

SECTION **AV**

AUDIO, VISUAL & NAVIGATION SYSTEM

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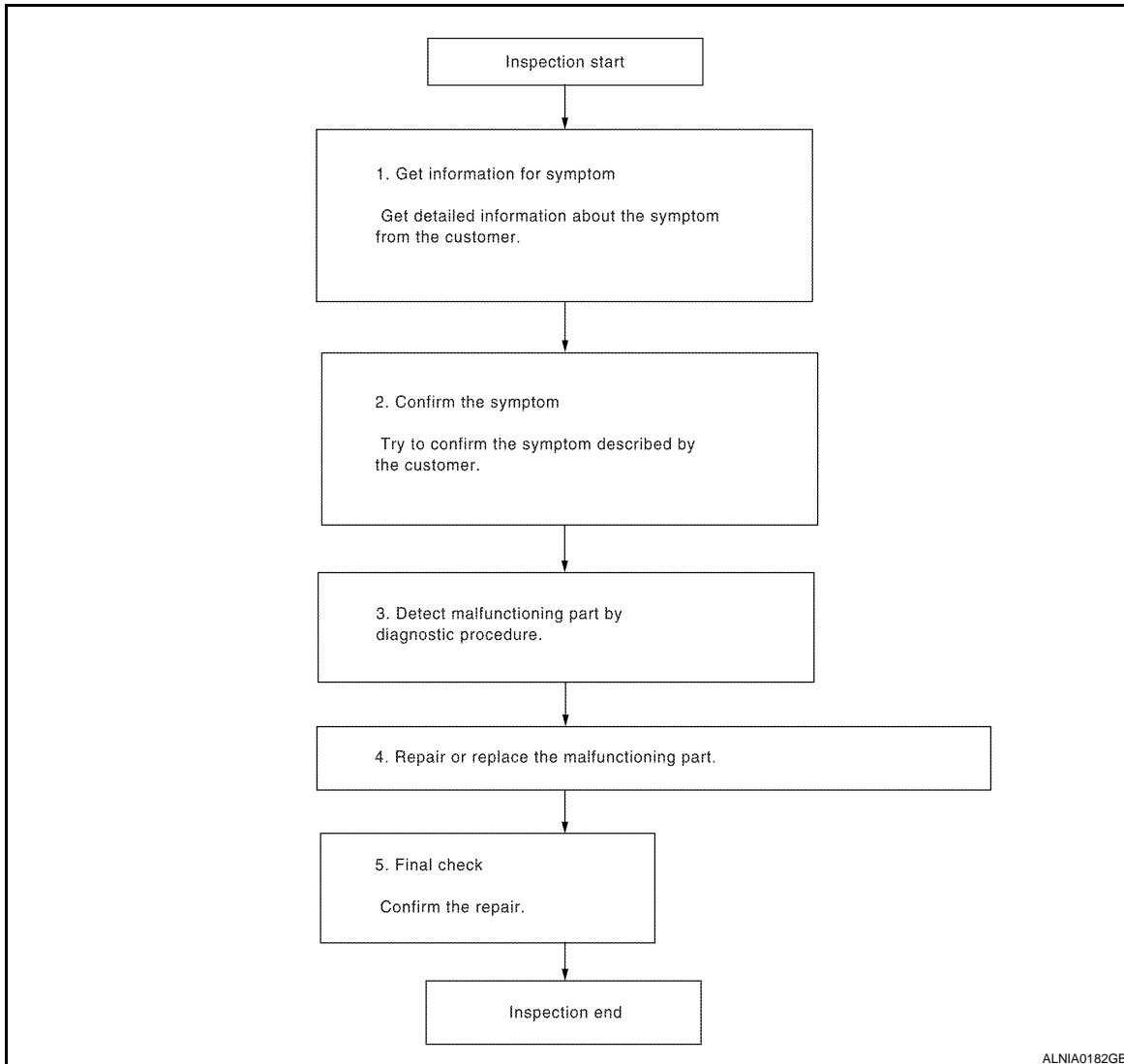
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000003899602

OVERALL SEQUENCE



DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2.

2.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer. Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 3.

3.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[BASE AUDIO]

Is malfunctioning part detected?

YES >> GO TO 4.

NO >> GO TO 2.

4.REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnostic Procedure.

>> GO TO 5.

5.FINAL CHECK

Refer to confirmed symptom in step 2, and make sure that the symptom is not detected.

Has the symptom been repaired?

YES >> Inspection End.

NO >> GO TO 2.

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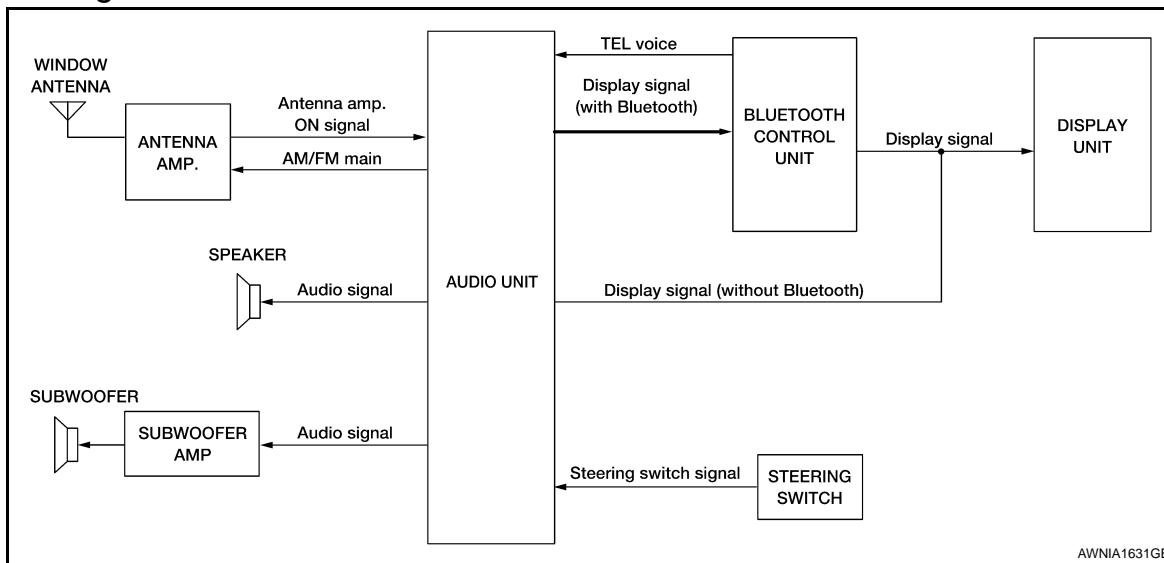
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FUNCTION DIAGNOSIS

AUDIO SYSTEM

System Diagram



System Description

INFOID:000000003899608

AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Display unit
- Bluetooth control unit
- Window antenna
- Steering wheel audio control switches
- Front door speakers
- Tweeters
- Rear door speakers
- Subwoofer amp.
- Subwoofers

When the audio system is on, radio signals are received by the window antenna. The audio unit then sends audio signals to the front door speakers, tweeters, rear door speakers, subwoofer amp. and subwoofers. Refer to Owner's Manual for audio system operating instructions.

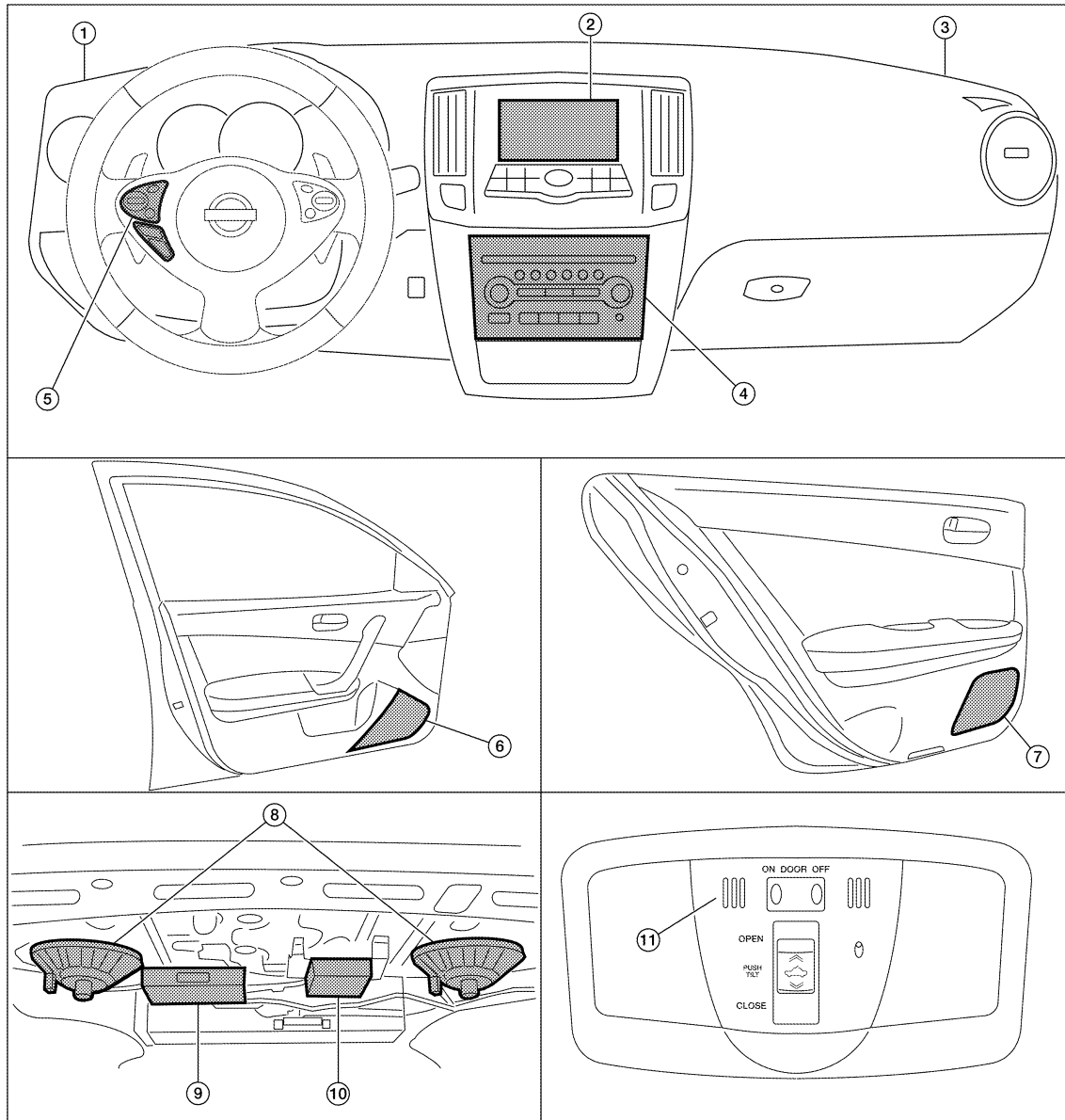
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

Component Parts Location

INFOID:000000003899609



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|--|---|--|
| 1. Tweeter LH M143 | 2. Display unit
M93 (with Bluetooth)
M109 (without Bluetooth) | 3. Tweeter RH M144 |
| 4. Audio unit M133, M135 | 5. Steering wheel audio control switches | 6. Front door speaker
LH D3
RH D103 |
| 7. Rear door speaker
LH D202
RH D302 | 8. Subwoofers (view of underside of parcel shelf)
LH B16
RH B17 | 9. Bluetooth control unit (with Bluetooth)
B125, B126, B130 |
| 10. Subwoofer amp. B21 | 11. Microphone (with Bluetooth) R7 | |

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AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

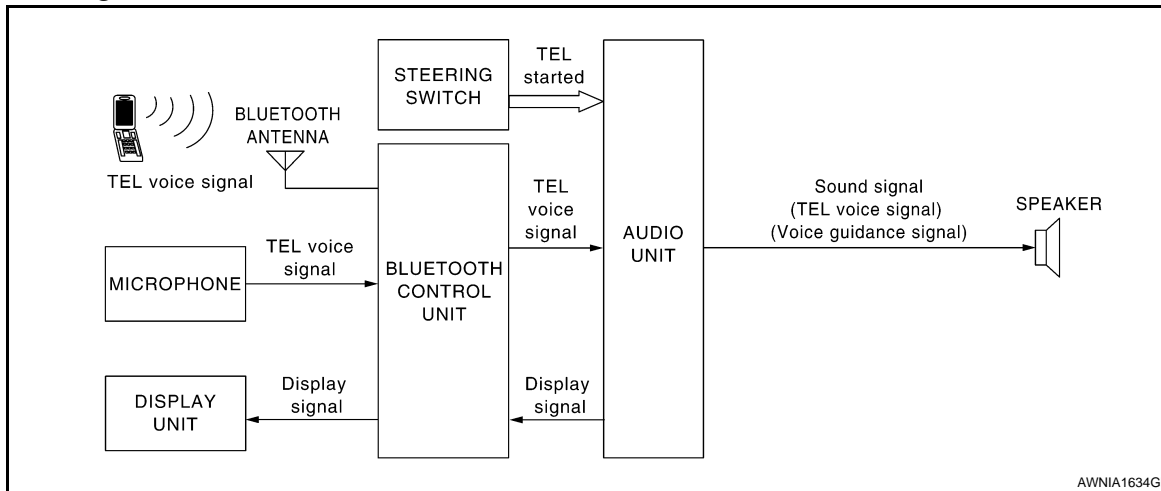
Component Description

INFOID:000000003899610

Part name	Description
Audio unit	Controls audio system functions.
Steering wheel audio control switches	<ul style="list-style-type: none">• Each audio operation can be operated.• Steering switch signal (operation signal) is output to audio unit.
Front door speakers	<ul style="list-style-type: none">• Outputs audio signal from audio unit.• Outputs high, mid and low range sounds.
Tweeters	<ul style="list-style-type: none">• Outputs audio signal from audio unit.• Outputs high range sounds.
Rear door speakers	<ul style="list-style-type: none">• Outputs audio signal from audio unit.• Outputs high, mid and low range sounds.
Bluetooth control unit	<ul style="list-style-type: none">• Receives signals from the audio unit.• Outputs display signals.
Display unit	<ul style="list-style-type: none">• Receives and displays signals from the Bluetooth control unit (with Bluetooth) or audio unit (without Bluetooth).• Displays audio system information.
Subwoofer amp.	<ul style="list-style-type: none">• Receives and amplifies sound signal from audio unit.• Outputs amplified sound signal to the subwoofers.
Subwoofers	<ul style="list-style-type: none">• Outputs audio signal from subwoofer amp.• Outputs low range sounds.

HANDS-FREE PHONE SYSTEM

System Diagram



System Description

INFOID:000000004252561

Refer to the owner's manual for Bluetooth telephone system operating instructions.

NOTE:

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

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

BLUETOOTH CONTROL UNIT

When the ignition switch is turned to ACC or ON, the Bluetooth control unit will power up. During power up, the Bluetooth control unit is initialized and performs various self checks. Initialization may take up to 10 seconds. If a phone is present in the vehicle and paired with the Bluetooth control unit, Nissan Voice Recognition will then become active. Bluetooth telephone functions can be turned off using the Nissan Voice Recognition system.

