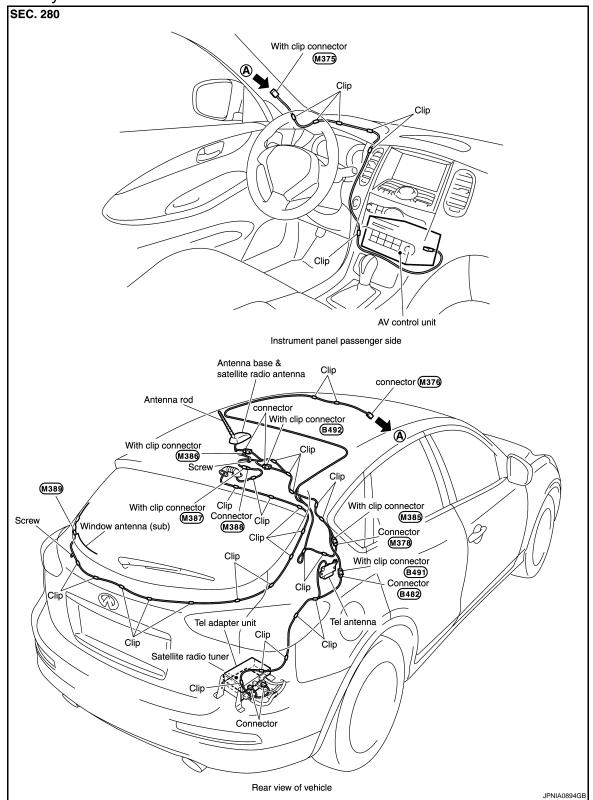
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# ANTENNA FEEDER

Harness Layout



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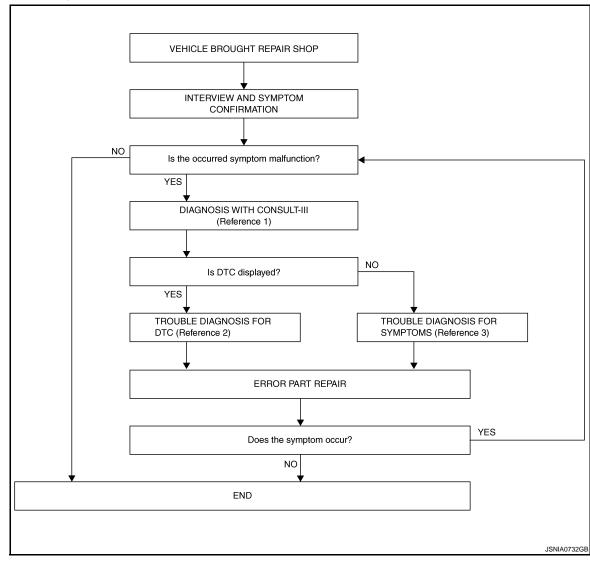
M

# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

### **OVERALL SEQUENCE**



- Reference 1... Refer to <u>AV-498, "CONSULT-III Function (MULTI AV)"</u>.
- Reference 2··· Refer to <u>AV-651</u>, "<u>DTC Index</u>".
- Reference 3··· Refer to AV-889, "Symptom Table".

# **DETAILED FLOW**

# 1.INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

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

# Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

2.DIAGNOSIS WITH CONSULT-III

### DIAGNOSIS AND REPAIR WORKFLOW

# < BASIC INSPECTION >

[BOSE AUDIO WITH NAVIGATION]

Connect CONSULT-III and perform a self-diagnosis for "MULTI AV". Refer to <u>AV-498</u>. "CONSULT-III Function (<u>MULTI AV</u>)".

### NOTE:

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

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

# Is DTC displayed?

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

# 3. TROUBLE DIAGNOSIS FOR DTC

- 1. Check the DTC indicated in the self-diagnosis results.
- Perform the relevant diagnosis referring to the DTC Index. Refer to AV-651, "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-889</u>, "Symptom <u>Table"</u>.

>> GO TO 5.

# 5. ERROR PART REPAIR

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

### NOTE:

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

3. Check that the symptom does not occur.

### Does the symptom occur?

YES >> GO TO 1.

NO >> INSPECTION END

# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE AUDIO WITH NAVIGATION]

# INSPECTION AND ADJUSTMENT Α ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: De-В scription INFOID:0000000003160593 WITH REAR VIEW MONITOR OR AROUND VIEW MONITOR Always correct the center position of the predicted course line after disconnecting the battery negative terminal. ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Spe-D cial Repair Requirement INFOID:0000000003160594 1. CORRECTION OF CENTER POSITION OF PREDICTED COURSE LINE Е Refer to the following for details. >> Refer to AV-437, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Special Repair Requirement". ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description INFOID:0000000003160595 When camera control unit or around view monitor control unit is replaced, the center position of predicted course line shall be corrected. ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement INFOID:0000000003160596 1. CORRECTION OF CENTER POSITION OF PREDICTED COURSE LINE Refer to the following for details. >> Refer to AV-437, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Special Repair Requirement". PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Description INFOID:0000000003160597 M Adjust the center position of the predicted course line of the rear view monitor if it is shifted. PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT: Special Repair Requirement INFOID:0000000003160598 ΑV 1.STEERING OPERATION Steer the steering wheel to the leftmost and rightmost ends. >> GO TO 2 Р 2. DRIVING

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

>> END CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

# CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Description

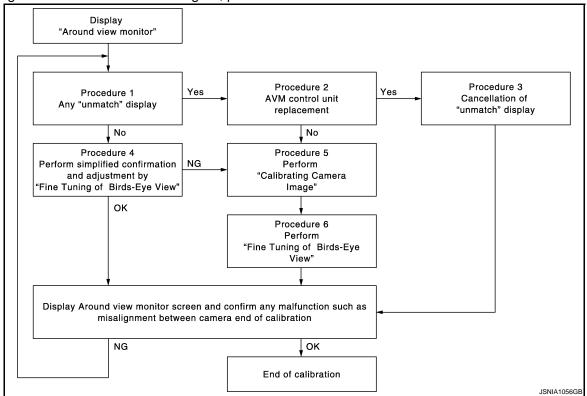
INFOID:0000000003166669

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

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

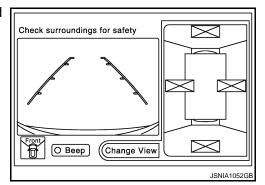
### Calibration flowchart

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



### NOTE:

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



# Calibration procedure

1. AROUND VIEW MONITOR SCREEN CONFIRMATION

# **INSPECTION AND ADJUSTMENT**

### < BASIC INSPECTION >

### [BOSE AUDIO WITH NAVIGATION]

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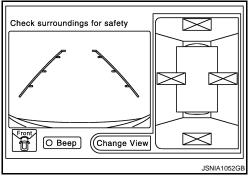
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Check that there is the un-match display in any camera.

### Is the un-match display visible?

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



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

Check that the around view monitor control unit is replaced.

Is the around view monitor control unit replaced?

YES >> GO TO 3.

NO >> GO TO 5.

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

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

### **CAUTION:**

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

# 

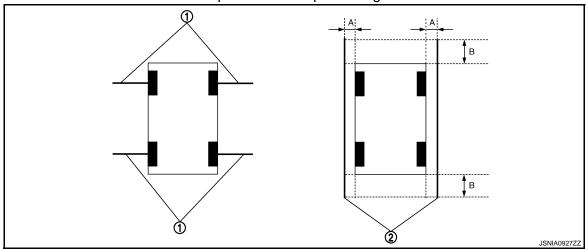
### Is there a malfunction?

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

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

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

# Preparation of simplified target line



Revision: 2007 November AV-439 2008 EX35

Marker for target line 1

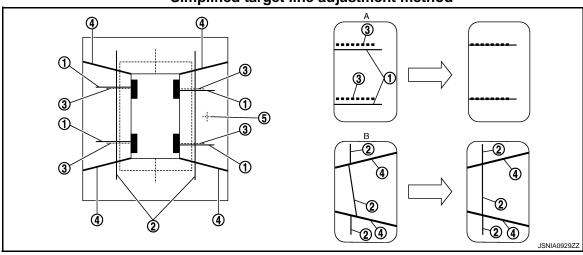
# < BASIC INSPECTION >

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

### **CAUTION:**

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

# Simplified target line adjustment method



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

### NOTE:

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

# Is the difference corrected?

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

NO >> GO TO 5.

# **5.**PERFORM "CALIBRATING CAMERA IMAGE"

### Preparation of target line

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

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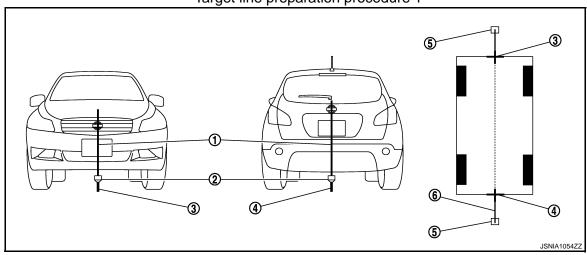
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Target line preparation procedure 1



- Thread 1.
- Point RM0 (mark)
- Weight 2.
- Packing tape (to fix the vinyl string)
- Point FM0 (mark) 3.
- 6. Vinyl string
- Put the points FM and RM (mark) 75 cm (29.5 in) from the points FM0 and RM0 individually.
- Route the vinyl string through the points FM and RM using a triangle scale, and then fix it at approximately 1.5 m (59 in) on both sides with packing tape.
- Put the points FL, FR, RL, and RR (mark) to both right and left [vehicle width / 2 + 30 cm (11.8 in)] from the points FM and RM.

Target line preparation procedure 2 1 ③ 퓹 ф В В

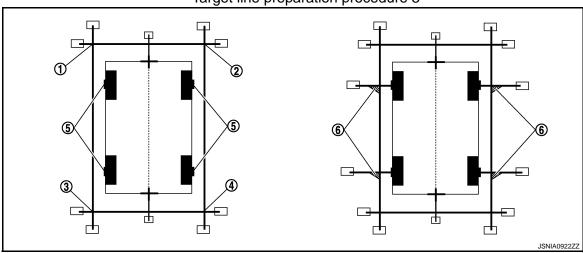
- Point FM
- Point FL (mark) 4.
- 7. Point RR (mark)
- 75 cm (29.5 in)

- Point RM 2.
- Point FR (mark)
- Approx. 1.5 m (59 in)
- Triangle scale 3.
- Point RL (mark)
  - 30 cm (11.8 in)
- [Vehicle width/ 2 + 30 cm (11.8 in) from the points FM and RM]

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- Draw the lines of the points FL RL and FR RR with vinyl string, and fix it with packing tape.
- Put a mark on the center of each axle, draw vertical lines to the lines of the points FL RL and FR RR from the marks on the center of the axle using a triangle scale, and then fix the lines using packing tape.

Target line preparation procedure 3



Point FL
 Point RR

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

Perform "Calibrating Camera Image"

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

Adjustment range

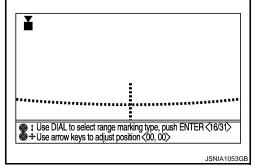
Rotation direction (Center : 31 patterns (16 on the dial) center)

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

per/lower switch)

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

switch)



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

### **CAUTION:**

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

>> GO TO 6.

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

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

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

# **INSPECTION AND ADJUSTMENT**

### < BASIC INSPECTION >

### [BOSE AUDIO WITH NAVIGATION]

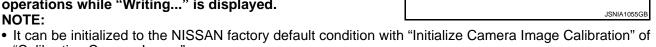
Operate the center dial and upper/lower/left/right switch to overlap the marker on the screen and the target lines on the ground.

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

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

### **CAUTION:**

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



- "Calibrating Camera Image".
- The adjustment value is cancelled on this mode by performing "Initialize Camera Image Calibration".

>> Calibration end

"+"-Mark CAMERA Push CAMERA to change area Use DIAL to adjust angle Use arrow keys to adjust position<0,0> Push ENTER to fix

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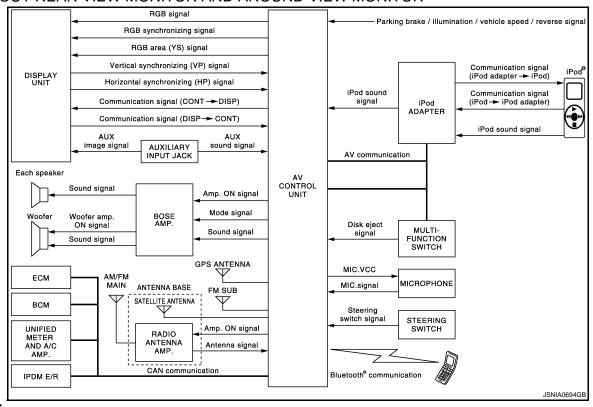
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# **FUNCTION DIAGNOSIS**

# **MULTI AV SYSTEM**

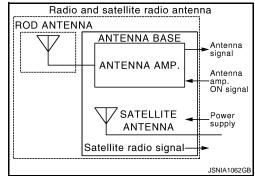
System Diagram

# WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR

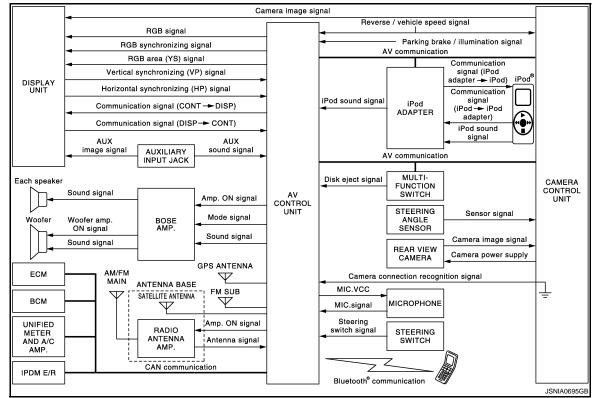


### NOTE:

- The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.
- A radio antenna base integrated with radio antenna and satellite radio antenna is adopted.



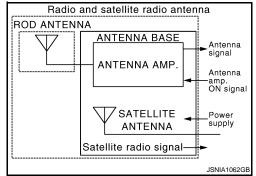
# WITH REAR VIEW MONITOR



### NOTE:

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

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



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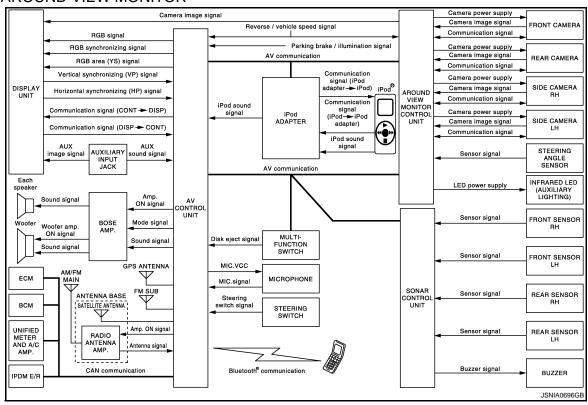
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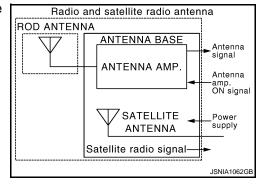
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# WITH AROUND VIEW MONITOR



### NOTE:

- The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.
- A radio antenna base integrated with radio antenna and satellite radio antenna is adopted.



# System Description

INFOID:0000000003515918

Multi AV system means that the following systems are integrated.

System name	System explanation
NAVIGATION SYSTEM	AV-458, "System Description"
AUDIO SYSTEM	AV-453, "System Description"
REAR VIEW MONITOR SYSTEM	AV-463, "System Description"
VEHICLE INFORMATION SYSTEM	<ul> <li>Status of audio, climate control system, fuel economy, maintenance and navigation are displayed.</li> <li>AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM, unified meter and A/C amp.</li> <li>AV control unit is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.</li> </ul>
HANDS-FREE PHONE SYSTEM	Refer to the following "HANDS-FREE PHONE SYSTEM".
AUXILIARY INPUT SYSTEM	Refer to the following "AUXILIARY INPUT SYSTEM".

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

System name	System explanation
VOICE RECOGNITION SYSTEM	Refer to the following "VOICE RECOGNITION SYSTEM".
TOUCH PANEL SYSTEM	Refer to the following "TOUCH PANEL SYSTEM".

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

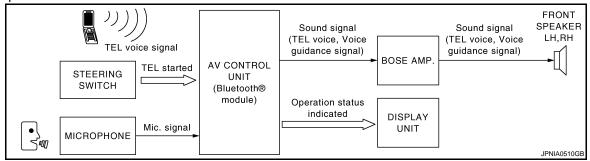
### NOTE:

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

- CONSULT-III self diagnosis: Refer to <u>AV-498</u>, "CONSULT-III Function (MULTI AV)".
- On board self diagnosis: Refer to <u>AV-482, "Diagnosis Description"</u>.

# HANDS-FREE PHONE SYSTEM

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



### When a call is originated

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

### When receiving a call

Voice sound is input to one's own cellular phone from the other party. TEL voice signal is output to door speakers, and the signal is input to BOSE amp. via AV control unit by establishing Bluetooth communication from cellular phone.

### **AUXILIARY INPUT SYSTEM**

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

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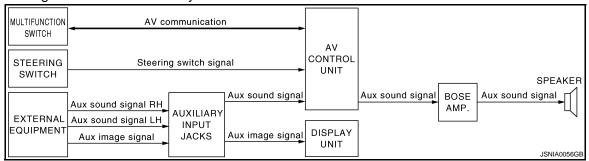
Revision: 2007 November AV-447 2008 EX35

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# < FUNCTION DIAGNOSIS >

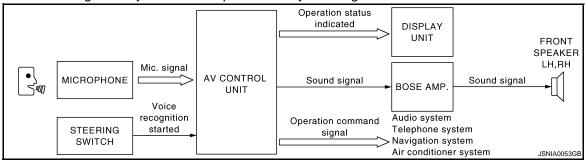
## [BOSE AUDIO WITH NAVIGATION]

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



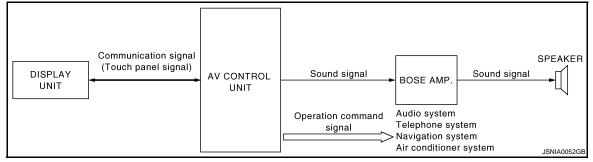
### **VOICE RECOGNITION SYSTEM**

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



# **TOUCH PANEL SYSTEM**

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



**Component Parts Location** 

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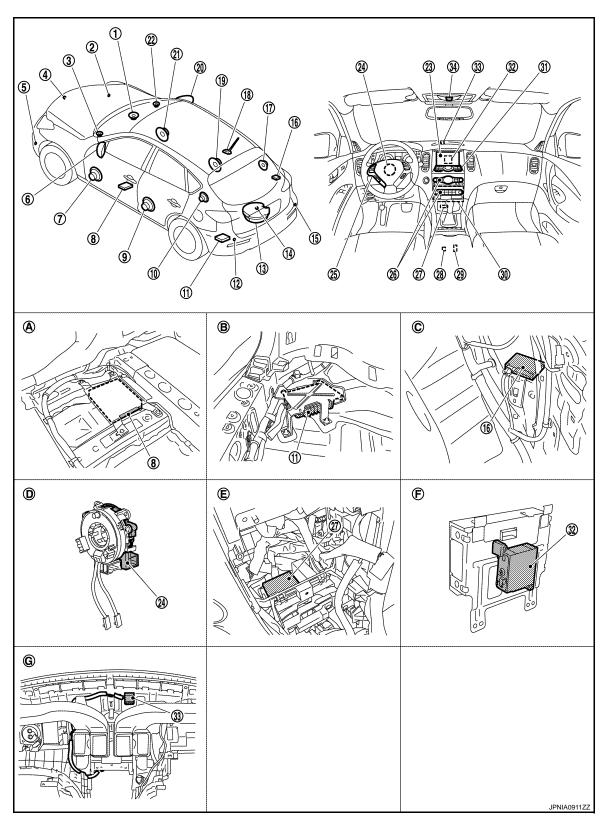
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- Center speaker
- 4. Front camera

- 2. Corner sensor front RH
- Corner sensor front LH
- 3. Front squawker LH
- 6. Side camera LH

# < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

7	<b>7.</b>	Front door speaker LH	8.	<ul> <li>Around view monitor control unit (with around view monitor)</li> <li>Camera control unit (with rear view monitor)</li> </ul>	9.	Rear door speaker LH
1	0.	Rear squawker LH	11.	BOSE amp.	12.	Corner sensor rear LH
1	3.	Woofer	14.	<ul> <li>Rear camera (with around view monitor)</li> <li>Rear view camera (with rear view monitor)</li> </ul>	15.	Corner sensor rear RH
1	6.	Buzzer	17.	Rear squawker RH	18.	Antenna base (antenna amp and satellite antenna)
1	9.	Rear door speaker RH	20.	Side camera RH	21.	Front door speaker RH
2	22.	Front squawker RH	23.	Display unit	24.	Steering angle sensor
2	25.	Steering switch	26.	Preset switch	27.	Sonar control unit (with around view monitor)
2	28.	iPod connector	29.	Auxiliary input jacks	30.	AV control unit
3	31.	Multifunction switch	32.	iPod adapter	33.	GPS antenna
3	34.	Microphone				
A	١.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
	).	Spiral cable part	E.	Cluster lid C removed condition	F.	Rear view of the display unit
C	3.	Instrument panel rear side				

# **Component Description**

INFOID:0000000003515919

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

# < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

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Part name	Description			
FRONT SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>			
REAR SQUAWKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>			
CENTER SPEAKER	<ul><li>Outputs sound signal from BOSE amp.</li><li>Outputs sound (high and mid range).</li></ul>			
WOOFER	<ul> <li>Inputs power (amp. ON) and sound signal from BOSE amp.</li> <li>Outputs low-frequency sound.</li> </ul>			
MULTIFUNCTION SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio, auxiliar input and navigation operations are integrated.</li> <li>Connected with preset switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> </ul>			
PRESET SWITCH	<ul> <li>Operation panel is equipped with the centralized switch where audio and air conditioner operations are integrated.</li> <li>Connected with multifunction switch via cable, and operation signal is transmitted to AV control unit via AV communication.</li> <li>The disk ejection operating signal is performed by hardwire.</li> </ul>			
CAMERA CONTROL UNIT	<ul> <li>Camera image signal is input from rear view camera. Camera image signal output to display unit.</li> <li>Power (camera ON signal) is transmitted to rear view camera.</li> <li>Superimposes the guiding line, predicted course line and sonar indicator to camera image that outputs to display unit.</li> <li>Input the sensor signal from the steering angle sensor, and then control the predicted course line.</li> <li>Camera control unit is connected via AV communication.</li> </ul>			
REAR VIEW CAMERA	<ul> <li>The image from rear camera is transmitted to camera control unit.</li> <li>It receives power (camera ON signal) from camera control unit and operates.</li> </ul>			
AROUND VIEW MONITOR CONTROL UNIT	<ul> <li>It supplies power to front camera, rear camera, and side camera. And then it superimposes the images from each camera and outputs them to display unit.</li> <li>Superimpose the guiding line, predicted course line and sonar indicator to the camera image that outputs to display unit.</li> <li>It performs the reception/transmission of communication signal with each camera.</li> <li>Inputs the sensor signal from steering angle sensor, and then controls the predicted course line.</li> <li>It transmits the sonar operation signal from sonar control unit and receives the sonar information from sonar control unit via AV communication.</li> <li>It transmits the information received/transmitted with sonar control unit via AV communication to AV control unit.</li> </ul>			
FRONT CAMERA	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle front to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>			
REAR CAMERA	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle rear to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>			
SIDE CAMERA LH	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle LH to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>			
SIDE CAMERA RH	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle RH to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>			
INFRARED LED (AUXILIARY LIGHTING)	<ul> <li>It illuminates around the front RH wheel by the power supply from around view monitor control unit to improve nighttime visibility of Front-Side view.</li> <li>The infrared LED is an invisible light ray.</li> </ul>			

# < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Part name	Description
STEERING SWITCH	<ul> <li>Operations for audio, hands-free phone, audio response and navigation, etc. are possible.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>
STEERING ANGLE SENSOR	Steering signal necessary for predicted course line control is transmitted to camera control unit or around view monitor control unit.
MICROPHONE	<ul> <li>Used for hands-free phone operation and voice recognition.</li> <li>Mic signal is transmitted to AV control unit.</li> <li>Power (Mic VCC) is supplied from AV control unit.</li> </ul>
AUXILIARY INPUT JACKS	Image signal of auxiliary input is output to display, and sound signal is output to AV control unit.
GPS ANTENNA	GPS signal is received and transmitted to AV control unit.
ANTENNA BASE	<ul> <li>A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.</li> <li>ANTENNA AMP.</li> <li>Radio signal received by rod antenna is amplified and transmitted to AV control unit.</li> <li>Power (antenna amp. ON signal) is supplied from AV control unit.</li> <li>SATELLITE RADIO ANTENNA</li> <li>Receives satellite radio waves and outputs it to satellite radio tuner.</li> </ul>
iPod ADAPTER	<ul> <li>Inputs iPod sound signal from iPod<sup>®</sup>, and outputs iPod sound signal to AV control unit.</li> <li>Receiving/transmitting of iPod<sup>®</sup> operation signals are performed as follows:</li> <li>between AV control unit and iPod adapter: AV communication.</li> <li>between iPod<sup>®</sup> and iPod adapter: serial communication.</li> </ul>
SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)	<ul> <li>It is connected with around view monitor control unit via AV communication and receives the sonar operation signal from around view monitor control unit.</li> <li>It transmits the sonar detection status to around view monitor control unit via AV communication.</li> <li>It judges the warning level according to the signal from corner sensor and outputs the buzzer drive signal.</li> <li>Trouble diagnosis is supported with CONSULT-III (K-LINE).</li> </ul>
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to sonar control unit.
BUZZER	The warning buzzer outputs with the signal from sonar control unit.

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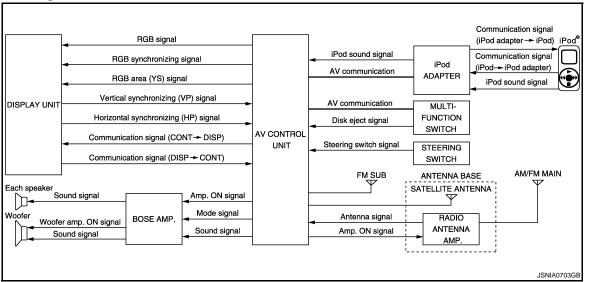
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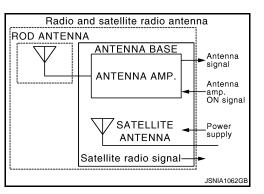
# **AUDIO SYSTEM**

System Diagram



NOTE:

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



INFOID:0000000003515921

# System Description

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

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

### **FUNCTION DESCRIPTION**

### Operating signal

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

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

### AUDIO SYSTEM

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

• Refer to AV-446, "System Description" for explanation of voice recognition function and touch panel function.

### Screen display

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

### AM/FM Radio Mode

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

### Satellite Radio Mode

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

### CD Mode

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

### Music Box Mode

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

### CF Mode

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

### iPod Connection

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

# Driver's Audio Stage Mode

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

# **Component Parts Location**

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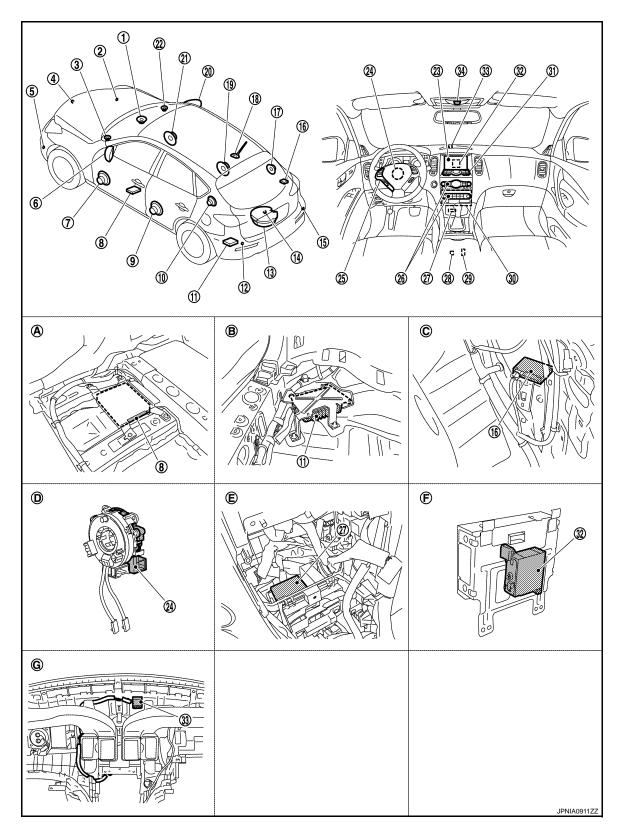
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- Center speaker
- 4. Front camera

- 2. Corner sensor front RH
- 5. Corner sensor front LH

**AV-455** 

- 3. Front squawker LH
- 6. Side camera LH

# **AUDIO SYSTEM**

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# [BOSE AUDIO WITH NAVIGATION]

7.	Front door speaker LH	8.	<ul> <li>Around view monitor control unit (with around view monitor)</li> <li>Camera control unit (with rear view monitor)</li> </ul>	9.	Rear door speaker LH
10.	Rear squawker LH	11.	BOSE amp.	12.	Corner sensor rear LH
13.	Woofer	14.	<ul> <li>Rear camera (with around view monitor)</li> <li>Rear view camera (with rear view monitor)</li> </ul>	15.	Corner sensor rear RH
16.	Buzzer	17.	Rear squawker RH	18.	Antenna base (antenna amp and satellite antenna)
19.	Rear door speaker RH	20.	Side camera RH	21.	Front door speaker RH
22.	Front squawker RH	23.	Display unit	24.	Steering angle sensor
25.	Steering switch	26.	Preset switch	27.	Sonar control unit (with around view monitor)
28.	iPod connector	29.	Auxiliary input jacks	30.	AV control unit
31.	Multifunction switch	32.	iPod adapter	33.	GPS antenna
34.	Microphone				
A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
D.	Spiral cable part	E.	Cluster lid C removed condition	F.	Rear view of the display unit
G.	Instrument panel rear side				

# **Component Description**

INFOID:0000000003515970

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

# **AUDIO SYSTEM**

# < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Part name	Description			
STEERING SWITCH	<ul> <li>Each audio operation can be operated.</li> <li>Steering switch signal (operation signal) is output to AV control unit.</li> </ul>			
MICROPHONE	<ul> <li>It is used for voice activated operation</li> <li>Pronounced voice is converted to voice signal and transmitted to AV control unit.</li> </ul>			
ANTENNA AMP.	<ul> <li>Radio signal received by rod antenna is amplified and transmitted to AV control unit.</li> <li>Power (antenna amp ON. signal) is supplied from AV control unit.</li> </ul>			
SATELLITE RADIO ANTENNA	Audio signal (satellite radio) is received and output to AV control unit.			
iPod ADAPTER	<ul> <li>Inputs iPod sound signal from iPod<sup>®</sup>, and outputs iPod sound signal to AV control unit.</li> <li>Receiving/transmitting of iPod<sup>®</sup> operation signals are performed as follows:</li> <li>between AV control unit and iPod adapter: AV communication.</li> <li>between iPod<sup>®</sup> and iPod adapter: serial communication.</li> </ul>			

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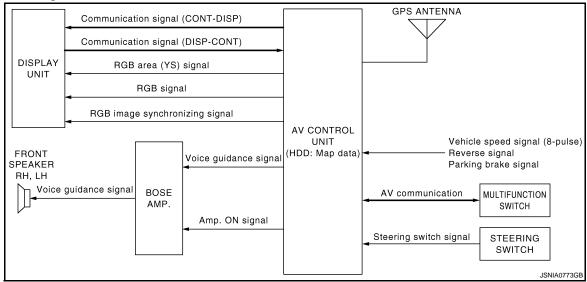
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# NAVIGATION SYSTEM

# System Diagram

INFOID:0000000003160607



# System Description

INFOID:0000000003515971

### DESCRIPTION

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

### POSITION DETECTION PRINCIPLE

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

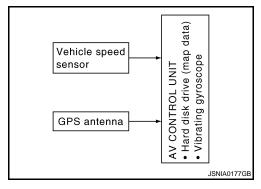
- Travel distance of the vehicle as determined by the vehicle speed sensor
- Vehicle turning angle determined by the gyroscope (angular speed sensor)
- The travel direction of the vehicle determined by the GPS antenna (GPS information)

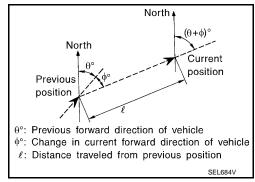
The current position of the vehicle is then identified by comparing the calculated vehicle position with map data, which is stored in the HDD (Hard Disk Drive) (map-matching), and indicated on the screen with the current location mark. More accurate data is used by comparing position detection results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

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

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

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





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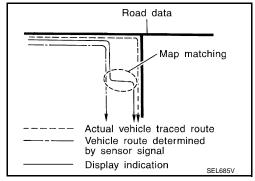
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Туре	Advantage	Disadvantage
Gyroscope (angular velocity sensor)	The turning angle is precisely detected.	Errors are accumulated when driving a long distance without stopping.
GPS antenna (GPS information)	The travel direction (North/South/East/West)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

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

### MAP-MATCHING

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

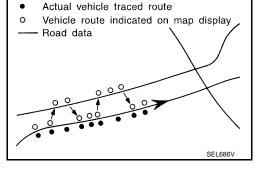


There is a possibility that the vehicle position may not be corrected in the following case, or when vehicle is driven over a certain distance or time in which GPS information is hard to receive. Manually correct the current location mark on the screen.

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

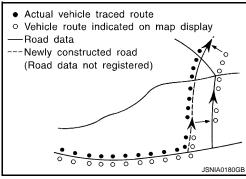
Therefore, due to errors in the distance and/or direction, an incorrect road may be prioritized, and the current location mark may be repositioned to the incorrect road.

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



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

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



GPS (GLOBAL POSITIONING SYSTEM)

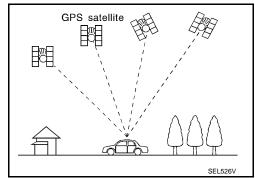
# NAVIGATION SYSTEM

# < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

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

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



Accuracy of the GPS will deteriorate under the following conditions:

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

### NOTE:

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

# **Component Parts Location**

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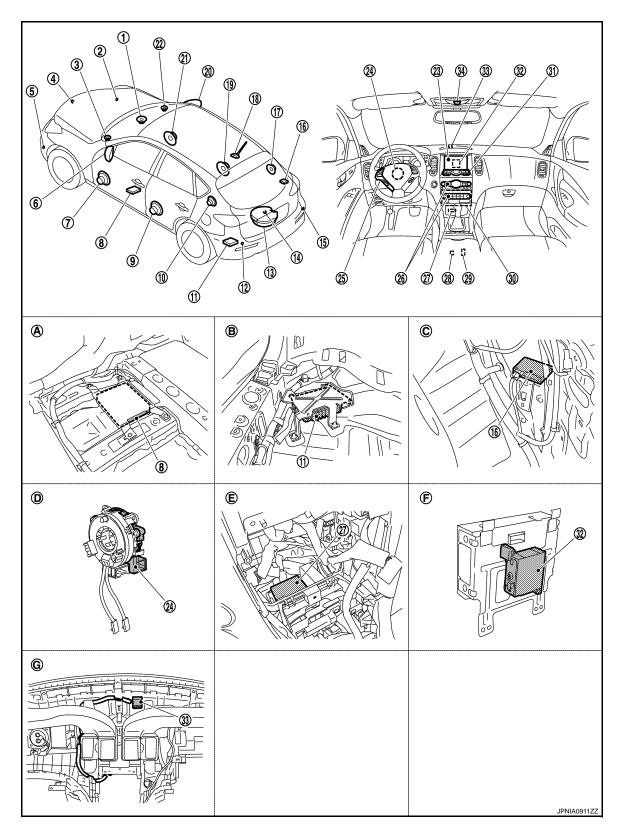
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- Center speaker
- 4. Front camera

- 2. Corner sensor front RH
- 5. Corner sensor front LH
- 3. Front squawker LH
- 6. Side camera LH

# **NAVIGATION SYSTEM**

# < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

7.	Front door speaker LH	8.	<ul> <li>Around view monitor control unit (with around view monitor)</li> <li>Camera control unit (with rear view monitor)</li> </ul>	9.	Rear door speaker LH
10.	Rear squawker LH	11.	BOSE amp.	12.	Corner sensor rear LH
13.	Woofer	14.	<ul> <li>Rear camera (with around view monitor)</li> <li>Rear view camera (with rear view monitor)</li> </ul>	15.	Corner sensor rear RH
16.	Buzzer	17.	Rear squawker RH	18.	Antenna base (antenna amp and satellite antenna)
19.	Rear door speaker RH	20.	Side camera RH	21.	Front door speaker RH
22.	Front squawker RH	23.	Display unit	24.	Steering angle sensor
25.	Steering switch	26.	Preset switch	27.	Sonar control unit (with around view monitor)
28.	iPod connector	29.	Auxiliary input jacks	30.	AV control unit
31.	Multifunction switch	32.	iPod adapter	33.	GPS antenna
34.	Microphone				
A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
D.	Spiral cable part	E.	Cluster lid C removed condition	F.	Rear view of the display unit
G.	Instrument panel rear side				

# **Component Description**

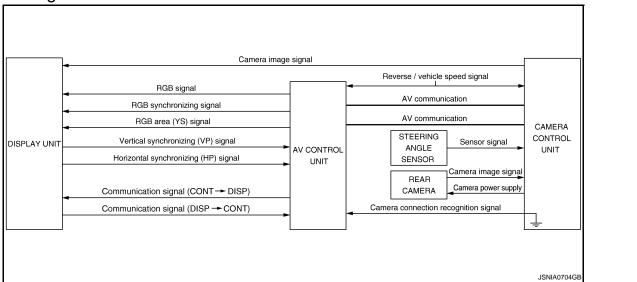
INFOID:0000000003515972

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

Revision: 2007 November 2008 EX35

# **REAR VIEW MONITOR SYSTEM**

# System Diagram



# System Description

INFOID:0000000003515973

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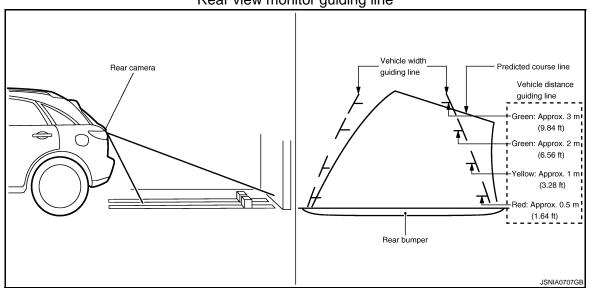
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INFOID:0000000003160615

### CAMERA IMAGE OPERATION PRINCIPLE

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

### Rear view monitor guiding line



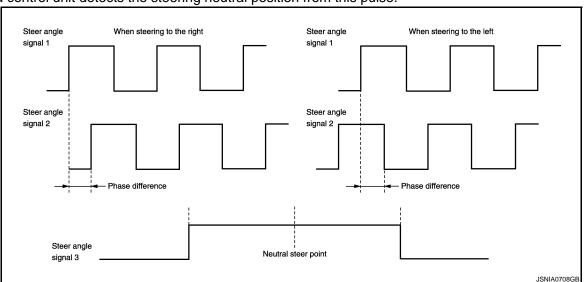
# PREDICTED COURSE LINE OPERATION PRINCIPLE

Detection of steering rotation direction

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

Detection of steering neutral position

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



Correction of steering neutral position

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

# **Component Parts Location**

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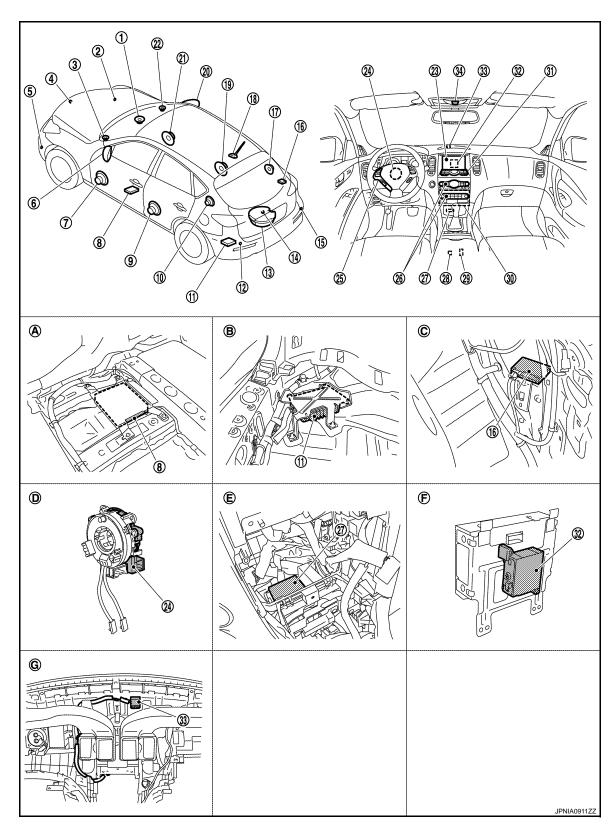
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- Center speaker
- 4. Front camera

- 2. Corner sensor front RH
- 5. Corner sensor front LH
- 3. Front squawker LH
- 6. Side camera LH

# **REAR VIEW MONITOR SYSTEM**

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# [BOSE AUDIO WITH NAVIGATION]

7.	Front door speaker LH	8.	<ul> <li>Around view monitor control unit (with around view monitor)</li> <li>Camera control unit (with rear view monitor)</li> </ul>	9.	Rear door speaker LH
10.	Rear squawker LH	11.	BOSE amp.	12.	Corner sensor rear LH
13.	Woofer	14.	<ul> <li>Rear camera (with around view monitor)</li> <li>Rear view camera (with rear view monitor)</li> </ul>	15.	Corner sensor rear RH
16.	Buzzer	17.	Rear squawker RH	18.	Antenna base (antenna amp and satellite antenna)
19.	Rear door speaker RH	20.	Side camera RH	21.	Front door speaker RH
22.	Front squawker RH	23.	Display unit	24.	Steering angle sensor
25.	Steering switch	26.	Preset switch	27.	Sonar control unit (with around view monitor)
28.	iPod connector	29.	Auxiliary input jacks	30.	AV control unit
31.	Multifunction switch	32.	iPod adapter	33.	GPS antenna
34.	Microphone				
A.	Under front seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
D.	Spiral cable part	E.	Cluster lid C removed condition	F.	Rear view of the display unit
G.	Instrument panel rear side				

# Component Description

INFOID:0000000003515974

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

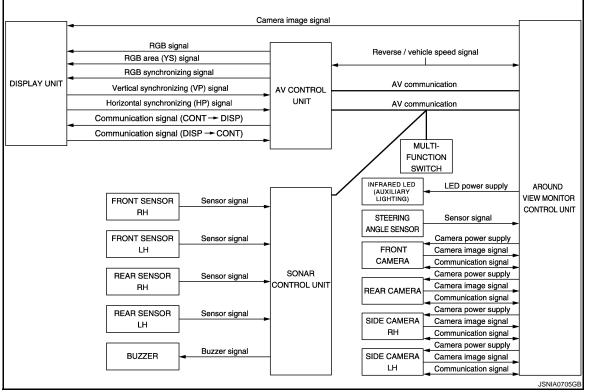
# AROUND VIEW MONITOR SYSTEM

System Diagram

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# System Description

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

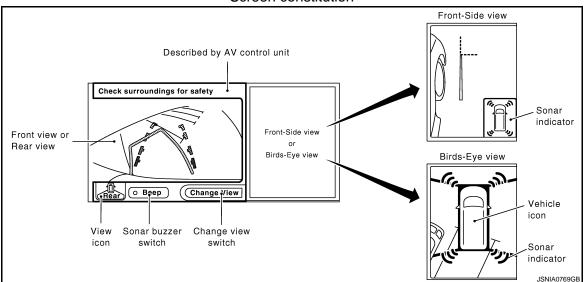
### AROUND VIEW MONITOR SCREEN

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

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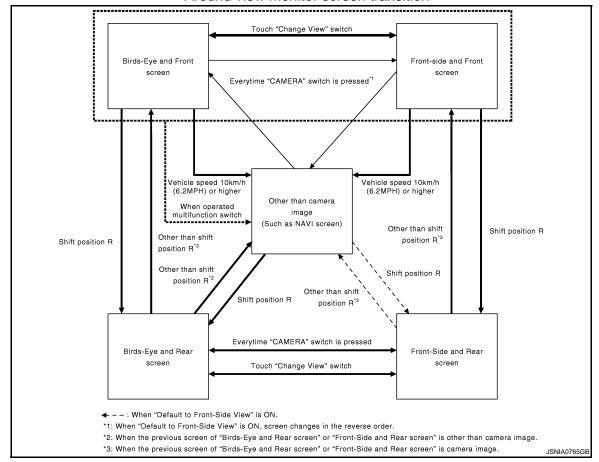
### Screen constitution



### OPERATION DESCRIPTION

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

### Around view monitor screen transition



### FRONT VIEW

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

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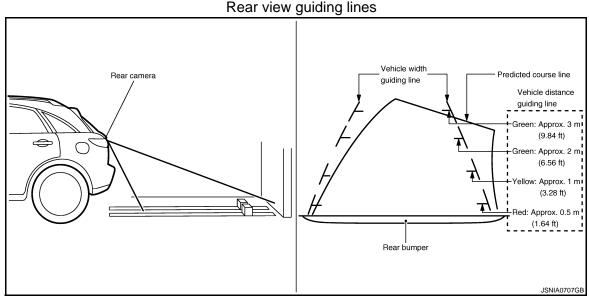
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# Predicted course line Vehicle width guiding line Vehicle distance guiding line Green: Approx. 3 m (9.84 ft) Green: Approx. 2 m (6.56 ft) Yellow: Approx. 1 m (3.28 ft) Red: Approx. 0.5 m (1.64 ft) Front bumper

### **REAR VIEW**

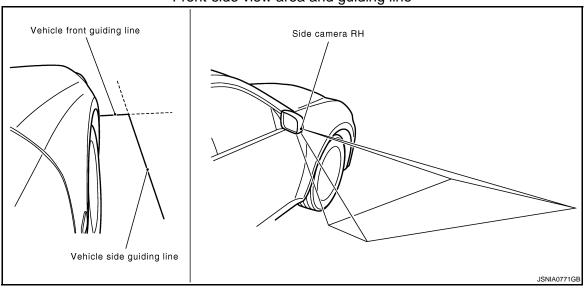
- The rear view image is from the rear camera.
- When the selector lever is in the reverse position, the rear view is displayed. Backing and parking are improved by the images from Birds-Eye view and Front-Side view.
- Display the vehicle width guiding line and vehicle distance guiding line in Rear view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



### FRONT-SIDE VIEW

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

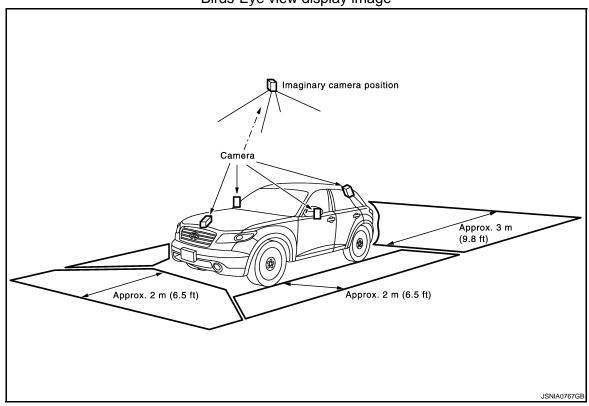
### Front-side view area and guiding line



### **BIRDS-EYE VIEW**

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

### Birds-Eye view display image



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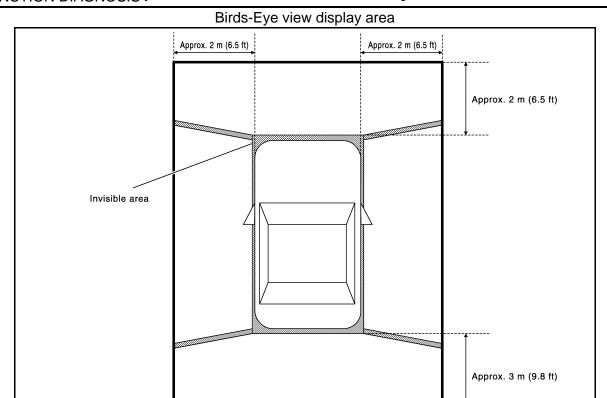
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### CAMERA IMAGE OPERATION PRINCIPLE

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

### PREDICTED COURSE LINE OPERATION PRINCIPLE

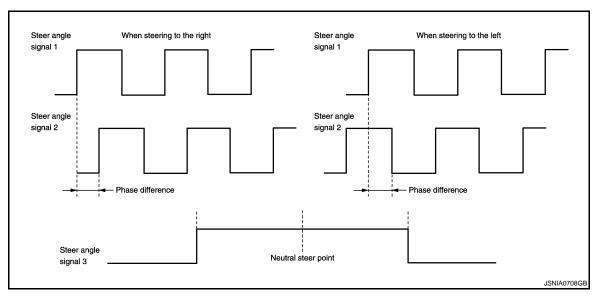
Detection of steering rotation direction

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

Detection of steering neutral position

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

# **AROUND VIEW MONITOR SYSTEM**



Correction of steering neutral position

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

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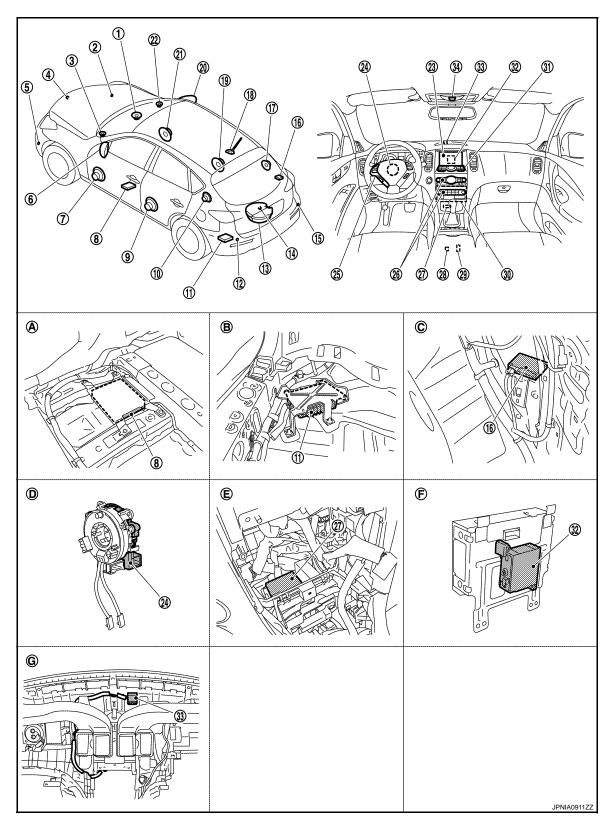
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# **Component Parts Location**

INFOID:0000000003579819



- 1. Center speaker
- 4. Front camera

- 2. Corner sensor front RH
- 5. Corner sensor front LH
- 3. Front squawker LH
- 6. Side camera LH

# **AROUND VIEW MONITOR SYSTEM**

< FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

7.	Front door speaker LH	8.	<ul> <li>Around view monitor control unit (with around view monitor)</li> <li>Camera control unit (with rear view monitor)</li> </ul>	9.	Rear door speaker LH	
10.	Rear squawker LH	11.	BOSE amp.	12.	Corner sensor rear LH	
13.	Woofer	14.	<ul> <li>Rear camera (with around view monitor)</li> <li>Rear view camera (with rear view monitor)</li> </ul>	15.	Corner sensor rear RH	
16.	Buzzer	17.	Rear squawker RH	18.	Antenna base (antenna amp and satellite antenna)	
19.	Rear door speaker RH	20.	Side camera RH	21.	Front door speaker RH	
22.	Front squawker RH	23.	Display unit	24.	Steering angle sensor	
25.	Steering switch	26.	Preset switch	27.	Sonar control unit (with around view monitor)	
28.	iPod connector	29.	Auxiliary input jacks	30.	AV control unit	
31.	Multifunction switch	32.	iPod adapter	33.	GPS antenna	
34.	Microphone					
A.	Under front seat (LH side)	В.	Luggage floor (LH side)	C.	Luggage side RH	
D.	Spiral cable part	E.	Cluster lid C removed condition	F.	Rear view of the display unit	
G.	Instrument panel rear side					

# Component Description

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

Revision: 2007 November AV-475 2008 EX35

# **AROUND VIEW MONITOR SYSTEM**

# < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Part name	Description		
SIDE CAMERA RH	<ul> <li>It inputs the power supply from around view monitor control unit and outputs the image of the vehicle RH to around view monitor control unit.</li> <li>It performs the reception/transmission of the communication signal with around view monitor control unit.</li> </ul>		
INFRARED LED (AUXILIARY LIGHTING)	It illuminates around the front RH wheel by the power supply from around view monitor control unit to improve nighttime visibility of Front-Side view.		
SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)	<ul> <li>It is connected with around view monitor control unit via AV communication and receives the sonar operation signal from around view monitor control unit.</li> <li>It transmits the sonar detection status to around view monitor control unit via AV communication.</li> </ul>		
STEERING ANGLE SENSOR	Steering signal necessary for predicted course line control is transmitted to around view monitor control unit.		

# CAMERA ASSISTANCE SONAR SYSTEM

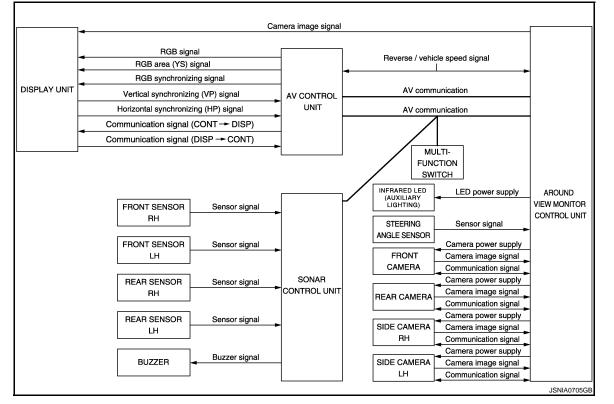
System Diagram

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# System Description

### Description

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

### System operation description

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

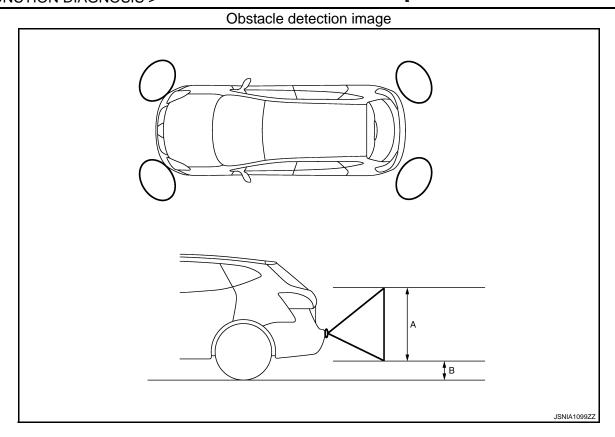
### Obstacle detection distance

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

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A. Approx. 50 cm (19.6 in)

B. Approx. 15 cm (5.9 in)

### Detection distance

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

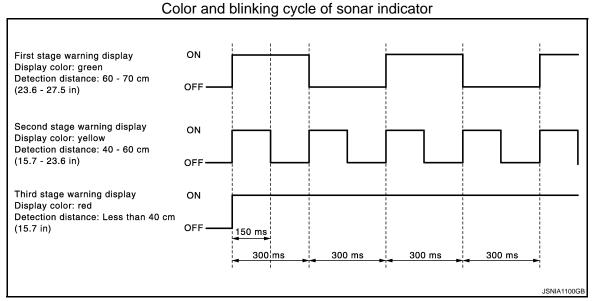
### SONAR INDICATOR DISPLAY

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

# **CAMERA ASSISTANCE SONAR SYSTEM**

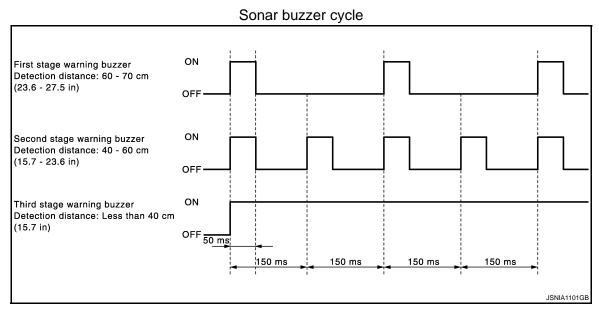
[BOSE AUDIO WITH NAVIGATION]

### < FUNCTION DIAGNOSIS >



### SONAR BUZZER OPERATION

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



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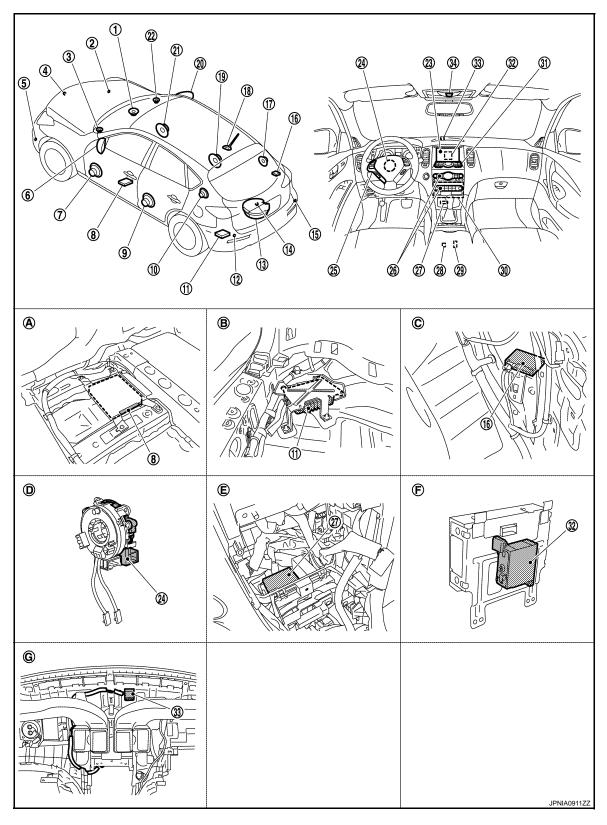
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# **Component Parts Location**

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- 1. Center speaker
- 4. Front camera

- 2. Corner sensor front RH
- 5. Corner sensor front LH
- 3. Front squawker LH
- 6. Side camera LH

# **CAMERA ASSISTANCE SONAR SYSTEM**

# < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

7. Front door	r speaker LH	8.	Around view monitor control unit (with around view monitor)     Camera control unit (with rear view monitor)	9.	Rear door speaker LH
10. Rear squa	awker LH	11.	BOSE amp.	12.	Corner sensor rear LH
13. Woofer		14.	<ul> <li>Rear camera (with around view monitor)</li> <li>Rear view camera (with rear view monitor)</li> </ul>	15.	Corner sensor rear RH
16. Buzzer		17.	Rear squawker RH	18.	Antenna base (antenna amp and satellite antenna)
19. Rear door	speaker RH	20.	Side camera RH	21.	Front door speaker RH
22. Front squa	awker RH	23.	Display unit	24.	Steering angle sensor
25. Steering s	witch	26.	Preset switch	27.	Sonar control unit (with around view monitor)
28. iPod conn	ector	29.	Auxiliary input jacks	30.	AV control unit
31. Multifuncti	ion switch	32.	iPod adapter	33.	GPS antenna
34. Microphor	ne				
A. Under fror	nt seat (LH side)	B.	Luggage floor (LH side)	C.	Luggage side RH
D. Spiral cab	le part	E.	Cluster lid C removed condition	F.	Rear view of the display unit
G. Instrumen	t panel rear side				

# **Component Description**

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

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< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# DIAGNOSIS SYSTEM (AV CONTROL UNIT)

# **Diagnosis Description**

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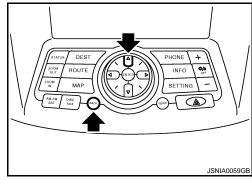
### MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

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

### Self-diagnosis mode

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

The hazard switch and Disk eject switch cannot be checked.



Finishing self-diagnosis mode

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

### MULTI AV SYSTEM ON BOARD DIAGNOSIS FUNCTION

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

### ON BOARD DIAGNOSIS

### Description

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

### On board diagnosis item

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

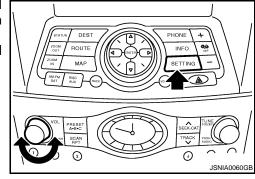
### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

	Mode		Description	
	Display Diagnosis		The following check functions are available: color tone check by color bar display, light and shade check by gray scale display and touch panel calibration response check.	
	Vehicle Signals		Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse.	
	Speaker Test		The connection of a speaker can be confirmed by test tone.	
	Climate Control		Start auto air conditioner system self-diagnosis.	
		Steering Angle Adjustment	When there is a difference between the actual turning angle and the 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.	
		XM SAT Subscription Status	The XM NavTraffic subscription status can be checked.	
	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.	
	Synchronizer FES	clock	-	
Confirmation/	Vehicle CAN Diagi	nosis	The transmitting/receiving of CAN communication can be monitored.	
Adjustment	AV COMM Diagno	sis	The communication condition of each unit of Multi AV system can be monitored.	
	Handsfree Phone		The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.	
		With rear view monitor	The signal connected to camera control unit can be checked and the guiding line position that overlaps rear view camera image can be adjust ed.	
	Camera Cont.	With around view monitor	It can perform the confirmation of a signal connection to around view monitor control unit, the calibration of each camera, Correct Draw Line of Camera Image, and Fine Tuning of Birds-Eye View. Refer to <a href="AV-503">AV-503</a> <a href="mailto:">Diagnosis Description</a> ".	
	Bluetooth		The passkey and the device name can be checked and changed.	
		Change Channel	Any necessary channels required to receive traffic information from the satellite radio system can be set.	
	SAT	Change Application ID	Any application IDs required to receive traffic information from the satel lite radio system can be set.	
		Diag	Not used.	
	Delete Unit Conne	ction Log	Erase the connection history of unit and error history.	
	Initialize Settings		Initializes AV control unit memory.	

### STARTING PROCEDURE

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



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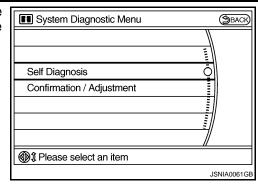
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### < FUNCTION DIAGNOSIS >

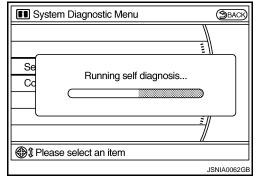
### [BOSE AUDIO WITH NAVIGATION]

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



### **SELF-DIAGNOSIS MODE**

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

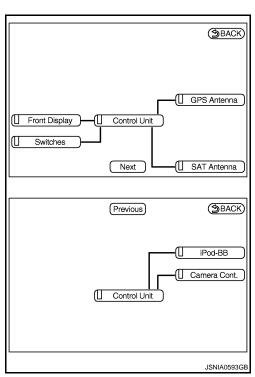


Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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

### NOTE:

- · Only the control unit (AV control unit) is displayed in red.
- Replace AV control unit if "Self-Diagnosis did not run because of a control unit malfunction" is indicated. The symptom is an AV control unit internal error. Refer to <u>AV-903</u>, "<u>Exploded View</u>".
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.



### < FUNCTION DIAGNOSIS >

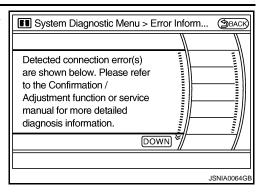
### [BOSE AUDIO WITH NAVIGATION]

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



Detection range of self-diagnosis mode

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

### **SELF-DIAGNOSIS RESULTS**

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

With Rear View Monitor, With Around View Monitor, Without Rear View Monitor and Around View Monitor (common item)

Area with yellow connection lines	Detection logic	Possible malfunction location / Action to take	F
Previous    GPS Antenna	When either one of the following items are detected:  AV control unit power supply or ground circuits malfunction are detected.  AV control unit malfunction is detected.	<ul> <li>AV control unit power supply and ground circuits.</li> <li>When there is no malfunction, AV control unit is malfunctioning.</li> </ul>	J J K L L AV

# [BOSE AUDIO WITH NAVIGATION]

Area with yellow connection lines	Detection logic	Possible malfunction location / Action to take
Previous    Previous   SBACK   IPod-BB   IPod-	Malfunction is detected in the Camera-connection recognition signal circuit.	Camera connection recognition signal circuit.
GPS Antenna    GPS Antenna   Switches	GPS antenna connection malfunction is detected.	GPS antenna.
GPS Antenna    GPS Antenna     Switches     SAT Antenna     Gray : Yellow     JSNIA0598GB	Poor connection is detected in satellite radio antenna.	<ul> <li>Satellite radio antenna feeder.</li> <li>Satellite radio antenna.</li> </ul>
Front Display Control Unit Switches Next SAT Antenna  I Gray SAT Antenna JSNIA0599GB	Malfunction are detected in the communication circuits between AV control unit and display unit.	Communication circuits between AV control unit and display unit.

# < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

communication circuits between camera control unit and iPod adapter.  Previous  When either one of the following items are detected:  iPod adapter power supply or ground circuits malfunction are detected.  Malfunction is detected in the AV communication circuits between around view monitor control unit and iPod adapter.  Previous  Previous  Previous  Around view  Around view  Around view  Around view  Around view  Around view  Around view monitor control unit and iPod. BB  Around view monitor control unit and iPod adapter.	Area with yellow connection lines	Detection logic	Possible malfunction location / Action to take
When either one of the following items are detected:  iPod adapter power supply or ground circuits malfunction are detected.  Malfunction is detected in the AV communication circuits between around view monitor control unit and iPod adapter.  Previous  Around view  Around view monitor control unit power supply or ground circuits between around view monitor control unit and iPod adapter.  Around view monitor control unit power supply or ground circuits malfunction are detected.  Around view monitor control unit power supply or ground circuits malfunction are detected.  Around view monitor control unit power supply or ground circuits malfunction are detected.  Around view monitor control unit power supply and ground circuits malfunction are detected.	iPod-BB  Camera Cont.	<ul> <li>items are detected:</li> <li>iPod adapter power supply or ground circuits malfunction are detected.</li> <li>Malfunction is detected in the AV communication circuits between camera control unit and iPod adapt-</li> </ul>	ground circuits.  • AV communication circuits between camera control unit and iPod adapt-
Around view monitor control unit power supply or ground circuits malfunction are detected.  Around view monitor control unit power supply and ground circuits	Sonar  Around view  I Pod-BB  Control Unit	<ul> <li>items are detected:</li> <li>iPod adapter power supply or ground circuits malfunction are detected.</li> <li>Malfunction is detected in the AV communication circuits between around view monitor control unit</li> </ul>	ground circuits.  • AV communication circuits between around view monitor control unit
■: Gray: Yellow JSNIA1102GB	Sonar  Around view    I Around view   I I I I I I I I I I I I I I I I I I	er supply or ground circuits malfunc-	Around view monitor control unit power supply and ground circuits

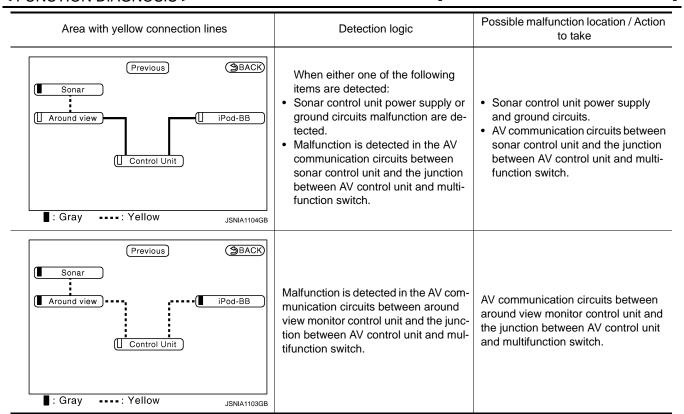
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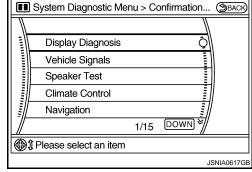
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### [BOSE AUDIO WITH NAVIGATION]



### CONFIRMATION/ADJUSTMENT MODE

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



### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

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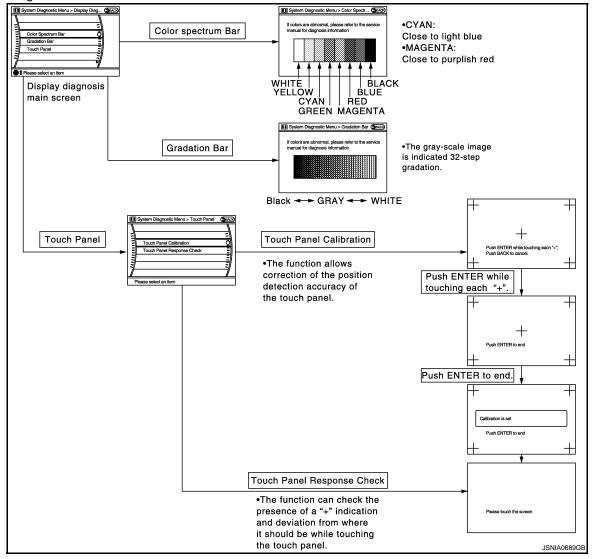
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### Display Diagnosis



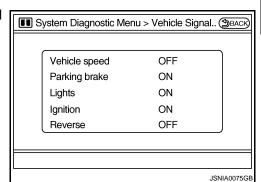
The tint of the color bar indication is as per the following list if a RGB signal error is detected.

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

B (blue) signal error : Yellow tint

### Vehicle Signals

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



### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

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

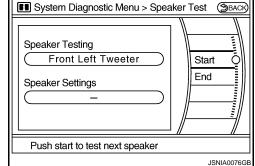
### Speaker Test

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

### NOTE:

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

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



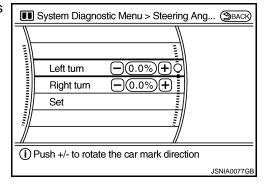
### Climate Control

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

### Navigation

### STEERING ANGLE ADJUSTMENT

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



**SPEED CALIBRATION** 

<sup>\*:</sup> Squawker

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

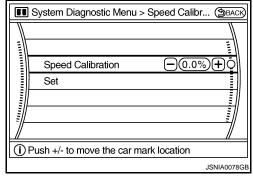
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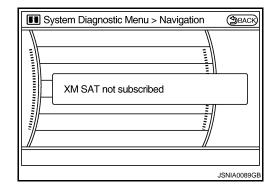
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During normal driving, distance error caused by tire wear and tire pressure change is automatically adjusted for by the automatic distance correction function. This function, on the other hand, is for immediate adjustment, in cases such as driving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



### XM SAT SUBSCRIPTION STATUS

The XM NavTraffic subscription status can be checked.



### **Error History**

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

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

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

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

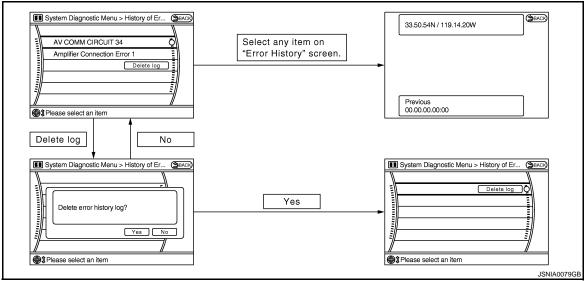
### Count up method A

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

### Count up method B

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

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



Error item

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

Error item	Detection logic	Possible malfunction factor/Action to take	
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results.  Refer to AV-498, "CONSULT-III Function (MULTI AV)".	
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.		
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.		
FLASH-ROM Error Of Control Unit			
Connection Of Gyro		Replace AV control unit.	
XM SERIAL COMM Error			
CAN Controller Memory Error			
Bluetooth Module Connection Error			
HDD CONN Error	AV control unit malfunction is detected.		
HDD READ Error	Av control unit mailunction is detected.		
HDD WRITE Error			
HDD COMM Error			
HDD ACCESS Error			
DSP CONN Error			
DSP COMM Error			
Internal Communication Error	When either one of the following items are detected:  Malfunction is detected in AV control unit power supply or ground circuits.  AV control unit malfunction is detected.	AV control unit power supply and ground circuits.     When there is no malfunction, AV control unit is malfunctioning.	
GPS Communication Error		An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.  Replace AV control unit if the malfunction occurs constantly.	
GPS ROM Error			
GPS RAM Error	GPS malfunction is detected.		
GPS RTC Error			

# < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Error item	Detection logic	Possible malfunction factor/Action to take	
Front Display Connection Error	When either one of the following items are detected: Display unit power supply or ground circuits malfunction are detected. Malfunction is detected in the communication circuits between AV control unit and display unit.	<ul> <li>Display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and display unit.</li> </ul>	
GPS Antenna Error	GPS antenna connection malfunction is detected.	GPS antenna.	
Camera Control Unit Connection Error	Malfunction is detected in the camera con- nection recognition circuit between AV con- trol unit and camera control unit.	Camera-connection recognition circuit between AV control unit and camera control unit.	
XM Antenna Connection Error	Poor connection is detected in satellite radio antenna.	Satellite radio antenna feeder.     Satellite radio antenna.	
AV COMM CIRCUIT     Internal Communication Error	When either one of the following items are detected:  AV control unit power supply or ground circuits malfunction are detected.  AV control unit malfunction is detected.	AV control unit power supply and ground circuits.     When there is no malfunction, AV control unit is malfunctioning.	
	WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR When either one of the following items are detected:  • Multifunction switch power supply or ground circuits malfunction are detected.  • Malfunction is detected in the AV communication circuits between multifunction switch and the junction between AV control unit and iPod adapter.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between multifunction switch and the junction between AV control unit and iPod adapter.</li> </ul>	
AV COMM CIRCUIT     Switches Connection Error	WITH REAR VIEW MONITOR When either one of the following items are detected:  • Multifunction switch power supply or ground circuits malfunction are detected.  • Malfunction is detected in the AV communication circuits between multifunction switch and the junction between AV control unit and camera control unit.	Multifunction switch power supply and ground circuits.     AV communication circuits between multifunction switch and the junction between AV control unit and camera control unit.	
	WITH AROUND VIEW MONITOR When either one of the following items are detected:  • Multifunction switch power supply or ground circuits malfunction are detected.  • Malfunction is detected in the AV communication circuits between multifunction switch and the junction between AV control unit and around view monitor control unit.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between multifunction switch and the junction between AV control unit and around view monitor control unit.</li> </ul>	
AV COMM CIRCUIT     Rearview Camera Connection Error	Camera control unit power supply or ground circuits malfunction is detected.	Camera control unit power supply and ground circuits.	

# [BOSE AUDIO WITH NAVIGATION]

Error item	Detection logic	Possible malfunction factor/Action to take
	WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR When either one of the following items are detected:  iPod adapter power supply or ground circuits malfunction are detected.  Malfunction is detected in the AV communication circuits between camera control unit and iPod adapter.	WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR  • iPod adapter power supply and ground circuits.  • AV communication circuits between multifunction switch and iPod adapter.
<ul><li>AV COMM CIRCUIT</li><li>iPod Connection Error</li></ul>	WITH REAR VIEW MONITOR When either one of the following items are detected:  • iPod adapter power supply or ground circuits malfunction are detected.  • Malfunction is detected in the AV communication circuits between camera control unit and iPod adapter.	WITH REAR VIEW MONITOR  • iPod adapter power supply and ground circuits.  • AV communication circuits between camera control unit and iPod adapter.
	WITH AROUND VIEW MONITOR When either one of the following items are detected:  • iPod adapter power supply or ground circuits malfunction are detected.  • Malfunction is detected in the AV communication circuits between around view monitor control unit and iPod adapter.	WITH AROUND VIEW MONITOR  • iPod adapter power supply and ground circuits.  • AV communication circuits between around view monitor control unit and iPod adapter.
AV COMM CIRCUIT     AVM Connection Error	Around view monitor control unit power supply or ground circuits malfunction is detected.	Around view monitor control unit power supply and ground circuits.
AV COMM CIRCUIT     AVM Sonar Connection Error	When either one of the following items are detected: Sonar control unit power supply or ground circuits malfunction are detected. Malfunction is detected in the AV communication circuits between sonar control unit and the junction between AV control unit and multifunction switch.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between sonar control unit and the junction between AV control unit multifunction switch.</li> </ul>
AV COMM CIRCUIT     Switches Connection Error     iPod Connection Error	Malfunction is detected in the AV communication circuits between AV control unit and the junction between multifunction and iPod adapter.	AV communication circuits between AV control unit and the junction between multifunction and iPod adapter.
AV COMM CIRCUIT     Rearview Camera Connection Error     iPod Connection Error	Malfunction is detected in the AV communication circuits between camera control unit and the junction between AV control unit and multifunction switch.	AV communication circuits between camera control unit and the junction between AV control unit and multifunction switch.
<ul> <li>AV COMM CIRCUIT</li> <li>Switches Connection Error</li> <li>Rearview Camera Connection Error</li> <li>iPod Connection Error</li> </ul>	Malfunction is detected in the AV communication circuits between AV control unit and the junction between camera control unit and multifunction switch.	AV communication circuits between AV control unit and the junction between camera control unit and multifunction switch.
<ul> <li>AV COMM CIRCUIT</li> <li>iPod Connection Error</li> <li>AVM Connection Error</li> </ul>	Malfunction is detected in the AV communication circuits between around view monitor control unit and the junction between AV control unit and multifunction switch.	AV communication circuits between around view monitor control unit and the junction between AV control unit and multifunction switch.
<ul> <li>AV COMM CIRCUIT</li> <li>Switches Connection Error</li> <li>iPod Connection Error</li> <li>AVM Connection Error</li> </ul>	Malfunction is detected in the AV communication circuits between AV control unit and the junction between around view monitor control unit and multifunction switch.	AV communication circuits between AV control unit and the junction between around view monitor control unit and multifunction switch.

### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Error item	Detection logic	Possible malfunction factor/Action to take
AV COMM CIRCUIT     Internal Communication Error     Switches Connection Error     Rearview Camera Connection Error     iPod Connection Error	Malfunction is detected in the AV communication circuits.	Check and repair the short circuit in AV communication circuits.
AV COMM CIRCUIT     Internal Communication Error     Switches Connection Error     iPod Connection Error     AVM Connection Error	Malfunction is detected in the AV communication circuits.	Check and repair the short circuit in AV communication circuits.

### Vehicle CAN Diagnosis

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

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

### **AV COMM Diagnosis**

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

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

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System Diag	nostic Menu	ı > Vehi	CIE CAN (SBACE
Signal Tx(HVAC) Rx(ECM) Rx(Cluster) Rx(BCM) Rx(HVAC) Rx(USM)	Status OK OK OK OK OK OK OK	Count OK OK OK OK OK	Checking
		·	JSNIA00800

System Diagnostic Menu > AV COMM Di (S)BACK)			
Signal C Tx(ITM-PrimarySW) C Rx(PrimarySW-ITM) C Rx(STRG SW-ITM) C Rx(Audio-ITM) C Rx(Amp-ITM) C Rx(RearCamera-ITM) C Rx(XM-ITM)	Status OK OK OK OK	Count. OK OK OK OK OK OK OK OK	Checking \
			JSNIA0081GE

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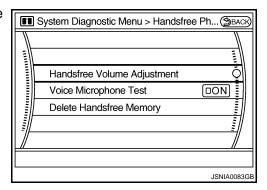
### < FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

- Any units with "—" displayed have no history of vehicle connection.
- "Audio" and "Amp" indicate the same status because "Amp" indicates the status of the amplifier integrated in AV control unit.
- "STRG SW", "Amp" and "XM" indicate the same status as "Audio".

### Hands-Free Phone

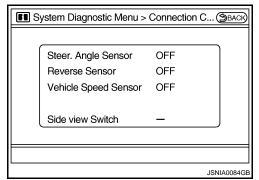
The hands-free phone reception volume adjustment, microphone and speaker test, and memory erase functions are also available.



Camera Cont. (With Rear View Monitor)

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

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



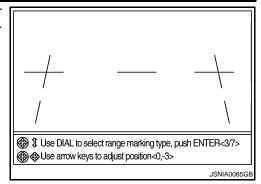
Diagnosis item	Display	Vehicle status
	ON	When steering the vehicle with ignition switch ON (remains ON until connection mode is stopped when it is turned ON)
Steer. Angle Sensor	OFF	Ignition switch at ACC     No steering with ignition switch ON
	_	Malfunction detected in camera connection recognition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

ADJUST OFFSET OF REAR VIEW CAMERA

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

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

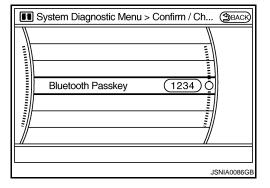


Camera Cont. (With Around View Monitor) Refer to AV-503, "Diagnosis Description".

### Bluetooth

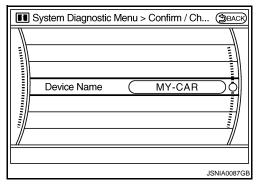
Confirm / Change Passkey

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



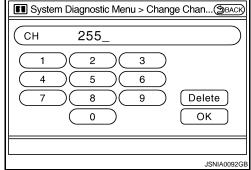
### Confirm / Change Device Name

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



### SAT

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



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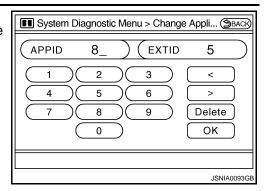
0

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### < FUNCTION DIAGNOSIS >

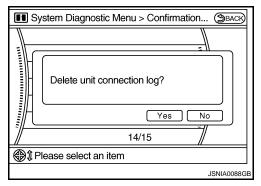
### [BOSE AUDIO WITH NAVIGATION]

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



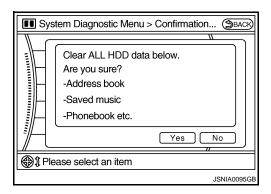
### Delete Unit Connection Log

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



Initialize Settings

Deletes data stored in HDD.



# CONSULT-III Function (MULTI AV)

INFOID:0000000003465022

### **CONSULT-III FUNCTIONS**

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

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

### AV COMMUNICATION

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

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

### **ECU IDENTIFICATION**

The part number of AV control unit is displayed.

### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

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# **SELF DIAGNOSIS RESULT**

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

Self-diagnosis results display item

Error item	Description	Possible malfunction factor/Action to take	
CAN COMM CIRCUIT[U1000]	CAN communication malfunction is detected.	Refer to AV-508, "Diagnosis Procedure".	
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.		
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.		
Control Unit FLASH-ROM [U1200]			
Gyro NO CONN [U1201]			
CAN CONT [U1216]			
BLUETOOTH CONN [U1217]			
HDD CONN [U1218]		Replace AV control unit.	
HDD READ [U1219]			
XM SERIAL COMM [U1220]	AV control unit malfunction is detected.		
HDD WRITE [U121A]			
HDD COMM [U121B]			
HDD ACCESS [U121C]			
DSP CONN [U121D]			
DSP COMM [U121E]			
INTERNAL COMM [U121F]	<ul> <li>When either one of the following items are detected:</li> <li>Malfunction is detected in AV control unit supply or ground circuit.</li> <li>AV control unit malfunction are detected.</li> </ul>	<ul> <li>AV control unit power supply and ground circuits.</li> <li>When there is no malfunction, AV control unit is malfunctioning.</li> </ul>	
GPS COMM [U1204]		An intermittent error caused by strong radio	
GPS ROM [U1205]		interference may be detected unless any symptom (GPS reception error, etc.) occurs.	
GPS RAM [U1206]	GPS malfunction is detected.		
GPS RTC [U1207]		Replace AV control unit if the malfunction occurs constantly.	
FRONT DISP CONN [U1243]	<ul> <li>When either one of the following items are detected:</li> <li>Display unit power supply or ground circuits malfunction are detected.</li> <li>Malfunction is detected in the communication circuits between AV control unit and display unit.</li> </ul>	<ul> <li>Display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and AV display unit.</li> </ul>	
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna.	
CAMERA CONT CONN [U1250]	Malfunction is detected in the camera con- nection recognition circuit between AV con- trol unit and camera control unit.	Camera-connection recognition circuit between AV control unit and camera control unit.	
XM ANTENNA CONN [U1258]	Poor connection is detected in satellite radio antenna.	Satellite radio antenna feeder.     Satellite radio antenna.	
AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]	<ul> <li>When either one of the following items are detected:</li> <li>AV control unit power supply or ground circuits malfunction are detected.</li> <li>AV control unit malfunction are detected.</li> </ul>	<ul> <li>AV control unit power supply and ground circuits.</li> <li>When there is no malfunction, AV control unit is malfunctioning.</li> </ul>	

# [BOSE AUDIO WITH NAVIGATION]

Error item	Description	Possible malfunction factor/Action to take
	WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR When either one of the following items are detected:  Multifunction switch power supply or ground circuits malfunction are detected.  Malfunction is detected in the AV communication circuits between multifunction switch and the junction between AV control unit and iPod adapter.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between multifunction switch and the junction between AV control unit and iPod adapter.</li> </ul>
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	WITH REAR VIEW MONITOR When either one of the following items are detected:  Multifunction switch power supply or ground circuits malfunction are detected.  Malfunction is detected in the AV communication circuits between multifunction switch and the junction between AV control unit and camera control unit.	Multifunction switch power supply and ground circuits.     AV communication circuits between multifunction switch and the junction between AV control unit and camera control unit.
	WITH AROUND VIEW MONITOR When either one of the following items are detected:  • Multifunction switch power supply or ground circuits malfunction are detected.  • Malfunction is detected in the AV communication circuits between multifunction switch and the junction between AV control unit and around view monitor control unit.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between multifunction switch and the junction between AV control unit and around view monitor control unit.</li> </ul>
AV COMM CIRCUIT [U1300]     REAR CAMERA LAN CONN [U1252]	Camera control unit power supply or ground circuits malfunction is detected.	Camera control unit power supply and ground circuits.
	WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR When either one of the following items are detected:  • iPod adapter power supply or ground circuits malfunction are detected.  • Malfunction is detected in the AV communication circuits between iPod adapter and the junction between AV control unit and multifunction switch.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between iPod adapter and the junction between AV control unit and multifunction switch.</li> </ul>
AV COMM CIRCUIT [U1300]     IPod CONN [U1254]	WITH REAR VIEW MONITOR When either one of the following items are detected:  • iPod adapter power supply or ground circuits malfunction are detected.  • Malfunction is detected in the AV communication circuits between camera control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between camera control unit and iPod adapter.</li> </ul>
	WITH AROUND VIEW MONITOR When either one of the following items are detected:  • iPod adapter power supply or ground circuits malfunction is detected.  • Malfunction is detected in the AV communication circuits between around view monitor control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between around view monitor control unit and iPod adapter.</li> </ul>
AV COMM CIRCUIT [U1300]     AROUND CAMERA CONN [U125B]	Around view monitor control unit power supply or ground circuits malfunction is detected.	Around view monitor control unit power supply and ground circuits.

### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Error item	Description	Possible malfunction factor/Action to take
AV COMM CIRCUIT [U1300]     SONAR CONN [U125C]	When either one of the following items are detected: Sonar control unit power supply or ground circuit malfunction are detected. Malfunction is detected in the AV communication circuits between sonar control unit and the junction between AV control unit and multifunction switch.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between sonar control unit and the junction between AV control unit and multifunction switch.</li> </ul>
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]     IPod CONN [U1254]	Malfunction is detected in the AV communication circuits between AV control unit and the junction between multifunction switch and iPod adapter.	AV control unit and the junction between multifunction switch and iPod adapter.
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>REAR CAMERA LAN CONN [U1252]</li> <li>IPod CONN [U1254]</li> </ul>	Malfunction is detected in the AV communication circuits between camera control unit and the junction between AV control unit and multifunction switch.	AV communication circuits between camera control unit and the junction between AV control unit and multifunction switch.
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>REAR CAMERA LAN CONN [U1252]</li> <li>IPod CONN [U1254]</li> </ul>	Malfunction is detected in the AV communication circuits between AV control unit and the junction between camera control unit and multifunction switch.	AV communication circuits between AV control unit and the junction between camera control unit and multifunction switch.
AV COMM CIRCUIT [U1300]     IPod CONN [U1254]     AROUND CAMERA CONN [U125B]	Malfunction is detected in the AV communication circuits between around view monitor control unit and the junction between AV control unit and multifunction switch.	AV communication circuits between around view monitor control unit and the junction between AV control unit and multifunction switch.
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>IPod CONN [U1254]</li> <li>AROUND CAMERA CONN [U125B]</li> </ul>	Malfunction is detected in the AV communication circuits between AV control unit and the junction between around view monitor control unit and multifunction switch.	AV communication circuits between AV control unit and the junction between around view monitor control unit and multifunction switch.
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>INTERNAL COMM [U121F]</li> <li>SWITCH CONN [U1240]</li> <li>IPod CONN [U1254]</li> </ul>	Malfunction is detected in the AV communication circuits.	Check and repair the short circuit in AV communication circuits.
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>INTERNAL COMM [U121F]</li> <li>SWITCH CONN [U1240]</li> <li>REAR CAMERA LAN CONN [U1252]</li> <li>IPod CONN [U1254]</li> </ul>	Malfunction is detected in the AV communication circuits.	Check and repair the short circuit in AV communication circuits.
<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>INTERNAL COMM [U121F]</li> <li>SWITCH CONN [U1240]</li> <li>IPod CONN [U1254]</li> <li>AROUND CAMERA CONN [U125B]</li> </ul>	Malfunction is detected in the AV communication circuits.	Check and repair the short circuit in AV communication circuits.

### **DATA MONITOR**

### **ALL SIGNALS**

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

Display Item	Display	Vehicle status	Remarks	
VHCL SPD SIG	On	Vehicle speed > 0 km/h (0 MPH)		
VIIOL OF DISIO	Off	Vehicle speed = 0 km/h (0 MPH)	Changes in indication may be delayed. This is	
PKB SIG	On	Parking brake is applied.	normal.	
FRD SIG	Off	Parking brake is released.		

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# < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Display Item	Display	Vehicle status	Remarks	
ILLUM SIG	On	Block the light beam from the auto light optical sensor when the light SW is ON.		
ILLUM SIG	Off	Expose the auto light optical sensor to light when the light SW is OFF or ON.	_	
IGN SIG	On	Ignition switch ON		
	Off	Ignition switch in the ACC position		
REV SIG	On	Shift the selector lever to the "R" position	Changes in indication may be delayed. This is	
NEV 3IG	Off	Shift the selector lever to a position other than the "R" position	normal.	

### **SELECTION FROM MENU**

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

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

# **DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)** [BOSE AUDIO WITH NAVIGATION]

< FUNCTION DIAGNOSIS >

# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

# Diagnosis Description

The diagnosis function of around view monitor control unit is displayed when selecting "Camera Cont." of Confirmation/Adjustment mode in the multi AV system.

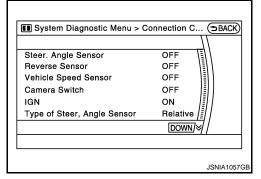
Around view monitor control unit diagnosis item

AV control unit Confirmation/Adjustment mode			Function
	Connection Confirm	ation	The status of signals input to around view monitor control unit can be checked.
		Rear Camera	Performs the calibration of rear camera.
		Pass-Side Camera	Performs the calibration of side camera LH.
	Calibrating Cam-	Front Camera	Performs the calibration of front camera.
Camera Cont.	era Image	Dr-Side Camera	Performs the calibration of side camera.
		Initialize Camera Image Calibration*	The calibration can be initialized to NISSAN factory shipment condition.
		Rear View	The position of rear view guiding line can be changed.
	Correct Draw Line of Camera Image	Front-Side View	The position of Front-Side view guiding line can be changed.
	or camera image	Front View	The position of front view guiding line can be changed.
	Fine Tuning of Birds-Eye View		<ul> <li>The confirmation and adjustment of the difference between each camera can be performed.</li> <li>The system changes to the ZOOM function by the operation of shift and the ZOOM ratio of each camera can be changed</li> </ul>

### **CAUTION:**

### **Connection Confirmation**

The status of signals inputted to around view monitor control unit can be checked.



Connection Confirmation item list

Diagnosis item	Display	Description
Steer. Angle Sensor	ON/OFF	<ul> <li>Input status of steering angle sensor is displayed by ON/OFF.</li> <li>When all of steering signals 1, 2, and 3 are input, it is turned ON. It remains ON until connection confirmation mode is stopped.</li> </ul>
Reverse Sensor	ON/OFF	Input status of reverse signal inputted to around view monitor control unit is displayed by ON/OFF in real time.
Vehicle Speed Sensor	ON/OFF	<ul> <li>Input status of vehicle speed signal inputted to around view monitor control unit is displayed by ON/OFF.</li> <li>When the vehicle speed signal is input, it is turned ON. It remains ON until connection confirmation mode is stopped.</li> </ul>
Camera Switch	ON/OFF	<ul> <li>The status of camera switch signal received via AV communication from AV control unit is displayed by ON/OFF.</li> <li>When the camera switch signal is received once, it is turned ON. It remains ON until connection confirmation mode is stopped.</li> </ul>
IGN	ON/OFF	Input status of ignition signal inputted to around view monitor control unit is displayed by ON/OFF in real time.

**AV-503** Revision: 2007 November 2008 EX35

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<sup>\*:</sup> Never perform other operations for approximately 10 seconds after performing "Initialize Camera Image Calibration".

# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT) [BOSE AUDIO WITH NAVIGATION]

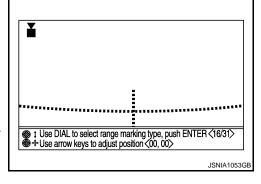
>
>

Diagnosis item	Display	Description
Type of Steer. Angle Sensor	Relative	The input type of steering angle sensor is displayed. ("Relative" is displayed on this model.)
Type of Steer. Gear ratio	1	The type of steering gear ratio is displayed. ("1" is displayed on this model.)
Left or Right Steer.	Left	The steering position is displayed. ("Left" is displayed on this model.)
Rear Camera Image Output signal	OK / NG	The input status of rear camera image signal is displayed by OK/NG in real time.
Rear Camera COMM Status	OK / NG	The communication status with rear camera is displayed by OK/NG in real time.
Rear Camera COMM Line	OK / NG	The status of communication line with rear camera is displayed by OK/NG in real time.
Front Camera Image Output signal	OK / NG	The input status of front camera image signal is displayed by OK/NG in real time.
Front Camera COMM Status	OK / NG	The communication status with front camera is displayed by OK/NG in real time.
Front Camera COMM Line	OK / NG	The status of communication line with front camera is displayed by OK/NG in real time.
Pass-Side Camera Image Output signal	OK / NG	The input status of side camera RH image signal is displayed by OK/NG in real time.
Pass-Side Camera COMM Status	OK / NG	The communication status with side camera RH is displayed by OK/NG in real time.
Pass-Side Camera COMM Line	OK / NG	The status of communication line with side camera RH is displayed by OK/NG in real time.
Dr-Side Camera Image Output signal	OK / NG	The input status of side camera LH image signal is displayed by OK/NG in real time.
Dr-Side Camera COMM Status	OK / NG	The communication status with side camera LH is displayed by OK/NG in real time.
Dr-Side Camera COMM Line	OK / NG	The status of communication line with side camera LH is displayed by OK/NG in real time.

### Calibrating Camera Image

- Perform the calibration of camera image caused by the incorrect mounting position of each camera, etc. Always perform calibration after performing the following work.
- When each camera or each camera mount (door mirror, front grille, etc.) is removed
- When replacing around view monitor control unit
- When performing the calibration initialization, it can be set to the NISSAN factory shipment condition.

Refer to AV-438, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement" for the calibration procedure.



**Adjustment range** 

Rotating direction : 31 patterns (16 on the

center)

Upper/lower direction : -99 - 99 Left/right direction : -99 - 99

Calibrating Camera Image item

Items	Description
Rear Camera	Performs the calibration of rear camera.
Pass-Side Camera	Performs the calibration of side camera RH.
Front Camera	Performs the calibration of front camera.
Dr-Side Camera	Performs the calibration of side camera LH.
Initialize Camera Image Calibration*	The calibration can be initialized to the factory shipment setting.

### **CAUTION:**

<sup>\*:</sup> Never perform other operations for approximately 10 seconds after performing "Initialize Camera Image Calibration".

# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

#### < FUNCTION DIAGNOSIS >

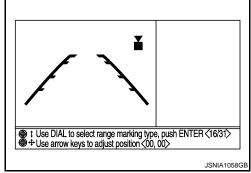
[BOSE AUDIO WITH NAVIGATION]

#### Correct Draw Line of Camera Image

The display position of guiding lines when displayed on the rear view, front view, and front-side view can be changed.

Adjustment range

Rotating direction : 31 patterns **Upper/lower direction** = -25 - 25**Left/right direction** : -25 - 25



Correct Draw Line of Camera Image item

Items	Description
Rear View	The position of rear view guiding line can be changed.
Front-Side View	The position of Front-Side view guiding line can be changed.
Front View	The position of Front view guiding line can be changed.

#### Fine Tuning of Birds-Eye View

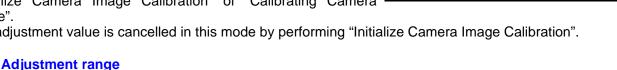
- The fine adjustment function of camera calibration can check and adjust the difference between each camera.
- Fine adjustments can be performed for each camera. Move the "+"-mark to select the camera by pressing the "CAMERA" switch.
- Perform the adjustment with the center dial and upper/lower/left/ right switches.

#### **CAUTION:**

Operate the center dial slowly because the changing of the screen takes approximately 1 second.

#### NOTE:

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



**Rotating direction** : 31 patterns (16 on the

center)

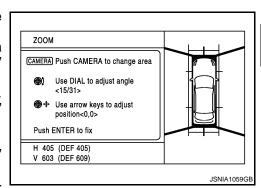
**Upper/lower direction** : -99 - 99 Left/right direction : -99 - 99

#### **ZOOM** function

- The ZOOM ratio of camera can be changed when calibrating the camera.
- It shifts to ZOOM function mode by shifting the selector lever to a position other than the "R" position  $\rightarrow$  "R" position  $\rightarrow$  other than "R" position in the "Fine Tuning of Birds-Eye View" mode.
- The changing of ZOOM ratio can be performed for each camera. Move the "+"-mark to select the camera by pressing "CAMERA" switch and press the left/right switch to change the ZOOM ratio.

#### NOTE:

- When the position is not correct in "Fine Tuning of Birds-Eye View" mode, use this "ZOOM" function to adjust it.
- If this function is used, always adjust the upper/lower/left/right position again on the "Fine Tuning of Birds-Eye View" screen.



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

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

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

CONSULT-III Function (SONAR)

INFOID:0000000003160631

#### **DESCRIPTION**

CONSULT-III can display each diagnostic item using the diagnostic test modes shown as follows:

Test mode	Function
Ecu Identification	Sonar control unit part number can be read.
Self Diagnostic Result	Sonar control unit checks the conditions and displays memorized error.
Data monitor	Sonar control unit input/output data in real time.
Active Test	Gives a drive signal to a load to check the operation.
Work support	Changes setting of each function.

#### **ECU IDENTIFICATION**

Displays the part number of sonar control unit.

#### SELF-DIAGNOSTIC RESULTS

For details, refer to AV-888, "DTC Index".

#### DATA MONITOR

Monitor Item	Display	Description	
SONAR OPE	On	Around view monitor is ON. (sonar system is ON)	
SONAIX OF L	Off	Around view monitor is OFF. (sonar system is OFF)	
BUZZER OUTPUT	On	Buzzer is output condition.	
Off Off		Buzzer is not output condition.	
CR SEN [FL] CR SEN [FR] CR SEN [RL] CR SEN [RR]	ERROR	When a sensor is abnormal.	
	LV.0	When a sensor is not detection.	
	LV.2	The distance between the corner sensor and an obstacle is 60 cm (23.6 in) or more and less then 70 cm (27.5 in).	
	LV.3	The distance between the corner sensor and an obstacle is 40 cm (15.7 in) or more and less then 60 cm (23.6 in).	
	LV.4	The distance between corner sensor and an obstacle less than 40 cm (15.7 in).	

#### **ACTIVE TEST**

Active test item Function	
BUZZER	This test is able to check buzzer (forward/backward) operation.
SONAR SENSOR	This test is able to check each sonar sensor operation.

#### **WORK SUPPORT**

Work support item	Function
CORNER SEN DISTANCE SET	Corner sensor warning buzzer distance is adjustable to 4 phases.

#### CORNER SEN DISTANCE SET

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

Warning item	FARTHER	FAR	NORMAL	NEAR
Second warning	70 – 80 cm (27.5 – 31.4 in)	60 - 70 cm (23.6 - 27.5 in)	50 - 60 cm (19.6 - 23.6 in)	40 – 50 cm (15.7 – 19.6 in)

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

## < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Warning item	FARTHER	FAR	NORMAL	NEAR
Third warning	50 – 70 cm (19.6 – 27.5 in)	40 - 60 cm (15.7 - 23.6 in)	30 - 50 cm (11.8 - 19.6 in)	30 - 40 cm (11.8 - 15.7 in)
Fourth warning	Less than 50 cm (19.6 in)	Less than 40 cm (15.7 in)	Less than 30 cm (11.8 in)	Less than 30 cm (11.8 in)

The default of this model is "FAR".

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

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# COMPONENT DIAGNOSIS

#### U1000 CAN COMM CIRCUIT

Description INFOID:000000003160632

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

CAN Communication Signal Chart. Refer to LAN-27, "CAN Communication Signal Chart".

DTC Logic

#### DTC DETECTION LOGIC

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

#### Diagnosis Procedure

INFOID:0000000003160634

#### 1.PERFORM SELF DIAGNOSTIC

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

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

YES >> Refer to "LAN system". Refer to LAN-18, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI section. Refer to GI-38, "Intermittent Incident".

# **U1010 CONTROL UNIT (CAN)**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# U1010 CONTROL UNIT (CAN)

Description INFOID:0000000003160635

Initial diagnosis of AV control unit.

DTC Logic

#### DTC DETECTION LOGIC

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

# Diagnosis Procedure

1. REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit.

>> INSPECTION END

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# **U1310 AV CONTROL UNIT**

Description INFOID:000000003160638

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit

#### **U1200 AV CONTROL UNIT**

#### [BOSE AUDIO WITH NAVIGATION]

# **U1200 AV CONTROL UNIT**

Description INFOID:0000000003513817

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

**DTC** Logic INFOID:0000000003160641

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take	Н
U1200	Cont Unit FLASH- ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	Replace AV control unit	

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**AV-511** Revision: 2007 November 2008 EX35

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# **U1201 AV CONTROL UNIT**

Description INFOID:0000000003513818

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1201	GYRO NO CONN [U1201]	Internal malfunction of AV control unit (gyrocompass disconnection) is detected.	Replace AV control unit

#### **U1216 AV CONTROL UNIT**

### [BOSE AUDIO WITH NAVIGATION]

# **U1216 AV CONTROL UNIT**

Description INFOID:0000000003513819

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1216	CAN CONT [U1216]	Internal malfunction of AV control unit (CAN controller) is detected.	Replace AV control unit

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#### **U1217 AV CONTROL UNIT**

## [BOSE AUDIO WITH NAVIGATION]

# **U1217 AV CONTROL UNIT**

Description INFOID:0000000003513820

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1217	BLUETOOTH MODULE CONN [U1217]	Internal malfunction of AV control unit (Bluetooth module connection malfunction) is detected.	Replace AV control unit

#### **U1218 AV CONTROL UNIT**

#### [BOSE AUDIO WITH NAVIGATION]

# **U1218 AV CONTROL UNIT**

Description INFOID:000000003513821

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1218	HDD-CONN [U1218]	Internal malfunction of AV control unit (HDD connection malfunction) is detected.	Replace AV control unit

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# **U1219 AV CONTROL UNIT**

Description INFOID:000000003513822

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1219	HDD-READ [U1219]	Internal malfunction of AV control unit (HDD read malfunction) is detected.	Replace AV control unit

#### **U1220 AV CONTROL UNIT**

#### [BOSE AUDIO WITH NAVIGATION]

# **U1220 AV CONTROL UNIT**

Description INFOID:0000000003513823

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

_	DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take	
_	U1220	XM SERIAL COMM [U1220]	Internal malfunction of AV control unit (satellite radio tuner communication error) is detected.	Replace AV control unit	

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#### **U121A AV CONTROL UNIT**

#### [BOSE AUDIO WITH NAVIGATION]

# **U121A AV CONTROL UNIT**

Description INFOID:0000000003513824

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121A	HDD-WRITE [U121A]	Internal malfunction of AV control unit (HDD write malfunction) is detected.	Replace AV control unit

#### **U121B AV CONTROL UNIT**

#### [BOSE AUDIO WITH NAVIGATION]

# **U121B AV CONTROL UNIT**

Description INFOID:0000000003513825

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121B	HDD-COMM [U121B]	Internal malfunction of AV control unit (HDD communication error) is detected.	Replace AV control unit

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#### [BOSE AUDIO WITH NAVIGATION]

# **U121C AV CONTROL UNIT**

Description INFOID:0000000003513826

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121C	HDD-ACCESS [U121C]	Internal malfunction of AV control unit (HDD access error) is detected.	Replace AV control unit

#### **U121D AV CONTROL UNIT**

### [BOSE AUDIO WITH NAVIGATION]

# **U121D AV CONTROL UNIT**

Description INFOID:0000000003513827

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

_	DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take	
	U121D	DSP CONN [U121D]	Internal malfunction of AV control unit (DSP connection error) is detected.	Replace AV control unit	

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# **U121E AV CONTROL UNIT**

## [BOSE AUDIO WITH NAVIGATION]

# **U121E AV CONTROL UNIT**

Description INFOID:0000000003513828

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121E	DSP COMM [U121E]	Internal malfunction of AV control unit (DSP communication error) is detected.	Replace AV control unit

#### **U121F AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

## **U121F AV CONTROL UNIT**

Description INFOID:0000000003513829

Replace the AV control unit if this DTC is displayed. Refer to AV-903, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121F	INTERNAL COMM [U121F]	Internal malfunction of AV control unit (internal communication error) is detected.	AV control unit power supply and ground circuit

# Diagnosis Procedure

1. CHECK AV CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check AV control unit power supply and ground circuit. Refer to <u>AV-544, "AV CONTROL UNIT : Diagnosis Procedure"</u>.

Is inspection result normal?

YES >> INSPECTION END

NO >> Repair malfunctioning parts.

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#### **U1204 GPS**

**Description** 

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-903">AV-903</a>. <a href="Removal and Installation"</a>.

Part name	Description		
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>		

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1204	GPS CONN [U1204]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

## Diagnosis Procedure

INFOID:0000000003160669

# 1. PERFORM THE SELF-DIAGNOSIS

- 1. Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- 3. Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

#### [BOSE AUDIO WITH NAVIGATION]

#### **U1205 GPS**

Description INFOID:0000000003513814

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-903">AV-903</a>, <a href="Removal and Installation"</a>.

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1205	GPS ROM [U1205]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

# Diagnosis Procedure

INFOID:0000000003160672

# 1.PERFORM THE SELF-DIAGNOSIS

- Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- 3. Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

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#### **U1206 GPS**

Description INFOID:0000000003513815

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-903">AV-903</a>. <a href="Removal and Installation"</a>.

Part name	Description		
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>		

DTC Logic INFOID:000000003160674

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1206	GPS RAM [U1206]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

# Diagnosis Procedure

INFOID:0000000003160675

# 1. PERFORM THE SELF-DIAGNOSIS

- Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- 3. Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

#### [BOSE AUDIO WITH NAVIGATION]

#### **U1207 GPS**

Description INFOID:000000003513816

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to <a href="AV-903">AV-903</a>, <a href="Removal and Installation"</a>.

Part name	Description	
AV CONTROL UNIT	<ul> <li>Integrates HDD (hard disk drive) allowing map data and music data to be stored.</li> <li>It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.</li> <li>It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1207	GPS RTC [U1207]	Internal malfunction of AV control unit (GPS malfunction) is detected.	Replace AV control unit

# Diagnosis Procedure

INFOID:0000000003160678

# 1.PERFORM THE SELF-DIAGNOSIS

- Delete the self-diagnosis results. Turn ignition switch OFF.
- 2. Turn ignition switch ON. Perform the self-diagnosis again.
- 3. Check that the DTC is detected again.

#### Is any DTC detected?

YES >> Replace AV control unit.

NO >> The intermittent malfunction caused by strong radio interference can be detected.

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#### U1243 DISPLAY UNIT

Description INFOID:000000003160679

Part name	Description	
DISPLAY UNIT	<ul> <li>Display image is controlled by the serial communication from AV control unit.</li> <li>RGB image signal is input from AV control unit (RGB, RGB area and RGB synchronizing). Auxiliary image signal is input from the auxiliary input jack. Camera image signal is input from the camera control unit.</li> <li>Synchronizing signal (HP, VP) is output to AV control unit.</li> <li>Touch panel function can be operated for each system by touching a display directly.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1243	FRONT DISP CONN [U1243]	When either one of the following items is detected.  Display unit power supply and ground circuit malfunction is detected  Malfunction is detected in communication circuits between display unit and AV control unit	Display unit power supply and ground circuit     Communication circuits between display unit and AV control unit

### Diagnosis Procedure

INFOID:0000000003160681

# 1. CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUITS

Check display unit power supply and ground circuits. Refer to <u>AV-544, "DISPLAY UNIT : Diagnosis Procedure"</u>.

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# 2.CHECK CONTINUITY COMMUNICATION CIRCUITS

- 1. Turn ignition switch OFF.
- 2. Disconnect display unit connector and AV control unit connector.
- 3. Check continuity between display unit harness connector and AV control unit harness connector.

Display unit		AV control unit		Continuity
Connector Terminals		Connector	Terminals	Continuity
M75	11	M88	70	Existed
IVI <i>T</i> S	22	IVIOO	71	LAISIEU

4. Check continuity between display unit harness connector and ground.

Display unit			Continuity
Connector	Terminals	Ground	Continuity
M75	11	Giodila	Not existed
W/75	22		Not existed

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

# 3. CHECK COMMUNICATION SIGNAL

- Connect display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.

#### **U1243 DISPLAY UNIT**

#### < COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

3. Check signal between display unit harness connector and ground.

(+)			
Display unit		(–)	Signal
Connector	Terminal		
M75	11	Ground	(V) 6 4 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

#### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

# 4. CHECK COMMUNICATION SIGNAL

Check signal between display unit harness connector and ground.

(-	+)		
Display unit		(–)	Signal
Connector	Terminal		
M75	22	Ground	(V) 6 4 2 0  + 1ms  PKIB5039J

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace display unit.

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#### **U1244 GPS ANTENNA**

< COMPONENT DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

## U1244 GPS ANTENNA

Description INFOID:000000003160682

Part name	Description
GPS ANTENNA	GPS signal is received and sent to AV control unit.

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1244	GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected	GPS antenna disconnection

# Diagnosis Procedure

INFOID:0000000003160684

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# 1.GPS ANTENNA CHECK

Visually check GPS antenna and antenna feeder.

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# $2. \hbox{check av control unit voltage}$

- 1. Disconnect GPS antenna connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit terminal and ground.

(+) AV control unit Terminal	(-)	Voltage (Approx.)
110	Ground	5.0 V

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace AV control unit.

#### **U1250 CAMERA CONTROL UNIT**

< COMPONENT DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

# U1250 CAMERA CONTROL UNIT

Description INFOID:000000003160688

Part name	Description	
CAMERA CONTROL UNIT	<ul> <li>Camera image signal is input from rear view camera, and camera image is indicated on the display.</li> <li>Power (camera ON signal) is sent to rear view camera.</li> <li>Controlled by AV communication sent from AV control unit.</li> <li>AV control unit recognizes the presence of camera system with camera connection recognition signal.</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1250	CAMERA CONT. CONN [U1250]	A malfunction is detected in Camera-connection recognition signal circuit	Camera-connection recognition signal circuit

## Diagnosis Procedure

INFOID:0000000003160690

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# 1. CHECK CAMERA-CONNECTION RECOGNITION SIGNAL CIRCUIT

Turn ignition switch OFF.

- 2. Disconnect AV control unit connector and camera control unit connector.
- 3. Check continuity between AV control unit harness connector and camera control unit harness connector.

AV control unit		Camera control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M87	40	B50	14	Existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector and ground.

(+)			V. K
AV control unit		(–)	Voltage (Approx.)
Connector	Terminal	,	(11 - )
M87	40	Ground	5.0 V

#### Is inspection result normal?

YES >> Replace camera control unit.

NO >> Replace AV control unit.

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#### **U1258 SATELLITE RADIO ANTENNA**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# **U1258 SATELLITE RADIO ANTENNA**

Description INFOID:000000003160691

Part name	Description
SATELLITE RADIO ANTENNA	Satellite radio signal is received and sent to AV control unit.

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1258	XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected	Satellite radio antenna disconnection

# Diagnosis Procedure

INFOID:0000000003160693

# 1. SATELLITE RADIO ANTENNA CHECK

Visually check satellite radio antenna and antenna feeder.

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# $2.\mathsf{CHECK}$ AV CONTROL UNIT VOLTAGE

- 1. Disconnect satellite radio antenna connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit terminal and ground.

(+) AV control unit Terminal	(-)	Voltage (Approx.)
108	Ground	5.0 V

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace AV control unit.

# U1300 AV COMM CIRCUIT

#### WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR

## WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR: Description

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U1300 is indicated when malfunction occurs in communication signal of multi AV system. Indicated simultaneously, without fail, with the malfunction of control units connected to AV control unit with communication line. Determine the possible malfunction cause from the table below.

#### Self-diagnosis results display item

DTC	Display contents of CONSULT-III	Description	Possible malfunction factor/Action to take
U1300 U121F	AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]	When either one of the following items is detected.  AV control unit power supply and ground circuits malfunction is detected.  AV control unit malfunction is detected.	AV control unit power supply and ground circuits.     When there is no malfunction, AV control unit is malfunctioning.
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items is detected.  Multifunction switch power supply and ground circuits malfunction is detected.  Malfunction is detected in AV communication circuits between multifunction switch and the junction of AV control unit and iPod adapter.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits be- tween multifunction switch and the junction of AV control unit and iPod adapter.</li> </ul>
U1300 U1254	AV COMM CIRCUIT [U1300]     IPOD CONN [U1254]	When either one of the following items is detected.  iPod adapter power supply and ground circuits malfunction is detected.  Malfunction is detected in AV communication circuits between iPod adapter and the junction of AV control unit and multifunction switch.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between iPod adapter and the junction of AV control unit and multifunction switch.</li> </ul>
U1300 U1240 U1254	AV COMM [U1300]     SWITCH CONN     [U1240]     IPOD CONN [U1254]	Malfunction is detected in AV communication circuits between AV control unit and the junction of multifunction switch and iPod adapter.	AV communication circuits between AV control unit and the junction of multifunction switch and iPod adapter.
U1300 U121F U1240 U1254	AV COMM [U1300]     INTERNAL COMM     [U121F]     SWITCH CONN     [U1240]     IPOD CONN [U1254]	Malfunction is detected in AV communication circuits.	Check and repair the short circuit in AV communication circuits.

#### WITH REAR VIEW MONITOR

## WITH REAR VIEW MONITOR: Description

U1300 is indicated when malfunction occurs in communication signal of multi AV system. Indicated simultaneously, without fail, with the malfunction of control units connected to AV control unit with communication line. Determine the possible malfunction cause from the table below.

Self-diagnosis results display item

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#### < COMPONENT DIAGNOSIS >

DTC	Display contents of CONSULT-III	Description	Possible malfunction factor/Action to take
U1300 U121F	AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]	When either one of the following items is detected.  AV control unit power supply and ground circuits malfunction is detected.  AV control unit malfunction is detected.	<ul> <li>AV control unit power supply and ground circuits.</li> <li>When there is no malfunction, AV control unit is malfunctioning.</li> </ul>
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items is detected.  Multifunction switch power supply and ground circuits malfunction is detected.  Malfunction is detected in AV communication circuits between multifunction switch and the junction of AV control unit and camera control unit.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits be- tween multifunction switch and the junction of AV control unit and cam- era control unit.</li> </ul>
U1300 U1254	AV COMM CIRCUIT [U1300]     IPOD CONN [U1254]	When either one of the following items is detected.  Malfunction is detected in iPod adapter power supply and ground circuits.  Malfunction is detected in AV communication circuits between rear view camera control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between rear view camera control unit and iPod adapter.</li> </ul>
U1300 U1252	AV COMM CIRCUIT [U1300]     REAR CAMERA LAN CONN [U1252]	Camera control unit power supply and ground circuits malfunction is detected.	Camera control unit power supply and ground circuits.
U1300 U1252 U1254	AV COMM CIRCUIT [U1300]     REAR CAMERA LAN     CONN [U1252]     IPOD CONN [U1254]	Malfunction is detected in AV communication circuits between camera control unit and the junction of AV control unit and multifunction switch.	AV communication circuits between camera control unit and the junction of AV control unit and multifunction switch.
U1300 U1240 U1252 U1254	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]     REAR CAMERA LAN CONN [U1252]     IPOD CONN [U1254]	Malfunction is detected in AV communication circuits between AV control unit and the junction of camera control unit and multifunction switch.	AV communication circuits between AV control unit and the junction of camera control unit and multifunction switch.
U1300 U121F U1240 U1252 U1254	AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]     SWITCH CONN [U1240]     REAR CAMERA LAN CONN [U1252]     IPOD CONN [U1254]	Malfunction is detected in AV communication circuits.	Check and repair the short circuit in AV communication circuits.

# WITH AROUND VIEW MONITOR

# WITH AROUND VIEW MONITOR: Description

INFOID:0000000003415759

U1300 is indicated when malfunction occurs in communication signal of multi AV system. Indicated simultaneously, without fail, with the malfunction of control units connected to AV control unit with communication line. Determine the possible malfunction cause from the table below.

Self-diagnosis results display item

#### **U1300 AV COMM CIRCUIT**

#### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

DTC	Display contents of CONSULT-III	Description	Possible malfunction factor/Action to take
U1300 U121F	AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]	When either one of the following items is detected.  AV control unit power supply and ground circuits malfunction is detected.  AV control unit malfunction is detected.	<ul> <li>AV control unit power supply and ground circuits.</li> <li>When there is no malfunction, AV control unit is malfunctioning.</li> </ul>
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items is detected.  Multifunction switch power supply and ground circuits malfunction is detected.  Malfunction detected in AV communication circuits between multifunction switch and the junction of AV control unit and around view monitor control unit.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits be- tween multifunction switch and the junction of AV control unit and around view monitor control unit.</li> </ul>
U1300 U1254	AV COMM CIRCUIT [U1300]     IPOD CONN [U1254]	When either one of the following items is detected.  Malfunction is detected in iPod adapter power supply and ground circuits.  Malfunction is detected in AV communication circuits between around view monitor control unit and iPod adapter.	<ul> <li>iPod adapter power supply and ground circuits.</li> <li>AV communication circuits between around view monitor control unit and iPod adapter.</li> </ul>
U1300 U125B	AV COMM CIRCUIT [U1300]     AROUND CAMERA CONN [U125B]	Around view monitor control unit power supply and ground circuits malfunction is detected.	Around view monitor control unit power supply and ground circuits.
U1300 U125C	AV COMM CIRCUIT [U1300]     SONAR CONN [U125C]	When either one of the following items is detected. Sonar control unit power supply and ground circuits malfunction is detected. Malfunction is detected in AV communication circuits between sonar control unit and the junction of AV control unit and multifunction switch.	<ul> <li>Sonar control unit power supply and ground circuits.</li> <li>AV communication circuits between sonar control unit and the junction of AV control unit and multifunction switch.</li> </ul>
U1300 U1254 U125B	AV COMM CIRCUIT [U1300]     IPOD CONN [U1254]     AROUND CAMERA CONN [U125B]	Malfunction is detected in AV communication circuits between around view monitor control unit and the junction of AV control unit and multifunction switch.	AV communication circuits between around view monitor control unit and the junction of AV control unit and multifunction switch.
U1300 U1240 U1254 U125B	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]     IPOD CONN [U1254]     AROUND CAMERA CONN [U125B]	Malfunction is detected in AV communication circuits between AV control unit and the junction of around view monitor control unit and multifunction switch.	AV communication circuits between AV control unit and the junction of around view monitor control unit and multifunction switch.
U1300 U121F U1240 U1254 U125B	AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]     SWITCH CONN [U1240]     IPOD CONN [U1254]     AROUND CAMERA CONN [U125B]	Malfunction is detected in AV communication circuits.	Check and repair the short circuit in AV communication circuits.

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# **B2700 CORNER SENSOR [FL]**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# B2700 CORNER SENSOR [FL]

Description INFOID:0000000003510909

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

## DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2700	CORNER SENSOR [FL] [B2700]	Corner sensor front left is malfunctioning.	Replace corner sensor front LH.

# **B2701 SENSOR HARNESS OPEN [CR-FL]**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# B2701 SENSOR HARNESS OPEN [CR-FL]

**Description** 

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2701	SENSOR HARNESS OPEN [CR-FL] [B2701]	Corner sensor front LH harness circuit is open.	Check corner sensor front LH circuit.

# Diagnosis Procedure

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# 1. CHECK HARNESS CORNER SENSOR FRONT LH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (FL) harness connector.

Sonar control unit		Corner sensor (FL)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M47	3	E63	1	Existed

4. Check continuity between sonar control unit harness connector and ground.

Sonar co	ontrol unit		Continuity
Connector	Terminal	Ground	Continuity
M47	3		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.check harness corner sensor front LH ground circuit

Check continuity between sonar control unit harness connector and corner sensor (FL) harness connector.

Sonar co	Sonar control unit		ensor (FL)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M47	12	E63	2	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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# **B2702 CORNER SENSOR [FR]**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# B2702 CORNER SENSOR [FR]

Description INFOID:000000003513808

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

## DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2702	CORNER SENSOR [FR] [B2702]	Corner sensor front right is malfunctioning.	Replace corner sensor front RH.

## **B2703 SENSOR HARNESS OPEN [CR-FR]**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# B2703 SENSOR HARNESS OPEN [CR-FR]

Description

Component	Description	
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.	

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2703	SENSOR HARNESS OPEN [CR-FR] [B2703]	Corner sensor front right harness circuit is open.	Check corner sensor front RH circuit.

# Diagnosis Procedure

1. CHECK HARNESS CORNER SENSOR FRONT RH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (FR) harness connector.

Sonar control unit		Corner sensor (FR)		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M47	4	E152	1	Existed	

4. Check continuity between sonar control unit harness connector and ground.

Sonar control unit			Continuity
Connector	Terminal	Ground	Continuity
M47	4		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.check harness corner sensor front RH ground circuit

Check continuity between sonar control unit harness connector and corner sensor (FR) harness connector.

Sonar control unit		Corner sensor (FR)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M47	12	E152	2	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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INFOID:0000000003510918

Revision: 2007 November AV-539 2008 EX35

# **B2704 CORNER SENSOR [RL]**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# B2704 CORNER SENSOR [RL]

Description INFOID:000000003513810

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

## DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2704	CORNER SENSOR [RL] [B2704]	Corner sensor rear left is malfunctioning.	Replace corner sensor rear LH.

# **B2705 SENSOR HARNESS OPEN [CR-RL]**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# B2705 SENSOR HARNESS OPEN [CR-RL]

Description INFOID:0000000003513811

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

**DTC** Logic INFOID:0000000003510922

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2705	SENSOR HARNESS OPEN [CR-RL] [B2705]	Corner sensor rear left harness circuit is open.	Check corner sensor rear LH circuit.

## Diagnosis Procedure

INFOID:0000000003510923

# 1. CHECK HARNESS CORNER SENSOR REAR LH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (RL) harness connector.

Sonar control unit		Corner sensor (RL)		Continuity
Connector	Terminal	Connector Terminal		Continuity
M47	5	B259	1	Existed

Check continuity between sonar control unit harness connector and ground.

Sonar control unit			Continuity
Connector	Terminal	Ground	Continuity
M47	5		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.check harness corner sensor rear lh ground circuit

Check continuity between sonar control unit harness connector and corner sensor (RL) harness connector.

Sonar control unit		Corner sensor (RL)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M47	12	B259	2	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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**AV-541** Revision: 2007 November 2008 EX35

# **B2706 CORNER SENSOR [RR]**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# **B2706 CORNER SENSOR [RR]**

Description INFOID:000000003513812

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2706	CORNER SENSOR [RR] [B2706]	Corner sensor rear right is malfunctioning.	Replace corner sensor rear RH.

# **B2707 SENSOR HARNESS OPEN [CR-RR]**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# B2707 SENSOR HARNESS OPEN [CR-RR]

Description INFOID:0000000003513813

Component	Description
CORNER SENSOR	The obstacle distance is detected. The signal is transmitted to the sonar control unit.

DTC Logic

### DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2707	SENSOR HARNESS OPEN [CR-RR] [B2707]	Corner sensor rear right harness circuit is open.	Check corner sensor rear RH circuit.

# Diagnosis Procedure

1. CHECK HARNESS CORNER SENSOR REAR RH SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector and corner sensor connector.
- Check continuity between sonar control unit harness connector and corner sensor (RR) harness connector.

Sonar control unit		Corner sensor (RR)		Continuity
Connector	Terminal	Connector Terminal		Continuity
M47	6	B256	1	Existed

4. Check continuity between sonar control unit harness connector and ground.

Sonar co	ontrol unit		Continuity
Connector	Terminal	Ground	Continuity
M47	6		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK HARNESS CORNER SENSOR REAR RH GROUND CIRCUIT

Check continuity between sonar control unit harness connector and corner sensor (RR) harness connector.

Sonar control unit		Corner sensor (RR)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M47	12	B256	2	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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INFOID:0000000003510928

Revision: 2007 November AV-543 2008 EX35

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000003160695

INFOID:0000000003160696

### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19
Ignition switch ON or START	3

### Is inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

# 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between AV control unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
	M80	19		
Battery power supply	M87	22	OFF	Battery voltage
		24		
ACC power supply	M80	7	ACC	Battery voltage
	M87	25	ACC	battery voltage
Ignition signal	M87	35	ON	Battery voltage

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Check harness between AV control unit and fuse.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect AV control unit connectors.
- 3. Check continuity between AV control unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M80	20	OFF	Existed
	M87	21		
		23		

### Is inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

**DISPLAY UNIT** 

**DISPLAY UNIT: Diagnosis Procedure** 

1. CHECK FUSE

Check for blown fuses.

#### < COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

### Is inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

# 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between Display unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M75	2	OFF	Battery voltage
ACC power supply	M75	3	ACC	Battery voltage

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Check harness between Display unit and fuse.

# 3.CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect Display unit connector.
- 3. Check continuity between Display unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground M75	M75	1	OFF	Existed
Ground	IVI75	13	OFF	Existed

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

### MULTIFUNCTION SWITCH

# MULTIFUNCTION SWITCH: Diagnosis Procedure

### 1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Ignition switch ACC or ON	19

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between multifunction switch harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
ACC power supply	M72	3	ACC	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between multifunction switch and fuse.

# 3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect multifunction switch connector.

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### < COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

3. Check continuity between multifunction switch harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M72	1	OFF	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

BOSE AMP.

### **BOSE AMP.**: Diagnosis Procedure

INFOID:0000000003652834

# 1. CHECK FUSE

Check for blown fuse.

Power source	Fuse No.
Battery	8

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between BOSE amp. harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B42	11	OFF	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between BOSE amp. and fuse.

# 3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect BOSE amp. connector.
- 3. Check continuity between BOSE amp. harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B42	12	OFF	Existed

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

iPod ADAPTER

# iPod ADAPTER: Diagnosis Procedure

INFOID:0000000003652835

# 1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### < COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

# 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between iPod adapter harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M111	5	OFF	Battery voltage
ACC power supply	M111	3	ACC	Battery voltage

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Check harness between iPod adapter and fuse.

### CAMERA CONTROL UNIT

# CAMERA CONTROL UNIT: Diagnosis Procedure

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### 1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

### 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between camera control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B50	32	OFF	Battery voltage
ACC power supply	B50	30	ACC	Battery voltage

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Check harness between camera control unit and fuse.

# 3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect camera control unit connector.
- 3. Check continuity between camera control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B50	31	OFF	Existed

#### Is inspection result normal?

YFS >> INSPECTION END

>> Repair harness or connector.

### AROUND VIEW MONITOR CONTROL UNIT

# AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure

### 1.CHECK FUSE

Check for blown fuses.

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#### < COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

Power source	Fuse No.
Battery	34
Ignition switch ACC	19
Ignition switch ON	3

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

# 2. CHECK POWER SUPPLY CIRCUITS

Check voltage between around view monitor control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B46	2	OFF	Battery voltage
ACC power supply	B46	4	ACC	Battery voltage
Ignition power supply	B46	3	ON	Battery voltage

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Check harness between around view monitor control unit and fuse.

# 3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector.
- 3. Check continuity between around view monitor control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B46	1	OFF	Existed

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR): Diagnosis Procedure

NFOID:000000000351094

# 1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.	
Ignition switch ACC or ON	19	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

# 2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch ON.
- 2. Check voltage between sonar control unit harness connector and ground.

Sonar co	ontrol unit	Ground	Voltage
Connector	Terminal		(Approx.)
M47	13		Battery voltage

### Is the inspection result normal?

YES >> GO TO 3.

### < COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

NO >> Repair or replace sonar control unit power supply harness.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect sonar control unit connector.
- 3. Check continuity between sonar control unit harness connector and ground.

Sonar co	ontrol unit	Ground	Continuity
Connector	Terminal		Continuity
M47	24		Existed

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace sonar control unit ground harness.

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# **RGB (R: RED) SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# RGB (R: RED) SIGNAL CIRCUIT

Description INFOID:000000003160701

Transmit the image displayed with AV control unit with RGB signal to the display unit.

# Diagnosis Procedure

INFOID:0000000003160702

# 1. CHECK CONTINUITY RGB (R: RED) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect display unit connector and AV control unit connector.
- 3. Check continuity between display unit harness connector and AV control unit harness connector.

Display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	17	M88	61	Existed

4. Check continuity between display unit harness connector and ground.

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	17		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (R: RED) SIGNAL

- 1. Connect display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between display unit harness connector and ground.

·	+) ay unit	(-)	Condition	Reference value
Connector	Terminal			
M75	17	Ground	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spec- trum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4  → 40µs  SKIB2238J

### Is inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

# **RGB (G: GREEN) SIGNAL CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# RGB (G: GREEN) SIGNAL CIRCUIT

**Description** 

Transmit the image displayed with AV control unit with RGB signal to the display unit.

# Diagnosis Procedure

INFOID:0000000003160704

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# 1. CHECK CONTINUITY RGB (G: GREEN) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect display unit connector and AV control unit connector.
- 3. Check continuity between display unit harness connector and AV control unit harness connector.

Displa	ay unit	AV cor	trol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	6	M88	62	Existed

4. Check continuity between display unit harness connector and ground.

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	6		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (G: GREEN) SIGNAL

- 1. Connect display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between display unit harness connector and ground.

	+) ay unit	(-)	Condition	Reference value
Connector	Terminal			
M75	6	Ground	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spec- trum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

### Is inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

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### **RGB (B: BLUE) SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# RGB (B: BLUE) SIGNAL CIRCUIT

Description INFOID:000000003513831

Transmit the image displayed with AV control unit with RGB signal to the display unit.

# Diagnosis Procedure

INFOID:0000000003160706

# $\hbox{\bf 1.} \text{check continuity RGB (B: BLUE) SIGNAL CIRCUIT}$

- 1. Turn ignition switch OFF.
- 2. Disconnect display unit connector and AV control unit connector.
- 3. Check continuity between display unit harness connector and AV control unit harness connector.

Displa	ay unit	AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	18	M88	63	Existed

4. Check continuity between display unit harness connector and ground.

Displa	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	18		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (B: BLUE) SIGNAL

- 1. Connect display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between display unit harness connector and ground.

(-	+)			
Displa	ay unit	(-)	Condition	Reference value
Connector	Terminal			
M75	18	Ground	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spec- trum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4  0

### Is inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

### **RGB SYNCHRONIZING SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

### RGB SYNCHRONIZING SIGNAL CIRCUIT

Description INFOID:0000000003160707

Transmit the RGB synchronizing signal to the display unit so as to synchronize the RGB image displayed with AV control unit.

# Diagnosis Procedure

# INFOID:0000000003160708

# 1. CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect display unit connector and AV control unit connector.
- Check continuity between display unit harness connector and AV control unit harness connector.

Displa	ay unit	AV cor	trol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	19	M88	65	Existed

Check continuity between display unit harness connector and ground.

Displ	ay unit		Continuity
Connector	Terminal	Ground	Continuity
M75	19		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB SYNCHRONIZING SIGNAL

- Connect display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- Check signal between display unit harness connector and ground.

	+) ay unit	(–)	Condition	Reference value
Connector	Terminal			
M75	19	Ground	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spec- trum Bar" on DISPLAY DIAGNOSIS screen.	

### Is inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

(V) 4 0
+ 20μs

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# **RGB AREA (YS) SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# RGB AREA (YS) SIGNAL CIRCUIT

Description INFOID:000000003160709

Transmits the display area of RGB image displayed by AV control unit with RGB area (YS) signal to display unit.

### Diagnosis Procedure

INFOID:0000000003160710

# 1. CHECK CONTINUITY RGB AREA (YS) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect display unit connector and AV control unit connector.
- 3. Check continuity between display unit harness connector and AV control unit harness connector.

Displa	Display unit		trol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M75	9	M88	67	Existed

4. Check continuity between display unit harness connector and ground.

Display unit			Continuity
Connector	Terminal	Ground	Continuity
M75	9		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB SYNCHRONIZING SIGNAL

- 1. Connect display unit connector and AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between display unit harness connector and ground.

(+) Display unit		(-)	Condition	Reference value (Approx.)	
Connector	Terminal			( 44.21.4)	
			At RGB image displayed	5.0 V	
M75	9	Ground	At AUX image displayed	(V) 6 4 2 0 → + 200 µ s PKIB4948J	

### Is inspection result normal?

YES >> Replace display unit.

NO >> Replace AV control unit.

# HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT T DIAGNOSIS > [BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

# HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Description INFOID:0000000003160711

In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

# Diagnosis Procedure

# 1. CHECK CONTINUITY HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect display unit connector and AV control unit connector.
- 3. Check continuity between display unit harness connector and AV control unit harness connector.

Displa	Display unit		trol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M75	8	M88	68	Existed

4. Check continuity between display unit harness connector and ground.

Display unit			Continuity	
Connector	Terminal	Ground	Continuity	
M75	8		Not existed	

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

- 1. Connect display unit connector and AV control unit connector.
- Turn ignition switch ON.
- 3. Check signal between display unit harness connector and ground.

(+)			
Display unit		(-)	Reference value
Connector	Terminal		
M75	8	Ground	(V) 4 0 +

#### Is inspection result normal?

YES >> Replace AV control unit.

NO >> Replace Display unit.

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INFOID:0000000003160712

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# VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT [BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

# VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description INFOID:000000003513832

In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

### Diagnosis Procedure

INFOID:0000000003160714

# 1. CHECK CONTINUITY VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect display unit connector and AV control unit connector.
- 3. Check continuity between display unit harness connector and AV control unit harness connector.

Display unit		AV control unit		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M75	20	M88	69	Existed	

4. Check continuity between display unit harness connector and ground.

Display unit			Continuity
Connector	Terminal	Ground	Continuity
M75	20		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

- 1. Connect display unit connector and AV control unit connector.
- Turn ignition switch ON.
- 3. Check signal between display unit harness connector and ground.

(+)			
Display unit		(–)	Reference value
Connector	Terminal		
M75	20	Ground	(V) 4 0 ++4ms SKIB3598E

### Is inspection result normal?

YES >> Replace AV control unit.

NO >> Replace Display unit.

### **AUX IMAGE SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

## **AUX IMAGE SIGNAL CIRCUIT**

Description INFOID:0000000003160715

Transmits the image signal of external device from auxiliary input jacks to display unit.

# Diagnosis Procedure

### INFOID:0000000003160716

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# 1. CHECK CONTINUITY AUX IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect auxiliary input jacks connector and display unit connector.
- 3. Check continuity between auxiliary input jacks harness connector and display unit harness connector.

Auxiliary	input jacks	Display unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M154	7	M75	15	Existed

4. Check continuity between auxiliary input jacks harness connector and ground.

Auxiliary input jacks			Continuity
Connector	Terminal	Ground	Continuity
M154	7		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK AUX IMAGE SIGNAL

- 1. Connect auxiliary input jacks connector and display unit connector.
- 2. Turn ignition switch ON.
- 3. Check signal between auxiliary input jacks harness connector and ground.

	+) input jacks Terminal	(-)	Condition	Reference value
M154	7	Ground	At AUX image displayed	(V) 0. 4 0 -0. 4 → 40µs SKIB2251J

### Is inspection result normal?

YES >> Replace display unit.

NO >> Check that there is no malfunction in the external device.

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### MODE CHANGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# MODE CHANGE SIGNAL CIRCUIT

**Description** 

• AV control unit transmits the mode change signal to BOSE amp.

• Driver's Audio Stage controls the speaker's output characteristic by BOSE amp. so that the driver's seat is to be the center of sounds.

### Diagnosis Procedure

INFOID:0000000003533899

# 1. CHECK CONTINUITY MODE CHANGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BOSE amp. connector and AV control unit connector.
- 3. Check continuity between BOSE amp. harness connector and AV control unit harness connector.

BOSE	E amp.	AV control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B41	17	M87	44	Existed

4. Check continuity between BOSE amp. harness connector and ground.

BOSE	E amp.		Continuity
Connector	Terminal	Ground	Continuity
B41	17		Not existed

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK MODE CHANGE SIGNAL

- 1. Connect BOSE amp. connector.
- Turn ignition switch ON.
- 3. Check voltage between BOSE amp. harness connector and ground.

(+) BOSE amp.			
		(–)	Voltage (Approx.)
Connector	Terminal		<b>、</b> 11
B41	17	Ground	8.5 V

### Is the inspection result normal?

YES >> Replace AV control unit.

NO >> Replace BOSE amp.

### **DISK EJECT SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# DISK EJECT SIGNAL CIRCUIT

Description INFOID:000000003160717

The eject signal is output to AV control unit when the eject switch of multifunction switch is pressed.

# Diagnosis Procedure

### INFOID:0000000003160718

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# 1. CHECK CONTINUITY CD EJECT SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect multifunction switch connector and AV control unit connector.
- 3. Check continuity between multifunction switch harness connector and AV control unit harness connector.

Multifunc	Multifunction switch		trol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M72	14	M89	85	Existed

4. Check continuity between multifunction switch harness connector and ground.

Multifunc	tion switch		Continuity
Connector	Terminal	Ground	Continuity
M72	14		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector and ground.

	+) ntrol unit	(-)	Voltage (Approx.)
Connector	Terminal		(11 - 7
M89	85	Ground	3.3 V

#### Is inspection result normal?

YES >> Replace preset switch.

NO >> Replace AV control unit.

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### MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

### MICROPHONE SIGNAL CIRCUIT

Description INFOID:000000003160719

Supply power from AV control unit to microphone. The microphone transmits the sound voice to the AV control unit.

### Diagnosis Procedure

INFOID:0000000003160720

# 1. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND MICROPHONE CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect AV control unit connector and microphone connector.
- 3. Check continuity between AV control unit harness connector and microphone harness connector.

AV con	AV control unit		phone	Continuity
Connector	Terminals	Connector Terminals		
	26		4	
M87	27	R17	2	Existed
	28		1	

4. Check continuity between AV control unit harness connector and ground.

AV cor	ntrol unit		Continuity
Connector	Terminals	Ground	Continuity
M87	26	Glound	Not existed
IVIO /	28		NOT existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VOLTAGE MICROPHONE VCC

- 1. Connect AV control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector.

(-	(+)		<b>-</b> )	
AV con	trol unit	AV control unit		Voltage (Approx.)
Connector	Terminal	Connector Terminal		(-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,
M87	26	M87	27	5.0 V

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace AV control unit.

# 3. CHECK MICROPHONE SIGNAL

- 1. Turn ignition switch OFF.
- Connect microphone connector.
- 3. Turn ignition switch ON.
- 4. Check signal between AV control unit harness connector.

### **MICROPHONE SIGNAL CIRCUIT**

### < COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

	+)		-)		
AV cor	trol unit	AV con	trol unit	Condition	Reference value
Connector	Terminal	Connector	Terminal		
M87	28	M87	27	give a voice.	(V) 2.5 2.0 1.5 1.0 0.5 0

Is inspection result normal?

YES >> Replace AV control unit.

NO >> Replace microphone.

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### REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

[BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

# REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:000000003513843

Camera control unit outputs camera ON signal to rear view camera and inputs rear view camera image signal from rear view camera when the reverse signal is input.

 The camera control unit that inputs the camera image signal transmits the camera image signal to the display unit.

### **Diagnosis Procedure**

INFOID:0000000003369310

# 1. CHECK CONTINUITY CAMERA POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect camera control unit connector and rear view camera connector.
- Check continuity between camera control unit harness connector and rear view camera harness connector.

Camera o	control unit	Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B50	8	D121	1	Existed

4. Check continuity between camera control unit harness connector and ground.

Camera o	control unit		Continuity
Connector	Terminal	Ground	Continuity
B50	8		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VOLTAGE CAMERA POWER SUPPLY

- 1. Connect camera control unit connector and rear view camera connector.
- 2. Turn ignition switch ON.
- 3. Shift position is "R"
- 4. Check voltage between camera control unit harness connector and ground.

(+)					
Camera control unit		(-)	Condition	Voltage (Approx.)	
Connector	Terminal			( + + +	
B50	8	Ground	Shift position is "R"	6.0 V	

### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace camera control unit.

# $3. \mathsf{CHECK}$ CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect camera control unit connector and rear view camera connector.
- Check continuity between camera control unit harness connector and rear view camera harness connector.

Camera control unit		Rear vie	w camera	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B50	6	D121	3	Existed

4. Check continuity between camera control unit harness connector and ground.

### REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

### < COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

Camera d	control unit		Continuity
Connector	Terminal	Ground	Continuity
B50	6		Not existed

### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

# 4. CHECK CAMERA IMAGE SIGNAL

- 1. Connect camera control unit connector and rear view camera connector.
- 2. Turn ignition switch ON.
- 3. Shift position is "R"
- 4. Check signal between camera control unit harness connector and ground.

(+) Camera control unit		(–)	Condition	Reference value
Connector	Terminal			
B50	6	Ground	Shift position is "R"	(V) 1 0 -1 + 40 μ s JSNIA0834GB

### Is inspection result normal?

YES >> Replace camera control unit.

NO >> Replace rear view camera.

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### **CAMERA IMAGE SIGNAL CIRCUIT**

[BOSE AUDIO WITH NAVIGATION]

### < COMPONENT DIAGNOSIS >

# CAMERA IMAGE SIGNAL CIRCUIT WITH REAR VIEW MONITOR

### WITH REAR VIEW MONITOR: Description

INFOID:0000000003160725

- Camera control unit outputs camera ON signal to rear view camera and inputs rear view camera image signal from rear view camera when the reverse signal is input.
- The camera control unit that inputs the camera image signal transmits the camera image signal to the display unit.

### WITH REAR VIEW MONITOR: Diagnosis Procedure

INFOID:0000000003160726

# 1. CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect camera control unit connector and display unit connector.
- 3. Check continuity between camera control unit harness connector and display unit harness connector.

Camera c	control unit	Displa	ay unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B50	12	M75	12	Existed

Check continuity between camera control unit harness connector and ground.

Camera o	control unit		Continuity
Connector	Terminal	Ground	Continuity
B50	12		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK CAMERA IMAGE SIGNAL

- 1. Connect camera control unit connector and display unit connector.
- 2. Turn ignition switch ON.
- 3. Shift position is "R".
- 4. Check signal between camera control unit harness connector and ground.

(+)				
Camera o	control unit	(–)	Condition	Reference value
Connector	Terminal			
B50	12	Ground	Shift position is "R"	(V) 1 0 -1 +40 μ s JSNIAO834GB

#### Is inspection result normal?

YES >> Replace display unit.

NO >> Replace camera control unit.

### WITH AROUND VIEW MONITOR

### **CAMERA IMAGE SIGNAL CIRCUIT**

### < COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

## WITH AROUND VIEW MONITOR: Description

INFOID:0000000003513842

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- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

# WITH AROUND VIEW MONITOR: Diagnosis Procedure

INFOID:0000000003415753

# 1. CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and display unit connector.
- Check continuity between around view monitor control unit harness connector and display unit harness connector.

Around view monitor control unit		display unit		Continuity
Connector	Terminal	Connector	Terminal	
B46	27	M75	12	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	27		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and display unit connector.
- 2. Turn ignition switch ON.
- Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(-)	Condition	Reference value
Connector	Terminal			
B46	27	Ground	At camera image display	(V) 1 0 -1 40 μs JSNIA0834GB
240		Sisund	Other than camera image display	(V) 1 0 -1 40 μ s  JSNIA0835GB

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# **CAMERA IMAGE SIGNAL CIRCUIT**

### < COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

### Is inspection result normal?

YES >> Replace display unit.

NO >> Replace around view monitor control unit.

### STEERING ANGLE SENSOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# STEERING ANGLE SENSOR SIGNAL CIRCUIT WITH REAR VIEW MONITOR

### WITH REAR VIEW MONITOR: Description

INFOID:0000000003160727

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- Steering angle sensor signal 1, 2 detects the turning direction and quantity of the steering and transmits it to the camera control unit.
- Steering angle sensor signal 3 detects the neutral position of the steering and transmits it to the camera control unit.
- Camera control unit performs the correction of neutral position with sensor signal 1, 2, 3 and vehicle speed signal.

### WITH REAR VIEW MONITOR: Diagnosis Procedure

#### INFOID:0000000003160728

# 1. CHECK CONTINUITY STEERING ANGLE SENSOR SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect camera control unit connector and steering angle sensor connector.
- 3. Check continuity between camera control unit harness connector and steering angle sensor harness connector.

Camera control unit		Steering angle sensor		Continuity
Connector	Terminals	Connector	Terminals	Continuity
	23		3	
B50	24	M37	4	Existed
	25		5	

4. Check continuity between camera control unit harness connector and ground.

Camera d	control unit		Continuity
Connector	Terminals		Continuity
	23	Ground	
B50	24		Not existed
	25		

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK SIGNAL SENSOR SIGNAL

- 1. Connect camera control unit connector.
- 2. Turn ignition switch ON.
- Check voltage between camera control unit harness connector and ground.

(+)			
Camera control unit		(–)	Voltage (Approx.)
Connector	Terminals	( )	(
	23		
B50	24	Ground	5.0 V
	25		

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace camera control unit.

3.check signal sensor signal

### STEERING ANGLE SENSOR SIGNAL CIRCUIT

[BOSE AUDIO WITH NAVIGATION]

### < COMPONENT DIAGNOSIS >

- Turn ignition switch OFF.
- Connect steering angle sensor connector.
- Turn ignition switch ON.
- 4. Check signal between camera control unit harness connector and ground.

(-	+)			
Camera c	Camera control unit		Condition	Reference value
Connector	Terminals			
	23, 24		Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2
B50	20, 24		Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2
	25	Ground	Turn the steering around the neutral position	A: Sensor signal 3 B: Sensor signal 1

#### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering angle sensor.

### WITH AROUND VIEW MONITOR

# WITH AROUND VIEW MONITOR: Description

• Steering angle sensor signal 1, 2 detects the turning direction and quantity of the steering and transmits it to the around view monitor control unit.

- Steering angle sensor signal 3 detects the neutral position of the steering and transmits it to around view monitor control unit.
- Around view monitor control unit performs the correction of neutral position with sensor signal 1, 2, 3 and vehicle speed signal.

# WITH AROUND VIEW MONITOR: Diagnosis Procedure

#### INFOID:0000000003514104

INFOID:0000000003514103

# 1. CHECK CONTINUITY STEERING ANGLE SENSOR SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and steering angle sensor connector.
- Check continuity between around view monitor control unit harness connector and steering angle sensor harness connector.

### STEERING ANGLE SENSOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

	nonitor control nit	Steering angle sensor		Continuity
Connector	Terminals	Connector	Terminals	
	14		3	
B46	15	M37	4	Existed
	16		5	

4. Check continuity between around view monitor control unit harness connector and ground.

	nonitor control nit		Continuity
Connector	Terminals		
	14	Ground	
B46	15		Not existed
	16		

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK SIGNAL SENSOR SIGNAL

- 1. Connect around view monitor control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit harness connector and ground.

(	+)		
Around view monitor control unit		(–)	Voltage (Approx.)
Connector	Terminals		
	14		
B46	15	Ground	5.0 V
	16		

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

# 3.CHECK SIGNAL SENSOR SIGNAL

- 1. Turn ignition switch OFF.
- 2. Connect steering angle sensor connector.
- 3. Turn ignition switch ON.
- 4. Check signal between around view monitor control unit harness connector and ground.

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Around view monitor control unit		(–)	Condition	Reference value	
Connector	Terminals				
	14, 15		Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2	
B46	14, 15			Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2
	16	Ground	Turn the steering around the neutral position	(V) 4 2 0 4 2 0 SKIB3829E  A: Sensor signal 3 B: Sensor signal 1	

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering angle sensor.

### STEERING SWITCH SIGNAL A CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

### STEERING SWITCH SIGNAL A CIRCUIT

Description INFOID:0000000003160731

Transmits the steering switch signal to AV control unit.

# Diagnosis Procedure

### INFOID:0000000003160732

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# 1. CHECK STEERING SWITCH SIGNAL A CIRCUIT

- 1. Disconnect AV control unit connector and spiral cable connector.
- 2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV con	trol unit	Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M80	6	M36	24	Existed

3. Check continuity between AV control unit harness connector and ground.

AV cor	trol unit		Continuity
Connector	Terminal	Ground	Continuity
M80	6		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK SPIRAL CABLE

Check spiral cable.

### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

# 3.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector and spiral cable connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector.

(	+)	(	<b>–</b> )	
AV cor	trol unit	AV control unit		Voltage (Approx.)
Connector	Terminal	Connector Terminal		(11 - 7
M80	6	M80	15	5.0 V

### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

# 4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-572</u>, "Component Inspection".

### Is inspection result normal?

Revision: 2007 November

YES >> INSPECTION END

NO >> Replace steering switch.

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AV-571

## STEERING SWITCH SIGNAL A CIRCUIT

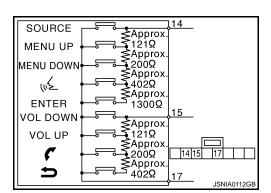
< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

INFOID:0000000003160733

# Component Inspection

Measure the resistance between the steering switch connector.



Steerin	Steering switch		g switch	Condition	Resistance value	
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$	
				ENTER switch ON	2003 – 2043	
				w≨ switch ON	716 – 730	
	14			MENU DOWN switch ON	318 – 324	
			MENU UP switch ON	120 – 122		
M303		M303 17	M303 17	17	SOURCE switch ON	0
				switch ON	716 – 730	
	15			switch ON	318 – 324	
				VOL UP switch ON	120 – 122	
				VOL DOWN switch ON	0	

### STEERING SWITCH SIGNAL B CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

### STEERING SWITCH SIGNAL B CIRCUIT

Description INFOID:0000000003513833

Transmits the steering switch signal to AV control unit.

# Diagnosis Procedure

### INFOID:0000000003160735

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# 1. CHECK STEERING SWITCH SIGNAL B CIRCUIT

- 1. Disconnect AV control unit connector and spiral cable connector.
- 2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV cor	AV control unit		l cable	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M80	16	M36	31	Existed

3. Check continuity between AV control unit harness connector and ground.

AV cor	ntrol unit		Continuity
Connector	Terminal	Ground	Continuity
M80	16		Not existed

#### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK SPIRAL CABLE

Check spiral cable.

### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

# 3.CHECK AV CONTROL UNIT VOLTAGE

- 1. Connect AV control unit connector and spiral cable connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector.

(+)		(-)		Voltage (Approx.)
AV control unit		AV control unit		
Connector	Terminal	Connector	Terminal	(11 - )
M80	16	M80	15	5.0 V

### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

### 4. CHECK STEERING SWITCH

- 1. Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-574</u>, "Component Inspection".

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

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## STEERING SWITCH SIGNAL B CIRCUIT

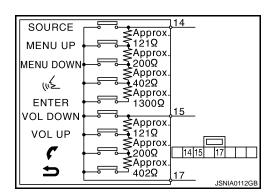
< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

INFOID:0000000003566474

# Component Inspection

Measure the resistance between the steering switch connector.



Steering switch		Steering switch		Condition	Resistance value
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$
	14	M303	17	ENTER switch ON	2003 – 2043
				w≨ switch ON	716 – 730
				MENU DOWN switch ON	318 – 324
				MENU UP switch ON	120 – 122
M303				SOURCE switch ON	0
	15			switch ON	716 – 730
				switch ON	318 – 324
				VOL UP switch ON	120 – 122
				VOL DOWN switch ON	0

### STEERING SWITCH SIGNAL GND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# STEERING SWITCH SIGNAL GND CIRCUIT

Description INFOID:0000000003513834

Transmits the steering switch signal to AV control unit.

# Diagnosis Procedure

# 1. CHECK STEERING SWITCH SIGNAL GND CIRCUIT

- 1. Disconnect AV control unit connector and spiral cable connector.
- 2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV control unit		Spiral cable		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M80	15	M36	33	Existed	

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

## 2. CHECK SPIRAL CABLE

Check spiral cable.

### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

## 3.CHECK GROUND CIRCUIT

- Connect AV control unit connector.
- Check continuity between AV control unit harness connector and ground.

AV control unit			Continuity	
Connector	Terminal	Ground	Continuity	
M80	15		Not existed	

### Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit.

### 4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-575, "Component Inspection"</u>.

### Is inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch.

### Component Inspection

Measure the resistance between the steering switch connector.

SOURCE ≹Approx ≨121Ω MENU UP MENU DOWN Approx (11/2 402Ω Approx **ENTER** 1300Ω VOL DOWN <u></u>
₹Approx VOL UP 121Ω Approx 200Ω 14 15 **≸**Approx JSNIA0112GB J

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## STEERING SWITCH SIGNAL GND CIRCUIT

### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Steering switch		Steering switch		Condition	Resistance value
Connector	Terminal	Connector	Terminal	Condition	$(\Omega)$
M303	14	M303	17	ENTER switch ON	2003 – 2043
				w≨ switch ON	716 – 730
				MENU DOWN switch ON	318 – 324
				MENU UP switch ON	120 – 122
				SOURCE switch ON	0
	15			switch ON	716 – 730
				switch ON	318 – 324
				VOL UP switch ON	120 – 122
				VOL DOWN switch ON	0

## FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT [BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

# FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

Description INFOID:0000000003160721

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## Diagnosis Procedure

# INFOID:0000000003160722

- 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT
- Turn ignition switch OFF. Disconnect around view monitor control unit connector and front camera connector.
- Check continuity between around view monitor control unit harness connector and front camera harness connector.

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector Terminal		
B45	45	E73	6	Existed

Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B45	45		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK COMMUNICATION SIGNAL

- Connect around view monitor control unit connector and front camera connector.
- Turn ignition switch ON. 2.
- Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Reference value
Connector	Terminal		
B45	45	Ground	(V) 5 4 3 2 1 1.0 μ s JSNIA0836GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace front camera.

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## FRONT CAMERA IMAGE SIGNAL CIRCUIT

[BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

# FRONT CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:000000003513835

 Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the display unit.

- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## Diagnosis Procedure

INFOID:0000000003369308

# 1.CHECK CONTINUITY FRONT CAMERA POWER SUPPLY AND GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and front camera connector.
- Check continuity between around view monitor control unit harness connector and front camera harness connector.

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector	Terminals	
B45	44	E73	2	Existed
D40	46	<b>⊑</b> 73	1	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

	nonitor control nit		Continuity
Connector	Terminal	Ground	
B45	46		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VOLTAGE FRONT CAMERA POWER SUPPLY

- 1. Connect around view monitor control unit connector and front camera connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit harness connector.

(+) Around view monitor control unit		(–)	Condition	Voltage (Approx.)
Connector	Terminal			
B45	46	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

# 3.check continuity front camera image signal circuit

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and front camera connector.
- Check continuity between around view monitor control unit harness connector and front camera harness connector.

# FRONT CAMERA IMAGE SIGNAL CIRCUIT

### < COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector Terminals		
B45	41	E73	3	Existed
D40	42		4	EXISTED

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		0	Continuity
Connector	Terminals	Ground	
B45	41, 42		Not existed

### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

# 4. CHECK FRONT CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and front camera connector.
- 2. Turn ignition switch ON.

3. Check signal between around view monitor control unit harness connector.

(-	+)	(-)			
	nonitor control nit	Around view monitor control unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
B45	41	B45	42	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μs  JSNIA0834GB

### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace front camera.

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# REAR CAMERA COMMUNICATION SIGNAL CIRCUIT [BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

# REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

Description INFOID:000000003513836

• Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the display unit.

- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## Diagnosis Procedure

INFOID:0000000003455036

# 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and rear camera connector.
- Check continuity between around view monitor control unit harness connector and rear camera harness connector.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector Terminal		
B46	35	D111	4	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	35		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector and rear camera connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Reference value
Connector	Terminal		
B46	35	Ground	(V) 5 4 3 2 1.0 μs JSNIA0836GB

### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace rear camera.

## REAR CAMERA IMAGE SIGNAL CIRCUIT

[BOSE AUDIO WITH NAVIGATION]

### < COMPONENT DIAGNOSIS >

## REAR CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:0000000003513837

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## **Diagnosis Procedure**

### INFOID:0000000003455038

# 1. CHECK CONTINUITY REAR CAMERA POWER SUPPLY AND GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and rear camera connector.
- 3. Check continuity between around view monitor control unit harness connector terminals 36, 38 and rear camera harness connector terminals 8, 7.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminals	Connector Terminals		
B46	36	D111	8	Existed
D40	38	וווט	7	LXISIGU

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	36		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VOLTAGE REAR CAMERA POWER SUPPLY

- 1. Connect around view monitor control unit connector and rear camera connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Voltage (Approx.)
Connector	Terminal			
B46	36	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V

### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

# 3. CHECK CONTINUITY REAR CAMERA IMAGE SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and rear camera connector.
- Check continuity between around view monitor control unit harness connector and rear camera harness connector.

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# REAR CAMERA IMAGE SIGNAL CIRCUIT

[BOSE AUDIO WITH NAVIGATION]

2008 EX35

## < COMPONENT DIAGNOSIS >

Around view monitor control unit		Rear camera		Continuity
Connector	Terminals	Connector Terminals		
B46	39	D111	5	Existed
D40	40	וווט	1	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		0	Continuity
Connector	Terminals	Ground	
B46	39, 40		Not existed

### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

## 4. CHECK REAR CAMERA IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and rear camera connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector.

Around view r	+) monitor control nit	(-) Around view monitor control unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
B46	39	B46	40	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 + 40 μ s JSNIA0834GB

### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace rear camera.

## SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT [BOSE AUDIO WITH NAVIGATION]

### < COMPONENT DIAGNOSIS >

# SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

Description INFOID:0000000003513838

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## Diagnosis Procedure

# INFOID:0000000003455040 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and door mirror (driver side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

	Around view monitor control unit		mirror r side)	Continuity
Connector	Terminal	Connector Terminal		
B45	47	D3	3	Existed

Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity	
Connector	Terminal	Ground		
B45	47		Not existed	

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK COMMUNICATION SIGNAL

- Connect around view monitor control unit connector and door mirror (driver side) connector.
- Turn ignition switch ON. 2.
- Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Reference value
Connector	Terminal		
B45	47	Ground	(V) 5 4 3 2 1 1.0 μ s JSNIA0836GB

#### Is inspection result normal?

YES >> Replace around view monitor control unit.

>> Replace side camera LH. NO

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## SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

## SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

Description INFOID:000000003513839

 Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the display unit.

- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## **Diagnosis Procedure**

INFOID:0000000003455042

# 1.check continuity side camera LH power supply and ground circuit

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and door mirror (driver side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminals	Connector Terminals		
H45 48		D3	6	Existed
D40	50	D3	18	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

	nonitor control nit		Continuity
Connector	Terminal	Ground	
B45	48		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VOLTAGE SIDE CAMERA LH POWER SUPPLY

- 1. Connect around view monitor control unit connector and door mirror (driver side) connector.
- 2. Turn ignition switch ON.
- Check voltage between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Voltage (Approx.)
Connector	Terminal			
B45	48	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V

### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

# ${f 3.}$ CHECK CONTINUITY SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector and door mirror (driver side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

# SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

## < COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminals	Connector Terminals		
B45	51	D3	5	Existed
<b>D4</b> 3	52	D3	17	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		Cround	Continuity
Connector	Terminals	Ground	
B45	51, 52		Not existed

### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

# 4. CHECK SIDE CAMERA LH IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and door mirror (driver side) connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector.

(	+)	(-)			
	nonitor control nit	Around view monitor control unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
B45	51	B45	52	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μ s JSNIA0834GB

### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace side camera LH.

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# SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT [ DIAGNOSIS > [BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

# SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

Description INFOID:000000003513840

• Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the display unit.

- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## Diagnosis Procedure

INFOID:0000000003455044

# 1. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and door mirror (passenger side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

Around view monitor control unit		Door mirror (passenger side)		Continuity
Connector	Terminal	Connector Terminal		
B46	33	D33	3	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	33		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK COMMUNICATION SIGNAL

- 1. Connect around view monitor control unit connector and door mirror (passenger side) connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(-)	Reference value
Connector	Terminal		
B46	33	Ground	(V) 5 4 3 2 1.0 μs JSNIA0836GB

### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace side camera RH.

## SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

[BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

# SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

Description INFOID:00000000003513841

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the display unit.
- Superimpose the guiding lines, predicted course line and sonar indicator to the camera image that outputs to the display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

## **Diagnosis Procedure**

### INFOID:0000000003455046

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# 1. CHECK CONTINUITY SIDE CAMERA RH POWER SUPPLY AND GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect control unit connector and door mirror (passenger side) connector.
- 3. Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

Around view monitor control unit		Door mirror (passenger side)		Continuity
Connector	Terminals	Connector Terminals		
B46	32	- D33	18	Existed
D40	34	D33	6	LXISIGU

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit			Continuity
Connector	Terminal	Ground	
B46	34		Not existed

### Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VOLTAGE SIDE CAMERA RH POWER SUPPLY

- 1. Connect around view monitor control unit connector and door mirror (passenger side) connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Voltage (Approx.)	
Connector	Terminal				
B46	34	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V	

#### Is inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit.

# ${f 3.}$ CHECK CONTINUITY SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect around view monitor control unit connector and door mirror (passenger side) connector.
- Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

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# SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

[BOSE AUDIO WITH NAVIGATION]

Around view monitor control unit		Door mirror (passenger side)		Continuity
Connector	Terminals	Connector Terminals		
B46	29	D33	5	Existed
Б40	30	DSS	17	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

around view monitor control unit		_	Continuity
Connector	Terminals	Ground	
B46	29, 30		Not existed

### Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

## 4. CHECK SIDE CAMERA RH IMAGE SIGNAL

- 1. Connect around view monitor control unit connector and door mirror (passenger side) connector.
- 2. Turn ignition switch ON.
- 3. Check signal between around view monitor control unit harness connector.

(-	(+) (-)				
Around view monitor control unit		Around view monitor control unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
B46	29	B46	30	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 +40 μ s JSNIA0834GB

### Is inspection result normal?

YES >> Replace around view monitor control unit.

NO >> Replace side camera RH.

## **BUZZER CIRCUIT**

### < COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

# **BUZZER CIRCUIT**

Description INFOID:0000000003597481

The sonar control unit outputs the buzzer signal when the rear sonar detects the obstacle.

# Component Function Check

# 1. SONAR CONTROL UNIT ACTIVE TEST

Check the buzzer operation with the sonar control unit active test.

**BUZZER** 

**Test item Condition** 

On : Buzzer is operation. Off : Buzzer is not operation.

>> INSPECTION END

# Diagnosis Procedure

1. CHECK BUZZER POWER SUPPLY

Turn ignition switch ON.

Check voltage between buzzer harness connector and ground.

(+) Buzzer		(-)	Voltage (Approx.)	
Connector	Terminal		( ) 1 - /	
B240	1	Ground	Battery voltage	

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK HARNESS BUZZER SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect sonar control unit connector and buzzer connector.
- Check continuity between sonar control unit harness connector and buzzer harness connector.

Sonar co	ontrol unit	Bu	zzer	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M47	23	B240	2	Existed	

Check continuity between sonar control unit harness connector and ground.

Sonar co	ontrol unit		Continuity	
Connector	Terminal	Ground		
M47	23		Not existed	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

# 3.check signal sonar control unit

- Connect sonar control unit connector and buzzer connector.
- Check signal between sonar control unit harness connector and ground.

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(+) Sonar control unit		(–)	Condition	Signal
Connector	Terminal			
M47	23	Ground	When buzzer operation	NOTE: Waveform period changes due to the distance to an obstacle.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace sonar control unit.