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

MICROPHONE

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

AUDIO UNIT

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

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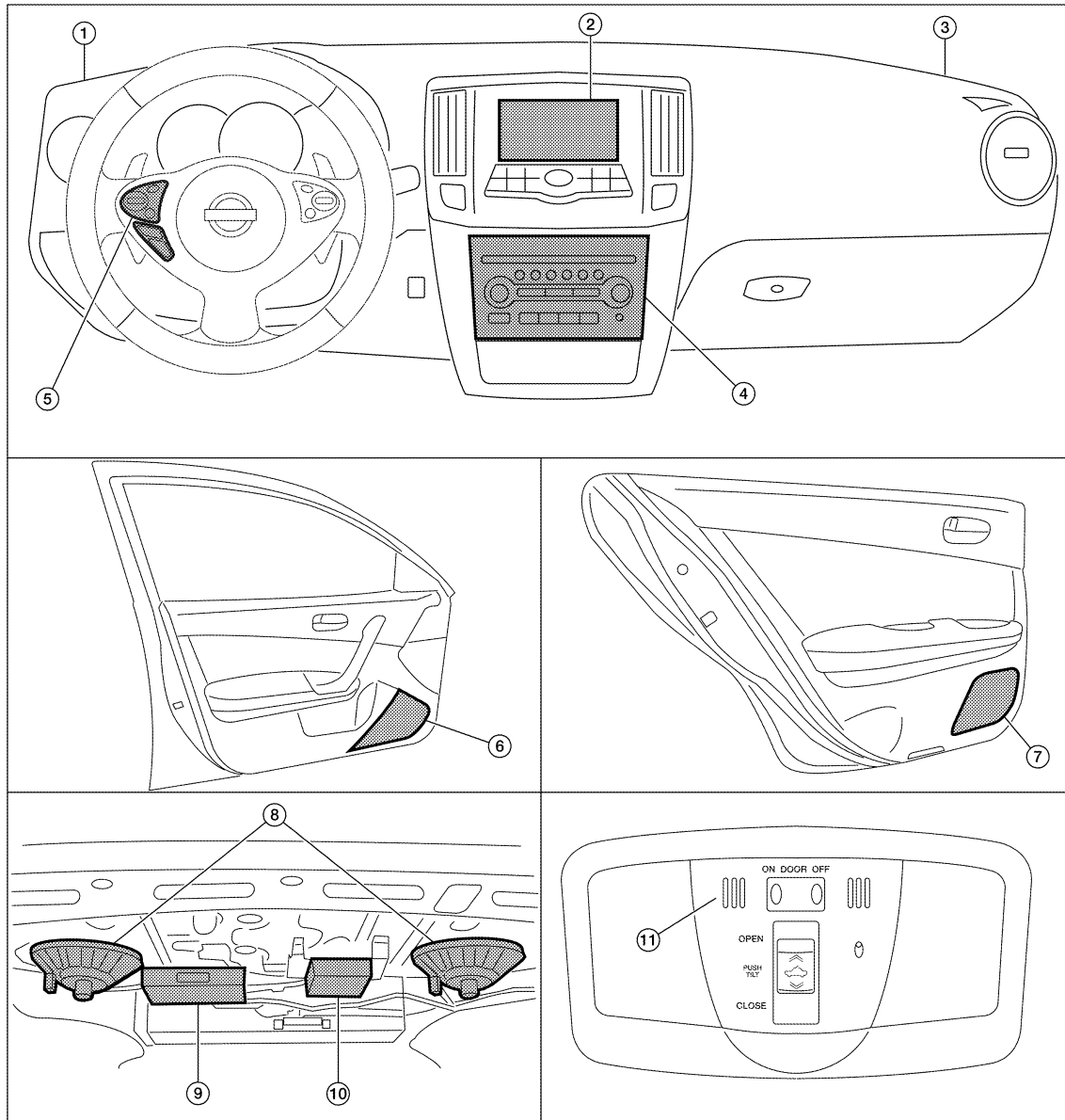
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

Component Parts Location

INFOID:000000004296277



ALNIA1160ZZ

- | | | |
|--|---|--|
| 1. Tweeter LH M143 | 2. Display unit
M93 (with Bluetooth)
M109 (without Bluetooth) | 3. Tweeter RH M144 |
| 4. Audio unit M133, M135 | 5. Steering wheel audio control switches | 6. Front door speaker
LH D3
RH D103 |
| 7. Rear door speaker
LH D202
RH D302 | 8. Subwoofers (view of underside of parcel shelf)
LH B16
RH B17 | 9. Bluetooth control unit (with Bluetooth)
B125, B126, B130 |
| 10. Subwoofer amp. B21 | 11. Microphone (with Bluetooth) R7 | |

HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

Component Description

INFOID:000000004252563

Part name	Description
Audio unit	<ul style="list-style-type: none"> Receives telephone voice signal from Bluetooth control unit. Sends telephone voice signals to the speakers.
Front door speaker	Receives telephone voice signals from the audio unit.
Tweeter	
Steering wheel audio control switches	<ul style="list-style-type: none"> Start a voice recognition session. Answer and end telephone calls. Adjust the volume level.
Microphone	Sends voice signals to Bluetooth control unit.
Bluetooth control unit	<ul style="list-style-type: none"> Controls hands-free phone functions. Receives display signals from audio unit. Outputs display signals to the display unit.
Display unit	<ul style="list-style-type: none"> Receives display signals from Bluetooth control unit. Displays audio system information.
Bluetooth antenna	Sends telephone voice signal to bluetooth control unit.

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DIAGNOSIS SYSTEM (AUDIO UNIT)

Diagnosis Description

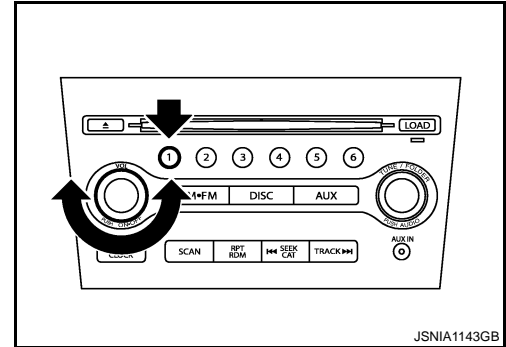
INFOID:000000004276225

Self-diagnosis mode can perform the following items.

- Versions display
- Channel check diagnosis
- Key check diagnosis
- AV communication diagnosis

VERSIONS DISPLAY FUNCTION

1. Turn ignition switch ON.
2. Turn the audio unit off.
3. While pressing "1" button, turn volume control dial clockwise or counterclockwise for 30 clicks or more.



4. Diagnosis default screen of audio display unit is displayed.

NOTE:

Diagnosis default screen = All icons and segments of the audio display unit are turned on.

5. Pressing the AUDIO switch briefly displays the version display mode. Pressing the AUDIO switch briefly switches to each version display. Pressing and holding the AUDIO switch when displaying each software version returns to the diagnosis default screen.

Version display item

	Mode	Description
Versions display	Software V#####	Audio unit software version is displayed.
	Hardware V#####	Audio unit hardware version is displayed.
	CD Mech V#####	Audio unit CD mechanism version is displayed.
	EEPROM V#####	Audio unit EEPROM version is displayed.
	Disp SW V#####	Display unit software version is displayed.
	Disp HW V#####	Display unit hardware version is displayed.
	SDARS V#####	Audio unit SDARS version is displayed. NOTE: "VFFFFFFF" is displayed when SDARS is not available.

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

CHANNEL CHECK DIAGNOSIS FUNCTION

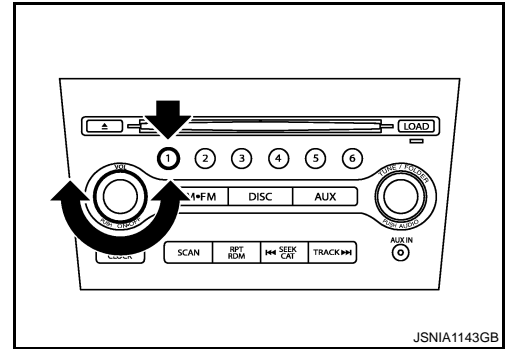
1. Turn ignition switch ON.
2. Turn the audio unit off.

DIAGNOSIS SYSTEM (AUDIO UNIT)

[BASE AUDIO]

< FUNCTION DIAGNOSIS >

- While pressing the “1” button, turn the volume control dial clockwise or counterclockwise for 30 clicks or more.



- The diagnosis default screen of audio display unit is displayed.
NOTE:
Diagnosis default screen = All icons and segments of the audio display unit are turned on.
- Turning the TUNE/FOLDER dial clockwise displays the channel check mode. Pressing and holding the AUDIO switch during each channel check or waiting approximately 1 second after finishing all channel checks returns to the diagnosis default screen.

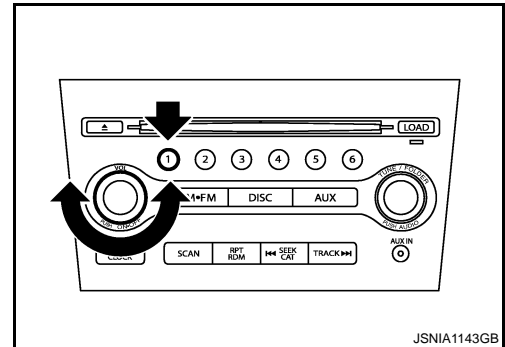
Channel check item

	Mode	Description
Channel check	Channel Check Front Left	Connection of a speaker can be confirmed by test tone.
	Channel Check Front Right	
	Channel Check Rear Right	
	Channel Check Rear Left	

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

KEY CHECK DIAGNOSIS FUNCTION

- Turn ignition switch ON.
- Turn the audio unit off.
- While pressing the “1” button, turn the volume control dial clockwise or counterclockwise for 30 clicks or more.



- The diagnosis default screen of audio display unit is displayed.
NOTE:
Diagnosis default screen = All icons and segments of the audio display unit are turned on.
- Turning the TUNE/FOLDER dial counterclockwise displays the key check mode, and the pressed switch name is shown. Pressing and holding the AUDIO switch during the key check mode returns to the diagnosis default screen.

DIAGNOSIS SYSTEM (AUDIO UNIT)



[BASE AUDIO]

< FUNCTION DIAGNOSIS >

Key check item (audio unit)

Mode	Display item	Switch name
Key check	1	Preset button "1" switch
	2	Preset button "2" switch
	3	Preset button "3" switch
	4	Preset button "4" switch
	5	Preset button "5" switch
	6	Preset button "6" switch
	POWER	ON-OFF switch
	VOLUME up	VOL up switch
	VOLUME down	VOL down switch
	AM-FM	AM-FM switch
	DISC	DISC switch
	AUX	AUX switch
	AUDIO	AUDIO switch
	TUNE/FOLDER up	TUNE/FOLDER up switch
	TUNE/FOLDER down	TUNE/FOLDER up switch
	DISP CLOCK	DISP CLOCK switch
	SCAN	SCAN switch
	RPT/RDM	RPT RDM switch
	SEEK/TRACK up	SEEK CAT switch
	SEEK/TRACK down	TRACK switch
LOAD	LOAD switch	
EJECT	EJECT switch	

Key check item (steering switch)

Mode	Display item	Switch name
Key check	STR SOURCE	SOURCE switch
	STR VOL UP	VOL up switch
	STR VOL DOWN	VOL down switch
	STR UP	MENU up switch
	STR DOWN	MENU down switch
	STR TEL END*	 switch
	STR TEL SEND*	 switch

*with Bluetooth.

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

AV COMMUNICATION DIAGNOSIS FUNCTION

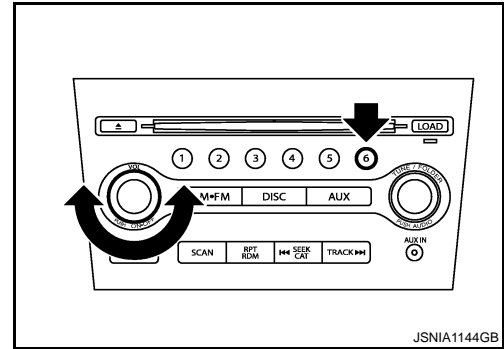
1. Turn ignition switch ON.
2. Turn the audio unit off.

DIAGNOSIS SYSTEM (AUDIO UNIT)

[BASE AUDIO]

< FUNCTION DIAGNOSIS >

- While pressing the “6” button, turn the volume control dial clockwise or counterclockwise for 30 clicks or more.



- Returns to diagnosis default screen and displays “AV DIAGNOSIS”.
- Pressing the AUDIO switch briefly displays the AV communication diagnosis mode. Pressing the AUDIO switch briefly again switches to each AV communication display.

AV communication diagnosis item

Display item			Description
AV communication item	Current	Past	
TRANSMIT	OK / UN	OK / 0 -39	The communication condition and error counter from the audio unit to the audio display unit are displayed.
DISP	OK / UN	OK / 0 -39	The communication condition and error counter from the audio display unit to the audio unit.
DISP MPDT	OK / UN	OK / 0 -39	
BTHF MPDT*	OK / UN	OK / 0 -39	The communication condition and error counter from the audio unit to the Bluetooth control unit.
NO HISTORY BTHF	—	—	This is displayed on models without Bluetooth.
AV TROUBLE DEL.	—	—	The error record can be deleted.

*With Bluetooth.

- Pressing the SEEK up switch displays the confirmation screen of “delete error record”. Press the SEEK down switch if returning from RECORD DEL YES? to RECORD DEL NO?
The item is automatically determined approximately 6 seconds after it is displayed. Then the display returns to AV TROUBLE DEL display item.

Display item	Description
RECORD DEL-NO?	Does not delete error record.
RECORD DEL-YES?	Deletes error record.

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

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DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

Diagnosis Description

INFOID:000000004252564

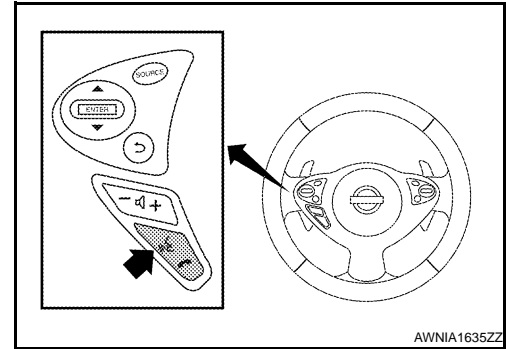
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

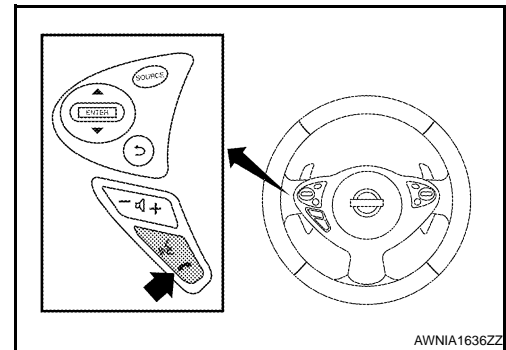
- Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

OPERATION PROCEDURE

1. Turn ignition switch to ACC or ON.
2. Wait for the Bluetooth system to complete initialization. This may take up to 10 seconds.
3. Press and hold the steering wheel audio control switch SEND button for at least 5 seconds. The Bluetooth system will begin to play a verbal prompt.



4. While the prompt is playing, press and hold the steering wheel audio control switch END button until you hear the “Diagnostics mode” prompt. The Bluetooth system will sound a 5-second beep.
5. While the beep is sounding, press and hold the steering wheel audio control switch END button again until you hear prompts.
6. The Bluetooth system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician. Refer to [AV-22, "Work Flow"](#).
7. After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails, refer to [AV-22, "Work Flow"](#).
8. Self-diagnosis mode is complete when the voice prompt says “All diagnostic functions completed”.



Work Flow

INFOID:000000004252565

Failure Message	Action
“Internal failure”	Replace Bluetooth control unit. Refer to AV-79, "Removal and Installation" .
“Bluetooth antenna open”	1. Inspect harness connection.
“Bluetooth antenna shorted”	2. Replace Bluetooth antenna. Refer to AV-78, "Removal and Installation" .
“Phone/Send for Hands Free System is stuck”	Check steering wheel audio control switches. Refer to AV-72, "Removal and Installation" .
“Phone/End for the Hands Free System is stuck”	
“Microphone test” (failed interactive test)	1. Inspect harness between Bluetooth control unit and microphone. 2. Replace microphone. Refer to AV-77, "Removal and Installation" .

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:000000003899614

1. CHECK FUSES

Check that the following fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Audio unit	19	Battery power	24
	7	Ignition switch ACC or ON	17

Are the fuses OK?