# [BOSE AUDIO WITH NAVIGATION]

# **ECU DIAGNOSIS**

# AV CONTROL UNIT

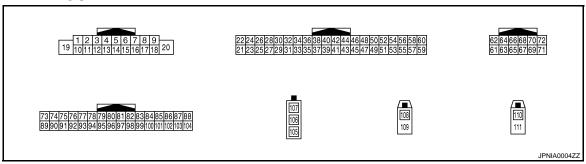
Reference Value INFOID:0000000003160740

## VALUES ON THE DIAGNOSIS TOOL

### CONSULT-III MONITOR ITEM

Display Item Displa		Vehicle status	Remarks		
VHCL SPD SIG	ON	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is nor-		
VHCL SPD SIG	OFF	Vehicle speed =0 km/h (0 MPH)	mal.		
DIAD CIC	ON	Parking brake is applied.	Changes in indication may be delayed. This is nor-		
PKB SIG	OFF	Parking brake is released.	mal.		
ILLUM SIG	ON	Light switch ON			
ILLUM SIG	OFF	Light switch OFF	_		
ION CIO	ON	Ignition switch ON			
IGN SIG	OFF	Ignition switch in ACC position	<del>_</del>		
	ON	Selector lever in R position	Changes in indication may be delayed. This is not		
REV SIG	OFF Selector lever in any position other than R		<ul> <li>Changes in indication may be delayed. This is no mal.</li> </ul>		

# **TERMINAL LAYOUT**



# PHYSICAL VALUES

	minal color)	Description			Condition	Reference value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	M
1 (V)	Ground	Amp. ON signal	Output	Ignition switch ON	_	12.0 V	AV
2 (P)	3 (L)	Sound signal front LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 * 2ms SKIB3609E	O P

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	minal color)	Description			Condition	Reference value		
+	_	Signal name	Input/ Output		Condition	(Approx.)		
4 (V)	5 (SB)	Sound signal rear LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E		
					Keep pressing SOURCE switch.  Keep pressing MENU UP switch.	0 V 1.0 V		
6 (P)	15 (B)	Steering switch signal A	Input	Ignition switch	Keep pressing MENU DOWN switch.	2.0 V		
(- /	(-)			ON	Keep pressing w  ≤ switch	3.0 V		
					Keep pressing ENTER switch.	4.0 V		
					Except for above.	5.0 V		
7 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage		
9 (R)	Ground	Illumination signal	Input	OFF	Lighting switch is OFF. Lighting switch is ON.	0 V 12.0 V		
10 (B)	_	Shield	_	_	— — —	<u> </u>		
11 (R)	12 (G)	Sound signal front RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E		
13 (BR)	14 (Y)	Sound signal rear RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E		
15 (B)	Ground	Steering switch signal ground	_	Ignition switch ON	_	0 V		
					Keep pressing VOL DOWN switch.	0 V		
16	15	Steering switch signal B	Input	Ignition switch	Keep pressing VOL UP switch.	1.0 V		
(L)	(B)	Coorning ownfort digital D	Input	switch ON	Keep pressing 🗸 switch.	2.0 V		
					Keep pressing <b>5</b> switch.	3.0 V		
					Except for above.	5.0 V		

# **AV CONTROL UNIT**

# < ECU DIAGNOSIS >

	minal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
20 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
21 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
22 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
23 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
24 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
25 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
26 (G)	27	Microphone VCC	Output	Ignition switch ON	_	5.0 V	
27	Ground	Microphone ground	_	ON	_	0 V	
28 (R)	27	Microphone signal	Input	Ignition switch ON	Give a voice	2. 5 2. 0 1. 5 1. 0 0. 5 0	
35 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage	
36	Ground	Parking brake signal	Input	Ignition switch	Parking brake ON	0 V	
(V)	2.34.14	2.5 5191141	put	ON	Parking brake OFF	12.0 V	
37	Ground	Reverse signal	Input	Ignition switch	R position	12.0 V	
(O)		-		ON	Other than R position	0 V	
38 (R)	Ground	Vehicle speed signal (8- pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25MPH)	(V) 6 4 2 0 ** 20ms SKIA6649J	

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
40	Ground	Camera-connection recog-	Input	Ignition switch	Connected to camera control unit connector	0 V	
(W)		nition signal	'	ON	Not connected to camera control unit connector	5.0 V	
41 (B)	Ground	Control signal 1	_	Ignition switch ON		0 V	
42 (B)	Ground	Control signal 2	_	Ignition switch ON	_	0 V	
43 (GR)	Ground	Control signal 3	_	Ignition switch ON	_	0 V	
44	Ground	Mode change signal	Output	Ignition switch	Driver's Audio Stage ON	0 V	
(SB)	Ciound	wode oridinge signal	Output	ON	Driver's Audio Stage OFF	8.5 V	
48 (G)	_	AV communication signal (H)	Input/ Output	_	_	_	
49 (R)	_	AV communication signal (L)	Input/ Output	_	_	_	
50 (LG)	_	AV communication signal (H)	Input/ Output	_	_	_	
51 (V)	_	AV communication signal (L)	Input/ Output	_	_	_	
52 (L)	_	CAN-H	Input/ Output	_	_	_	
53 (P)	_	CAN-L	Input/ Output	_	_	_	
61 (B)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 8 -0. 8 -	
62 (W)	Ground	RGB signal (G: green)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4 -0. 4 -0. 8 SKIB22	
63 (R)	Ground	RGB signal (B: blue)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0	
64		Shield				SKIB22	

# **AV CONTROL UNIT**

Terminal (Wire color)		Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
65 (G)	Ground	RGB synchronizing signal	Output	Ignition switch ON		(V) 4 0 → 20 µs SKIB3603E	
66	_	Shield	_	_	_	_	
67 (B)	Ground	RGB area (YS) signal	Output	Ignition switch ON	At RGB image display  At camera image or AUX image display	5.0 V  (V)  6 4 2 0  → 200 \( \text{y} \text{s} \)  PKIB4948J	
68 (R)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON	_	(V) 4 0 + 20µs SKIB3601E	
69 (W)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch ON	_	(V) 4 0 ++4ms SKIB3598E	
70 (BR)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 +-1ms PKIB5039J	
71 (Y)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
						PKIB5039J	

# [BOSE AUDIO WITH NAVIGATION]

	Terminal Description				Reference value		
+	-	Signal name	Input/ Output		Condition	(Approx.)	
79 (R)	95 (W)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected	(V) 1 0 -1 + 2ms SKIB3609E	
80 (B)	96 (G)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected	(V) 1 0 -1 2ms SKIB3609E	
85	0	Fig. 4 of the life	1		Pressing the eject switch	0 V	
(SB)	Ground	Eject signal	Input	_	Except for above	3.3 V	
86	_	Shield	_		_	_	
87 (R)	88 (W)	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is selected	(V) 1 0 -1 + 2ms SKIB3609E	
102 (BR)	Ground	SW ground	_	Ignition switch ON	_	0 V	
103 (B)	88 (B)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is selected	(V) 1 0 -1 + 2ms SKIB3609E	
105	_	FM sub	Input		_	_	
106	_	AM-FM main	Input	_	_	_	
107	Ground	Antenna amp. ON signal	Output	Ignition switch ACC	_	120. V	
108	Ground	Satellite antenna signal	Input	Ignition switch ACC	Not connected to satellite antenna connector	5.0 V	
109	_	Shield	_	_	_	_	
110	Ground	GPS antenna signal	Input	Ignition switch ACC	Not connected to GPS antenna connector	5.0 V	
111	_	Shield	_	_	_	_	

WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR

# WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR : Wiring Diagram

- BOSE AUDIO WITH NAVIGATION -

INFOID:0000000003160741

Α

В

C

D

Е

F

Н

J

K

L

M

ΑV

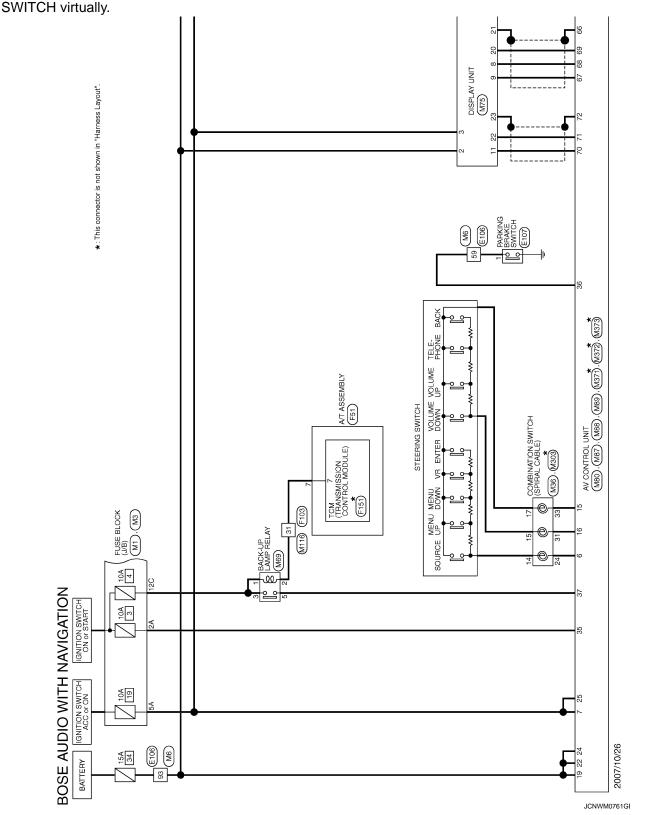
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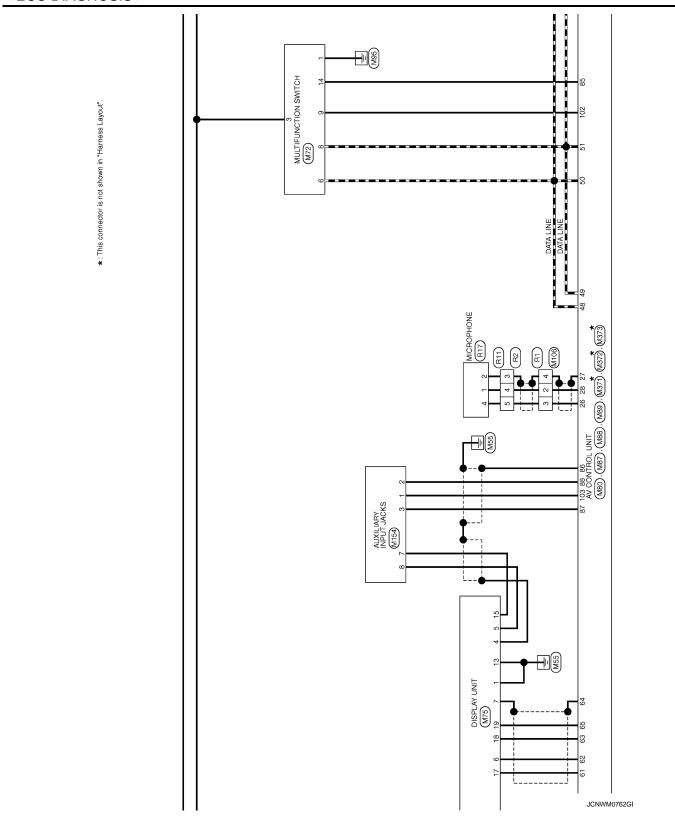
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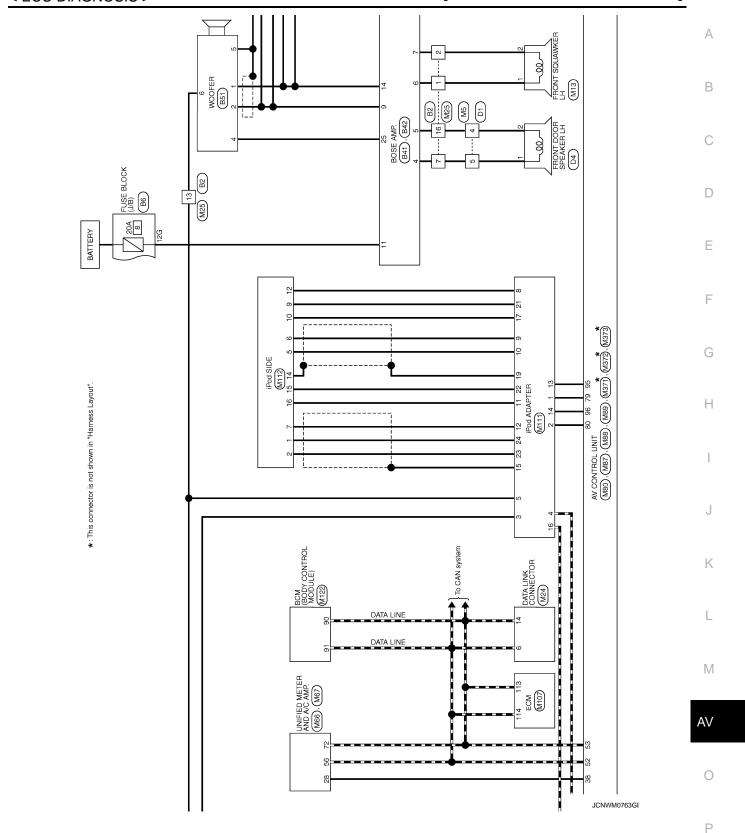
Click here to view the eWD.

### NOTE:

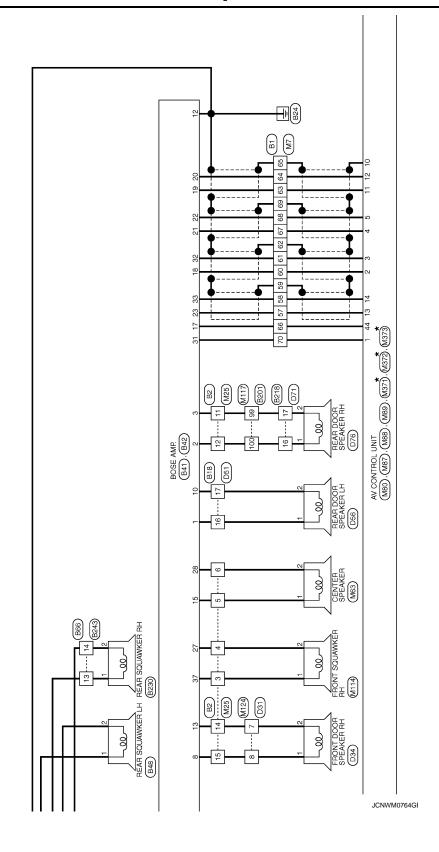
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually







\*: This connector is not shown in "Harness Layout".



Α

В

С

D

Е

F

G

Н

J

Κ

L

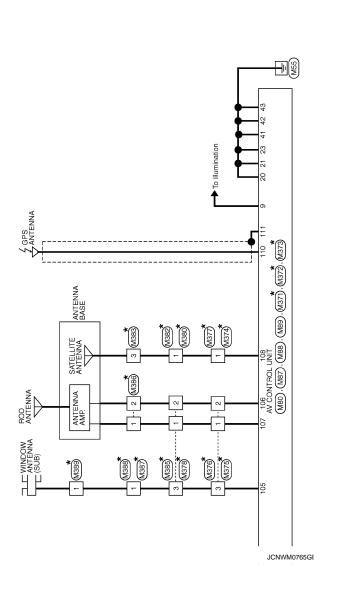
M

ΑV

0

Р

\*: This connector is not shown in "Harness Layout".



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# [BOSE AUDIO WITH NAVIGATION]

ector No.  ector Name ector Type 0. of Wire 0. of Wire 0. G G G 0.	Commestor No. 18730 Commestor Type TKOZFBR  Terminal Color No. of Vine Signal Name [Specification]  T	A B C
Specification)	12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Е
Connector No. B48 Connector Name REAR SQUAWKER LH Connector Type TKOZEBR	9 9 8 7 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	F G
SOUND SIGNAL FRONT DOOR SKEAKER RM (-) SOUND SIGNAL WOOFER (-)	E audo]	Η
12   B   SOUND SIGNAL   14   R   SOUND SIGNAL   14   R   SOUND SIGNAL   14   R   SOUND SIGNAL   14   R   SOUND SIGNAL	01 W MR TO 1	J K
DIO WITH NAVIGATION	WIRE  NH    18   19   20   21   22   23   24     2   3   4   4   5   5   5     3   4   5   5   5   5   5   5     4   5   5   5   5   5   5   5     5   6   7   7   7   7   7   7   7     6   7   8   7   7   7   7   7     7   8   19   20   21   22   23   24     7   8   19   20   21   22   23   24     7   8   19   20   21   22   23   24     7   8   9   9   9   9   9     8   9   9   9   9   9   9     9   9   9	L M
Connector No.   B42   Connector No.   B42   Connector Name   B0SE AMP:   Connector Name   B0SE AMP:   Connector Type   SGA12*FBR-SJA2   Connector Type   SGA12*FBR-SJA2   Connector Type   SGA12*FBR-SJA2   Connector No.   Color   Signal Name [Specification]   No.   Color   Colo	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AV
— <u>[51 5 16] [52 3</u> [5] [1] [1]	JCNWM0767GI	Р

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Connector No. D31	Connector Name   WIRE TO WIRE	Color   No. of Wire   Signal Name [Specification]   7 R   -   8   BR   -	Connector No. D71  Connector Name WIRE TO WIRE  Connector Type ITK10MV-NS8  H.S. I [ 2 ] 3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   18   10   10   10   10   10   10	Color   Signal Name [Specification]   16   L   -
Connector No.   D4   Conn	Connector Name SYSTEM) Connector Type NSOZFBR-CS  H.S.	Territoral   Color   Signal Name [Specification]   Territoral   No.   Color   No.	Connector No.         D56         Connector Name         REAR DOOR SPEAKER LH         Connector Type         Connector Name         Connector Na	Terminal   Color   Signal Mame [Specification]   Terminal No. of Wire   Signal Mame [Specification]   No.   1   1   2   2   1   1   1   1   1   1
Connector No. D1	Connector Name WIRE TO WIRE  Connector Type TH40FW-CS15  H.S.   15   14   12   11   10   9   7   6   5   4   3   2   1    ESTABLE AND HOMBORING MEMORY OF SECRET SE	Color   Signal Name [Specification]   No.	Connector No. D51 Connector Name WIRE TO WIRE  Connector Type TK10AM-NS8  H.S. T 2 3 4 5 6 7 8 9 10  T1 12 13 14 15 16 17 18	Terminal   Color   Signal Name [Specification]
BOSE AUDIO WITH NAVIGATION Connector No.	Connector Name WIRE TO WIRE  Connector Type TH24FW-NH  L2	Terminal   Color   Signal Name [Specification]   13   L	Connector No. D34 Connector Name SY/STEM) Connector Type NS/SZERA  A.S. A.S. A.S. A.S. A.S. A.S. A.S. A.	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]

JCNWM0768GI

EMBLY DGY 4 3 2 1 9 8 7 6 Signal Name [Specification]	OCK (J/B) CS  IOG 9C 2C 1C IOG 9C 7C 6C  Signal Name [Specification]	АВ
No. F51 Name A-7 ASS Type RK10FG  Color of Wire R	M3 FUSE BL NS12FW 120110	С
Connector No. Connector Name Connector Type  Terminal Oolor No. Of Wir.	Connector No. Connector Name Connector Type  H.S.  Terminal Color No. of Wirt.	D
offcation	offcation	E
E107 TB01FW TB01FW Signal Name [Specification]	FUSE BLOCK (J/B) NS06FW-M2  3A 2A 1A  8A 7A 6A 5A 4A  Signal Name [Specification]	F
Connector No. E107 Connector Name PARN Connector Type TB01 M. Color No. of Wire 1 0	Connector No.  Connector Name FUG Connector Type NSC  Connector Name  Conn	G
		Н
WIRE CS16-TM4  C	FEST TOM (TRANSMISSION CONTROL MODULE) SPIOFBGY SPIOFBGY Signal Name [Specification] REV LAMP RLY	I
	Signal Na  Signal Na  Signal Na  FEG	J
Connector No. E106 Connector Type TH80 Connector Type TH80 No. of Wire S9 O O 93 Y Y	Connector No. F151 Connector Name TGM Connector Type SF10 H.S. F10 9 8 Terminal Color No. of Wire 7	К
- III		L
BOSE AUDIO WITH NAVIGATION Connector Name ReAR DOOR SPEAKER RH LAS. LAS. LAS. LAS. LAS. LAS. LAS. LAS.	NSIO NSIO Carintonio della propertication   Signal Name (Specification)	M
DOWITH PEAR DOOR S INSIGNED SIGNED SI	WIRE TO WIRE TRASEW-NSIO	AV
BOSE AUDI Connector Name Former of Wire No.  Terminal Oolor No.  Terminal T	Connector No.  Connector Name V Connector Type 1  LEGISTICS CO.  No. of Wire  31 R	0
		JCNWM0769GI
		Р

- AV OV SHELD SHELD 88 89	19 d 91
Connector No.   M7   Connector Name   WIRE TO WIRE	Connector Name   WIRE TO WIRE
Connector No. M6 Connector Type TH80MM-CSI6-TM4  Connector Type TH80MM-CSI6-TM4  Terminal Color Signal Name (Specification)  Sp. V  93 Y	Connector No.   M24   Connector No.   M24   Connector Name   DATA LINK CONNECTOR   Connector Type   BD16FW   Connector Type   BD16FW   Connector Type   BD16FW   Connector Type   Connector Typ
BOSE AUDIO WITH NAVIGATION	Connector Name FRONT SQUAWKER LH Connector Type TROZFBR  Terminal Color No. of Wire 1 L 2 W

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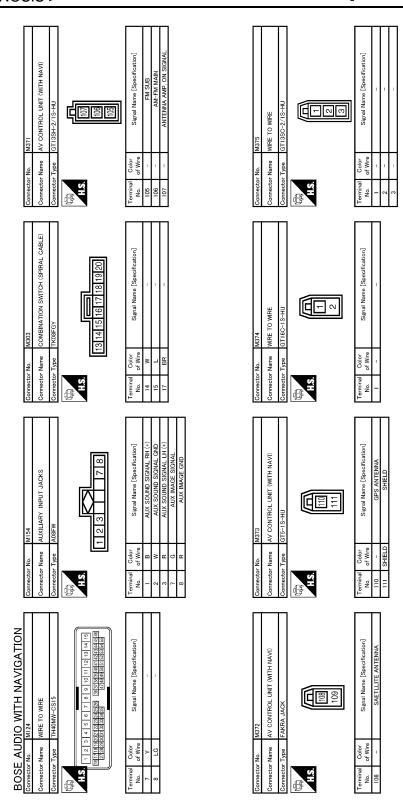
M67  UNIFIED METER AND A/C AMP.  TH32FW-NH  144 65 67 47 86 90 51 52 53 64 65 96 90 61 52 50 64 65 96 90 71 71 72	Signal Name [Specification] CAN-H CAN-L	AUX IMAGE SIGNAL RGB (R. RED) SIGNAL RGB (B. ELUE) SIGNAL RGB SYNC VP SHIELD COMM (DISP->CONT) SHIELD	А	
M67   M67   Connector No.   M67   Connector Name   UNIFED METI   Connector Type   TH32FW-NH   M5   M5   M5   M5   M5   M5   M5   M	Terminal Color   Sign   No.   O'Wire   Sign   1	15 G R R R R R R R R R R R R R R R R R R	C	
M66  TH40FW-NH  TH40FW-NH  S 0 2 0 0 0 11 22 0 14 15 10 10 10 10 20 10 10 20 10 10 10 10 10 10 10 10 10 10 10 10 10	Signal Name (Specification) VEHICLE SPEED (8-PULSE)	M75  DISPLAY UNIT (WITH MAVI)  TH24FW-NH  10 9 8 7 6 5 4 3 2 1  Signal Name (Speeifcation)  GND  BATTERY  ACC  SHELD  AIX MAGE GND  FIGB (G. GREED) SIGNAL  SHELD  ROB AREA (YS) SIGNAL  SHELD  GOMM (CONTDISP)  GND	E	
Connector No. M66 Connector Name UNIFED ME Connector Type TH40FW+NH  M.S. I Z 0 4 5 6 7 6 9 9	Terminal Color Sign 128 R VEH	Connector Name   DISPLAY UN	G	
PEAKER 2 1	Signal Name [Specification]	MULTIFUNCTION SWITCH THISPW-NH    4 6 8 10 12 14 16   3 5 7 9 11 13 15   3 5 7 9 11 13   3 5 7 9 11   3 5 7 9 11 13   3 5 7 9 11	I	
Connector No. M63 Connector Name CENTER SPEAKER Connector Type TK02FBR H.S.	Terminal Color Signature of Wire 2 G	Connector Name   MULTIFUNC   Connector Type   THISTWINN   THISTWINN   Thistwin   Color   Thistwin   Color   Thistwin   Color   Thistwin   Color   Thistwin   Thistwin   Color   Thistwin   Color   Thistwin   Thistwin   Color   Thistwin   This	J K	
100 WITH NAVIGATION MSG COMBINATION SWITCH (SPIRAL CABLE) TROBFGY-1V  [24 25 26 27 [31] 22 23 34	Signal Name [Specification]	MZ  MZ  2	L	
BOSE AUDIO WITH NAVIGATION Connector No. M36 Connector Name COMBINATION SWITCH (SPIRAL CABLE Connector Type TK08FGV-1V  MAS. [24 25 26 27] [24 25 28 27] [24 25 28 27] [24 25 28 27]	Signa   Sign	Connector No   M69	AV	
·			JCNWM0771GI	)

1		Connector No. MID6  Connector Name WIRE TO WIRE  Connector Type TKTIOMW-NS6  MA  1 2 3 4 5 6 7 8 9 10  11 12 13 14 15 16 17 18	Terminal Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]   2   R   - [With INAVI]   3   G   - [With INAVI]   4   SHELD   - [With INAVI]
Connector No. M87 Connector Type TH40PW-NH  M. Connector Type TH40PW-NH  M	Terminal   Color   Signal Name [Specification]     21	Connector No. M89  Connector Type AV CONTROL UNIT (WITH NAVI)  Connector Type TH32FW-NH  H.S. 72 74 75 76 77 78 79 60 51 62 63 61 63 66 77 88  88 90 91 92 63 94 65 69 97 88 99 00000011128 1000	Terminal   Golor   Signal Name [Specification]   No. of Wire   Ped SOUND SIGNAL LH (+)   80   B   Ped SOUND SIGNAL LH (+)   81   82   B   Ped SOUND SIGNAL LH (+)   82   83   B   Ped SOUND SIGNAL LH (+)   81   R   AUX SOUND SIGNAL LH (+)   82   W   AUX SOUND SIGNAL LH (-)   96   G   Ped SOUND SIGNAL LH (-)   96   G   Ped SOUND SIGNAL LH (-)   96   G   Ped SOUND SIGNAL RH (-)   102   BR   SW GND   103   RM   AUX SOUND SIGNAL RH (+)   103   BR   AUX SOUND SIGNAL RH (+)
13   BR   SOUND SIGNAL REAR RH (+)     14   Y   SOUND SIGNAL REAR RH (-)     15   B   STRG SW GND     16   L   STRG SW GND     19   Y   BATTERY     20   B   GND     30   GND     40   GND     50   GN		72 SHIELD SHIELD	
Connector No. M80 Connector Name AV CONTROL UNIT (WITH NAV) Connector Type THISPW-CS2  MS  19 10 11 12 3 4 5 6 7 8 9 20  19 10 11 12 13 14 15 16 17 18 20	Signal Name [Specification]  AMP: ON SIGNAL SOUND SIGNAL FRONT LH (+) SOUND SIGNAL FRONT LH (+) SOUND SIGNAL FRAR LH (+) SOUND SIGNAL REAR LH (+) SOUND SIGNAL REAR LH (+) STRG SWA ACC LLUMINATION SHELD SOUND SIGNAL FRONT RH (+) SOUND SIGNAL FRONT RH (+)	M88 AV CONTROL UNIT (WITH NAV)) THI2FW-NH  62 64 66 68 70 72 61 63 65 67 69 71	Signal Name [Specification] RGB (G. GREEN) SIGNAL RGB (B. BLLE) SIGNAL SHIELD RGB SYNC SHIELD RGB SARA HP HP VP COMM (CONTDISP)
	Solor Wire Nire Nire Nire Nire Nire Nire Nire N		of Wire B W W R R R R R B B B B B B B B B B B B
Connector Name Connector Type H.S. H.S.	Color   Color	Connector No. Connector Name Connector Type	Company   Comp

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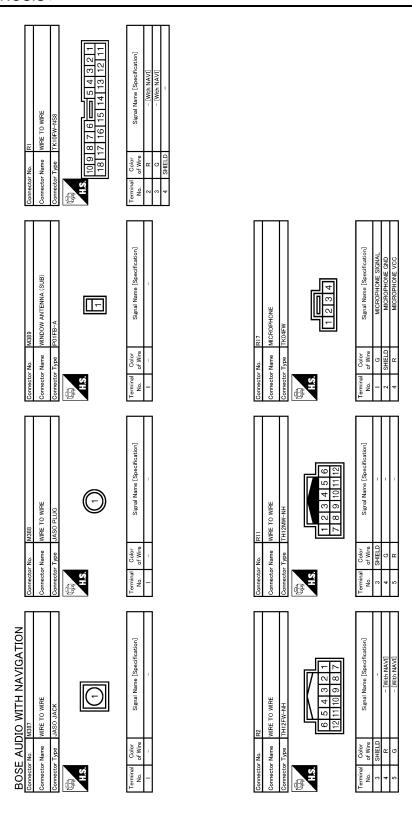
607  10 11 12 13 14 15 16 10 11 12 13 14 15 16 10 11 12 13 14 15 16 10 10 10 10 10 10 10 10 10 10 10 10 10	DY CONTROL MODULE)  NH  Signal Name [Specification]  CAN-H  CAN-H		АВ
M	M 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		С
Connector No.   Connector Name   Connector Name   Color   Connector Type   Color   C	Connector No. Connector Name Connector Types Fig. 1998 F		D
Pod SOUND SIGNAL PH (-) SHELD AV COMM (+) GND SHELD POD CONNECTION RECOGNITION POD CONNECTION RECOGNITION POD SOUND SIGNAL CND POD SOUND SIGNAL LH (+)	(%) (%) (%) (%) (%) (%) (%) (%) (%) (%)		Е
Pod SOUND SIGNAL RH (-) SHIELD AV COMM (+) GND ACOMNECTION RECOGNIT ACCESSORY DETECT THEORY THEOR POD SIGNAL LH (+) Pod SOUND SIGNAL LH (+)	T. M. Marme		F
	WRE TO THEOMAY		G
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Connector No. Connector Name Connector Type  11.5. 11.0. 11.		
			Н
10111 10111 10223 2223 34LHG AL RHG WER WER WER AL RHG AL	WIRE NSTO TOTAL TO THE CONTRIBUTION OF THE CON		I
ER	Type WIRE TO WIRE  Type TK38MW-NS10  112 12 14 S		J
No. M111 Name   Pod ADAPTER Types   TH24FW+NH	- Name (WIRE TO WIRE T		
Connector No.   Connector No.   Connector Name   Connector Type   Connec	Connector No. Connector Type Connect		K
			L
-RZS-R-LH-Z -RZS-R-RZS-R-RZS-RZS-RZS-RZS-RZS-RZS-RZS	OUAWKER RH  Z T Signal Name [Specification]  - [With BOSE audio]  - [With BOSE audio]		M
ECM RP44FGY-R25-F-LH-2  ECM RP42FGY-R25-F-LH-2  [128   122   138   149   169	MI14 TROZEBR Signal Name [ Signal Name [ - With BO - With BO		A) /
			AV
BOSE AL Connector Nome Connector Type IIS III P III P III I III P	Connector No. Connector Type Connect		0
		JCNWM0773Gł	Р

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JCNWM0774GI

WIRE TO WIRE GT16-1S-HU  Signal Name [Specification]  Signal Name [Specification]  ANTENIA AMP: ON SIGNAL  ANTENIA AMP ON SIGNAL  ANTENIA	
Connector No.  L.  H.S.  H.S.	
Soffication	
WIRE TO WIRE  GT135C-2/1S-HU  Signal Name [Specification]  Signal Name [Specification]	
N. Name  Color  Type  Type  Type  Type  Type  Color  Type  T	
Connector Na  Co	
WIRE PP-HU Signal Name [Specification] Signal Name [Specification] SAETLLITE ANTENINA	
WIRE TO WIRE GTI6C-IPP-HU Signal Nam Signal Nam SAETLLI SAETLLI	
Connector No. M. Connector No. M. Connector No. M. Connector No. M. Connector No. No. Connector No. No. Connector Type G. Wire No. Connector Type G. Wire No. Connector Type G. Wire No. Color No. C	
BOSE AUDIO WITH NAVIGATION Connector Name Wife TO Wife  Connector Name (Figure 1)  Terminal Color No. of Wire  Connector Name Wife TO Wife  Connector Name Wife TO Wife  Connector Name (Specification)  Terminal Color No. of Wire  Connector Name (Specification)  Terminal Color No. of Wire  Color No.	
M376 WIRE TO WIRE  Signal Name  Signal Name	
BOSE AUI Connector Name Connector Na	
JCNWM0775GI	

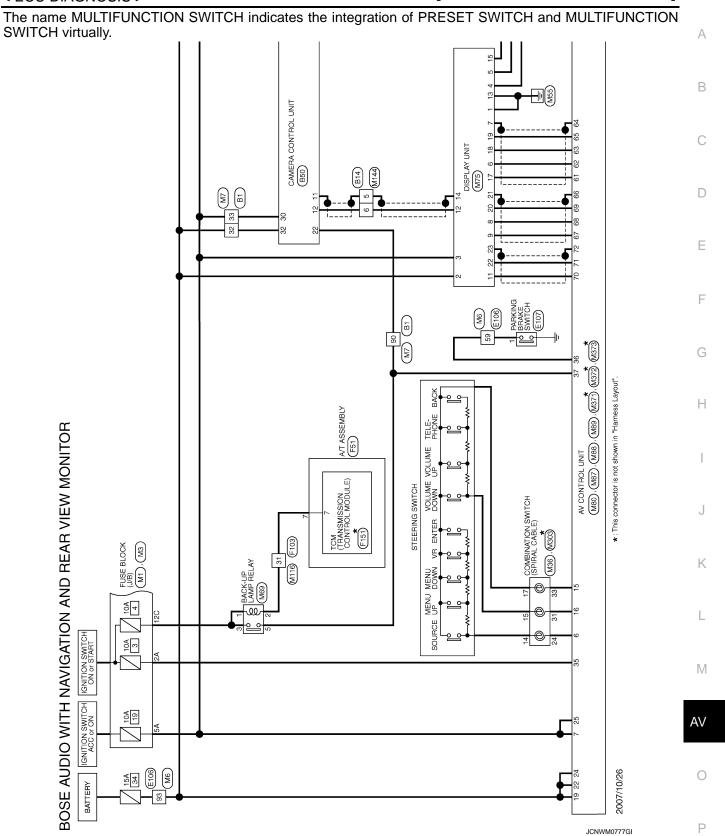


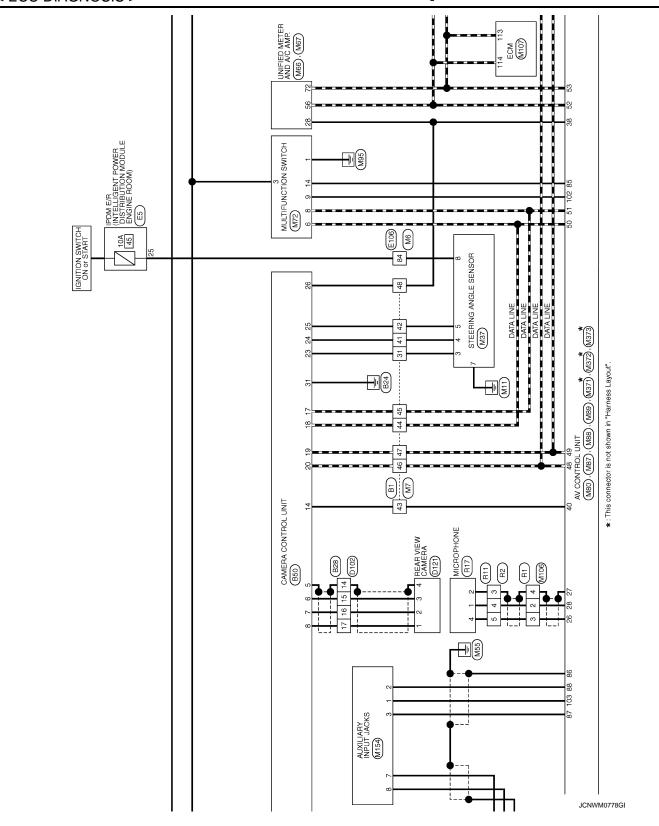
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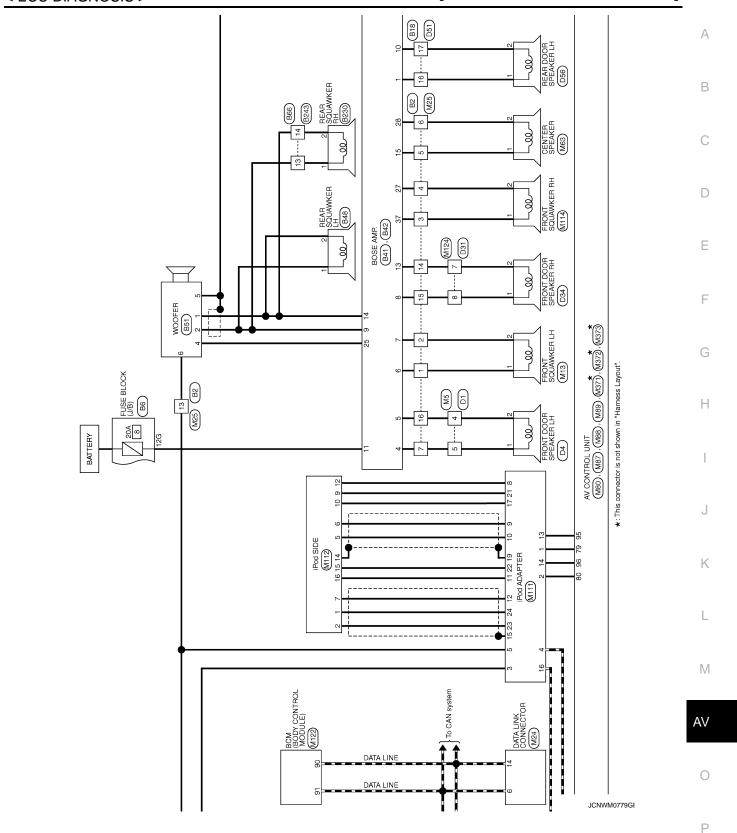
# WITH REAR VIEW MONITOR

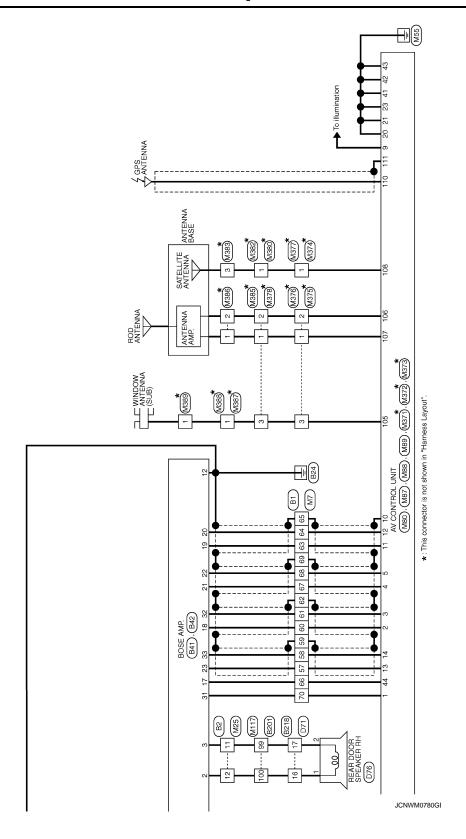
WITH REAR VIEW MONITOR: Wiring Diagram - BOSE AUDIO WITH NAVIGATION AND REAR VIEW MONITOR -

Click here to view the eWD. **NOTE:** 









BOSE AUDIO WITH NAVIGATION AND BEAN VIEW MONITOR    Control of the property   Control of the pro		o wire W-NH 5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24	Signal Name [Specification]  - [Without around view monitor]		АВ
BOSE AUDIO WITH NAVIGATION AND REAR VIEW MONITOR   Converte from first 10 met   Converte from first 1		В28 WIRE 1 • ИН24М • ТН24М • ТН24М	Color of Wire B B B B B B B B B B B B B B B B B B B		
BOSE AUDIO WITH HAVIGATION AND REAR VIEW MONITOR  Consider Name    Part   Part	12 11 10 9 8 12 11 12 11 10 9 8 12 11 12 11 10 9 8 12 11 12 11 10 9 8 12 11 12 11 12 12 12 12 12 12 12 12 12	33 2	nal Name [Specification] - [With BOSE audo] - [With BOSE audo]		
BOSE AUDIO WITH NAVIGATION AND REAR VIEW MONITOR   Concessor five   File   Fi	100r   10	6 6 6 1 1 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1	Color of Wire G		
BOSE AUDIO WITH NAVIGATION AND REAR VIEW MODE	AO 	0 3 2 1 1 2 8 6 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	l Name (Specification)		I
Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Type ITH80FW-CSIB-TM4  Terminal Color of Wire  Signal Name [Specification]  Terminal Color  Connector Name FUSE BLOCK (J/B)  Connector Type NSIZFBR-CS  Terminal Color	REAR VIEW MONITT 87 B B B B B B B B B B B B B B B B B B	112F	Color of Wire W LD		
JCNWM0781GI	MAVIGATION AND	around view monitor] around view monitor] as audio or with NAVI) as audio or with NAVI)  B) 3G2G1G	[Specification]		L
JCNWM0781GI	Miles   Mile	0 G G G G G G G G G G G G G G G G G G G	of Wire GR	P	
1.1	<u> </u>		<u> -      </u>	JCNWM0781GI	Р

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12 B GND GADAL ENGIND SIGNAL WOOFER (+) 14 R SOUND SIGNAL WOOFER (+)		Connector No. 951 Connector Name WOOFER Connector Type RS09FGY-PR	Terminal   Color   Signal Name [Speedination]   No.   of Wire   Signal Name [Speedination]   1 R   SOUND SIGNAL WOOPER (+)   2 G   SOUND SIGNAL WOOPER (+)   4 GR   WOOPER AMP ON SIGNAL   GND   6 W   BATTERY
Connector No. B42  Connector Type SGA12FBR-SJA2  H.S. 14 13 12 11 10	Perminal   Color   Signal Name [Specification]     1	22 O REVERSE 23 L SENSOR SIGNAL 1 24 BR SENSOR SIGNAL 2 25 R SENSOR SIGNAL 3 26 V VEHICLE SPEED (8-PULSE) 31 B GND 32 L BATTERY	
SEAR VIEW MONITOR   31   W   AMP ON SIGNAL   STORT LH (*)   32   L   SOUND SIGNAL REAR RH (*)   37   BR   SOUND SIGNAL RRONT SQUAMKER RH (*)		Connector No. 850  Connector Name GAMERA CONTROL UNIT  Connector Type TH32FW-NH  (1.8)  (2.4)  (3.4)  (4.8)  (4.8)  (5.4)  (6.8)  (7.19)  (8.10)  (8.10)  (8.10)  (9.11)  (1.13)  (1.13)  (1.13)  (1.13)  (1.13)  (1.13)  (1.13)	Terminal   Calor   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   SHELD   CAMERA MAGE SIGNAL   CAMERA MAGE SIGNAL   SHELD   SHELD   SHELD   SHELD   SHELD   SHELD   SHELD   CAMERA MAGE SIGNAL   11 SHELD   CAMERA MAGE SIGNAL   12 W   CAMERA MAGE SIGNAL   14 W   CAMERA MAGE MAGE SIGNAL   14 W   CAMERA MAGE MAGE SIGNAL   15 W   CAMM (L.) Wirth base audio or with NAVI]   19 R   AV COMM (L.) Wirth base audio or with NAVI]   19 R   AV COMM (L.) Wirth base audio or with NAVI]   20 G   AV COMM (H.) WIRTH   20 G   20 G
BOSE AUDIO WITH NAVIGATION AND Connector No.   841   Connector Name   80.5E AMP.   Connector Type   SCA19FBF-SGA4	Terminal   Color   Signal Name [Spee/fication]	Connector No. 648 Connector Name REAR SOUAWKER LH Connector Type TK02FBR	Terminal   Color   Signal Name [Specification]   No.   1

JCNWM0782GI

Connector No. B230 Connector Name REAR SOLAWKER RH Connector Type TKOZFBR  A.S. Properties Color Signal Name [Specification]  1	Connector No.   D31   Connector Name   WIRE TO WIRE   Connector Name   WIRE TO WIRE   THATOFW-CS15   Connector Type   THATOFW-CS15   THATOFW-C	В
Connector No. Connector Type Connector Type H.S. H.S.  Terminal Colc I of W. I 2 W.	Commettor No. Commettor Type Fig. 12   Commett	D
1321 1211 1211 E sudio]	LH (WITH BOSE ecification)	Е
No. B218  Name WIRE TO WIRE  Type TKIOFW-NSS  10 9 8 7 6 6 6 7 12 12 12 12 12 12 12 12 12 12 12 12 12	PO4 FRONT DOOR SPEAKER LH (WITH BOSE SYSTEM) NS02FBR-CS  NS02FBR-CS  Signal Name [Specification]	F
No. B218 Type TK10  10 9 8 7  18 17 1  18 17 7  10 0 0 Wire	N N N N N N N N N N N N N N N N N N N	G
Connector Name Connector Type  MAS  Terminal Color No. Color Terminal Te	Connector No.  Connector Name Connector Type Connector Type  Terminal No. of Wire 2 W	Н
OWRE W-CSIG-TM4  W-CSIG-TM4	No.   D1   NIRE TO WIRE   TH40FW-CS15   TH	I
MONITOR B201 WIRE TO WIPE TH80PW-CS16-TM Signal Nar - (With)	WIRE TO WIRE THOPPECSIS THAOPPECSIS SET ALL SE	J
REAR VIEW MONITOR Connector Name WIRE TO WIRE Connector Type TH80FW-CS16-TM LAS Connector Type C	Commector No.   DI	К
NO RIPER TO THE PROPERTY OF TH		L
NAVIGATIO 1920212223	WIRE NIH 0 19 18 17 16 15 14 13 Signal Name [Specification]	M
DIO WITH B66 WIRE TO WIRE TH24MW-NH  3 4 5 6 15 16 17 18	8 B243 WIRE TO WIRE TH24FW-NH 10 9 8 7 22 21 20 19 Signal	AV
BOSE AUC Connector Name Connector Type    1   2	ttor No.  ttor Name  ttor Type    12   11     24   23     Color     V     W	0
B B B B B B B B B B B B B B B B B B B	Conner Conner Termin No.	JCNWM0783Gi
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Connector No. D71 Connector Name WIRE TO WIRE Connector Type TK10MW-NS8	H.S. 112345 678910 1112131415161718	Terminal   Color   Signal Name [Specification]   No.   of Wire     Signal Name [Specification]   16   L	Connector No. E5		H2. FINE THE STATE OF THE STATE	Terminal   Color   Signal Name [Specification]   No. of Wire   25   G   Color   Colo
Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NSWZFBR-CS	H.S.	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1	Connector No. D121		H.S. 17234	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1   G   CAMERA POWER SUPPLY   2   L   CAMERA GND   3   Y   CAMERA IMAGE SIGNAL   A SUMER NAME IMAGE SIGNAL   CAMERA IMAGE SIG
O REAR VIEW MONITOR Connector No. DSI Connector Name WIRE TO WIRE Connector Type TRY (DMW-NS)	112345 678910 1112131415 161718	Terminal   Odlor   Signal Name [Specification]   No. of Wire   Y   - [With BOSE audio]	Connector No. D102	$\neg$	Connector 19pe   1724-19-18   18.	Terminal   Color   Signal Name [Specification]   14   SHELD   -[Without around view monitor]   15   Y   -[Without around view monitor]   15   L   -[Withou
BOSE AUDIO WITH NAVIGATION AND Connector No. D34 Connector Name SYSTEM) Connector Name SYSTEM) Connector Type NSQEER-CS	#8 21	Terminal Golor   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1 BR   -	Connector No. D76		Gomecor type Insuze Br-Cs. H.S.	Color

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Connector No. F103 Connector Name WIRE TO WIRE  Connector Type TK36FW-NS10  H.S EDERBERGER BROWNER TO THE ENGINEER TO THE ENGINEER THE	Connector No.   M5   Connector No.   M5   Connector Name   WIRE TO WIRE	A B C
Connector No.   FSI	Connector No.   M3   Connector Name   FUSE BLOCK (J/B)   Connector Type   NS12FW-CS	E F G
REAR VIEW MONITOR	Connector No.   M1	J K
BOSE AUDIO WITH NAVIGATION AND Connector Name WIRE TO WIRE Connector Type TH857W-CS16-TM4  Connector Type TH857W-CS16-TM4  Torninal Color Torninal Color Signal Name [Specification] Signal Name [Specification]	Connector No.   F151	AV O JCNWM0785GI

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BOSE AUDIO WITH NAVIGATION AND	≥III	57	A >	1 1	П
Connector Name WIRE TO WIRE Connector Type TH80MW-CSI 6-TM4	Connector Name WIRE TO WIRE Connector Type TH80MW-CS16-TM4	20 20	SHIELD	1 1	Connector Name FRONT SQUAWKER LH Connector Tvoe TK02FBR
		62 63 65 65 67 67	SHELD G G SHELD SB SB SB		
Color of Wire Signal Name [Specification]  V  V	Color   Signal Name [Specification]   Color   Signal Name [Specification]   Signal Name [Specification]   Signal Name [Specification]   Signal Name   Specification]   Signal Name   Specification]   Signal Name   Signal Name   Specification   Specificat	89 20 80 80 80 80 80 80 80 80 80 80 80 80 80	SHELD O		Terminal Color   Signal Name [Specification]
Connector No. M24 Connector Name DATA LINK CONNECTOR Connector Type BD16FW  Connector Type BD16FW  (9 10 11 12 13 14 15 16 7 8)	Connector No. MZ5 Connector Name WIRE TO WIRE Connector Type NS16MW-CS  H.S. 1 2 3 1 4 5 6 7  8 9 10 11 12 13 14 15 16	15	2 0		Connector No. M36 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TKOBFGY-1V  A.S. 22 26 27 31 32 33 34
Color Signal Name [Specification] L L	Terminal   Color   Signal Name [Specification]   1   L				Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Color

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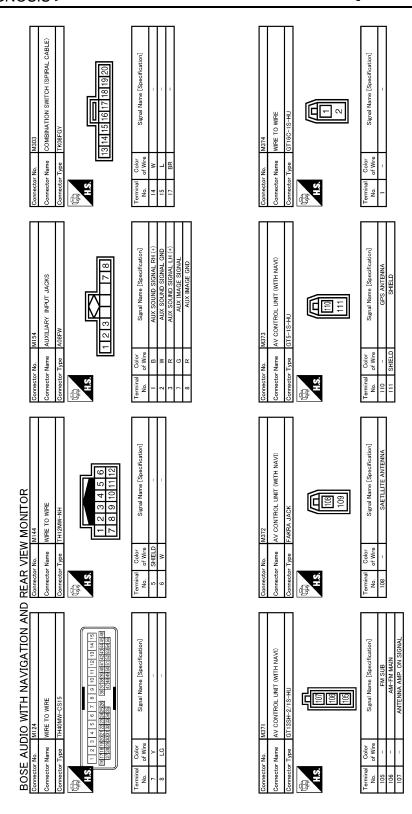
D A/C AMP.	Specification] H-H I-L	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0		A B
Connector No. M67  Connector Name UNIFED METER AND A/C AMP  Connector Type TH32PW-NH  TH32  TH32	Color   Signal Name [Specification]   Of Wire   P   CAN+H   CAN+L   CAN+L	B   GND		С
Conne	Terminal   No.   No.   72   72	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		D
5 AMP.	pelfication) (8-PULSE)	(A)	E SIGNAL - DISSO - SIGNAL - DISSO - SIGNAL	Е
AETER AND A/C	Signal Name [Specification] VEHICLE SPEED (8-PULSE)	M75 DISPLAY UNIT (WITH NAVI) TH24FW-NH  10 9 8 7 6 5 4 3 2 22 21 20 19 18 17 16 15 14  Signal Name [Specification]  ACC SHELD AUX MAGE GND AUX MAGE GND	RGB GG GREEN SIGNAL SHELD RGB AREA (VS) SIGNAL COMM (CONT201SP) CAMERA IMAGE SIGNAL	F
4.2	Color Of Wire R	111 233 Mire	N N N N N N N N N N N N N N N N N N N	G
Connector No. Connector Name Connector Type H.S. H.S. ELES SE	Terminal o No. 28	Connector No.  Connector Types  Connector Types  12 11  12 11  12 11  13 1 V  2 V  3 V  4 SHIELLI  5 RELEASE  8 RELEASE  1 RELEASE  1 RELEASE  1 RELEASE  1 RELEASE  1 RELEASE  1 RELEASE  2 V  3 V  4 SHIELLI  5 RELEASE  5 RELEASE  6		Н
			Π	
	Specification]	CH 14 16 13 15 13 15 15 15 15 15 15 15 15 15 15 15 15 15	T SIGNAL	I
M63 CENTER SPEAKER TKGZFBR  2 1	Signal Name [Specification]	TTON SWITTON S	DISK E.JEC	J
W MON M63 CENTER STROZEBR				
REAR VIEW MONITOR Connector No M63 Connector Name GENTER SPEAKER Connector Type TROOPER  M3.	Color of Wire 2 C C C C C C C C C C C C C C C C C C	Connector No.  Connector Name Connector Type  LS.  Connector Name	H	K
Δ		Ten	Ц	L
VOIL	[cation]	(cation)		
NAVIG	Signal Name [Specification] SENSORI SENSORZ SENSORZ GND IGN	MZ  MZ  AZ  Signal Name [Specification]		M
BOSE AUDIO WITH NAVIGATION AN Commetor No. Ms7  Commetor Name STEERING ANGLE SENSOR  THOSPY-NH  T 2 3 8  T 4 5	Signal	MSGZFL-MZ MSGZFL-MZ  Signal Name [S		AV
BOSE AUDI Connector No. M Connector Name S Connector Type T M.S. H.S.	Octor of Wire	e e e		
BOSE A Connector No Connector No Connector Ty	Terminal No	Connector Name Connector Type Connec	JCNWM0787GI	0
			oorwine or or	Р

R   VEHICLE:   W   CONNECTION   B   CONTINUE   GR   CONTINUE   SB   MODECTION   GR   AV   AV     LG   AV     LG   AV   AV     LG   AV     LG		Connector Name WIRE TO WIRE  Connector Type TX(DMW-NSS  T1 2 3 4 5 6 7 8 9 10  T1 12 13 14 15 16 17 18	Terminal   Color   Signal Name [Speeification]     No.
Connector No. M87 Connector Name AV CONTROL UNIT (WITH NAVI) Connector Type TH40FW-NH  HS. TH40FW-NH  Connector Type TH40FW-NH  Connector Type TH40FW-NH  HS. TH40FW-NH  Connector Type TH40FW-NH	Terminal Color   Signal Mane [Specification]     21	Connector No.   M89	Terminal   Color   Signal Manne (Specification)   No.   of Wire   Pod SOUND SIGNAL, LH (+)   80   B   Pod SOUND SIGNAL, LH (+)   86   SteL   Pod SOUND SIGNAL, LH (+)   86   SteL   Pod SOUND SIGNAL, CH (+)   87   M   AUX SOUND SIGNAL, CH (+)   86   W   AUX SOUND SIGNAL, CH (+)   96   G   Pod SOUND SIGNAL, LH (-)   96   G   Pod SOUND SIGNAL, LH (-)   96   G   Pod SOUND SIGNAL, LH (-)   97   M   Pod SOUND SIGNAL, LH (-)   98   G   Pod SOUND SIGNAL, LH (-)   98   G   Pod SOUND SIGNAL, LH (-)   99   M   Pod SOUND SIGNAL, LH (-)   90   M   Pod SOUND SIGNAL, LH (-)   9
REAR VIEW MONITOR   13		72 SHIELD SHIELD	
BOSE AUDIO WITH NAVIGATION AND Connector No. MSD Connector Name AV CONTROL UNIT (WITH NAV) Connector Type THISFW-CS2  Connector Type THISFW-CS2  ALS  19 10 11 12 13 14 15 6 7 8 9 1 19 10 11 12 13 14 15 16 17 18 20	No. of Wire   Signal Name [Specification]	Connector Name AV CONTROL UNIT (WITH NAVI)  Connector Type THIZFW-N4H  LS. 62 64 66 68 70 72  61 63 65 67 69 71	No. of Wire   Signal Name [Specification]     No. of Wire   Signal Name [Specification]

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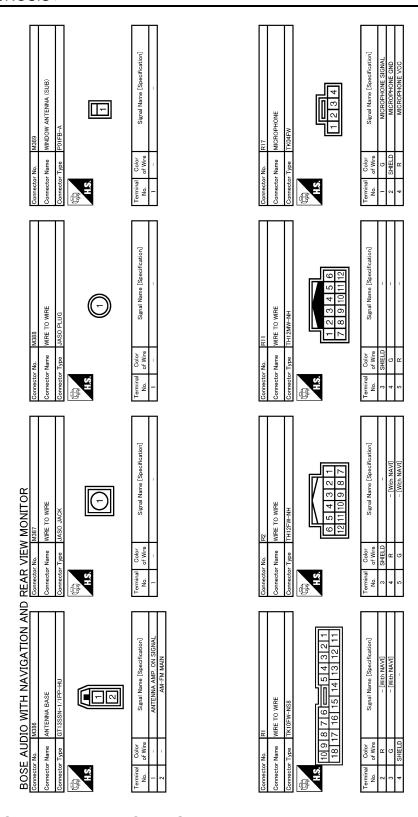
	M122  BCM (BODY CONTROL MODULE)  TH4GFB-14H  TH4GFB-14H  Signal Name (Specification)  CAN-L  CAN-H	АВ	
Connector No.   M112	M122	C	
Pod SOUND SIGNAL RH (~)  SHIELD  AV COMM (H)  GND  GND  ACCESSORY DETECT  ACCESSORY DETECT  Pod SOUND SIGNAL LH (+)  Pod SOUND SIGNAL LH (+)	Speedfeation]	E	
	WRE TO WRE TH/80MW-CS16-TM4 TH/80MW-CS16-TM4  Signal Name I  - [With Bit I	F	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Connector No. Connector Name Connector Type No. of Wire 100 SB	Н	
10   10   10   10   10   10   10   10	WIRE NS10  TOTAL MATTER ENTRE	1	
M MIII M P P O 1 T H 2 M II I I I I I I I I I I I I I I I I	MI16 WIRE TO TIX38MW	J	
	Connector No. Connector Name Connector Type  Terminal Color No. of Wire  31	K	
BOSE AUDIO WITH NAVIGATION AND	OUAWKER RH  2 1  - [With BOSE audio]  - [With BOSE audio]	L M	
No.   MIO7   Name   ECM   Type   RP124FGY-RE26-R-LH-2   ECM   EC	MI14 FRONT S	AV	
BOSE AL Commencer Name Commencer Type  H.S.  H.S	Connector No.  Connector Type  Connector Type  No.  No.  Terminal  No.  To Wir.  L V  L V	JCNWM0789GI	
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[po]	[in]	А
WIRE 2/1S-HU  [2] [3] [3] [4] [5] [6] [7] [7] [7] [7] [8] [8] [8] [9] [9] [9] [9] [9] [9] [9] [9] [9] [9	WRE P-2/IPP-HU Signal Name [Specification]	В
MYRE TO GT113SG-	M885 TO	С
Connector Name Connector Type  Connector Type  H.S.  1 Color  No. of Wire  2	Connector No.  Connector Name Connector Type H.S.  Terminal Color No. of Wir	D
ification	fication]	Е
WHE IPP-HU Signal Name [Specification]	A BASE IPP-HU Signal Name (Specification) SATILITE ANTENNA	F
tor No. M377  Tor Name WIRE TO	rNo. M383  r Name ANTENNA BASE  Type GT16C-1PP-HU  Color Signal P  of Wire Saleral	G
Connector No. Connector Name Connector Type H.S. H.S. Terminal Color No. of Wire T	Connector No. Connector Type Connector Type No.  15.  15.  16.  17.  18.  18.  19.  19.  19.  19.  19.  19	Н
peofication)	pecification]	1
MAZIG WIRE TO WIRE GTT3SCN-27/IPP-HU	WIRE TO WIRE GTIGC-IPP-HU  Signal Name [Specification]	J
AR VIEW estern No. certor Name ester Type of Wire	nettor No.	К
	No long long long long long long long lon	L
WRE 2/15-HU  WRE 2/15-HU  Signal Name [Specification]	WIRE  HU  Signal Name (Specification)	M
BOSE AUDIO WITH NAVIGATION AND Sometor No. M375 Connector No. M375 Connector Name WIRE TO WIRE Connector Type GT13SC-2/1S-HU  ALS. Terminal Color Signal Name [Specification]  No. of Wire Signal Name [Specification]  1	M380 WIRE TO WIRE GT16-1S-HU	AV
BOSE AUD: Connector No.  Connector Type (Connector Type (Conne	Connector No. In Connector Type Connector Terminal Color No. of Wire Inc.	0
		JCNWM0791GI
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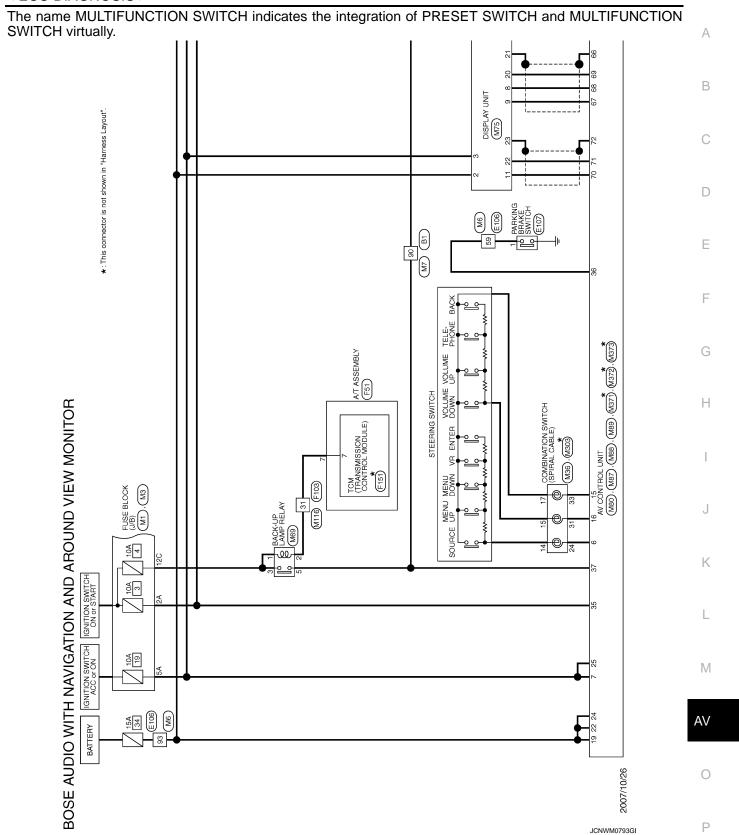


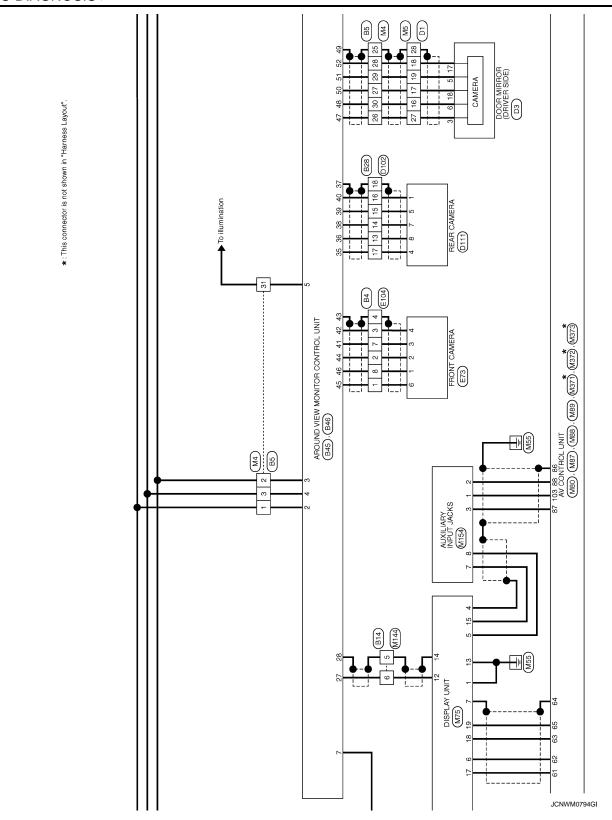
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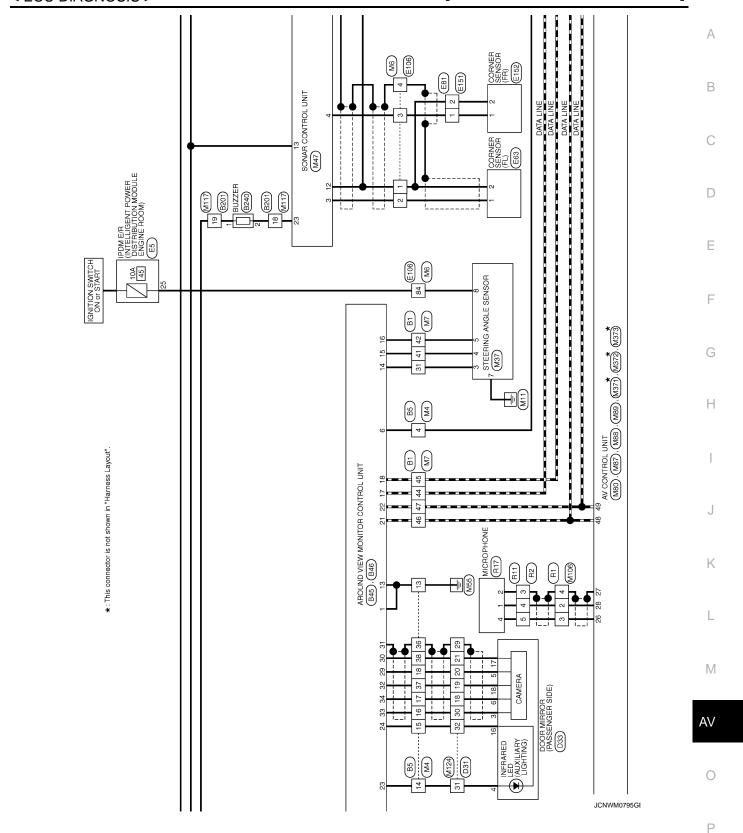
### WITH AROUND VIEW MONITOR

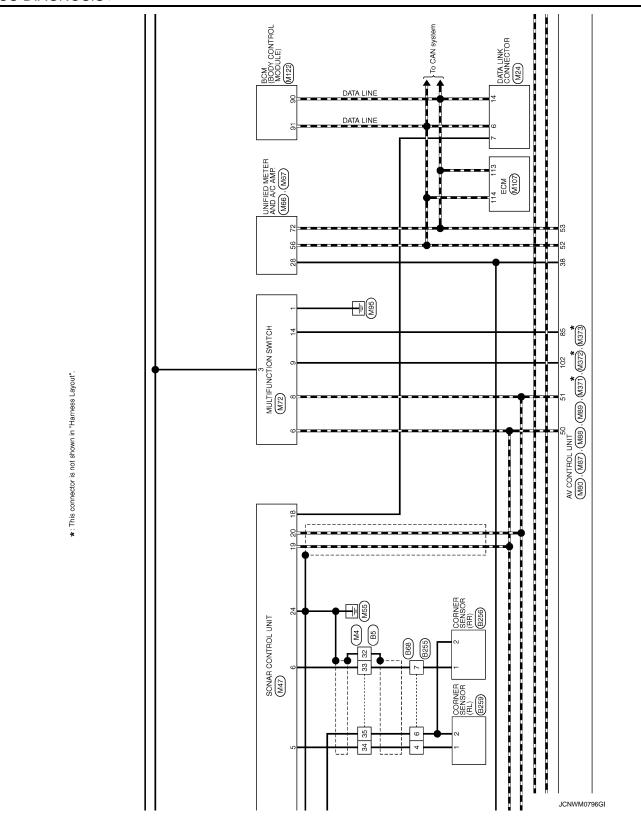
WITH AROUND VIEW MONITOR: Wiring Diagram - BOSE AUDIO WITH NAVIGATION AND AROUND VIEW MONITOR -

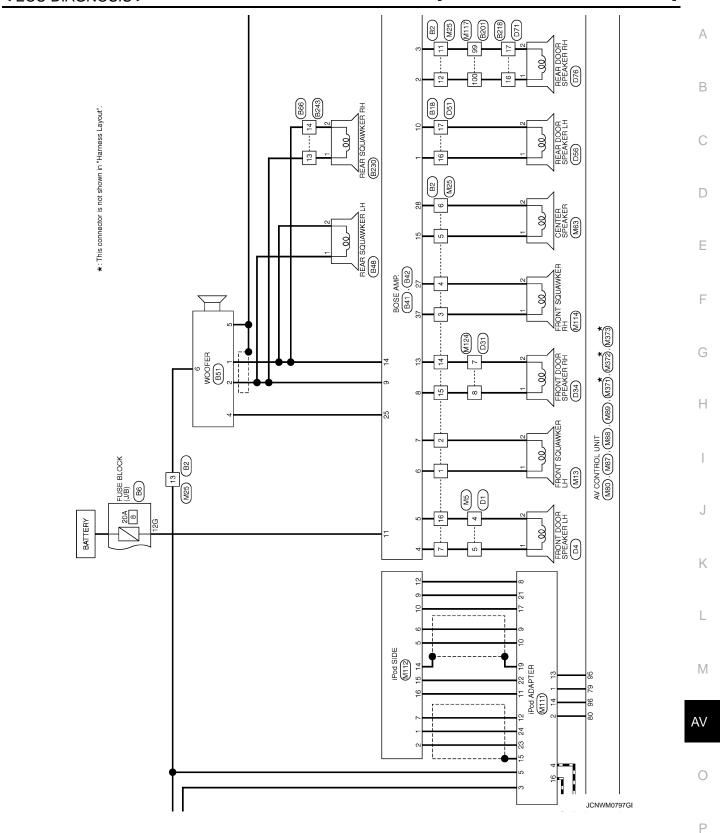
Click here to view the eWD. **NOTE:** 



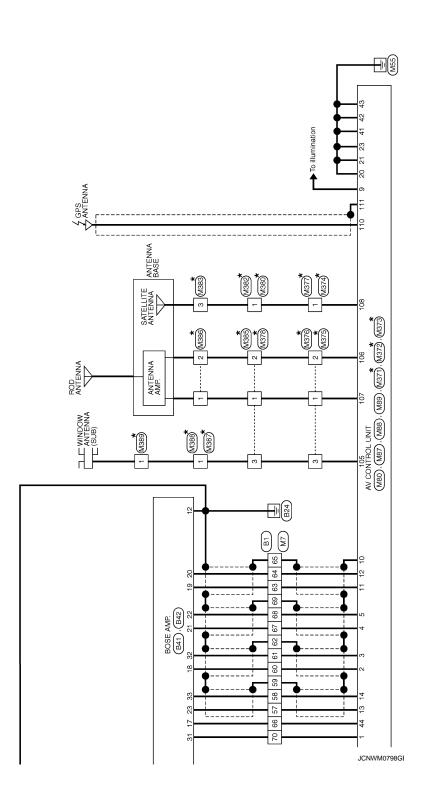






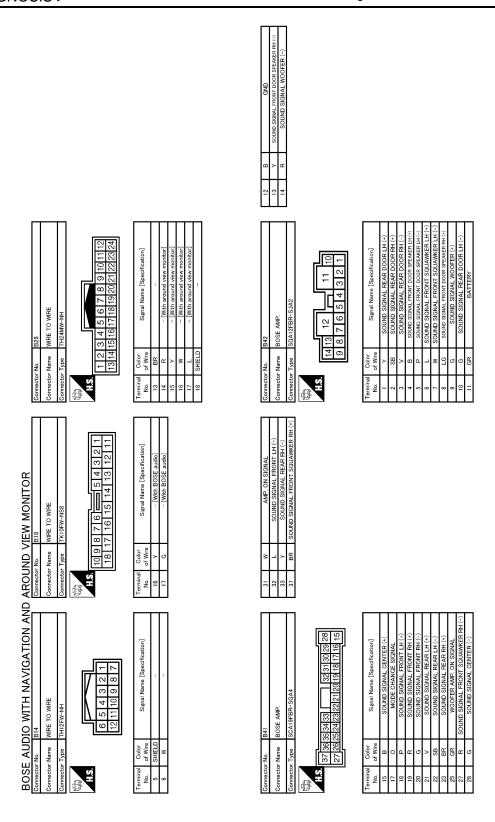


\*: This connector is not shown in "Harness Layout".



15   LG	A B C
WIRE TO WIRE	E
Connector No.   B2	G H
Shield   S	J K
	L
Connector Name   Wife TO WIFE	AV
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17   G	Connector No. B68 Connector Name WIRE TO WIRE Connector Type RH08MB  H.S. 1 2 3 4	Terminal Color No. of Wie A R - [With around view monitor] B - [With around view monitor] 7 W - [With around view monitor]	A B C	
Connector No.   646	Connector No. B86 Connector Name WIRE TO WIRE Connector Type ITH24MW-NH H.S. T 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Terminal Color Signal Name [Specification]  13 L	E F G	
SZ W SIDE CAMERA LH IMAGE GND SZ W SIDE CAMERA LH IMAGE GND	Connector No. 851 Connector Name WOOFER Connector Type RSOBFGY-PR H.S.	Terminal Color   Signal Name [Specification]	J K	
BOSE AUDIO WITH NAVIGATION AND Connector No.   845	Connector No. B48 Connector Name REAR SQUAWKER LH Connector Type TROZFER  TROZFER  TLS	Terminal Color No. of Wire Signal Name [Specification]	AV O	
			P	

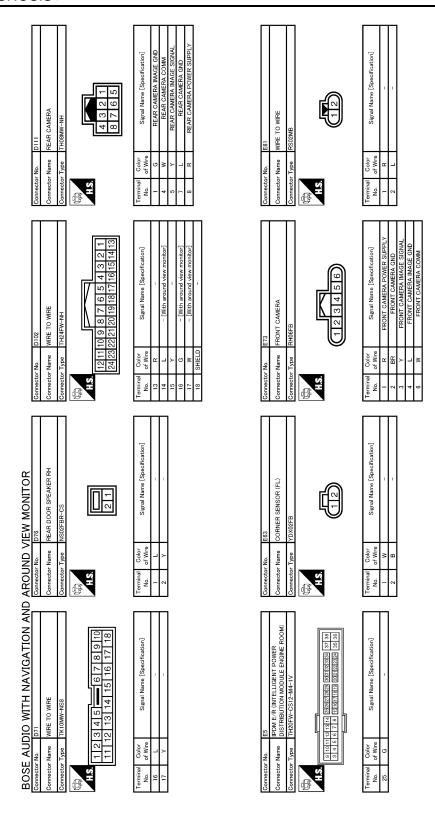
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BOSE AUDIO WITH NAVIGATION AND		AROUND VIEW MONITOR				
Connector No. B201		B218	Connector No.	B230	Connector No.	B240
Connector Name WIRE TO WIRE	Connector Name	WIRE TO WIRE	Connector Name	REAR SQUAWKER RH	Connector Name	BUZZER
Connector Type TH80FW-CS16-TM4	Connector Type	TK10FW-NS8	Connector Type	TK02FBR	Connector Type	RK02FBR
XH.	H.S. 10 9	18 716 = 5 4 3 2 1 1 17 16 15 14 13 12 11	H.S.		H.S.	
Terminal   Goldor   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   Signal Name [Specification]	Terminal Golor   No.   of Wire     16   L   17   O	Signal Name (Specification)	Terminal Color No. of Wire 1 L 2 N	Signal Name (Specification)	Terminal   Golor	Signal Name [Specification]
Connector No. B243 Connector Name WIRE TO WIRE Connector Tran TH245W-NH	Connector No. Connector Name	B255 WRE TO WRE	Connector No. Connector Name	B256 CORNER SENSOR (RR) YDXOSER	Connector No. Connector Name	B259 CORNER SENSOR (RL) YDXOFR
	E.S.	8 4 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			E S	
Terminal Golor Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]
13 L = -	4 9 W	1 1	1 2 B	1 1	1 W	1 1

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Name   Wife TO Wife   TH40FW-CS15   TH40FW	A B C
Commettor No.   Commettor No.   Commettor Name   Color   No.   Commettor No.   Color   Color   No.   Color	D
Sigral Name [Specification]  Sigral Name [Specification]  Sigral Name [Specification]  3 4 5 6 6 7 8 9 10  Sigral Name [Specification]  - With BOSE audio]  - With BOSE audio]  - With BOSE audio]	E
	F G
Connector Na Connector Typ  This  Th	Н
EW MONITOR   D3   D3   D3   D3   D3   D3   D3   D	l J
AROUND V Connector No. F. R.  Terminal Color No. Of Wire I B R	K
	L
NAVIGATI	M
Signa  Signa  Signa  Signa  Signa  Signa  Signa	AV
BOSE AUC   Connector Name   Connector Type   Connector Name   Color Name   Color Name   Color Name   Connector Name   Conne	0
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No. E151  Name WIRE TO WIRE  Type RS02FB  Color of Wire  P. R. Color of Wire  B. Color of Wire  B. Color of Wire  Color of Wire  B. Color of Wire  Color of	No. F151  Type SP10FBGY  TOM (TRANSMISSION CONTROL MODULE)  Type SP10FBGY  TO 9 8 7 6 5 4 3 2 1  Color Signal Name [Specification]  of Wire REV LAMP RLY	В
Connector No. Connector Type  Terminal Color No. P. W.	Connector No. Connector Type Connector Type III III III III III III III III III I	D
BRAKE SWITCH Signal Name [Specification]	WRE NS10 The state of the state	Е
		F
No.  Name Type Color of Wire	ne ee e	G
Connector No. Connector Name Connector Type Terminal Odio No. To ff W.	Connector No. Connector Name Connector Type  I.S.  Egiptic  I.S.	Н
WIRE CSS 6-TM4  CSS 6-TM4  CSS (-TM4  CSS (-	DGY DGY 4 3 2 1 9 8 7 6 Signal Name [Specification]	I
FIGURE WIRE TO WIRE THROWNESS Signal Name [5]		J
AROUND V. Commector No. Commector Name Connector Type Connector Type No. of Wire No. of Wi	Connector No. F51 Connector Name A/ Connector Type RK  M.S.  Terminal Color No. of Wire 7	К
ON AND THE PROPERTY OF THE PRO		L
TTH NAVIGATIC  WIRE	Signal Name [Specification]	M
DIO W WIRE TO NSTRAW 6 7 2	CORNER YDX02FE	AV
BOSE AU	Connector No. Connector Name Connector Type  Terminal Color No. Of Wire 1 R	0
		JCNWM0805GI

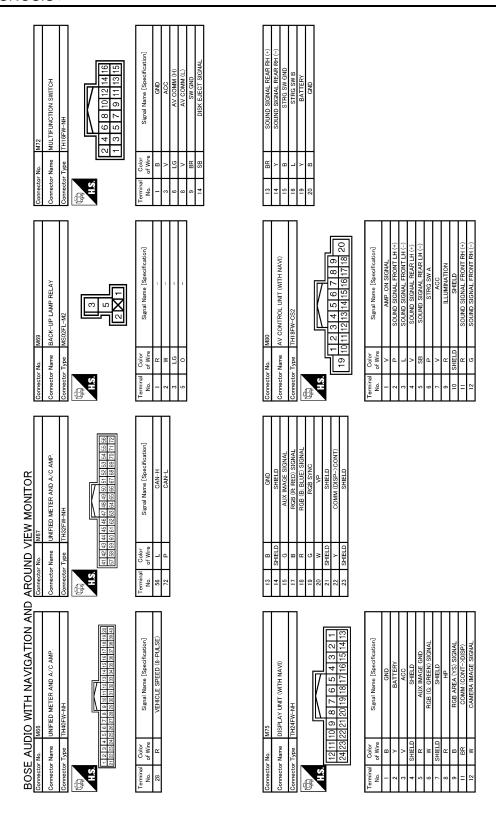
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BOSE AUDIO WITH NAVIGATION AND Connector No. MI	Connector No.		26 W – – – – – – – – – – – – – – – – – –
Connector Name FUSE BLOCK (J/B) Connector Type NSO6FW-M2	Connector Name	Connector Name   WIRE   Connector Type   TH40FW-NH	28 G –
11.5. 3.4 2.7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	H.S. 5C4C 3C2C1C 12C1T01009C8C7C6C	4.5. Some services and services are services and services and services and services and services and services are services and services and services are services and services and services are services and services and services	φ   φ
Color   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   SA	Terminal Color Signal Name [Specification] 12C 0	Terminal No.         Offor Mire         Signal Name [Specification]           1         Y         -           2         P         -           3         V         -           4         V         -           13         B         -           14         LG         -           15         G         -           17         R         -           18         Y         -           18         Y         -           18         Y         -           2         SHELD         -	a 0
Connector No. M5 Connector Type   TH40MW-CS15 Connector Type   TH40MW-CS15	Connector No. M6 Connector Name WIRE TO WIRE Connector Type TH80MW-CS16-TM4 H.S. TH80MW-CS16-TM4 TH80MW-CS16-TM4	Connector No. M7 Connector Name WIRE TO WIRE Connector Type ITH80MW-CS16-TM4  H.S. I I I I I I I I I I I I I I I I I I	61 L 62 SHELD 63 R 64 G 64 SHELD 65 SHELD 70 V
No. of Wire   Signal Name [Specification]   No. of Wire   Signal Name [Specification]	Terminal Color   Signal Name [Specification]	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Signal Name [Specification]   Signal Name [Specification]   Signal Name   Specification]   Signal Name   Sign	

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	PEAKER 21	Signal Name [Specification]	АВ
16 P P 16	Connector No. M83 Connector Name CENTER SPEAKER Connector Type TK02FBR H.S.	Terminal Color No. of Wire Sig. 1 Y Y Z G G G G G G G G G G G G G G G G G	C
-CS -CS	MA7  SONAR CONTROL UNIT TH24FW-NH  TH24FW-NH  3 4 5 6 7 8 9 10 11 12 15 16 17 18 19 20 21 22 23 24	Signal Name [Specification] CORNER SENSOR FROWT I-H CORNER SENSOR REAR I-H CORNER SENSOR REAR I-H CORNER SENSOR REAR RH SENSOR REAR RH SENSOR REAR RH AND AND AND AND BUZZER GND	E
M25   Connector No.   M25	2 W 3 V 4 LG 5 V 6 G 7 L 11 V 12 SB 13 V 14 Y Connector No. M47 Connector Name SONAR CON Connector Name SONAR CON	Terminal Color No. 1	G H
NEW MONITOR   M24	M37 STEFRING ANGLE SENSOR THOSPIW-NIH  7 2 3 8 1 4 5 5	Signal Name [Specification]  SENSORI SENSORI SENSORS SENSORS GRID IGN	J
D AROUND No. Connector No. Connector Type Connector	ctor No.	Terminal Color No. of Wire 3 4 ER 5 R 7 7 E 8 8 6 G	K
BOSE AUDIO WITH NAVIGATION AN Connector No. MI3 Connector Name FRONT SOUAWKER LH Connector Type TROZEBR  Terminal Golor Signal Name [Specification] No. of Wire Signal Name [Specification]	M86 COMBINATION SWITCH (SPIRAL CABLE) TK08FGY-1V  24 25 26 27 31 32 33 34	Signal Name [Specification]	M
BOSE AUDIO WIT Connector No. M13 Connector Name FRONT SC Connector Type TK02FBR MS.	Connector No. M36 Connector Name COMBINATIC Connector Type TK08FGY-IV  H.S.	Terminal Color No. of Wire 24 P P P 31 L 33 B	AV
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JCNWM0808GE

SHELD					АВ
72 SHELD					C
AV CONTROL UNIT (WITH NAVI) THIZPW-NH  62 64 66 68 70 72 61 63 66 67 69 71	Signal Name (Specification) ROB (R. RED) SIGNAL ROB (G. GREEN) SIGNAL ROB SINC SHELD ROB SINC SHELD ROB AREA (VS) SIGNAL HP SIGNAL POW COMM (CONTDISS) COMM (CONTDISS)	8-R-LH-Z   16   17   16   17   16   17   17   17	Signal Name [Specification] VEHCAN-L1 VEHCAN-H1		E
Connector No. M88 Connector Name AV CONTROL L Connector TH12PW-NH M3. E2 64 66 E1 63 65	Terminal   Color   Signa	Connector Name ECM Connector Type RH24FGV-RZ9-R-LH-Z    128   124   126   166	Terminal Color No. of Wire Signa 1113 P P 114 L		G
(6-PULSE) (8-PULSE) (8-PULSE) (8-PULSE) (8-PULSE) (8-PULSE) (8-PULSE) (9-PULSE) (9-PULSE) (9-PULSE) (9-PULSE) (1-PULSE) (1-PUL	<u> </u>	7 8 9 10 16 17 18	Signal Name [Specification]  - [With NAVI]  - [With NAVI]  - [With NAVI]		Η
AROUND VIEW MONITOR 38 R CONTROL SI 42 B CONTROL SI 44 SB CONTROL SI 48 G CONTROL SI 49 B A COMM 50 LG AV COMM 51 V AV COMM 51 V AV COMM 52 L COMP 53 P COMP		MIDG WIRE TO WIRE DISTRIBUTION	Color of Wire R R R R R R R R R R R R R R R R R R R		J K
2	ton)	Connector Name Connector Type Connector Type Management Type M	Terminal No. 18 2 2 2 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		L
BOSE AUDIO WITH NAVIGATION A Connector No. May  Connector Name Av CONTROL UNIT (WITH NAV!)  Connector Type TH40FN-14H  (Connector Type Control Connector Type Connector Connector Type Control Connector Type Control Connector Co	Signal Name (Specification)  GND  GND  BATTERY  GND  GND  MOROPHONE VOC  MOROPHONE GND	M89 AV CONTROL UNIT (WITH NAVI) TH32FW-NH TR 77 TO 80 81 82 80 80 80 82 82 83 80 80 80 80 80 80 80 80 80 80 80 80 80	Signal Name (Specification)  Fod SOUND SIGNAL IN (+)  Fod SOUND SIGNAL IN (+)  FOR ELECT SIGNAL  AUX SOUND SIGNAL IN (+)  AUX SOUND SIGNAL LIN (+)  Fod SOUND SIGNAL LIN (+)  Fod SOUND SIGNAL LIN (+)  Fod SOUND SIGNAL IN (+)  Fod SOUND SIGNAL IN (+)  Fod SOUND SIGNAL IN (+)  SW GND  AUX SOUND SIGNAL IN (+)		M
BOSE AUDIO W  Gonnector Name AV CONT  Connector TH40FN-  H.S.  Element Type TH40FN-  Laborator Type TH40FN-  Element Type TH40FN-  Thank The Third The Third The Third The	Terminal Color No. of Wire 2.2 Y 2.2 Y 2.4 Y 2.4 Y 2.6 G 2.7 SHIELD 2.7 SHIELD 2.5 G 3.5 C	Connector No. M. Connector Type T. Connector Typ	Terminal Color No. of Wire No.	JCNWM0809Gf	0
					Р

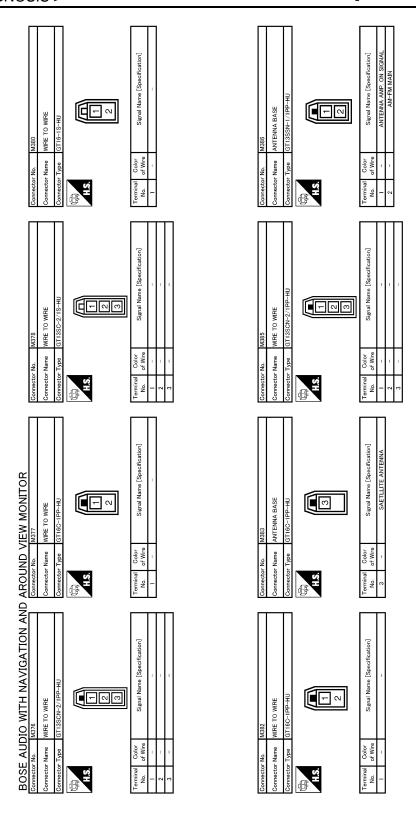
Revision: 2007 November AV-645 2008 EX35

Connector No.   MI14	Signal Name [Specification]         Terminal Color Pod South Signal Name [Specification]           Pod SOUND SIGNAL LH (*) Pod COMM (Pod->Pod ADAPTER)         1 V — [With BOSE audio]           COMM (Pod->Pod ADAPTER) COMM (Pod->Pod ADAPTER)         2 LG — [With BOSE audio]           Pod SOUND SIGNAL RH (*) Pod CONNECTION RECOGNITION         AGO           CHARGE POWER SOUND SIGNAL RH (*) Pod CONNECTION RECOGNITION         AGO           SHELD ACCESSORY DEFIELT         ACCESSORY DEFIFEY	M124	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   CAN-H   S.   CAN-H   S.   C.   C.   C.   C.   C.   C.   C.
Connector No.   MI12	Terminal Color   Signal     No. of Wire   Flood Signal     1	or Type WIRE TO WIRE  Type TH80MV-CS16-TM4  Connector Name Connector Type  Type TH80MV-CS16-TM4  Connector Type  Type Th80MV-CS16-TM4  Connector Type  The first f	Color   Signal Name [Specification]   Color   Name   Color   Nam
BOSE AUDIO WITH NAVIGATION AND ARC Connector No. MI11  Connector Name Pod ADAPTER  Connector Type ITH24FW-NH  MA  1 2 3 4 5 6 7 8 9 1011112  23  43  13 14 15 16 17 18 19 20 21 22 23 24	Terminal   Color   Signal Name [Specification]     No.	Connector No. MI16 Connector Name WRE TO WIRE Connector Type TK39AWH-NS10  Connector Type TK39AWH-NS10  A.S.  TK39AWH-NS10  TK39AWH-NS10  TK39AWH-NS10  TK39AWH-NS10  TK39AWH-NS10  TK39AWH-NS10  TK39AWH-NS10  TK39AWH-NS10	Terminal   Color   Signal Name [Specification]   No.   No.

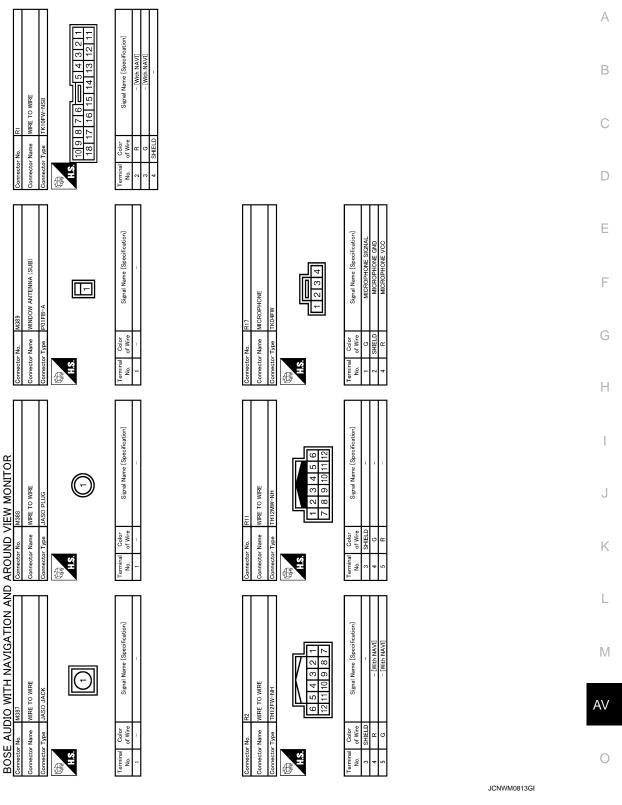
JCNWM0810GI

Connector No.   M371	Connector No.   M375	В
	Cornector No.   Cornector Name   Cornector Type   Corne	D
M303 COMBINATION SWITCH (SPIRAL CABLE) TK08FGY  314151617181920  Signal Name [Specification]	WIRE TO WIRE GT16C-1S-HU  Signal Name [Specification]	E F
Connector No.   M303	Connector No. M374 Connector Name WIRE Connector Type GT166 H.S. H.S. 1 Color No. of Wire 1	G
MIS4  MIS4  AUXILLARY INPUT JACKS  AUSEPW  Signal Name [Specification]  Signal Name [Specification]  AUX SOUND SIGNAL IN (+)  AUX SOUND SIGNAL IN (+)  AUX SOUND SIGNAL IN (+)  AUX MAGE GND  AUX INAGE GND	AV CONTROL UNIT (WITH NAV)) GIF-1S-HU  Signal Name [Specification] GPS ANTENNA SHIELD	H I J
AROUND VIEW MONITOR	Connector No. M373 Connector Name AV CONTRC Connector Type GT5-15-HU Connector Type GT6-15-HU Connector Type GT6-15-HU Connector Type GT6-15-HU LISHELD  Terminal Color Signature 110 - 110 - 111 SHIELD	К
Δ		L
BOSE AUDIO WITH NAVIGATION AN	AV CONTROL UNIT (WITH NAVI) FAKRA JACK  [10] Signal Name [Specification] SAETLLITE ANTENNA	M
BOSE AUDI Connector Name W Connector Type T  Terminal of Wire No of Wire S SHIELD  S SHIELD	Connector No.  Connector Name A Connector Type FF  LS  Terminal No of Wire 108  108	0
		JCNWM0811GE

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JCNWM0812GE



Fail-Safe INFOID:0000000003160742

When the ambiance temperature becomes extremely low or extremely high, or when HDD is malfunctioning, AV control unit displays the message and limits the AV control unit function.

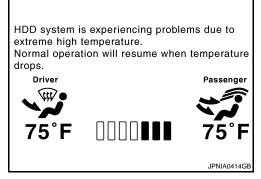
#### **FAIL-SAFE CONDITIONS**

- When the ambiance temperature is -20°C or lower, or when it is 70°C or higher
- · when HDD is malfunctioning

#### < ECU DIAGNOSIS >

Display

The messages displayed on fail-safe conditions are as shown below:



Fail-safe mode	Display (display of the fail-safe condition)
When HDD temperature is low	HDD system is experiencing problems due to extreme low temperature.  Normal operation will resume when temperature rises.
When HDD temperature is high	HDD system is experiencing problems due to extreme high temperature.  Normal operation will resume when temperature drops.
When HDD is malfunctioning	HDD system is not functioning. Please contact your dealer for assistance.

#### **DESCRIPTION OF CONTROLS**

Function		When Fail-safe Function is activated
	Operation	Only multifunction switch (preset switch) can be operated.
Air conditioner	Display	<ul> <li>LED of multifunction switch (preset switch) illuminates.</li> <li>Aimed temperature, blow angle, and flow rate are displayed in simplified mode.</li> </ul>
Audio	Operation	Only ON/OFF and volume control operations by multifunction switch (preset switch) are possible.
Audio	Display	No display ("Fail-safe mode" is displayed)
Camera	Operation	Image tone cannot be controlled.
Display		Cannot be superimposed. (warning display, tone control display)
Hands-free phone	Operation	Cannot be operated.
Navigation	Operation	Cannot be operated.
Self diagnosis	•	The display in simplified mode of fail-safe condition
CONSULT-III diagno	sis	Cannot be operated.

#### **Ability Operation Mode**

There is an ability operation mode for Fail-safes due to low or high ambiance temperature.

If HDD data can be read, fail-safe is shown, then normal displays are displayed only for functions which can be operated.

#### RELEASE CONDITIONS OF FAIL-SAFE

Fail-safe is released on following conditions and normal mode is restored.

When the temperature of HDD is low or high

If the ambient temperature becomes out of fail-safe condition range, normal mode is restored.

When HDD is malfunctioning

If the malfunction disappears, normal mode is restored.

#### NOTE:

- If fail-safe mode due to HDD malfunction is seen continuously, replace AV control unit.
- If fail-safe mode due to HDD malfunction is seen temporarily, check the "Error History" of Confirmation/ Adjustment mode. If this is normal, then continue the normal operation, observing the function. (It might be a temporary malfunction of HDD.)

Α

DTC Index

### Self-diagnosis results display item

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-508, "Diagnosis Procedure"
U1010	CONTROL UNIT (CAN) [U1010]	AV-509, "Diagnosis Procedure"
U1310	CONTROL UNIT (AV) [U1310]	AV-510, "DTC Logic"
U1200	Control Unit FLASH-ROM [U1200]	AV-511, "DTC Logic"
U1201	Gyro NO CONN [U1201]	AV-512, "DTC Logic"
U1216	CAN CONT [U1216]	AV-513, "DTC Logic"
U1217	BLUETOOTH CONN [U1217]	AV-514, "DTC Logic"
U1218	HDD CONN [U1218]	AV-515, "DTC Logic"
U1219	HDD READ [U1219]	AV-516, "DTC Logic"
U1220	XM SERIAL COMM [U1220]	AV-517, "DTC Logic"
U121A	HDD WRITE [U121A]	AV-518, "DTC Logic"
U121B	HDD COMM [U121B]	AV-519, "DTC Logic"
U121C	HDD ACCESS [U121C]	AV-520, "DTC Logic"
U121D	DSP CONN [U121D]	AV-521, "DTC Logic"
U121E	DSP COMM [U121E]	AV-522, "DTC Logic"
U121F	INTERNAL COMM [U121F]	AV-523, "Diagnosis Procedure"
U1204	GPS COMM [U1204]	AV-524, "Diagnosis Procedure"
U1205	GPS ROM [U1205]	AV-525, "Diagnosis Procedure"
U1206	GPS RAM [U1206]	AV-526, "Diagnosis Procedure"
U1207	GPS RTC [U1207]	AV-527, "Diagnosis Procedure"
U1243	FRONT DISP CONN [U1243]	AV-528, "Diagnosis Procedure"
U1244	GPS ANTENNA CONN [U1244]	AV-530, "Diagnosis Procedure"
U1250	CAMERA CONT. CONN [U1250]	AV-531, "Diagnosis Procedure"
U1258	XM ANTENNA CONN [U1258]	AV-532, "Diagnosis Procedure"
0.230	77	Without rear view monitor and around view monitor
U1300 U121F	AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]	AV-533, "WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR:     Description"     With rear view monitor     AV-533, "WITH REAR VIEW MONITOR:     Description"     With around view monitor     AV-534, "WITH AROUND VIEW MONITOR:     TOR: Description"
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	Without rear view monitor and around view monitor  • AV-533, "WITHOUT REAR VIEW MONITOR:

DTC	Display item	Refer to
U1300 U1254	AV COMM CIRCUIT [U1300]     IPod CONN [U1254]	Without rear view monitor and around view monitor  • AV-533, "WITHOUT REAR VIEW MONITOR: Description"  With rear view monitor  • AV-533, "WITH REAR VIEW MONITOR: Description"  With around view monitor  • AV-534, "WITH AROUND VIEW MONITOR: Description"
U1300	AV COMM CIRCUIT [U1300]	AV-534, "WITH AROUND VIEW MONITOR
U125B	AROUND CAMERA CONN [U125B]  AND COMMODIFICATION OF THE PROPERTY OF THE PR	: Description"
U1300 U125C	<ul><li>AV COMM CIRCUIT [U1300]</li><li>SONAR CONN [U125C]</li></ul>	AV-534, "WITH AROUND VIEW MONITOR  : Description"
U1300 U1240 U1254	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]     IPod CONN [U1254]	Without rear view monitor and around view monitor  • AV-533, "WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR:  Description" With rear view monitor  • AV-533, "WITH REAR VIEW MONITOR:  Description" With around view monitor  • AV-534, "WITH AROUND VIEW MONITOR:  OBSCRIPTION OF THE PROPERTY OF THE PRO
U1300 U1252 U1254	<ul><li>AV COMM CIRCUIT [U1300]</li><li>REAR CAMERA LAN CONN [U1252]</li><li>IPod CONN [U1254]</li></ul>	AV-533, "WITH REAR VIEW MONITOR : Description"
U1300 U1240 U1252 U1254	<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>REAR CAMERA LAN CONN [U1252]</li> <li>IPod CONN [U1254]</li> </ul>	AV-533, "WITH REAR VIEW MONITOR : Description"
U1300 U1254 U125B	AV COMM CIRCUIT [U1300]     IPod CONN [U1254]     AROUND CAMERA CONN [U125B]	AV-534, "WITH AROUND VIEW MONITOR : Description"
U1300 U1240 U1254 U125B	<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>SWITCH CONN [U1240]</li> <li>IPod CONN [U1254]</li> <li>AROUND CAMERA CONN [U125B]</li> </ul>	AV-534, "WITH AROUND VIEW MONITOR : Description"
U1300 U121F U1240 U1254	<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>INTERNAL COMM [U121F]</li> <li>SWITCH CONN [U1240]</li> <li>IPod CONN [U1254]</li> </ul>	AV-533, "WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR :  Description"
U1300 U121F U1240 U1252 U1254	AV COMM CIRCUIT [U1300]     INTERNAL COMM [U121F]     SWITCH CONN [U1240]     REAR CAMERA LAN CONN [U1252]     IPOd CONN [U1254]	AV-533, "WITH REAR VIEW MONITOR : Description"
U1300 U121F U1240 U1254 U125B	<ul> <li>AV COMM CIRCUIT [U1300]</li> <li>INTERNAL COMM [U121F]</li> <li>SWITCH CONN [U1240]</li> <li>IPod CONN [U1254]</li> <li>AROUND CAMERA CONN [U125B]</li> </ul>	AV-534, "WITH AROUND VIEW MONITOR : Description"

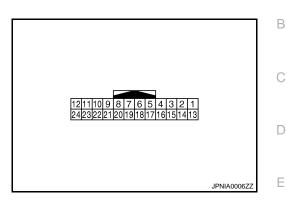
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# **DISPLAY UNIT**

Reference Value

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

Ter	minal	Description				
(Wire	e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output			(Approx.)
1 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
2 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
3 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
4	_	Shield	_	_	_	_
5 (R)	Ground	AUX image ground	_	Ignition switch ON		0 V
6 (W)	Ground	RGB signal (G: green)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting"Color Spectrum Bar" on DISPLAY DIAGNO- SIS screen.	(V) 0. 4 0 -0. 4 → 40μs SKIB2236J
7	_	Shield	_	_	_	_
8 (R)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	_	(V) 4 0 +

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
				Ignition	At RGB image display	5.0 V
9 (B)	Ground	RGB area (YS) signal	Input	switch ON	At rear view camera image display	2 0 + + 200 μ s PKIB4948J
11 (BR)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0  + 1ms  PKIB5039J
12 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
13 (B) ———————————————————————————————————	Ground	Ground	_	Ignition switch ON	_	0 V
15 (G)	Ground	AUX image signal	Input	Ignition switch ON	AUX image display	(V) 0.4 0 -0.4
17 (B)	Ground	RGB signal (R: red)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 8 -0. 8 -0. 8 -0. 9 -0. 9 -
18 (R)	Ground	RGB signal (B: blue)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting"Color Spectrum Bar" on DISPLAY DIAGNO- SIS screen.	(V) 0. 4 0 11 11 11 11 11 11 11 11 11 11 11 11 11

#### **DISPLAY UNIT**

#### < ECU DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

	minal e color)	Description			Condition	Reference value	А
+	_	Signal name	Input/ Output		Condition	(Approx.)	
19 (G)	Ground	RGB synchronizing signal	Input	Ignition switch ON	_	(V) 4 0 → 20µs SKIB3603E	С
20 (W)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch ON	_	(V) 4 0 + 4ms SKIB3598E	E
21	_	Shield	_	_	_	_	G
22 (Y)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0  +-1ms  PKIB5039J	Н
23	_	Shield	_	_	_	_	

WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR

WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR: Wiring Diagram - BOSE AUDIO WITH NAVIGATION -

Click here to view the eWD.

NOTE:

AV

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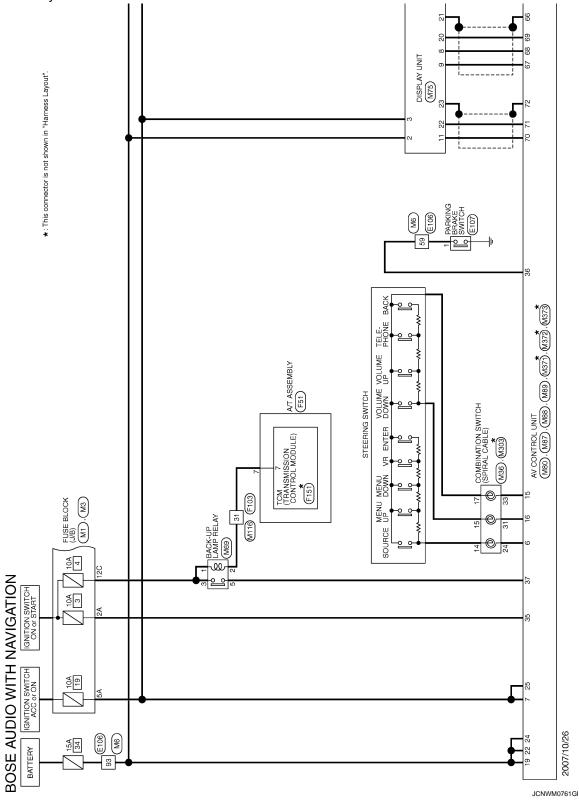
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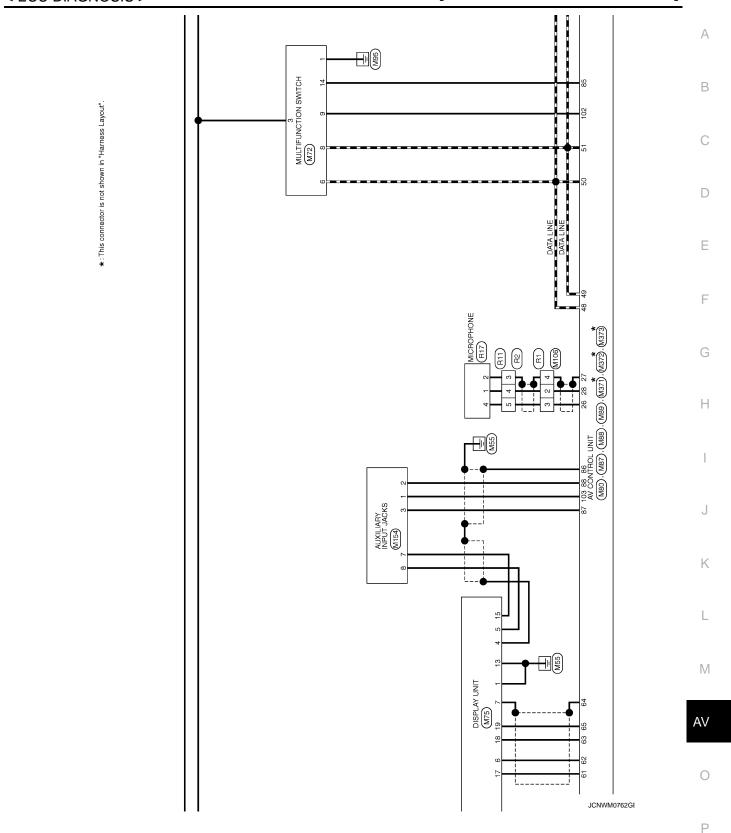
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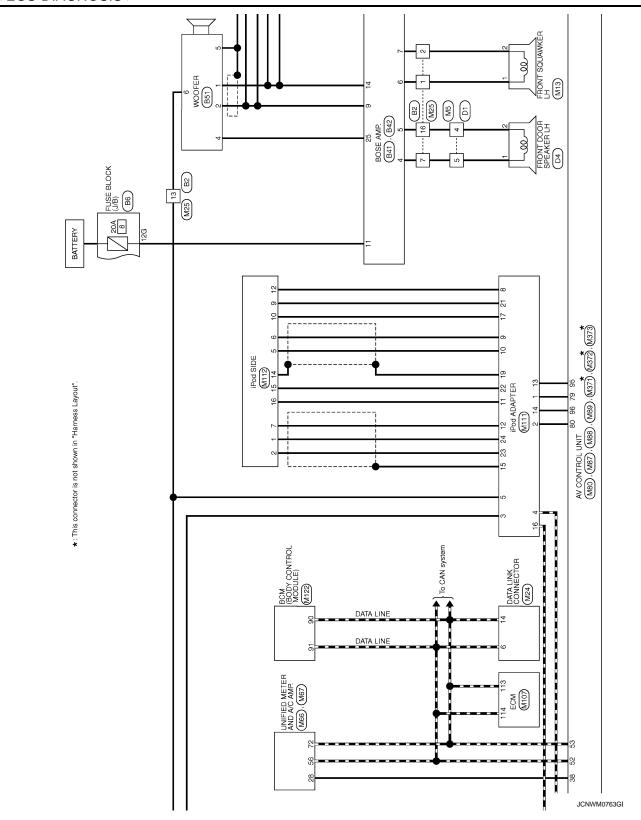
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F

The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.



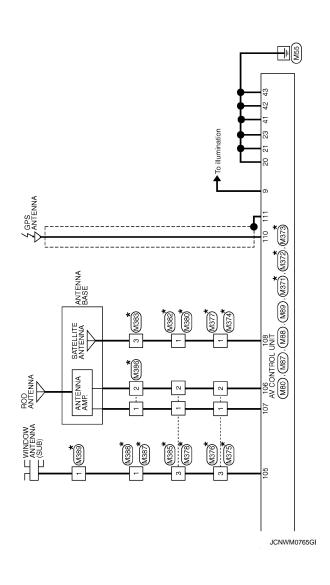




\*: This connector is not shown in "Harness Layout".

Α В - B24 C D Е F G \*(M372),( **₩**371)\* Н (M89) AV CONTROL UNIT
(M80), (M87), (M88), ( BOSE AMP. (B41), (B42) 9 J Κ CENTER SPEAKER (M63) 3 L REAR SQUAWKER RH (B230) 9 M ΑV 0 JCNWM0764GI Ρ

 $\bigstar$  : This connector is not shown in "Harness Layout".



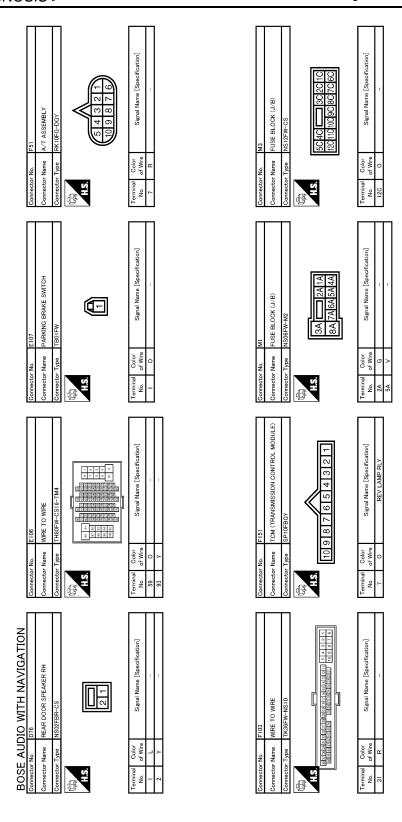
AMP ON SIGNAL SOUND SIGNAL FRONTLH (-) SOUND SIGNAL FRONTLH (-) SOUND SIGNAL FRONT H(-)	А	
15 LG SOUND STORMS 31 W SOUND STORMS 32 L SOUND STORMS 33 Y SOUND STORMS 34 SOUND STORMS 35 SOUND STORMS 37 SO	C	
WIPE CS Signal Name [Specification]  Signal Name [Specification]	13   10   15   15   15   15   15   15   15	
10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	27   26   25   24   23   22   21   22   24   23   22   21   24   25   24   23   22   21   24   25   24   23   24   24   24   24   24   24	
	Terminal 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	15   14   13   12   11   15   14   13   12   11   15   14   14   13   12   11   11   15   14   14   15   15   14   15   15	
B18 WIRE TO WIRE		
SHELD OF SHE	Terminal Color N N N N N N N N N N N N N N N N N N N	
NOIT [tien]	lion]	
WIRE USIG-TM4  SSIGN-TM4  Signal Name [Specification]  COCK (J/B)	Signal Name [Specification]    Name [Specification]   Name [Specific	
DIO WITH NAN WIRE TO WIRE TH80FW-CSIG-TMA Signal Name [S. Signal Name [S. Sign	VA V	
BOSE AUDIO WITH NAVIGATION	Terminal Color No. of Wire 122 GR	_
	JCNWM0766GI	
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Revision: 2007 November AV-661 2008 EX35

မြို့	BOSE AU	BOSE AUDIO WITH NAVIGATION	9		Si S	1	070	Commendate Ma DE1
3	ector No.	-	13	ح ۵	SOUND SIGNAL FRONT DOOR SPEAKER RH (-)	Collinector No.	000	Τ
Conn	Connector Name	BOSE AMP.	14	ч	SOUND SIGNAL WOOFER (-)	Connector Name	REAR SQUAWKER LH	Connector Name WOUFER
Conn	Connector Type	SGA12FBR-SJA2				Connector Type	TK02FBR	Connector Type RS06FGY-PR
4						4		•
	v					V.F.		
•	ت ا	1413 12 1 11 10						2 4 6
		987654321					121	1315
Terminal No.	inal Color of Wire	Signal Name [Specification]				Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color Signal Name [Specification]
_	T	L				H	1	H
2	SB	Н				2 W	-	2 G SOUND SIGNAL WOOFER (+)
8	>	SOUND SIGNAL REAR DOOR RH (-)						GR WOOFER
4	+	SOUND SIGNAL FRONT DOOR SPEAKER LH (+)						В
2	۵.	SOUND SIGNAL FRONT DOOR SPEAKER LH (-)						6 W BATTERY
9	_	SOUND SIGNAL FRONT SQUAWKER LH (+)						
	>	S						
8	5 LG	NOOS						
6	ى ت	SOUND SIGNAL WOOFER (+)						
10	$\dashv$	SOUND SIGN						
Ξ	- GR	BATTERY						
Conne	Connector No.	B66	Connector No.	П	B201	Connector No.	B218	Connector No. B230
Conne	Connector Name	WIRE TO WIRE	Connector Name		WIRE TO WIRE	Connector Name	WIRE TO WIRE	Connector Name REAR SQUAWKER RH
Conn	Connector Type	TH24MW-NH	Connector Type	П	TH80FW-CS16-TM4	Connector Type	TK10FW-NS8	Connector Type TK02FBR
Œ			€ E			匮		母
۲	HS.		HS			HS.		HS
	T \$	3 4 5				10 9 8	18 7 6 <del></del>	2 1
	4	4    3    10    1   10    3    20    2     2     2     2     2     2			888			
Terminal No.	inal Color of Wire	Signal Name [Specification]	Terminal No.	Color of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color Signal Name [Specification]
13	_	-	66	0	- [With BOSE audio]	16 L	-	1 L -
14	Α	1	100			17 0	- [With BOSE audio]	2 W –

JCNWM0767GI

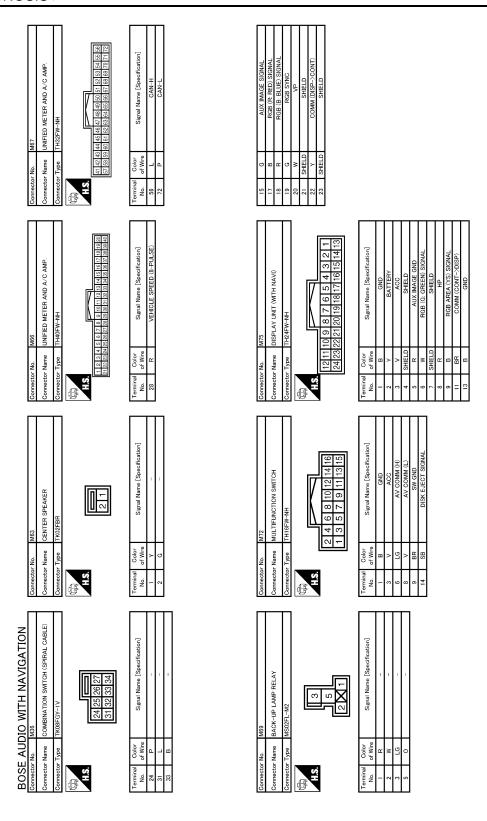
No.   D31	Signal Name [Specification]	o wire w-wss 5 6 7 8 9 10 1 4 15 16 17 18	Signal Name [Specification]		АВ
Oomector No. D31  Connector Type TH40PN-CS15  (15) 41 (3) (2) (1) (9) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	Terminal Color No. of Wire 7 R R 8 BR	Connector No. 071 Connector Name WIFE TO WIFE Connector Type TK10MW-NS8  H.S. 1 2 3 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Terminal Color No. of Wire 16 L		C D
D4 FRONT DOOR SPEAKER LH (WITH BOSE SYSTEM) INSUZIFIER-CS	Signal Name [Specification]	KERLH	Signal Name [Specification]		E
	Odlor Colver L W	ector No. D56 ector Name REAR DOOR SPEAKER LH ector Type NSO/2FBR-CS	Color G Wire		F G
Connector No. Connector Name Connector Type	Terminal No.	Connector No. Connector Name Connector Type H.S.	Terminal No.		Н
Connector No. D1  Connector Name WIRE TO WIRE  Connector Type   TH40FW-CS15	inal Color Signal Name (Specification)  Of Wire  L	Connector No. D51  Connector Name WIRE TO WIRE  Connector Type TK10MW-NS3  LS 1 2 3 4 5 6 6 7 8 9 10  11 12 13 14 15 16 17 18	Color   Signal Name [Specification]   Color   Color		J K
Conne	Terminal No. 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Conne	Terminal 16 17 17 17 17 17 17 17 17 17 17 17 17 17		L
BOSE AUDIO WITH NAVIGATION	Signal Name (Specification)	D34 FRONT DORS SPEAKER RH (WITH BOSE NSYSTEM) NS02FBR-CS	Signal Name (Specification)		M
BOSE AUI Connector No. Connector Name Connector Type RM H.S. 1211	Color   Colo	Connector No. Connector Type Connector Type H.S.	Terminal Color of Wire 2 R R		0
m [6] 6 [6] [영 및	<u>- 111</u>	[6] 호 [6] [15	<u></u>	JCNWM0768GI	Р



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	eoification]	8 <u>7 9 15 16 </u>	ecification]		Е
WRE TO WIRE THE THE THE THE THE THE THE THE THE TH	Signal Name [Specification]	MZE WIRE TO WIRE NSIGNW-CS  2 3 6 6 7 5 14 5 9 10 11 12 13 14	Signal Name [Specification]		F
an ac	October of Wire SHELD SHELD SHELD SHELD SHELD SHELD SHELD SHELD SS	_ e _ e ∞	O C O O O O M M M M M M M M M M M M M M		G
Comector No. Connector Name Connector Type	Terminal No.	Connector No. Connector Type Connector Type H.S.	Terminal No. 1 1 2 2 2 2 2 2 4 4 5 5 5 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1		Н
	pecification	7 8 7 8	pecification		I
76 - 1744	Signal Name [Specification]	M24 DATA LINK CONNECTOR BD16FW 101112131411 1234567	Signal Name [Specification]		
MIG TO WIRE TO	iii	M24 DATA LINK BD16FW 9 10 11 1	o o		J
9. 90	of Wire		al Color of Wire		K
Connector No. Connector Typ	Terminal No. 59 93 93	Connector No. Connector Typ	Terminal No. 6 6 7		
NO III					L
IGATIC	Signal Name [Specification]		Signal Name [Specification]		M
TH NAV	gnal Name [5	MI3 FRONT SOUAWKER LH TK02FBR	Si ame l'ame [5]	_	
BOSE AUDIO WITH NAVIGATION Connector No. M5 Connector Name WIRE TO WIRE Connector Type ITH40MM-CS15  LIZI 2   4   5   7   9   10   11   12   12   13   13   13   13   13		M13 FRONT SQL TK02FBR	Ö		AV
BOSE AUC Connector Non Connector Type Connector Type H.S. ITER	of Wire	Connector No. Connector Name Connector Type	of Wire	•	
BOSI Commette Commette	Terminal No. No. S	Connectt Connectt Connectt H.S.	Terminal No.	JCNWM0770Gł	0
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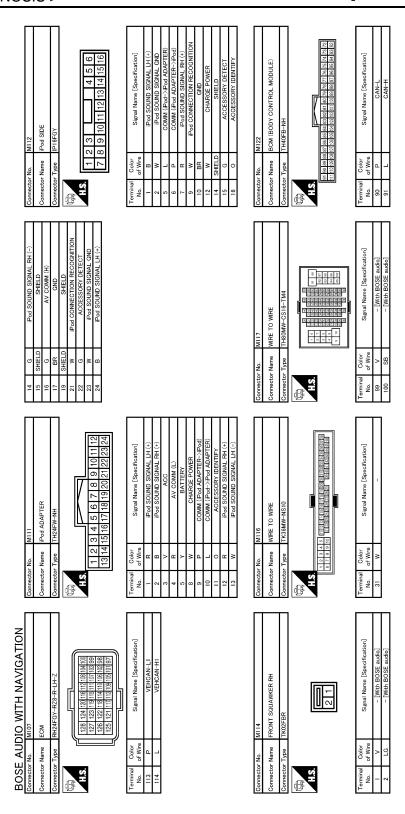
Revision: 2007 November AV-665 2008 EX35



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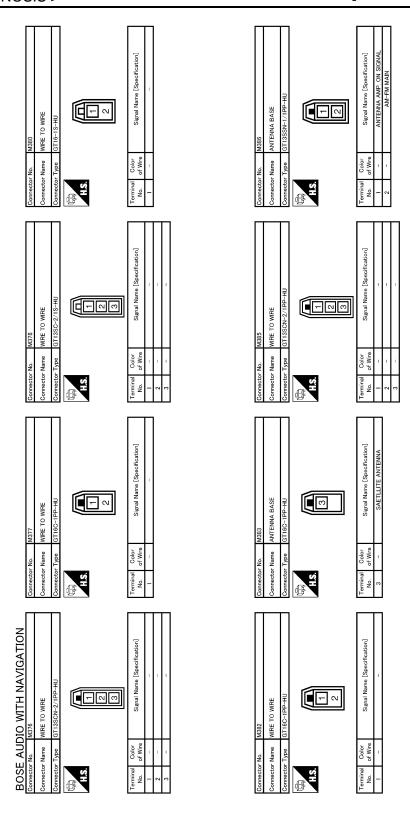
1	Connector No.   MI 06	A B C
Connector No.   M87	Connector No.   M89	E F G
13   BR   SOUND SIGNAL REAR PH (+)   14   Y   SOUND SIGNAL PEAR PH (+)   15   B   STRG SW GND   16   L   STRG SW B   STRG SW	22 SHELD	J K
BOSE AUDIO WITH NAVIGATION	Connector No.   M38	M AV
		Р

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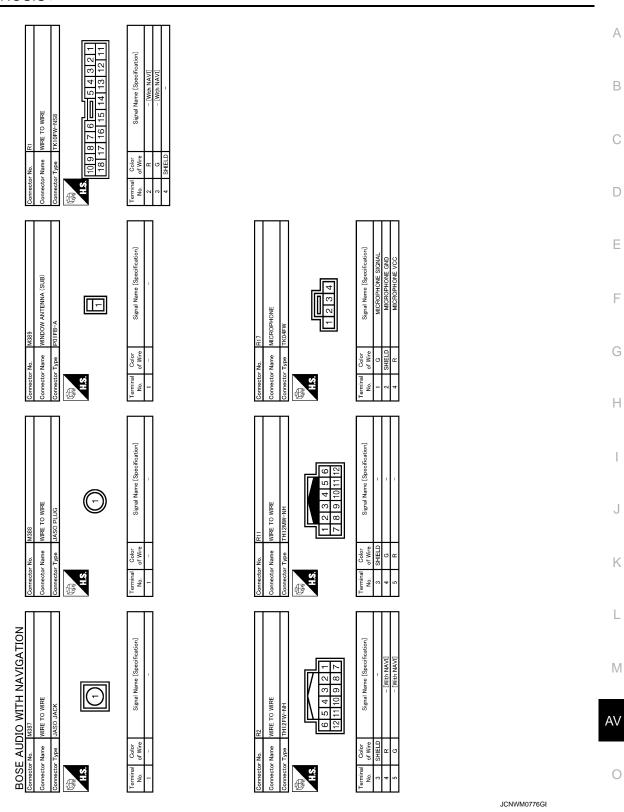
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D (incom)	[indian]	А
AV CONTROL UNIT (WITH NAVI) GT13SH-2/1S-HU  GT13SH-2/1S-HU  GT13SH-2/1S-HU  Signal Name (Specification) FM SUB  AN-TRUNA AMR. ON SIGNAL	WIRE 2/1S-HU Signal Name (Specification)	В
M371 AV CONT GT13SH-	MA75 MIRE TO TO MIRE TO TO MIRE TO TO MIRE TO TO TO TO TO TO TO TO TO TO	С
Connector No. Connector Type Connector Type Inc. Color Inc. Inc. Inc. Inc. Inc. Inc. Inc. Inc.	Connector Name Connector Name Terminal Color No. 1 1 2 2 3 - 3 - 3 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1	D
SPIRAL CABLE) 920 ecifeation)	offeation.)	Е
ATION SWITCH (18 11 16 17 18 11 18 1	WIRE TO WIRE GT16C-1S-HU  Signal Name [Specification]	F
Oslor W W W W BR		G
Connector Na Connector Type Connector Type I S I S	Connector No. Connector Type  Connector Type  A.S.  H.S.  I connector Type  Or Mo. of W.  I col.  I co	Н
KS    T   B	TH NAV() Specification TENNA LLD	1
AUXILIARY INPUT JACKS A08FW  12 3 T7 8 Signal Name [Specification] AUX SOUND SIGNAL IN (+) AUX SOUND SIGNAL IN (+) AUX MAGE GNAL AUX MAGE GNAL	MA73 AV CONTROL UNIT (WITH NAVI) GT5-1S-HU  Signal Name [Specification] GPS ANTENNA SHIELD SHIELD	J
Connector No. M154 Connector Name AUXILI Connector Type AOBFW LLS LLS LLS LLS LLS LLS LLS LLS LLS LL	Connector No. M373 Connector Name AV Ci. Connector Type GITS- H.S. H.S. 110 - 111 SHIELD	К
		L
WRE CS15  CS15  Signal Name [Specification]	ROL UNIT (WITH NAVI) ACK 109 Signal Name [Specification] SAETLLITE ANTENNA	M
DIO William 124 WIRE TO THE TO	M072 AV CONT FAKRA J	AV
BOSE AUIC Connector Name Connector Name Connector Type Connector T	Connector No Connector Name Connector Type Connecto	0
		JCNWM0774GI



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# WITH REAR VIEW MONITOR

WITH REAR VIEW MONITOR: Wiring Diagram - BOSE AUDIO WITH NAVIGATION AND REAR VIEW MONITOR -

Click here to view the eWD. **NOTE:** 

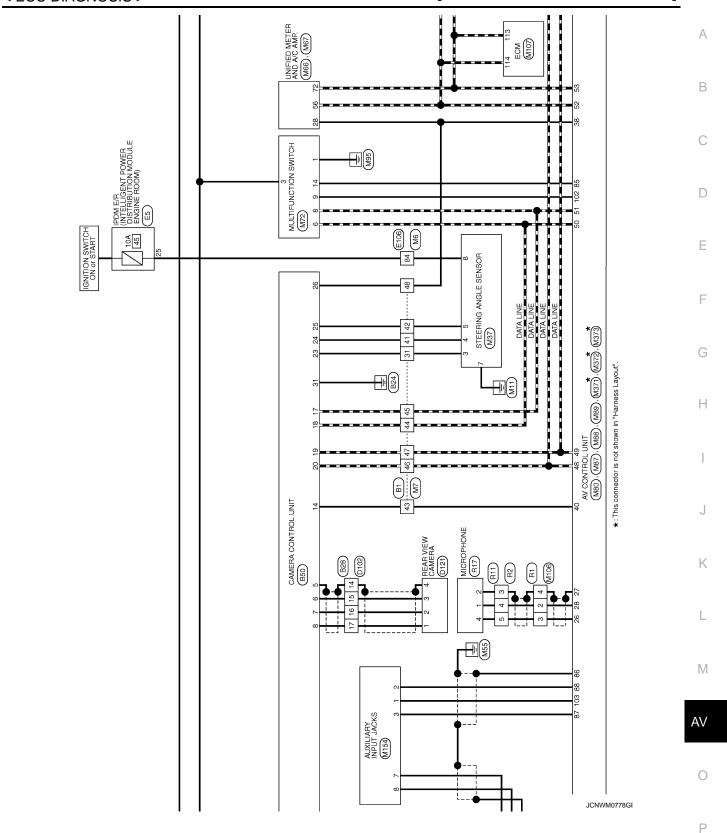
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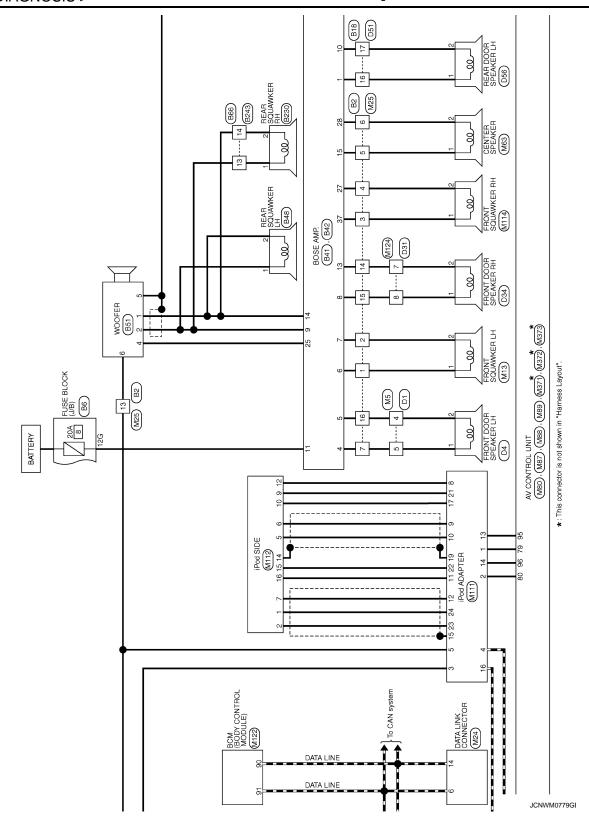
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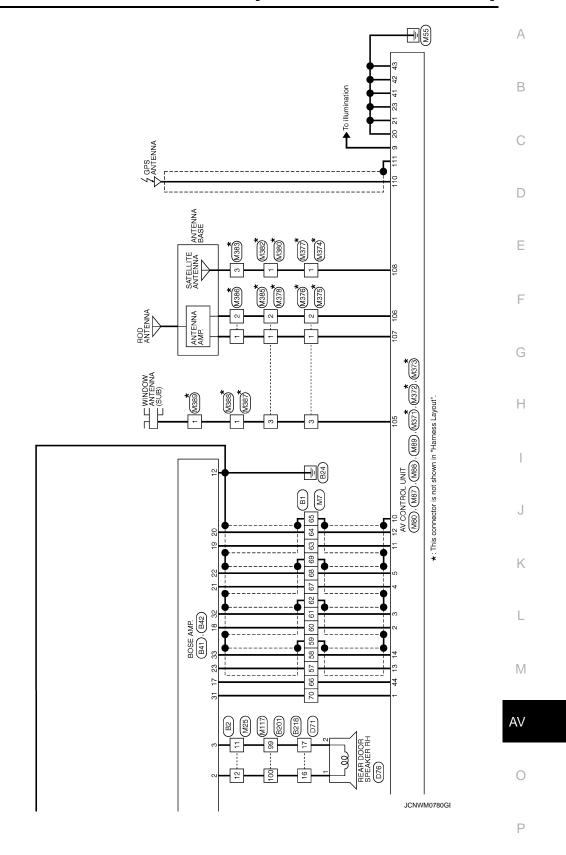
E100 (M)

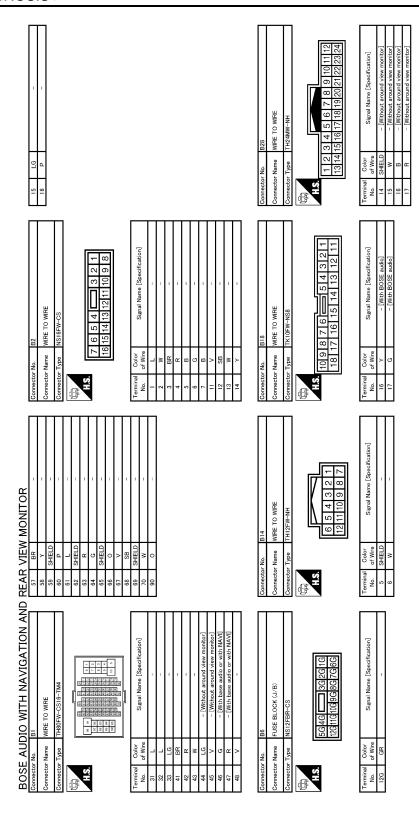
BATTERY

[BOSE AUDIO WITH NAVIGATION] < ECU DIAGNOSIS > The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually. CAMERA CONTROL UNIT DISPLAY UNIT [8] 33 PARKING BRAKE SWITCH (E107) Me M7 \*(M373) \*: This connector is not shown in "Harness Layout" A/T ASSEMBLY (F51) BOSE AUDIO WITH NAVIGATION AND REAR VIEW MONITOR TELE VOLUME VOLUME TCM (TRANSMISSION CONTROL MODULE) STEERING SWITCH COMBINATION SWITCH (SPIRAL CABLE) FUSE BLOCK (J/B) (M1), (M3) (M36), MENU MENU SOURCE IGNITION SWITCH ON or START 10A IGNITION SWITCH ACC or ON



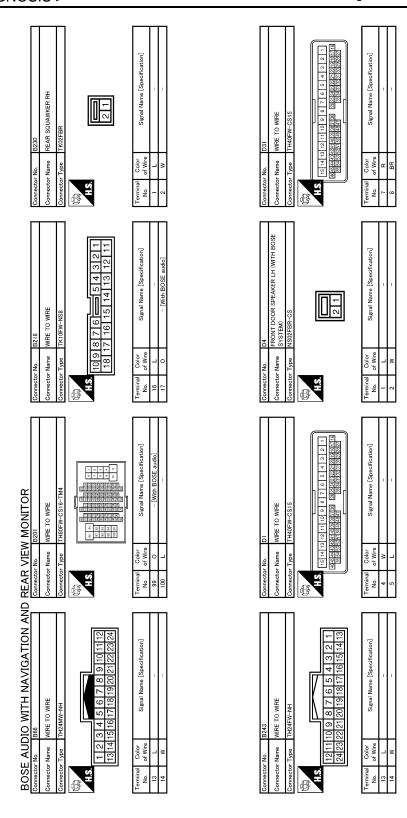






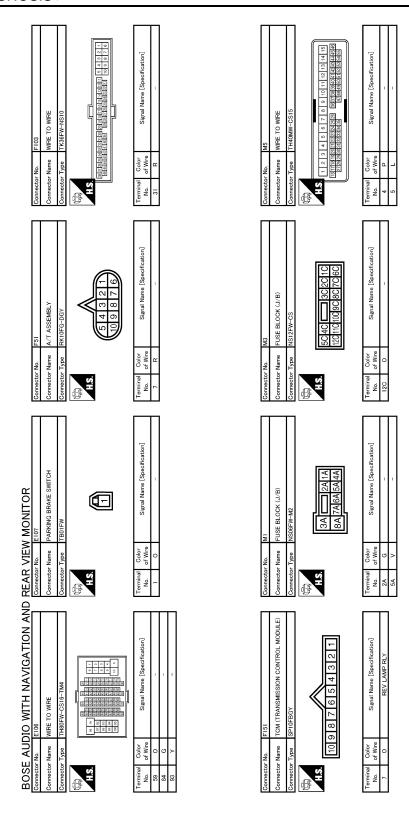
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12   B   GND   SQUAD SIGNAL PRONT DOOR SPEAKER RH (-)   14   R   SQUIND SIGNAL WOOFER (-)	Connector No. BS1 Connector Name WOOFER Connector Type RS06FGY-PR	Terminal   Color   Signal Name [Specification]   Color   PWie   Signal Name [Specification]   Color   PWie   SOUND SIGNAL WOOFER (-)   Color   Color		A B C
Sound Signal Name (Specification)	B   LG   SOUND SIGNAL FRONT DOOR SPEACER RH (4)     10   G   SOUND SIGNAL WOOFER (4)     11   GR   SOUND SIGNAL MOOFER (7)     12   C   SOUND SIGNAL LERAR DOOR LH (~)     22   C   SENSOR SIGNAL 1     24   BR   SENSOR SIGNAL 1     25   R   SENSOR SIGNAL 2     26   V   VEHICLE SPEED (8-PULSE)     30   LG   ACC     31   B   GAND     32   L   BATTERY     33   L   BATTERY     34   GAND     35   L   BATTERY     36   GAND     37   L   BATTERY     38   LG   BATTERY     39   LG   BATTERY     30   LG   BATTERY			E F G
REAR VIEW MONITOR  AMP. ON SIGNAL  AMP. ON SIGNAL  SOUND SIGNAL FRONT H (+)  SOUND SIGNAL FRONT SOLAWKER RH (+)  THE SOUND SIGNAL FRONT SOLAWKER RH (+)	Connector No.         B50           Connector Name         CAMERA CONTROL UNIT           Connector Type         TH22FW-NH           H.S.         In 122 [4] 6 8 10 [2 [4] [6] [8 00 [22 [4] 66 [8] 30 [4] 30	Terminal   Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]   SHELD   SHELD		J K
S ctor I	23 BR SOUND SIGNAL REAR RH (+) 25 GR WOOFER AMFON SIGNAL 27 R SOUND SIGNAL FRONT SOUNAMER RH (-) 28 G SOUND SIGNAL CENTER (-)  Connector Name REAR SOUNAWER LH  Connector Name REAR SOUNAWER LH  Connector Type TROZEBR	Terminal   Color   Signal Name (Specification)   No.   of Wire     L	JCNWM0782GI	M AV
				Р



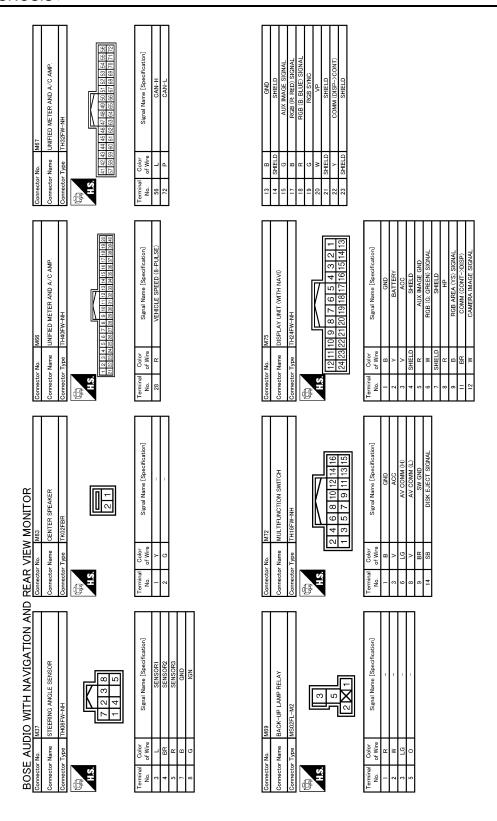
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D71  WRE TO WIRE  TK:IOMW-NS3  3 4 5 6 6 7 8 9 10  2 13 14 15 16 17 18	Signal Name [Specification]	No. E5  Nome DISTRIBUTION MODULE ENGINE ROOM)  Type TH20FW-CS12-M4-1V  101011-1314 (SESTINGES)  1   1   1   1   1   1   1   1   1   1	Signal Name [Specification]		A B
Connector No. D71 Connector Name WIR Connector Type TKI	Terminal Color No. of Wire 16 L 17 Y	Connector No. E5 Connector Name DIS Connector Type THR	Terminal Color No. of Wire 25 G		D
	Signal Name (Specification)		Signal Name (Specification) CAMERA FOWER SUPPLY CAMERA OND CAMERA IMAGE SIGNAL SHELD		Е
DS6 REAR DOOR SPEAKER LH NSQ2FBR-CS 2 1	2 2	D121  PEAR VIEW CAMERA  THOSHWY-NH  T 2 3 4			F G
Connector No. Connector Type	Terminal   Oalc	Connector No. Connector Type H.S.	Terminal   Color		Н
MONITOR  FIRE TO WIRE  KTOMW-NSS  4 5 6 7 8 9 10  13 14 15 16 17 18	Signal Name [Specification] - [With BOSE audio] - [With BOSE audio]	о wire w-NH 8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13	Signal Name [Specification] [Without around view monitor] [Without around view monitor] [Without around view monitor]		I
REAR VIEW MONITOR Connector Name WIRE TO WIRE Connector Type TK(10MW-NS)  MA  12 3 45 — 1	Terminal Codor No of Wire 16 V	Connector No. D102 Connector Name WIRE TO WIRE Connector Type TH24FW-NH  H.S.  12 11 10 9 8 7  24 23 22 21 20 19	Terminal   Color		K
TION AND	tion]		[ion]		L
BOSE AUDIO WITH NAVIGATION AN Commerce No. 1034 SYSTEM Commerce Type NSOZEBR-CS Commerce Type NSOZEBR-CS	Signal Name (Specification)	D76 NS0ZEBR-CS  2 1	Signal Name [Specification]		M
AUDIO WITH	Color of Wine BR R	<u>e</u> e	Color Y		AV
BOSE AU Connector No. Connector Type H.S.	Terminal C No. of I	Connector No. Connector Type	7 cerninal O O O O O O O O O O O O O O O O O O O	ICNIMA CZOŁO!	0
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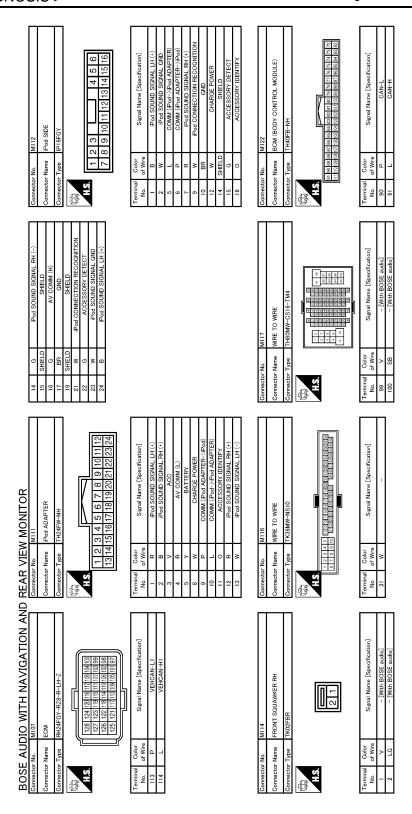
Connector No. M13 Connector Name FRONT SQUAWKER LH Connector Type TK0ZFBR  H.S.  Terminal Color Signal Name [Specification]  1 L 2 W	Connector No.   M36   Connector Name   COMBINATION SWITCH (SPIRAL CABLE)   Connector Type   TK08FGV-1V   TK08FGV-1V   TK08FGV-1V   Signal Name   Specification   S	A B C	
		E	
57 BR 66 60 SHELD	91 29 29	G	
		H	
Connector No.   M7   Connector No.   M7   Connector No.   M7   Connector No.   TH80MM-CS16-TM4   TH80MM-CS16-TM4   Terminal Color   Connector Type   TH80MM-CS16-TM4   Color	MX25 NS16MW-CS NS16MW-CS 8 9 10 11 12 13 14 15 16 7 8 9 10 11 12 13 14 15 16 7  Signal Mane [Specification]	J	
Δ	Commettor Name   Commettor Type   R   R   R   R   R   R   R   R   R	K L	
BOSE AUDIO WITH NAVIGATION AN Connector Name Wife TO WIFE Connector Type TH80MW-CS16-TM4  Terminal Color Signal Name (Specification)  So V Signal Name (Specification)  So V Signal Name (Specification)	M24 DATA LINK CONNECTOR BDIGFW  10111213141516  12 3 4 5 6 7 8  Signal Name [Specification]	М	
Connector No. Mis Connector Name WIRE TO WIRE Connector Type TH800W-CSIS Co	Connector No. M24 Connector Name BD16FW Connector Type BD16FW H.S. 12 3 Terminal Color No of Wire 6 L 14 P	AV	
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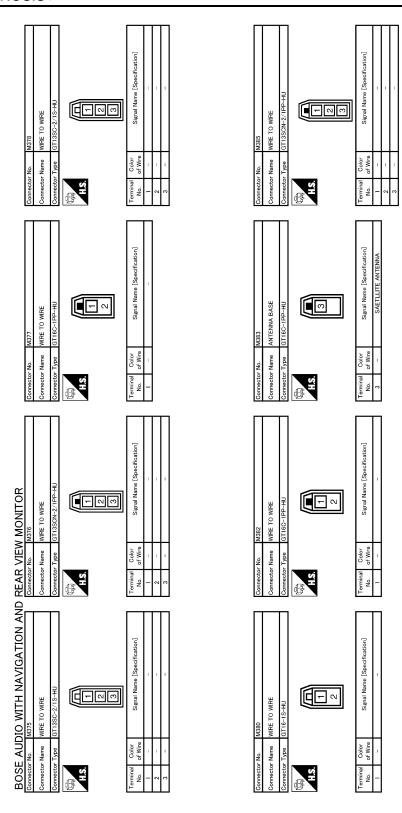
R VEHICLE SPEED (8-PULSE)	Cornector Name WIRE Cornector Name WIRE TO WIRE Cornector Type   TK 10MW-NS8    1   2   3   4   5	A B C
8 4 4 4 6 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Connector Connector Terminal To Bo 2 2 2 2 2 2 3 3 4 4 4 4 4 4 4 4 4 4 4 4	D
NH  NH  NH  Signal Name (Specification)  ChD  BATTERY  GND  BATTERY  GND  BATTERY  GND  MICROPHONE GNAL  MICROPHONE GNAL  MICROPHONE GNAL  MICROPHONE SIGNAL  MICROPHONE SIGNAL	PARKING BRAKE  REVERSE  NITROL UNIT (WITH NAVI)  W-NH  INTROL	Е
MACONTROL UNIT (WITH NAV) TH40FW-NH TH40FW-NH SEE SEED SEED SEED SEED SEED SEED SEED	M89 AV CONTROL UNIT (WITH NAV)) TH32PW-NH TH32PW-NH TH32PW-NH TR 2	F
M87 AV CONT TH40FW TH40FW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	M99 AV CO TH 737F 1 107 107 107 107 107 107 107 107 107 10	G
Connector Name   Connector Name   Connector Type   Conn	1   1   1   1   1   1   1   1   1   1	
1	2	Н
R RH (-)		I
ONITOR SOUND SIGNAL REAR RH (- STREG SW BE BATTERY GND GND	可当地	
VIEW MONITOR BIG SOUND SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN		J
VIEW P P P P P P P P P P P P P P P P P P P	72 SHIELD	K
D REAR	72	
		L
WITH NAVIGATION  PW-CS2    12   13   14   15   6   7   8   9	SOUND SIGNAL FRONT RH (+)	M
MEDICAL   NAVIGAT	SOUND SIGNAL FRONT R	
M80  AV CONTROL  THISPW-CSS  THISPW-CSS  THISPW-CSS  THISPW-CSS  THISPW-CSS  THISPW-CSS  THISPW-CSS  THISPW-CSS  THISPW-CSS  SOUN SOUN SOUN SOUN SOUN SOUN SOUN S	MM88 1417 1617 1617 1617 1617 1617 1617 1617	AV
SSE ALL  Colonial  Colonia	ninal necto	0
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M303 COMBINATION SWITCH (SPIRAL CABLE) TK08FGY  3 14 15 16 17 18 19 20	Signal Name (Specification)	WRE S-HU Signal Name [Specification]		АВ
Connector No. M333 Connector Name COMBINATION Connector Type TK08FGY M3.8 H3.	Terminal   Color   Signa	M374		C
Pur JAcks	Signal Name [Specification] AUX SOUND SIGNAL EN (+) AUX SOUND SIGNAL LH (+) AUX INAGE SIGNAL AUX INAGE SIGNAL AUX INAGE GND	AV CONTROL UMIT (WITH NAVI)  GTG-1S-HU  [10]  Signal Name [Specification]  GPS ANTENNA  SHIELD		E F
Connector No. M154 Connector Name AUXILARY INPUT JACKS Connector Type A08FW  M1.8  1 2 3 1 7	No.   Octor   Signa	Connector No.   M373		G
12 0 12 12 12 12 12 12 12 12 12 12 12 12 12	Signal Name [Specification]			H
Connector No   M144	No. of Wire Signal Na. 5 SHELD 6 W.W. 6 W.W. 6 W. 7 SHELD 6 W. 7 SHELD	ttor No. M372 ttor Name AV CON1 ttor Type FAKRA J of Wire of Wire		J K
		NAL NAL		L
M124   WITH N   M124   WIRE TO WIRE   TH40MW-CS15	Color Signal Name [Specification] of Wire V	No.   M071		AV
BOSE AU Connector Name Connector Type H.S. T. Z. H.S. T	Terminal No. 7	Connector No. Connector Type Connector Type Terminal Color No. 106 107 107	JCNWM0790Gt	O P



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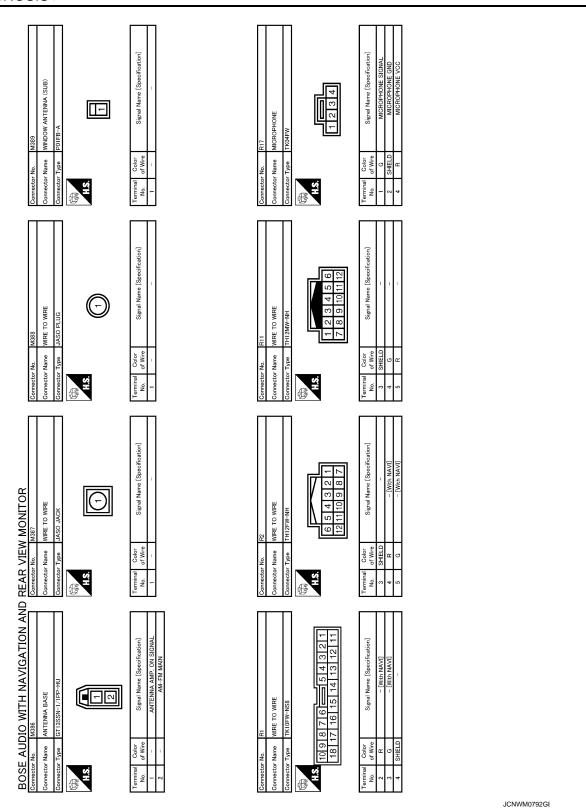
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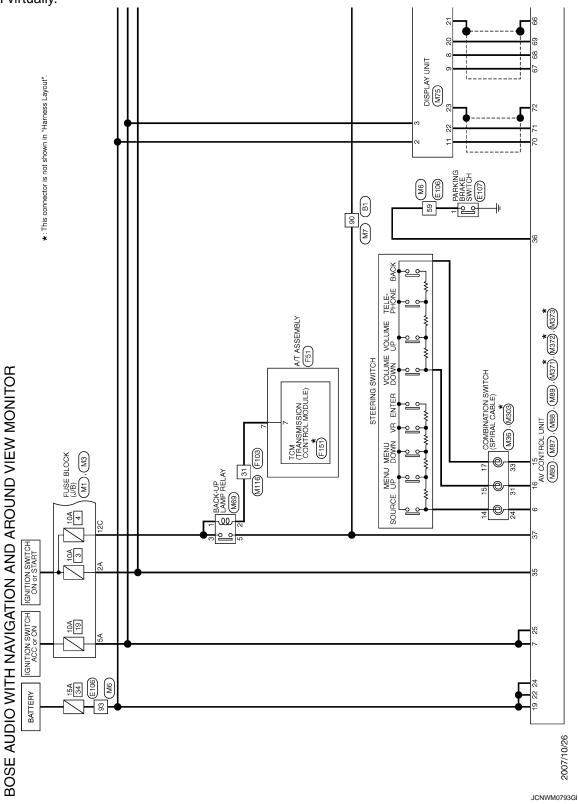
WITH AROUND VIEW MONITOR

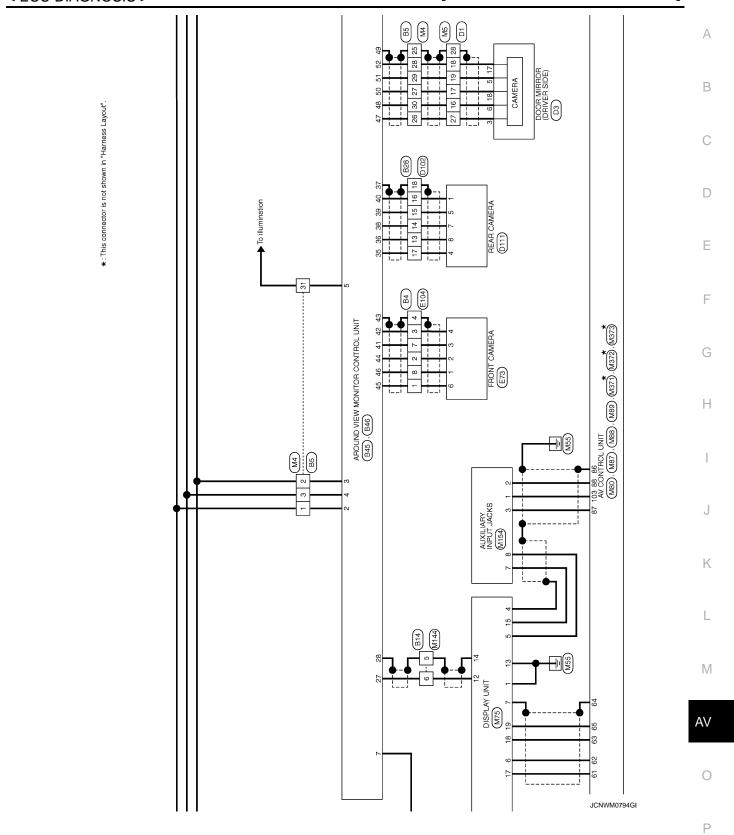
WITH AROUND VIEW MONITOR: Wiring Diagram - BOSE AUDIO WITH NAVIGATION AND AROUND VIEW MONITOR -

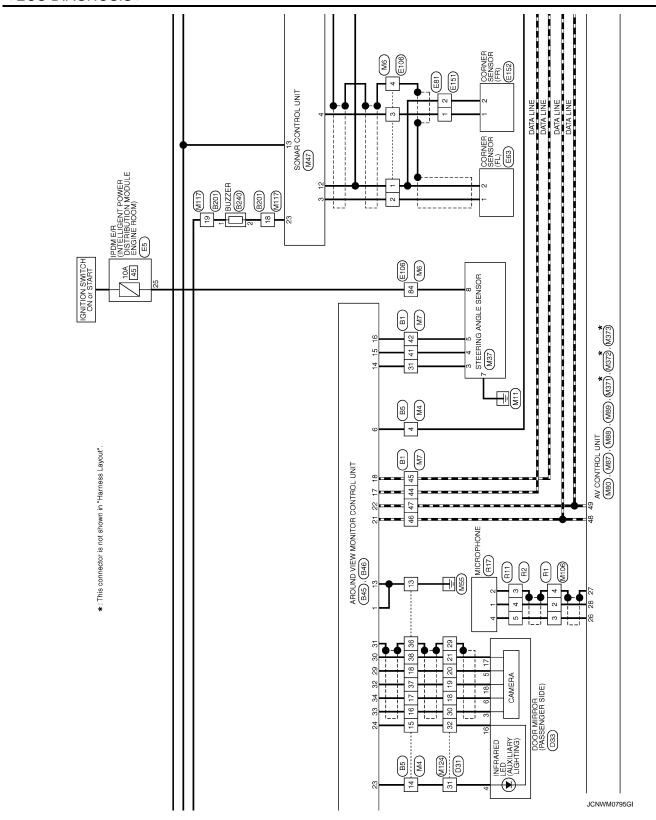
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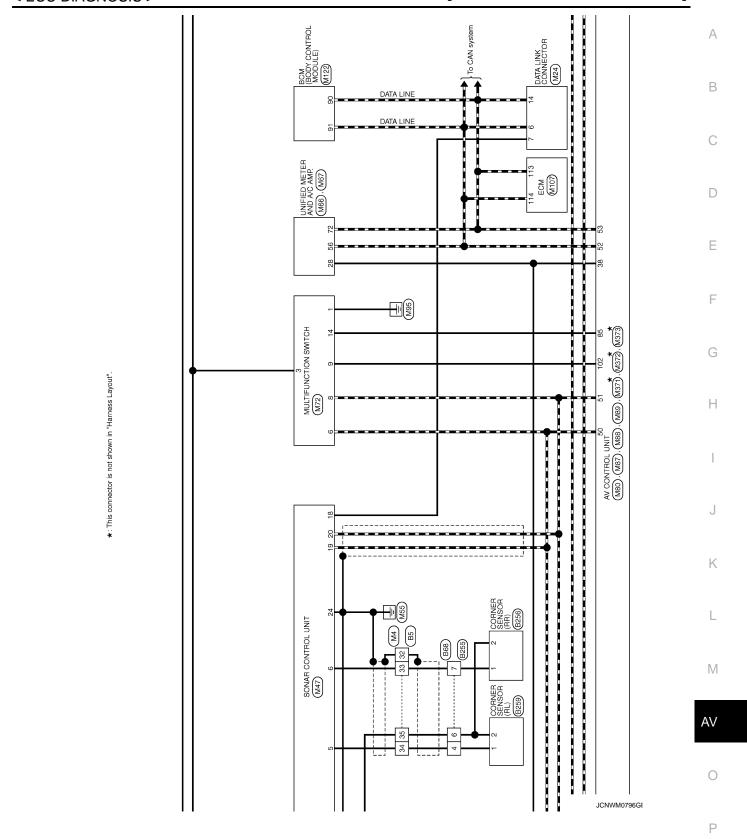
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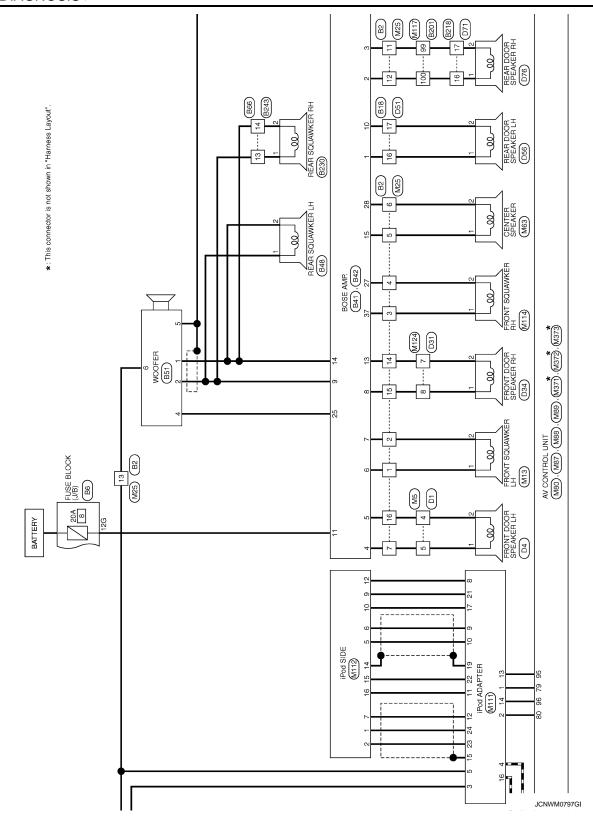
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.











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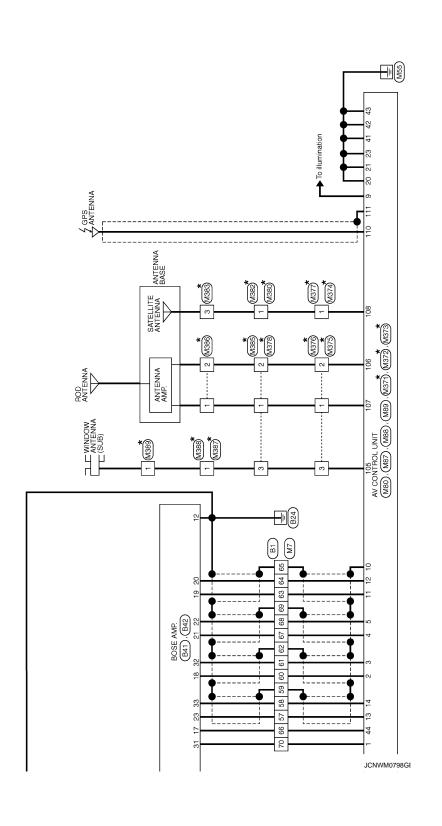
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\*: This connector is not shown in "Harness Layout".



Revision: 2007 November AV-693 2008 EX35

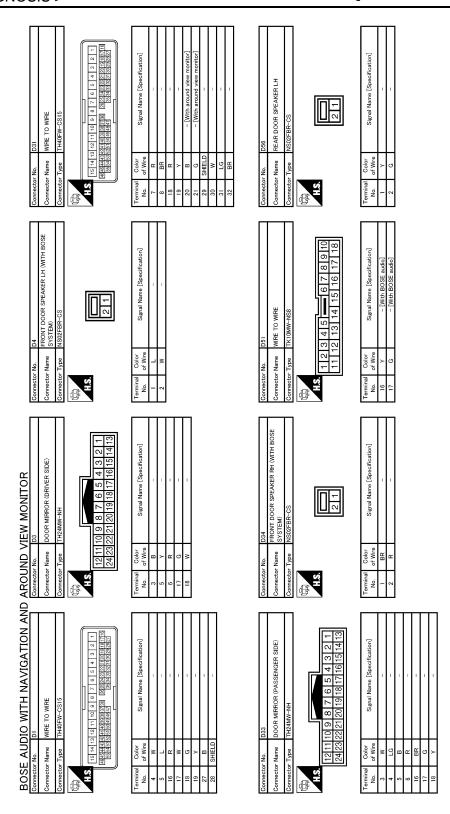
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	DOOR SPEAKER RH (-) LWOOFER (-)	A
	GAID  Y SOUND SIGNAL PROIT DOOR SPEAKER RH (-)  R SOUND SIGNAL WOOFER (-)	С
	22 52 42	D
10   11   12   12   23   24   12   12   23   24   12   23   24   24   24   24   24   24   2	11 10 3 2 11 10 3 2 11 10 3 2 11 10 3 2 11 10 10 10 10 10 10 10 10 10 10 10 10	Е
WIRE TO WIRE   TH24AW-NH	E AMP:    2FBR-SJA2	F
Nome  Type  13 14  13 14  R R R R R R R R R R R R R R R R R R R	N	G
Connection		Н
MONITOR  WIRE  NISS    5   4   3   2   1     5   14   13   12   11     15   14   13   12   11     15   14   18   12   11     16   14   18   18     16   14   18   18     17   14   18   18     18   18   18   18     18   18	SOUND SIGNAL H(-) SOUND SIGNAL FEAR H(-) SOUND SIGNAL FEAR H(-) SOUND SIGNAL FRONT SOUAWKER RH (+)	I
VIEW MONITOF  B18  B18  TK10FW-NS8  TT10FW-NS8  B 7 6 = 5  T7 16 15 14 11  T 16 15 14 11  Signal Name [S  - [With BOS	AMP. SOUND SIGNAL PI SOUND SIGNAL PI SOUND SIGNAL PI	J
AROUND V Connector Nan Connector Type Connector Typ	31 N W BR SS 33 L L SS 33 SS 3	К
		L
BOSE AUDIO WITH NAVIGATION AND Commetter No. B14	TO SPECIFICATION OF SPE	M
DIO WITH B14 WIRE TO WIRE THIZPW-NH 12 11 110		AV
BOSE AUC Connector No. Connector Type Connector Type H.S. H.S. S.HELD 6 W	Connector No.   Connector Name   Connector Type	0
	JCNWM0800Gi	Р

BOSE AUDIO WITH NAVIGATION AND	D AROUND VIEW MONITOR			
Connector No. B45	52 W SIDE CAMERA LH IMAGE GND	Connector No. B46	17 G AV COMM (H)	
THE CONTROL WITH CHANGE		THE COTTINGS DOTHERS OF THE CO.	18 Y AV COMM (L)	
Connector Name ARCOIND VIEW MONITOR CONTROL ONL		Connector Name ARCOIND VIEW MONITOR CONTROL UNIT	21 W AV COMM (H)	
Connector Type TH24FW-NH		Connector Type TH40FW-NH	22 B AV COMM (L)	
ſ			23 LG LED (+)	
			24 G LED (-)	
			27 W CAMERA IMAGE SIGNAL	
_			28 SHIELD CAMERA IMAGE GND	
42 44 46 48 50 52 54 56 58 60 62 64		12 14 16 18 20 22 24 26 28 30 32 34 36 38	29 Y SIDE CAMERA RH IMAGE SIGNAL	SNAL
41 43 45 47 49 51 53 55 57 59 61 63		1 3 5 7 9 11113115117119[2122]22[22]33[33]33[31]34	30 G SIDE CAMERA RH IMAGE GND	DN
			31 SHIELD SHIELD	
			32 B SIDE CAMERA RH GND	
Terminal Color Simpl Name [Specification]		Terminal Color Signal Name [Saccification]	33 W SIDE CAMERA RH COMM	V
No. of Wire Signal Name (Specincation)		No. of Wire Signal Name (Specification)	34 R SIDE CAMERA RH POWER SUI	PPLY
41 Y FRONT CAMERA IMAGE SIGNAL		1 B GND	35 L REAR CAMERA COMM	
42 G FRONT CAMERA IMAGE GND		2 Y BATTERY	36 BR REAR CAMERA POWER SUPPLY	PLY
43 SHIELD SHIELD		3 P IGNITION	37 SHIELD SHIELD	
44 B FRONT CAMERA GND		4 GR ACC	38 R REAR CAMERA GND	
45 W FRONT CAMERA COMM		5 0 ILLUMINATION	39 Y REAR CAMERA IMAGE SIGNAL	IAL
46 R FRONT CAMERA POWER SUPPLY		6 SB VEHICLE SPEED (8-PULSE)	40 W REAR CAMERA IMAGE GND	٩
47 L SIDE CAMERA LH COMM				
48 BR SIDE CAMERA LH POWER SUPPLY		13 B CONTROL SIGNAL		
SHIELD		14 L SENSOR SIGNAL 1		
50 R SIDE CAMERA LH GND		BB		
Y SIDE		æ		
Connector No. B48	Connector No. B51	Connector No. B66	Connector No. B68	
Occupation Name DEAD SOLIAMICED   H	Omnoster Name	MWDE TO WIDE	Edwy OT BOW	
П		╛	╗	
Connector Type TK02FBR	Connector Type RS06FGY-PR	Connector Type TH24MW-NH	Connector Type RH08MB	
	E.		•	
	2 4 6	1123456789101112		
2 1	<u> </u>	15 16 17 18 19 20 21	$\overline{}$	
Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	7
t	t	t	t	Į,
2 W -	"	14 W -	Ц	[Ja
	GR WOOFER A		7 W - [With around view monitor]	
	5 B GND 6 W BATTERY			

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at on ]	А
BES9 CORNER SENSOR (RL) Signal Name [Specification] Signal Name [Specification]  Signal Name [Specification]	В
PACOZER   PACO	С
Oommettor No.  Commettor No.  Commettor No.  Commettor No.  Terminal Color  No.  Commettor No.  Terminal Color  Terminal Color	D
pecification)	Е
REAR SOUAWKER RH TKOZFBR  Signal Name [Specification]  NDXOZFB  Signal Name [Specification]	F
Connector No. B230 Connector No. B236 Connector No. B286 Connector No. B286 Connector Name Coffy I L L I W Coffy I Color No. of Wire No. of Wire No. of Wire Some Connector Type YDX0 ASS. Some Coffy I B B Color I B B Color	G
	Н
MIRE  WIRE  WIRE  WIRE  WIRE  Signal Name [Specification]  Signal Name [Specification]	I
TEW N   WINE TO   WINE T	J
Oonnector Connector Connec	К
	L
Connector Name   RE24	M
Name   WIRE TO WIRE	AV
BOSE AUIC   Connector No.	0
JCNWM0802Gi	Р



JCNWM0803GI

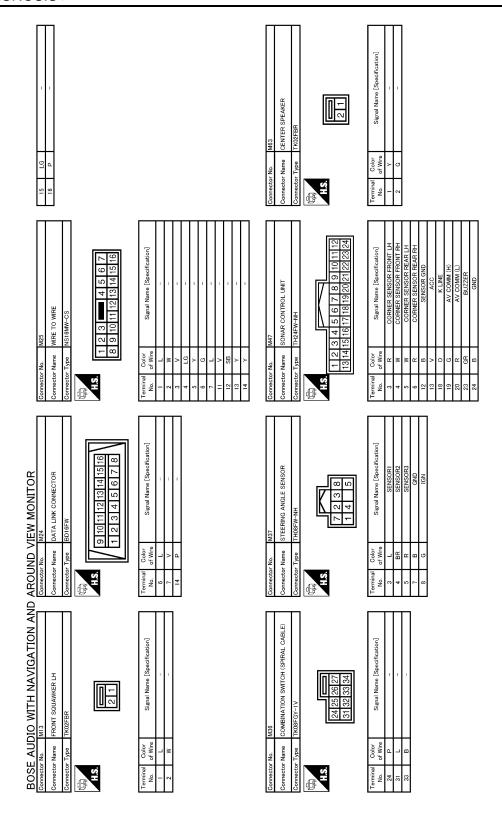
	Signal Name [Specification] TEAR CAMERA IMAGE GND TEAR CAMERA MAGE SIGNAL THEAR CAMERA GNA THEAR CAMERA GNA AR CAMERA POWER SUPPLY AR CAMERA POWER SUPPLY		Signal Name [Specification] -		A B
Connector No. D111 Connector Name REAR CAMERA Connector Type THOSIMW-NH  1.3 1 3 2 1 1 3 2 1	Color of Wing. R R R R R	Connector No. E81 Connector Name WIRE TO WIRE Connector Type RS02MB	Color R R P		С
Connector No. Connector Na. Connector Typ.	Terminal No. 1 1 1 1 7 7 7 8 8 8	Connector No. Connector Type	Terminal No.		D
4 3 2 1 16 15 14 13	ecification]  ew monitor]  ew monitor]  ew monitor]		eefreation] WRER SUPPLY RA GND AGE SIGNAL IMAGE GND AC COMM		Е
22 24FW-NH 24FW-NH 2120191817	Signal Name [Specification]  - [With around view monitor]  - [With around view monitor]  - [With around view monitor]	NAT CAMERA NOT CAMERA 12 3 4 5	Signal Name [Specification] FRONT CAMERA FOOVER SUPPLY FRONT CAMERA IMAGE SIGNAL FRONT CAMERA IMAGE GND FRONT CAMERA IMAGE GND FRONT CAMERA COMM		F
23 11 Se 36 12 12 12 12 12 12 12 12 12 12 12 12 12	Of Wire C C C C C C C C C C C C C C C C C C C	9 9	of Wire PR BR C		G
Connector No. Connector Na. Connector Typ. H.S. 12	Terminal No. No. 13 14 15 15 16 17 18 18	Connector Na. Connector Typ	1 Terminal No. 2 2 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		Н
TOR EAKER RH	Signal Name [Specification]	R(FL)	Signal Name [Specification]		I
IEW MONITOR  1756 1756 1757 1757 1757 1757 1757 175	Signal	CORNER SENSOR (FL.) NDX02FB	Signal		J
AROUND V Connector No. Connector Name Connector Type H.S.	Towninal Color No. of Wire 2 Y	Connector No. E63 Connector Name OF Connector Type YDX	Terminal Color No. of Wire 1 W T		K
ON AND		W) III			L
NAVIGATI	Signal Name [Specification]	No.   E5	Signal Name [Specification]		M
AUDIO WITH No. D71 Name WIRE TO WIRE TX10MW-NSS 1 2 3 4 5 = 11   12   13   14		E5 IPDM E/R (II DISTRIBUTION THZ0FW-CS TH20FW-CS TH219 IN BBBB S 6 7 8 IBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB	Ш		AV
BOSE AU Connector No. Connector Name Connector Type 11.2 11.2	Calor   Calo	rector rector	Terminal Color No. of Wire 25 G		0
BC Conn	ř	Con	ř	JCNWM0804Gf	
					Р

BOSE AUDIO WITH NAVIGATION AND	D AROUND VIEW MONITOR		
Connector No. E104		Connector No. E107	Connector No. E151
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Name PARKING BRAKE SWITCH	Connector Name WIRE TO WIRE
Connector Type NS12MW-CS	Connector Type TH80FW-CS16-TM4	Connector Type TB01FW	Connector Type RS02FB
H.S. 1 2 3 - 4 5 6 7 8 9 10 11 12	S'H	HS.	#S.
Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   Color   C	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   Signal Name [Spec	Terminal Color   Signal Name [Specification]   No. of Wire   O.	Terminal Golor   Signal Name (Specification)     No. of Wire
	2 >		
Connector No. E152 Connector Name CORNER SENSOR (FR)	Connector No. F51 Connector Name A/T ASSEMBLY	Connector No. F103 Connector Name WIRE WIRE	Connector No. F151 Connector Name TCM (TRANSMISSION CONTROL MODULE)
Connector Type YDX02FB	Connector Type RK10FG-DGY	Connector Type TK36FW-NS10	Connector Type SP10FBGY
#S.	H.S. (5 4 3 2 1)	H.S. SETTINGENERAL SETTINGENER	H.S. 1091817161514131211
Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]     R	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   7   R	Terminal   Golor   Signal Name [Specification]   No.   of Wire	Terminal   Color   Signal Name [Specification]   No. of Wire   PEV LAMP RLY   O   REV LAMP RLY

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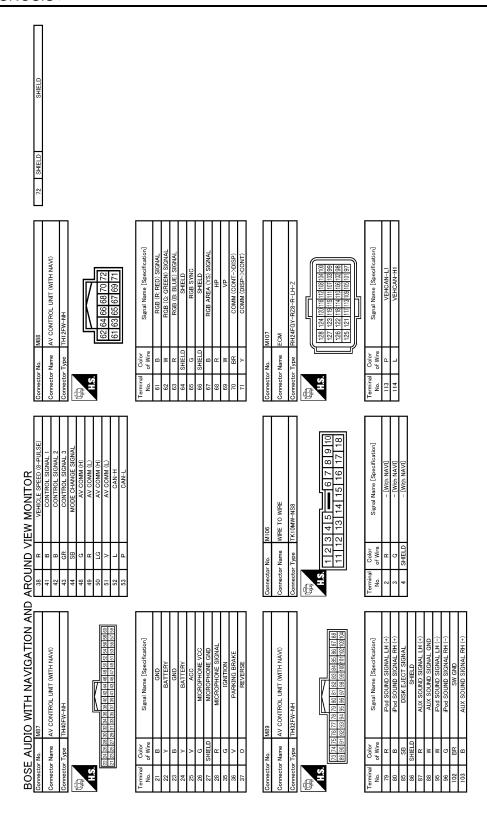
		АВ
26 W W C C C C C C C C C C C C C C C C C	62 SHELD 63 SHELD 64 G SB 66 SB 67 V V 68 SB 69 SHELD 70 V 70 V	C D
MAF TH40FW-NH  TH40FW-NH  Signal Name [Specification]	WIRE TO WIRE  THEOMW-CSIG-TIMA  THEOMY-CSIG-TIMA  THEOMY-CSIG-TIMA  Signal Name [Specification]  - (With base audio or with NAVI)	E
Connector No.   M4	SHELD Ctor Name ctor Type and	G
IEW MONITOR   M3   FUSE BLOCK (J/B)   NSIZEW-CS     SCAC   C   C   C   C   C   C   C   C   C	MARE TO WIRE THROMW-CS IS-TM4 THROMW-CS	I J
AROUND V Connector No. Connector Name Connector Type No. Fix. Terminal Color No. of Wire 12C 0	Connector No.   M6	К
Connector Name   Color   Col	Name   WIRE TO WIRE   The WIRE	L M
Connector No.   MI	Connector No.   MS	AV O JCNWM0806GI
		Р

Revision: 2007 November AV-701 2008 EX35



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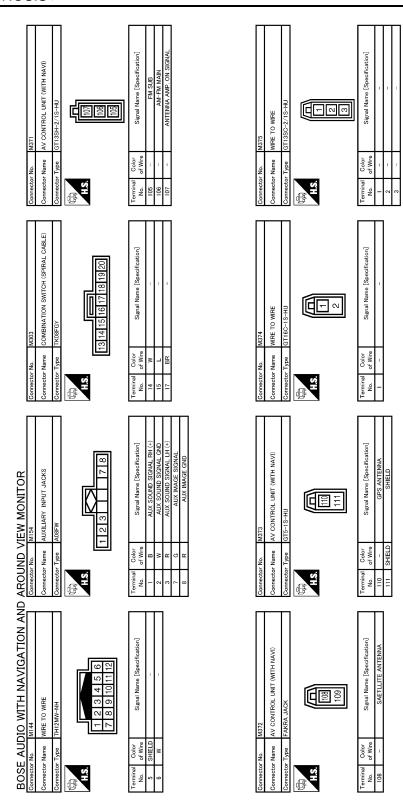
16 (16 (17 (18 (18 (18 (18 (18 (18 (18 (18 (18 (18	А
TION SWITCH TION SWITCH TO STATE SWI OF STATE SWI OF STATE SWI OF STATE SWI OF SWITCH	В
N   N   N   N   N   N   N   N   N   N	C
Connection   Con	D
eeffection]  17.18 20  17.	Е
Signal Name [Specification]   Signal Name [Specification]	F
M   M   M   M   M   M   M   M   M   M	G
Connector No.   Connector No	Н
	П
C AMP:   C	1
TER AND A ALIXIMAGE (SIGN) TO AND A SHEEL SOLAM (DIS) SHEEL SHEEL SHEEL SOLAM (DIS) SHEEL SHEEL SOLAM (DIS) SHEEL	J
No   No   No   No   No   No   No   No	0
Connector Name   Connector Type   Conn	K
9	L
7TION A TION A T	
1TH NAVIGATIC	M
OWITH NAVIGA	AV
	0
JCNWM0808Gł	Р



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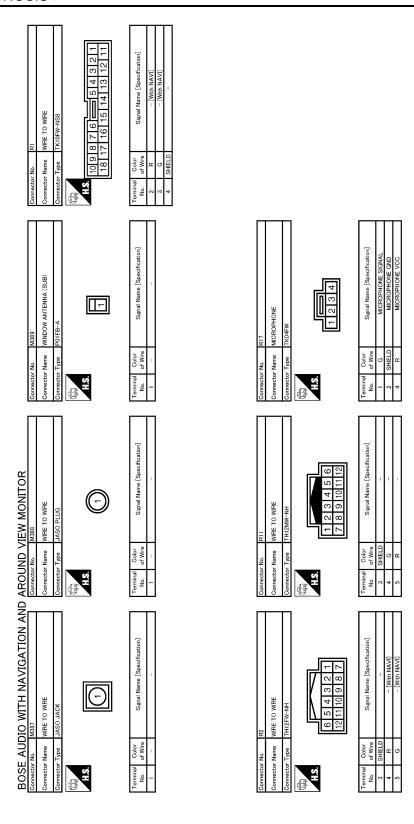
Connector No. MI14 Connector Name FRONT SQUAWKER RH Connector Type TR02FBR  H.S.	Terminal   Color   Signal Name [Specification]   No. of Wire   - [With BOSE audio]	Cornector No.   MI24	+	A B C
Connector No. M112  Connector Name Pod SIDE  Connector Type IP16FGY  M.S. 1 2 3 4 5 6 7 8 9 10 11 112 13 14 15 16	Terminal   Color   Signal Name (Specification)   No.   of Wire   Fiped SOUND SiGNAL LH (+)   E.   of SOUND SiGNAL LH (+)   of Wire   Prod SOUND SiGNAL GND   Of Wire   Prod SOUND SIGNAL GND   Of Wire   Of	Connector No.   M122		E F G
AROUND VIEW MONITOR   14   14   15   15   15   16   17   18   18   19   19   19   19   19   19		Connector Name   WIRE TO WIRE		J K
BOSE AUDIO WITH NAVIGATION AND Commector No.   Milit Commector Name   Pod ADAPTER Commector Type   TH24FN-NH	Terminal   Color   Signal Name   Specification   No. of Wire   Fipod SOUND SIGNAL LH (+)	Connector Name WIRE TO WIRE Connector Type TKSBMW-NS10  THE STATE THE TOTAL THE THEORY THE STATE	JCNWM0810GI	M AV
				Г

Revision: 2007 November AV-705 2008 EX35



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HU  Signul Name [Specification]	N-IVIPP-HU  N-IVIPP-HU  Signal Name (Specification)  Signal Name (Specification)	А
Connector No. M380 Connector Name WIRE TO WIRE Connector Type GTI6-15-HU H.S. Color Signal N No. of Wire 1	Connector No. M386 Connector Name ANTENNA BASE Connector Type GT13SSN-L/IPP-HU Connector Type GT13SSN-L/IPP-HU  Terminal Color Signal Name No. of Wire Signal Name 1 - ANTENNA A 2 - AMF	C
[cation]	Gestion	Е
MRTO WIRE GTT3SC-2/1S-HU  GTT3SC-2/1S-HU  Signal Name (Specification)	WRE TO WIRE GTISSCN-2/IPP-HU  GTISSCN-2/IPP-HU  Signal Name [Specification]	F
ector No. ector Name ector Type ector Type of Vive Color . of Vive	ector None ector Type  inal Color  of Wire	G
Community National Community Nat	Communication of the communica	Н
MONITOR WRE PP-HU  Signal Name [Specification]	PP-HU  SIgnal Name [Specification]  SAETLITE ANTENNA	ı
M377 WIRE TO WIRE GITIGC—IPP—HU 2 Signal	N   N   N   N   N   N   N   N   N	J
AROUND VIEW MONITOR Connector No. M9377 Connector Name WIRE TO WIRE Connector Type GT16C-1P9-HU  WR. Color GT16C-1P9-HU  Terminal Color No. of Wire Signal Name [Sp.	Connector No. M383 Connector Name ANTE Connector Type GTI6  ALS  Terminal Color No. of Wire 3	К
		L
BOSE AUDIO WITH NAVIGATION ANI Connector No. M376 Connector Name WIRE TO WIRE Connector Type GT13SCN-2/1PP-HU  Connector Type GT13SCN-2/1PP-HU  MIS  Terminal Color No. of Wire Signal Name (Specification)  2	WRE PP-HU  Signal Name [Specification]	M
M376 WIRE TO WIRE GT13SCN-2/IF	M382 WHE TO WIRE GT16C-1PP-HI	AV
BOSE AUDI Connector No. In Connector Type Connector	Connector No. Occured Type Connector Type Connector Type Connector Type Color No. of Wire I.S.	0
		JCNWM0812GI
		Р



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Α

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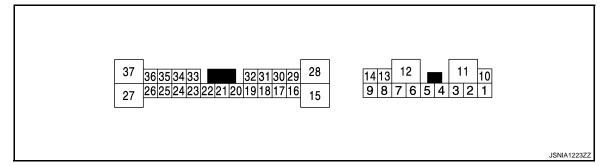
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## BOSE AMP.