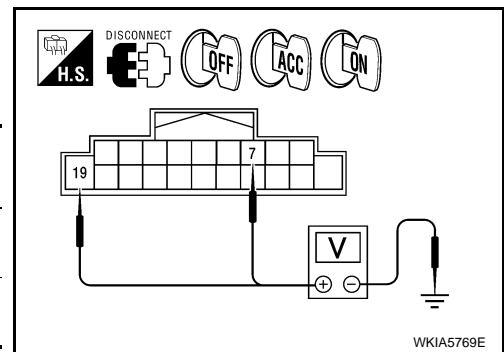
YES >> GO TO 2.

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect audio unit connector M133.
2. Check voltage between the audio unit connector M133 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M133	19	Ground	Battery voltage	Battery voltage	Battery voltage
	7	Ground	0V	Battery voltage	Battery voltage



Are the voltage results as specified?

YES >> GO TO 3.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3. GROUND CIRCUIT CHECK

Inspect audio unit case ground.

Does case ground pass inspection?

YES >> Inspection End.

NO >> Repair audio unit case ground.

SUBWOOFER AMP

SUBWOOFER AMP : Diagnosis Procedure

INFOID:000000004252566

1. CHECK FUSE

Check for blown fuses.

Unit	Terminals	Signal name	Fuse No.
Subwoofer amp.	9	Ign switch ACC or ON	17

Are the fuses OK?

YES >> GO TO 2.

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

2. CHECK POWER SUPPLY CIRCUIT

POWER SUPPLY AND GROUND CIRCUIT

[BASE AUDIO]

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect subwoofer amp connector.
3. Check voltage between subwoofer amp harness connector and ground.

(+)		(-)	Voltage (approx.)
Connector	Terminal		
B21	9	Ground	Battery voltage

Is battery voltage present?

- YES >> GO TO 3.
 NO >> Check harness between subwoofer amp and fuse.

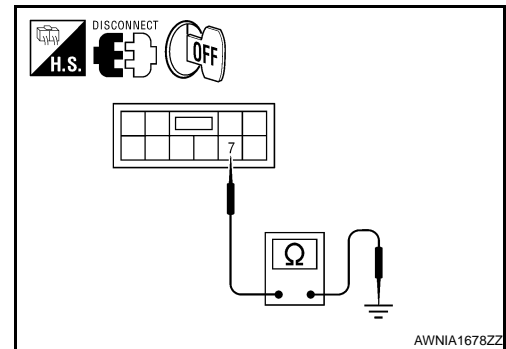
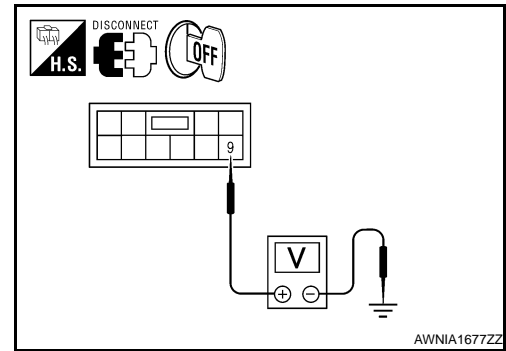
3.CHECK GROUND CIRCUIT

Check continuity between subwoofer amp harness connector and ground.

(+)		(-)	Continuity
Connector	Terminal		
B21	7	Ground	Yes

Does continuity exist?

- YES >> Inspection End.
 NO >> Repair harness or connector.



DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:000000004252821

1.CHECK FUSES

Check that the following fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Display unit	9	Battery power	24
	8	Ignition switch ACC or ON	17

Are the fuses OK?

- YES >> GO TO 2.
 NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

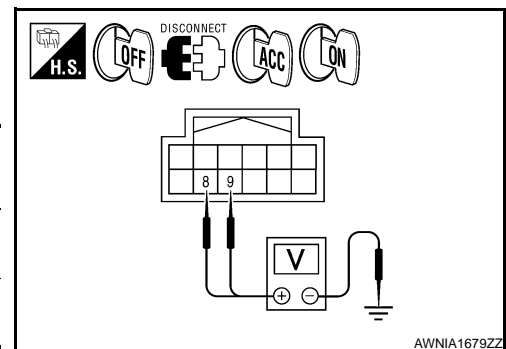
1. Turn ignition switch OFF.
2. Disconnect display unit connector.
3. Check voltage between the display unit and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M93 (without Bluetooth)	9	Ground	Battery voltage	Battery voltage	Battery voltage
M109 (with Bluetooth)	8	Ground	0V	Battery voltage	Battery voltage

Are the voltage results as specified?

- YES >> GO TO 3.
 NO >> • Check connector housings for disconnected or loose terminals.
 • Repair harness or connector.

3.GROUND CIRCUIT CHECK



POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

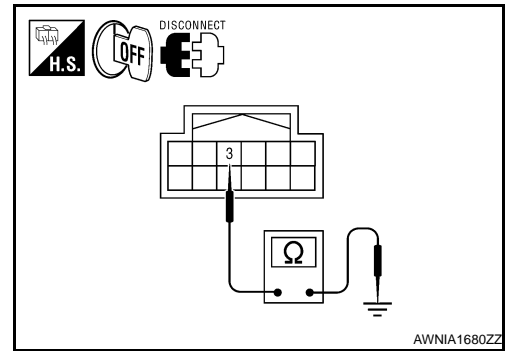
[BASE AUDIO]

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

Connector	Terminal	—	Continuity
M93	3	Ground	Yes

Is the inspection result normal?

- YES >> Inspection End.
 NO >> Repair harness or connector.



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BLUETOOTH CONTROL UNIT

BLUETOOTH CONTROL UNIT : Diagnosis Procedure

INFOID:000000004252820

1. CHECK FUSE

Check that the following fuses of the Bluetooth control unit are not blown.

Power source	Fuse No.
Battery	24
Ignition switch ACC or ON	17
Ignition switch ON or START	3

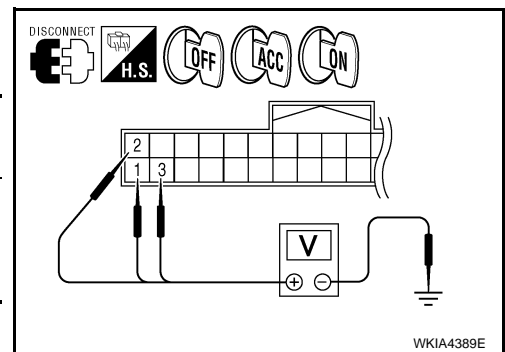
Are the fuses OK?

- YES >> GO TO 2.
 NO >> Be sure to eliminate cause of malfunction before installing new fuse.

2. CHECK POWER SUPPLY CIRCUIT

Check voltage between Bluetooth control unit harness connector and ground.

(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
B126	1	Ground	OFF	Battery voltage
	2		ACC	
	3		ON	



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Are the voltage results as specified?

- YES >> GO TO 3.
 NO >> Check harness between Bluetooth control unit and fuse.

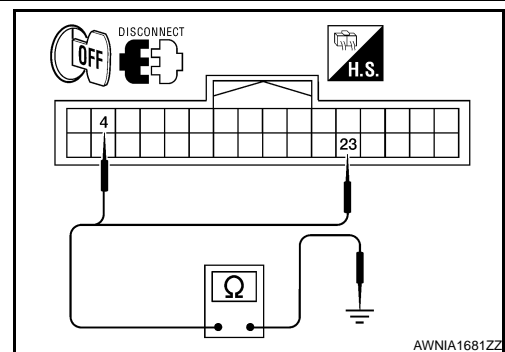
3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit connector B126.
3. Check continuity between Bluetooth control unit harness connector and ground.

(+)		(-)	Continuity
Connector	Terminal		
B126	4	Ground	Yes
	23		

Does continuity exist?

- YES >> Inspection End.
 NO >> Repair harness or connector.



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MICROPHONE

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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

INFOID:000000004364417

MICROPHONE : Diagnosis Procedure

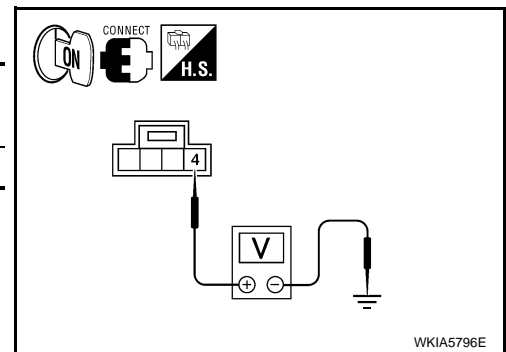
1. CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

Check voltage between microphone harness connector and ground.

(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
R7	4	Ground	ON	5V

Is proper voltage present?

- YES >> GO TO 3.
- NO >> GO TO 2.

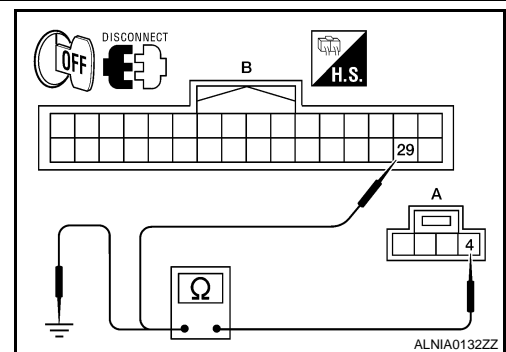


2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit and microphone connectors.
3. Check continuity between microphone harness connector R7 (A) terminal 4 and Bluetooth control unit harness connector B126 (B) terminal 29.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	4	B126	29	Yes

4. Check continuity between microphone harness connector R7 (A) terminal 4 and ground.



A		-	Continuity
Connector	Terminal		
R7	4	Ground	No

Are continuity results as specified?

- YES >> Replace the Bluetooth control unit. Refer to [AV-79, "Removal and Installation"](#).
- NO >> Repair harness or connector.

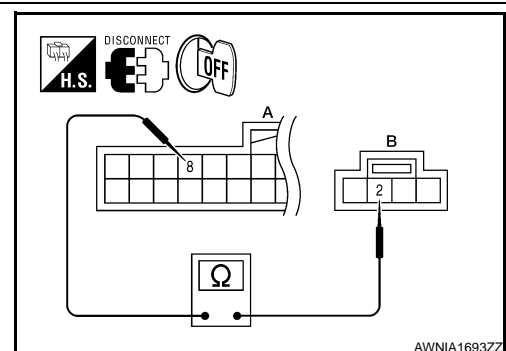
3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit and microphone connectors.
3. Check continuity between Bluetooth control unit harness connector B126 (A) terminal 8 and microphone harness connector R7 (B) terminal 2.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B126	8	R7	2	Yes

Is continuity present?

- YES >> Inspection End.
- NO >> Repair harness or connector.



FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

FRONT DOOR SPEAKER

Description

INFOID:000000003899618

The audio unit sends audio signals to the front door speakers using the front door speaker circuits.

Diagnosis Procedure

INFOID:000000003899619

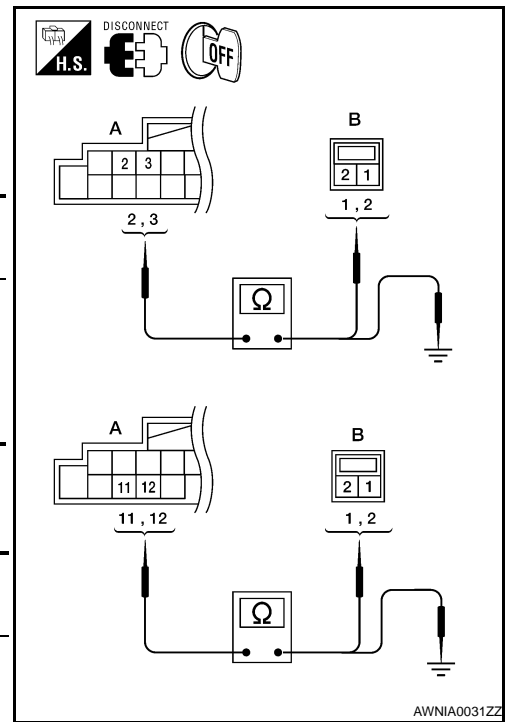
1. HARNESS CHECK

1. Disconnect audio unit connector M133 (A) and suspect speaker connector (B).
2. Check continuity between audio unit harness connector M133 (A) terminal and suspect speaker harness connector (B) terminal.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M133	2	D3	1	Yes
	3		2	
	11	D103	1	
	12		2	

3. Check continuity between audio unit harness connector M133 (A) terminal and ground.

A		—	Continuity
Connector	Terminal		
M133	2	Ground	No
	3		
	11		
	12		



Are continuity results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2. FRONT DOOR SPEAKER SIGNAL CHECK

1. Connect audio unit connector and front speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.

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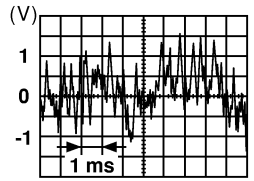
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FRONT DOOR SPEAKER

[BASE AUDIO]

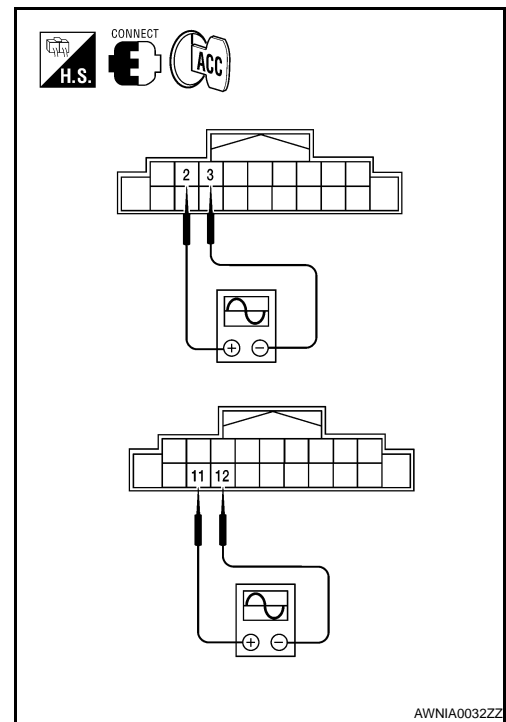
< COMPONENT DIAGNOSIS >

4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

(+) Connector		(-) Terminal		Condition	Reference signal
Terminal	Terminal	Terminal	Terminal		
M133	2	11	3	Receive audio signal	 <p>SKIA0177E</p>

Is the inspection result normal?

- YES >> Replace speaker. Refer to [AV-68, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-64, "Removal and Installation"](#).



TWEETER

Description

INFOID:000000003899622

The audio unit sends audio signals to the tweeters using the front door speaker circuits.

Diagnosis Procedure

INFOID:000000003899623

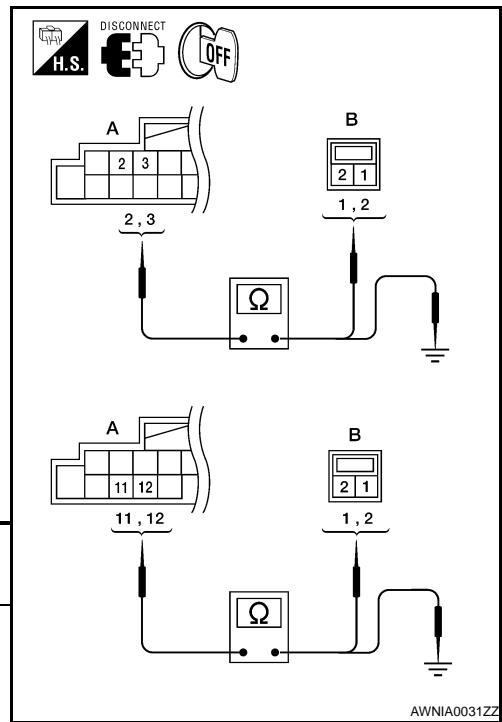
1. HARNESS CHECK

1. Disconnect audio unit connector M133 (A) and suspect tweeter connector (B).
2. Check continuity between audio unit harness connector M133 (A) and suspect tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M133	2	M143	1	Yes
	3		2	
	11	M144	1	
	12		2	

3. Check continuity between audio unit harness connector M133 (A) and ground.

A		—	Continuity
Connector	Terminal		
M133	2	Ground	No
	3		
	11		
	12		



Are the continuity results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
 • Repair harness or connector.

2. TWEETER SIGNAL CHECK

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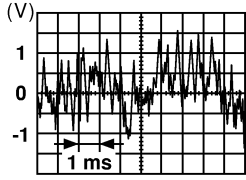
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TWEETER

[BASE AUDIO]

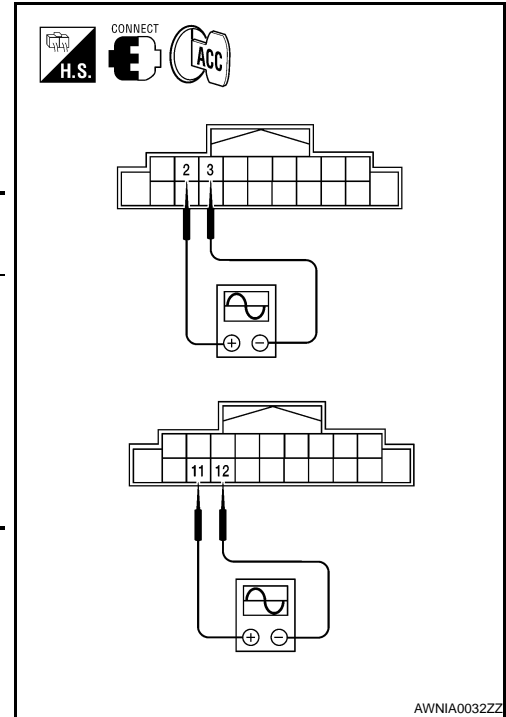
< COMPONENT DIAGNOSIS >

1. Connect audio unit connector and tweeter connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

(+)		(-)		Condition	Reference signal
Connector	Terminal	Terminal	Terminal		
M133	2	3		Receive audio signal	
	11	12			

Is the audio signal voltage as specified?

- YES >> Replace tweeter. Refer to [AV-67. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-64. "Removal and Installation"](#).



AWNIA0032ZZ

REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

REAR DOOR SPEAKER

Description

INFOID:000000003899624

The audio unit sends audio signals to the rear door speakers using the rear door speaker circuits.

Diagnosis Procedure

INFOID:000000003899625

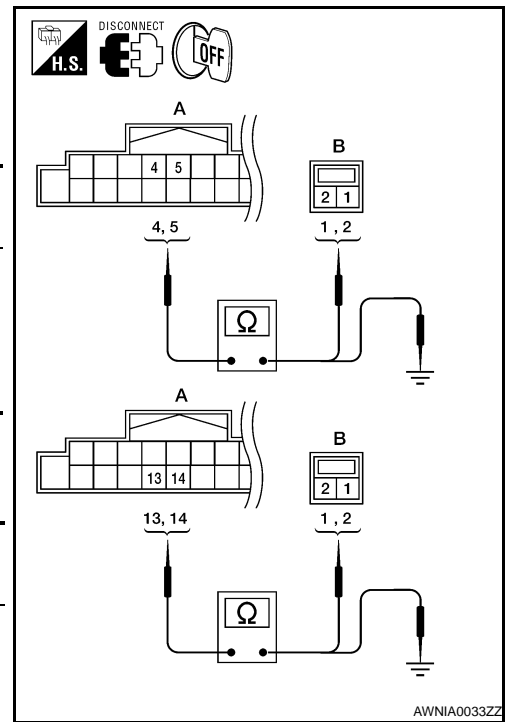
1. HARNESS CHECK

1. Disconnect audio unit connector M133 (A) and suspect speaker connector.
2. Check continuity between audio unit harness connector M133 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M133	4	D202	1	Yes
	5		2	
	13	D302	1	
	14		2	

3. Check continuity between audio unit harness connector M133 (A) and ground.

A		—	Continuity
Connector	Terminal		
M133	4	Ground	No
	5		
	13		
	14		



Are the continuity results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2. REAR DOOR SPEAKER SIGNAL CHECK

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REAR DOOR SPEAKER

[BASE AUDIO]

< COMPONENT DIAGNOSIS >

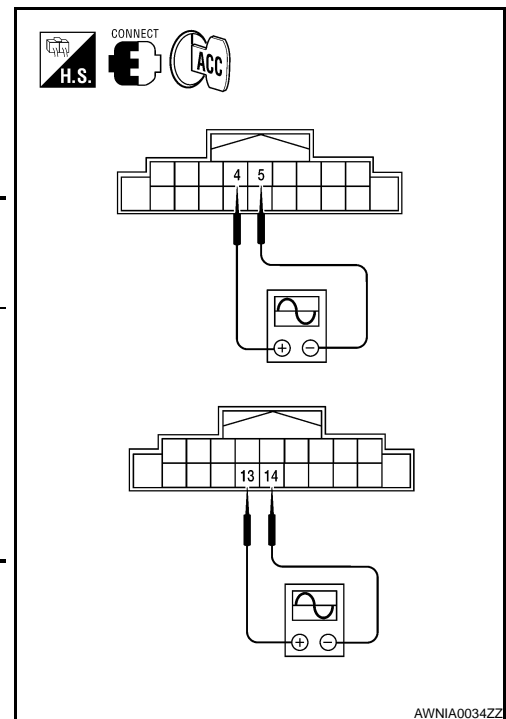
1. Connect audio unit connector and rear door speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	(+) Terminal		(-) Terminal		Condition	Reference signal
	4	5	13	14		
M133	4	5	13	14	Receive audio signal	

SKIA0177E

Is the audio signal voltage as specified?

- YES >> Replace rear door speaker. Refer to [AV-69, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-64, "Removal and Installation"](#).



SUBWOOFER

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

SUBWOOFER

Description

INFOID:000000004252822

The audio unit sends audio signals to the subwoofer amp. The subwoofer amp. amplifies the audio signals before sending them to the subwoofers using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004252823

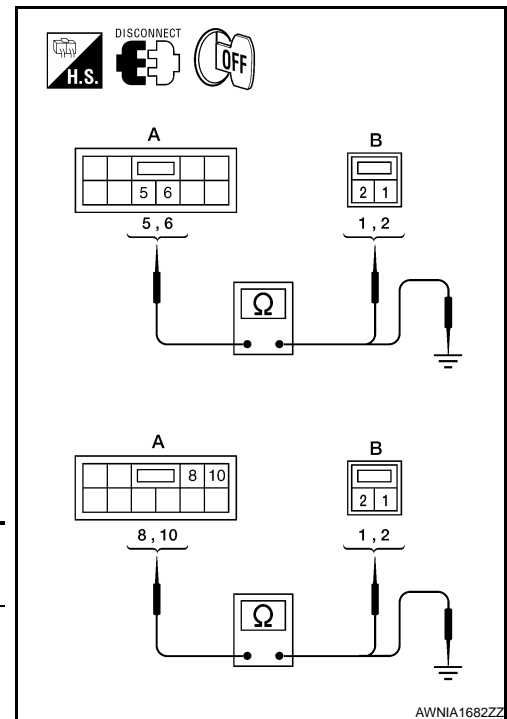
1. HARNESS CHECK

1. Disconnect subwoofer amp. connector B21 and suspect subwoofer connector.
2. Check continuity between subwoofer amp. harness connector B21 (A) and suspect subwoofer harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B21	6	B16	1	Yes
	5		2	
	10	B17	1	
	8		2	

3. Check continuity between subwoofer harness connector B21 (A) and ground.

A		—	Continuity
Connector	Terminal		
B21	6	Ground	No
	5		
	10		
	8		



AWNIA1682ZZ

Are the continuity test results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2. REAR SUBWOOFER SIGNAL CHECK

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SUBWOOFER

[BASE AUDIO]

< COMPONENT DIAGNOSIS >

1. Connect subwoofer amp. connector B21 and suspect subwoofer connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between subwoofer amp. harness connector B21 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B21	6	5	Receive audio signal	
	10	8		

SKIA0177E

Is the audio signal voltage as specified?

YES >> Replace suspect subwoofer. Refer to [AV-70, "Removal and Installation"](#).

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect audio unit connector M133 and subwoofer speaker amp. connector B21.
2. Check continuity between audio unit harness connector M133 (A) and subwoofer amp. harness connector B21 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M133	4	B21	2	Yes
	5		1	
	13		4	
	14		3	

3. Check continuity between audio unit harness connector M133 (A) terminal and ground.

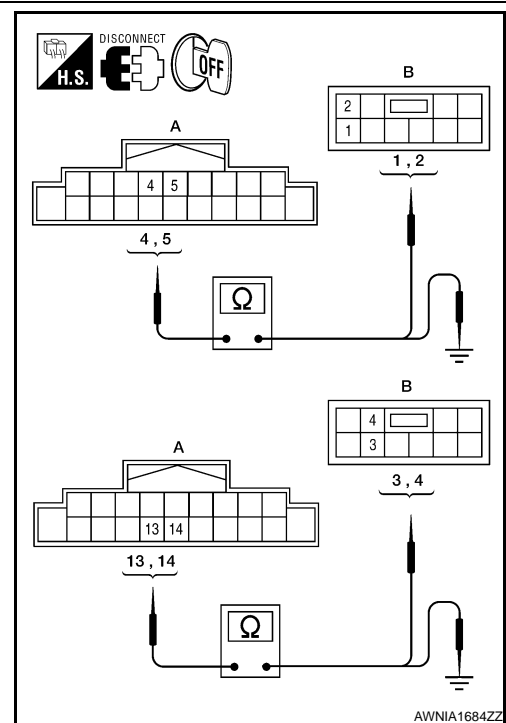
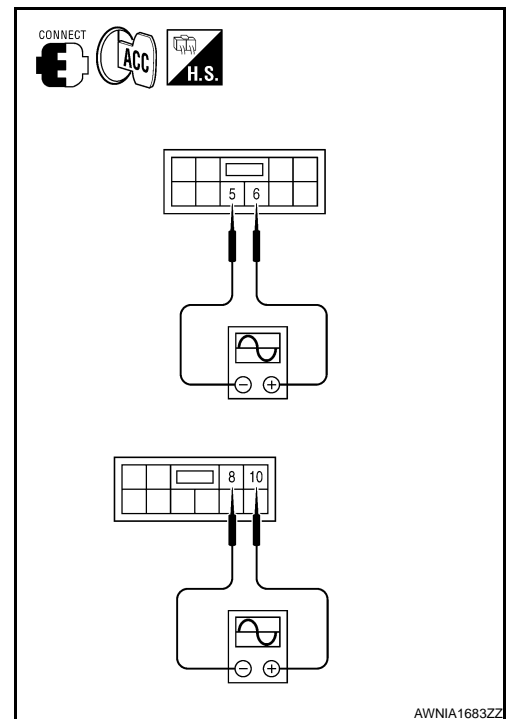
A		—	Continuity
Connector	Terminal		
M133	4	Ground	No
	5		
	13		
	14		

Are continuity test results as specified?

YES >> GO TO 4.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. SUBWOOFER SIGNAL CHECK

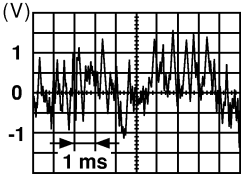


SUBWOOFER

< COMPONENT DIAGNOSIS >

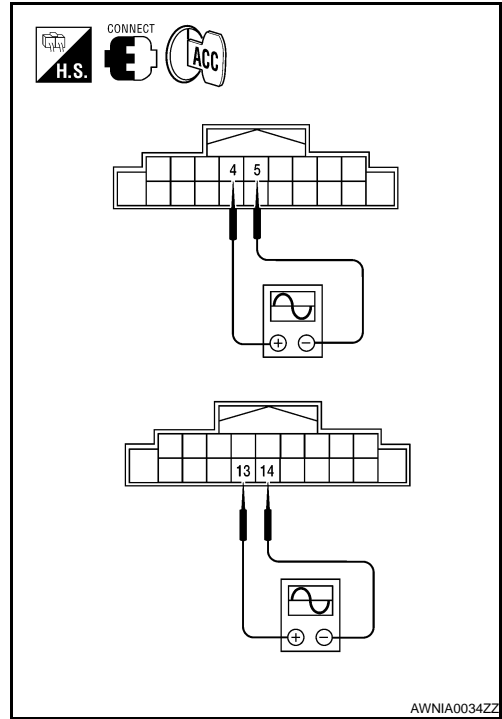
[BASE AUDIO]

1. Connect audio unit connector M133 and subwoofer amp. connector B21.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between audio unit harness connector M133 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M133	4	5	Receive audio signal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
	13	14		

Is the audio signal voltage as specified?

- YES >> Replace subwoofer Refer to [AV-70, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-64, "Removal and Installation"](#).



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STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

STEERING SWITCH

Description

INFOID:000000003899626

When one of the steering wheel audio control switches is pushed, the resistance in steering switch circuit changes depending on which button is pushed.





Diagnosis Procedure

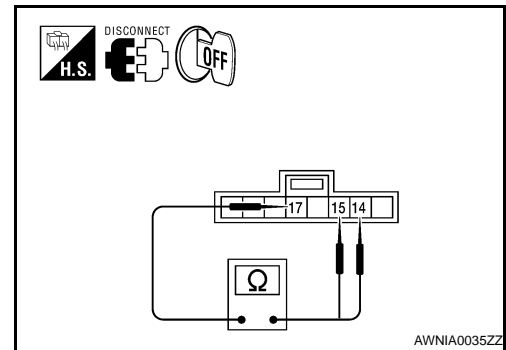
INFOID:000000003899627

WITH BLUETOOTH

1.CHECK STEERING SWITCH RESISTANCE

1. Disconnect steering switch connector M88.
2. Check resistance between steering switch connector terminals.

Terminal	Signal name	Condition	Resistance (Ω) (Approx.)	
15	17	Source	Depress SOURCE switch.	680
		Phone/Send	Depress  switch.	220
		Volume (up)	Depress volume UP switch.	110
		Volume (down)	Depress volume DOWN switch.	0
14	17	Seek (down)	Depress  switch.	220
		Seek (up)	Depress  switch.	110
		Phone/End	Depress  switch.	0



Do the steering switches check OK?

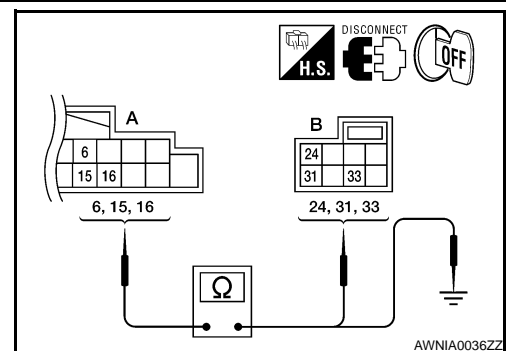
YES >> GO TO 2.

NO >> Replace steering switch. Refer to [AV-72. "Removal and Installation"](#).

2.CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M133 and spiral cable connector M30.
3. Check continuity between audio unit harness connector M133 (A) and spiral cable harness connector M30 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M133	6	M30	24	Yes
	16		31	
	15		33	



4. Check continuity between audio unit connector M133 (A) and ground.

A		—	Continuity
Connector	Terminal		
M133	6	Ground	No
	15		
	16		

Are the continuity results as specified?

YES >> GO TO 3.

NO >> Repair harness.