Reference Value

### TERMINAL LAYOUT



#### PHYSICAL VALUES

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (Y)	10 (G)	Sound signal rear door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 +2ms SKIB3609E
2 (SB)	3 (V)	Sound signal rear door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
4 (B)	5 (P)	Sound signal front door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + + 2ms SKIB3609E
6 (L)	7 (W)	Sound signal front squawk- er LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
8 (LG)	13 (Y)	Sound signal front door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
9 (G)	14 (R)	Sound signal woofer and rear squawker (LH and RH)	Output	Ignition switch ON	Audio output	(V) 1 0 -1 → 2ms SKiB3609E	
11 (GR)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
12 (B)	Ground	Ground	ı	Ignition switch ON	_	0 V	
15 (B)	28 (G)	Sound signal center speaker	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
17 (O)	Ground	Mode change signal	Input	Ignition switch ON	Driver's Audio Stage ON  Driver's Audio Stage OFF	0 V 8.5 V	
18 (P)	32 (L)	Sound signal front LH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
19 (R)	20 (G)	Sound signal front RH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	

#### **BOSE AMP.**

#### < ECU DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
21 (V)	22 (SB)	Sound signal rear LH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 * 2ms SKIB3609E	
23 (BR)	33 (Y)	Sound signal rear RH	Input	Ignition switch ON	Audio output	(V) 1 0 -1 *** 2ms SKIB3609E	
25 (GR)	Ground	Woofer amp. ON signal	Output	Ignition switch ACC	_	12.0 V	
37 (BR)	27 (R)	Sound signal front squawk- er RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
31 (W)	Ground	Amp. ON signal	Input	Ignition switch ACC	_	12.0 V	

WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR

WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR : Wiring Diagram

- BOSE AUDIO WITH NAVIGATION -

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Click here to view the eWD.

NOTE:

ΑV

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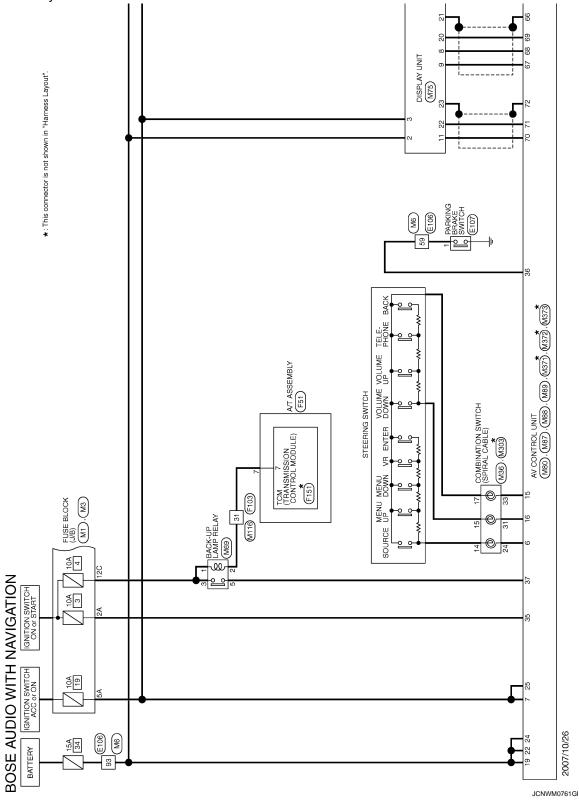
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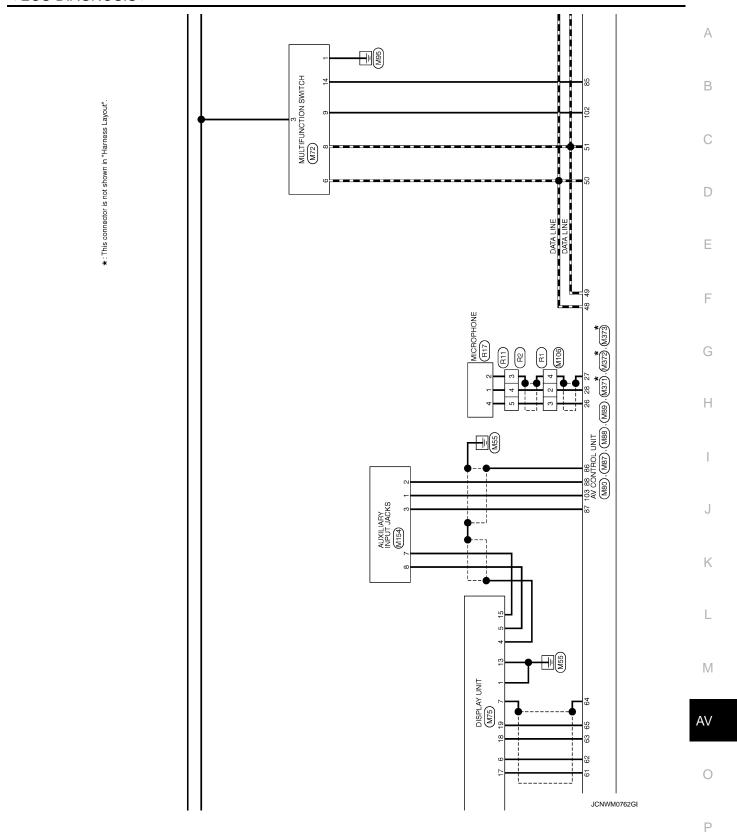
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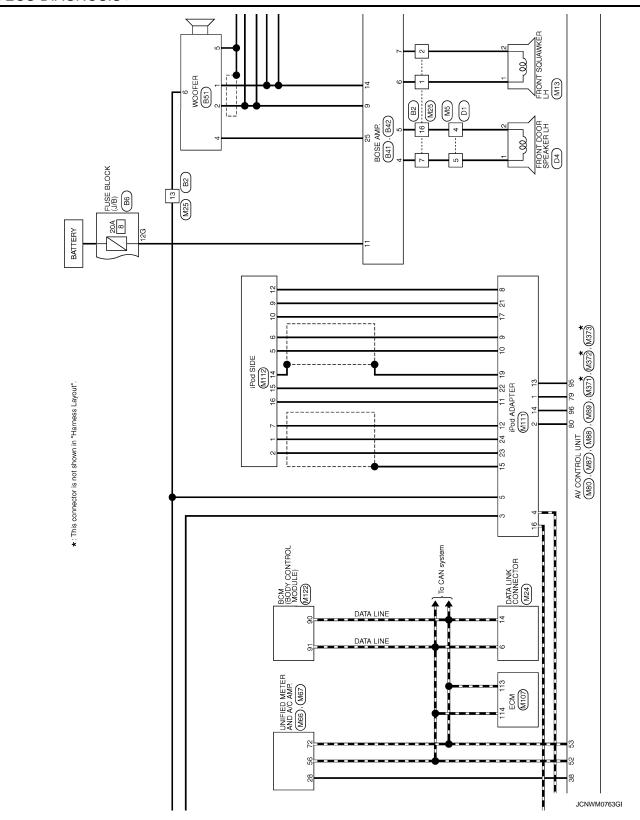
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The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

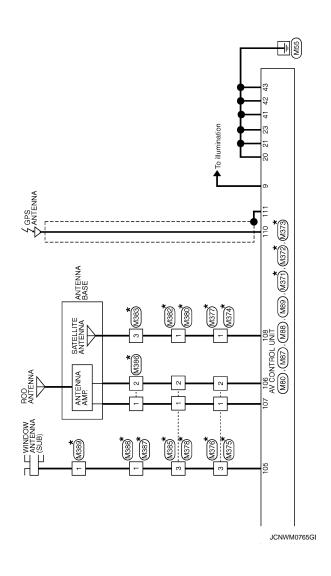






Α В \*: This connector is not shown in "Harness Layout". - F C D Е F G \*(M372),( **₩**371)\* Н (M89) AV CONTROL UNIT
(M80), (M87), (M88), ( BOSE AMP. (B41), (B42) 99 J Κ CENTER SPEAKER (M63) 3 L REAR SQUAWKER RH (B230) 9 M ΑV 0 JCNWM0764GI Ρ

★: This connector is not shown in "Harness Layout".

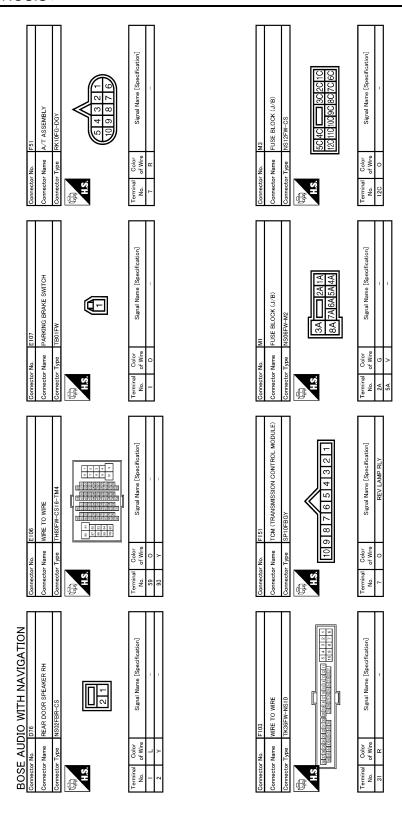


AMP. ON SIGNAL	SOUND SIGNAL FRONT SOUNMER PAR COUND SIGNAL FRONT SOUNMER PAR COUNT SOUND
9	<del>                                      </del>
	SCA19FBR-SGA4     SCA19FBR-SGA4     SCA19FBR-SGA4     SCA19FBR-SGA4     SCA19FBR-SGA4     SCA19BBR     SCA1
Connector No.   B2   Connector No.   B2   Connector Name   WIRE TO WIRE   Connector Type   NS15FW-CS	1   1   1   1   1   1   1   1   1   1
68 SB 69 SHELD 70 W EIS	10 10 10 10 10 10 10 10 10 10 10 10 10 1
	OCK (J./B) Common Commo
MIE TO WIE TO WRE THEOPY-CS16-TM4	AV  NR12FBR LO  100 100 100 100 100 100 100 100 100 10
BOSE AL	Connector Name  Connector Name

OE S	BOSE AU	BOSE AUDIO WITH NAVIGATION	ç	<u> </u>	CNO	on retoened	la48	Connector No 1851
Conne	Connector Name		13	a >- α	SOUND SIGNAL FRONT DOOR SPEAKER RH (-)	Connector Name		ne
Conne	sctor Type	Connector Type SGA12FBR-SJA2				Connector Type	pe TK02FBR	Connector Type RS06FGY-PR
Œ	<b>\</b>					•		
F	<u>ا</u> ن					H.S.		HS.
	121	1,-11					2 1	135
Terminal		Signal Name [Specification]				ᅙ	Color Signal Name [Specification]	<u></u>
ġ –	of Wire	nos				No.	of Wire	No. of Wire Sound Stand Wooffer (-)
2	SB	Н				2	M	L
3	> 0	SOUND SIGNAL REAR DOOR RH (-)						GR WOOFER
4 10	۵ ۵	SOUND SIGNAL FRONT DOOR SPEAKER LH (+)						5 B GND 6 W BATTERY
9	H	SOUND SIGNAL FRONT SQUAWKER LH (+)						
7	Α	SOUND SIGNAL FRONT SQUAWKER LH (-)						
80	ΓG	SOUN						
6	g	SOUND SIGNAL WOOFER (+)						
10		SOUND SIGNAL REAR DOOR LH (-)						
=	GR	BATTERY						
Conne	Connector No.	B66	Connector No.	П	B201	Connector No.	. B218	Connector No. B230
Conne	Connector Name	WIRE TO WIRE	Connector Name		WIRE TO WIRE	Connector Name	me WIRE TO WIRE	Connector Name REAR SQUAWKER RH
Conne	Connector Type	TH24MW-NH	Connector Type	П	TH80FW-CS16-TM4	Connector Type	pe TK10FW-NS8	Connector Type TK02FBR
Œ			唇			匮		<b>E</b>
1	112	3 4 5 6 7 8 9 10 11 12	2		2000	2	876 54	
	13 14	15 16			9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		18 17 16 15 14 13 12 11	[21]
Terminal No.	inal Color b. of Wire	Signal Name [Specification]	Terminal No.	Color of Wire	Signal Name [Specification]	Terminal C No. of	Color Signal Name [Specification]	Terminal Color Signal Name [Specification]
13	_	-	66	0	- [With BOSE audio]	16		
14	*	1	100			1.7	0 – [With BOSE audio]	2 W –

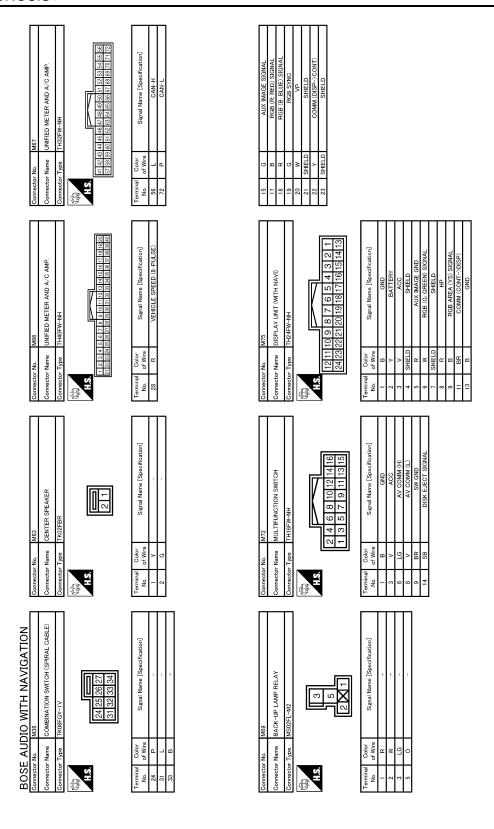
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7 0 5 4 3 2 1 1 2 2 2 3 2 3 3 3 3 3 3 3 3 3 3 3	Signal Name [Specification]	■ 6 7 8 9 10 15 16 17 18	Signal Name [Specification]		АВ
Connector No.   D31	Terminal Color Signal 7 R 8 BR	Connector No. 071  Connector Name WIRE TO WIRE  Connector Type TIX10MW-NSS  H.S. 1 2 3 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Terminal Color Signal II Y Y		C
(WITH BOSE	fration]		fratton]		Е
D4 FRONT DOOR SPEAKER LH (WITH BOSE SYSTEM) NS0ZFBR-CS 2 1	Signal Name [Specification]	DSS REAR DOOR SPEAKER LH NS02FBR-CS 2 1	Signal Name (Specification)		F
ector No. ector Name ector Type	No. of Wire	ector No. ector Name ector Type	Terminal Color No. 0' Wire 1 Y 2 G G		G
Oom Oo Oo Oo	<u> </u>	Commo	<u> </u>		Н
Name   WIRE TO WIRE   TH40FW-CS15   TH40FW	Signal Name [Specification]	NRS NRS 14 15 16 17 18	Signal Name [Specification] - [With BOSE audio] - [With BOSE audio]		I
Connector No. D1 Connector Name WIRE TO WIRE Connector Type TH40FW-CS15  HAS 15 14 15 12 11 10 9 6 GENERAL REAL FROM THE STATE OF	Terminal Color No. 5 L L	Connector No. D51 Connector Name WIRE TO WIRE Connector Type TX1(DMW-NSS)  H.S. 1 2 3 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Terminal   Color   No.   17   C   17   C   C   C   C   C   C   C   C   C		K
z		SE			L
BOSE AUDIO WITH NAVIGATION Connector No. B243 Connector Name WIRE TO WIRE  MARKET OF THEAFW-NH  MARKET OF THEAFW-N	Signal Name (Specification)	DOJ FRONT DOOR SPEAKER RH (WITH BOSE SYSTEM) NSOZEBR-CS	Signal Name (Specification)		M
DIO WITH 8243 WRE TO WRE TH24FW-NH 10 9 8 7		D34 FRONT DOOF SYSTEM) NS02FBR-CS			AV
BOSE AUI	Terminal Color No. of Wire 13 L. 14 W	Connector No. Connector Name Connector Type	Terminal Color No. of Wire 1 BR 2		0
				JCNWM0768GI	Р



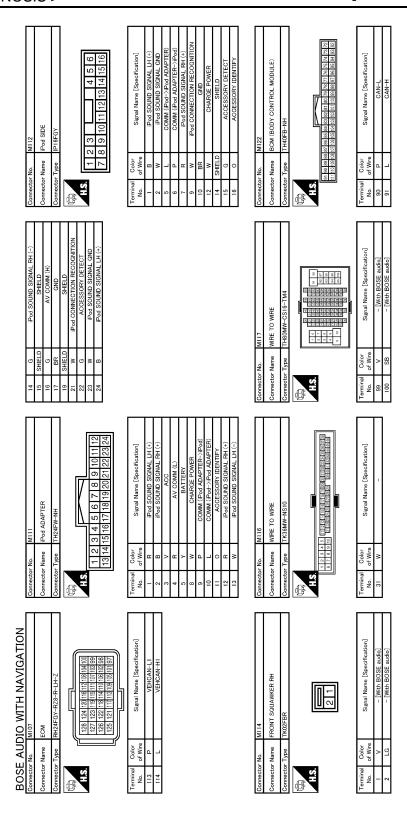
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	АВ
68 SHELD 69 SHELD 70 V	C
WW-CS ig-TM4  WW-CS ig-TM4  Signal Name [Specification]  Signal Name [Specification]	E
Connector No.   MT   Connector No.   MT   Connector Name   WIRE TO WIRE   Connector Name   MIRE TO WIRE   Connector Name   WIRE TO WIRE   Connector Name   WIRE TO WIRE   Connector Name   WIRE TO WIRE   Connector Name   MIRE TO WIRE   Connector Name   Connector Nam	G
WIPE CSI 16-TM4  (K COMNECTOR Signal Name [Specification]  Signal Name [Specification]	ı
Connector No.   M6   WIRE TO WIRE   Connector Name   WIRE TO WIRE   Connector Type   TH50MW-CS16-TM4   Connector No.   Of Wire   Connector No.   Of Wire   Connector Name   D16FW   Connector Name   D16FW   Connector Type   B016FW   Connector Type   Connector Type   B016FW   Connector Type	J K
	L M
SE AUDIO W wester No. Mis ector Name WIRE TO Intel 1   2   3   5   6 Intel 1   2   3   4   5   Intel 2   3   5   6 Intel 3   4   5   6 Intel 3   5   6 Intel 4   5   6 Intel 5   6   6   6 Intel 6   6   6   6 Intel 7   7   6   6   6 Intel 7   7   7   6   6   Intel 6   7   7   7   7   Intel 7   7   7   7   7   Intel 7   7   7   7   7   Intel 7   7   I	AV
BOOmmen Commen C	JCNWM0770GI



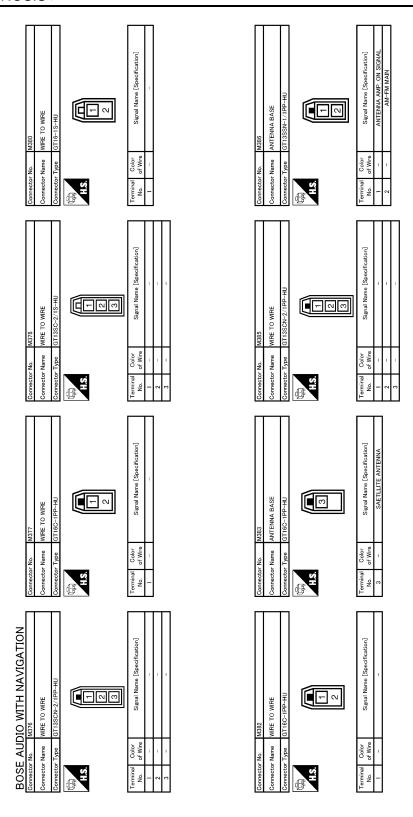
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VEHICLE SPEED (8-PULSE) CONTROL SIGNAL 1 CONTROL SIGNAL 2 NODE CHANGE SIGNAL 3 NO COMM (1) AV COMM (1) AV COMM (1) AV COMM (1) AV COMM (1) CAN-H CAN-H CAN-H	NS8  14 15 16 17 18 10 10  14 15 16 17 18  Signal Name [Specification]  - [With INAVI]  - [With INAVI]	АВ
38 R VEHICA 41 B C C C 42 B C C C C 44 S S B MOI C C C C C C C C C C C C C C C C C C C	Connector No.   MIOS	C
AV CONTROL UNIT (WITH NAVI) TH4GFW-NH TH4GFW-NH TH2GFG F F F F F F F F F F F F F F F F F F	AV CONTROL UNIT (WITH NAVI)  TH32PW-NH  TREATH TO BE T	E
Connector No.   M87	Connector No.   M89	G H
SOUND SIGNAL REAR RH (+) SOUND SIGNAL FARA RH (-) SITIG SW GND STRC SW GND STRC SW B EATTERY GND	SHELD	I
13 BR SOI 15 BR	72 SHELD	К
MED   MITH NAVIGATION	NO CONTROL UNIT (WITH NAV)	M
BOSE AUDIO WITH NAVIGATION	Connector No   M88	AV
	JCNWM0772Gł	Р

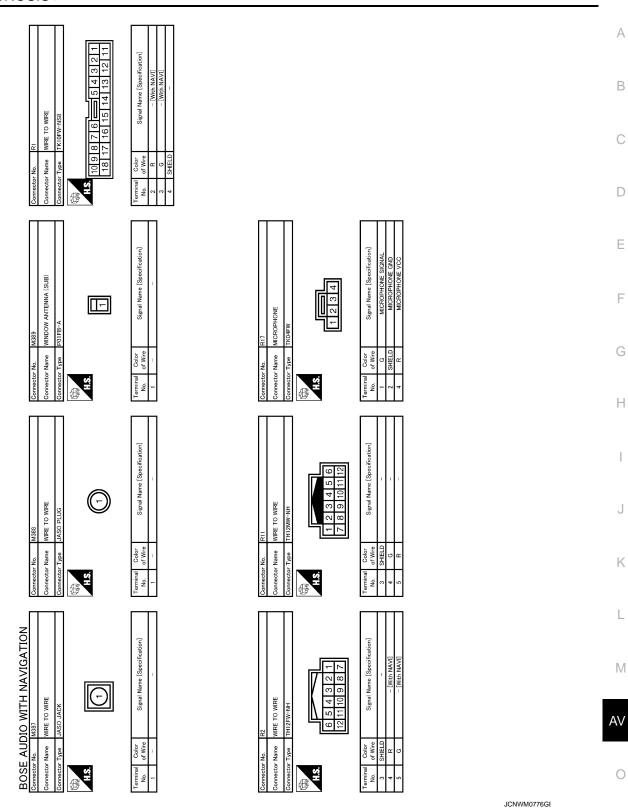


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	bon]		tonl		А
M371 AV CONTROL UNIT (WITH NAV)) GT13SH-2/1S-HU  [10]	Signal Name [Specification] FM SUB AM-FM MAIN ANTENNA AMP. ON SIGNAL	IS-HU	Signal Name [Specification]		В
ПП	O'Color of Wire Si	No. MA375  Name WIRE TO WIRE  Types GT13SC-2./1S-H.	Color Si Wire		С
Connector No. Connector Name Connector Type H.S.	Terminal No. 106 106 107	Connector No. Connector Name Connector Type H.S.	Terminal No.		D
(SPIRAL CABLE)	pecification]		pecification		Е
37 37 15 16 17 18	Signal Name [Specification]	MAST4 WINE TO WINE GT16C-15-HU	Signal Name [Specification]		F
Cornector No. M303 Connector Name COMBI Connector Type TROBF H.S.	Color   Colo	Connector No. M374 Connector Name WIRE Connector Type GT106 H.S.	Terminal Color No. of Wire		G
					Н
JACKS 78	Signal Name [Specification] AUX SOUND SIGNAL, RH (+) AUX SOUND SIGNAL LH (+) AUX SOUND SIGNAL LH (+) AUX INAGE SIGNAL AUX INAGE SIGNAL	r (with navi)	Signal Name (Specification) GPS ANTERNA SHELD		I
MIS4 AUXILIARY INPUT JACKS AOSFW  1233 7		MG73 AV CONTROL UNIT (WITH NAVI) GTS-1S-HU  111			J
Connector No. Connector Type Connector Type H.S.	Terminal Color   No. of Wire   1   B   2   2   W   2   3   R   7   7   G   8   R   R   R   R   R   R   R   R   R	Connector No. Connector Name Connector Type	Terminal   Color   No.   of Wire   110		K
NO STATE OF THE PROPERTY OF TH					L
BOSE AUDIO WITH NAVIGATION Connector Name WIRE TO WIRE Connector Type TH40MW-CS15  Connector Type ST	Signal Name (Specification)	M872 AV CONTROL UNIT (WITH NAVI) FARRA JACK	Signal Name [Specification] SAETILITE ANTENNA		M
MI24 WIRE TO WITE TH40MW-CSIS S   S   S   S   S   S   S   S   S   S					AV
BOSE AU Connector No. Connector Name Connector Type  H.S.   2	Terminal Color   No. of Wire   7   Y   8   LG   CO   CO   CO   CO   CO   CO   CO   C	Connector No. Connector Type	Terminal Color No. 108 - 108 - 108		0
				JCNWM0774Gł	Р



JCNWM0775GI



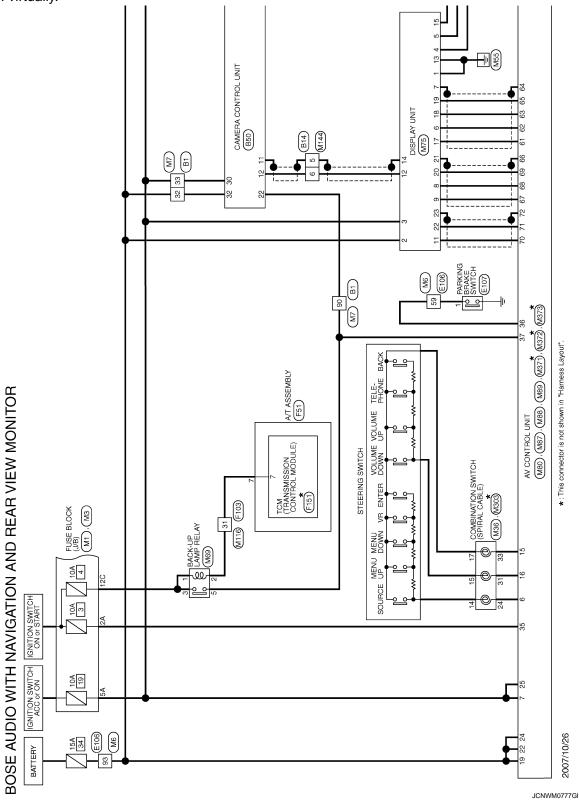
## WITH REAR VIEW MONITOR

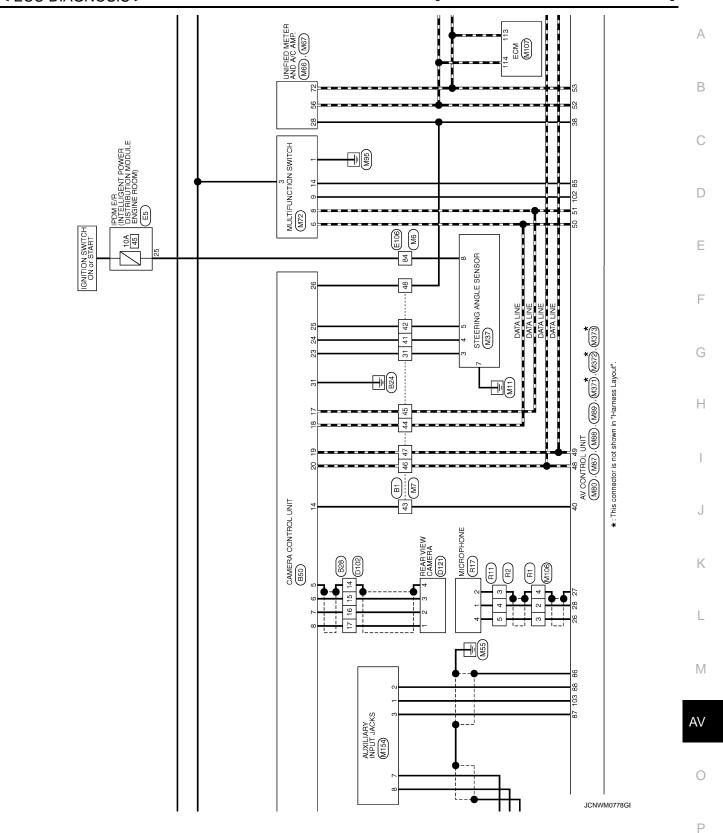
WITH REAR VIEW MONITOR: Wiring Diagram - BOSE AUDIO WITH NAVIGATION AND REAR VIEW MONITOR -

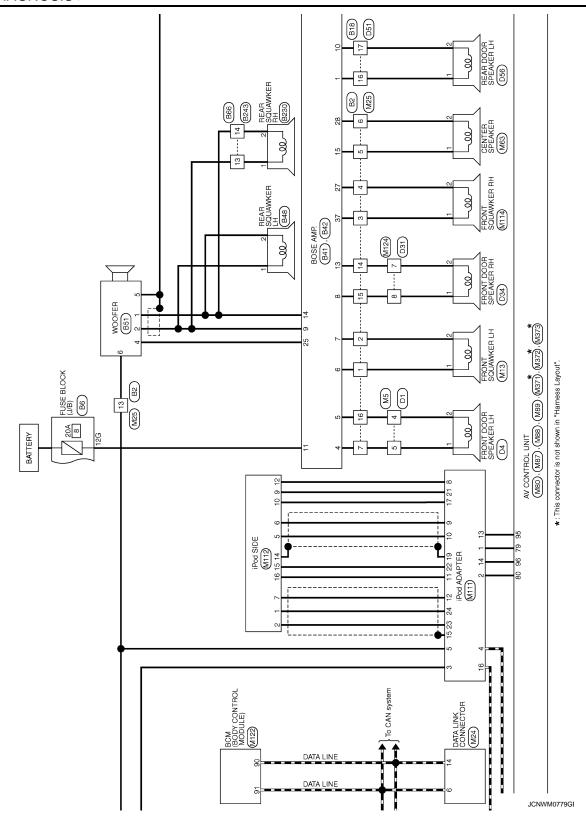
Click here to view the eWD. **NOTE:** 

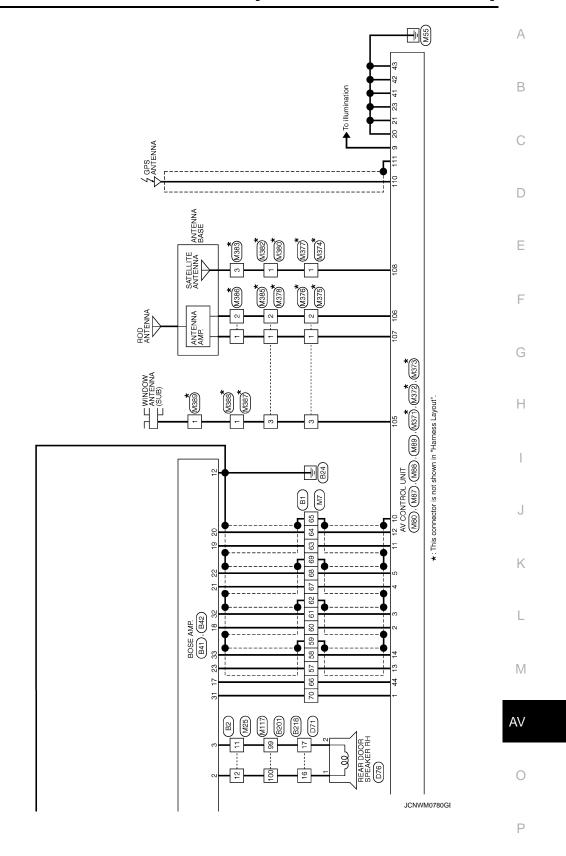
Р

The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.









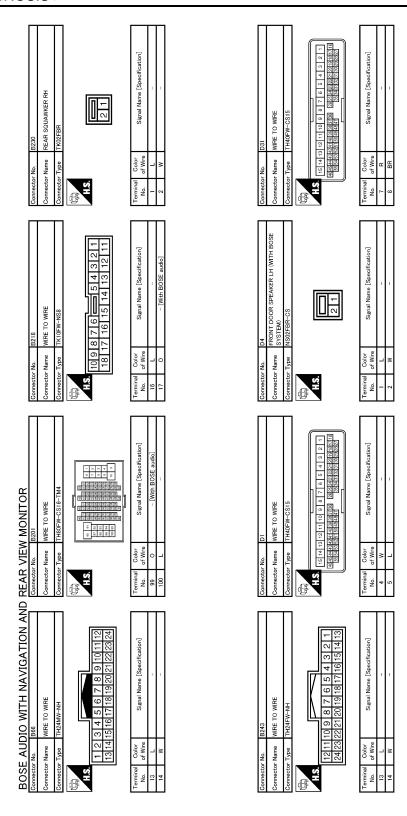
BOSE	AUI	BOSE AUDIO WITH NAVIGATION AND		₹ VIE\	REAR VIEW MONITOR					
Connector No.	. No.	B1	57	BR	1	Connector No.	r No. B2	2	15 LG –	
Connector Name	Name	WIRE TO WIRE	58	> SHE	1 1	Connector Name		WIRE TO WIRE		
Connector Type	Type	TH80FW-CS16-TM4	09	۵	1	Connector Type	1	NS16FW-CS		
			61	_	ı					
F			62	SHIELD	-	修				
Ě			63	۳	ï	E				
		2 2 2	64	9	-		7 6	654 321		
		80 34 85 89 PK 88 89 PK 89 85 89	65	SHIELD	-		9	-		
		90 90 80 877 678 678 678 678 678 678 678 678 678	99	0	-			9 01		
		25 45 25 25 25 25 26 26 26 26 26 26 26 26 26 26 26 26 26 26 26 26 26 26 26	67	۸	-					
			89	SB	-					
Terminal	Color of Wire	Signal Name [Specification]	69	SHELD	1 1	Terminal	Color of Wire	Signal Name [Specification]		
t			96	: 0		-	-			
32	-	1				2	*	1		
33	57	1				ဗ	BR	1		
14	æ	1				4	œ	ı		
45	œ	1				2	В	1		
43	*	1				9	5	1		
44	១	- [Without around view monitor]				7	В	1		
45	>	- [Without around view monitor]				Ξ	>	1		
46	5	- [With base audio or with NAVI]				12	SB	1		
47	ч	- [With base audio or with NAVI]				13	M	1		
48	>	1				14	<b>,</b>	-		
Connector No.	No.	B6	Connector No.	or No.	B14	Connector No.	r No. B18	81	Connector No. B28	
Connector Name	Name	FUSE BLOCK (J/B)	Connect	Connector Name	WIRE TO WIRE	Connector Name		WIRE TO WIRE	Connector Name WIRE TO WIRE	
Connector Type	Type	NS12FBR-CS	Connect	Connector Type	TH12FW-NH	Connector Type	r Type Tk	TK10FW-NS8	Connector Type TH24MW-NH	
€ XX	_	5646 — 362616  1241610696867666	₽ H.S.		6 5 4 3 2 1 121110 9 8 7	ER.	10 9 8 18 17	76 5 4 3 2 1 16 15 14 13 12 11	H.S. 1 2 3 4 5 6 7 8 9 10 111 12 13 14 15 16 17 18 19 20 21 22 23 24	
Terminal No.	Color of Wire	Signal Name [Specification]	Terminal No.	I Color of Wire	Signal Name [Specification]	Terminal No.	Color of Wire	Signal Name [Specification]	Terminal Color Signal Name [Specification]	
Н	æ	-	2	SHIELD	-	16	>	- [With BOSE audio]	Н	
			9	М	-	17	9	- [With BOSE audio]	W	
									16 B - [Without around view monitor]	

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## [BOSE AUDIO WITH NAVIGATION]

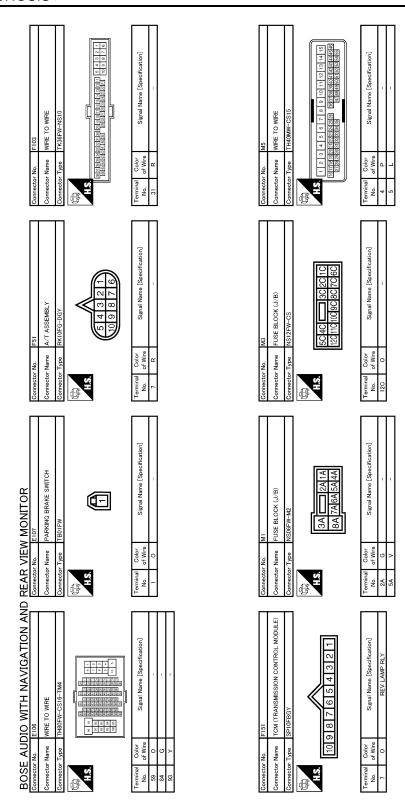
12   B   SOUND SIGNAL INOVERR (-)   14   R   SOUND SIGNAL WOOFER (-)		A B C
Connector No.   B42		E F G
NEAR VIEW MONITOR   32		I J K
Connector Nume   BOSE AMP    Connector Nume   SCA19FER-SGA4	JCNWM0782GI	M AV

Revision: 2007 November AV-733 2008 EX35



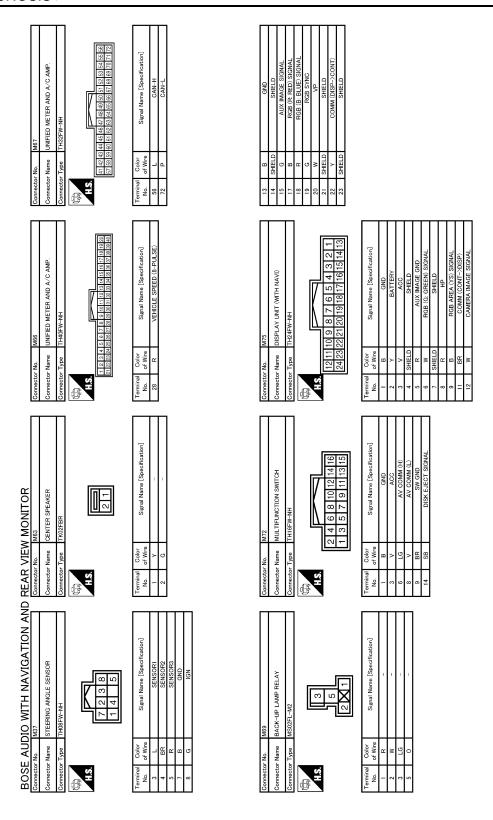
JCNWM0783GE

Connector No.         D71           Connector Name         WIRE TO WIRE           Connector Type         TK10MW-NS8           IT   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   14   15   16   17   18   14   15   16   17   18   18   14   15   16   17   18   18   14   15   16   17   18   18   14   15   16   17   18   18   14   15   16   17   18   18   14   15   16   17   18   18   14   15   16   17   18   18   14   15   16   17   18   18   14   15   16   17   18   18   18   18   18   18   18	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   16	Connector No. E5  Connector Name IPOM E/R (INTELLIGENT POWER  Connector Type ITH20FW-CS12-M4-IV  LS   Connector Type   Connec	Terminal Color No. Gignal Name [Specification] 25 G G -		A B C
Connector No.         D56         Connector Name         PEAR DOOR SPEAKER LH         Connector Type           Connector Type         NSQFBR-CS         Connector Type         Connector Type           H.S.         2.1	Terminal   Color   Signal Name [Specification]   Terminal No. of Wire   Y	Connector No. D121 Connector Name REAR VIEW CAMERA Connector Type TH04MW-NH Connector Type T102 T T T T T T T T T T T T T T T T T T T	Terminal   Color   Signal Name   Specification   Name   Name		E F G
REAR VIEW MONITOR	Terminal   Color   Signal Name [Specification]   No.   Color   Color	Connector No. D102 Connector Type TH24FW-NH  T2 11100 9 8 7 6 5 4 3 2 1  24 23 22 21 20 19 18 17 16 15 14 13	Terminal   Color   Signal Name [Specification]   Odor   Nice   Signal Name [Specification]   14   SHELD   -[Without around view monitor]   15   C   -[Without around view monitor]   17   G   -[Without around view monitor]		J K
BOSE AUDIO WITH NAVIGATION AND Connector Name FRONT DOOR SPEAKER RH (WITH BOSE STORMED NSIZEBR-CS WAS A STATEM NSIZEBR-CS  WAS A STATEM NSIZEBR-CS	Terminal   Golor   Signal Mane [Specification]   1   BR   - 2   R   - 2   R   - 2   R   - 2   R   - 2   R   - 2   R   - 2   R   - 2   R   - 2   R   - 3	Connector No. D76  Connector Name REAR DOON SPEAKER RH Connector Type NSOZFBR-CS  H.S.	Terminal Golor Signal Name [Specification] No. of Wire 2 Y	JCNWM0784Gt	M AV



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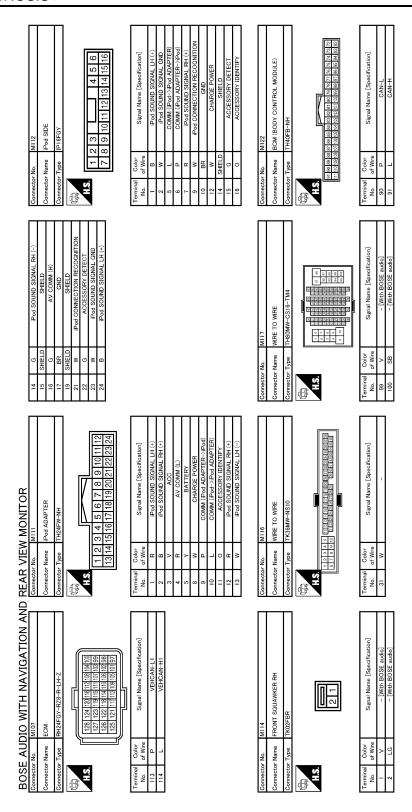
Cornector No. M13 Cornector Name FRONT SOLAWKER LH Cornector Type TK02FBR  Terminal Color Signal Name [Specification]  1 L 2 W	TKOSFCY-IV	A B C
	<u> </u>	E
		F
51   52   53   54   54   54   54   54   54   54		G
	<u> </u>	Н
WITON WIRE TO WIRE THEOMIN-CS16-TMA  THEOMIN-CS16-TMA  Signal Name (Specification)  Signal Name (Specification)  - [With base audio or with NAVI]  - [With base audio or with NAVI]  - [With base audio or with NAVI]	F-CS 11 14 15 16 7 11 12 13 14 15 16 7 1 1 12 13 14 15 16 7 1 1 12 13 14 15 16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	l J
Connector No.   M7   Connector No.   M7   Connector No.   M7   Connector Type   TH8DMM-CS16-TMA   M8E TO WIRE   Connector Type   TH8DMM-CS16-TMA   M8E   Connector Type   TH8DMM-CS16-TMA   M8E   Connector No.   Connector	WINE TO THE TO T	K
		L
BOSE AUDIO WITH NAVIGATION AND Connector No. Mis Connector Name Wife TO WIFE  Connector Type TH80MW-CS16-TM4  Terminal Color Signal Name (Specification)  So V Wre Signal Name (Specification)  So V Wre Signal Name (Specification)  So V Wre Signal Name (Specification)	Name [ 13 14 17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	M
MIG WITH NA MIG TO WIRE TO WIRE TO WIRE STANDING CS.16-TM4 Signal Name Signal Name MA24		V
No Mine WI Vigor V V V V V V V V V V V V V V V V V V V		
Connector No.  Connector No.  Connector Type  (Wire  84  Connector No.  Gonnector No.	Connector Name  Connector Type  Connector Type  Terminal Color  No of Wife  14 P	0
	JCNWM0786GI	
	F	Р



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Second   Signal Name   Specification	A B C
Cornector No.   M87	E F G
REAR VIEW MONITOR   13   14   Y   SOUND SIGNAL REAR RH (+)   14   Y   SOUND SIGNAL REAR RH (+)   15   L   STRG SW GRD   16   L   STRG SW B   STRG SW	J K
BOSE AUDIO WITH NAVIGATION AND Connector No.   M80	AV
	Р

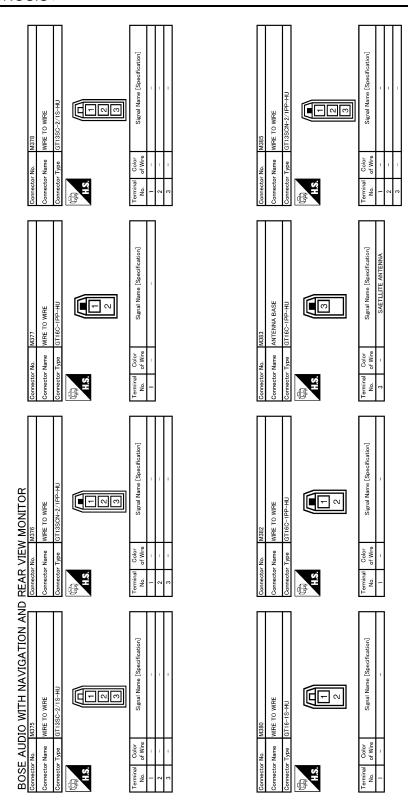
Revision: 2007 November AV-739 2008 EX35



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## [BOSE AUDIO WITH NAVIGATION]

Connector No. M303 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TK08FGY  Connector Type TK08FGY  TX13 14 15 16 17 18 19 20	Terminal   Color   Signal Name [Specification]   No. of Wire	Connector No. M374  Connector Name WIRE TO WIRE  Connector Type GT16C-1S-HU  Terminal Color  No. of Wire  Signal Name [Specification]	A B C
Cornector No.   M154   Cornector No.   M154   Cornector Name   AUXILJARY INPUT JACKS   Cornector Type   A08FW   A08FW	Terminal   Color   Signal Name [Specification]   Terminal   Color   No. of Wire   AUX SOUND SIGNAL ENH (-)   2   W   AUX SOUND SIGNAL CHID   2   R   AUX SOUND SIGNAL LH (-)   7   G   AUX IMAGE SIGNAL   SIGNAL	Connector No. M373 Connector Name AV CONTROL UNIT (WITH NAVI) Connector Type GIT5-1S-HU  H.S. of Wire Signal Name [Specification] Terminal Color Signal Name [Specification] The Shield	E F G
Connector No.   M144	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   5   SHELD   -   -	Connector No. M372 Connector Name AV CONTROL UNIT (WITH NAVI) Connector Type FAKRA JACK  LIOS Terminal Color No. of Wire Signal Name [Specification] 108 - SAETLLITE ANTENNA	J K
BOSE AUDIO WITH NAVIGATION AND Connector No.   M124	Terminal   Color   Signal Name (Specification)   No. of Wire   Y   Y   -	Connector No   M371	AV O
			Р



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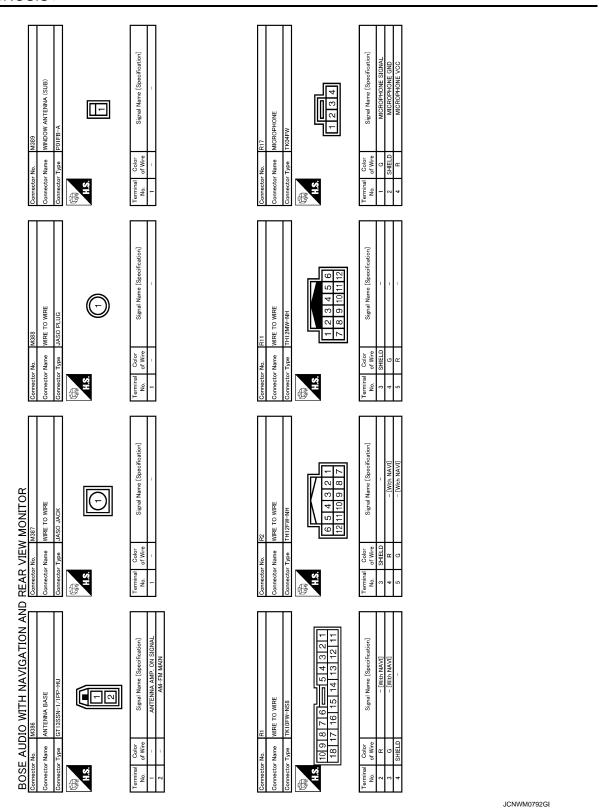
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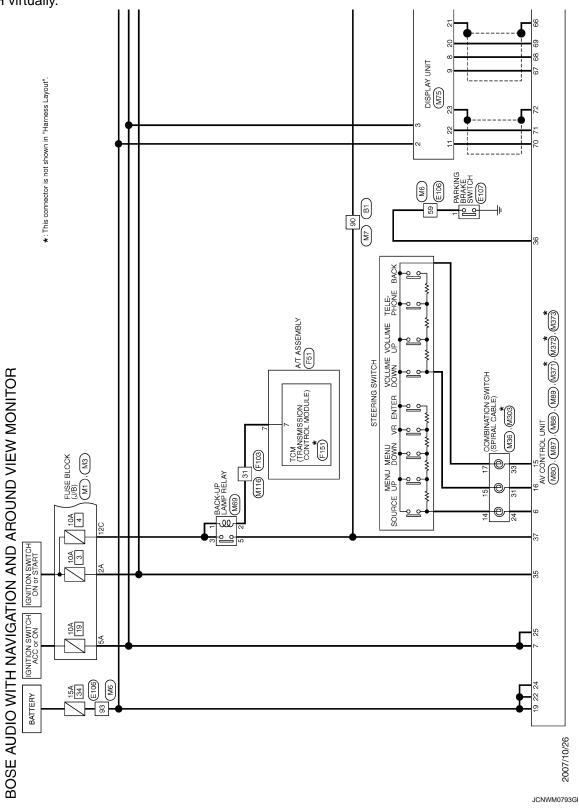


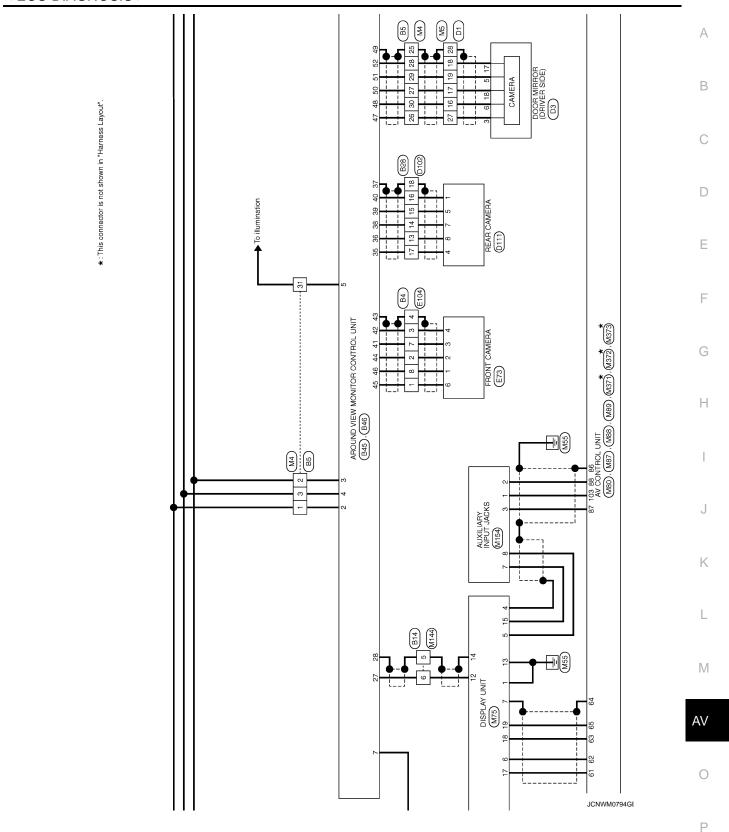
WITH AROUND VIEW MONITOR

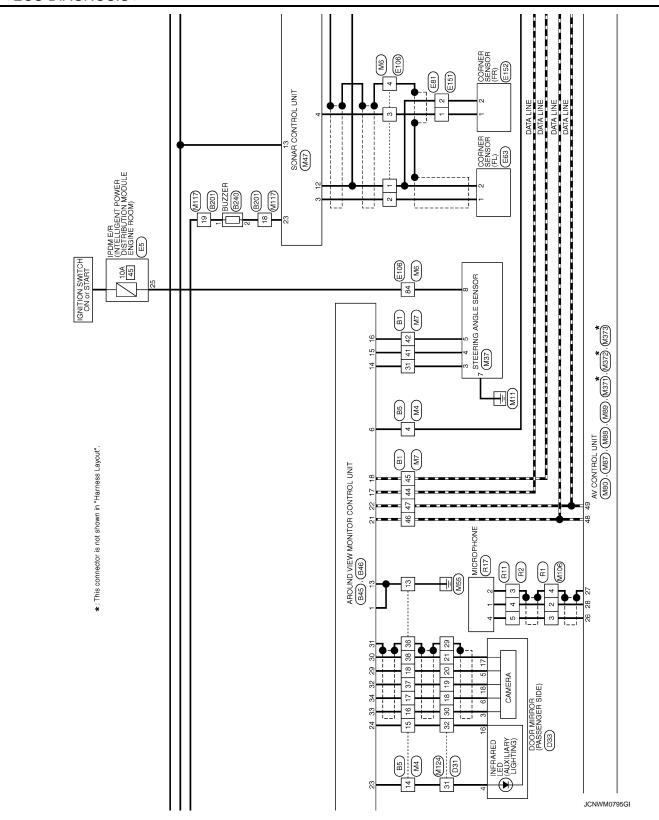
WITH AROUND VIEW MONITOR: Wiring Diagram - BOSE AUDIO WITH NAVIGATION AND AROUND VIEW MONITOR -

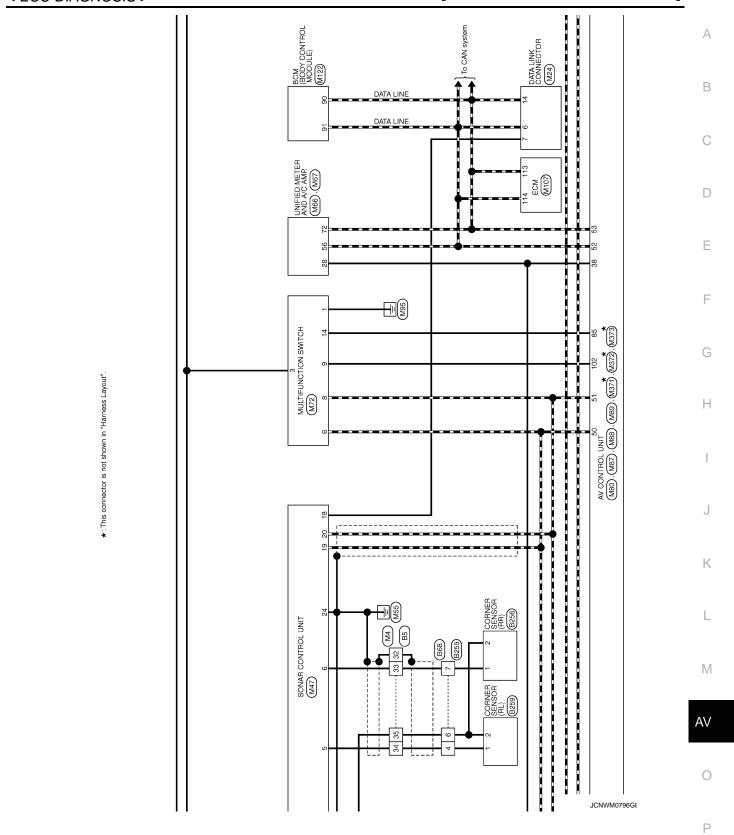
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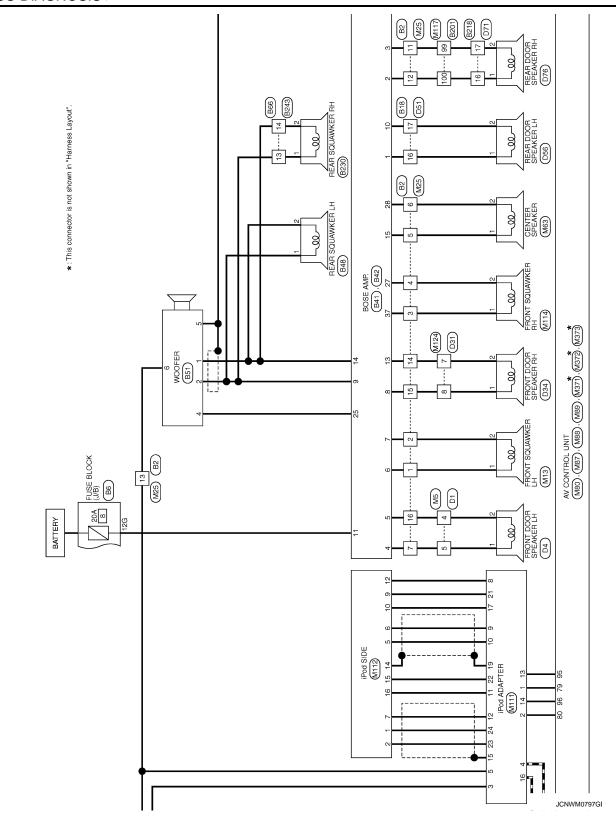
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.











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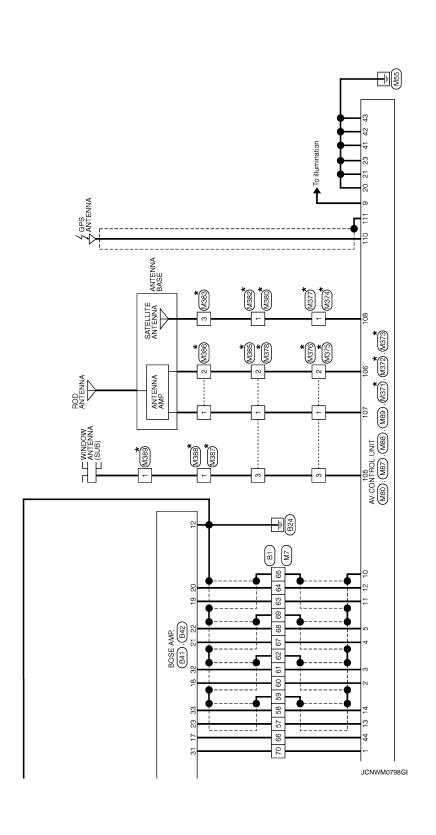
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\*: This connector is not shown in "Harness Layout".



15 LG	Signal Name (Specification)	Connector No.   B6	Terminal   Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]   12G   GR
AROUND VIEW MONITOR   61	Terminal Color   Signal   Color   Co	MRE TO WIRE   26   27   27   28   28   28   29   29   29   29   29	Color Signal Name (Specification) 38 G S S S S S S S S S S S S S S S S S S
D AROUN 61 62 6 63 66 66 66 66 66 66 66 66 66 66 66 66 6		Connector No. Connector Type Connector Type H.S.  1 2 3	Terminal No. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
BOSE AUDIO WITH NAVIGATION AND Connector No. Bit Connector Name WIRE TO WIRE Connector Type TH80FW-CS16-TM4	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Color	Connector Nue WIRE TO WIRE  Connector Type NS.12FW-CS  H.S. 5 4	Terminal   Color   Signal Name [Specification]

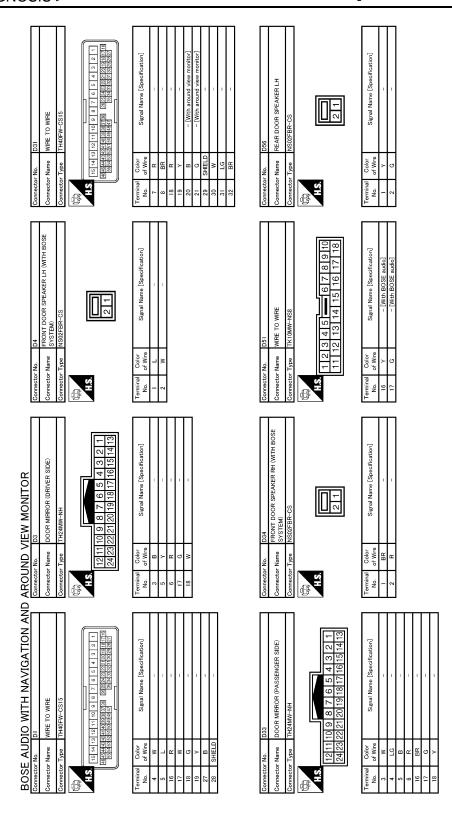
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	ER (-)	А
	GND SIGNAL PROFIT DONS SPEAKER HF (-) SOUND SIGNAL WOOFER (-)	В
	8 A A 8 OOM 8	С
	2 2 2	D
10   11   12   12   23   24   12   22   23   24   24   24   24   24   2	seifcation] R DOOR LH (-) R DOOR RH (-) R DOOR RH (-) RR SEAWER LH (-) ROS SEAWER LH (-) SOLUWER LH (-) SOLUWER RH (-) SOLUWER	Е
TH24MW-NH	10   10   10   10   10   10   10   10	F
No. 17	N	G
Connecto Connecto Connecto Connecto Terminal No. 13 14 14 16 16 16 16 16 16 16 16 16 16 16 16 16		Н
MIRE NISS  NISS  Signal Name [Specification]  - [With BOSE audio]  - [With BOSE audio]	SOUND SIGNAL FRONT H (-) SOUND SIGNAL FRONT H (-) SOUND SIGNAL FRONT SOUAWKER FH (-)	I
IEW MONITO BIS WINE TO WINE TKIOFW-NSS SIGNAL NAME SIGNAL NAME - WINCH E - WINCH E	SOUND SIGNAL FILE SOUND SIGNAL	J
AROUND VIEW MONITOR Connector Name WIRE Connector Type TK10FW-NS8  Connector Type TK10FW-NS8  The Transparent Transparent Terminal Color Signal Name (Spen No. Of Wire No. Of	N N N N N N N N N N N N N N N N N N N	К
	29  28    16  15  16  15  16  15  16  15  16  16  16  16  16  16  16  16  16  16	L
WIRE NH  10 9 8 7  Signal Name [Specification]	S2 31 30	M
DDIO WWRE TO WINE TO WILLIAM TO W	B	AV
BOSE AUD Connector Name Connector Name Connector Type Terminal Color No. of Wire 5 SHIELD 6 W	Connector No.	0
	JCNWM0800Gt	Р

17 G AV COMM (H)	18 Y AV COMM (L)	21 W AV COMM (H)	22 B AV COMM (L)	23 LG LED (+)	9	†	28 SHIELD CAMERA IMAGE GND	. <sub>©</sub>	SHIELD	æ	33 W SIDE CAMERA RH COMM	= -	BR REA	SHIELD	38 R REAR CAMERA GND	39 Y REAR CAMERA IMAGE SIGNAL	40 W REAR CAMERA IMAGE GND					Connector No. B68	Connector Name WIRE TO WIRE	Connector Type RH08MB	H.S.	1 2 3 4 5 6 7 8	Terminal Color Signal Name [Specification]	4 R = [With around view monitor]	. *	
Connector No.   B46	TIMIT TOURISH MONITOR CONTROL		Connector Type TH40FW-NH	¢		H.S.	2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39			Terminal Color Signal Name [Specification]	+	)A	3 P IGNITION	4 GR ACC		6 SB VEHICLE SPEED (8-PULSE)	IJ	m -	15 BR SENSOR SIGNAL 1	æ	Connector No. B66	Connector Name WIRE TO WIRE	Connector Type TH24MW-NH	SH.	1 2 3 4 5 6 7 8 9 1011112 13 14 15 16 17 18 19 20 21 22 23 24	Terminal Color Signal Name [Specification]	13 L -	=	
D AROUND VIEW MONITOR																						Connector No. B51	Connector Name WOOFER	Connector Type RS06FGY-PR	\$H	2 4 6 1 3 5	Terminal Color Signal Name [Specification]	1 R SOUND SIGNAL WOOFER (-)	Н	5 B GND 6 W BATTERY
BOSE AUDIO WITH NAVIGATION AND Connector No. 1845	A POLIND VIEW MONITOR CONTROL		Connector Type TH24FW-NH	d	体约		42 44 46 48 50 52 54 56 58 60 62 64	41 43 45 47 49 51 53 55 57 59 61 63			Terminal Color Signal Name [Specification]	t	. 0	SHIELD	44 B FRONT CAMERA GND	45 W FRONT CAMERA COMM	R FRO	_	BR SIDE CAMER	50 R SIDE CAMERA I H GND	Y SIDE	Connector No. B48	Connector Name REAR SQUAWKER LH	Connector Type TK02FBR	E H.S.		Terminal Color Signal Name [Specification] No. of Wire		=	

JCNWM0801GI

Signal Name [Specification]	SENSOR (RL.)  Signal Name [Specification]	А
-No. 6240 -Name BUZZER -Type RRGZEBR -Opior	Name CORVER  Type YDX02FE  Type of Wire of Wire B  B  B  B  Color  Type B  B  B  B  B  Color  Type B  B  Color  Type B  B  B  B  B  B  B  B  B  B  B  B  B	С
Commetto	Commetton Commetton Commetton Terminal No. 1	D
off-cation)	offication)	Е
PEZIO REAR SOUAWKER RH TKOZEBR  Z 1 Signal Name [Specification]	CORNER SENSOR (RR) YOXOZFB  Signal Name [Specification]	F
Name Type	ector No. ector Name ector Type  inal Color of Wire B B B	G
Connector Connector Terminal No. 1 2	Communication of the state of t	Н
MIRE NISS  NISS  Signal Name [Specification]  - [With BOSE sudio]	WIPE  3 2 1  7 6 5  Signal Name [Specification]	I
TEW MONITC   B218   WIRE TO WIRE   TKI OFW-NSB   R   C   C   E   E   E   E   E   E   E   E		J
AROUND VIE Commetor No. 67 (Commetor Name Will Commetor Type The Transment of Name Terminal Color No. of Wire Is Color I	Connector No. B255 Connector Name WIRE TO Connector Type RH08FB  H.S.  H.S.  H.S.  Ferminal Color No. of Wire  A W  B B  Connector Name  RH08FB  RH08FB  RH08FB	К
X X X X X X X X X X X X X X X X X X X		L
AUDIO WITH NAVIGATION AND los B201 lame WIRE TO WIRE  ype ITH8/DFW-CS16-TM4    The Color		M
Signal Name	1	AV
BOSE AUDI Commettor Name M Connector Type T  Terminal Color 18 18 19 19 19 10 100 100 100 100 100 100 100	Connector No.   B22	0
		JCNWM0802Gf
		Р



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Connector No. D111  Connector Name REAR CAMERA  Connector Type ITH08MN-NH  H.S. 4 3 2 1  8 7 6 5	No.   Signal Name [Specification]     O	Connector No. E81 Connector Name WIFE TO WIRE Connector Type RS02MB	Terminal Color No. of Wree  1 R		A B C
Connector No. 0102 Connector Name WIRE TO WIRE Connector Type TH24FW-NH  Connector Type TH24 TH24FW-NH  Connector Type TH24FW-NH  Connector Type TH24FW-NH  Connector Type TH24FW-NH  Connector Type TH24FW-NH  Connector Name TH2	Terminal   Color   Signal Name [Specification]   Tolor   No. of Wire   13	Connector No.         E73         Connector No.           Connector Type         RH06FB         Connector Type           Connector Type         RH06FB         Connector Type           Connector Type         Connector Type         Connector Type	Terminal   Color   Signal Name (Specification)   Terminal   Color   1		E F G
D AROUND VIEW MONITOR  Connector No. 076  Connector Name REAR DOR SPEAKER RH  Connector Type NS02FBR-CS  H.S.	Terminal Color   No. of Wire   Signal Name [Specification]	Connector No. E63 Connector Name CORNER SENSOR (FL) Connector Type YDX02FB  H.S.	Terminal   Color   Signal Name   Specification		J K
BOSE AUDIO WITH NAVIGATION AND Commetor No.   D71   Commetor Name   WIRE TO WIRE	Terminal   Color   Nic.   Signal Name [Specification]   No.   of Wire   16   L     17   Y	Connector No.   E5	Terminal Color No. of Wire Signal Name [Specification] 25 G	JCNWM0804GI	M AV

Connector No. E151 Connector Name WIRE TO WIRE Connector Type RS02FB	H.S.	Terminal Color of Wire Signal Name [Specification] 1 R R 2 B -	Connector No.   F151   Connector Name   TOM (TRANSMISSION CONTROL MODULE)   Connector Type   SP10FBGY	Terminal   Color   Signal Name [Specification]   No. of Wire   REV LAMP RLY
Connector No. E107 Connector Name PARKING BRAKE SWITCH Connector Type TB01FW	HS.	Terminal Color No. of Wire Signal Name [Specification]	Connector No. F103  Connector Name WIRE TO WIRE  Connector Type TK38FW-NS10  H.S.  H.S.  Exercise TK38FW-NS10  I TK38FW-NS10	Terminal   Color   Signal Name [Specification]
D AROUND VIEW MONITOR Connector No. E106 Connector Name WIRE TO WIRE Connector Type TH80FW-CS16-TM4		Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   2   W   -	Connector No. F31  Connector Name Av7 ASSEMBLY  Connector Type RK10FG-DGY  H.S. 6 4 3 2 1  C 9 8 7 6	Terminal Color   Signal Name [Specification]   7   R
BOSE AUDIO WITH NAVIGATION AND Connector No. E104 Connector Name WIRE TO WIRE Connector Type INSIZMN-CS	H.S. 1 2 3 - 4 5 6 7 8 9 10 11 12	Terminal   Color   Signal Name   Specification   Color   No. of Wire   No.   Color   Color	Connector No. E152 Connector Name CORNER SENSOR (FR.) Connector Type VDXXZFB  H.S.	Terminal   Color   No. of Wire   Signal Name [Specification]

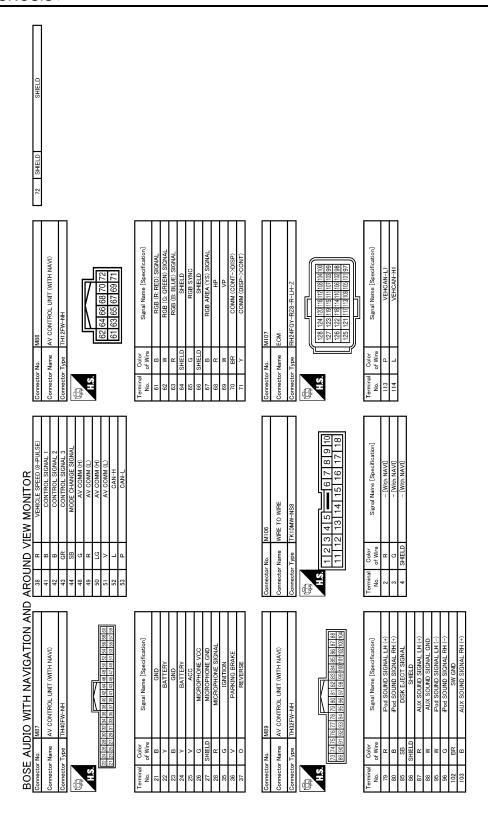
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		АВ
26 W Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	61 L C S SHELD S S S S S S S S S S S S S S S S S S S	C
NH  NH    NH   NH   NH   NH   NH   NH		E
M4   M4   MRE TO WIRE TO WIR	Y   W   Ctor No.   M7   Ctor No.   M7   Ctor No.   M7   Ctor No.   M7   Ctor No.   M8   TH80M   Ctor Type   Th80M   Th80M   Ctor Type   Th80M   Th80	G H
AONITOR CS	WIRE TO WIRE THROMM-CSIG-TM4 T	I J
Connector Name FUSE BLC Connector Name FUSE BLC Connector Type NSTJFW  M.S.  Terminal Color No. of Wire 12C 0	Connector Name   WIRE TO WIRE	К
BOSE AUDIO WITH NAVIGATION AN	VINE	L M
BOSE AUDIO WITH N.     Connector No.   MI     Connector Type   NSO6FV-MZ     Connector Type	Connector No   M5	AV
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		Connector No. M63 Connector Name GENTER SPEAKER Connector Type TK02FBR	Terminal Color No. of Wire Signal Name [Specification]
Connector No. M25 Connector Name WIRE TO WIRE Connector Type NS18NM-CS  H.S. 1 2 3	Terminal Golor   Signal Name [Specification]     No.   Golor   Signal Name [Specification]     1	Connector No. M47  Connector Name SONAR CONTROL UNIT  Connector Type TH24PW-NH  1 2 3 4 5 6 7 8 9 10 111 12  13 14 15 16 17 18 19 20 21 22 23 24	Terminal Color   Signal Name (Specification)     No.
AROUND VIEW MONITOR	Terminal   Color   Signal Name [Specification]   Color   Col	Connector No. M07 Connector Name STEERING ANGLE SENSOR Connector Type TH08FW-NH  H.S. 7 2 3 8 7 7 2 3 8 7 7 2 3 8 7 7 7 2 3 8 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Terminal   Color   Signal Name [Specification]   3   L   Signal Name [Specification]   3   L   Signal Name [Specification]   5   R   SINSOR3   7   B   GND   GND   6   G
BOSE AUDIO WITH NAVIGATION AND Connector No. M13 Connector Name FRONT SOUAWKER LH Connector Type TROZEBR	Terminal Golor   Signal Name [Specification]   1	Connector No. M35 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TKOBF-CV-TV  A.S. 24 25 26 27 31 32 33 34	Terminal   Color   Signal Name [Specification]   24   P   -   -     31   B   -     -

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Cornector No.   M72	С
Connecto Con	D
18   20   18   20   18   20   18   20   18   20   18   20   18   20   20   20   20   20   20   20   2	Е
100   100	F
Name   Name   O'Glory	G
Connector Na   Conn	Н
Signal Name (Specification)	I
NIMITED METER A THRZEW-NH Signal N Signal N COMM	J
Competer No.   M67	K
	L
H NAVIGATI  FER AND A/C AMP.  Build and also begins a series and a ser	M
MATS	AV
Connector Name   Conn	0
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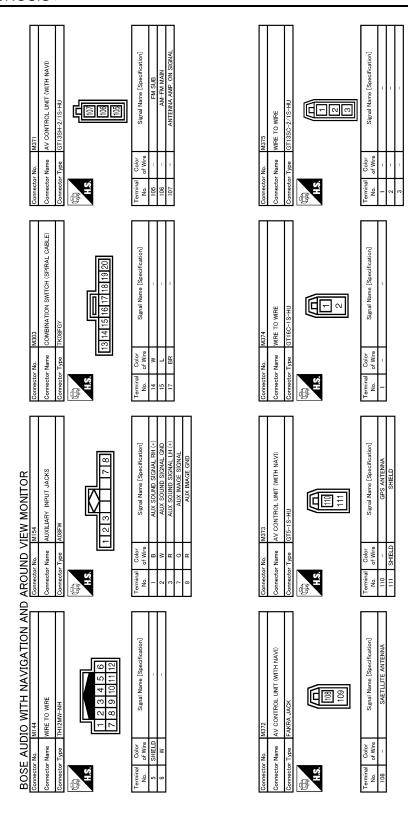


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# [BOSE AUDIO WITH NAVIGATION]

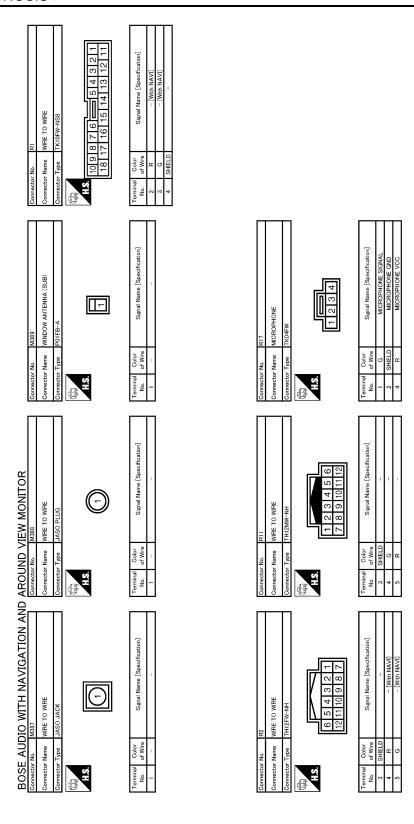
Connector No.   M114	A B C
Connector No.   M12	E F G
AROUND VIEW MONITOR   14   G   Ped SOUND SIGNAL RH (-)	J K
Connector Name   Pod ADAPTER	AV O

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tonj	ion]	А
HU  Z  Signal Name [Specification]	N-1/IPP-HU N-1/IPP-HU Signal Name (Specification) ANTENNA AMP. ON SIGNAL AM-FM MAIN	В
MMRE TO GT16-1S	M386 ANTEN G GT135S	С
Connector No. Connector Type Connector Type H.S. Terminal Color No. of Viir.	Connector No. Connector Name Connector Type Terminal No. of Wire  2	D
offcation)	pifcation]	Е
WIRE TO WIRE GT135C-2/15-HU  TI Signal Name (Specification)	WIRE TO WIRE GT13SCN-2/IPP-HU Signal Name [Specification]	F
an older	Big a land	G
Connector Na. Connector Tyr. Connector Tyr. No. or n. 1.5. 2.2.2.2.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3.	Connector Non Connector Typ Connector Typ Terminal Col No. of W	Н
MONITOR WIRE PP-HU  Signal Name [Specification]	R BASE PP-HU Signal Name [Specification] SAETLITE ANTENNA	1
AROUND VIEW MONITOR Gonnector No. M377 Connector Type GT18C-IPP-HU  ALS  Terminal Color No. of Wire  Terminal Color Terminal Color No. of Wire  Terminal Color Terminal Col	M383 ANTENNA BASE GT16O-IPP-HU Signal Name	J
AROUND VII Connector No. M Connector Type G Connector Typ	Connector No.  Connector Name A Connector Type Government Solor No.  3	К
AND AND THE PROPERTY OF THE PR		L
Connector Name   MIST   Connector Name   Connector Name   Connector Type   GT13SGN-2/IPP-HU   Connec	WIRE PP-HU Signal Name [Specification]	M
M376 WRE TO WIRE GT13SGN-2/1PP-HU Signal Name	M382 WIRE TO	AV
BOSE AUIC Gonnector No. Gonnector Name Gonnector Type  No. of Wife  1 2 2 - 3 3	Connector No. Connector Name Connector Types H.S. H.S. 1 Color No. of Wite	0
		JCNWM0812GI



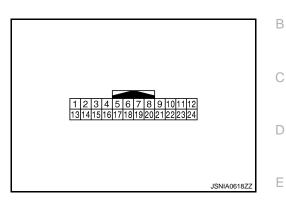
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### [BOSE AUDIO WITH NAVIGATION]

## **IPOD ADAPTER**

Reference Value

**TERMINAL LAYOUT** 



### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
1 (R)	13 (W)	iPod sound signal LH	Output	Ignition switch ON	When iPod mode is selected	(V) 1 0 -1 *** 2ms SKIB3609E	
2 (B)	14 (G)	iPod sound signal RH	Output	Ignition switch ON	When iPod mode is selected	(V) 1 0 -1 + 2ms SKIB3609E	
3 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
4 (R)	_	AV communication signal (L)	Input/ Output	_	_	_	
5 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
8 (W)	Ground	iPod battery charge	Output	Ignition switch ON	Connected to iPod <sup>®</sup>	12.0 V	

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	minal color)	Description			O Pitt	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
9 (P)	Ground	Communication signal (iPod adapter→iPod <sup>®</sup> )	Output	Ignition switch ON	The wave pattern is displayed just after iPod connection.	V) 3 2 1 0  V=2ms  JPNIA0462GB  NOTE:  After the wave pattern display, the value continues Approx 3.3 V
10 (L)	Ground	Communication signal (iPod <sup>®</sup> →iPod adapter)	Input	Ignition switch ON	Connected to iPod <sup>®</sup>	(V) 3 2 1 0 ••2ms JPNIA0462GB
11 (O)	Ground	ACCESSORY-IDENTIFY	_	Ignition switch ON	Connected to iPod <sup>®</sup>	0 V
12 (R)	23 (W)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected	(V) 1 0 -1 + 2ms SKiB3609E
15	_	Shield	_	_	_	_
16 (G)	_	AV communication signal (H)	Input/ Output	_	_	_
17 (BR)	Ground	Ground	_	Ignition switch ON	_	0 V
19	_	Shield	_	_	_	_
21 (W)	Ground	iPod connection recognition signal	Input	Ignition switch	Not connected to iPod®	4.0 V
		uon oignai		ON	Connected to iPod®	0 V
22 (G)	Ground	ACCESSORY-DETECT	_	Ignition switch ON	Connected to iPod <sup>®</sup>	0 V
24 (B)	23 (W)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected	(V) 1 0 -1 *** 2ms SKIB3609E

WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR
WITHOUT REAR VIEW MONITOR AND AROUND VIEW MONITOR: Wiring Diagram

### - BOSE AUDIO WITH NAVIGATION -

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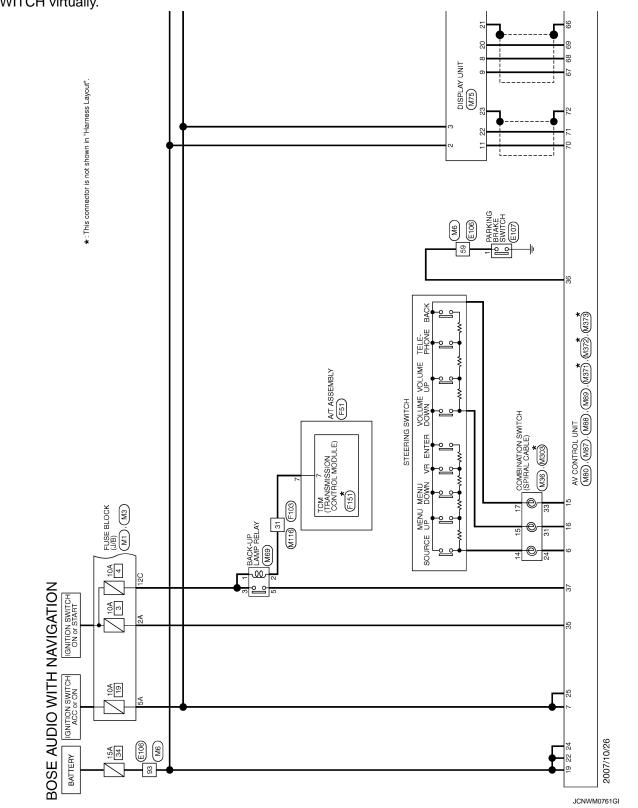
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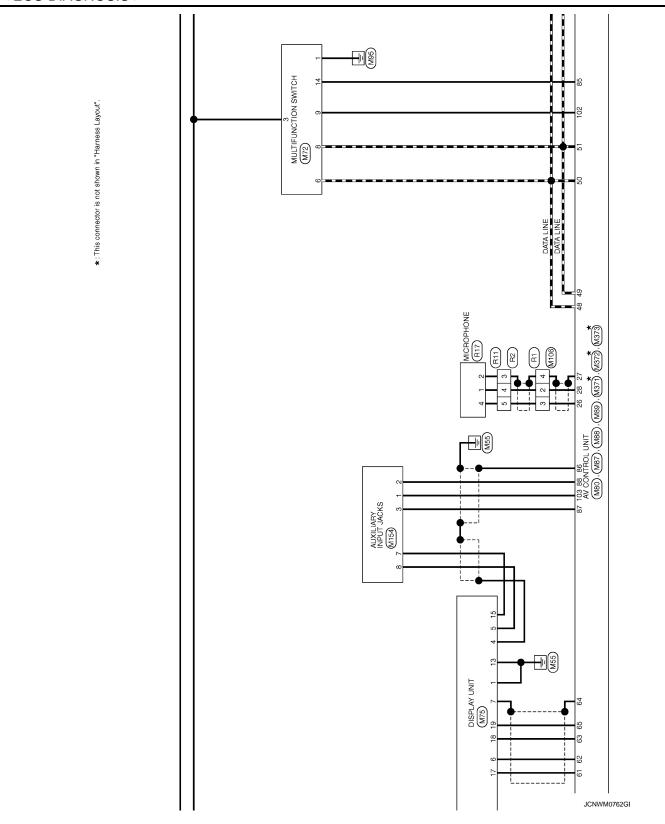
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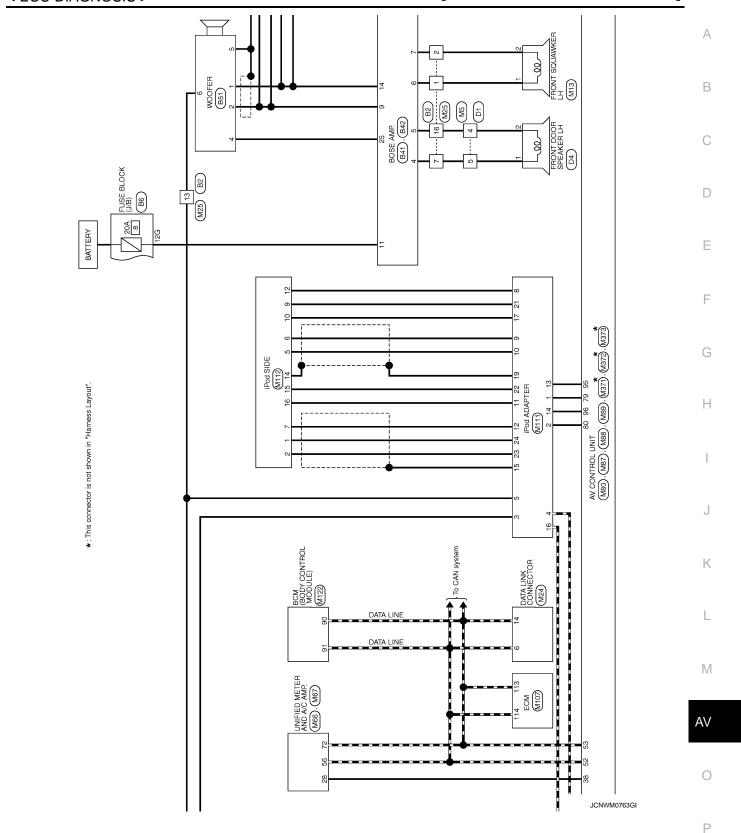
Click here to view the eWD.