STEERING SWITCH

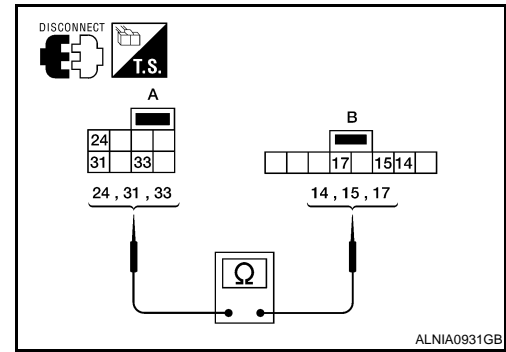
< COMPONENT DIAGNOSIS >

[BASE AUDIO]

3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M88.
2. Check continuity between spiral cable harness connector M30 (A) and M88 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M88	14	Yes
	31		15	
	33		17	



Does the spiral cable check OK?

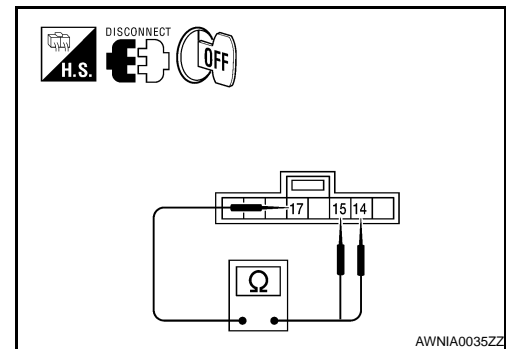
- YES >> Inspection End.
 NO >> Replace spiral cable. Refer to [SR-8, "Removal and Installation"](#).

WITHOUT BLUETOOTH

1. CHECK STEERING SWITCH RESISTANCE

1. Disconnect steering switch connector M88.
2. Check resistance between steering switch connector terminals.

Terminal	Signal name	Condition	Resistance (Ω) (Approx.)
15	Volume (up)	Depress volume up switch.	121
	Volume (down)	Depress volume down switch.	0
14	Seek (down)	Depress ▽ switch.	321
	Seek (up)	Depress △ switch.	121
	Source	Depress source switch.	0



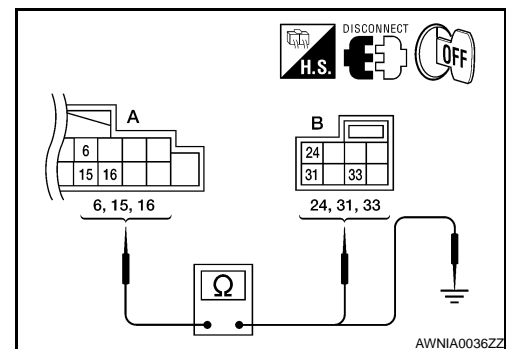
Do the steering switches check OK?

- YES >> GO TO 2.
 NO >> Replace steering switch. Refer to [AV-72, "Removal and Installation"](#).

2. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M133 and spiral cable connector M30.
3. Check continuity between audio unit harness connector M133 (A) and spiral cable harness connector M30 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M133	6	M30	24	Yes
	16		31	
	15		33	



4. Check continuity between audio unit connector M133 (A) and ground.

A		—	Continuity
Connector	Terminal		
M133	6	Ground	No
	15		
	16		

STEERING SWITCH

[BASE AUDIO]

< COMPONENT DIAGNOSIS >

Are the continuity results as specified?

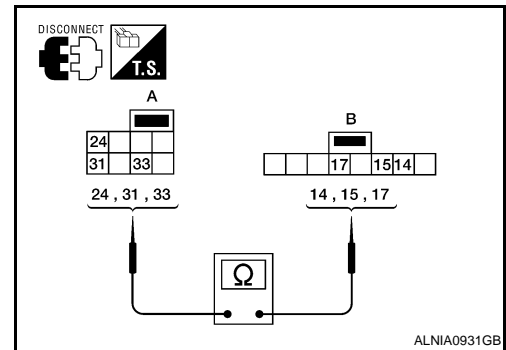
YES >> GO TO 3.

NO >> Repair harness.

3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M88.
2. Check continuity between spiral cable harness connector M30 (A) and M88 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M88	14	Yes
	31		15	
	33		17	



Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to [SR-8, "Removal and Installation"](#).

MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000004252824

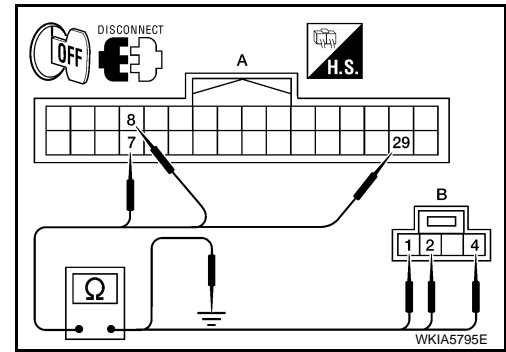
Voice signals are transmitted from the microphone to the Bluetooth control unit using the microphone signal circuits.

Diagnosis Procedure

INFOID:000000004252825

1. CHECK HARNESS BETWEEN BLUETOOTH CONTROL UNIT AND MICROPHONE

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit connector and microphone connector.
3. Check continuity between Bluetooth control unit harness connector B126 (A) and microphone harness connector R7 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
B126	7	R7	1	Yes
	8		2	
	29		4	

4. Check continuity between Bluetooth control unit harness connector B126 (A) and ground.

A		—	Continuity
Connector	Terminal		
B126	7	Ground	No
	8		
	29		

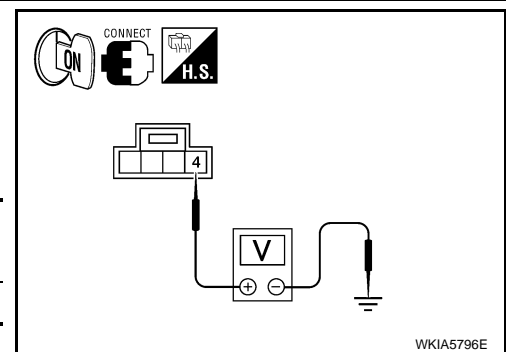
Are the continuity test results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK MICROPHONE POWER SUPPLY

1. Connect Bluetooth control unit connector and microphone connector.
2. Turn ignition switch ON.
3. Check voltage between microphone harness connector R7 terminal 4 and ground.



(+)		(-)	Voltage (approx.)
Connector	Terminal		
R7	4	Ground	5V

Is voltage reading approx. 5 volts?

YES >> GO TO 3.

NO >> Replace Bluetooth control unit. Refer to [AV-79, "Removal and Installation"](#).

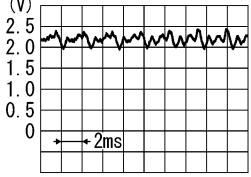
3. CHECK MICROPHONE SIGNAL

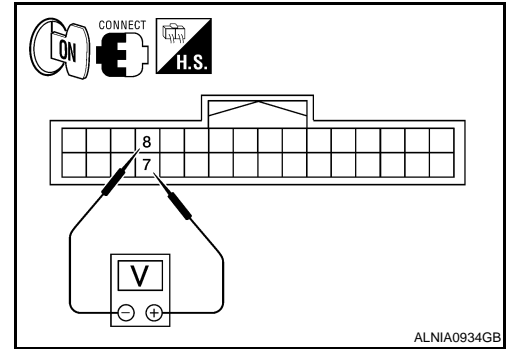
MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

Check signal between Bluetooth control unit harness connector B126 terminals 7 and 8.

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
B126	7	8	While talking into microphone  <small>PKIB5037J</small>



Are voltage readings as specified?

- YES >> Replace Bluetooth control unit. Refer to [AV-79, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-77, "Removal and Installation"](#).

AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

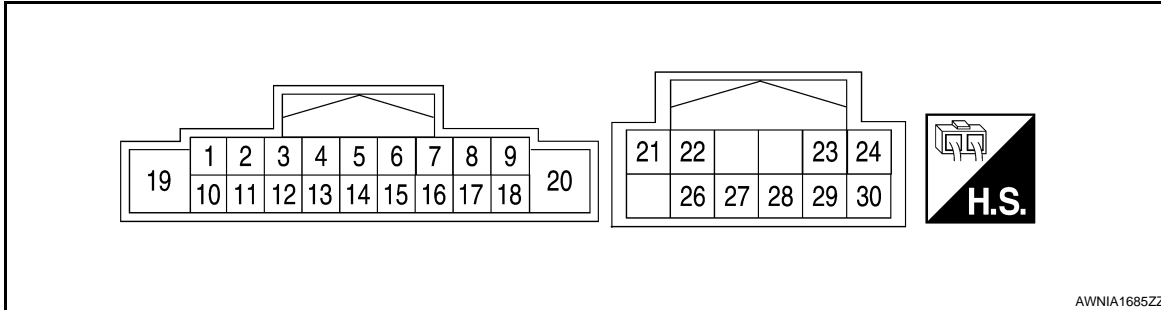
ECU DIAGNOSIS

AUDIO UNIT

Reference Value

INFOID:000000003899638

TERMINAL LAYOUT



PHYSICAL VALUES - WITH BLUETOOTH

Terminal (Wire color)		Item	Signal input/output	Condition		Reference value (approx)
+	-			Ignition switch	Operation	
2 (L)	3 (B/W)	Audio sound signal front LH	Output	ON	Receive audio signal	 SKIA0177E
4 (LG)	5 (B/Y)	Audio sound signal rear LH	Output	ON	Receive audio signal	 SKIA0177E
6 (W/G)	Ground	Steering switch signal A	Input	ON	Depress ▽ switch.	220Ω
					Depress △ switch.	110Ω
					Depress ◐ switch.	0Ω
7 (V/Y)	Ground	ACC signal	Input	ON	Ignition switch ACC or ON	Battery voltage
9 (R/L)	8 (R/Y)	ILL signal	Input	ON	Headlamps ON	Battery voltage
11 (BR)	12 (B/R)	Audio sound signal front RH	Output	ON	Receive audio signal	 SKIA0177E

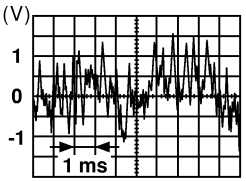





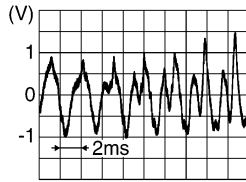
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AUDIO UNIT

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[BASE AUDIO]

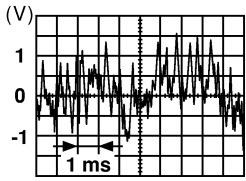
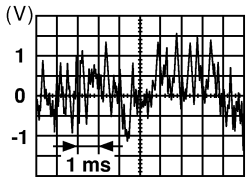
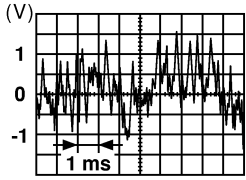
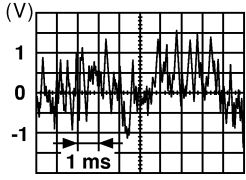
Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value (approx)
+	-			Ignition switch	Operation	
13 (O)	14 (B/P)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	 <small>SKIA0177E</small>
15 (L/B)	-	Remote con- trol ground	Input	-	-	-
16 (GR/L)	Ground	Steering switch signal B	Input	ON	Depress SOURCE switch.	680Ω
					Depress  switch.	220Ω
					Depress volume UP switch.	110Ω
					Depress volume DOWN switch.	0Ω
19 (Y/R)	Ground	Battery power	Input	-	-	Battery voltage
21 (G)	22 (R)	Multimedia CAN	Input	-	-	-
23 (W/B)	Ground	Steering switch signal A	Output	ON	Depress  switch.	220Ω
					Depress  switch.	110Ω
					Depress  switch.	0Ω
24 (GR/R)	Ground	Steering switch signal B	Output	ON	Depress SOURCE switch.	680Ω
					Depress  switch.	220Ω
					Depress volume UP switch.	110Ω
					Depress volume DOWN switch.	0Ω
26	-	Shield	-	-	-	-
27 (BR)	28 (Y)	Tel Voice sig- nal	Input	ON	With Bluetooth transmitting tel- voice signals to the audio unit.	 <small>SKIB3609E</small>
29 (G/O)	Ground	Telephone ON	Output	ON	-	-
30	-	Shield	-	-	-	-

PHYSICAL VALUES - WITHOUT BLUETOOTH

AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value (approx)
+	-			Ignition switch	Operation	
2 (L)	3 (B/W)	Audio sound signal front LH	Output	ON	Receive audio sig- nal	 <small>SKIA0177E</small>
4 (LG)	5 (B/Y)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	 <small>SKIA0177E</small>
6 (W/G)	Ground	Steering switch signal A	Input	ON	Depress ▽ switch.	321Ω
					Depress △ switch.	121Ω
					Depress source switch.	0Ω
7 (V/Y)	Ground	ACC signal	Input	ON	Ignition switch ACC or ON	Battery voltage
9 (R/L)	8 (R/Y)	ILL signal	Input	ON	Headlamps ON	Battery voltage
11 (BR)	12 (B/R)	Audio sound signal front RH	Output	ON	Receive audio sig- nal	 <small>SKIA0177E</small>
13 (O)	14 (B/P)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	 <small>SKIA0177E</small>
15 (L/B)	-	Remote con- trol ground	Input	-	-	-
16 (GR/L)	Ground	Steering switch signal B	Input	ON	Depress volume up switch.	121Ω
					Depress volume down switch.	0Ω
19 (Y/R)	Ground	Battery power	Input	-	-	Battery voltage
21 (G)	22 (R)	Multimedia CAN	Input	-	-	-
26	-	Shield	-	-	-	-

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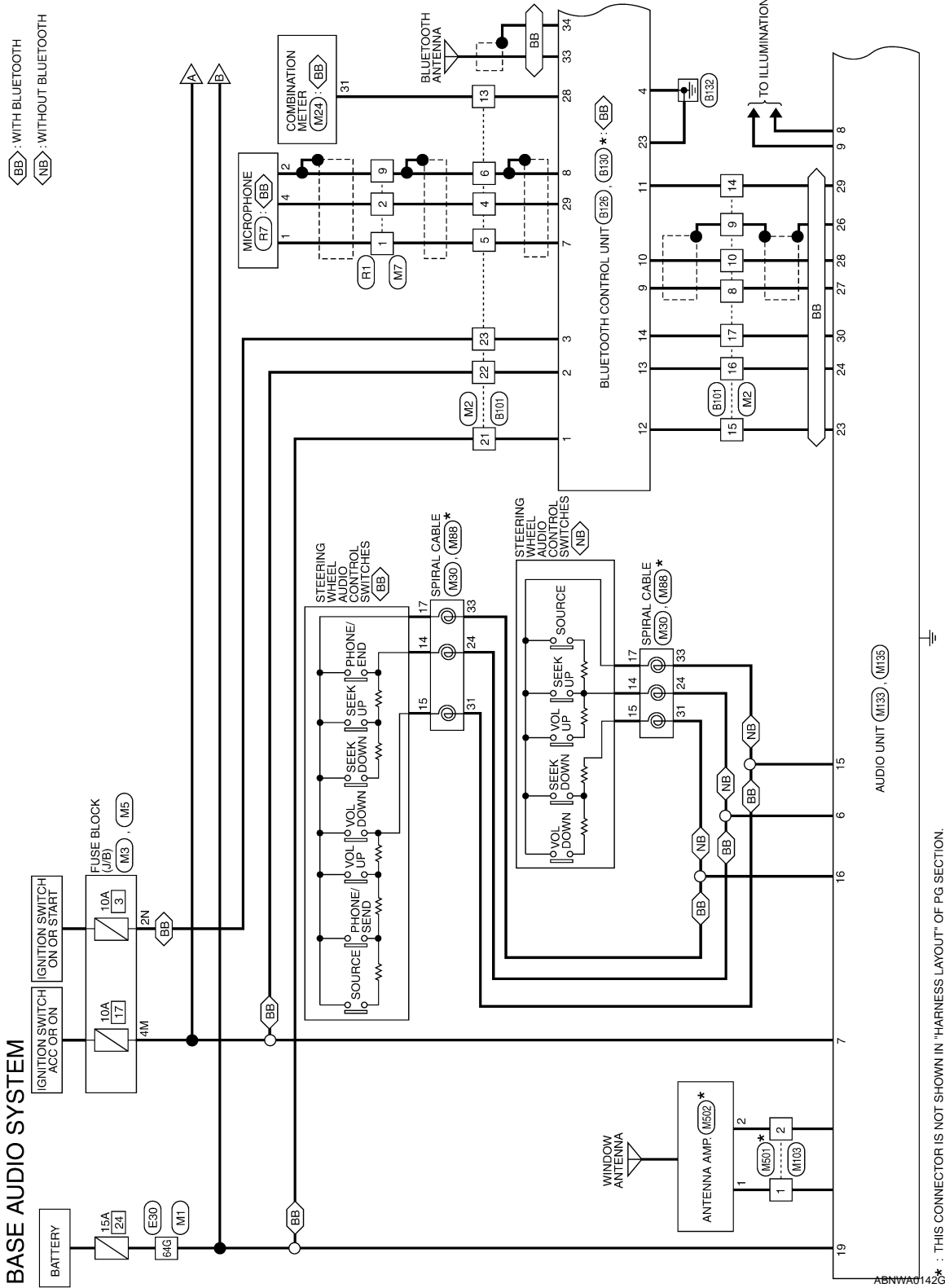
AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

Wiring Diagram

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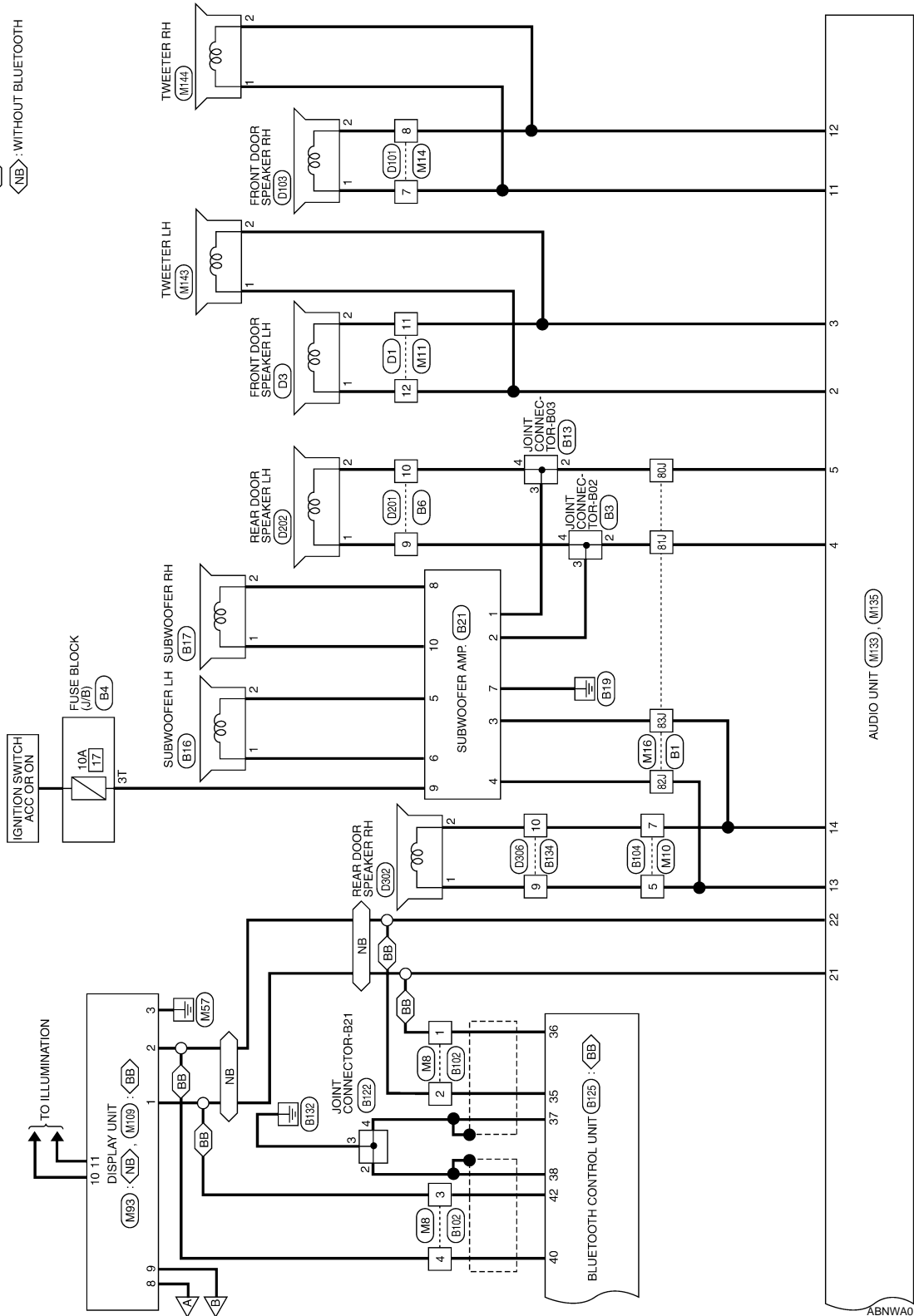


AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

◊BE◊ : WITH BLUETOOTH
◊NB◊ : WITHOUT BLUETOOTH



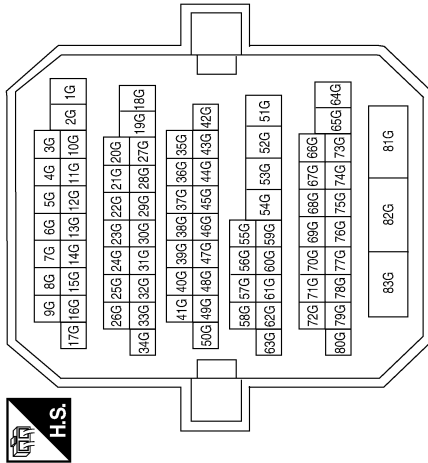
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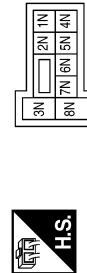
BASE AUDIO SYSTEM CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



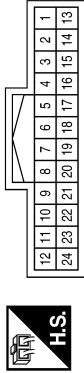
Terminal No.	Color of Wire	Signal Name
64G	Y/R	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



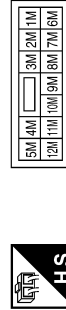
Terminal No.	Color of Wire	Signal Name
2N	G	-

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	R	-
5	L	-
6	SHIELD	-
8	BR	-
9	SHIELD	-
10	Y	-
13	V/W	-
14	SB	-
15	W/B	-
16	GR/R	-
17	LG/B	-
21	V	-

Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



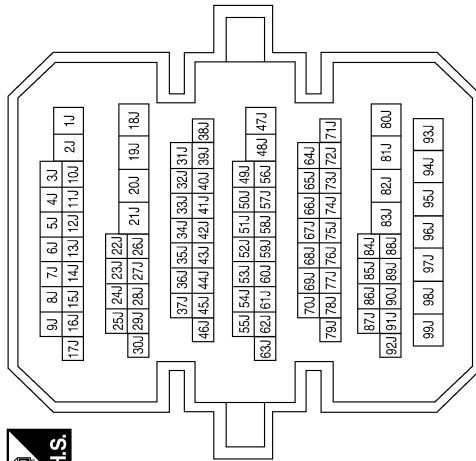
Terminal No.	Color of Wire	Signal Name
4M	V/Y	-

AUDIO UNIT

< ECU DIAGNOSIS >

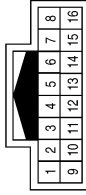
[BASE AUDIO]

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



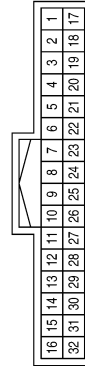
Terminal No.	Color of Wire	Signal Name
80J	B/Y	-
81J	LG	-
82J	O	-
83J	B/P	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



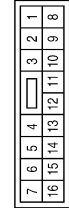
Terminal No.	Color of Wire	Signal Name
1	L	-
2	R	-
9	SHIELD	-

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



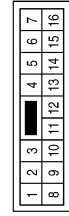
Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-
3	G	-
4	R	-

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	O	-
7	B/P	-

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	B/W	-
12	L	-

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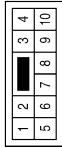
AV

AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	BR	-
8	B/R	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
31	V/W	8P/R OUT

Connector No.	M30
Connector Name	SPIRAL CABLE
Connector Color	GRAY



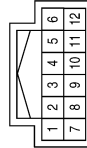
Terminal No.	Color of Wire	Signal Name
24	W/G	AUDIO STRG SW REMOTE A
31	GR/L	AUDIO STRG SW REMOTE B
33	L/B	AUDIO STRG SW GND

Connector No.	M88
Connector Name	SPIRAL CABLE
Connector Color	GRAY



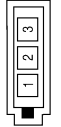
Terminal No.	Color of Wire	Signal Name
14	W	REMOTE A
15	L	REMOTE B
17	BR	GND

Connector No.	M93
Connector Name	DISPLAY UNIT (WITH MONOCHROME DISPLAY, WITHOUT BLUETOOTH)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	M-CAN L
2	R	M-CAN H
3	B	GND
4	-	-
5	-	-
6	-	-
7	-	-
8	V/Y	ACC
9	Y/R	+B
10	R/L	ILL+
11	R/Y	ILL-
12	-	-

Connector No.	M103
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

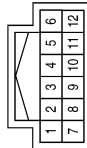
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AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

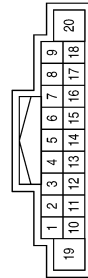
Connector No.	M109
Connector Name	DISPLAY UNIT (WITH MONOCHROME DISPLAY, WITH BLUETOOTH)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	M-CAN L
2	R	M-CAN H
3	B	GND
4	-	-
5	-	-
6	-	-

Terminal No.	Color of Wire	Signal Name
7	-	-
8	V/Y	ACC
9	Y/R	+B
10	R/L	ILL+
11	R/Y	ILL-
12	-	-

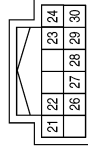
Connector No.	M133
Connector Name	AUDIO UNIT (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	L	FR SP LH(+)
3	B/W	FR SP LH(-)
4	LG	RR SP LH(+)
5	B/Y	RR SP LH(-)
6	W/G	STRG SW A

Terminal No.	Color of Wire	Signal Name
7	V/Y	ACC
8	R/Y	ILL(-)
9	R/L	ILL(+), LIGHT SW
10	-	-
11	BR	FR SP RH(+)
12	B/R	FR SP RH(-)
13	O	RR SP RH(+)
14	B/P	RR SP RH(-)
15	L/B	STRG SW GND
16	GR/L	STRG SW B
17	-	-
18	-	-
19	Y/R	BAT
20	-	-

Connector No.	M135
Connector Name	AUDIO UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	G	MULTIMEDIA CAN L
22	R	MULTIMEDIA CAN H
23	W/B	LADDER OUT 1
24	GR/R	LADDER OUT 2
25	-	-
26	SHIELD	TEL SHIELD
27	BR	TEL I/F+
28	Y	TEL I/F-
29	G/O	TEL ON
30	LG/B	LADDER SHIELD

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AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

Connector No.	M143
Connector Name	TWEETER LH (WITH BASE AUDIO SYSTEM)
Connector Color	BROWN



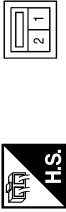
Terminal No.	Color of Wire	Signal Name
1	L	-
2	B/W	-

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



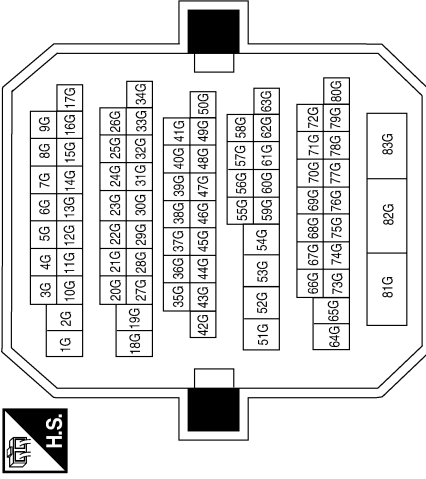
Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

Connector No.	M144
Connector Name	TWEETER RH (WITH BASE AUDIO SYSTEM)
Connector Color	BROWN



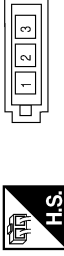
Terminal No.	Color of Wire	Signal Name
1	BR	-
2	B/R	-

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE



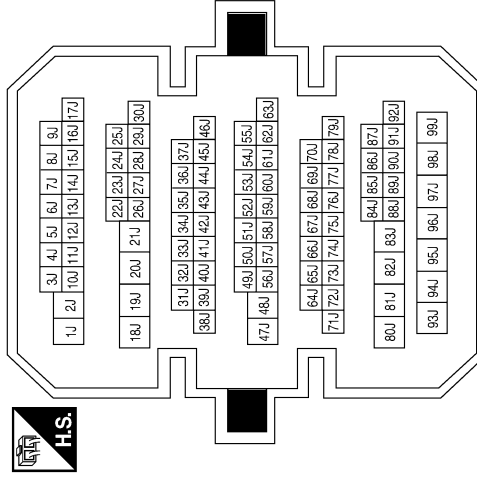
Terminal No.	Color of Wire	Signal Name
64G	V	-

Connector No.	M501
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
80J	O	-
81J	LG	-
82J	L	-
83J	P	-

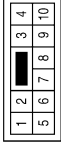
ABNIA0439GB

AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	B4
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
3T	G	-

Connector No.	B3
Connector Name	JOINT CONNECTOR B-02
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	LG	-
3	LG	-
4	LG	-

Connector No.	B17
Connector Name	SUBWOOFER LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	BR	-

Connector No.	B16
Connector Name	SUBWOOFER LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	V	-

Connector No.	B13
Connector Name	JOINT CONNECTOR B-03
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	O	-
3	O	-
4	O	-

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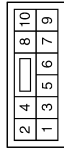
AV

AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

Connector No.	B21
Connector Name	SUBWOOFER AMP.
Connector Color	WHITE

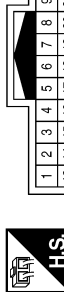


Terminal No.	Color of Wire	Signal Name
1	O	SPL LH (-) IN
2	LG	SPL LH (+) IN
3	P	SP RH (-) IN
4	L	SP RH (+) IN
5	V	WOOFER LH (-)
6	Y	WOOFER LH (+)
7	B	GND
8	BR	WOOFER RH (-)
9	G	ACC
10	W	WOOFER RH (+)



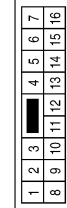
Terminal No.	Color of Wire	Signal Name
1	P	-
2	L	-
3	R	-
4	G	-

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	R	-
5	L	-
6	SHIELD	-
8	BR	-
9	SHIELD	-
10	Y	-
13	BR	-
14	SB	-
15	L	-

Connector No.	B104
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	LG	-
7	O	-

Terminal No.	Color of Wire	Signal Name
16	P	-
17	R	-
21	V	-
22	GR	-
23	O	-

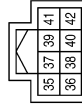
Connector No.	B122
Connector Name	JOINT CONNECTOR-B21
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	SHIELD	-
3	B	-
4	SHIELD	-

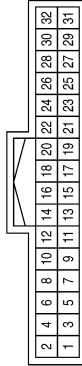
ABNIA0441GB

Connector No.	B125
Connector Name	BLUETOOTH CONTROL UNIT (WITH MONOCHROME DISPLAY)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
35	L	CAN H1
36	P	CAN L1
37	SHIELD	CAN SHIELD 1
38	SHIELD	CAN SHIELD 2
39	-	-
40	R	CAN H 2
41	-	-
42	G	CAN L 2

Connector No.	B126
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	V	+B
2	GR	ACC
3	O	IGN
4	B	GND
5	-	-
6	-	-
7	L	MIC IN +
8	SHIELD	MIC IN -
9	BR	AUDIO OUT (+)
10	Y	AUDIO OUT (-)
11	SB	MUTE CONTROL (WITH MONOCHROME DISPLAY)
12	L	LADDER IN1 (WITH MONOCHROME DISPLAY)