#### NOTE:

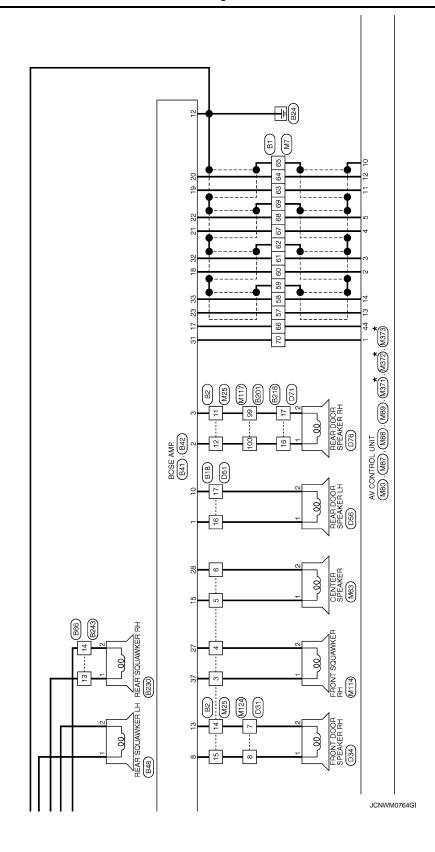
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.



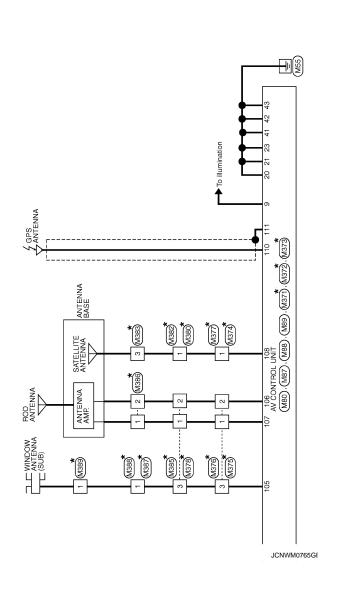




\*: This connector is not shown in "Harness Layout".



★: This connector is not shown in "Harness Layout".



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- d 91		31 W   AMP. ON SIGNAL	
Connector No. B2 Connector Name WIRE TO WIRE Connector Type NSI 16FW-CS  T 6 5 4	Terminal Golor No. of Wire Signal Name [Specification]  1	Connector Name BOSE AMP.  Connector Type SCA19FBR-SGA4  (A) 37 36 25 24 29 22 21 20 19 18 17 16 15	Perminal   Color   Signal Name [Specification]
88 88		Connector No. 818 Connector Name WIRE TO WIRE  Connector Type TK10FW-NSS  MA  10 9 8 7 6 = 5 4 3 2 1  18 17 16 15 14 13 12 11	Terminal   Color   Signal Name [Specification]   No. of Wire   Verter BOSE audio]   17   G   - [With BOSE audio]
BOSE AUDIO WITH NAVIGATION Connector No. Bit Connector Name WIRE TO WIRE Connector Type THROFF-CS16-TM4  M.S. R.	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Signal Name [Specification]   Signal Name   Specification]   Signal Name   Signal	Connector No. BB Connector Type RUCK (J/B) Connector Type NS12FBR-CS  MA  12G11G10G9G8G7G6G	Terminal Color Signal Name [Specification] 12G GR -

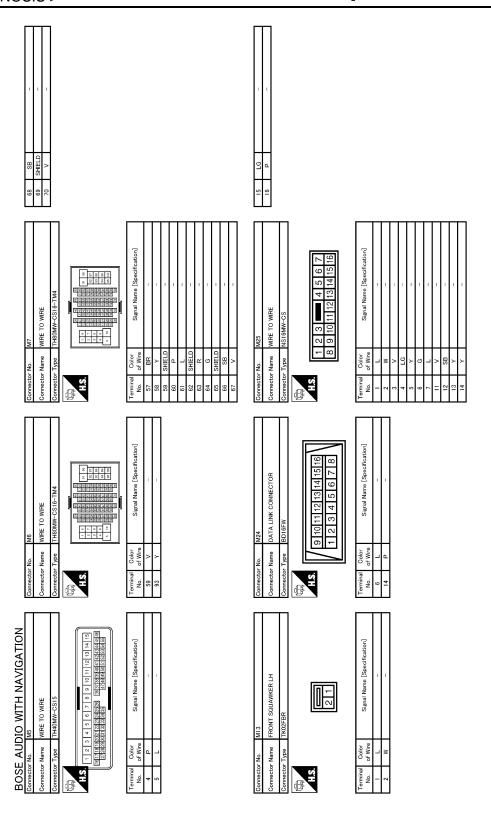
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	Signal Name [Specification] SOUND SIGNAL WOOFER (+) SOUND SIGNAL WOOFER (+) WOOFER AMP. ON SIGNAL BATTERY		Signal Name [Specification]		A B
Connector No. B51 Connector Name WOOFER Connector Type RSUGFGY-PR	C Color of Wire G G R R B B B B	Connector No. B230 Connector Name REAR SQUAWKER RH Connector Type TK02FBR  LLS	of Wine		С
Connector No. Connector Na. Connector Ty.	Terminal No.	Connector No. Connector Typ	Terminal No.		D
	roification]	12 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	audio]		Е
B48 REAR SOUAWKER LH TK02FBR 21	Signal Name [Specification]	WIRE TO WIRE TKIOFW-NSS	Signal Name [Specification]  - [With BOSE audio]		F
ector No. ector Name ector Type	Terminal Color No. of Wire 1 L L 2 W	ector No. BE2   SE4   SE	Terminal Color No. of Wire II Color II		G
Conn	P	Conn			Н
GWD SOUND SIGNAL WOOFER (-) SOUND SIGNAL WOOFER (-)		4 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Signal Name (Specification) - [With BOSE audio]		I
SOUND SIGNAL FR		B201 WHRE TO WIRE TH80PW-CS16-TM4	Signal Na Miles		J
12 E		Connector Name Connector Type H.S.	Terminal Color No. of Wire 99 100 L		K
7			ПП		L
BOSE AUDIO WITH NAVIGATION  Sometor No. B42  Sometor Name BOSE AMP.  SSALPER-SJA2  SSALPER-SJA2  SSALPER-SJA2  SSALPER-SJA2  SSALPER-SJA2  SSALPER-SJA2  SSALPER-SJA2	Signal Name [Specification] SOUND SIGNAL REAR DOOR LH (+) SOUND SIGNAL REAR DOOR BH (+) SOUND SIGNAL REAR DOOR STEAKER H (+) SOUND SIGNAL REAR TOOR STEAKER H (+) SOUND SIGNAL REAR TOOR STEAKER H (+) SOUND SIGNAL REAR DOOR LH (+) SOUND SIGNAL REAR DOOR LH (+) SOUND SIGNAL REAR DOOR LH (+)	HH 6 7 8 9 10 11 12 18 19 20 21 22 23 24	Signal Name (Specification)	_	M
AUDIO WIT No. 642 Name BOSE AMP. Type SGA1ZFBR 1413 12	Color of Wire State of Wire State of Wire State of Wire State of S	MIRE TO W TH24MW-h	Color Sil		AV
Sonnector No. Connector Name Connector Type M.S. H.S.	Terminal O O O O O O O O O O O O O O O O O O O	Connector No. Connector Type HS.	No. 13		0
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					P

Connector No. D31 Connector Name WRE TO WRE	1 c s	Terminal   Color   Signal Name [Specification]   7   R   -	Connector No. D71 Connector Name WIRE TO WIRE Connector Type TKIOWW-NSS    1 2 3 4 5	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   17
Connector No. D4 Connector Name FROT DOOR SPEAKER LH (WITH BOSE	Connector Type NSOZFBR-CS H.S.	Terminal   Color   Signal Name [Specification]	Connector No. DS6 Connector Name REAR DOOR SPEAKER LH Connector Type NSGZEBR-CS H3.	Terminal Color Signal Name (Specification) No. of Wire 1 Vr
Connector No. D1 Connector Name WIRE TO WIRE		Terminal   Color   No.   Signal Name [Specification]   4   W   -	Connector No. D51 Connector Name WIRE TO WIRE Connector Type TK10MW-NS8  H.S. T   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   10   11   12   13   14   15   16   17   18   10   11   12   13   14   15   16   17   18   10   11   12   13   14   15   16   17   18   10   10   10   10   10   10   10	Terminal   Color   Signal Name   Specification   No. of Wire   Y   - (With BOSE audio)   17   - (With BOSE audio)   17   - (With BOSE audio)   19   - (Wit
BOSE AUDIO WITH NAVIGATION Connector No. B243 Connector Name WIRE TO WIRE		Terminal   Color   Signal Name [Specification]   Color   13   L   -	Connector No. D34 Connector Name SPSTEM PROVIDED SPEAKER RH (WITH BOSE STORMED Type NS/STEM) Connector Type NS/STEM)  LAS	Terminal Color   No. of Wire   Signal Name (Specification)   1 BR   - 2   DR             -   -

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EMBLY DGY 4 3 2 1 9 8 7 6 Signal Name [Specification]	COK (J/B) -CS	АВ
Connector No.   F51	Cornector No.   M3	C
H Pecification]	14 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	E
E107 PARKING BRAKE SWITCH TEDIFW Signal Name [Specification]	NSOFW-M2 Sigral Name [Specification]	F
Connector No.  Connector Name  Connector Type  Connector Type	Connector Nun Connector Nun Connector Type If H.S. H.S.  Terminal Color No of Wire 2A of SA V	G H
[Specification]	SONTROL MODULE)  3 2 1  Securification)  AP RLY	I
WIRE TO WIRE THBOFW-CSIG-TM4  I HBOFW-CSIG-TM4  I H H H H H H H H H H H H H H H H H H	F151 TCM (TRANSMISSION CONTROL MODULE) SPIGEGY  Signal Name [Specification] REV LAMP RLY	J
Connector No.  Connector Name  Connector Type  Connector Type	Connector No. FI Connector Type ST Connector Type ST Connector Type Of Terminal Color No. of Wire 7 0	K
SATION offcation]	offeation)	L
DIO WITH NAVIGATIC DIS BEAR DOR SPEAKER RH NSQZEBR-CS  Signal Nume [Specification]	WRE TO WIRE TKSBFW-NS10 SETTS STATE	AV
BOSE AUDIO WITH NAVIGATION Connector No. D16 Connector Name REAR DOOR SPEAKER RH Connector Type INSQFBR-CS  Terminal Color No. of Wire  I L  I L  I L	Connector No.  Connector Name WIRE Connector Type ITA38  A.S.  Connector Type Order  Connector Type Order  Transite Order  No. of Wire  St.  R.  St.  St.  St.  St.  St.  St.	0
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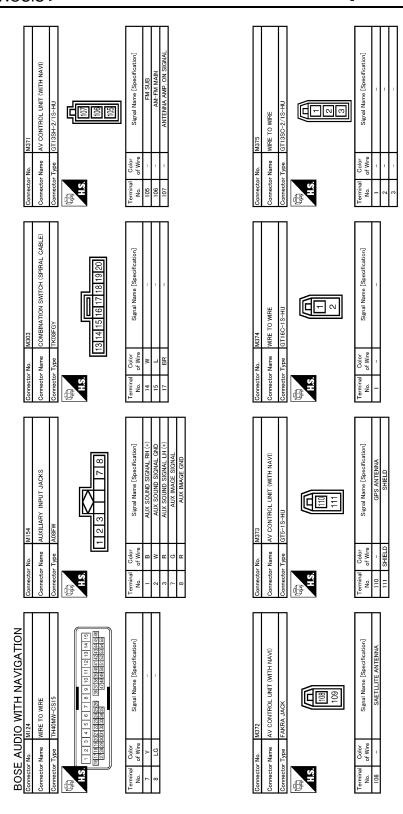
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2	ation]	NAT.		Α
M67  UNIFIED METER AND A.C. AMP  TH32PW-NH  14 45 46 47 46 49 50 51 25 55 60 61 58 66 77 68 69 77 68 77 6	Signal Name (Specification) CAN-H CAN-L	AUX IMAGE SIGNAL RGB (R RED) SIGNAL RGB (B EUE) SIGNAL RGB SWIC VP SHELD COMM DISSES—CONT) SHELD HELD HELD RGB SWICH SHELD HELD HELD HELD HELD HELD HELD HELD		В
59 63	of Wire	S G G G S S S S S S S S S S S S S S S S		С
Connector No. Connector Type H.S. H.S. Err Egr	Terminal No. 56 72	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		D
5 AMP. 15 16 17 16 19 20 15 18 37 18 18 20	oeification] (8-PULSE)	AVI)  16 13 2 1 1 16 15 14 13 2 1 1 16 15 14 13 2 1 1 16 15 14 13 3 2 1 1 16 15 14 13 3 2 1 1 1 16 15 14 13 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Е
r No. M66  r Name UNIFIED METER AND A/C AMP.  r Type TH40FW-NH  1 2 3 4 5 6 7 18 9 10 11 12 13 14 18 16 17 18 19 10 11 12 13 14 18 16 17 18 19 10 11 12 13 14 18 18 18 18 18 18 18 18 18 18 18 18 18	Signal Name (Specification) VEHICLE SPEED (8-PULSE)	3 (graf Name E Signal Name E S		F
Corrector No. M66 Corrector Name UNIFICATIONS CORRECTOR TH40  1.2. 1 2 3 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	odor of Wire R	Note   State		G
Connector Nar Connector Tyr H.S.	No. 28	Connector No. Connector No. Connector No. Connector Type 124		Н
	Signal Name [Specification]	NOTION SWITCH  NH    NH   NH   NH   NH   NH   NH   N		I
MRS CENTER SPEAKER TKOZFBR	Signal Name	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		J
Connector No. M. Connector Name C. Connector Type TI	Terminal Color No. 1 of Wire 2 C C	Connector No. M  Connector Name   M  Connector Type   T  Terminal   Color   N  No. of Wire   N  1		K
				L
BOSE AUDIO WITH NAVIGATION Connector No. M36 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TKUBFGY-1V  A.S. 24 25 26 27  31 32 33 34	Signal Name (Specification)	M2 M2 Signal Name (Specification)		M
<u>₽</u> □ □		BACK-UI MS0ZFL-		ΑV
Connector Name Connector Type Man	Color   Colo	Commettor No. Commettor Name Committed Type  Terminal Color 1		0
		<u> </u>	JCNWM0771Gŧ	Р

1		Connector No. MID6  Connector Name WIRE TO WIRE  Connector Type TKTIOMW-NS6  MA  1 2 3 4 5 6 7 8 9 10  11 12 13 14 15 16 17 18	Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   2   R
Connector No. M87 Connector Type TH40PW-NH  MS PROBLEM OF TH40PW-NH  TH40PW-NH  TH5  TH5  TH5  TH5  TH5  TH5  TH5  T	Terminal   Color   Signal Name [Specification]     21	Connector No. M89  Connector Type AV CONTROL UNIT (WITH NAVI)  Connector Type TH32FW-NH  H.S. 72 74 75 76 77 78 79 60 51 62 63 61 63 66 77 88  88 90 91 92 63 94 65 69 97 88 99 (00)(01)(128 128)	Terminal   Golor   Signal Name [Specification]   No. of Wire   Ped SOUND SIGNAL LH (+)   80   B   Ped SOUND SIGNAL LH (+)   81   82   B   Ped SOUND SIGNAL LH (+)   82   83   B   Ped SOUND SIGNAL LH (+)   81   R   AUX SOUND SIGNAL LH (+)   82   W   AUX SOUND SIGNAL LH (-)   96   G   Ped SOUND SIGNAL LH (-)   96   G   Ped SOUND SIGNAL LH (-)   96   G   Ped SOUND SIGNAL RH (-)   102   BR   SW GND   103   RH (+)   104   RH (+)   105   RH (
13   BR   SOUND SIGNAL REAR RH (+)     14   Y   SOUND SIGNAL REAR RH (-)     15   B   STRG SW GND     16   L   STRG SW GND     19   Y   BATTERY     20   B   GND     30   GND     40   GND     50   GN		72 SHIELD SHIELD	
Connector No. M80 Connector Name AV CONTROL UNIT (WITH NAV) Connector Type THISPW-CS2  MS  19 10 11 12 3 4 5 6 7 8 9 20  19 10 11 12 13 14 15 16 17 18 20	Signal Name [Specification]  AMP: ON SIGNAL SOUND SIGNAL FRONT LH (+) SOUND SIGNAL FRONT LH (+) SOUND SIGNAL FRAR LH (+) SOUND SIGNAL REAR LH (+) SOUND SIGNAL REAR LH (+) STRG SWA ACC LLUMINATION SHELD SOUND SIGNAL FRONT RH (+) SOUND SIGNAL FRONT RH (+)	M88 AV CONTROL UNIT (WITH NAV)) THI2FW-NH  62 64 66 68 70 72 61 63 65 67 69 71	Signal Name [Specification] RGB (G. GREEN) SIGNAL RGB (B. BLLE) SIGNAL SHIELD RGB SYNC SHIELD RGB SARC SHIELD RGB SARC WP COMM (CONTDISP)
	Solor Wire Nire Nire Nire Nire Nire Nire Nire N		of Wire B W W R R R R R B B B B B B B B B B B B
Connector Name Connector Type H.S. H.S.	Color   Color	Connector No. Connector Name Connector Type	Company   Comp

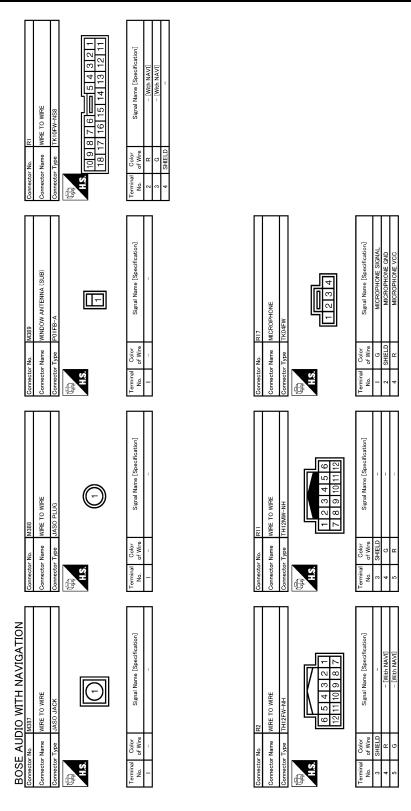
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(a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	
In Name [Specifical CAN-LI CAN	
N	
Connector No.   Connector Name   Connector Type   Connector Type   Connector No.   Connector	
E (-)	
Pod SOUND SIGNAL RH (+)  A SHIELD  BHIELD  SHIELD  SHI	
WWRE 17	
14   G   15   SHELD   19   SH	
1   2   3   4   5   6   7   8   9   10   11   12   13   4   5   6   7   8   9   10   11   12   13   4   5   6   7   8   9   10   11   12   13   4   5   6   7   8   9   10   11   12   13   4   5   6   7   8   9   10   11   12   13   4   5   6   7   8   9   10   11   12   13   4   5   6   7   8   9   10   11   12   13   4   5   6   7   8   9   10   11   12   13   2   2   2   2   2   2   2   2   2	
No.   MIII	
Connector No.   Connector Type   Connector Type   Connector Type   Connector Type   Connector Type   Connector No.   Connect	
ATION (ioin)	
FRZ8-R-LH-Z  FRZ8-R-RH-Z  FRZ8-RH-Z  FRZ	
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MRE TO GT16-1S	M 886 e AVTENN o G T13SS	С
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officention)	ifeaton]	Е
WRE TO WIRE GT13SC-2/1S-HU  TISSC-2/1S-HU Signal Name (Specification)	WIRE TO WIRE GTI3SCN-2/IFP-HU  Signal Name [Specification]	F
2 5	ا في م	G
Connector No. Connector Type  Connector Type  H.S.  H.S.  1 2	Connector Nam Connector Type  Terminal Col No. of Col No. of Col Solution  Terminal Col Solut	Н
WIRE PP-HU  Signal Name (Specification)	PP-HU  Signal Name [Specification]  SAETLLITE ANTENNA	1
WIRE TO WIRE GTT6C-IPP-HU  Signal Name	ANTENNA BASE GTIGC-IPP-HU Signal Name	J
Connector No. M. Connector Name W. Connector Type G. H.S. H.S. No. of Wire	Connector No. M. Connector Name Al Connector Type G. Connector Type G. Connector Type G. Color No. Of Wire 3. Colo	К
		L
BOSE AUDIO WITH NAVIGATION Connector No. M376 Connector Name WIRE TO WIRE Connector Type GT13SCN-2/IPP-HU  M. Of Vire Signal Name [Specification]  Terminal Color No. of Vire Signal Name [Specification]  2	WIRE PP-HU  Signal Name [Specification]	M
M376 WIRE TO WIRE GT13SCN-2/1PP-HU  Signal Name	MRE TO GT16C-1	AV
BOSE AUI Connector Na Connector Name Connector Type Aux Connector Type Connector	Connector No. Connector Name Connector Type H.S. H.S. I enrical Oolor No. of Wire I	0
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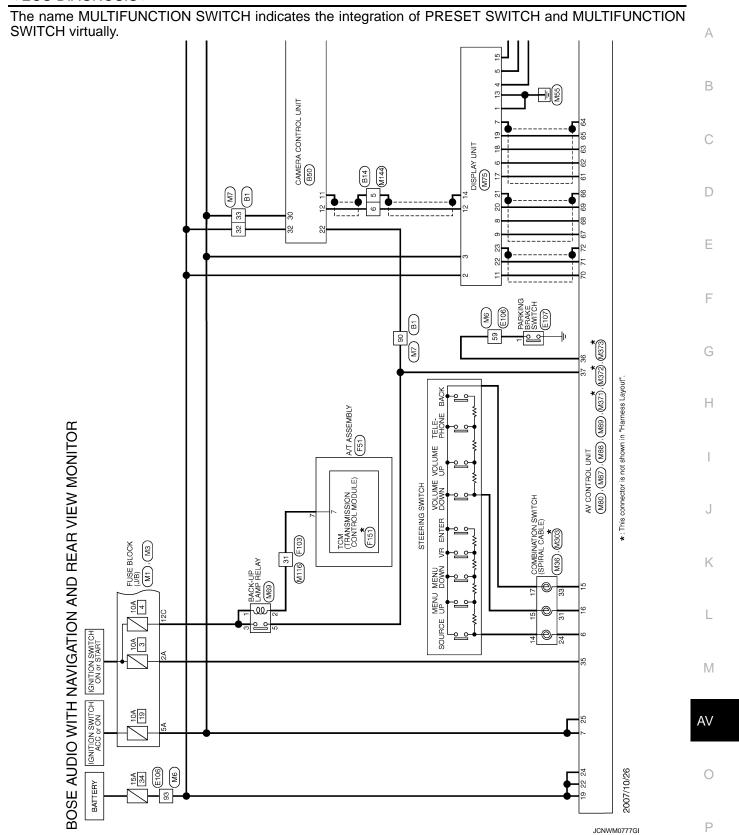


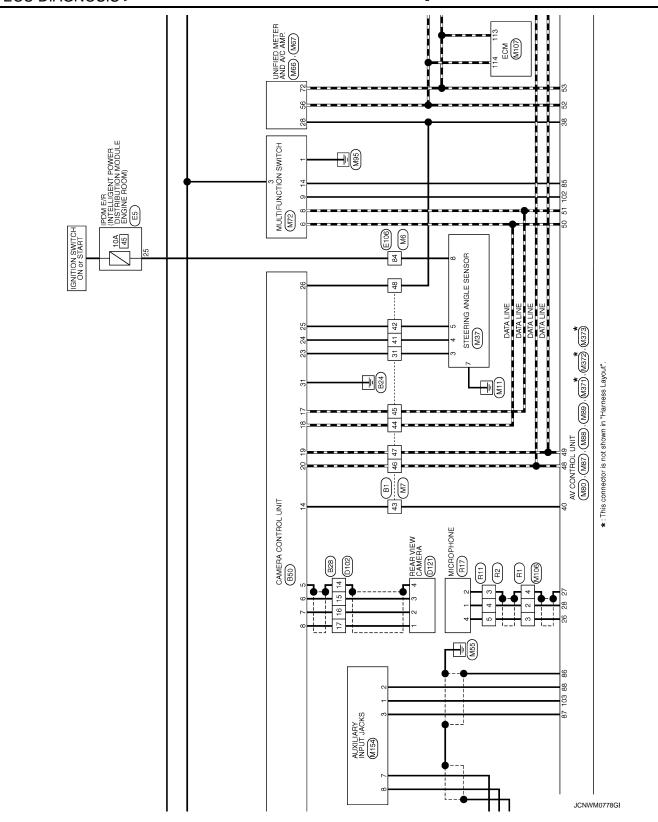
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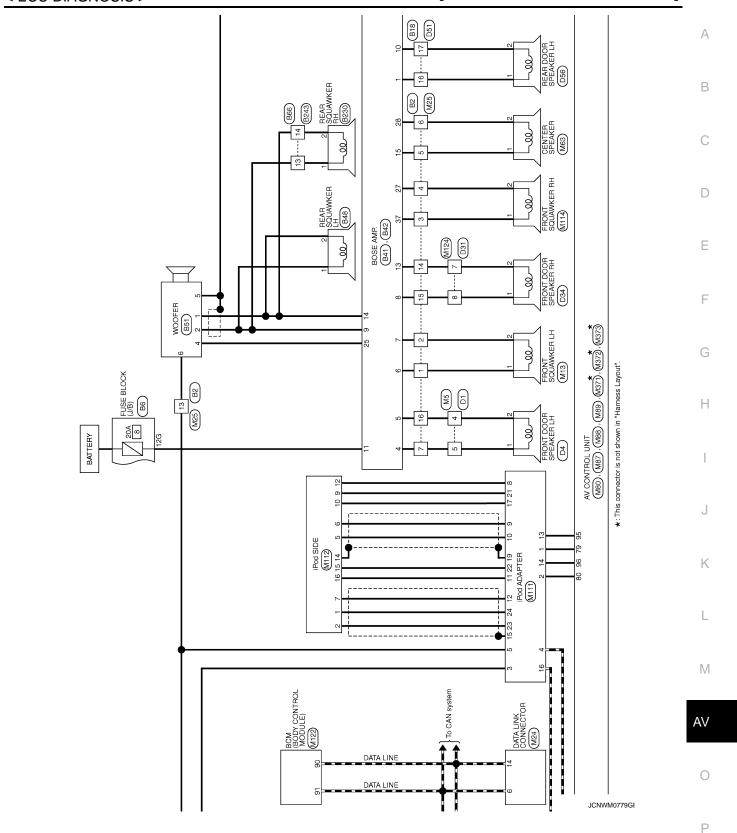
# WITH REAR VIEW MONITOR

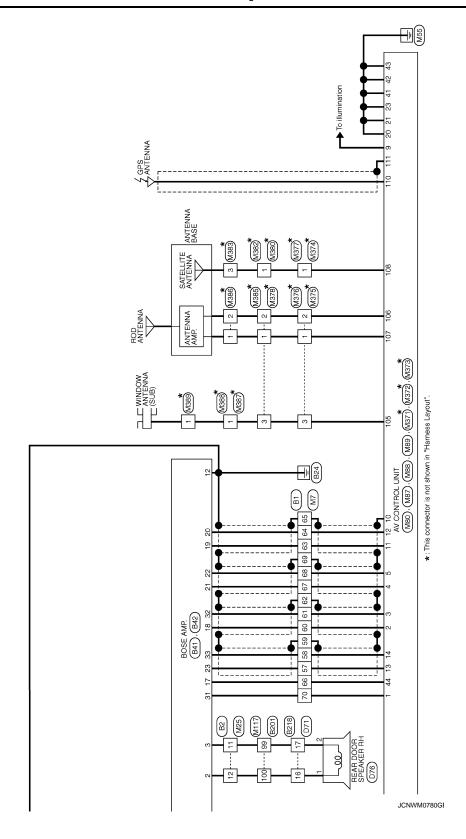
WITH REAR VIEW MONITOR : Wiring Diagram - BOSE AUDIO WITH NAVIGATION AND REAR VIEW MONITOR -

Click here to view the eWD. **NOTE:** 









D7 91	Commetor No. 828 Commetor Name WIRE TO WIRE  M.S. 1712 A 5 6 7 8 9 10 11 12  13 14 15 16 17 18 19 20 12 23 24	Terminal   Color   Signal Name [Specification]   14   SHELD   - [Without around view monitor]   15   W		A B C
Connector No.   B2   Connector Name   WIRE TO WIRE   Connector Type   NS16FW-CS	Connector No. B18 Connector Name WIRE TO WIRE Connector TY(10FW-NS8  WAR TO B 7 6 5 4 3 2 1  18 17 16 15 14 13 12 11	Color   Signal Name (Specification)   No. of Wire   Signal Name (Specification)   16   Y   - [With BOSE audio]   17   G   - [With BOSE audio]		E F G
REAR VIEW MONITOR  57 BR 58 Y 60 P 61 L 62 SHELD 63 SHELD 64 C 65 SHELD 67 V 68 SB 70 V 69 SHELD 70 W 70 W 70 W 70 W	Connector No. B14 Connector Name WIRE TO WIRE  M.S. 6 5 4 3 2 1 12 11 110 9 8 7	Terminal   Color   Signal Mame [Specification]   Color   Signal Mame [Specification]   S   SHELD   -   -   -		I J
Connector No.   Bit   Connector No.   Bit   Connector No.   Bit   Connector Type   TH80FW-CS16-TM4	Connector No. B6 Connector Name FUSE BLOCK (J/B) Connector Type NS12FBR-CS  H.S  5646 362616	Terminal Calor No. of Wire 12G GR	JCNWM0781Gł	L M AV
				Р

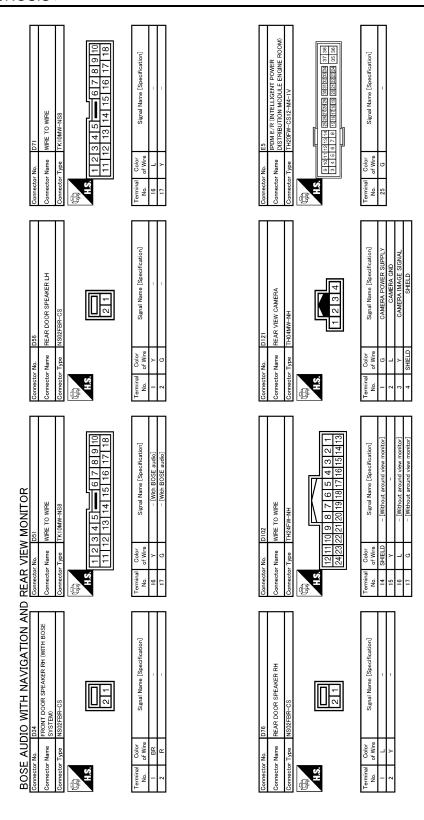
Revision: 2007 November AV-787 2008 EX35

12 B GND 13 Y SOUND SIGNAL PROFIT DOOR SPEAKER RH (-) 14 R SOUND SIGNAL WOOFER (-)	att (+) 3 RH (+) 3 RH (+) 4 RH (-) 5 RH (-) 6 RH (-) 6 RH (-) 7 RH (-) 7 RH (-) 8 RH	Connector No.   BS1   Connector Name   WOOFER   Connector Type   RS00FCY-PR	Terminal   Color   Signal Name [Specification]   1 R   SOUND SIGNAL WOOFER (-)   2 G   SOUND SIGNAL WOOFER (-)   4 GR   WOOFER AMP. ON SIGNAL   6 W   BATTERY
Connector No. B42. Connector Name BOSE AMP. Connector Type SGA12FBR-SJA2. H.S. 1413 12 11 10 10	Terminal   Color   Signal Name [Specification]     N	22         0         REVERSE           23         L         SENSOR SIGNAL 1           24         BR         SENSOR SIGNAL 2           25         R         SENSOR SIGNAL 2           26         R         VENDER SPEED 6PULSE)           30         LG         ACC           31         B         GND           32         L         BATTERY	
REAR VIEW MONITOR  31 W AMP ON SIGNAL  32 L SOUND SIGNAL REAR HE (-)  33 Y SOUND SIGNAL REAR HE (-)  37 BR SOUND SIGNAL FRONT SQUAMKER RH (-)		Connector No. 850 Connector Name CAMERA CONTROL UNIT Connector Type TH32PW-NN  H.S.	Celor   Signal Name [Specification]   Celor   No. of Wire   Signal Name [Specification]   Signal Name [Stecification]   Signal Name   Stecification]   Signal Name   Stecification   Stecifi
BOSE AUDIO WITH NAVIGATION AND Connector No.   841   Connector Type   SCA19FBR-SGA4   Connector Type   Connector Type   SCA19FBR-SGA4   Connector Type   Connecto	Color   Signal Name [Specification]	Connector No. B48 Connector Name REAR SOUAWKER LH Connector Type TK02FBR  H.S.	Terminal   Color   Signal Name   Specification

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UAWKER RH		5 4 3 2 1 3 2 1 3 2 1 3 2 1 3 3 2 1 3 3 3 3	Signal Name [Specification]		A B
BE230 REAR SQ TK02FBR	tor No. D31  Ctor Name WIRE TO WIRE  Ctor Type TH40FW-GS15	22 51 50 49 48	Cydor Signal Name [		С
Connector No. Connector Type Connector Type H.S. Terminal Color No.		HIS	No.   No.		D
3 2 1 12 11 12 11	audio]		oifration		Е
No	D4 FFOWT DOOR SPEAKER LH (WITH BOSE 8YSTEM) SYSTEM)	21	Signal Name (Specification)		F
		H.S.	No. C. W. W. W. W. W. C.		G
Common Term		<b></b>	<u> </u>		Н
WIRE CSIG-TM4 CSIG-TM4 Signal Name (Specification)	[With BOSE audio]		Signal Name (Specification)		
MONITOR B201 WRE TO WIRE THBGFW-CS IG-TM4	DI WIRE TO WIRE TH40FW-CSI5	15 14 15 12 11 11 10 9 8 7 6 5 4 3 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Signal Na		J
VIEW No. Name Type		15 14 13 4 13 4 13 4 13 14 13 14 13 14 13 14 13 14 14 15 14 14 15 14 14 15 14 14 15 14 14 15 14 14 15 14 14 15 14 14 15 14 14 15 14 14 14 14 14 14 14 14 14 14 14 14 14	1 - From 1 - Coop		K
X Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	П ПТ		$\prod$		L
BOSE AUDIO WITH NAVIGATION AND Connector No. 1866 Connector Name WIRE TO WIRE Connector Type   TH24MW-NH		6 5 4 3 2 1	Signal Name (Specification)		M
MINE TO WIRE WIRE TO W	B243 WIRE TO WRE	222212	Ш	А	V
BOSE AUIC Connector No. Connector Type  1 2 1 2 1 1 2 1 1 1 1 2 1 1 1 1 1 1 1	13 L 14 W Gometor No. Connector Name Connector Type		Grmai Color   Grm   Gr		0
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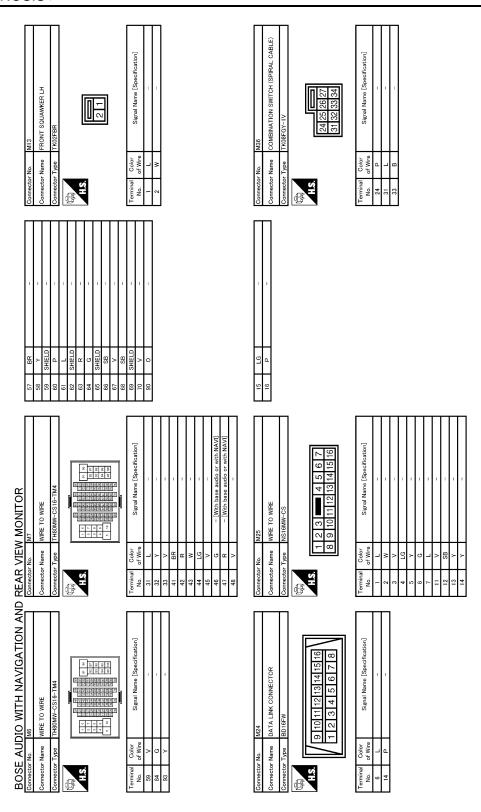
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Corrector No.   F103	B C
Connector No.   F51   Connector No.   F51   Connector Name   AT ASSEMBLY   Connector Name   F8KIOFG-DGY   F8KIOF	E F G
Connector No.   MI   Connector No.   Wo.   Connector Name   PARKING BRAKE SWITCH   Connector Name   PARKING BRAKE SWITCH   Connector Name   Connector Name   Connector Name   FUSE BLOCK (J/B)   Connector Name   PUSE BLOCK (J/B)   Connector Name   Signal Name   Specification   Specificat	J K
BOSE AUDIO WITH NAVIGATION AND Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE TO WIRE Connector Types TH80FW-CS16-TM4  Terminal Color Signal Name [Spacification]  Solution of Wire Signal Name [Spacification]  Terminal Color Signal Name [Spacification]	M AV

Revision: 2007 November AV-791 2008 EX35



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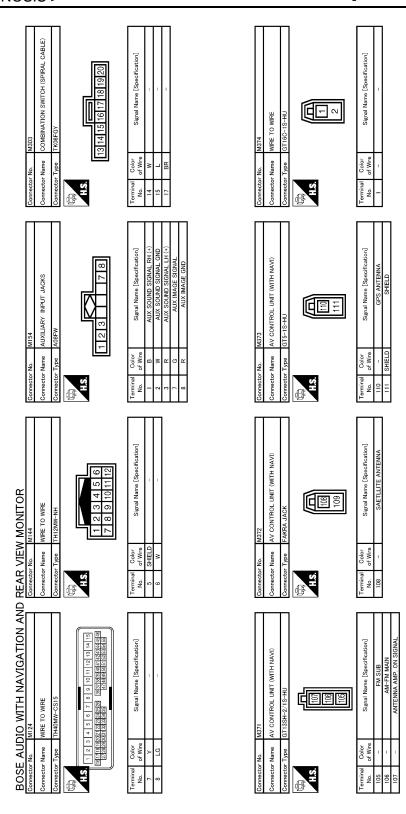
D A/C AMP.	Specification] H-H I-L	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0		A B
Connector No. M67  Connector Name UNIFED METER AND A/C AMP  Connector Type TH32PW-NH  1.3  1.3  1.13	Color   Signal Name [Specification]   Of Wire   P   CAN+H   CAN+L   CAN+L	B   GND		С
Conne	Terminal   No.   No.   72   72	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		D
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AETER AND A/C	Signal Name [Specification] VEHICLE SPEED (8-PULSE)	M75  DISPLAY UNIT (WITH NAVI)  TH24FW-NH  10 9 8 7 6 5 4 3 2  22 21 20 19 18 17 16 15 14  Signal Name [Specification]  ACC  SHEEP  ALVI MAGE GND  AUX MAGE GND	RGB GG GREEN SIGNAL SHELD RGB AREA (VS) SIGNAL COMM (CONT201SP) CAMERA IMAGE SIGNAL	F
4.2	Color Of Wire R	111 233 Mire	N N N N N N N N N N N N N N N N N N N	G
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	Specification]	CH 14 16 13 15 13 15 15 15 15 15 15 15 15 15 15 15 15 15	T SIGNAL	I
M63 CENTER SPEAKER TKGZFBR  2 1	Signal Name [Specification]	TTON SWITTON S	DISK EFIEC	J
W MON M63 CENTER STROZEBR				
REAR VIEW MONITOR Connector No M63 Connector Name GENTER SPEAKER Connector Type TROOPER  M3.	Color of Wire 2 C C C C C C C C C C C C C C C C C C	Connector No.  Connector Name Connector Type  LS.  Connector Name	H	K
Δ		Ten	Ц	L
VOIL	[cation]	(cation)		
NAVIG	Signal Name [Specification] SENSORI SENSORZ SENSORZ GND IGN	MZ  MZ  AZ  Signal Name [Specification]		M
BOSE AUDIO WITH NAVIGATION AN Commetor No. Ms7  Commetor Name STEERING ANGLE SENSOR  THOSPY-NH  T 2 3 8  T 4 5	Signal	MSGZFL-MZ MSGZFL-MZ  Signal Name [S		AV
BOSE AUDI Connector No. M Connector Name S Connector Type T M.S. H.S.	Octor of Wire	e e e		
BOSE A Connector No Connector No Connector Ty	Terminal No	Connector Name Connector Type Connec	JCNWM0787GI	0
			oorwine or or	Р

10	_	Connector No. MIO6 Connector Name WIRE TO WIRE Connector Type TK10MW-NS8	Terminal   Color   Signal Name [Specification]
Connector No.   M87	Terminal Color   Signal Name [Specification]     No. of Wire   Signal Name [Specification]     21	Connector No. M89  Connector Name AV CONTROL UNIT (WITH NAVI)  Connector Type TH3ZFW-NH  Connector Type TH3ZFW-NH  LS. TO TA TO	Perminal   Color   Signal Name [Specification]     No.
REAR VIEW MONITOR   13		72 SHIELD SHIELD	
BOSE AUDIO WITH NAVIGATION AND Connector No. M80 Connector Type THISPW-CS2 Connector Type THISPW-CS2  H.S. THISPW-CS2  THISPW-CS3  THISPW-	Signal Name [Specification]  AMP ON SIGNAL SOUND SIGNAL FRONT LH (+) SOUND SIGNAL REAR LH (-) SOUND SIGNAL REAR LH (-) STRG SW A ACO ILLUMINATION SHELD SOUND SIGNAL FRONT RH (+) SOUND SIGNAL FRONT RH (+) SOUND SIGNAL FRONT RH (+)	М88 AV CONTROL UNIT (WITH NAV)) ТНІЗРИ-ИН  62 64 66 68 70 72 61 63 66 76 71	Signal Name [Specification] RGB (R. EDED) SIGNAL RGB (G. GREEN) SIGNAL RGB (G. BLUE) SIGNAL SHELD RGB SYNC SHELD RGB AREA (YS) SIGNAL HP W COMM (CONT->DISP COMM (CONT->DISP) COMM (CONT->DISP)
BOSE AUIC Connector No. Connector Name Connector Type  H.S.  H.S.	Terminal   Color     No. of Wire     Of Wire     Of Wire     Of Wire     Of	Connector No. Connector Name Connector Type	Color

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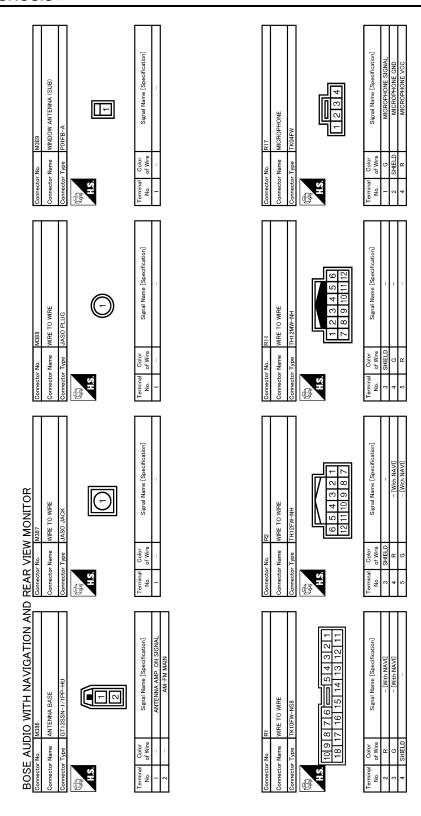
M112   Pod SIDE   Pod SIDE	M122 BOM (BODY CONTROL MODULE) TH40FB-NH TH40FB-NH Signal Mame [Specification] CAN-H CAN-H	A E	3
Connector No.	Connector Name Connector Name Connector Type  Terminal Color No. of Wire 90 P 91 L	Е	)
1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1	fication)	E	=
Pod SOUND SIGNAL RH (+)  AV COMM (+)  GND SHELD SHELD POD CONNECTION RECOGNITION ACCESSORY DEFECT POD SOUND SIGNAL, GND POD SOUND SIGNAL, GND POD SOUND SIGNAL, GND	WRE TO WIRE THBOMW-CS16-TM4  THBOMW-CS16-TM4  THBOMW-CS16-TM4  THBOMW-CS16-TM4  THBOSE audio)  - [With BOSE audio]  - [With BOSE audio]	F	=
SHELD O W W W W B B B B B B B B B B B B B B B	Nie   8   8   8   8   9   9   9   9   9   9	G	)
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Connector Na Connector Tyr Connector Tyr ILS  Terminal Co No Of T 100 S 100	H	-
NITOR  HANT	r Name WIRE TO WIRE  1 Type TK38MW-NS10  1 1 2 1 4 5	J	I
Connector No.   MIII	Connector No.   M116	K	
NA N		L	-
BOSE AUDIO WITH NAVIGATION AN	FRONT SOUAWKER RH TWOZFBR Signal Name [Specification] - [With BOSE audio] - [With BOSE audio]	M	/
NIO WITH   MIO WITH   MIO   MIO	M114 FRONT S TK02FBR	AV	/
BOSE AUI Commetter No Commetter Type Commetter Type III3 Color III4 L	Connector No.  Connector Name Connector Type  Terminal Color No. of Wire  V V C  2 LG	C	)
		JCNWM0789GI	
		F	)

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WRE Signal Name (Specification) Signal Name (Specification)  Signal Name (Specification)	В
M M M M M M M M M M M M M M M M M M M	С
Connector No. Connector Name Connector Type  Terminal Connector No. Connector No. Connector Name	D
ification]	Е
WIRE TO WIRE GTIGG-IPP-HU  Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]	F
	G
Connector No. Connector Type Connector No.  Connector No. Connector No.  S. H.S. H.S.  H.S.  A.S.  Connector Type  Connector No.  Connector Type  Of Wire  No.  Of Wire  No.  Of Wire  Of Wir	Н
Specification	I
MATONITOR WIRE TO WIRE GTT3SCN-2/IPP-HU Signal Name (Specification) Signal Name (Specification) Signal Name (Specification)	J
AR VIEW ector Name ector Type  cetor Type	K
	L
BOSE AUDIO WITH NAVIGATION AND Connector Name WIFE TO WIFE  Demector Type (T13SC-2/18-HU  Terminal Color Signal Name (Specification)  1	M
MOTTH N WIRE TO WIRE GTT135C-2/15-HU GTT135C-2/15-HU GTT16-15-HU	AV
BOSE AUC Gennector Name Connector Type  I Connector Type  Connector No.  Connector Name  Conne	0
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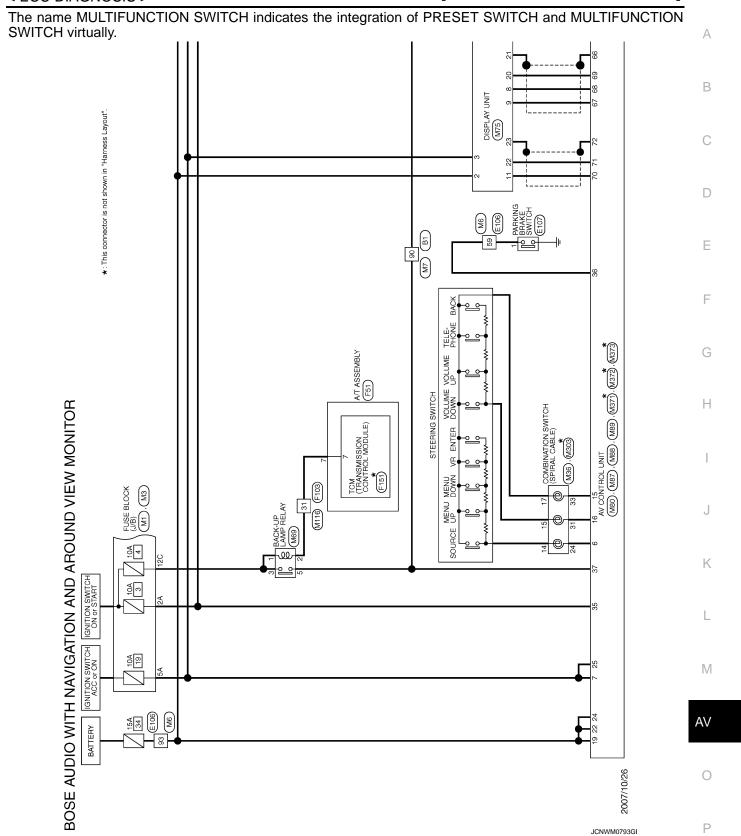


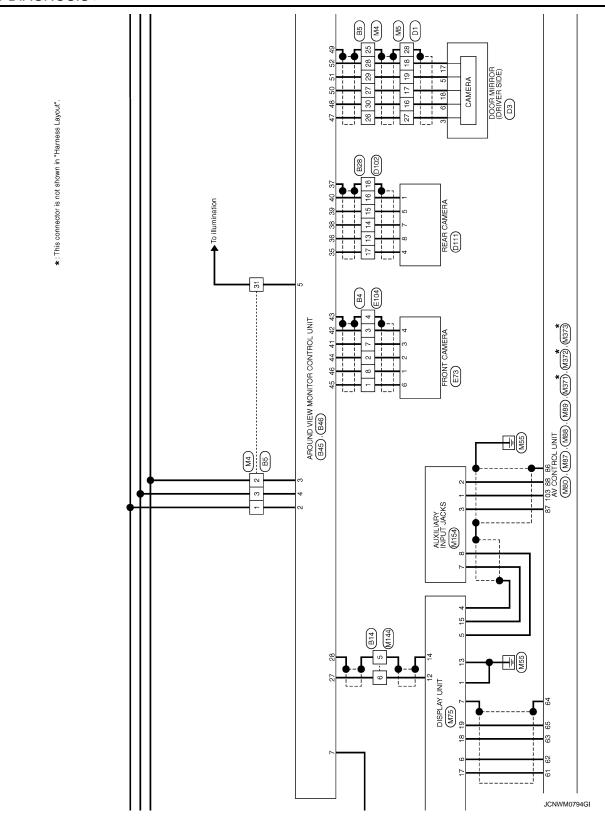
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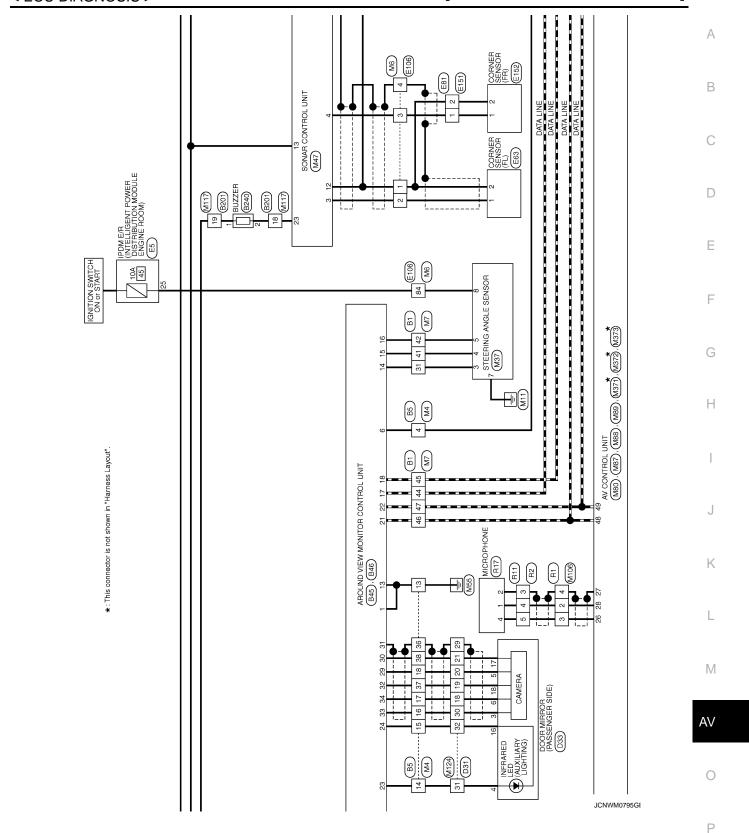
#### WITH AROUND VIEW MONITOR

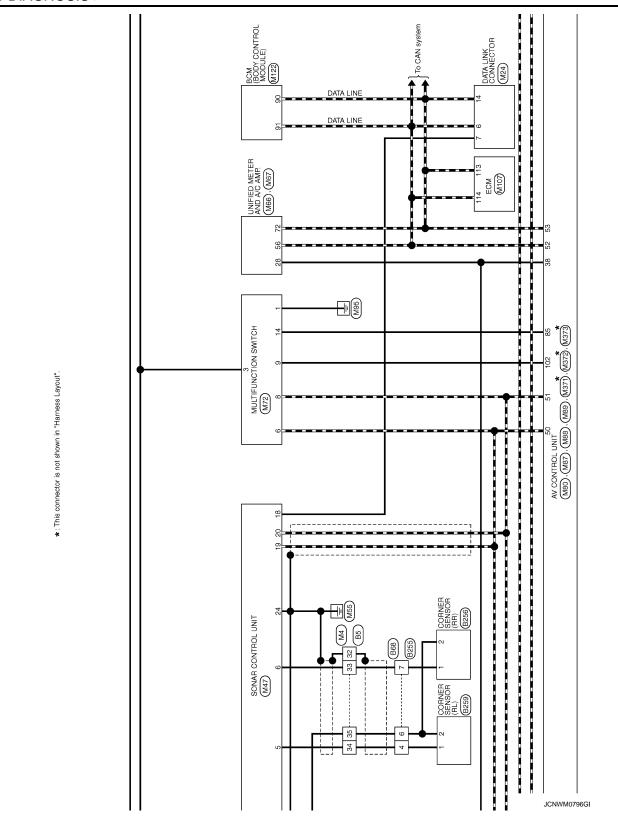
WITH AROUND VIEW MONITOR: Wiring Diagram - BOSE AUDIO WITH NAVIGATION AND AROUND VIEW MONITOR -

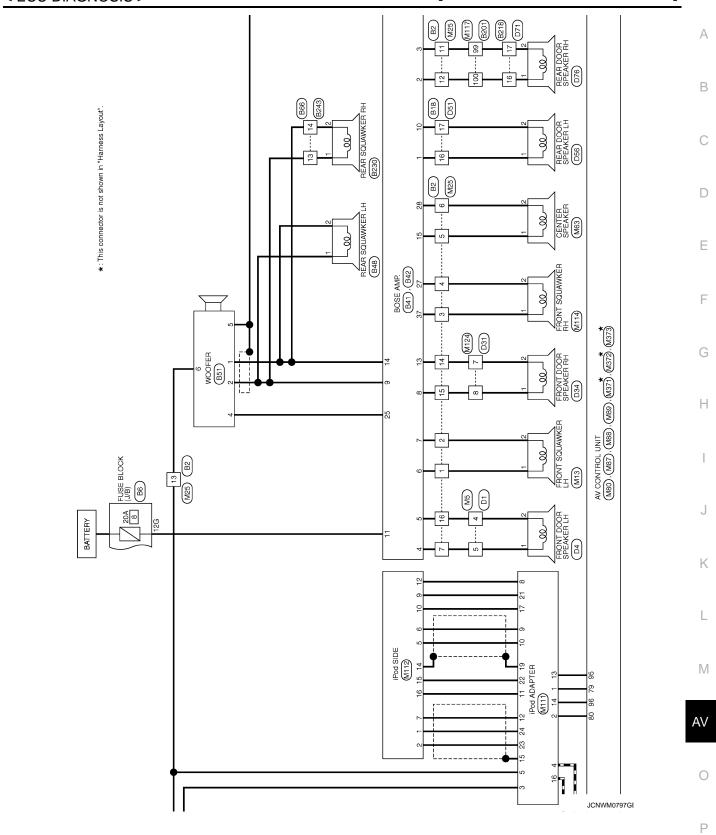
Click here to view the eWD. **NOTE:** 



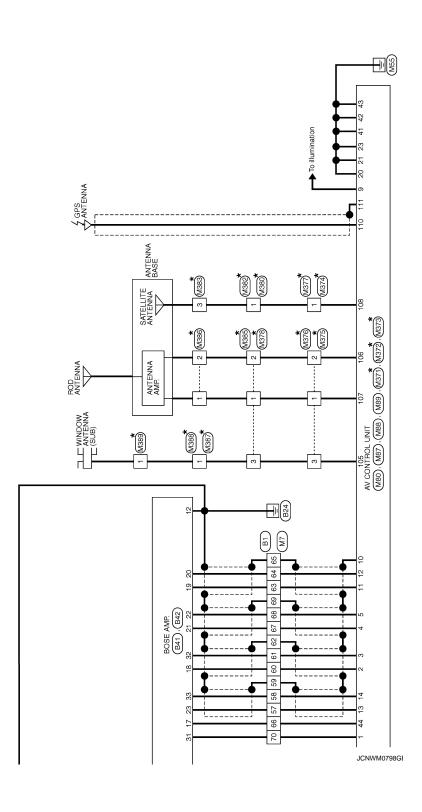




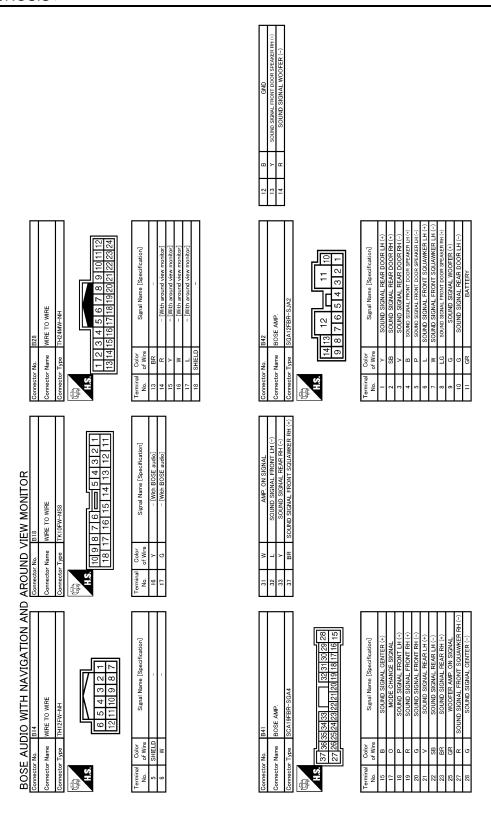




\*: This connector is not shown in "Harness Layout".



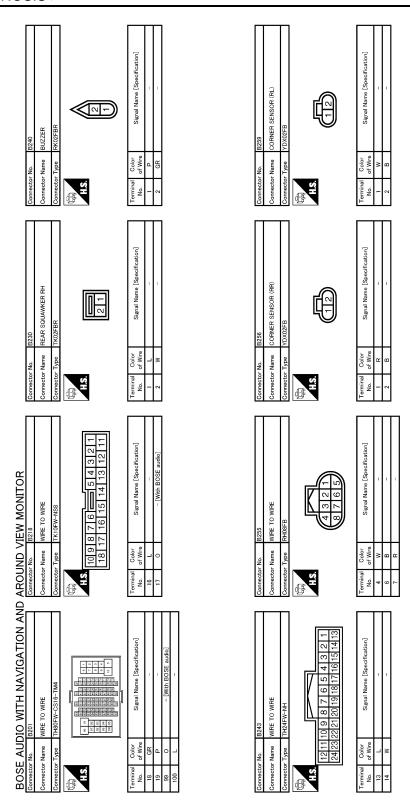
16 LG	Connector No. B6 Connector Name FUSE BLOCK (J/B) Connector Type NS12FBR-CS  MS12FBR-CS  FG4G  362G1G  12291G109086766G	Terminal Golor Signal Name [Specification] 120 GR -	A B C
CS  4			E
Color   Colo	5   5   6   6   6   6   6   6   6   6	36 SHIELD 38 G G	G
T T Tem			Н
NITOR	27 0 10 10 10 10 10 10 10 10 10 10 10 10 1	Signal Name (Specification)	I
OM WE	65 WRE TO WIRE TH40MM-NH 56 78 90 56 78 90 56 78 90	Sign	J
AROUND VIEW MONITOR  61 L 62 SHIELD 64 G 65 SHIELD 66 O 67 V 67 V 68 SHIELD 770 W 90 O	Connector No. B5 Connector Name WIRE TO WIRE Connector Type TH40MW-NH  TH2 3 4 5 6 7 6 9 9 11  TH2 22 23 4 5 6 7 6 9 9 11  TH2 22 23 23 23 25 25 25 25 25 25 25 25 25 25 25 25 25	Terminal Color of Wire of the Color of the C	К
A L			L
BOSE AUDIO WITH NAVIGATION Connector No.   Bit   Connector No.   Bit   Connector Type   H80FW-CS16-TM4	- [With around view monitor]	Signal Name [Spacification]	M
WIRE TO WITH NA WIRE TO WHE THROPY-CSS IG-TMA Signal Nam	- IWR - IWR		AV
BOSE AUD Connector No.     Connector Name     Connector Type     Connector Type     Connector Type     Connector Type     Connector Type     Color     Color	45	Color   Colo	0
		· 111111	JCNWM0799GI
			Р



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17   G	Wirke IO Wirke    1	A B C
Connector No.   B46   Connector Name   AROUND VIEW MONITOR CONTROL UNIT	Milet   O Wilet   O O O O O O O O O O O O O O O O O O	E F G
S2 W SIDE CAMERA LH IMAGE GND S3 W SIDE CAMERA LH IMAGE GND S3 W SIDE CAMERA LH IMAGE GND S4 W SIDE CAMERA LH IMAGE GND S5 W S1 W SIDE CAMERA LH IMAGE GND S5 W S1 W S1 W S1 W S1 W S1 W S	Signal Name (Specification) Signal Name (Specification) SOUND SIGNAL WOOFER (-) SOUND SIGNAL WOOFER (-) WOOFER (-) MOOFER AMP. ON SIGNAL BATTERY	J
BOSE AUDIO WITH NAVIGATION AND Connector No.   845	Commetter Type TROBEBR  Trombial Color Signal Name [Specification]  1 L L	M N
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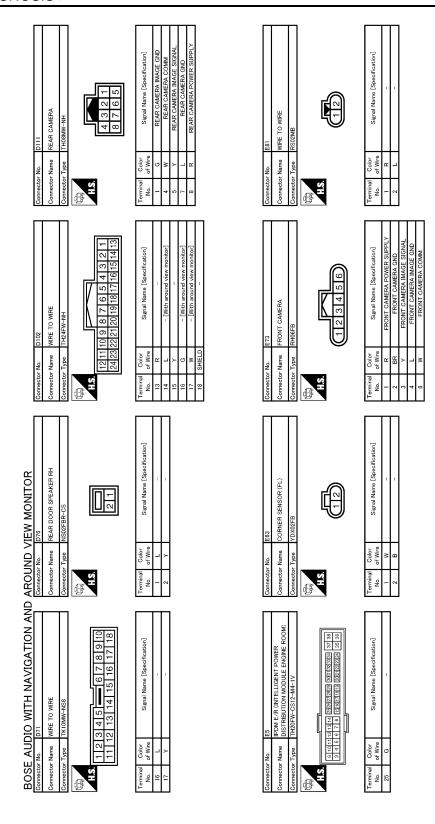
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Connector No.   D31   Connector No.   D31   Connector Name   WIRE TO WIRE   Connector Type   TH40FW-CS15   TS   TS   TS   TS   TS   TS   TS   T	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Signal Name [Specification]   S   S   S   S   S   S   S   S   S	Corrector No. DS6 Connector Name REAR DOOR SPEAKER LH Connector Type NS0ZPBR-CS	Terminal   Color   Signal Name [Specification]   1		A B C
Connector No. D4  Connector Name FRONT DOOR SPEAKER LH (WITH BOSE SYSTEM) Connector Type NSQZFBR-CS  H.S.	Terminal   Golor   Signal Name [Specification]   1	Cornector No. D51  Connector Name WIRE TO WIRE  Connector Type TK 10MM-NS8  A.S. TI Z 3 4 5 6 7 8 9 10  TI 12 13 14 15 16 17 18	Color		E F G
AROUND VIEW MONITOR  Gennetor Name DOOR MIRROR (ORIVER SIDE)  Connector Type   TH24MM-NH    12   11   10   9   8   7   6   5   4   3   2   1     24   23   22   21   20   19   18   17   16   15   14   13     24   23   22   21   20   19   18   17   16   15   14   13     24   25   25   27   20   19   18   17   16   15   14   13      24   25   25   27   20   27   20   19   18   17   16   15   14   13      24   25   25   27   27   27   27   27   27	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]	Connector No. D34 Connector Name SYSTEM) Connector Type NS02FBR-CS  H.S.	Terminal Color   Signal Name [Specification]   Of Wire   Signal Name [Specification]		J K
BOSE AUDIO WITH NAVIGATION AND Connector Name WIRE TO WIRE Connector Type   TH40FW-CS15	Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   No. of	Connector No. D33 Connector Name DOOR MIRROR (PASSENGER SIDE) Connector Type TH24MW-NH  1.2 11110 9 8 7 6 5 4 3 2 1 24 23 22 22 120 19 18 17 16 15 14 13	Terminal   Codor   Sigraul Name   Specification]   No. of Wire   Sigraul Name   Specification]	JCNWM0803Gf	M AV

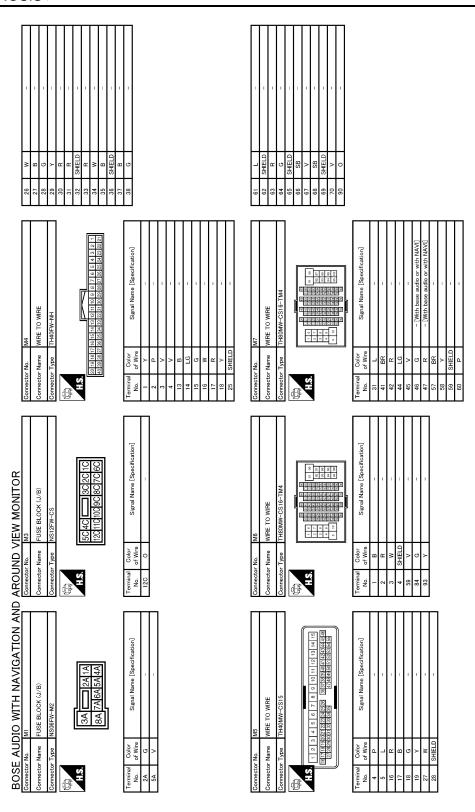
Revision: 2007 November AV-809 2008 EX35



JCNWM0804GE

WIRE TO WIRE RSOZEB Signal Name [Specification]	F151 TCM (TRANSMISSION CONTROL MODULE) SPI0FBGY  B 7 6 5 4 3 2 1  Signal Name [Specification]  REV LAMP RLY	A B C
Connector No. E151 Connector Name WIRE TG Connector Type RSOZEB  H.S.  Terminal Color No. of Wire 1 R R  1 R R	Connector No. F151 Connector Name TOM Connector Type SPILI H.S.  To of Wire  7 0	D
BRAKE SWITCH Signal Name [Specification]	WRE NS10 Interpretation   S   S   S   S   S   Interpretation   Specification	Е
PARKING TBOIFW	WRE TO WRE TO TRASEW.	F G
Connector No.  Connector Name Connector Type  Terminal Color No. of Wire  1 0	Connector Name Connector Type Connector Name Connec	Н
WIRE CSI 6-TM4  CSI 6-	Signal Name (Specification)	I
M MEN CONTRACTOR OF CONTRACTOR	AVT ASS RKIDFG-	J
	Connector No. Connector Name Connector Type  Terminal Color No. of Wite. 7 R	K L
BOSE AUDIO WITH NAVIGATION AND Commetter No.   E104	SENSOR (FR)	M
AUDIO WITH  1.80 E104  1.90 WIRE TO WIRE  1.750 NSIZMW-CS  1.750 NSIZMW-CS  Color  O'Mire  Signal  A Willer  Signal  R Signal  R Signal	CORNER TOXOZEE	AV
BOSE AU	Connector No. Connector Name Connector Type  Terminal Color No. of Wire 1 R	O JCNWM0805Gł
		Р

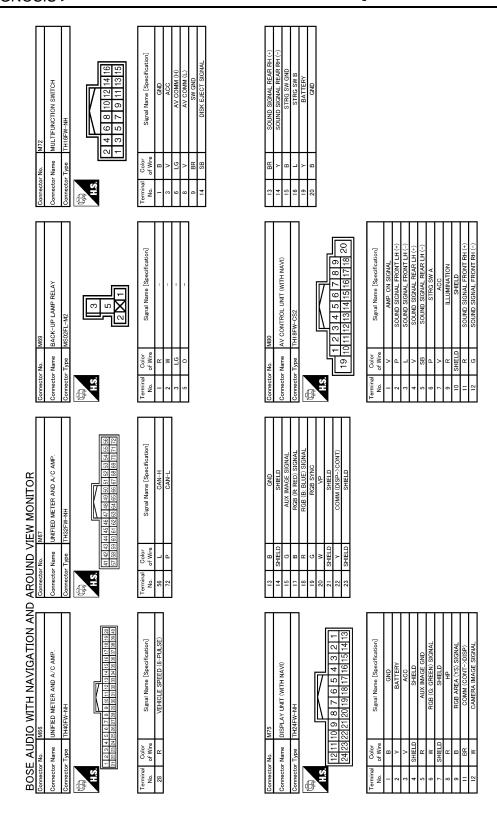
Revision: 2007 November AV-811 2008 EX35



JCNWM0806GI

		PPEAKER 21	Signal Name [Specification] -		АВ
15 16 17		Connector No. M63 Connector Name CENTER SPEAKER Connector Type TK02FBR H.S.	Terminal   Color   No   O'   V'		C D
E 4 5 6 7 12 13 14 15 16	Signal Name [Specification]	HT H H G 7 8 9 10 11 12 18 19 20 21 22 23 24	Signal Name [Specification] CORNER SENSOR FRONT LH CORNER SENSOR FRONT RH CORNER SENSOR REAR LH CORNER SENSOR REAR LH CORNER SENSOR REAR ACC R LINE R LINE R LINE AV COMM (1) BUZZER GND		E F
Connector No. WISE Connector Type WIRE TO WIRE Connector Type NISIBMV-CS H.S. H.S. H.S. H.S. H.S. H.S. H.S. H.S	Terminal Color Sign No. of Wire No. of Wire 1. W LG 1. W LG 1. W LG 1. T LG 1.	Connector No. M47 Connector Type TH24FW-NH  12 3 4 5 6 7 8 1 13 14 15 16 17 18 19 20 20 20 20 20 20 20 20 20 20 20 20 20	Terminal Color No. 1989  1 0 R COOR 1		G
EM MONITOR  EM  TALINK CONNECTOR  SIGN  10 11 12 13 14 15 16  Z 3 4 5 6 7 8	Signal Name [Specification]	JE SENSOR	Signal Name [Specification] SENSORI SENSORI SENSORI GND IGN		ı
AROUND VIEW MONITOR Connector No. M24 Connector Name DATA LINK CONNECTOR Connector Type BD16FW  H.S  (9 10111121314111 H.S	Color   Colo	Connector No.  Connector Name STERRING ANGLE SENSOR Connector Type THOSPW-NH  7 2 3 8  1 4 5	Terminal   Color   Signa   Signa   No. of Wire   Signa   Sig		J K
	Signal Name (Specification)	TCH (SPIRAL CABLE)	Signal Name [Specification]		L
BOSE AUDIO WITH NAVIGATION AND Connector No. M13 Connector Name FRONT SOUAWKER LH Connector Type TROPER  M.S. E. TROPER  A.S. TROPER  T. TROPER	Terminal Color Signal N. of Wire 1 N	nector No.	Color   Colo		AV
	<u>  •                                     </u>	O O O	[ <u>*</u> - ] ] ]	JCNWM0807GI	Р

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JCNWM0808GE

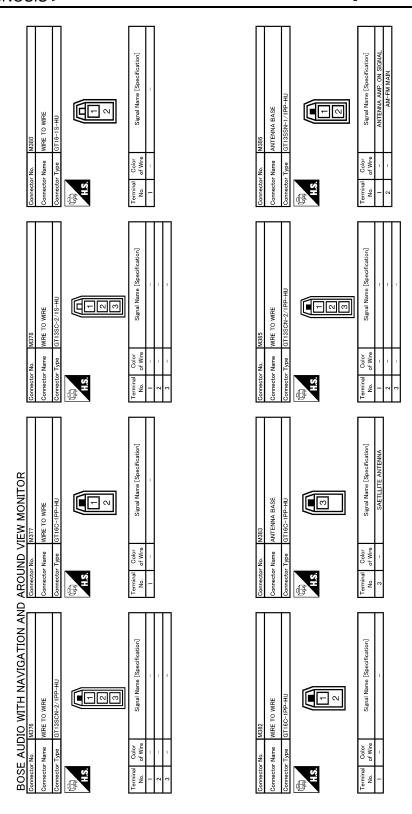
					Α
SHELD					В
HELD					С
72 SHIELD					D
I NAVI)	eoification] SignAL I) SignAL II SignAL I) SignAL II Sig	3885b	boffcaton]		Е
5 4    / 0 6	Signal Name [Specification] RGB (R. RED) SIGNAL RGB (G. GREEU) SIGNAL RGB (B. BLUE) SIGNAL RGB (B. BLUE) SIGNAL SHIELD RGB ARR (YS) SIGNAL HP VP COMM (CONT">DISP COMM (CONT">DISP)	MIO7  RE24FGY-RZ8-R-LH-Z    128   124   126   116   116   126   127   128   144   116   116   126   127   128   144   116   116   126   127   128   144   116   116   126   127   128   144   116   116   126   127   128   144   116   116   126   127   128   144   116   116   126   127   128   144   116   116   126   127   128   144   116   126   127   128   144   116   126   126   127   128   144   116   12	Signal Name [Specification] VEHCAN-LI VEHCAN-HI		F
r No.	Color of Wire of Wire SHIELD COLOR SHIELD COLOR	r No.	Color of Wire		G
Connect Connec	Terminal Terminal No. (No. (1971)	Connectt Connectt Connectt H.S.	Terminal No. 113		Н
MONITOR VEHICLE SPEED (8-PULSE) CONTROL SIGNAL 1 CONTROL SIGNAL 2 CONTROL SIGNAL 3 MODE CHANGE SIGNAL 3 MODE CHANGE SIGNAL 3 AV COMM (L) AV COMM (L) AV COMM (L) AV COMM (L) CAN-H CAN-H CAN-H		678910	Signal Name [Specification]  - [With NAVI]  - [With NAVI]  - [With NAVI]		I
WONITE S VEHICLE S CONTR CONTR CONTR CONTR CONTR CONTR AV		26 RE TO WIRE 100MW-NS8 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Nan — [V] — — — — — — — — — — — — — — — — — — —		J
AROUND VIEW MONITOR  38 R VEHICLE SPEED 41 B CONTROL SI 42 B CONTROL SI 43 GR CONTROL SI 44 SB MODE CHANIGH 48 G AV COMM 50 LG AV COMM 51 V AV COMM 52 L CAN+1 53 P CAN+1 53 P CAN+1		Connector No. WIII Connector Name WIE Connector Type TK  1 2 3  11 12	Terminal Color No. of Wire 2 A SHILLD		K
ON AND	- E	7 88 2010			L
BOSE AUDIO WITH NAVIGATION Connector No. M87 Connector Name AV CONTROL UNIT (WITH NAVI)  TH40FW-NH  EXAMPLE OF THAOFW-NH  EXAMPLE OF	Signal Name (Specification)  GND BATTERY GND BATTERY GND MICROPHONE VCC MICROPHONE GND MICROPHONE GND MICROPHONE GNA MICROPHONE MIC	M89 AV CONTROL UNIT (WITH NAVI) TH32FV-NH TH37FN TO ST	Signal Name [Specification] Pod SOUND SIGNAL LH (+) Pod SOUND SIGNAL HH (+) DISK LEGT SIGNAL SHELD AUX SOUND SIGNAL LH (+) AUX SOUND SIGNAL LH (+) Pod		M
M87 AV CONTROL TH40FW-NH IN40FW-NH IN40FW-NH IN40FW-NH IN40FW-NH IN40FW-NH		1 1 2 1 6			AV
BOSE AL Connector No Connector Type	Terminal O'Olor No. of Wire 21 B 22 Y 23 B 24 Y 24 Y 25 C 26 G 26 G 27 SHELD 28 R 35 G 35 G 35 G	Connector No. Connector Type H.S. 7374	Terminal Color No. of Wire No. of Wire St. SB. SB. SB. SB. SB. SB. SB. SB. SB. SB		0
				JCNWM0809GI	

Connector No.   MI 14	Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire BOSE audio]   A AAAPTER)   A AAAPTER   A AAAPTER   A AAAPTER   A AAAPTER   A AAAPTER   A AAAPTER   A AAAAPTER   A AAAAPTER   A AAAAATER   AAAAATER   A	Connector No.   MI24	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]
Connector No   M112	Terminal   Color   Signal Name [Specification]     1	Connector Name GCM (GODY CONTROL MODULE) Connector Name GCM (GODY CONTROL MODULE) Connector Type TH40FB-NH  MAS  Little Godge GC	Terminal   Golor   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   Gold-L   Go
CON AND AROUND VIEW MONITOR   CONTROL SIGNAL RH (+)   CONTROL SIGNAL RH (+)	1-1 (-(-(-(-(-(-(-(-(-(-(-(-(-(-(-(-(-(-	Connector No. M117 Connector Name WIRE TO WRE Connector Type TH80MW-CSIG-TM4  TH80MW-CSIG-TM4	Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   No. of Wire BOSE audio]   No. of Wire BOSE audio]
BOSE AUDIO WITH NAVIGATION AND Connector No. MIII Connector Name Pod ADAPTER Connector Type ITHERWANH    1 2   3   4   5   6   7   8   9   10   11   2   1   12   3   4   5   6   7   8   9   10   11   2   1   11   11   11   11	Terminal   Color   Signal Name [Specification]	Connector No. MI16 Connector Name WIRE TO WIRE Connector Type ITK36MW-NS10  MA  1 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Terminal Golor Signal Name (Specification) No. of Wire Signal Name (Specification)

JCNWM0810GI

# [BOSE AUDIO WITH NAVIGATION]

FROL UNIT (WITH NAV)) 2/15-HU  Signal Name [Specification]  FM SUB  AM-FM MAIN  ANTENNA AMP. ON SIGNAL	WRE 2/1S-HU  Signal Name [Specification]	АВ
Connector Name	Connector No. M375 Connector Name WRE TO WRE Connector Type GT1350-2/15-HU M. of Wire Signal Name of Wire	C
	WIRE Signal Name [Specification]	Е
COMBINATION TROBEGY 114 115	M374 WIRE TO GT16C-I	F
Connector No. Connector Name Connector Type H.S. H.S. I erminal Odor No. of Wire 14 H. W H. BR	Connector No. Connector Type Connector Type No. of Wr.	Н
MONITOR  ARY INPUT JACKS  Signal Name [Specification]  AUX SOUND SIGNAL BH (a)  AUX SOUND SIGNAL GND  AUX MAGE SIGNAL  AUX MAGE SIGNAL	HU HU Signal Name [Specification] Signal Name [Shelfcation]	I
VIEW MIS4 AUXILL AOBEW	M373 ne AV CON1 Nire Nire ELD	J
	Connector No. Connector Name Connector Type No. Of Wir. 110 SHIEL	K
BOSE AUDIO WITH NAVIGATION AND Connector No. MI44  Connector Name WIRE TO WIRE  Connector Type THI2MW-NH  THI2MW-NH  TARMING Color  No. of Wire  Signal Name [Specification]  Signal Name [Specification]	AV CONTROL UNIT (WITH NAVI)  FAKEA JACK    109     Signal Name [Specification]  SAFTLLITE ANTENNA	М
AUDIO WITH	M372 AV CONI	AV
BOSE AU Gameeter No. Connector Name Connector Type H.S. H.S. Terminal No. of Wire 5 SHIELL 6 W	Connector No. Connector Type Connector Type H.S. H.S. Ing Color No. of Wir	JCNWM0811GE
		Р



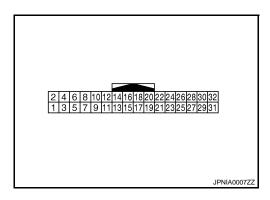
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	tion]			А
RE TO WIRE  CIGHW-NS8  7 6 = 5 4 3 2  16 15 14 13 12	Signal Name [Specification] - [With NAV] - [With NAV]			В
	Color Si of Wire R R SHIELD			С
Connector No. Connector Name Connector Type H.S. 10 9	Terminal No. 2 2 2 4 4 4			D
	ofication]	incincation) SIGNAL E CAID E VCC		Е
M389 WINDOW ANTENNA (SUB) POIFB-A	Signal Mame (Specification)	MICROPHONE TROJAPW  Signal Name [Specification] MICROPHONE SIGNAL MICROPHONE SIGNAL MICROPHONE SIGNAL MICROPHONE SIGNAL		F
9 9	of Wire	or fire		G
Connector No. Connector Nar. H.S.	Terminal No.	Connector No.  Onnector Typ.  H.S.  H.S.  A. O.		Н
OR	Signal Name (Specification)	-NH		I
TEW MONIT M388 WIRE TO WIRE JASO PLUG	Signal Nam	NIRE TO WIRE THIZMW-NH  THIZMW-NH  Signal Manne [S		J
AROUND V Connector Name Connector Type HS	Terminal Color No. of Wire	Connector No.   Connector Name   Victoria   Colored   Co		K
ION AND	- F			L
I NAVIGATI	Signal Name [Specification]	NINH  1 4 3 2 1  1 10 9 8 7    1 10 9 8 7    1 10 9 8 7    1 10 9 8 7    1 10 9 8 7		M
BOSE AUDIO WITH NAVIGATION AND Commerce No. M897 Connector Name WHE TO WHE Connector Type JASO JACK  H.S.		M WRE TO THIS FW		AV
BOSE AU Connector No. Connector Type Connector Type H.S.	Terminal Color No. of Wire	Connector No. Connector Name Connector Type Connector Type No. of Wire 3 SHIELD 4 B 5 G		0
			JCNWM0813Gf	Р

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Reference Value

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	-	Signal name	Input/ Output		Condition	(Approx.)
5	_	Shield			_	_
6 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
7 (B)	Ground	Camera ground	_	Ignition switch ON	_	0 V
8	Craund	Comoro nover events	Output	Ignition	R position	6.0 V
(R)	Ground	Camera power supply	Output	switch ON	Other than R position	0 V
11	_	Shield	_	_	_	_
12 (W)	Ground	Camera image signal	Output	Ignition switch ON	At rear view camera image display	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
14	Ground	Camera-connection recog-	_	Ignition switch	Connected to camera control unit connector	0 V
(W)	3.54.14	nition signal		ON	Not connected to camera control unit connector	5.0 V
17 (V)	_	AV communication signal (L)	Input/ Output	_	_	_
18 (LG)	_	AV communication signal (H)	Input/ Output	_	_	<del>-</del>
19 (R)	_	AV communication signal (L)	Input/ Output	_		

# [BOSE AUDIO WITH NAVIGATION]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
20 (G)	_	AV communication signal (H)	Input/ Output	_	_	_
22 (O)	Ground	Reverse signal	Input	Ignition switch ON	R position Other than R position	12.0 V 0 V
23				Ignition	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2
23 (L)	Ground	Sensor signal 1	Input	switch ON	Turn the steering to the left	(V) 4 2 0 4 2 0
						A: Sensor signal 1 B: Sensor signal 2
					Turn the steering to the right	(V) 4 2 0 4 2 0 8
24	Ground	Sensor signal 2	Input	Ignition switch		A: Sensor signal 1 B: Sensor signal 2
(BR)		Ç	·	ON	Turn the steering to the left	(V) 4 2 0
					-	A: Sensor signal 1 B: Sensor signal 2
25 (R)	Ground	Sensor signal 3	Input	Ignition switch ON	Turn the steering around the neutral position	(V) 4 2 0 B SKIB3829E A: Sensor signal 3

< ECU DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

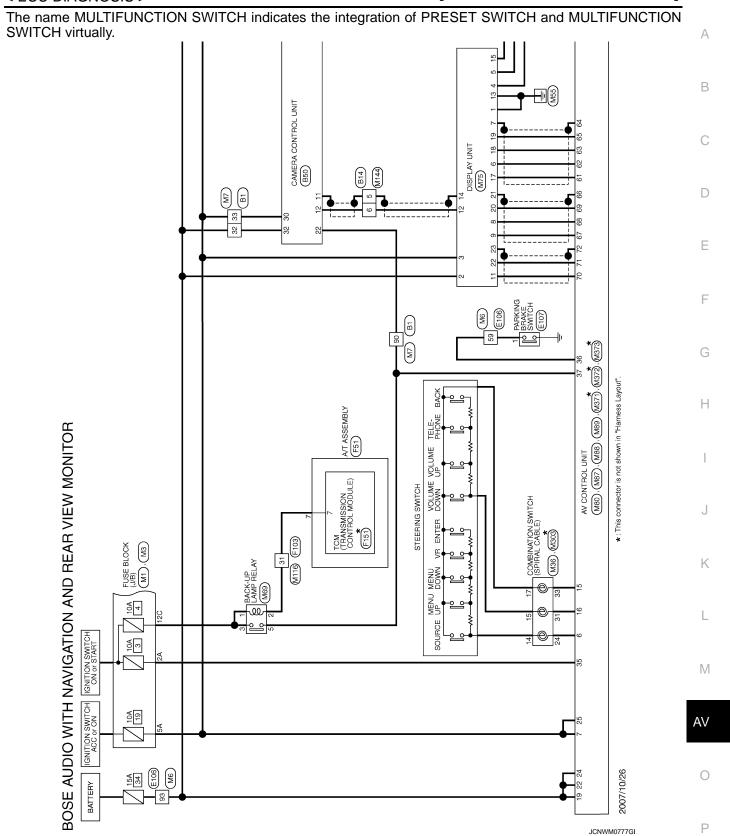
	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
26 (V)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE:  Maximum voltage may be 12 V due to specifications (connected units).  (V)  4 2 0  ***20ms  SKIA6649J
30 (LG)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
31 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
32 (L)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage

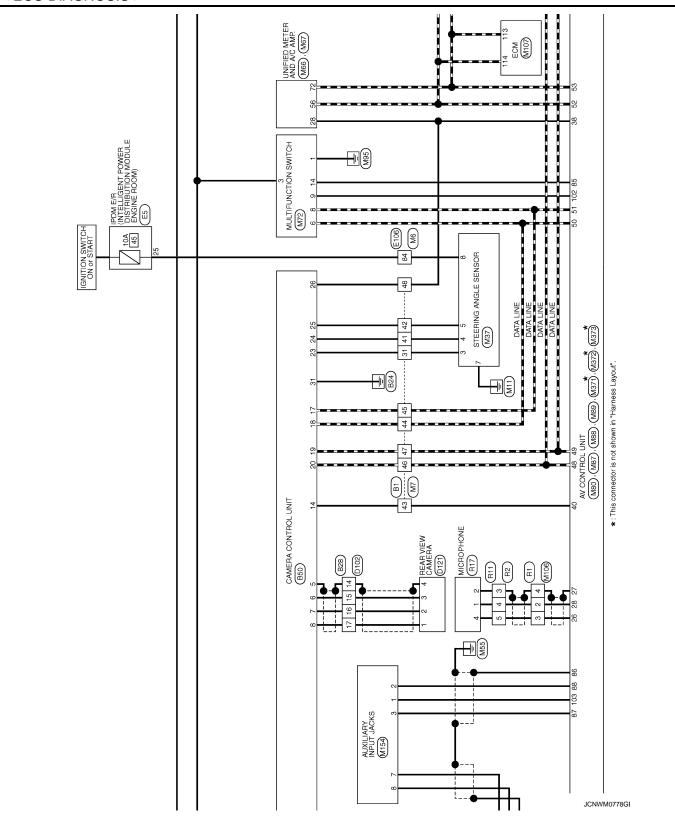
Wiring Diagram - BOSE AUDIO WITH NAVIGATION AND REAR VIEW MONITOR -

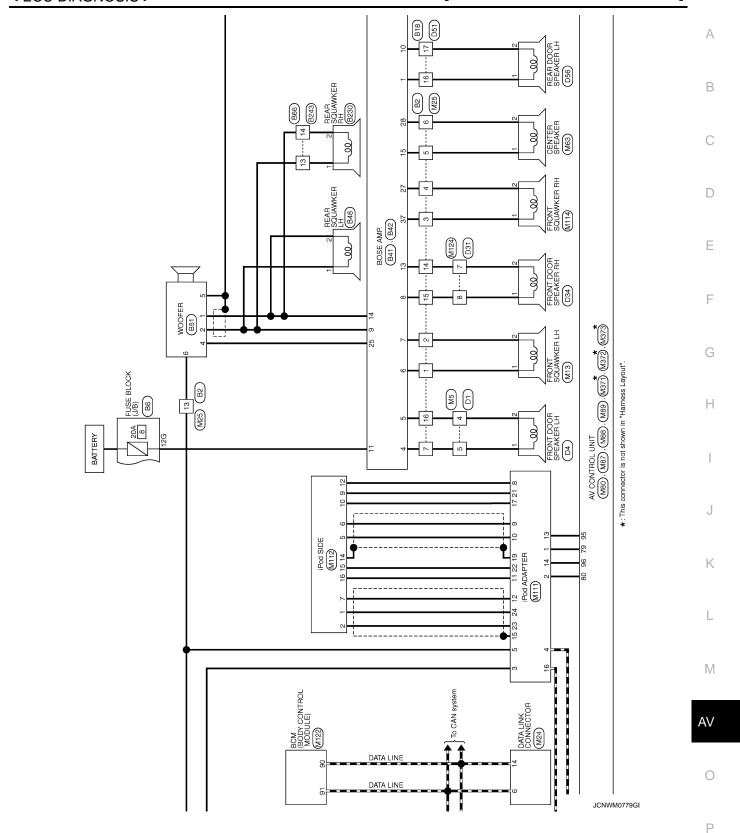
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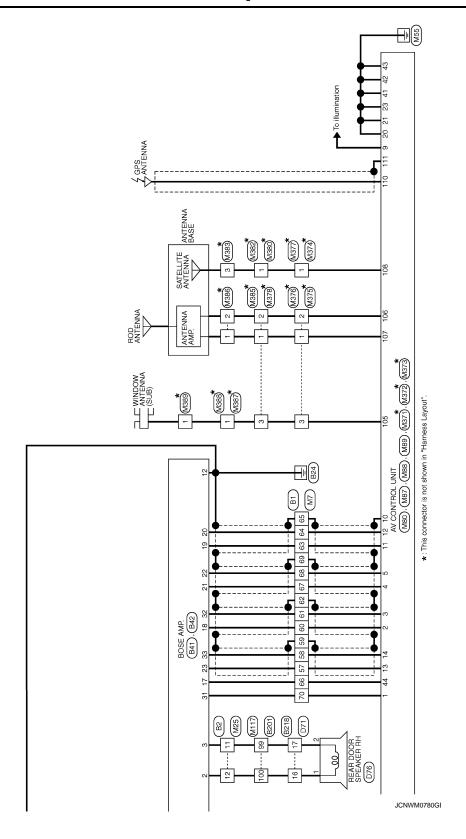
Click here to view the eWD.

NOTE:









16 LG	Connector No. B28  Connector Type Trezawn-NH  H.S. 1 2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 20 21 22 23 24	Terminal Golor   Signal Name [Spacification]   No. of Wire   Signal Name [Spacification]   14   SHIELD   Without around view monitor]   15   W   Without around view monitor]   17   R   Without around view monitor]   17   R   Without around view monitor]   18   Without around view monitor]   19   Without around view monitoral view mo		A B C
Signal Name   Signal Name   Specification   Specific	Connector No. B18 Connector Name WIRE TO WIRE Connector Type TK10FW-NS8  W. 10 9 8 7 6 6 7 3 2 1 1 18 17 16 15 14 13 12 11	Terminal   Color   Signal Name [Specification]   No.   of Wire   Yes   Color   Of Wire   Of Wi		E F G
NEAR VIEW MONITOR	Connector No. B14 Connector Type THIZFW-NH  HS. 6 5 4 3 2 1	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Signal Name   Specification]		J K
Connector Name   WIRE TO WITH NAVIGATION AND	Connector Name FUSE BLOCK (J/B) Connector Type NS12FBR-CS  ALS  129110 100 90 80 7 6 60	Terminal Golor Signal Name [Specification]	JCNWM0781GI	M AV
				Р

BOSE AUDIO WITH NAVIGATION AND Connector Name BOSE AMP.  Connector Name BOSE AMP.  Connector Type SCA19FBR-SCA4  H.S. 37 36356433 3231332928  27 262524232221201918171615	REAR VIEW MONITOR  31 W AMP ON SIGNAL  32 L SOUND SIGNAL BRANT IH (-)  33 Y SOUND SIGNAL BRANT H (-)  31 R SOUND SIGNAL FRONT SOUAWKER RH (-)	Connector No. B42 Connector Name BOSE AMP. Connector Type SCA12FBR-S.422  H.S. 14 13 12 11 10 9 8 7 6 5 4 3 2 1	12   B   GNID
Terminal   Color   Signal Name [Specification]   No. of Wire   SOUND SIGNAL CENTER (+)   17		Terminal   Color   Signal Name [Specification]   No.   or Yilice   SOUND SIGNAL REAR DOOR LH (+)   2   SB   SOUND SIGNAL REAR DOOR RH (-)   3   V   SOUND SIGNAL REAR DOOR RH (-)   4   B   SOUND SIGNAL REAR DOOR RH (-)   5   P   SOUND SIGNAL REONT DOOR SEAKER LH (-)   5   L   SOUND SIGNAL REONT SOUNMER LH (-)   7   W   SOUND SIGNAL REONT SOUNMER LH (-)   7   W   SOUND SIGNAL REONT SOUNMER LH (-)   9   G   SOUND SIGNAL REONT SOUNMER LH (-)   110   G   SOUND SIGNAL REONT SOUNMER LH (-)   111   GR   SOUND SIGNAL REONT SOUND SIGNAL REONT SOUND SIGNAL REONT SOUND SIGNAL REAR DOOR LH (-)   111   GR   SOUND SIGNAL REAR	
Connector No. 848 Connector Name REAR SOUAWKER LH Connector Type TK02FBR	Connector No. 650  Connector Name CAMERA CONTROL UNIT  Connector Type TH32FN-14H  1.3   7   9   11   13   17   9   11   13   17   9   11   13   17   19   11   13   17   19   11   19   17   12   18   17   18   18	22         0         REVERSE           23         L         SENSOR SIGNAL 1           24         BR         SENSOR SIGNAL 2           25         R         SENSOR SIGNAL 3           26         V         VEHICLE SPEED 69-DULSE)           30         LG         ACC           31         B         GND           32         L         BATTERY	Connector No. 851  Connector Name WOOFER  Connector Type RSOBFCGY-PR  H.S. 2 4 6
Terminal Color Signal Name [Specification]	Color   Signal Name [Specification]		No.   Octor   Signal Name [Specification]   Octor   No.   Octor   Signal Name [Specification]   Octor   Octo

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Connector Name   Conn	Connector No. B230 Connector Name REAR SQUAWKER RH Connector Type TKOZFBR  LS.  Terminal Color No. of Wire Signal Name [Specification]	1   L	Terminal   Color   Signal Name [Specification]	A B C	
Connector Name Wire TO WIRE  Connector Name Signal Name (Specification)  Terminal Color Signal Name (Specification)  To vi Wire  Signal Name (Specification)	BZ18   WIRE TO WIRE   TIX(IPW-NS8   TIX(IP	D4 FRONT DOOR SPEAKER LH (WITH BOSE SYSTEM) NS02/FBR-CS	Color Nine L W	G	
	REAR VIEW MON Connector No. Connector Name WIRE TO Connector Type TH80PW H.S. TH80PW T	DI	Color of Wine	I	
JCNWM0783GI	NITH NAVICATION AN    B66	B243 WINE TO WINE TH24FW-NH  10 9 8 7 6 5 4 3 2 322 21 20 19 18 17 16 15 14	Color N W	AV O	

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Connector No.   D71 Connector Name WIRE TO WIRE Connector Type   TK10MM-NS8	1 1111	Terminal   Color   Signal Name [Specification]   16   17	Connector No. E5  Connector Name   PDM E/R (INTELLIGENT POWER   DISTRIBUTION MODULE ENGINE ROOM) Connector Type   TH2PFW-CS12-M4-IV	2 0	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] 25 G
Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NS02FBR-CS		Terminal Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   1   2   V   -	Connector No. D121 Connector Name REAR VIEW CAMERA Connector Type TH04MW-NH		Terminal   Golor   Signal Name [Specification]
O REAR VIEW MONITOR Connector No. DS1 Connector Name WIRE TO WIRE Connector Type TX(IOMW-NS8		Terminal Golor   Signal Name [Specification]   No. of Wire   Yes   - [With BOSE audio]   17   G   - [With BOSE audio]	Connector No. D102 Connector Name WIRE TO WIRE Connector Type TH24FW-NH	1 <del>- 6</del>	Terminal Golor   Signal Name [Specification]     No.   of Wire   Signal Name [Specification]     14   SHELD   - [Without around view monitor]     15   V   - [Without around view monitor]     17   G   - [Without around view monitor]
BOSE AUDIO WITH NAVIGATION AND Connector No. 034 FRONT DOOR SPEAKER RH (WITH BOSE STEAM) Connector Type NSOZEEN-CS		Terminal   Color   Signal Name [Specification]	Connector No. D76 Connector Name REAR DOOR SPEAKER RH Connector Type NSQFBR-CS	1	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   L   L   -

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Connector No. F103 Connector Type TY36FW-NS10 Connector Type TX36FW-NS10  LAST STATE	Cornector No.   M5	A B C
Commetter No.   F51   Commetter Name   A.T. ASSEMBLY   Commetter Type   RR(10FG-DGY   Commetter Type   Comme	Commetter No.   M3   Commetter No.   M3   Commetter Name   FUSE BLOCK (J/B)   Commetter Type   NS12FW-CS   Commetter Type   NS12FW-CS   Commetter Type   NS12FW-CS   Commetter Type   Commetter	E F G
Connector No.   E107	Connector No.   M1   Connector Name   FUSE BLOCK (J/B)   Connector Type   NS06FW-M2   SA   SA   Saral Name [Specification]   Saral Name [Specification]   SA   Saral Name [Specification]   SA   SA   V   Saral Name [Specification]   SA   SA   V   SA   SA   SA   SA   SA	J K
BOSE AUDIO WITH NAVIGATION AND Connector Name WIRE TO WIRE Connector Type TH80FW-CS16-TM4  Terminal Color Name Signal Name (Specification) Signal Name (Specification) Signal Name (Specification) Signal Name (Specification)	Connector No.   F151	L  M  AV  O  JCNWM0785GI

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BOSE AUDIO WITH NAVIGATION AND	ID REAR VIEW MONITOR				
Connector No. M6	Connector No. M7	27	BR	1	Connector No. M13
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	58	Y de la	1 1	Connector Name FRONT SQUAWKER LH
Connector Type TH80MW-CS16-TM4	Connector Type TH80MW-CS16-TM4	9	9	1	Connector Type TK02FBR
	1	19	٦	_	1
MAN BY BY BY	thing to the same of the same	62	SHIELD	-	
1. c   11.2 3141 5160 [78]   1 . c   12.2 3141 5160 [78]   1 . c   1 .	H.S.	63	œ (	1	HS.
28 S S S S S S S S S S S S S S S S S S S	3 6 3 6 3 6 3 6 3 6 3 6 3 6 3 6 3 6 3 6	\$ 5	5 [	1	<u>]</u>
0 5	0 200	69	SB	1 1	2 1
2000	20 E	67	>	1	
		89	SB	-	
	Terminal Color Signal Mana [Sasaifastian]	69	SHIELD	-	Terminal Color Signal Mana [SanaiGastion]
of Wire	of Wire	70	^	1	
A	4	90	0	I	$\dashv$
	32 Y –				2 W –
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	+				
Connector No. M24	Connector No. M25	5	91	1	Connector No. M36
Т	Т	9	۵	1	Т
Connector Name DATA LINK CONNECTOR	Connector Name WIRE TO WIRE	2			Connector Name COMBINATION SWITCH (SPIRAL CABLE)
Connector Type BD16FW	Connector Type NS16MW-CS				Connector Type TK08FGY-1V
•	<b>1</b>				•
The state of the s	きず				deleta
H.S.					HS.
0 4 0 7 1 0	2 3				24 25 26 27
12345678	8 9 10 11 12 13 14 15 16				31 32 33 34
					T
No. of Wire Signal Name [Specification]	_				_
- T 9	-				24 P =
14 P –	2 W -				31 L –
	3 V				33 B = -
	4 LG -				
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## [BOSE AUDIO WITH NAVIGATION]

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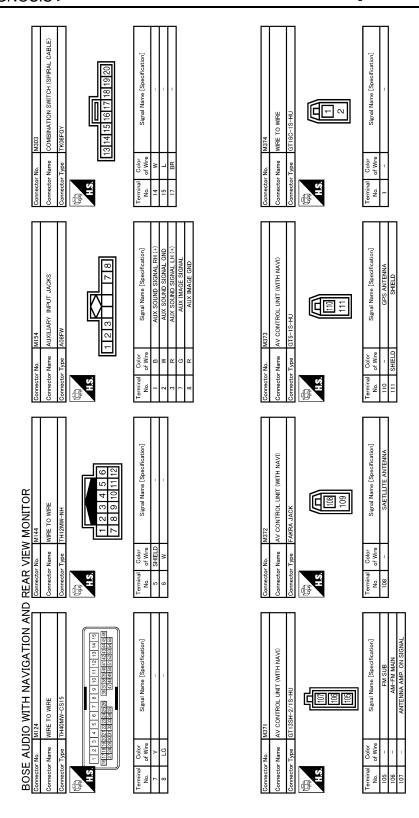
MP. 54 555 568 70 77 77 77 77 77 77 77 77 77 77 77 77	(cation)	NAL. GNAL.	ı	А
M67 TH32FW-NH TH32FW-NH  Ad 46 16 47 48 149 50 11 52 153 55 169 161 162 163 164 165 166 167 168 169 179 169 169 169 169 169 169 169 169 169 16	Signal Name [Specification] CAN-H CAN-L	GND SHIELD AUX INAGE SIGNAL RGB (R-RED) SIGNAL RGB RAED SIGNAL RGB STWC VP SHIELD COMM (DISP->CONT) SHIELD	I	В
or No.  Type  4 42 43  57 58 59	Color of Wire	SHELD SHELD		С
Connectt Connectt H.S.	Terminal No. 56 56	13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		D
D A/C AMP.	ocification]	Avv))    16   15   14   3   2   1     16   15   14   13   2   1     16   15   15   15   15   15   1	ı	Е
NA NH	Signal Name (Specification) VEHICLE SPEED (8-PULSE)	Nunit (with Nunit (with Nunit (with Nunit (with Nunit Nuni	ı	F
ector No. ector Type  S. 1 2 3 4	Terminal Color No. 28 R R	12   1   1   1   1   1   1   1   1   1	(	G
Conn	Tea Z	Conne	l l	Н
	Signal Name (Specification)	NOTION SWITCH NH    R   10   12   14   16     7   9   11   13   15     8   10   12   14   16     7   9   11   13   15     8   10   12   14   16     7   9   11   13   15     8   10   12   14   16     8   10   12   14   16     8   10   12   14   16     8   10   12   14     8   10   12   14     8   10   12   14     8   10   12   14     9   10   12     10   12   13     10   12   13     10   13   13     11   13   15     12   14   16     13   15     14   15     15   15     15   15     16   15     17   15     18   15     18   10     19   10     10   10     10   10     10   10		I
/ MONITOR M83 CENTER SPEAKER TK02FBR	Signal Na	MULTIEUNCTION SWITCH THISFW-NH THISFW-NH 2 4 6 8 10 12 14 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 3 5 7 9 11 17 1 1 3 5 7 9 11 17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		J
REAR VIEW MONITOR  Gomestor Name GENTER SPEAKER  Connector Type TROZEBR  TRAZER  TRAZER  TRAZER  TRAZER	Terminal   Color   No.   O' Wire       Y	Connector No. Connector Name Connector Type  Terminal Color No. Of Wire  1 6 6 LG 6 B LV 6 6 B LV 7 8 B RR	ı	K
S S				L
BOSE AUDIO WITH NAVIGATION AN Commerce No. M37 Commerce Name STEERING ANGLE SENSOR Commerce Type ITHUSFW-NH  MA. T Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	Signal Name (Specification) SENSORI SENSORI SENSORI SENSORI GND IGN	BACK-UP LAMP RELAY MSGZFL-MZ  Signal Name [Specification]	1	M
AUDIO WITI	Color Sir Life B R R R R R R R R R R R R R R R R R R	MS027FL-	A	V
BOSE AU Connector Nu. Connector Type Connector Type H.S.	Terminal No. 9 3 4 4 4 7 7 7 7 9 8	Connector No. Connector Name Connector Type Connector Type Color No. Color N	(	0
			JCNWM0787GI	P
				F'

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10	_	Connector No. MIO6 Connector Name WIRE TO WIRE Connector Type TK10MW-NS8	Terminal   Color   Signal Name [Specification]
Connector No.   M87	Terminal Color   Signal Name [Specification]     No. of Wire   Signal Name [Specification]     21	Connector No. M89  Connector Name AV CONTROL UNIT (WITH NAVI)  Connector Type TH3ZFW-NH  Connector Type TH3ZFW-NH  LS. TO TA TO	Perminal   Color   Signal Name [Specification]     No.
REAR VIEW MONITOR   13		72 SHIELD SHIELD	
BOSE AUDIO WITH NAVIGATION AND Connector No. M80 Connector Type THISPW-CS2 Connector Type THISPW-CS2  H.S. THISPW-CS2  THISPW-CS3  THISPW-	Signal Name [Specification]  AMP ON SIGNAL SOUND SIGNAL FRONT LH (+) SOUND SIGNAL REAR LH (-) SOUND SIGNAL REAR LH (-) STRG SW A ACO ILLUMINATION SIGNAL FRONT RH (+) SOUND SIGNAL FRONT RH (+) SOUND SIGNAL FRONT RH (+) SOUND SIGNAL FRONT RH (+)	М88 AV CONTROL UNIT (WITH NAV)) ТНІЗРИ-ИН  62 64 66 68 70 72 61 63 66 76 71	Signal Name [Specification] RGB (R. EDED) SIGNAL RGB (G. GREEN) SIGNAL RGB (G. BLUE) SIGNAL SHELD RGB SYNC SHELD RGB AREA (YS) SIGNAL HP W COMM (CONT->DISP COMM (CONT->DISP) COMM (CONT->DISP)
BOSE AUIC Connector No. Connector Name Connector Type  H.S.  H.S.	Terminal   Color     No. of Wire     Of	Connector No. Connector Name Connector Type	Color

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5   6   15   16   15   16   17   17   17   17   17   17   17	OULE)  Figure 1	А
E Signal Name (Special Name (S	MIZZ BCM (BODY CONTROL MODULE) TH40PB-NH Signal Name [Specification] Signal Name [Specification] CAN-H CAN-H	В
Connector No. M112 Connector Type   Pod SIDE Connector Type   P16FGY  H.S.   1 2 3	Connector No. MI22 Connector Name BCM Connector Type TH400 Connector Type TH4000	C
		E
Pod SOUND SIGNAL RH (+)  NA COMM (+)  SHIELD  POD CONNECTION RECOGNITION  ACCESSORY DETECT  POD SOUND SIGNAL LH (+)  Pod SOUND SIGNAL LH  POD SOUND SIGNAL L	WIRE TO WIRE THEOMW-CS16-TM4  THEOMW-CS16-TM4  THE COMPANY CS16-TM4  THE COMPANY CS16-TM	F
1 1 2 SHELD C C C C C C C C C C C C C C C C C C C	ester No. MIII7 ester Type TH800 ester Type TH800    1   1   1   1   1   1   1   1   1	G
	Ten	Н
APTER NH	r Name WIRE TO WIRE  1 Type Trk38MW-NS10  1 2 1 4 15 [Trian transportering transp	I
MONITOR	MI16 TK38MW-NS10 TK38MW-NS10 ELEPERSISTED	J
Connector Name   Connector Name   Connector Type	Connector No.   MI16	K
NAME OF THE PROPERTY OF THE PR		L
BOSE AUDIO WITH NAVIGATION AN	OUAWKER RH  2 1  Signal Name [Specification]  - [With BOSE audio]  - [With BOSE audio]	Μ
NO WITH NA   MIO)	FRONT SOUAWKER RH TKOZF BR Signal Name [2 1 1	AV
BOSE AUC Connector Name Connector Type Connector Type IIIA Color IIIA L IIIA L	Name Type	_
BOSE Connector Connector Terminal No. 113	Connecto Con	JCNWM0789Gf
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WIRE 2/15:HU 2 Signal Name (Specification)	WIRE H-2/IPP-HU Signal Name [Specification]	АВ
M378 WIRE TO GT138C-	M M M M M M M M M M M M M M M M M M M	С
Connector No. Connector Name Connector Type H.S. H.S.  Terminal Color No. Color 3  — 3	Comector No.  Connector Type  Connector Type  A.S.  H.S.  1 of Golo  No. of Golo  Terminal  Colo  Solution  Colo  No. of Golo  Terminal  Colo  Solution  Colo	D
offication]	refreation]	Е
MR37 WIRE TO WIRE GT16C-IPP-HU  Signal Name [Specification]	ANTENNA BASE GTIGO-IPP-HU Signal Name [Specification] SAETLLITE ANTENNA	F
No. Name Type	e e e	G
Comnector No. Connector Name Connector Type  H.S. Terminal Color No. of Wire	Connector No. Connector Name Connector Type H.S. H.S.  Terminal Color No. 3 of Wire	Н
WITOR WIRE PZ/IPP-HU Signal Name (Specification)	WIRE PP-HU  Signal Name [Specification]	I
W MONITOR MA76 WIRE TO WIRE GTI3SCN-2/IPP-HU	WIRE TO WIRE GITIGC-IPP-HU 2 Signal	J
REAR VIEW MONITOR Connector None M376 Connector Name WIRE TO WIRE Connector Type GT135CN-2/IPP-H Connector Type GT135CN-2/IPP-H Connector Type GT135CN-2/IPP-H Connector Type Glor Signal Nam  Termical Color Signal Nam  1 2 2 2 2 3 3 3 3	Connector No. M Connector Name W Connector Type G Connect	K
N N N N N N N N N N N N N N N N N N N		L
BOSE AUDIO WITH NAVIGATION AND Commetcr No. M375 Connector Name WIRE TO WIRE Connector Type GT13SC-2/13-HU  Terminal Color No. of Wire Signal Name (Specification)  2	HU  Signal Name [Specification]	М
M0375 WIRE TO WIRE GTT3SC-2/1S-HU	WIRE TO WIRE	AV
BOSE AUD Connector No Connector No Connector Type ILS  LAS  LAS  Color	ector No. ector Name ector Type ninal Color of Wire	0
Marie Source Sou	Oom T N N N N N N N N N N N N N N N N N N	JCNWM0791GI
		Р

Connector No. M389 Connector Name WINDOW ANTENNA (SUB) Connector Type POIFE-A	H3.	Terminal Color No. of Wire Signal Name (Specification)	Connector No. R17 Connector Name MICROPHONE Connector Type TKO4FW	H.S. 1234	Terminal Color   Signal Name [Specification]     No. of Wire   Signal Name [Specification]     1
Connector No. M388 Connector Name WIRE TO WIRE Connector Type JASO PLUG	(1) (1)	Terminal Golor No. of Wire  Signal Name [Specification]	Connector No. R11 Connector Name WRE TO WIRE Connector Type TH12MM-NH	H.S. 1 2 3 4 5 6 7 8 9 10 11 12	Terminal   Color   Signal Name [Specification]     No. of Wire   Signal Name [Specification]     3 SHELD   -   -   -       4 G   -       5 R   -
ND REAR VIEW MONITOR Connector Name WIRE TO WIRE Connector Type JASO JACK	H.S.	Terminal Golor Signal Name [Specification]	Connector No. R2 Connector Name WIRE TO WIRE Connector Type TH12FW-NH	6 5 4 3 2 1 12 11 11 10 9 8 7	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   3 SHIELD   Color   Colo
BOSE AUDIO WITH NAVIGATION AN Connector No. M386 Connector Name ANTENNA BASE Connector Type GT15SSN-1/IPP-HU	H.S.	Terminal   Color   Signal Name (Specification)   No of Wire   ANTENNA AMP. ON SIGNAL   2	Connector No R1 Connector Name WIRE TO WIRE Connector Type TK10FW-NS8	18 17 16 15 14 13 12 11	Terminal   Color   Signal Name   Specification   Color   Signal Name   Specification   Color   State   Color   Color

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< ECU DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

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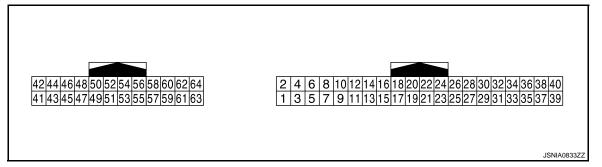
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## AROUND VIEW MONITOR CONTROL UNIT

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 (P)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage	
4 (GR)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	
5				Ignition	Lighting switch is OFF.	0 V	
(O)	Ground	Illumination signal	Input	switch OFF	Lighting switch is ON.	12.0 V	
6 (SB)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 6 4 2 0 * + 20ms SKIA6649J	
7	0	Davis a simual	la a cot	Ignition	R position	12.0 V	
(G)	Ground	Reverse signal	Input	switch ON	Other than R position	0 V	
13 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V	

## AROUND VIEW MONITOR CONTROL UNIT [BOSE AUDIO WITH NAVIGATION]

Terminal Description		Description		Qualities.		Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
14	Ground	Sensor signal 1	Input	Ignition switch	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2
(L)		<b>3</b>	ON	Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2	
15	Ground	Sensor signal 2		Ignition switch	Turn the steering to the right	A: Sensor signal 1 B: Sensor signal 2
(BR)		<b>3</b>	Input	ON	Turn the steering to the left	A: Sensor signal 1 B: Sensor signal 2
16 (R)	Ground	Sensor signal 3	Input	Ignition switch ON	Turn the steering around the neutral position	A: Sensor signal 3 B: Sensor signal 1
17 (G)	_	AV communication signal (H)	Input/ Output	_	_	
18 (Y)	_	AV communication signal (L)	Input/ Output	_	_	

## < ECU DIAGNOSIS >

## [BOSE AUDIO WITH NAVIGATION]

	rminal e color)	Description		Condition		Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
21 (W)	_	AV communication signal (H)	Input/ Output	_	_	_	
22 (B)	_	AV communication signal (L)	Input/ Output	_	_	_	
23 (LG)	24 (G)	Auxiliary infrared LED power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	5.5 V	
27	Ground	Camera image signal	Output	Ignition switch	At camera image display	(V) 1 0 -1 +40 μ s JSNIA0834GB	
(W)	Glouliu	Cantera image signal		ON	Other than camera image display	(V) 1 0 -1 40 μs JSNIA0835GB	
28	_	Camera image ground	_	_	_	<u> </u>	
29 (Y)	30 (G)	Side camera passenger side image signal	Input	Input	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 → 40 μ s JSNIA0834GB	
31	_	Shield	_	_	_	_	
32 (B)	Ground	Side camera passenger side ground	_	Ignition switch ON	_	0 V	
33 (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 μ s JSNIA0836GB	
34 (R)	Ground	Side camera passenger side power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V	

## [BOSE AUDIO WITH NAVIGATION]

	minal e color)	Description			Condition	Reference value		
+	_	Signal name	Input/ Output		Condition	(Approx.)		
35 (L)	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 μ s JSNIA0836GB		
36 (BR)	Ground	Rear camera power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V		
37	_	Shield		_	_	_		
38 (R)	Ground	Rear camera ground	_	Ignition switch ON	_	0 V		
39 (Y)	40 (W)	Rear camera image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μs		
41 (Y)	42 (G)	Front camera image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 1 0 -1 40 μ s  JSNIA0834GB		
43	_	Shield	_	_	_	<del>-</del>		
44 (B)	Ground	Front camera ground	_	Ignition switch ON	_	0 V		
45 (W)	Ground	Front camera communication signal	Input/ Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 1.0 μs JSNIA0836GB		
46 (R)	Ground	Front camera power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V		
47 (L)	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 μ s JSNIA0836GB		

## **AROUND VIEW MONITOR CONTROL UNIT** [BOSE AUDIO WITH NAVIGATION]

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	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
48 (BR)	Ground	Side camera driver side power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V
49	_	Shield	_	_	_	_
50 (R)	Ground	Side camera driver side ground	_	Ignition switch ON	_	0 V
51 (Y)	52 (W)	Side camera driver side image signal	Input	Ignition switch	"CAMERA" switch is ON or shift position is "R".	

Wiring Diagram - BOSE AUDIO WITH NAVIGATION AND AROUND VIEW MONITOR

ON

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Click here to view the eWD.

NOTE:

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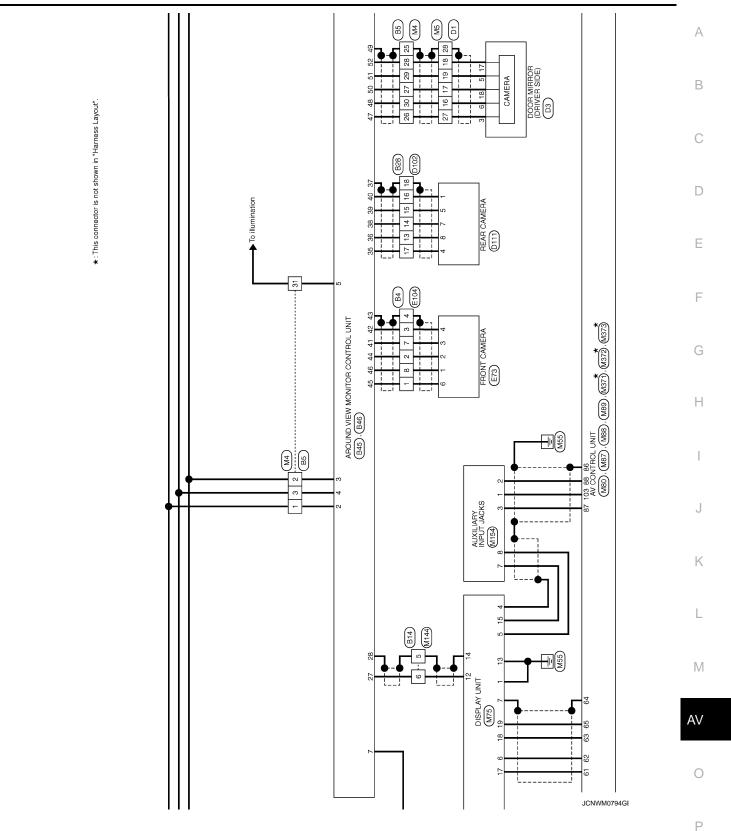
**AV-843** Revision: 2007 November 2008 EX35

[BOSE AUDIO WITH NAVIGATION]

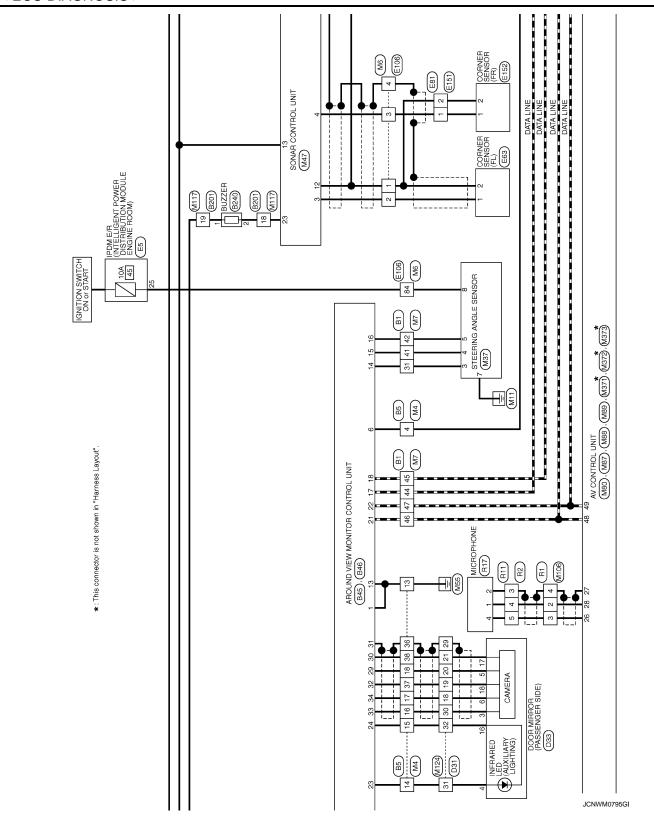
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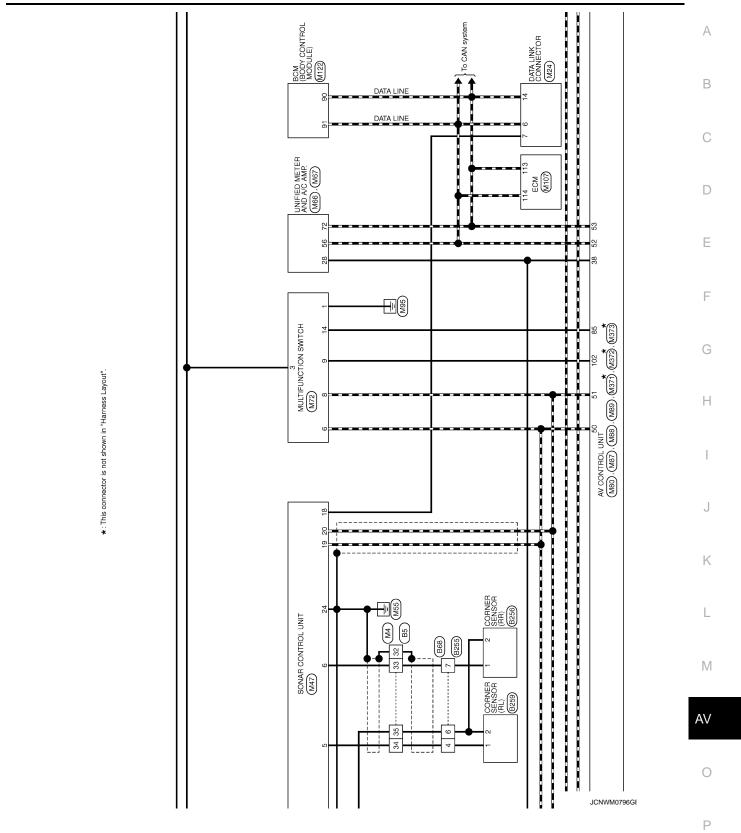
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually. DISPLAY UNIT \*: This connector is not shown in "Harness Layout". M7 B1 **★**(M373) A/T ASSEMBLY (F51) VOLUME **₩**372**)**\* \*(M371) STEERING SWITCH BOSE AUDIO WITH NAVIGATION AND AROUND VIEW MONITOR (M89) TCM (TRANSMISSION CONTROL MODULE) \* AV CONTROL UNIT

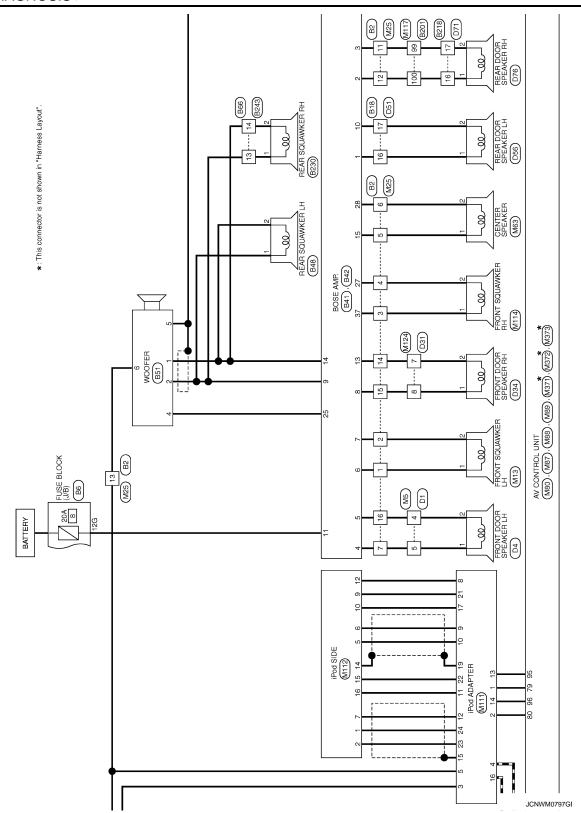
(M80), (M87), (M88),( FUSE BLOCK (J/B) (M1), (M3) MENU SOURCE 4 A IGNITION SWITCH ON or START ο 10Α IGNITION SWITCH ACC or ON 10A BATTERY 2007/10/26



## [BOSE AUDIO WITH NAVIGATION]







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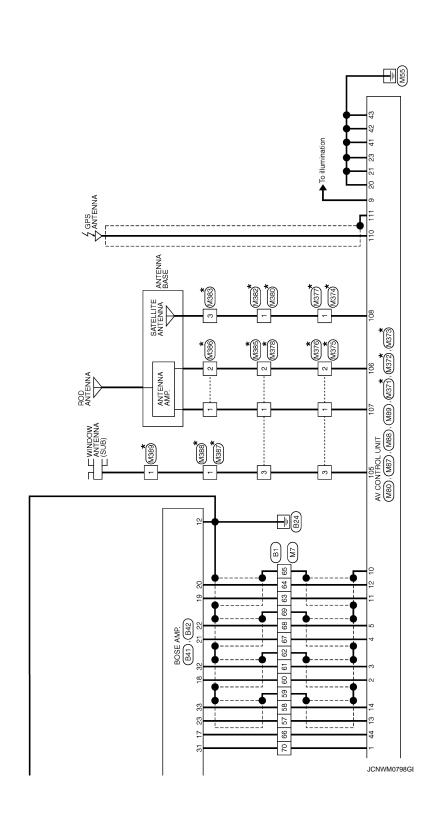
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★: This connector is not shown in "Harness Layout".



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[BOSE AUDIO WITH NAVIGATION]

15 LG	Signal Name [Specification]	- Connector No. 86 Connector No. 86 Connector Type NSIZEBR-CS Connector Type NSIZEBR-CS H.S. EG4G  3G 2G 1G H.S.	Terminal   Color   Signal Name [Specification]   No.   of Wire   12G   GR
AROUND VIEW MONITOR   Connector No.   E2   Connector No.   E2   Connector No.   E3   Connector No.   E4   Connector No.   E5   Connector No.   E5   Connector No.   E5   Connector No.   E5   E5   E5   E5   E5   E5   E5   E	Terminal   Color     No. of Wire     1	MIRE TO WIRE   26   27   28   28   28   29   29   29   29   20   20   20   20	Color Signal Name (Specification) 37 B G Of Wree P
AROUN 62 5 64 6 66 6 67 7 68 8 68 8 67 7 68 8 69 8		Connector No. Connector Type Connector Type H.S.	Terminal No. 0 0 2 2 3 3 3 14 4 4 4 15 16 16 16 17 17 17 17 17 17 17 17 17 17 17 17 17
BOSE AUDIO WITH NAVIGATION AND Connector No. Bit Connector Type TH80FW-CS16-TM4  WRE TO WRE  Connector Type TH80FW-CS16-TM4  WAS CONNECTOR TH80FW-CS16-TM4	Terminal   Golor   Signal Name [Specification]   31   41   ER   42   R   - [With around view monitor]   45   Y   - [With around view monitor]   45   Y   - [With around view monitor]   47   B   - [With around view monitor]   47   B   - [With around view monitor]   47   B   - [With around view monitor]   59   SHELD   - [With around view monitor]   59   SHELD   - [With around view monitor]   50   P   - [With around view monitor]   50   With around view monitor]   50	Connector No. 84  Connector Name WIRE TO WIRE  Connector Type NS12FW-CS  H.S. 5 4	Terminal   Color   Signal Name [Specification]   No.

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< ECU DIAGNOSIS > [BOSE AUDIO WITH NAVIGATION]

	SOUND SIGNAL WOOFER (-)	АВ
	12 B SOUND SIGNAL 114 R SOUND SIGNAL 115 P SOUND SI	C
9 10 11 12 21 22 23 24 24 24 24 22 23 24 24 24 24 24 24 24 24 24 24 24 24 24		E
B28   WIRE TO WIRE   TH24MW-NH	8 0 SE A 12 S S S S S S S S S S S S S S S S S S	F G
Commector No.   Commector Name   Commector Name   Commector Type   Color   C	Connector Connector Connector Ro. 1 2 2 3 3 4 4 5 5 6 6 6 6 6 6 7 7 7 11 11 11 11	Н
MONITOR  WIRE  NSS  15   4   3   2   1    15   14   13   12   11    15   14   10   12   11    - [With BOSE audio]  - [With BOSE audio]	SOUND SIGNAL FRONT IH (-) SOUND SIGNAL FRONT IH (-) SOUND SIGNAL FRONT SOUAWKER RH (-)	I
IEW MONITOR   BIB     WIRE TO WIRE     TKI OFW-NSS     TKI O	SOUND SIGNAL SIG	J
AROUND VIEW MONITOR    Connector Name   WIRE TO WIRE	B B K	K
ION AND	1/6   15   1/6   15   1/6   15   1/6   15   1/6   1/	L
WIRE NH 10987 Signal Name [Specification]	ame (Specification) (19 18   1   1   1   1   1   1   1   1   1	M
DIO W. WRE TO THISTW-	B B O SE AM B D O	AV
BOSE AUC Connector No. Connector Name Connector Type H.S. H.S.  Terminal Color No. 5 SHELD 5 SHELD 6 Wire 6 W	Connector No.	0
	JCNWM0800GI	Р

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17 G AV COMM (H)	18 У	21 W	B	FG	g ;	27 W CAMERA IMAGE SIGNAL	A SIDE	- <sub>0</sub>	SHIELD	B SIDE C	W	34 R SIDE CAMERA RH POWER SUPPLY	35 L REAR CAMERA COMM	36 BR REAR CAMERA POWER SUPPLY	37 SHIELD SHIELD	38 R REAR CAMERA GND	39 Y REAR CAMERA IMAGE SIGNAL	40 W REAR CAMERA IMAGE GND		1	1	Τ	Connector No. B68	Connector Name WIRE TO WIRE	Connector Type RH08MB	HS.	(1 2 3 4 ) (5 6 7 8 )	Terminal Color Signal Name [Specification]	4 R – [With around view monitor] 6 B – [With around view monitor]	7 W - [With around view monitor]	
Connector No.   B46	Connector Name AROUND VIEW MONITOR CONTROL UNIT		Connector Type TH40FW-NH	Į.	THE THE PARTY OF T		2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38	1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37			la.	No. of Wire Signal Name Copecinication.	1 B GND	2 Y BATTERY	3 P IGNITION	4 GR ACC	5 O ILLUMINATION	6 SB VEHICLE SPEED (8-PULSE)		В.	7	15 BR SENSOR SIGNAL 2 16 R SENSOR SIGNAL 3	Connector No. B66	Connector Name WIRE TO WIRE	Connector Type TH24MW-NH		1 2 3 4 5 6 7 8 9 10111 13 14 15 16 17 18 19 20 21 22 23	Terminal Color Signal Name [Specification]	13 L		
D AROUND VIEW MONITOR																							Connector No. B51	Connector Name WOOFER	Connector Type RS06FGY-PR	H.S.	(13 4 6 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Terminal Color No. of Wire Signal Name [Specification]	1 R SOUND SIGNAL WOOFER (-) 2 G SOUND SIGNAL WOOFER (+)	4         GR         WOOFER AMP. ON SIGNAL           5         B         GND	
BOSE AUDIO WITH NAVIGATION AND Connector No. 1845	ae u	Т	Connector Type TH24FW-NH	Ą	45	\ \ \ \ \ \	42 44 46 48 50 52 54 56 58 60 62 64	41 43 45 47 49 51 53 55 57 59 61 63	10000000		la.	No. of Wire Signal Name Lopecincation.]	41 Y FRONT CAMERA IMAGE SIGNAL	FRONT CA	SHIELD	44 B FRONT CAMERA GND	45 W FRONT CAMERA COMM	46 R FRONT CAMERA POWER SUPPLY	47 L SIDE CAMERA LH COMM	BR SIDE CAMER.	SHIELD	50 R SIDE CAMERA LH GND 51 Y SIDE CAMERA LH IMAGE SIGNAL	Connector No. B48	Connector Name REAR SQUAWKER LH	Connector Type TK02FBR	(表) H.S.	21	Terminal Color Signal Name [Specification]	1 L = -		

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## [BOSE AUDIO WITH NAVIGATION]

Signal Name [Specification]	SENSOR (RL)  Signal Name [Specification]	А
BUZZER RKOZFER	00 VDXQZFB	С
Connector No. Connector Type  Connector Type  Terminal Color No.  T	Connector No. Connector Name Connector Type A.S. A.S. A.S. A.S. A.S. A.S. A.S. A.S	D
soffication)	beification]	Е
REAR SQUAWKER RH TK02FBR  Signal Name (Specification)	CORNER SENSOR (RR)  VDXOZFB  Signal Name [Specification]	F
ector No.  ector Type  inal Color  V L  L	ector No. ector Name ector Type or of Wire or of Wire	G
Oon Oon Tem	T T T T T T T T T T T T T T T T T T T	Н
MONITOR NSS NSS NSS Signal Name [Specification] - [With BOSE audio]	WIRE  3 2 1  7 6 5  Signal Name [Specification]	I
MIRE TO TKIOFW-	WIRE TO RHOBER B	J
D AROUND V Connector No. Connector Name Connector Type 10 91 118 1 16 L 17 0	Connector No. Connector Name Connector Type Terminal Color No. of Wire 7 R R 7 R R	K
NO S		L
WITH NAVIGATIO TO WRE TO WRE TO SIGNAL TO SIGNAL TO WRE TO SIGNAL	NH NH 1 7 6 5 4 3 2 2 2 3 2 3 2 3 3 2 3 3 3 3 3 3 3 3	M
MWRE TO WIRE TO THROUGH THROUGH TO THROUGH TO THROUGH TO THROUGH THROUGH TO THROUGH THROUGH THROUGH THROUGH THROUGH THROUGH THROUGH THROUGH THROUGH THROUG	8243 wree 111110 9 9 7 1 2 2 2 2 1 9 8 7 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	AV
BOOSE AU Connector No. Connector Type  Connector Type  Terminal Color No. Of Walve  19 OF 19 OF 19 OF 10 OF	Connector No	0
		JCNWM0802GI

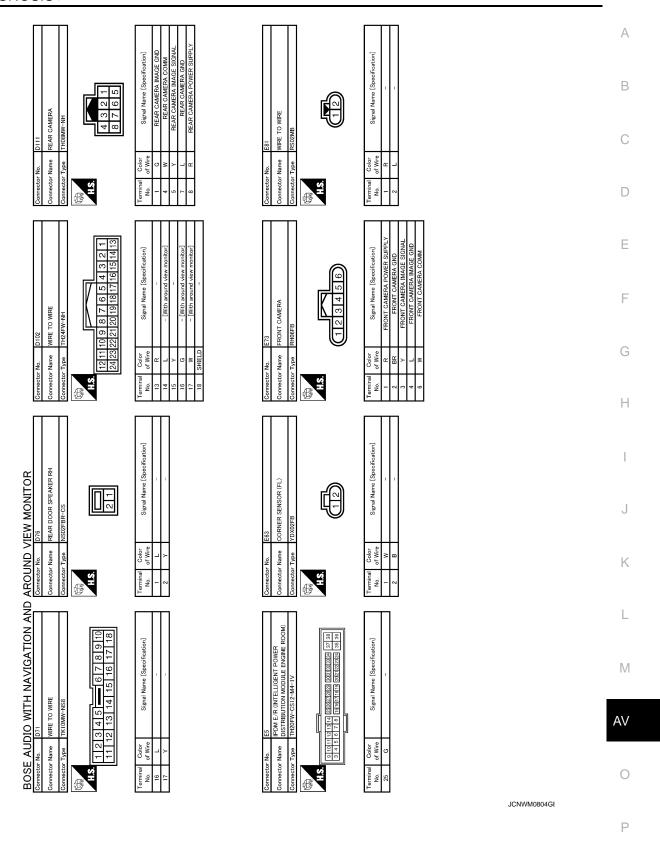
Revision: 2007 November AV-853 2008 EX35

⊔⊏	ND AROUND V	Connector No. D4 EDANT DATE BOSE	$\Box$
Connector Name WIRE TO WIRE Connector Type TH40FW-CS15	Connector Name   DOOR MIRROR (DRIVER SIDE)   Connector Type   TH24MW-NH	Connector Name SYSTEM) Connector Type NS02FBR-CS	Connector Name WIRE TO WIRE Connector Type TH40FW-CS15
15   15   15   15   15   15   15   15	14.5 121111019 8 7 6 5 4 3 2 1 242322212019181716151413	#8 21	
Terminal   Color   Signal Mane [Specification]   No.   of Wire   Signal Mane [Specification]	Terminal Color Signal Nane [Specification] No. of Wire 5 Y	Terminal   Color   Signal Name [Specification]	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   Signal Name [Specification]   Signal Name [Specification]   Signal Name   Signal Name
Connector No. D33 Connector Name DOOR MIRROR (PASSENGER SIDE) Connector Type TH2AMW-NH  12   11   10   9   7   6   5   4   3   2   1   1   2   2   1   2   2   1   2   1   1	Connector No. D34 Connector Name FRONT DOOR SPEAKER RH (WITH BOSE SYSTEM) Connector Type NS22FBR-CS  LAS	Connector No. DSI  Connector Name WIRE TO WIRE  Connector Type TX (IOMW-NS8  ***  ***  ***  ***  ***  ***  ***	Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NS02FBR-CS
Color   Signal Name [Specification]   Odor   Signal Name [Specification]   Odor   Color   Co	Terminal Color   Signal Name [Specification]	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   16   Y   -[With BOSE audio]   17   G   -[With BOSE audio]	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   T   Y   -   -

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## [BOSE AUDIO WITH NAVIGATION]



Revision: 2007 November AV-855 2008 EX35

Connector No. E151 Connector Name WIRE TO WIRE Connector Type RS0ZFB	Terminal Color Signal Name (Specification) 1	Connector No. F151 Connector Name TCM (TRANSMISSION CONTROL MODULE) Connector Type SPIOTEGY  H.S.  10 9 8 7 6 5 4 3 2 1	Terminal   Color   Signal Name [Specification]   No. of Wire   SPEV LAMP RLY   O   REV LAMP RLY
Connector No. E107 Connector Name PARKING BRAKE SWITCH Connector Type TB01FW  H.S.	Terminal Color Signal Name [Specification] No. of Wire 1 0	Corrector No. F103 Corrector Type TR36FW-NS10  H.S. SECOND STATES	Terminal Color Signal Name [Specification] No. of Wire 31 R
O AROUND VIEW MONITOR Cornector No. E106 Cornector Type TH80FW-CS16-TM4  WR. Cornector Type TH80FW-CS16-TM4  W. Cornector Type TH80FW-CS16-TM4	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   No. o	Connector No. F51  Connector Name A/T ASSEMBLY  Connector Type RK10FG-DGY  H.S. 6 4 3 2 1	Terminal   Color   Signal Name [Specification]   7   R
BOSE AUDIO WITH NAVIGATION AND Connector No.   E104   Connector Name   WIRE TO WIRE	Terminal Color   Signal Name [Specification]   No. of Wifee   Signal Name [Specification]	Connector No. E152 Connector Name CORNER SENSOR (FR) Connector Type VDX02FB	Terminal Color Signal Name [Specification]  1 Of Wire

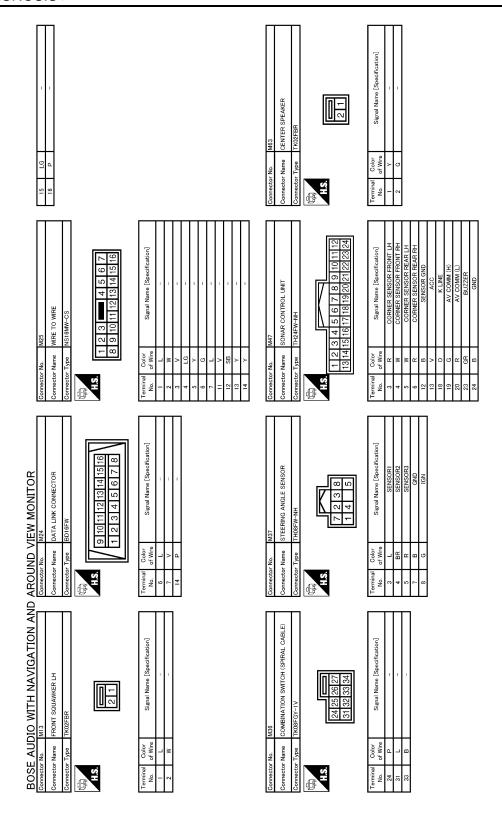
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[BOSE AUDIO WITH NAVIGATION]

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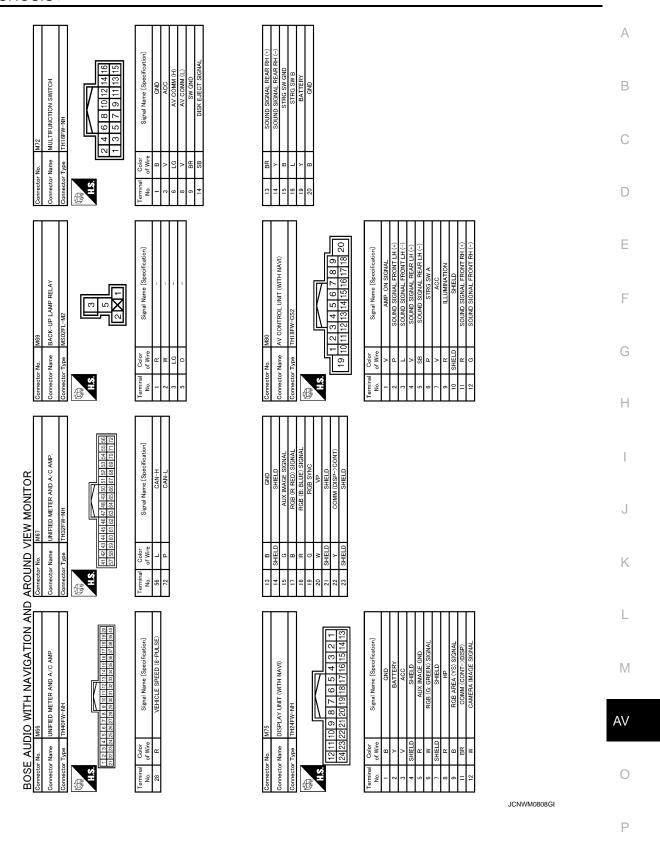
			A B
26 W 28 C 29 C	9 J J 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	61   1   1   1   1   1   1   1   1   1	D
1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 2 1 1 2 2 2 2 1 1 2	Signal Name [Specification]	Signal Name (Specification)  Signal Name (Specification)  Signal Name (Specification)	Е
Pr No. M4  pr Name WIRE TO WIRE  pr Type TH40PW-NH		WIRE TO THE STATE OF THE STATE	F
Connector No. Connector Type H.S. H.S.	Terminal Color No. of Wire 1	Connector No.   Connector Name   Connector Type   Conne	Н
0R 	Signal Name [Specification]	CSIG-TM4  CSIG-T	I
AROUND VIEW MONITOR  Connector No. M3  Connector Name FUSE BLOCK (J/B)  Connector Type NSISPW-CS  M3  5646   362616		MWIE TO THE TO T	J
	Terminal   Color   No. of Wire   12C   O	Connector No.   Connector Name   Connector Type   Color No.   Co	K
ATION AND	ation]	1   1   1   1   1   1   1   1   1   1	L
OCK (J/B) M2 M2 M2 M2 M2 M2 M2 M2 M4 M2 M4 M2 M4	Signal Name [Specification]	RIE	M
NSOGEW-	Octor of Wire O	MAE TO   MEE TO   M	AV
BOSE AU Connector No. Connector Name Connector Type H.S.	Terminal No. 2A 5A 5A	Connector No.   Connector No.   Connector No.   Connector No.   Connector No.   Connector Type   Connector	0
			Р

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## [BOSE AUDIO WITH NAVIGATION]



Revision: 2007 November AV-859 2008 EX35

# Signal Name [Specification] Signal Name [Specification] AV CONTROL UNIT (WITH NAVI) Signal Name [Specification] BOSE AUDIO WITH NAVIGATION AND AROUND VIEW MONITOR WIRE TO WIRE Signal Name [Specification] Signal Name [Specification] AV CONTROL UNIT (WITH NAVI) AV CONTROL UNIT (WITH NAVI)

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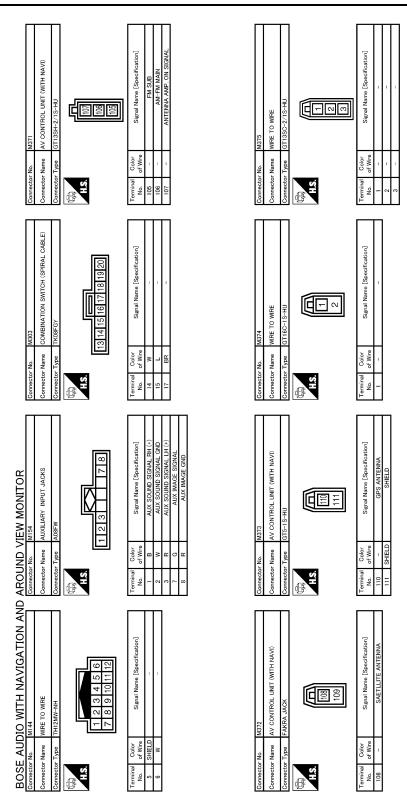
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## [BOSE AUDIO WITH NAVIGATION]

10 AROUND VIEW MONITOR   14 STEED	A B C
ABOUND VIET 14 G G G G G G G G G G G G G G G G G G	E F G
<b>7</b>	J K
Color   Colo	M AV

Revision: 2007 November AV-861 2008 EX35

## [BOSE AUDIO WITH NAVIGATION]



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## [BOSE AUDIO WITH NAVIGATION]

	ool MAL	А
HIU  Z  Signal Name [Specification]	N BASE N+1/IPP-HU Signal Name (Specification) ANTENNA AMP ON SIGNAL AM-FM MAIN	В
M380 WIRE TO GT16-1S.	M886 ANTENN 60 GT135Sh	С
Connector No. Connector Name Connector Type Terminal Color No. Of Wire 1	Connector No.  Connector Type  Connector Type  H.S.  H.S.  Terminal Color  No.  Of Well  1	D
soffcation]	ooffcation]	Е
WIRE TO WIRE GTI3SC-2/IS-HU  TI Signal Name [Specification]	WIRE TO WIRE GT13SCN-2/IPP-HU Signal Name (Specification)	F
No.  Name Type  Color of Wire	No. Type	G
Commetto Com	Connector Connector No.	Н
MONITOR WRE PP-HU  Signal Name [Specification]	A BASE PP-HU Signal Name [Specification] SAETLLITE ANTERNA	1
MB377 WIRE TO WIRE GT16C-IPP-HU Z Signal Nam	MX83 ANTEWNA BASE GTIGC-IPP-HU Signal Nam SAFTLL	J
AROUND V. Gonnector No. Gonnector Type Gonnector Type H.S. H.S.  Terminal Color No. of Wire 1	Connector No. M. Connector No. M. Connector Type G. Connector Type G. H.S. H.S. M. Color No. or Wire 3.	К
QNA NO		L
BOSE AUDIO WITH NAVIGATION AND Semector No. M376 Donnector Name WIRE TO WIRE Connector Type GT13SCN-2/IPP-HU  ALL Semector Type GT13SCN-2/IPP-HU  This Semector	WIRE PP-HU Signal Name (Specification)	M
UDIO WITH NA M376  WIRE TO WIRE  GTI3SCN-2/IPP-HU  GTI3SCN-2/IPP-HU  Signal Name	M382 WIRE TO GT16C-1	AV
BOSE AUI Gonnector Na Connector Name Connector Type Color Co	Connector No. Connector Nane Connector Type Terminal Color No. 1	0
		JCNWM0812GI

## WIRE TO WIRE WINDOW ANTENNA (SUB) Signal Name [Specification] Signal Name [Specification] BOSE AUDIO WITH NAVIGATION AND AROUND VIEW MONITOR (<del>-</del>) WIRE TO WIRE WIRE TO WIRE Signal Name [Specification] Signal Name [Specification WIRE TO WIRE WIRE TO WIRE

JCNWM0813GI

## SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

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[BOSE AUDIO WITH NAVIGATION]

Α

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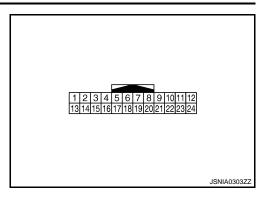
## SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Display	Description	
SONAR OPE	On	Around view monitor operating (sonar operating).	
SONAR OFE	Off	Around view monitor non-operating (sonar non-operating).	
BUZZER OUTPUT	On	Buzzer is output condition.	
BUZZER OUTFUT	Off	Buzzer is not output condition.	
00.0511/513	ERROR	When a sensor is abnormal.	
	LV.0	When a sensor is not detection.	
CR SEN [FL] CR SEN [FR] CR SEN [RL]	LV.2	The distance between the corner sensor and an obstacle is 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	
CR SEN [RR]	LV.3	The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	
	LV.4	The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	inal No. e color)	Description			Condition	Value	L
+	_	Signal name	Input/ Output		Condition	(Approx.)	
3 (R)	12 (B)	Corner sensor signal front LH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0 → 10ms JSNIA0837GB	A
4 (W)	12 (B)	Corner sensor signal front RH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0 → 10ms JSNIA0837GB	F

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	nal No. color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
5 (W)	12 (B)	Corner sensor signal rear LH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0 10ms JSNIA0837GB
6 (W/R)	12 (B)	Corner sensor signal rear RH	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	(V) 5 4 3 2 1 0 • 10ms JSNIA0837GB
12 (B)	Ground	Sensor ground	_	Ignition switch ON	_	0 V
13 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	12.0 V
18 (O)	_	K-line (CONSULT-III)	_	_	_	_
19 (G)	_	AV communication (H)	Input/ Output	_	_	_
20 (R)	_	AV communication (L)	Input/ Output	_	_	_
23 (GR)	Ground	Buzzer drive signal	Output	Ignition switch ON	When buzzer operation	NOTE: Waveform period changes due to the distance to an obstacle.
24 (B)	Ground	Ground	_	Ignition switch ON	_	0 V

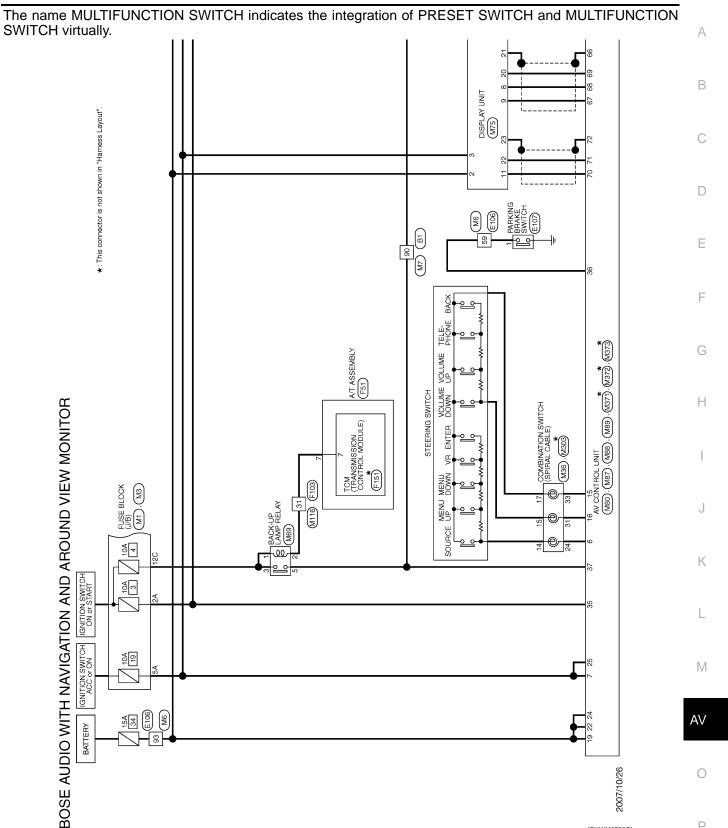
Wiring Diagram - BOSE AUDIO WITH NAVIGATION AND AROUND VIEW MONITOR

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Click here to view the eWD.

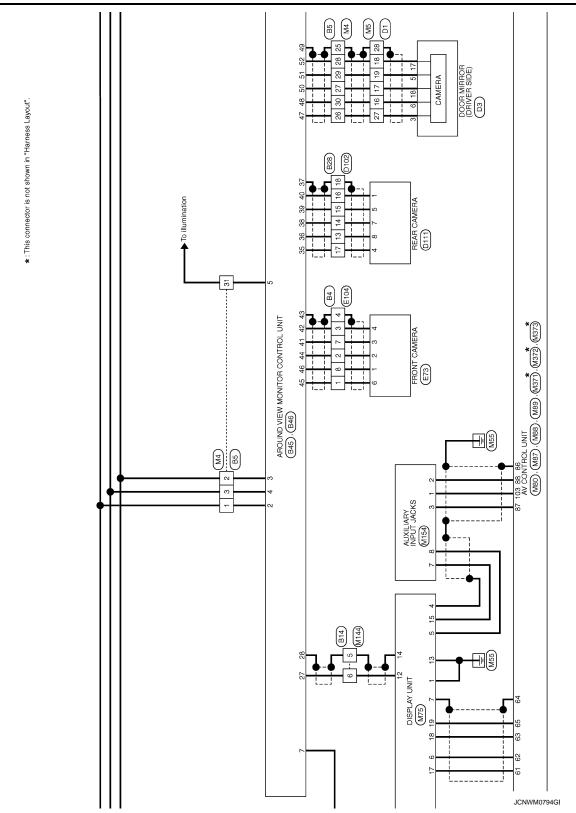
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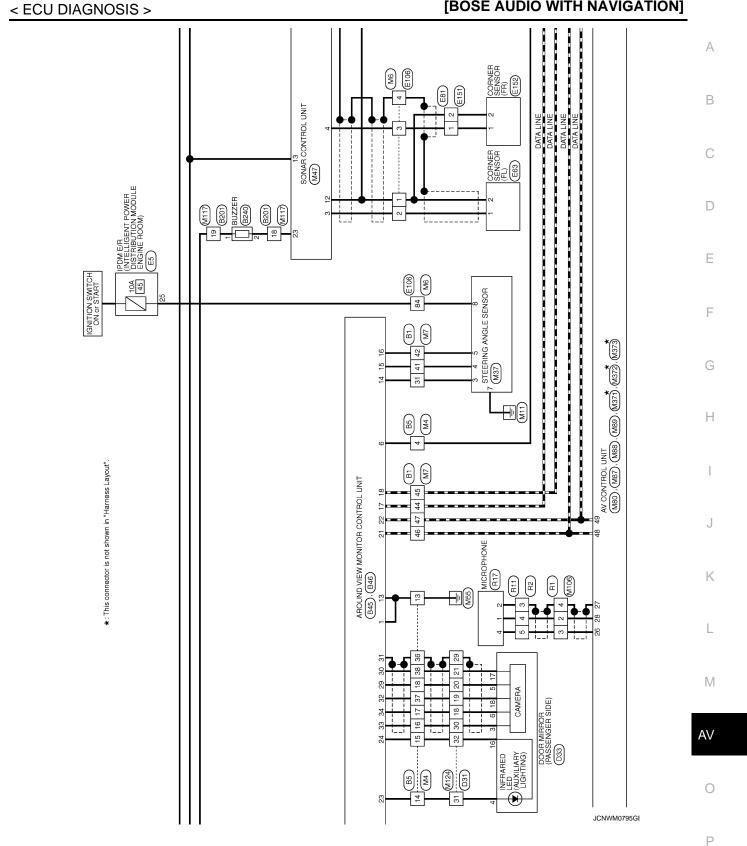
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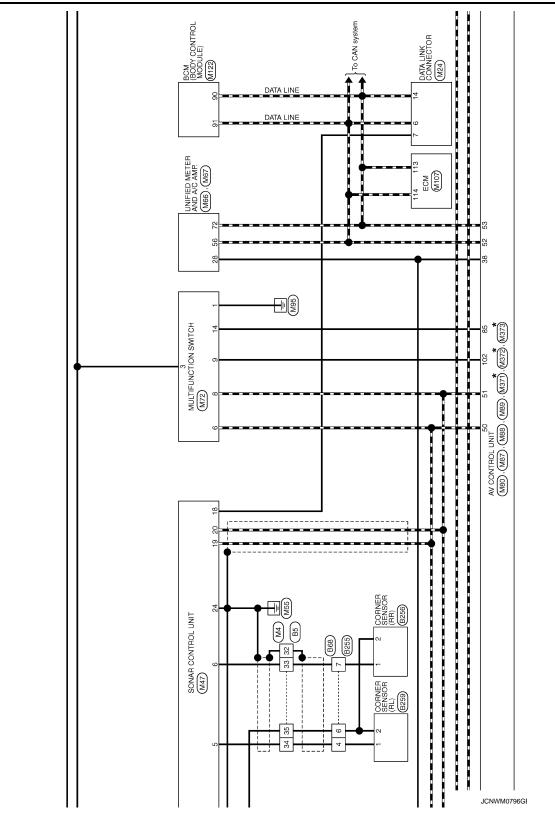
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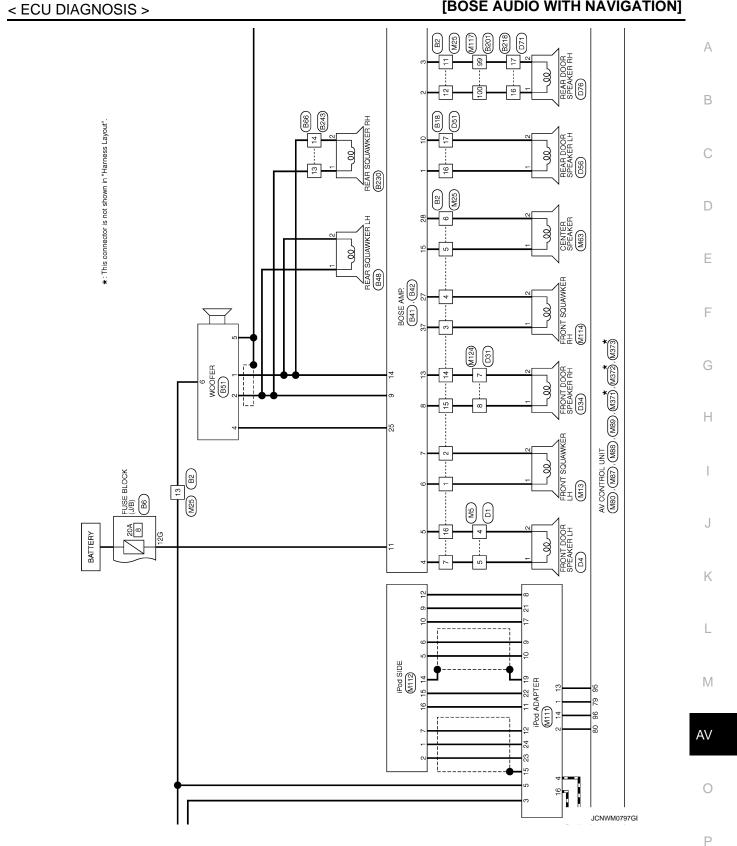
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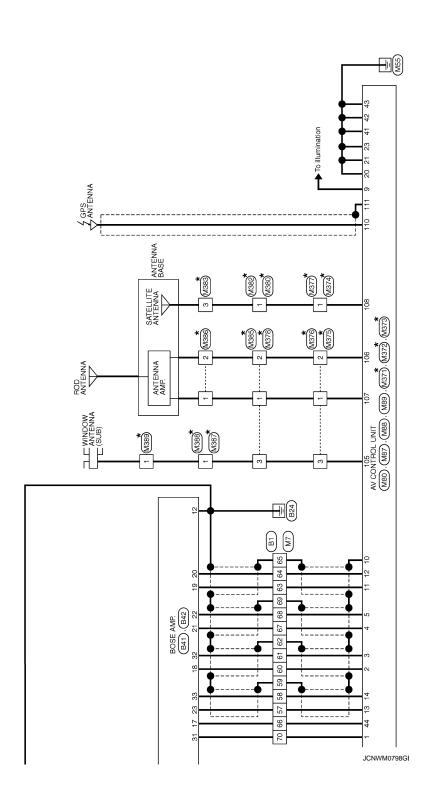




\*: This connector is not shown in "Harness Layout".