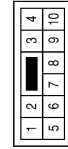
Terminal No.	Color of Wire	Signal Name
13	P	LADDER IN2 (WITH MONOCHROME DISPLAY)
14	R	LADDER GND (WITH MONOCHROME DISPLAY)
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	B	CONT4 (WITH MONOCHROME DISPLAY)
24	-	-
25	-	-
26	-	-
27	-	-
28	BR	SPEED
29	R	MIC POWER

Connector No.	B130
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	BLACK



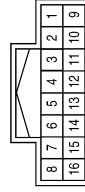
Terminal No.	Color of Wire	Signal Name
33	B	-
34	B	-

Connector No.	B134
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	R	-
9	SHIELD	-

ABNIA0442GB

AUDIO UNIT

< ECU DIAGNOSIS >

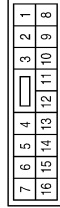
[BASE AUDIO]

Connector No.	D3
Connector Name	FRONT DOOR SPEAKER LH
Connector Color	WHITE



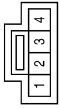
Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	O	-
12	LG	-

Connector No.	R7
Connector Name	MICROPHONE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	MIC SIG
2	SHIELD	MIC GEN
4	R	MIC VCC

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	D103
Connector Name	FRONT DOOR SPEAKER RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	LG	-
8	O	-

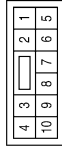
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AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

Connector No.	D306
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	D302
Connector Name	REAR DOOR SPEAKER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

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DISPLAY UNIT

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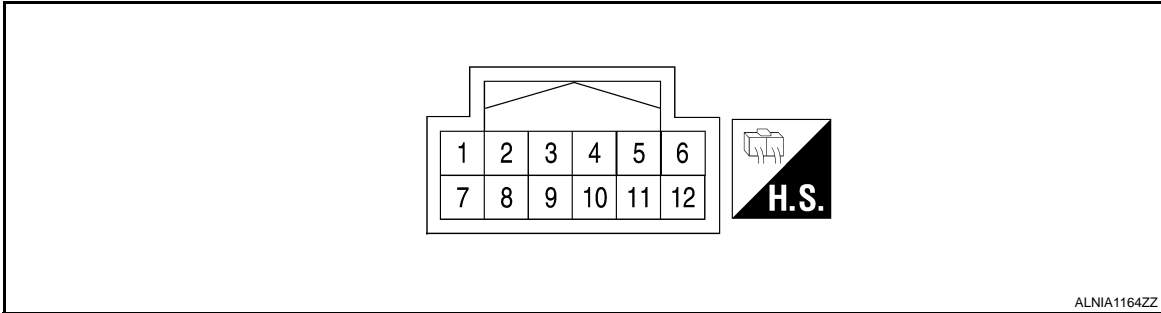
[BASE AUDIO]

DISPLAY UNIT

Reference Values

INFOID:000000004364431

TERMINAL LAYOUT



ALNIA1164ZZ

PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
1 (G)	Ground	M-CAN L	—	—	—	—
2 (R)	Ground	M-CAN H	—	—	—	—
3 (B)	Ground	Ground	Input	ACC	—	0V
8 (V/R)	Ground	ACC power	Input	ACC	—	Battery voltage
9 (Y/R)	Ground	Battery power	Input	OFF	—	Battery voltage
10 (R/L)	11 (R/Y)	Illumination	Input	—	With parking lights ON	Battery voltage

SUBWOOFER AMP

< ECU DIAGNOSIS >

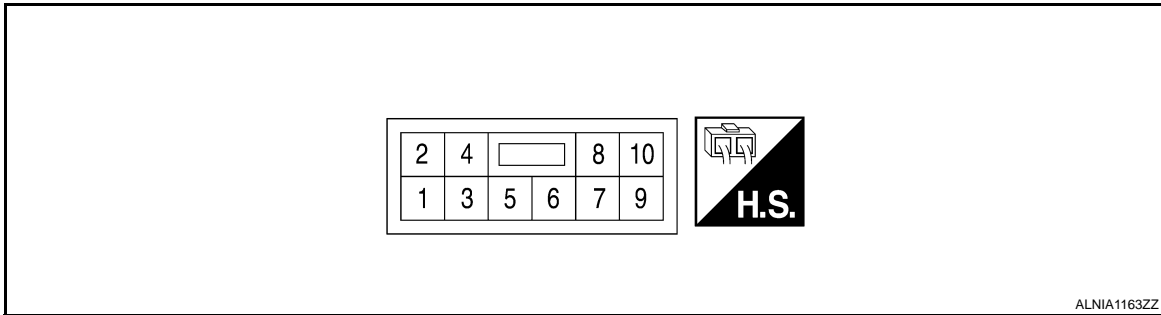
[BASE AUDIO]

SUBWOOFER AMP

Reference Value

INFOID:000000003899640

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Item	Signal input/ output	Condition		Voltage (approx.)
+	-			Ignition switch	Operation	
2 (LG)	1 (O)	Audio signal LH	Input	ON	Receive audio signal.	<p>SKIB3609E</p>
4 (L)	3 (P)	Audio signal RH	Input	ON	Receive audio signal.	<p>SKIB3609E</p>
5 (V)	6 (Y)	Subwoofer audio signal LH	Output	ON	Receive audio signal.	<p>SKIB3609E</p>
7 (B)	Ground	Ground	Input	ON	—	—
9 (G)	Ground	ACC power supply	Input	ACC	—	Battery voltage
10 (W)	8 (BR)	Subwoofer audio signal RH	Output	ON	Receive audio signal.	<p>SKIB3609E</p>

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BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS >

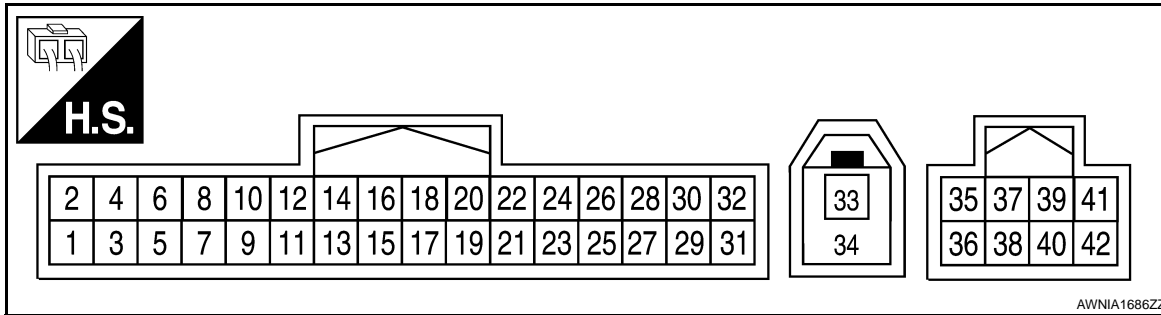
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BLUETOOTH CONTROL UNIT

Reference Value

INFOID:000000004252827

TERMINAL LAYOUT



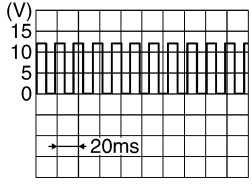
PHYSICAL VALUES

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
1 (V)	Ground	Battery power	Input	-	-	Battery voltage
2 (GR)	Ground	ACC power	Input	ACC/ON	-	Battery voltage
3 (O)	Ground	IGN power	Input	ON/ START	-	Battery voltage
4 (B)	Ground	Ground	-	-	-	0.2V
7 (L)	8	Mic-in signal	Input	-	-	-
9 (BR)	10 (Y)	Audio out	Output	ACC/ON	Bluetooth control unit sends audio sig- nal	
11 (SB)	-	Mute	Output	-	-	-
12 (L)	Ground	Remote con- trol switch 1	Input	ACC/ON	Press SEEK DOWN switch.	0.7 V
					Press SEEK UP switch.	1.3 V
					Pressing switch.	2.0 V
					Except for above.	3.3 V

BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
13 (P)	Ground	Remote con- trol switch 2	Input	ACC/ON	Press SOURCE switch.	0 V
					Press \llcorner switch.	0.7 V
					Press VOL UP switch.	1.3 V
					Press VOL DOWN switch	2 V
					Except for above.	3.3 V
14 (R)	-	Remote con- trol ground	Input	-	-	-
23 (B)	Gnd	Ground	-	-	-	0V
28 (BR)	-	Vehicle speed signal (8- pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	 <p style="text-align: right; font-size: small;">PKIA1935E</p>
29 (R)	Ground	Microphone power	Output	-	-	-
33 (B)	-	Antenna	-	-	-	-
34 (B)	-	Antenna	-	-	-	-
35 (L)	-	M-CAN H1	-	-	-	-
36 (P)	-	M-CAN L1	-	-	-	-
37	-	Shield	-	-	-	-
38	-	Shield	-	-	-	-
40 (R)	-	M-CAN H2	-	-	-	-
42 (G)	-	M-CAN L2	-	-	-	-

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SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:000000004364421

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> • Audio unit power circuit • Audio unit 	<ul style="list-style-type: none"> • AV-23 • AV-64
Steering switch does not operate	<ul style="list-style-type: none"> • Steering wheel audio control switch • Audio unit 	<ul style="list-style-type: none"> • AV-36 • AV-64
All speakers do not sound	<ul style="list-style-type: none"> • Audio unit • Audio unit power circuit 	<ul style="list-style-type: none"> • AV-64 • AV-23
One or several speakers do not sound	<ul style="list-style-type: none"> • Front door speaker • Tweeter • Rear door speaker • Subwoofer 	<ul style="list-style-type: none"> • AV-27 • AV-29 • AV-31 • AV-33

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	Audio unit	AV-64
CD cannot be ejected.		
The CD cannot be played.		
The sound skips, stops suddenly, or is distorted.		

HANDS-FREE PHONE

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> • Bluetooth control unit power and ground circuit • Bluetooth control unit 	<ul style="list-style-type: none"> • AV-25 • AV-79
Steering switch does not operate	<ul style="list-style-type: none"> • Steering wheel audio control switch • Audio unit • Bluetooth control unit 	<ul style="list-style-type: none"> • AV-36 • AV-64 • AV-79
Voice activated control does not operate	<ul style="list-style-type: none"> • Microphone • Steering wheel audio control switch • Bluetooth control unit 	<ul style="list-style-type: none"> • AV-39 • AV-36 • AV-79

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BASE AUDIO]

NORMAL OPERATING CONDITION

Description

INFOID:000000003899644

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

NOISE

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

- Fading noise: This noise occurs because of variations in the field strength in a narrow range due to mountains or buildings blocking the signal.
- Multi-path noise: This noise results from the waves sent directly from the broadcast station arriving at the antenna at a different time from the waves which reflect off mountains or buildings.

The vehicle itself can be a source of noise, if noise prevention parts or electrical equipment are malfunctioning. Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and determine the cause.

NOTE:

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

Type of Noise and Possible Cause

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

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PRECAUTION

PRECAUTIONS

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

INFOID:000000003899645

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 SR and SB section of this Service Manual.

WARNING:

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

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:000000004399689

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

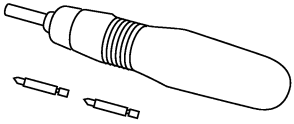
2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000003899646

Tool name	Description
<p>Power tool</p>  <p>PBIC0191E</p>	<p>Loosening bolts and nuts</p>

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AV

AUDIO UNIT

< ON-VEHICLE REPAIR >

[BASE AUDIO]

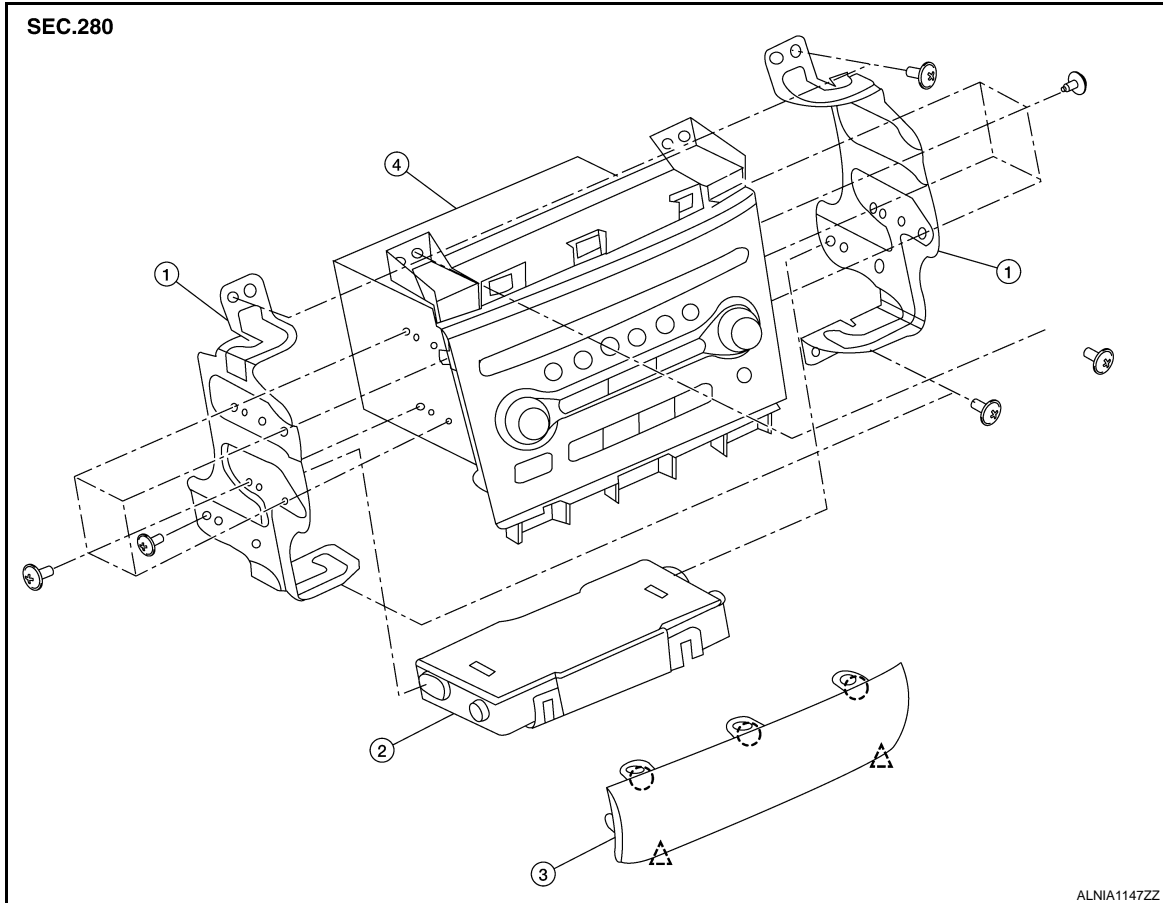
ON-VEHICLE REPAIR

AUDIO UNIT

Removal and Installation

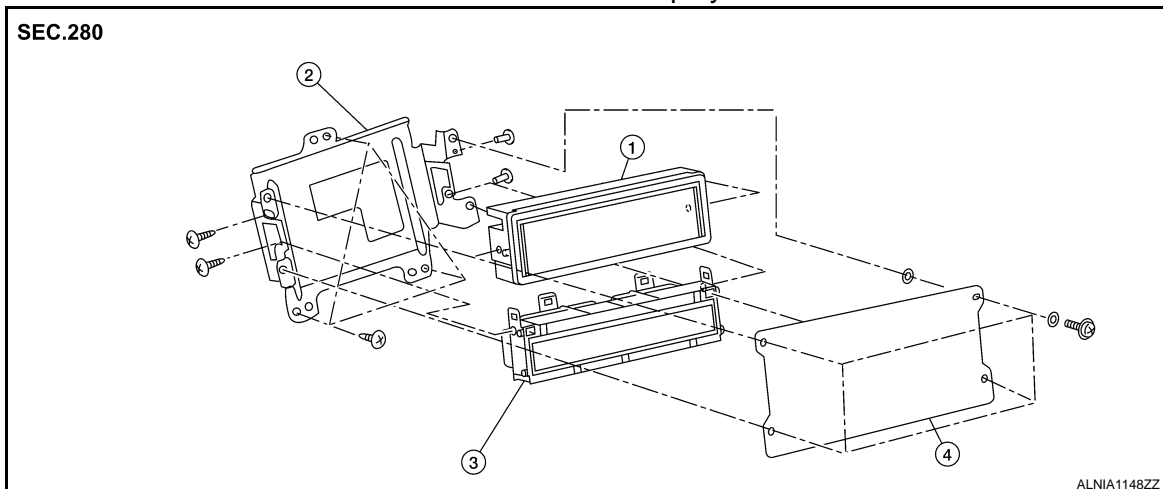
INFOID:000000003899647

Base Audio



- 1. Audio unit brackets LH/RH
 - 2. A/C auto amp.
 - 3. Cluster lid C lower
 - 4. Audio unit
- △ Clip ○ Pawl