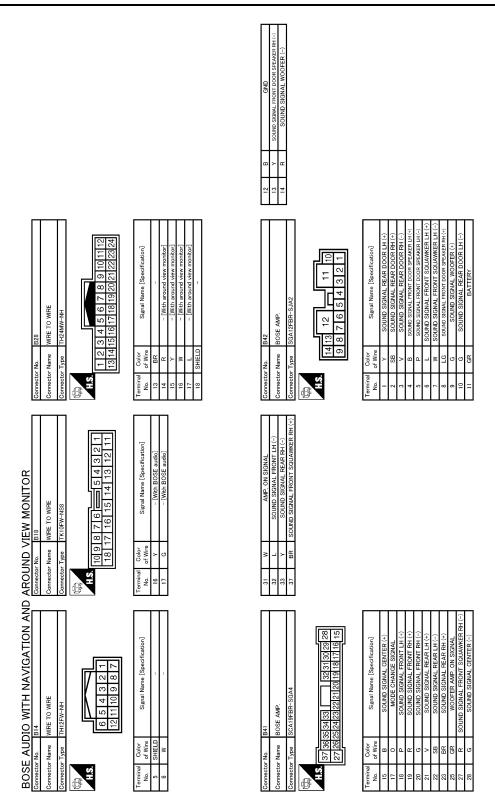


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	Connector No.   85   Connector No.   85   Connector Name   FUSE BLOCK (J/B)	A B C
Signal Name   Signal Name   Specification   Specification   Signal Name   Specification   Signal Name   Specification   Spec	26 L L 2	E F G
AROUND VIEW MONITOR  61	Connector No.   B5   Connector No.   B5   Connector Name   WIRE TO WIRE	J K
BOSE AUDIO WITH NAVIGATION AND Connector No.   Bi   Connector No.   Bi   Connector Type   TH80FW-CS16-TM4   Connector Type   TH80FW-CS16-TM4   Connector Type   TH80FW-CS16-TM4   Connector Type   TH80FW-CS16-TM4   Connector Type   The transport of the transpor	Connector No.   B4   Connector No.   B4   Connector No.   Connector Type   NS12FW-CS	L  M  AV  O  JCNWM0799GI

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17   G	Connector No.         B88           Connector Name         WIRE TO WIRE           Connector Type         RH08MB           M.S.         1 2 3 4           F 6 7 8	Terminal Color  No. of Wire Signal Name (Specification)  4 R - [With around view monitor]  6 B - [With around view monitor]  7 W - [With around view monitor]		A B C
Connector No.   B46	ttor No. 866 ttor Type TH24AWY-NH  etcr Type TH24AWY-NH  1 2 3 4 5 6 1 13 14 15 16 17 11	Terminal   Color   Signal Name (Specification)   No. of Wire   13   L   -   -		E F G
S2 W SIDE CAMERA LH IMAGE GND S2 W SDE CAMERA LH IMAGE GND	Connector No. B51 Connector Name WOOFER Connector Type RS08FGV-PR	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Color		I J K
BOSE AUDIO WITH NAVIGATION AND Connector No.   845	Name REAF	Terminal Color No. of Wire 1 L	А	M V

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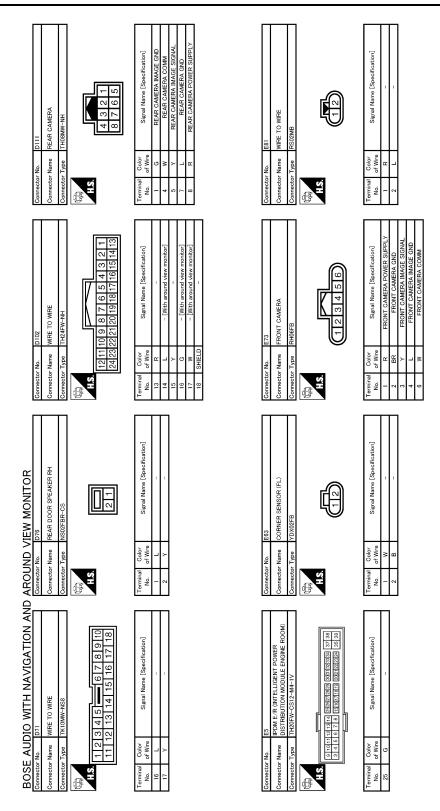
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Connector No. D31  Connector Name WIRE TO WIRE  Connector Type ITH40FW-CS15  (15) 14 15) 12 11 10 10 10 17 10 16 14 13 12 11  Connector Type ITH40FW-CS15	Terminal Color No. of Wire 7 R R 7 R 18 BR - 19 Y - 20 B B - [With around view monitor] 21 G - [With around view monitor] 30 W - 31 LG - [With around view monitor] 31 BR - [With around view monitor] 32 SHELD - [With around view monitor] 33 BR - [With around view monitor] 34 BR - [With around view monitor] 35 BR - [With around view monitor] 36 BR - [With around view monitor] 37 BR - [With around view monitor] 38 BR - [With around view monitor]	Connector No. D56 Connector Name REAR DOOR SPEAKER LH Connector Type NS02FBR-CS  H.S.	Terminal Color Number (Specification)  1 Y		A B C
D4   D4   D4   D4   Connector No.   D4   Connector Name   SYSTEM   SYSTEM	Terminal   Color   Signal Name [Specification]	Cornector No. D51  Connector Name WIRE TO WIRE  Connector Type TK10MW-NS8  TK10MW-NS8  TK2 4 5 6 7 8 9 10  TK1 12 13 14 15 16 17 18	Terminal   Color   Signal Name [Specification]   No. of Wire   Y   - [With BOSE audio]     17   G   - [With BOSE audio]		E F G
AROUND VIEW MONITOR	Terminal   Color   Signal Name [Specification]   Signal Name   Specification]   Signal Name   Signal Na	Connector No. D34 Connector Name SYSTEM Connector Type NS0ZFBR-GS H.S.	Terminal   Color   Signal Name [Specification]		I J K
BOSE AUDIO WITH NAVIGATION AND Connector No.   DI	Terminal   Color   Signal Name [Specification]	Connector No. D33 Connector Name D0OR MIRROR (PASSENGER SIDE) Connector Type 112 1110 9 8 7 6 5 4 3 2 1 [24 23 22 21 20 19 18 17 16 15 14 13	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]	JCNWM0803Gi	M AV

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WIRE  Signal Name [Specification]	F151 TOM (TRANSMISSION CONTROL MODULE) SPIOFBGY Signal Name [Specification] REV LAMP RLY	АВ
Connector No. E151 Connector Name WRE TO WRE Connector Type RS02FB  MA.  Terminal Color No. of Wire  T R	Connector No.   F151	C D
EIO7 PARKING BRAKE SWITCH TBOIFW  Signal Name [Specification]	W-NS10 W-NS10 Signal Name [Specification]	E F
Connector No. E107 Connector Name PARKING BR Connector Type ITB01FW H.S. H.S. Terminal Color No. of Wire 1	Connector No.   F103	G
MONITOR WIRE CSIG-TM4 Signal Name (Specification)	EMBLY DGY 4 3 2 1 9 8 7 6 Signal Name [Specification]	ı
AROUND VIEW MONITOR Connector No. E106 Connector Type IH80FW-CS16-TM4  H.S.   Signal Name [Sp. No. of Wire   Signal Name [Sp	Connector No.   F51	J K
	Specification)	L
SSE AUDIO W	Connector No. E152 Connector Name CORNER SENSOR (FR) Connector Type YDX02FB Terminal Color No. of Wire Signal Name [3] 1 R R	AV
OB LEST LEST LEST LEST LEST LEST LEST LEST	③ · ③ · ③ · ③ · · · · · · · · · · · · ·	
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BOSE AUDIO WITH NAVIGATION AND Connector No. MI Connector Name FUSE BLOCK (J/B) Connector Type NSOBFW-M2  MA  3A 2A 6A 5A 4A  BA 7A 6A 5A 4A	AROUND VIEW MONITOR	Connector No. M4  Connector Name WIRE TO WIRE  Connector Type TH40FW-NH  LS.  Connector Type Th60FW-NH  Connector Type Th60FW-NH  Connector Type Th60FW-NH	26 W
Terminal   Color   Signal Name [Specification]   2A   G   -	Terminal Color No. of Wire Signal Name [Specification]	Terminal         Color         Signal Name [Specification]           1         Y         -           2         P         -           3         V         -           4         V         -           13         B         -           14         LG         -           15         G         -           16         W         -           17         R         -           18         Y         -           25         SHELD         -	38 G
Connector No.   M5   Connector Name   WIRE   TO WIRE	Connector No.  Missing Connector Type TH80MW-CS16-TM4  LS	Connector No. M7 Connector Name WIRE TO WIRE Connector Type THEOMW-CS16-TM4	62 SHELD
Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   Signal Name [Spec	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   2   R	Terminal   Color   Signal Name [Specification]   No. of Wire   Signal Name [Specification]   41   ER   -	

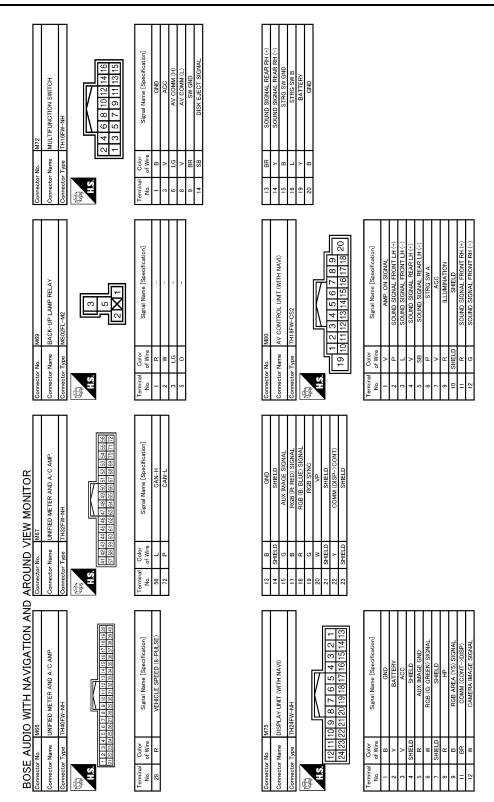
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- d 91		Connector No. M63 Connector Name CENTER SPEAKER Connector Type TK02FBR H.S.	Terminal Color		A B C
Connector No. M25  Connector Name WIRE TO WIRE  Connector Type INSIBMW-CS  M3.  1 2 3	Terminal Color No. of Mire 1 L 2 W 3 V 4 LG 5 G 6 G 11 V 11 V 11 V 11 V 12 SB 13 Y 14 Y 15 Y 16 C 17 V 18 C 18 C 18 C 18 C 19 C 10	Connector Na.  Connector Name SONAR CONTROL UNIT  Connector Type 112 12 3 4 5 6 7 8 9 10 11 12  113 14 15 16 17 118 19 20 21 22 23 24	Calor   Signal Name [Specification]		E F G
AROUND VIEW MONITOR	Terminal   Color   Signal Name   Specification	Connector No. M37 Connector Name STEERING ANGLE SENSOR Connector Type THGSPW-NH  T 2 3 8  T 2 3 8	Terminal   Calor   Signal Name [Specification]   Alor   Signal Name [Specification]   Signal Name   Sensoral   Sensoral		J K
BOSE AUDIO WITH NAVIGATION AND Gennector No. M13 Connector Name FRONT SQUAWKER LH Connector Type TKGZFBR	Terminal Color No. of Wire Signal Name [Specification] 1 L	Connector No. M36 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TKG8FGV-1V  H.S. 24 25 26 27  31 32 33 34	Terminal Color   Signal Name [Specification]	JCNWM0807GI	M AV

Revision: 2007 November AV-881 2008 EX35

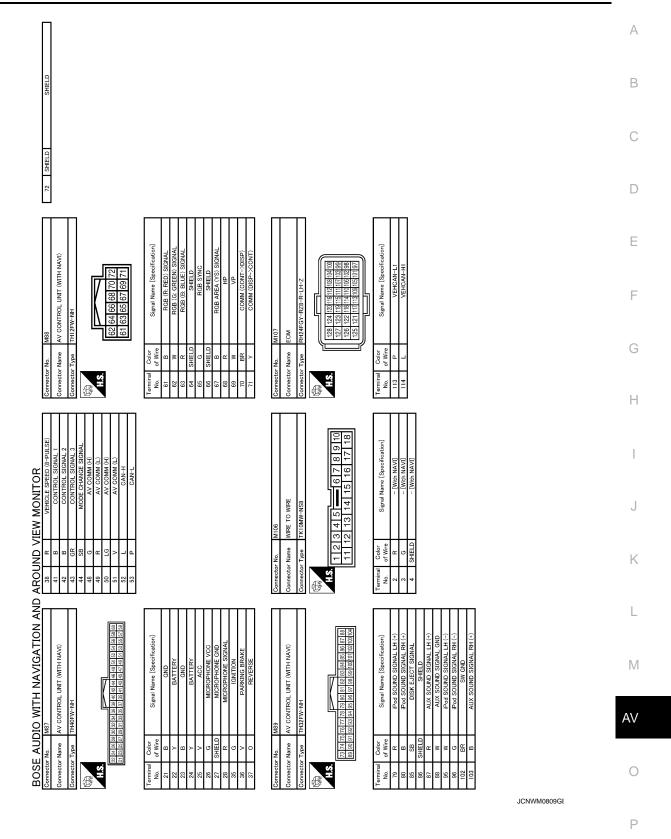
< ECU DIAGNOSIS >



JCNWM0808GI

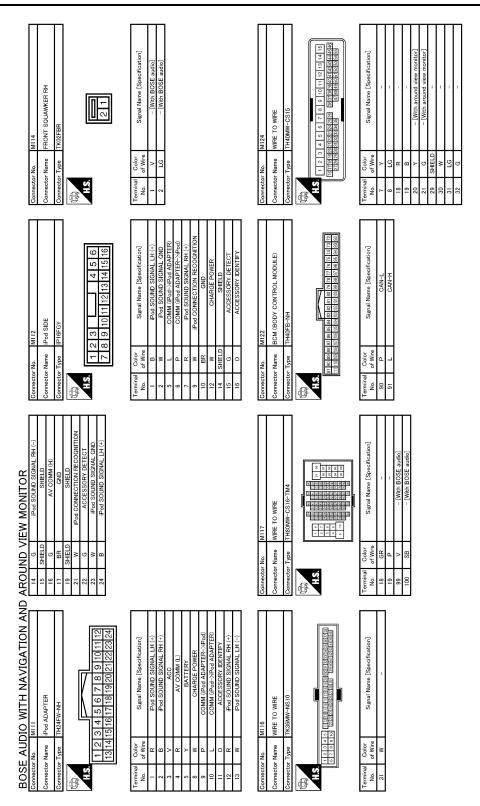
## **SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)**

[BOSE AUDIO WITH NAVIGATION] < ECU DIAGNOSIS >



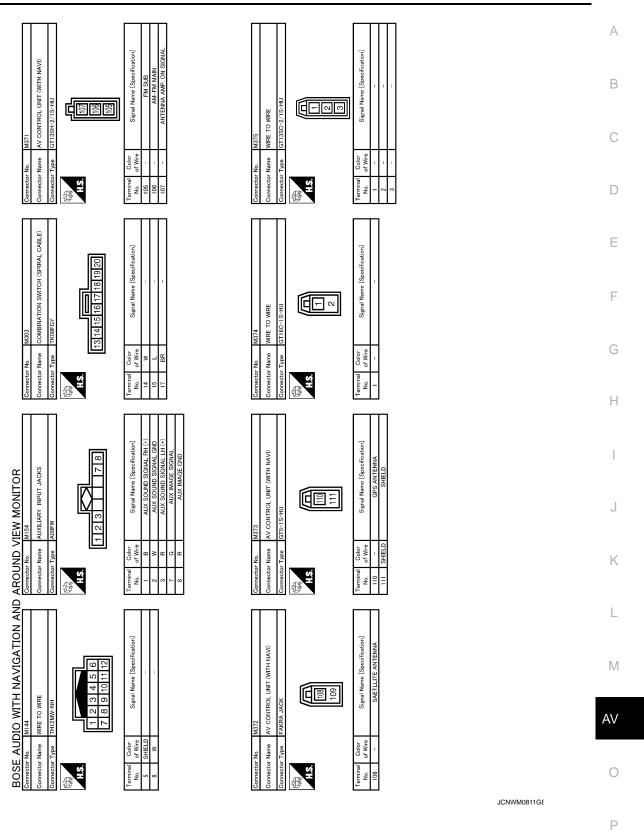
**AV-883** Revision: 2007 November 2008 EX35

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JCNWM0810GE

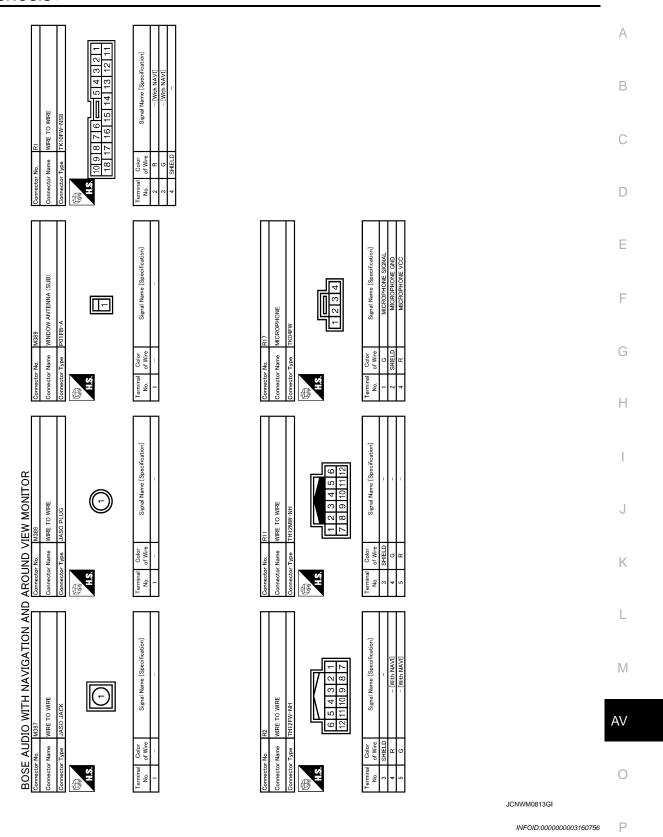
< ECU DIAGNOSIS >



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BOSE AUDIO WITH NAVIGATION AND Connector No. M376 Connector Name WIRE TO WIRE Connector Type GTI3SCN-2/IPP-HU		Connector No. M378 Connector Name WIRE TO WIRE Connector Type GT13SC-2/1S-HU	Connector No. M380 Connector Name WIRE TO WIRE Connector Type GT16-1S-HU
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т	т	т	Connector No. M386
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1			
Terminal   Color   Signal Name [Specification]   No. of Wire	Terminal Color Signal Name [Specification] No. of Wire	Terminal Color Signal Name [Specification] No.	Terminal   Color   Signal Name [Specification]   No.   of Wire
-	3 - SAETLLITE ANTENNA	2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- ANTENNA AMP. ON SIGNAL   2 - AM-FM MAIN

JCNWM0812GI



### Fail-Safe

• Sonar control unit has diagnosis function which can detect corner sensor malfunction and sensor harness disconnection.

 It transmits the malfunction status to around view monitor control unit and informs the malfunction to the user by displaying continuously red sonar indicator.

< ECU DIAGNOSIS >

DTC Index

DTC	Display item	Malfunction is detected when	Reference
B2700	CORNER SENSOR [FL] [B2700]	Corner sensor front left is malfunctioning.	AV-536
B2701	SENSOR HARNESS OPEN [CR-FL] [B2701]	Corner sensor front left harness circuit is open.	AV-537
B2702	CORNER SENSOR [FR] [B2072]	Corner sensor front right is malfunctioning.	<u>AV-538</u>
B2703	SENSOR HARNESS OPEN [CR-FR] [B2703]	Corner sensor front right harness circuit is open.	AV-539
B2704	CORNER SENSOR [RL] [B2704]	Corner sensor rear left is malfunctioning.	<u>AV-540</u>
B2705	SENSOR HARNESS OPEN [CR-RL] [B2705]	Corner sensor rear left harness circuit is open.	AV-541
B2706	CORNER SENSOR [RR] [B2706]	Corner sensor rear right is malfunctioning.	<u>AV-542</u>
B2707	SENSOR HARNESS OPEN [CR-RR] [B2707]	Corner sensor rear right harness circuit is open.	AV-543

#### NOTE:

"TIME" means the following.

- 0: Means detected malfunction at present. (From malfunction detection to turning ignition switch OFF)
- 1–39: Means detected malfunction in past.

## SYMPTOM DIAGNOSIS

### MULTI AV SYSTEM SYMPTOMS

Symptom Table INFOID:0000000003459047

#### RELATED TO NAVIGATION

Trouble diagnosis chart by symptom

Symptoms	Check items	Possible malfunction location / Action to take
Multifunction switch and preset switch operation does not work.	All switches cannot be operated.     "MULTI AV" is displayed on system selection screen when the CONSULT-III is started.	Multifunction switch power supply and ground circuit.     AV communication circuit between AV control unit and multifunction switch.     Perform CONSULT-III self-diagnosis. Refer to AV-498, "CONSULT-III Function (MULTI AV)".
	All switches cannot be operated.     "MULTI AV" is not displayed on system selection screen when the CONSULT-III is initialized.	AV control unit power supply and ground circuit malfunction. Refer to AV-544, "AV CONTROL UNIT: Diagnosis Procedure".
	Only specified switch cannot be operated.	Multifunction switch or preset switch malfunction.  Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-482, "Diagnosis Description".
Fuel economy display, vehicle setting operation is abnormal.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis. Refer to AV-498, "CONSULT-III Function (MULTI AV)".
	There is no malfunction in the self-diagnosis results.	Ignition signal circuit malfunction.  Refer to AV-544, "AV CONTROL UNIT : Diagnosis Procedure".
Guide sound is not heard.	On the setting display select "system sound (guide sound volume, etc.)," and confirm that guide sound is ON.	AV control unit malfunction.  Replace AV control unit. Refer to AV-903, "Exploded View".

#### RELATED TO HANDS-FREE PHONE

- Check that the cellular phone is corresponding type (Bluetooth® correspond) when the hands-free related malfunction vehicle is in service before performing a diagnosis.
- There is a case that malfunction occurs due to the version change of the phone type, etc. even though it is a corresponding type. Therefore, confirm it by changing the cellular phone to another corresponding type phone, and check that it operates normally. It is necessary to distinguish whether the cause is the vehicle or cellular phone.

Simple check for Bluetooth® communication

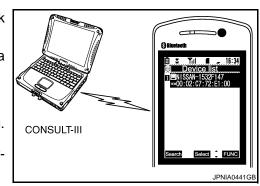
If cellular phone and AV control unit cannot be connected with Bluetooth® communication, following procedure allows the technician to judge which device has malfunction.

- Turn on a cellular phone, not connecting Bluetooth® communication. 1.
- Start CONSULT-III, then start Windows®.
- Set CONSULT-III near a cellular phone.
- When operated Bluetooth® registration by cellular phone, check if CONSULT-III\* would be displayed on the device name. (If other Bluetooth® device is located near cellular phone, a name of the device would be displayed also.)

#### NOTE:

\*:Displayed device name is "NISSAN-\*\*\*\*\*\*."

- If no device name is displayed, cellular phone is malfunctioning. Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.



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### [BOSE AUDIO WITH NAVIGATION]

Trouble diagnosis chart by symptom

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection. (no connection is displayed on the display at the guide.)	Repeat the registration of cellular phone.	AV control unit malfunction.  Replace AV control unit. Refer to AV-903, "Exploded View".
Hands-free phone cannot be established.	<ul> <li>Hands-free phone operation can be made, but the communication cannot be established.</li> <li>Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.</li> </ul>	AV control unit malfunction.  Replace AV control unit. Refer to AV-903, "Exploded View".
The other party's voice cannot be heard by hands-free phone.	Check the "microphone speaker" in "Confirmation/Adjustment" mode if sound is heard.	AV control unit malfunction.  Replace AV control unit. Refer to AV-903, "Exploded View".
	Check the "microphone speaker" in "Confirmation/Adjustment" mode if sound is not heard.	AV control unit malfunction.  Replace AV control unit. Refer to AV-903, "Exploded View".
Originating sound is not heard by the other party with handsfree phone communication.	Sound operation function is normal.	AV control unit malfunction.  Replace AV control unit. Refer to AV-903, "Exploded View".
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-560, "Diagnosis Procedure".

### RELATED TO REAR VIEW MONITOR

Trouble diagnosis chart by symptom

Symptoms	Check items	Probable malfunction location
Camera image is not displayed (displayed in black and nothing can be displayed)	AUX image is not displayed.	<ul> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-555, "Diagnosis Procedure"</li> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-556, "Diagnosis Procedure".</li> </ul>
Camera image is not shown. (Guiding line is displayed.)	_	<ul> <li>Camera image signal circuit between camera control unit and rear view camera.</li> <li>Rear view camera power supply circuit. Refer to AV-562, "Diagnosis Procedure".</li> </ul>
Camera image is not displayed. (Only warning message under area is displayed.)	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis.  Refer to AV-498, "CONSULT-III Function (MULTI AV)".
	AUX image is normal.	Camera image signal circuit malfunction between camera control unit and display unit.  Refer to AV-564, "WITH REAR VIEW MONITOR: Diagnosis Procedure".
	AUX image is not displayed.	RGB area (YS) signal circuit malfunction between AV control unit and display unit.  Refer to AV-554, "Diagnosis Procedure".
	Select "Camera Cont." of "Confirmation/ Adjustment" mode, Reverse Sensor is not turned ON at "Connection Confirmation".	Reverse signal circuit (camera control unit).
Camera image is rolling.	AUX image is also rolling.	Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit.  Refer to AV-556, "Diagnosis Procedure".

#### < SYMPTOM DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

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Symptoms	Check items	Probable malfunction location
Camera image does not switch	Malfunction of self-diagnosis result is indicated.	Camera-connection recognition signal circuit Refer to AV-498, "CONSULT-III Function (MULTI AV)".
Camera image does not switch.	Malfunction of self-diagnosis result is not indicated.	Reverse signal circuit (AV control unit).
Possible route line is indicated abnormally when camera image is displayed.	_	Sensor signal circuit malfunction.  Refer to AV-567, "WITH REAR VIEW MONITOR: Diagnosis Procedure".

#### RELATED TO AROUND VIEW MONITOR

Symptoms	Check items	Probable malfunction location / Action to take
	"Camera Cont." of "Confirmation/Adjustment" can be selected.	Ignition signal circuit.
It does not switch to camera image even when the "CAMERA" switch is pressed or the selector lever is in the reverse position.	"Camera Cont." of "Confirmation/Adjustment" cannot be selected.	<ul> <li>Around view monitor control unit power supply and ground circuits. Refer to AV-547, "AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure".</li> <li>AV communication circuits. Refer to AV-498, "CONSULT-III Function (MULTI AV)".</li> </ul>
	Only superimposing is displayed. (Only the image displayed by AV control unit is displayed)	<ul> <li>Camera image signal circuit between around view monitor control unit and display unit.     Refer to AV-547, "AROUND VIEW MONITOR CONTROL UNIT: Diagnosis Procedure".</li> <li>RGB (YS) area signal circuit.     Refer to AV-554, "Diagnosis Procedure".</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.	Superimposing is not displayed.	Communication circuit between AV control unit and display unit.  Refer to AV-498. "CONSULT-III Function (MULTI AV)".  When detecting no malfunction in those components, the following items are a possible cause.  • Horizontal synchronizing (HP) signa circuit malfunction between AV control unit and display unit.  Refer to AV-555, "Diagnosis Procedure".  • Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit.  Refer to AV-556, "Diagnosis Procedure".
Camera image is rolling.	AUX image is rolling	<ul> <li>Horizontal synchronizing (HP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-555, "Diagnosis Procedure".</li> <li>Vertical synchronizing (VP) signal circuit malfunction between AV control unit and display unit.     Refer to AV-556, "Diagnosis Procedure".</li> </ul>
It cannot be switched to rear view monitor even when the selector lever is in the reverse position.	The front view is displayed normally.	Reverse signal circuit. (AV control unit

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#### < SYMPTOM DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

Symptoms	Check items		Probable malfunction location / Action to take
The predicted course line display in front view and rear view is malfunctioning.	The "Steer. Angle Sensor" is not turned ON at "Connection Confirmation" of "Camera Cont."		Steering angle sensor signal circuits.  Refer to AV-567, "WITH REAR VIEW MONITOR: Diagnosis Procedure".
<ul> <li>The front view screen is not displayed.</li> <li>The front of Birds-Eye view</li> </ul>	Check the item Front Camera in "Connec- tion Confirmation"	Image Output Signal: NG     COMM Status: NG     COMM Line: NG	Front camera image signal circuit.     Front camera power supply and ground circuits.  Refer to AV-578, "Diagnosis Procedure"
screen is not displayed.	mode of "Camera Cont."	Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Front camera communication signal circuit. Refer to AV-577, "Diagnosis Procedure".
<ul> <li>The rear view screen is not displayed.</li> <li>The rear of Birds-Eye view screen</li> </ul>	Check the item Rear Camera in "Connec- tion Confirmation"	Image Output Signal: NG     COMM Status: NG     COMM Line: NG	Rear camera image signal circuit.     Rear camera power supply and ground circuits.  Refer to AV-581, "Diagnosis Procedure".
is not displayed.	mode of "Camera Cont."	Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Rear camera communication signal circuits. Refer to AV-580, "Diagnosis Procedure".
<ul> <li>The front-side screen is not displayed.</li> <li>The side RH of Birds-Eye view screen is not displayed.</li> </ul>	Check the item Pass- Side Camera in "Con- nection Confirmation" mode of "Camera Cont."	Image Output Signal: NG     COMM Status: NG     COMM Line: NG	Side camera RH image signal circuit.     Side camera RH power supply and ground circuits.     Refer to AV-587, "Diagnosis Procedure".
		Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Side camera RH communication circuit. Refer to AV-586, "Diagnosis Procedure".
The side LH of Birds-eye view screen is not displayed.	Check the item Dr- Side Camera at "Con- nection Confirmation" mode of "Camera	Image Output Signal: NG     COMM Status: NG     COMM Line: NG	Side camera LH image signal circuit.     Side camera LH power supply and ground circuits.  Refer to AV-584. "Diagnosis Procedure".
	Cont."	Image Output Signal: OK     COMM Status: NG     COMM Line: NG	Side camera LH communication circuit. Refer to <u>AV-583</u> , " <u>Diagnosis Procedure</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 (around view monitor control unit).
Around view monitor does not start other than shift position "R"		_	Certain States restrict the operation so that around view monitor does not start other than at shift position "R".

RELATED TO CAMERA ASSISTANCE SONAR

#### < SYMPTOM DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

Symptoms	Check items	Probable malfunction location / Action to take
	The malfunction is detected in only 1 indicator (Always displayed in red)	Corner sensor malfunction in corresponding area     Corner sensor harness circuit in corresponding area     Perform CONSULT-III self-diagnosis of sonar system. Refer to AV-506, "CONSULT-III Function (SONAR)".
The malfunction is detected in the sonar indicator (Always displayed in red)	The malfunction is detected in all 4 indicators (Always displayed in red)	Corner sensor ground circuit. Perform CONSULT-III self-diagnosis of sonar system. Refer to AV-506, "CONSULT-III Function (SONAR)".  Sonar control unit power supply and ground circuits.  AV communication circuits. Perform CONSULT-III self-diagnosis of multi AV system. Refer to AV-498, "CONSULT-III Function (MULTI AV)".
The sonar indicator is normal, but the buzz-	The buzzer is turned ON when performing "Buzzer" in "Active test" of "Sonar".	Replace sonar control unit. Refer to AV- 929, "Exploded View"
er does not sound	The buzzer is not turned ON when performing "Buzzer" in "Active test" of "Sonar".	Replace buzzer. Refer to AV-932, "Exploded View".

#### **RELATED TO RGB IMAGE**

Trouble diagnosis chart by symptom

Symptoms	Check items	Possible malfunction location / Action to take
DOD	All RGB images are not shown.     "MULTI AV" is displayed on system selection screen when the CONSULT-III is started.	Perform CONSULT-III self-diagnosis. Refer to AV-498, "CONSULT-III Function (MULTI AV)".
RGB image is not shown.	All RGB images are not shown.     "MULTI AV" is not displayed on system selection screen when the CONSULT-III is started.	AV control unit power supply and ground circuit malfunction.  Refer to AV-544, "AV CONTROL UNIT: Diagnosis Procedure".
Color of RGB image is not proper.	Light blue (Cyan) tint.	RGB signal (R: red) circuit malfunction between AV control unit and display unit.  Refer to AV-550, "Diagnosis Procedure".
	Purple (Magenta) tint.	RGB signal (G: green) circuit malfunction between AV control unit and display unit.  Refer to AV-551, "Diagnosis Procedure".
	Screen looks yellowish.	RGB signal (B: blue) circuit malfunction between AV control unit and display unit.  Refer to AV-552, "Diagnosis Procedure".
RGB screen is rolling.	_	RGB synchronizing signal circuit malfunction between AV control unit and display unit.  Refer to AV-553, "Diagnosis Procedure".

#### RELATED TO VOICE CONTROL

Trouble diagnosis chart by symptom

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#### [BOSE AUDIO WITH NAVIGATION]

Symptoms	Check items	Probable malfunction location
The voice cannot be controlled even if the voice control screen is displayed.	Voice sounds at "Voice Microphone Test" of Confirmation/Adjustment mode.	AV control unit malfunction.  Replace AV control unit. Refer to AV-903, "Exploded View".
	Voice does not sound at "Voice Micro- phone Test" of Confirmation/Adjustment mode.	Microphone circuit malfunction. Refer to AV-560, "Diagnosis Procedure".
The voice cannot be controlled (Voice control screen is not displayed).	Steering switch "SOURCE", "MENU UP", "MENU DOWN", "ENTER" operates, but "  " " " " " " " " " " " " " " " " " "	Steering switch malfunction. Replace steering switch.
	Steering switch's "SOURCE", "MENU UP", "MENU DOWN", " "ENTER" does not operate.	Steering switch signal A circuit malfunction. Refer to AV-571, "Diagnosis Procedure".
	All steering switches do not work.	Steering switch signal GND circuit malfunction. Refer to AV-575, "Diagnosis Procedure".

#### **RELATED TO AUDIO**

Trouble diagnosis chart by symptom

Symptoms	Check items	Possible malfunction location / Action to take	
The disk cannot be removed.	_	Disk eject signal circuit malfunction between AV control unit and preset switch.  Refer to AV-559, "Diagnosis Procedure".	
Audio sound is not heard.	No sound from all speakers.	<ul> <li>Amp. ON signal circuit.</li> <li>BOSE amp. power supply and ground circuits.</li> <li>Refer to <u>AV-546</u>. "BOSE AMP.: <u>Diagnosis Procedure"</u>.</li> </ul>	
	Sound is not heard from woofer.	<ul> <li>Woofer power supply and ground circuits.</li> <li>Sound signal woofer circuits between BOSE amp. and woofer.</li> <li>Woofer amp. ON signal circuit between BOSE amp. and woofer.</li> </ul>	
	Sound is not heard from center speaker.	Sound signals center speaker circuit.	
	Sound is heard only from specific places (RH front, RH rear, LH front and LH rear).	Sound signal circuits of suspect system.	
It does not change to "Driver's Audio Stage" mode.	_	Mode change signal circuit.  Refer to <u>AV-558</u> , " <u>Diagnosis Procedure</u> ".	
Satellite radio is not received.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-498, "CONSULT-III Function (MULTI AV)".	
	There is no malfunction in the CON-SULT-III self-diagnosis result.	Perform the following inspection procedure.  1. Check satellite radio antenna mounting nut for looseness.  NOTE:  Tightening torque: 6.5 N·m (0.66 kg-m, 58 in-lb)  2. Visually check for satellite radio antenna feeder.  3. Replace the satellite radio antenna (antenna base). Refer to AV-912, "Exploded View".  4. Replace the AV control unit. Refer to AV-903, "Exploded View".	
AM/FM radio is not received.	Other audio sounds are normal.	Antenna amp. ON signal circuit.     Antenna feeder.	

### RELATED TO iPod®

Trouble diagnosis chart by symptom

Connect another  $iPod^{\mathbb{B}}$  and check if the symptom is reproduced or not. If the symptom is reproduced, diagnose the vehicle. If no malfunction is detected, replace the iPod harness.

#### < SYMPTOM DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

It is unable to check that between iPod® and iPod harness.

Symptoms	Check items	Possible malfunction location / Action to take
The sound of iPod <sup>®</sup> is not heard.	Other audio sounds are normal.	<ul> <li>iPod sound signal circuits between AV control unit and iPod adapter.</li> <li>iPod sound signal circuits between iPod<sup>®</sup> and iPod adapter.</li> </ul>
It does not change to iPod mode.	There is malfunction in the CONSULT-III self-diagnosis.	Perform CONSULT-III self-diagnosis. Refer to AV-498, "CONSULT-III Function (MULTI AV)".
"iPod is not connected" is dis- played when it comes to iPod mode.	Connected to iPod <sup>®</sup> .	iPod connection recognition signal circuit between iPod® and iPod adapter.
iPod <sup>®</sup> cannot charge the battery.	_	iPod battery charge circuit between iPod <sup>®</sup> and iPod adapter.
The title of music file in the iPod $^{\otimes}$ is not indicated.		Communication circuit between iPod® and iPod adapter.
Accessing the iPod <sup>®</sup> is unavailable from the vehicle.		Communication circuit between iPod* and iPod adapter.

#### RELATED TO STEERING SWITCH

Trouble diagnosis chart by symptom

Symptoms	Probable malfunction location
None of the steering switch operations work.	Steering switch signal GND circuit malfunction. Refer to AV-575, "Diagnosis Procedure".
Only specified switch (1) cannot be operated.	Steering switch malfunction. Replace steering switch.
Steering switch's "SOURCE", "MENU UP", "MENU DOWN", "  " " " " " " " " " " " " " " " " "	Steering switch signal A circuit malfunction. Refer to AV-571, "Diagnosis Procedure".
Steering switch's "", "VOL UP", "VOL DOWN", "" switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-573, "Diagnosis Procedure".

#### RELATED TO AUXILIARY INPUT

#### NOTE:

Check that there is no malfunction of AUX equipment main body before performing a diagnosis.

Trouble diagnosis chart by symptom

Symptoms	Check items	Probable malfunction location
No voice sound is heard when AUX mode is selected.	Voice sound is heard when other modes are selected.	AUX sound signal circuits (auxiliary input jacks to AV control unit).
Image is not displayed when AUX mode is selected.	Camera image is displayed.	AUX image signal circuit malfunction.  Refer to AV-557, "Diagnosis Procedure".

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### NORMAL OPERATING CONDITION

Description INFOID:000000003160759

- For Navigation system operation information, refer to Navigation system Owner's Manual.
- Vehicle operation information, refer to Owner's Manual.

#### **BASIC OPERATIONS**

Symptom	Possible cause	Possible solution
	The brightness is at the lowest setting.	Adjust the brightness of the display.
No image is displayed.	The system in the video mode.	Push <b><disc-aux></disc-aux></b> to change the mode.
	The display is turned off.	Push <b><day night=""></day></b> to turn on the display.
Na voice guidance is available Or	The volume is not set correctly, or it is turned off.	Adjust the volume of voice guidance.
No voice guidance is available. Or The volume is too high or too low.	Voice guidance is not provided for certain streets (roads displayed in gray).	This is not a malfunction.
No map is displayed on the screen.	A screen other than map screen is displayed.	Push <b><map></map></b> .
The screen is too dim. The movement is slow.	The temperature in the interior of the vehicle is low.	Wait until the interior of the vehicle has warmed up.
Some pixels in the display are darker or brighter than others.	This condition is an inherent characteristic of liquid crystal displays.	This is not a malfunction.
Some menu items cannot be selected.	Some menu items become unavailable while the vehicle is driven.	Park the vehicle in a safe location, and then operate the navigation system.

#### NOTE:

Locations stored in the Address Book and other memory functions may be lost if the vehicle's battery is disconnected or becomes discharged. If this occurs, service the vehicle's battery as necessary and re-enter the information in the Address Book.

#### RELATED TO VOICE RECOGNITION

#### Related to basic operation

Symptom	Possible cause	Possible solution
	The interior of the vehicle is too noisy.	Close the windows or have other occupants quiet.
	The volume of your voice is too low.	Speak louder
	The volume if your voice is too loud.	Speak softer
	Your pronunciation is unclear	Speak clearly
The system does not recognize your command. or The system recognizes your command incorrectly	You are speaking before the voice recognition made is ready	Push and release " [ " switch on the steering switch, and speak a command after the tone sounds
	8 seconds or more have passed after you pushed and released "√∠" switch on the steering switch.	Make sure to speak a command within 8 seconds after you push and release "
	Only a limited range of voice commands is usable for each screen.	Use a correct voice command appropriate for the current screen
	The second of the fan od the air conditioner is too loud.	If the air conditioner is set to "Auto", the fan speed is automatically lowered and voice commands can be recognized more easily.  Lower the fan speed as necessary or set the air conditioner to "Auto".

#### Related to item choice

The system should respond correctly to all voice commands without difficulty. If problems are encountered, follow the solutions given in this guide for the appropriate error.

Where the solutions are listed b number, try each solution in turn, starting with number one, until the problem is resolved.

#### NORMAL OPERATING CONDITION

#### < SYMPTOM DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

Symptom/ error message	Solution	
D:	1. Ensure that the command format is valid.	
	2. Speak clearly without pausing between words and at a level appropriate to the ambient noise level.	
Displays "COMMAND NOT REC- OGNIZED" or the system fails to in- terpret the command correctly.	3. Ensure that the ambient noise level is not excessive, for example, windows open or defrost on. <b>NOTE:</b> If it is too noisy to use the phone, it is likely that voice commands will not be recognized.	
	4. If optional words of the command have been omitted, then command should be tried with these in place.	
The system consistently selects	1.Ensure that the voicetag requested matches what was originally stored. This can be confirmed by giving the Addressbook Directory or Phone Directory command.	
the wrong voicetag	2. Replace one of the voicetags being confused with a different voicetag.	

#### Related to telephone

The system should respond correctly to all voice commands without difficulty. If problems are encountered, try the following solutions.

Where the solutions are listed by number, try each solution in turn, starting with number 1, until the problem is resolves.

Symptom	Solution
	Ensure that the command is valid.
	2. Ensure that the command is spoken after the tone.
	3. Speak clearly without pausing between words and at level appropriate to the ambient noise level in the vehicle.
System fails to interpret the command correctly.	4.Ensure that the ambient noise level is not excessive (for example, windows open or defroster on),  NOTE:  ### The project of the plane of the black that the project open open or defroster on the plane of the pl
	If it is too noisy to use the phone, it is likely that the voice commands will be recognized.  5. If more than one command was said at a time, try saying the commands separately.
	6. If the system consistently fails to recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker. See "Speaker adaptation (SA) mode" earlier in this section. Refer to "OWNER'S MANUAL".
The system consistently selects	1.Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the "List Names" command.
the wrong voicetag	2. Replace one of the names being confused with a new name.

#### **RELATED TO AUDIO**

- The majority of the audio malfunctions are the result of outside causes (bad CD/cassette, electromagnetic interference, etc.). Check the symptoms below to diagnose the malfunction.
- The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning.
   Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and then determine the cause.

#### NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA) or could be incorrectly mastered by the customer on a computer.
- Check if the CDs carry the Compact Disc Logo. If not, the disc is not mastered to the "red book" Compact Disc Standard and may not play.

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#### [BOSE AUDIO WITH NAVIGATION]

Symptom	Cause and Counter measure
	Check if the CD/CF was inserted correctly.
	Check if the CD/CF is scratched or dirty.
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.
Cannot play	If there is a mixture of music CD files (CD-DA data) and MP3/WMA files on a CD, only the music CD files (CD-DA data) will be played.
	Files with extensions other than ".MP3", ".WMA", ".mp3", or ".wma" cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.
	Check if the disc or the file is generated in an irregular format, This may occur depending on the variation or the setting of MP3/WMA writing applications or other text editing applications.
	Check if the finalization process, such as session close and disc close, is done for the disc.
	Check if the CD/CF is protected by copyright.
Poor sound quality	Check if the CD/CF is scratched or dirty.
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA CD/CF, or if it is a multisession disc, some time may be required before the music starts playing.
Music cuts off or skips	The writing software and hardware combination might not match, or the writing speed, writing depth, writing width might not match the specifications. Try using the slowest writing speed.
Skipping with high bit rate files	Skipping may occur with large quantities if data such as for high bit rate data.
Move immediately to the next song when playing	When a non-MP3/WMA file has been given an extension of ".MP3", ".WMA", ".mp3", or ".wma", or when play is prohibited by copyright protection, the player will skip to the next song.
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.

Noise resulting from variations in field strength, such as fading noise and multi-path noise, or external noise from trains and other sources, is not a malfunction.

#### NOTE:

- Fading noise: This noise occurs because of variations in the field strength in a narrow range due to mountains or buildings blocking the signal.
- Multi-path noise: This noise results from a time difference between the broadcast waves directly from the station arriving at the antenna and the waves reflected by mountains or buildings.

#### RELATED TO VEHICLE ICON

Symptom	Possible cause	Possible solution
Names of roads differ between Plan View and Birdview <sup>™</sup> .	This is because the quantity of the displayed information is reduced so that the screen does not become too crowded. There is also a chance that names of the roads may be displayed multiple times, and the names appearing on the screen may be different because of a processing procedure.	This is not a malfunction.
The cooking is not displaced in	The vehicle was transported after the ignition switch was pushed off, for example, by a ferry or car transporter.	Drive the vehicle for a while on a road where GPS signals can be received.
The vehicle icon is not displayed in the correct position.	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is traveling on a new road, the vehicle icon is located on another road nearby.	Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available.	Updated road information will be included in the next version of the map data.

### **NORMAL OPERATING CONDITION**

Symptom	Possible cause	Possible solution
The screen does not switch to the night screen even after turning of the headlights.	I he daytime ecreen was set the last time the	Set the screen to the night screen mode using <day night=""> when you turn on the headlights</day>
The map does not scroll even w the vehicle is moving.	hen The current location map screen is not displayed.	Push <b><map></map></b> .
The vehicle icon is not displayed	The current location map screen is not displayed.	Push <b><map></map></b> .
The location of the vehicle icon misaligned from the actual posit		Drive the vehicle for a while (at approximately 19 MPH for about 30 minutes) to automatically correct the vehicle icon position.  If this does not correct the vehicle icon position, contact an INFINITI dealer.
	The map data has a mistake or is incomplete (the vehicle icon position is always misaligned in the same area).	Updated road information will be included in the next version of the map data.
RELATED TO ROUTE C	ALCULATION AND VISUAL GUIDANCE	<u> </u>
Symptom	Possible cause	Possible solution
Waypoints are not included in the auto reroute calculation.	Waypoints that you have already passed are not inclute auto reroute calculation.	ded in If you want to go to that waypoint again, you need to edit the route.
	Route calculation has not yet been performed.	Set the destination and perform route calculation.
Route information is not dis-	You are not driving on the suggested route.	Drive on the suggested route.
played.	Doute guidenes is set to eff	Turn on route quidence

Symptom	Possible cause	Possible solution
Waypoints are not included in the auto reroute calculation.	Waypoints that you have already passed are not included in the auto reroute calculation.	If you want to go to that waypoint again, you need to edit the route.
	Route calculation has not yet been performed.	Set the destination and perform route calculation.
Route information is not dis-	You are not driving on the suggested route.	Drive on the suggested route.
played.	Route guidance is set to off.	Turn on route guidance.
	Route information is not provided for certain types of roads (roads displayed in gray).	This is not a malfunction.
The auto reroute calculation (or detour calculation) suggests the same route as the one previously suggested.	Route calculations took priority conditions into consideration, but the same route was calculated.	This is not a malfunction.
A waypoint cannot be added.	Five waypoints are already set on the route, including ones that you have already passed.	A maximum of 5 waypoints can be set on the route. If you want to go to 6 or more waypoints, perform route calculations multiple times as necessary.
	Roads near the destination cannot be calculated.	Reset the destination to a main or ordinary road, and recalculate the route.
	The starting point and destination are too close.	Set a more distant destination.
The suggested route is not displayed.	The starting point and destination are too far away.	Divide your trip by selecting one or two intermediate destinations, and perform route calculations multiple times.
	There are time restricted roads (by the day of the week, by time) near the current vehicle location or destination.	Set [Use Time Restricted Roads] to off.
The part of the route that you have already passed is deleted.	A route is managed by sections between waypoints. If you passed the first waypoint, the section between the starting point and the waypoint is deleted. (It may not be deleted depending on the area.)	This is not a malfunction.
An indirect route is suggested.	If there are restrictions (such as one-way streets) on roads close to the starting point or destination, the system may suggest an indirect route.	Adjust the location of the starting of the starting point or destination.
	The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets (gray roads.)	Reset the destination to a main or ordinary road, and recalculate the route.

such as narrow streets (gray roads.)

### NORMAL OPERATING CONDITION

#### < SYMPTOM DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

Symptom	Possible cause	Possible solution
The landmark information does not correspond to the actual information.	This may be caused by insufficient or incorrect map data.	Updated information will be included in the next version of the data.
The suggested route does not exactly connect to the starting point, waypoints, or destination.	There is no data for route calculation closes to these locations.	Set the starting point, waypoints and destination on a main road, and perform route calculation.

### RELATED TO VOICE GUIDANCE

Symptom	Possible cause	Possible solution
Voice guidance is not available	Voice guidance is only available at certain intersections marked with? In some case, voice guidance is not available even when the vehicle should make a turn.	This is not a malfunction.
	The vehicle has deviated from the suggested route.	Go back to the suggested route or request route calculation again
	Voice guide is set to off.	Turn on voice guidance.
	Route guidance is set to off.	Turn on voice guidance.
The guidance contact does not correspond to the actual condition.	The contact of voice guidance may vary, depending on the types of intersections at which turn are made.	Follow all traffic rules and regulations.

#### **RELATED TO TRAFFIC INFORMATION**

Symptom	Possible cause	Possible solution
	The traffic information is not set to on.	Set the traffic information to on.
The traffic information is	You are in an area where traffic information is not available	Scroll to an area where traffic information is available
not displayed	You have not subscribed to XM NavTraffic or, your subscription to XM NavTraffic has expired.	Check your subscription status of XM NavTraffic.
	The map scale is set at a level where the display of icons is impossible.	Check that the map scale is set at a level in which the display of icons is possible.
With the automatic detour route search ON, no detour route is set to avoid congested areas.	There is no faster route compared to the current route, based on the road network and traffic information.	The automatic detour search is not intended for avoiding traffic jams. It searches for the fasted rote taking into consideration such things as traffic jams.
The route does not avoid road section with traffic information stating it is closed due to road construction.	The navigation system is designed not to avoid this event because the actual period of closure may differ from the declared roadwork period.	Observe the actual road condition and follow the instructions on road for detour when necessary. If the road closure is for certain, use detour function and set the detour distance to avoid the closed road section.
Traffic information displayed differs from information from other media (e.g. radio).	Other media may use different information sources.	Observe the actual road conditions and regulations. Always observe safe driving practices and follow all traffic regulations.

# **PRECAUTION**

### **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIRBAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIRBAG".
- 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.

## Precaution for Trouble Diagnosis

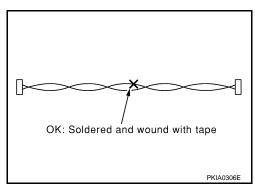
#### AV COMMUNICATION SYSTEM

- 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.

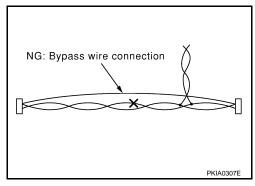
## Precaution for Harness Repair

#### AV COMMUNICATION SYSTEM

 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.)



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# **PREPARATION**

# **PREPARATION**

# **Commercial Service Tools**

INFOID:0000000003160763

Tool name		Description
Power tool	PBIC0191E	Loosening screws

# **ON-VEHICLE REPAIR**

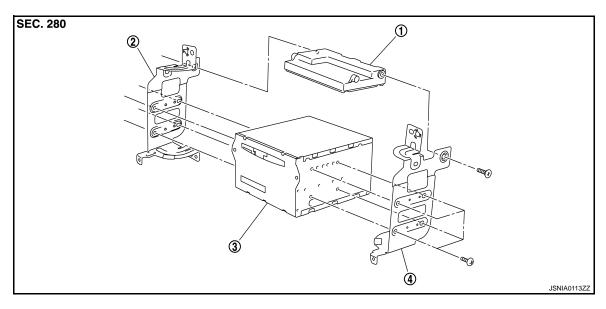
# AV CONTROL UNIT

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

DISASSEMBLY



- 1. Unified meter and A/C amp.
- 2. Bracket LH

3. AV control unit

Bracket RH

#### Removal and Installation

**REMOVAL** 

- Remove display unit.
- 2. Remove AV control unit with a unified meter and A/C amp. as a single unit from the body.
- 3. Remove bracket screws, and then remove AV control unit.

#### **INSTALLATION**

Installation is the reverse order of removal.

#### **CAUTION:**

Since AV control unit connector and unified meter and A/C amp. connector have the same form, be careful not to insert them wrongly.

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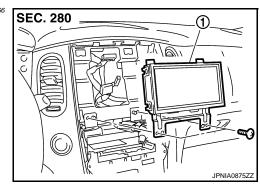
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# **DISPLAY UNIT**

**Exploded View** 

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1. Display unit

# Removal and Installation

INFOID:0000000003160767

#### **REMOVAL**

- 1. Remove cluster lid D. Refer to IP-11, "Exploded View".
- 2. Remove display unit mounting screws.
- 3. Remove display unit.

#### **INSTALLATION**

Installation is the reverse order of removal.

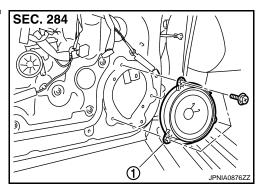
### FRONT DOOR SPEAKER

[BOSE AUDIO WITH NAVIGATION]

# FRONT DOOR SPEAKER

# **Exploded View**

INFOID:0000000003160768



. Front door speaker

### Removal and Installation

REMOVAL

- 1. Remove front door finisher. Refer to <u>INT-11</u>, "<u>DRIVER SIDE</u>: <u>Exploded View</u>" (driver side) or <u>INT-14</u>, "<u>PASSENGER SIDE</u>: <u>Exploded View</u>" (passenger side).
- 2. Remove front door speaker mounting bolts, disconnect the front door speaker connector.
- 3. Remove front door speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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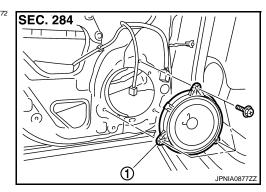
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# **REAR DOOR SPEAKER**

# **Exploded View**

INFOID:0000000003160772



Rear door speaker

### Removal and Installation

INFOID:0000000003160773

#### **REMOVAL**

- 1. Remove rear door finisher. Refer to INT-17, "Exploded View".
- 2. Remove rear door speaker mounting bolts, disconnect the rear door speaker connector.
- 3. Remove rear door speaker.

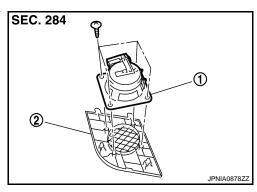
#### **INSTALLATION**

Installation is the reverse order of removal.

# **FRONT SQUAWKER**

# **Exploded View**

INFOID:0000000003569907



- 1. Front squawker
- 2. Speaker grille

#### Removal and Installation

- REMOVAL
- 1. Lift up the speaker grille with squawker. Refer to IP-11, "Exploded View".
- 2. Disconnect the front squawker connector.
- 3. Remove front squawker mounting screws.
- 4. Remove front squawker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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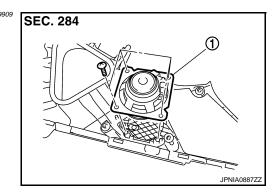
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# **REAR SQUAWKER**

**Exploded View** 

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Rear squawker

## Removal and Installation

INFOID:0000000003569910

#### **REMOVAL**

- 1. Remove luggage side finisher upper. Refer to INT-34, "Exploded View".
- 2. Remove rear squawker mounting screws.
- 3. Remove rear squawker.

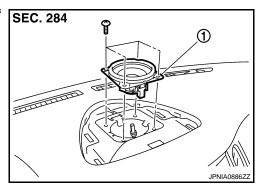
#### **INSTALLATION**

Installation is the reverse order of removal.

# **CENTER SPEAKER**

# **Exploded View**

INFOID:0000000003160776



. Center speaker

### Removal and Installation

REMOVAL

- 1. Remove center speaker grille. Refer to IP-11, "Exploded View".
- 2. Remove center speaker mounting screws, lift up the center speaker and disconnect center speaker connector.
- 3. Remove center speaker.

#### **INSTALLATION**

Installation is the reverse order of removal.

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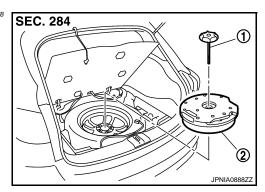
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# **WOOFER**

# **Exploded View**

INFOID:0000000003160778



- 1. Woofer clamp
- 2. Woofer

# Removal and Installation

INFOID:0000000003160779

### **REMOVAL**

- 1. Remove Luggage finisher center. Refer to INT-34, "Exploded View".
- 2. Remove woofer clamp.
- 3. Remove harness clip and woofer connector.
- 4. Remove woofer.

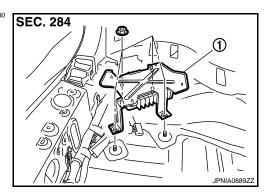
#### **INSTALLATION**

Installation is the reverse order of removal.

# BOSE AMP.

# **Exploded View**

INFOID:0000000003160780



BOSE amp.

## Removal and Installation

REMOVAL

- 1. Remove Luggage floor spacer (LH). Refer to <a href="INT-34">INT-34</a>, "Exploded View".
- 2. Remove BOSE amp. mounting nuts.
- 3. Remove BOSE amp..

### **INSTALLATION**

Installation is the reverse order of removal.

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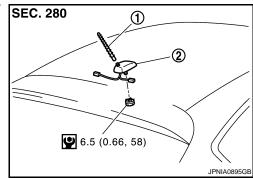
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# **ANTENNA BASE**

# **Exploded View**

INFOID:0000000003160782



- 1. Antenna rod
- 2. Antenna base

Refer to GI-4, "Components" for symbols in the figure..

#### Removal and Installation

INFOID:0000000003160783

#### **REMOVAL**

- Remove headlining (rear). Keep a service area. Refer to <u>INT-26, "NORMAL ROOF: Exploded View"</u> (normal roof) or <u>INT-30, "SUNROOF: Exploded View"</u> (sunroof).
- 2. Remove antenna base mounting nut.
- 3. Remove antenna base.

#### **INSTALLATION**

Installation is the reverse order of removal.

Antenna base mounting nut 
9: 6.5 N·m (0.66 kg-m, 58 in-lb)

#### **CAUTION:**

Be careful about tightening torque. Antenna sensitivity becomes poor, and when it is excessive, roof panel may be deformed, when roof antenna mounting nut tightening torque is loose.

## **MULTIFUNCTION SWITCH**

## [BOSE AUDIO WITH NAVIGATION]

# **MULTIFUNCTION SWITCH**

**Exploded View** 

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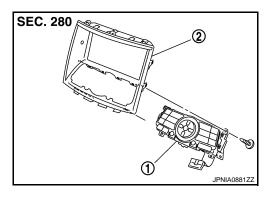
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**REMOVAL** 

Refer to IP-11, "Exploded View".

DISASSEMBLY



- 1. Multifunction switch
- Cluster lid D

### Removal and Installation

INFOID:0000000003160787

#### **REMOVAL**

- 1. Remove cluster lid D. Refer to IP-11, "Exploded View".
- 2. Remove multifunction switch mounting screws.
- 3. Remove multifunction switch.

#### **INSTALLATION**

Installation is the reverse order of removal.

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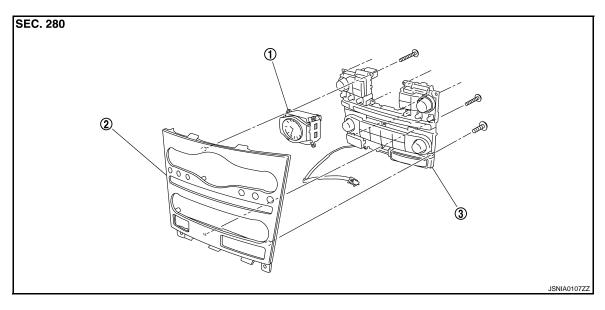
# PRESET SWITCH

Exploded View

**REMOVAL** 

Refer to IP-11, "Exploded View".

#### **DISASSEMBLY**



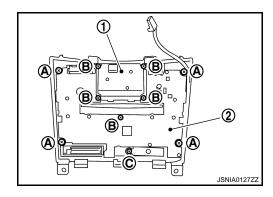
1. Clock 2. Cluster lid C 3. Preset switch

### Removal and Installation

INFOID:0000000003160789

#### **REMOVAL**

- Remove cluster lid C. Refer to <u>IP-11, "Exploded View"</u>.
- 2. Remove preset switch mounting screws.
- 3. Remove preset switch.
  - 1. Clock
  - 2. Preset switch
  - A. Screw
  - B. Screw
  - C. Screw



#### **INSTALLATION**

Installation is the reverse order of removal.

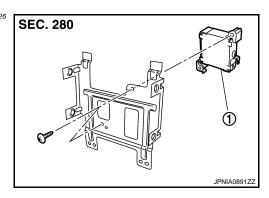
#### NOTE:

When installing preset switch, do not allow the print wire that connects preset switch and multifunction switch to get caught in between AV control unit and preset switch.

# **IPOD ADAPTER**

# **Exploded View**

INFOID:0000000003567026



1. iPod adapter

## Removal and Installation

REMOVAL

- 1. Remove display unit with bracket. Refer to IP-11, "Exploded View".
- 2. Remove display from display bracket.
- 3. Remove iPod adapter mounting screws.
- 4. Remove iPod adapter.

### **INSTALLATION**

Install in the reverse order of removal.

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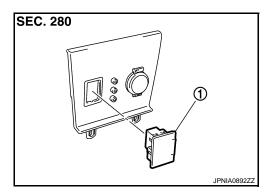
# **IPOD CONNECTOR**

Exploded View

**REMOVAL** 

Refer to IP-22, "Exploded View".

**DISASSEMBLY** 



iPod connector

### Removal and Installation

INFOID:0000000003567030

#### **REMOVAL**

- 1. Remove console finisher. Refer to IP-22, "Exploded View".
- 2. Push the pawl from the back of console finisher to remove iPod connector.

#### **INSTALLATION**

Install in the reverse order of removal.

### **AUXILIARY INPUT JACKS**

### [BOSE AUDIO WITH NAVIGATION]

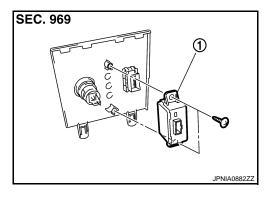
# **AUXILIARY INPUT JACKS**

Exploded View

**REMOVAL** 

Refer to IP-22, "Exploded View".

DISASSEMBLY



1. Auxiliary input jacks

### Removal and Installation

**REMOVAL** 

- 1. Remove console finisher. Refer to <a href="IP-22">IP-22</a>, "Exploded View".
- 2. Remove auxiliary mounting screws.
- 3. Remove auxiliary input jacks.

#### **INSTALLATION**

Installation is the reverse order of removal.

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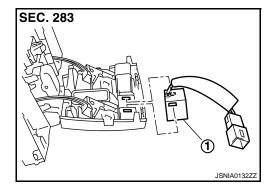
## **MICROPHONE**

Exploded View

#### **REMOVAL**

Refer to <u>INT-26, "NORMAL ROOF: Exploded View"</u> (normal roof) or <u>INT-30, "SUNROOF: Exploded View"</u> (sunroof).

**DISASSEMBLY** 



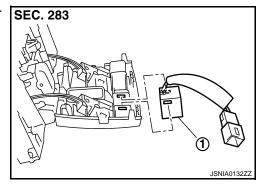
1. Microphone

#### Removal and Installation

INFOID:0000000003160797

### **REMOVAL**

- Remove map lamp assembly. Refer to <u>INT-26</u>, "NORMAL ROOF: Exploded View" (normal roof) or <u>INT-30</u>, "SUNROOF: Exploded View" (sunroof).
- 2. Remove microphone (1), stretching pawls of map lamp assembly.



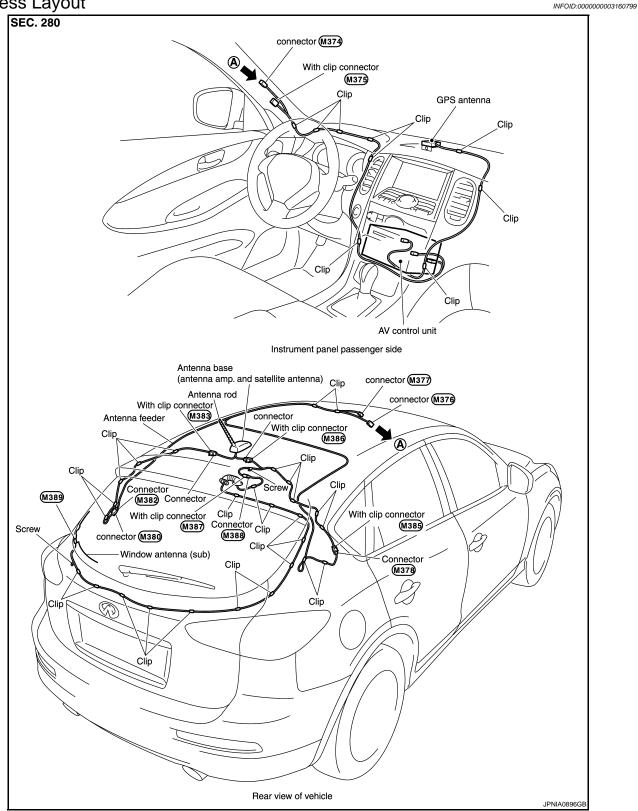
#### **INSTALLATION**

Installation is the reverse order of removal.

# **GPS ANTENNA**

Exploded View

Harness Layout



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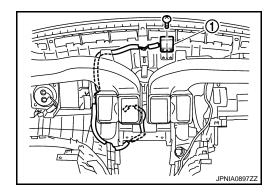
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## Removal and Installation

INFOID:0000000003160800

#### **REMOVAL**

- 1. Remove instrument panel. Refer to IP-11, "Exploded View".
- 2. Remove GPS antenna mounting screw.
- 3. Remove GPS antenna (1).



#### **INSTALLATION**

Installation is the reverse order of removal.

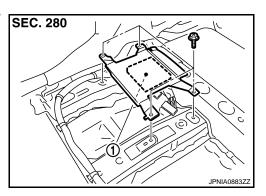
### **CAMERA CONTROL UNIT**

[BOSE AUDIO WITH NAVIGATION]

# **CAMERA CONTROL UNIT**

**Exploded View** 

INFOID:0000000003160801



. Camera control unit

### Removal and Installation

REMOVAL

- 1. Remove front seat (LH side). Refer to SE-87, "Exploded View".
- 2. Remove floor carpet. Keep a service area.
- 3. Remove camera control unit.

## **INSTALLATION**

- 1. Installation is the reverse order of removal.
- 2. Perform predicted course line center position adjustment. Refer to <u>AV-437</u>, "PREDICTED COURSE LINE <u>CENTER POSITION ADJUSTMENT</u>: Special Repair Requirement".

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### AROUND VIEW MONITOR CONTROL UNIT

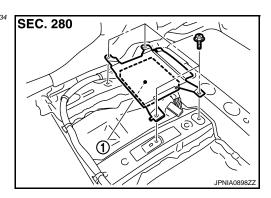
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[BOSE AUDIO WITH NAVIGATION]

# AROUND VIEW MONITOR CONTROL UNIT

**Exploded View** 

INFOID:0000000003528834



1. Around view monitor control unit

#### Removal and Installation

INFOID:0000000003528835

#### **REMOVAL**

- 1. Remove front seat (LH side). Refer to SE-87, "Exploded View".
- 2. Remove floor carpet. Keep a service area.
- 3. Remove around view monitor control unit.

#### INSTALLATION

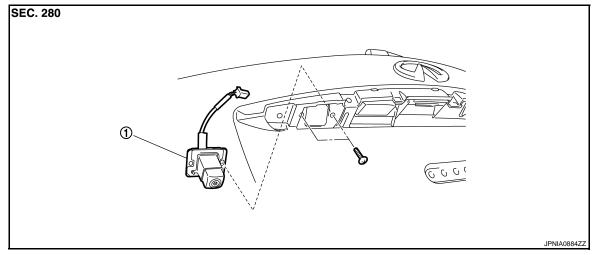
- 1. Installation is the reverse order of removal.
- Perform camera image calibration. Refer to <u>AV-438</u>, "<u>CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR</u>): <u>Special Repair Requirement</u>".
- Perform predicted course line center position adjustment. Refer to <u>AV-437</u>, "<u>PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT</u>: Special Repair Requirement".

#### CAUTION:

# **REAR VIEW CAMERA**

Exploded View

#### DISASSEMBLY



1. Rear view camera

### Removal and Installation

REMOVAL

- Remove back door finisher inner. Refer to <u>INT-38</u>, "<u>Exploded View</u>".
- 2. Remove back door outside finisher upper. Refer to EXT-48, "Exploded View".
- 3. Remove back door outside finisher lower. Refer to <a href="EXT-48">EXT-48</a>, "Exploded View".
- 4. Remove rear view camera mounting screws and rear view camera harness connector.
- 5. Remove rear view camera.

#### **INSTALLATION**

- Installation is the reverse order of removal.
- 2. Adjust the guide line position if the guide line position is shifted after installing the rear view camera. Refer to <a href="AV-924">AV-924</a>, "Adjustment".

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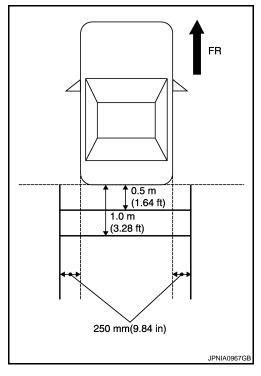
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INFOID:0000000003160805

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Adjustment INFOID:000000003160806

- Draw lines on rearward area of the vehicle passing through the following points: 250 mm (9.84 in) from both sides of the vehicle, and 0.5 m (1.64 ft), 1.0 m (3.28 ft) from the rear end of the bumper.
- 2. Set into "Adjust offset of rear view camera" mode of Confirmation/Adjustment mode.

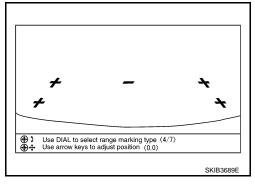


 Rotate the center dial, and then select the guiding line pattern so that its angle is aligned with the correction line of the rear of the vehicle.

## Selected pattern : 7

4. Make fine adjustment to the correction line of the rear of the vehicle with up/down/left/right switches so that its position is aligned with the guiding line. Press ""

Up/Down adjustment range : -20 - 20Left/Right adjustment range : -20 - 20



#### **CAUTION:**

Never operate other function such as pressing BACK while writing index data.

If Confirmation/Adjustment mode does not function in the above procedure, perform one of the following service to adjust the index again.

- Remove battery for five min. Then reconnect battery.
- Remove camera control unit connector for five min. Then reconnect camera control unit connector.

## FRONT CAMERA

**Exploded View** 

INFOID:0000000003528825

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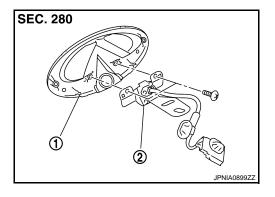
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REMOVAL

Refer to EXT-20, "Exploded View".

DISASSEMBLY



- 1. Front emblem
- Front camera

### Removal and Installation

INFOID:0000000003528826

REMOVAL

- REMOVAL

  1. Remove harness clip and connector clip from front camera bracket.
- 2. Remove front emblem. Refer to EXT-20, "Exploded View".
- 3. Remove front emblem mounting screws.
- 4. Remove front camera.

#### **INSTALLATION**

- 1. Installation is the reverse order of removal.
- 2. Perform camera image calibration. Refer to <u>AV-438</u>, "<u>CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)</u>: <u>Special Repair Requirement"</u>.

#### CAUTION:

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

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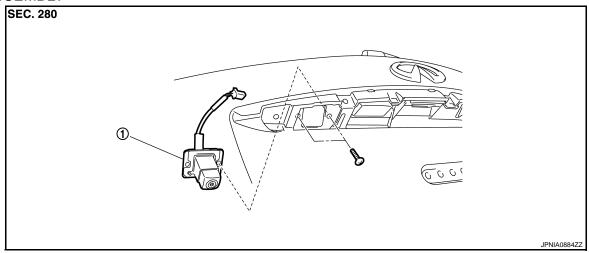
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# REAR CAMERA

Exploded View

#### DISASSEMBLY



1. Rear view camera

#### Removal and Installation

INFOID:0000000003528829

#### **REMOVAL**

- Remove back door finisher inner. Refer to <u>INT-38</u>, "<u>Exploded View</u>".
- 2. Remove back door outside finisher upper. Refer to <a>EXT-48</a>, <a>"Exploded View"</a>.
- Remove back door outside finisher lower. Refer to <u>EXT-48</u>, "<u>Exploded View</u>".
- 4. Remove rear camera mounting screws and rear camera harness connector.
- 5. Remove rear camera.

#### **INSTALLATION**

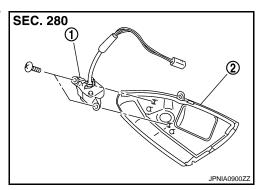
- Installation is the reverse order of removal.
- Perform camera image calibration. Refer to <u>AV-438</u>, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement".

#### **CAUTION:**

# SIDE CAMERA LH

# **Exploded View**

INFOID:0000000003528831



- 1. Side camera (LH)
- 2. Door mirror under cover

#### Removal and Installation

INFOID:0000000003528832

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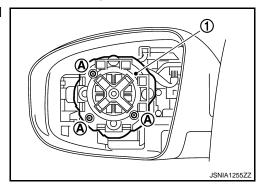
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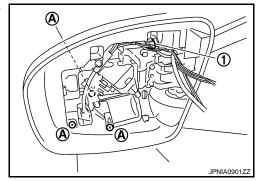
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#### **REMOVAL**

- 1. Remove door mirror glass (driver side). Refer to MIR-53, "GLASS MIRROR: Exploded View".
- 2. Remove screws (A), and door mirror actuator connector, and then door mirror actuator (1).



- Remove door mirror under cover. Refer to MIR-54, "DOOR MIRROR COVER: Exploded View".
- 4. Remove screws (A) and connector (1), and then remove side camera (LH).



#### **INSTALLATION**

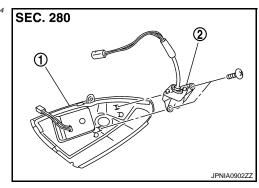
- 1. Installation is the reverse order of removal.
- Perform camera image calibration. Refer to <u>AV-438</u>, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR): Special Repair Requirement".

#### **CAUTION:**

## SIDE CAMERA RH

# **Exploded View**

INFOID:0000000003567094



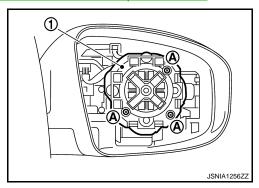
- 1. Side camera (RH)
- 2. Side camera lamp assembly

#### Removal and Installation

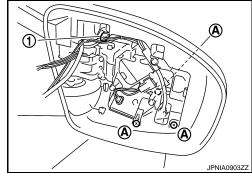
INFOID:0000000003567095

#### **REMOVAL**

- 1. Remove door mirror glass (passenger side). Refer to MIR-53, "GLASS MIRROR: Exploded View".
- 2. Remove screws (A) and door mirror actuator connector, and then door mirror actuator (1).



- 3. Remove door mirror under cover. Refer to MIR-54, "DOOR MIRROR COVER: Exploded View".
- 4. Remove screws (A) and connector (1), and then remove side camera (RH).



#### INSTALLATION

- 1. Installation is the reverse order of removal.
- Perform camera image calibration. Refer to <u>AV-438</u>, "<u>CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR</u>): Special Repair Requirement".

#### **CAUTION:**

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

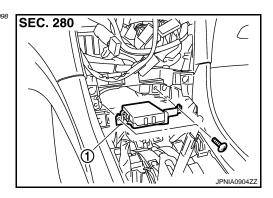
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[BOSE AUDIO WITH NAVIGATION]

# SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

**Exploded View** 

INFOID:0000000003567098



. Sonar control unit

### Removal and Installation

# REMOVAL

- 1. Remove AV control unit. Refer to AV-903, "Exploded View".
- 2. Remove screws and connector, and then sonar control unit.

#### **INSTALLATION**

Install in the reverse order of removal.

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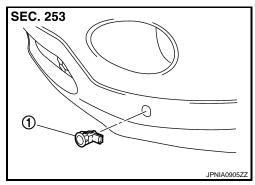
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# **SONAR SENSOR**

**FRONT** 

FRONT: Exploded View

INFOID:0000000003567102



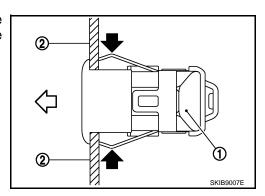
1. Sonar sensor (front)

## FRONT: Removal and Installation

INFOID:0000000003567103

#### **REMOVAL**

- 1. Remove fender protector. Keep a service area. Refer to <a href="EXT-25">EXT-25</a>, "FENDER PROTECTOR: Exploded View".
- 2. Remove sonar sensor connector.
- 3. Push the sonar sensor (1) outside (direction of white arrow) the front bumper (2), pressing the metal clips on the back to the direction of black arrows.



#### **INSTALLATION**

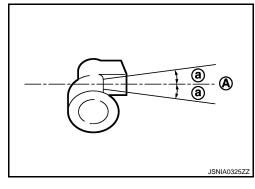
Install the bumper when the pawl engages.

#### **CAUTION:**

The connector direction is within  $\pm 10^{\circ}$  from the horizontal position when assembling the bumper.

A : Horizontal position

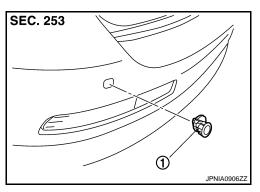
a : 10°



#### **REAR**

**REAR**: Exploded View

INFOID:0000000003567104



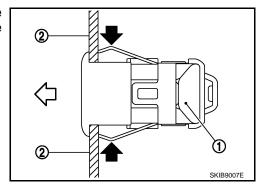
1. Sonar sensor (rear)

## **REAR**: Removal and Installation

INFOID:0000000003567105

#### **REMOVAL**

- 1. Remove sonar sensor connector.
- 2. Push the sonar sensor (1) outside (direction of white arrow) the rear bumper (2), pressing the metal clips on the back to the direction of black arrows.



### **INSTALLATION**

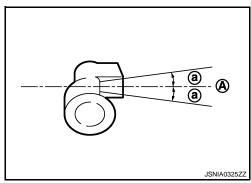
Install the bumper when the pawl engages.

#### **CAUTION:**

The connector direction is within  $\pm 10^\circ$  from the horizontal position when assembling the bumper.

A : Horizontal position

a : 10°



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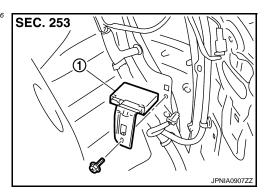
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# **BUZZER**

# **Exploded View**

INFOID:0000000003567106



1. Buzzer

## Removal and Installation

INFOID:0000000003567107

#### **REMOVAL**

- 1. Remove luggage side lower finisher (RH). Refer to <a href="INT-34">INT-34</a>, "Exploded View".
- 2. Remove buzzer mounting bolt.
- 3. Remove buzzer.

#### **INSTALLATION**

Install in the reverse order of removal.

### STEERING ANGLE SENSOR

## [BOSE AUDIO WITH NAVIGATION]

# STEERING ANGLE SENSOR

Exploded View

INFOID:0000000003160807

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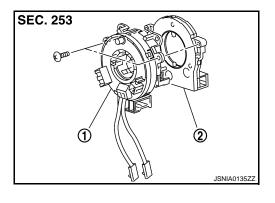
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**REMOVAL** 

Refer to SR-6, "Exploded View".

**DISASSEMBLY** 



- 1. Spiral cable
- 2. Steering angle sensor

## Removal and Installation

INFOID:0000000003160808

#### **REMOVAL**

- 1. Remove spiral cable.
- 2. Remove steering angle sensor mounting screws.
- 3. Remove steering angle sensor.

#### **INSTALLATION**

Installation is the reverse order of removal.

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# ANTENNA FEEDER

Harness Layout