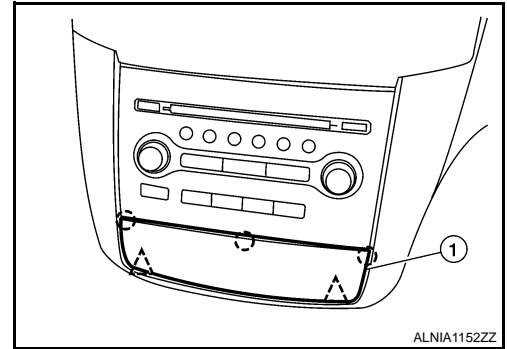
Monochrome Display



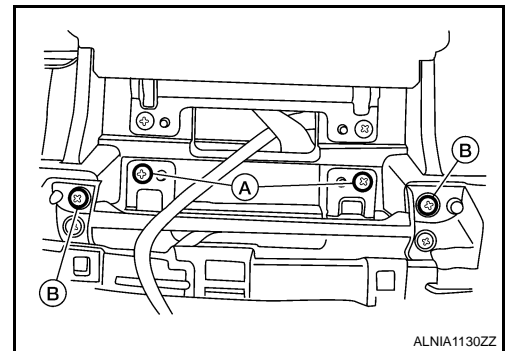
- 1. Audio display unit
- 2. Audio/A/C display unit bracket
- 3. A/C display unit
- 4. Front cover

Removal

1. Remove the cluster lid D. Refer to [IP-12. "Removal and Installation"](#).
2. Remove the cluster lid C lower finisher (1).



3. Remove the audio unit screws (A) and the cluster lid C screws (B).



4. Pull out the audio unit, disconnect the connectors and remove the audio unit.

Installation

Installation is in the reverse order of removal.

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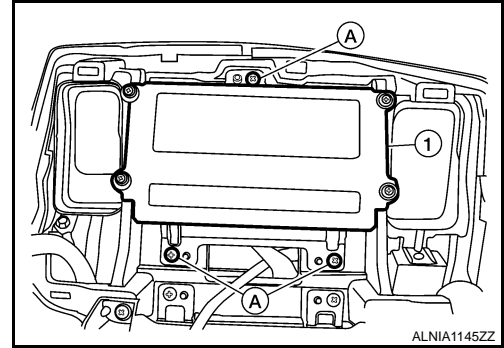
AUDIO DISPLAY UNIT

Removal and Installation

INFOID:000000004269529

REMOVAL

1. Remove the cluster lid D. Refer to [IP-12. "Removal and Installation"](#).
2. Remove the audio display unit screws (A), then pull out the audio display unit (1), disconnect the audio display unit (1), disconnect the connectors and remove the audio display unit (1).



INSTALLATION

Installation is in the reverse order of removal.

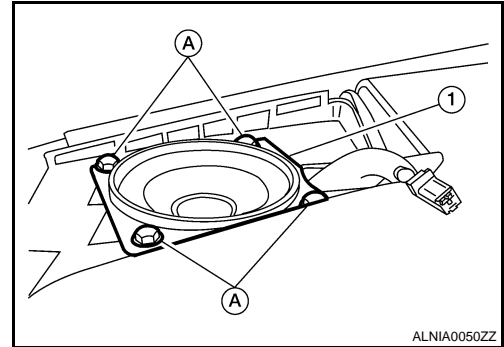
FRONT TWEETER

Removal and Installation

INFOID:000000003899648

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-23. "Exploded View"](#).
2. Remove front tweeter speaker grille. Refer to [IP-12. "Removal and Installation"](#).
3. Remove the front tweeter speaker screws (A), then pull out front tweeter speaker (1), disconnect the front tweeter speaker connector and remove the front tweeter speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

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FRONT DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BASE AUDIO]

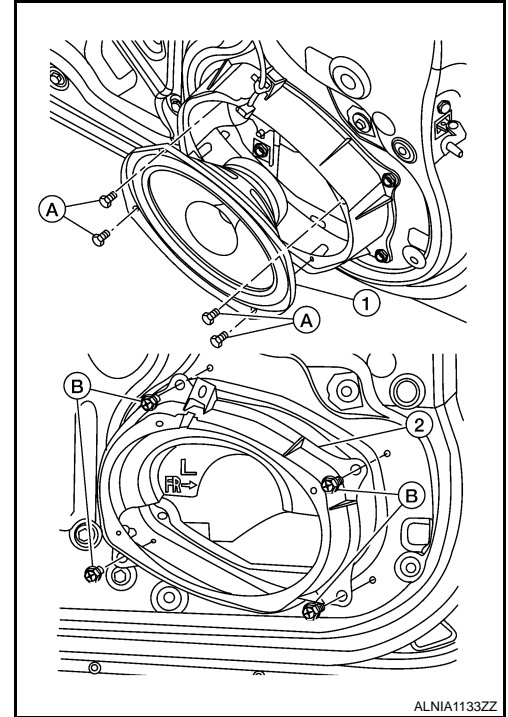
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000003899649

REMOVAL

1. Remove the front door finisher. Refer to [INT-18, "Removal and Installation"](#).
2. Remove the front door speaker screws (A), then disconnect the front door speaker connector and remove the front door speaker (1).
3. Remove the front door speaker spacer screws (B) and remove the front door speaker spacer (2).



INSTALLATION

Installation is in the reverse order of removal.

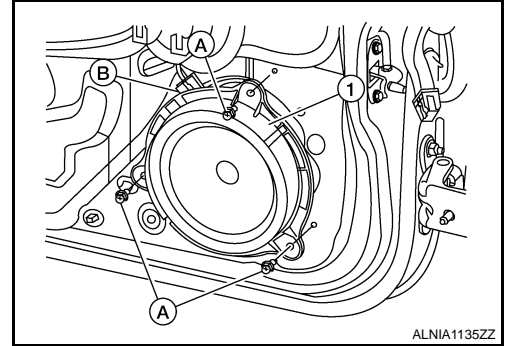
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000004230754

REMOVAL

1. Remove the rear door finisher. Refer to [INT-21. "Removal and Installation"](#).
2. Remove the rear door speaker screws (A), then disconnect the rear door speaker connector (B) and remove the rear door speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

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SUBWOOFER

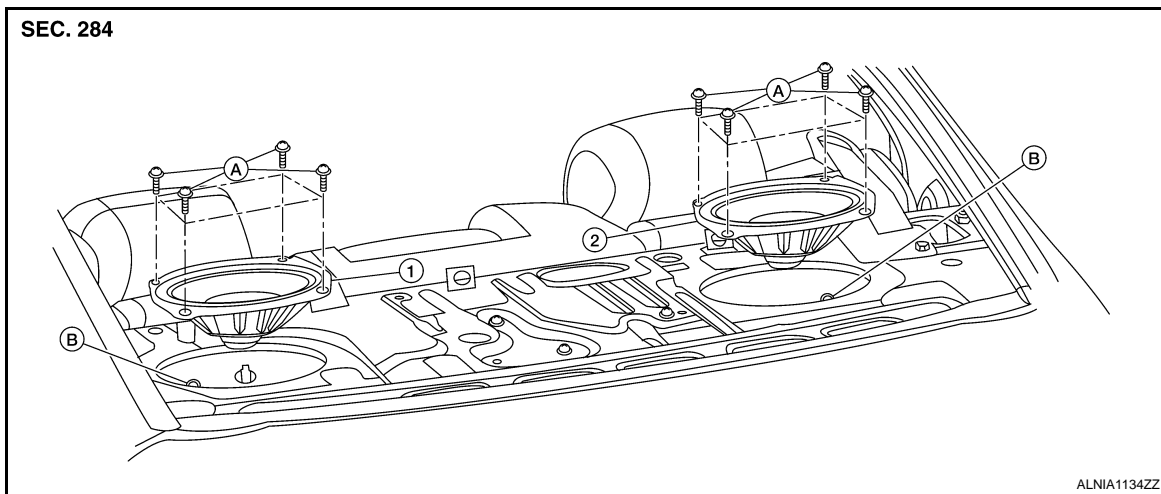
< ON-VEHICLE REPAIR >

[BASE AUDIO]

SUBWOOFER

Removal and Installation

INFOID:000000004269540



1. Subwoofer LH

2. Subwoofer RH

A. Subwoofer screws

B. Subwoofer connectors

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-26. "Removal and Installation"](#).
2. Remove the subwoofer screws, then pull out the subwoofer, disconnect the subwoofer connector and remove the subwoofer.

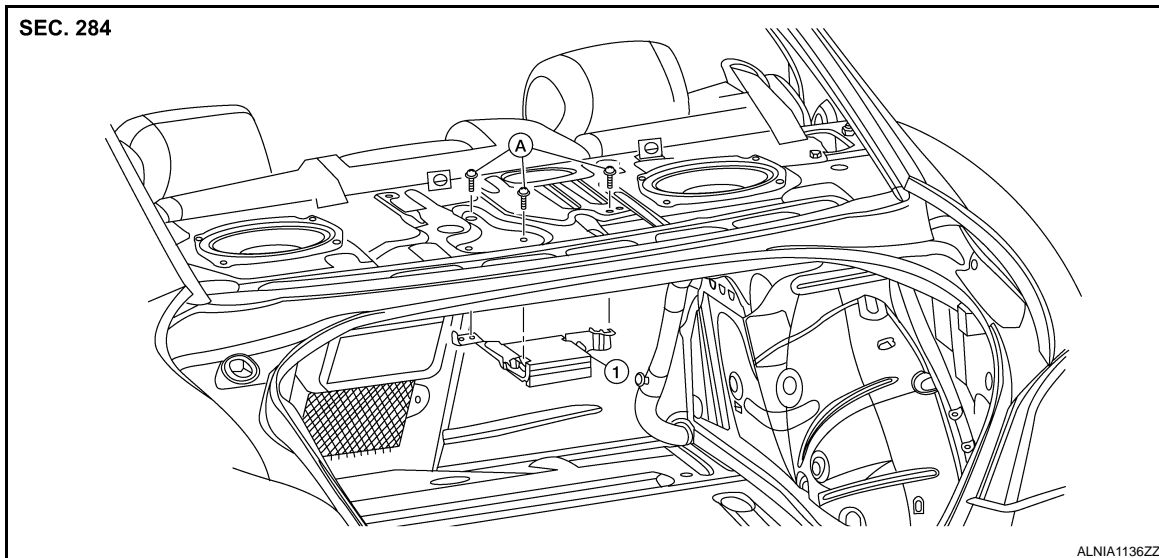
INSTALLATION

Installation is in the reverse order of removal.

AUDIO AMP.

Removal and Installation

INFOID:000000004269503



1. Audio amp.

A. Audio amp. bracket screws

REMOVAL

1. Remove the parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
2. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
3. Remove the audio amp. screws, then disconnect the audio amp. connectors and remove the audio amp.

INSTALLATION

Installation is in the reverse order of removal.

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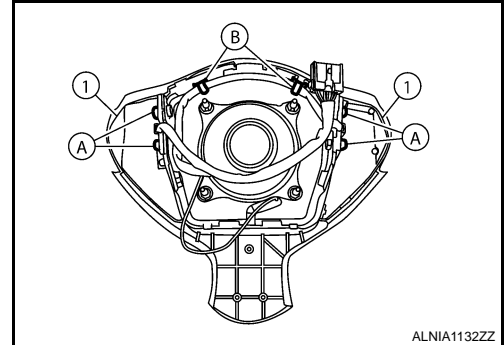
STEERING SWITCH

Removal and Installation

INFOID:000000003899652

REMOVAL

1. Remove the driver airbag module. Refer to [SR-5. "Removal and Installation"](#).
2. Remove the steering wheel switch assembly screws (A), then detach the steering wheel switch harness clips (B) and remove the steering wheel switches (1).



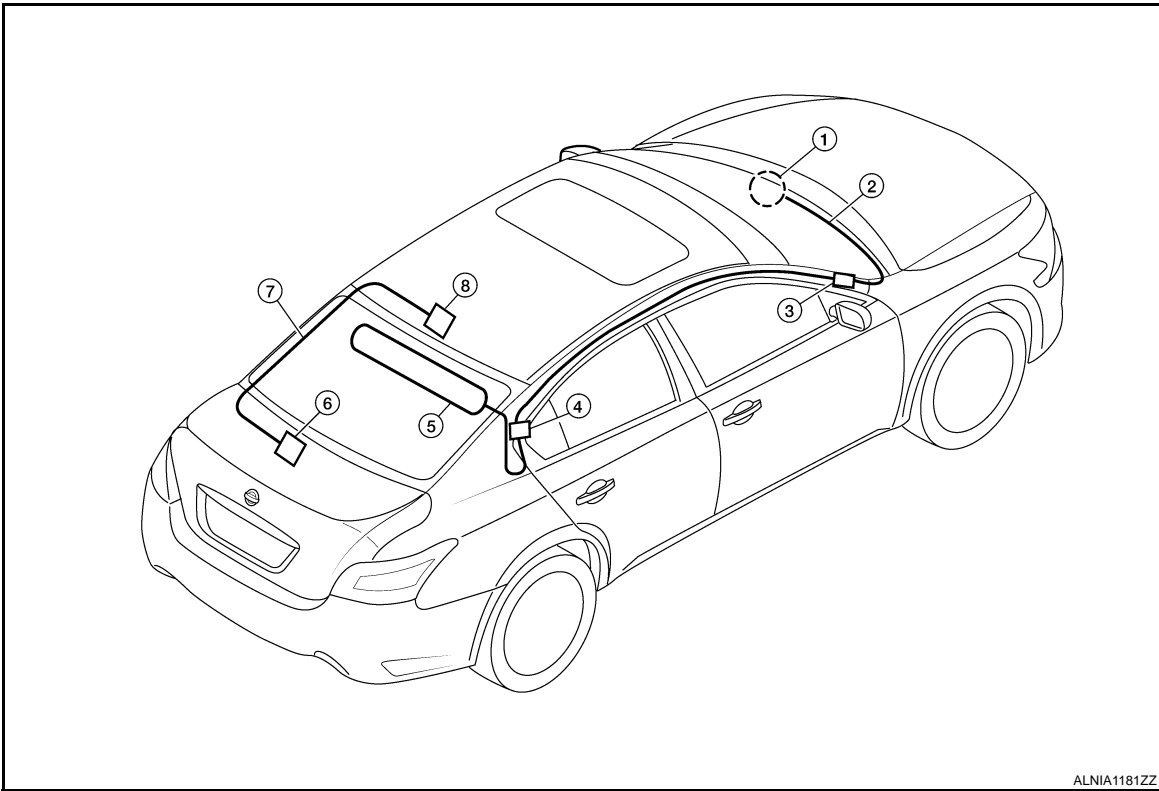
INSTALLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

Location of Antenna

INFOID:000000003899657



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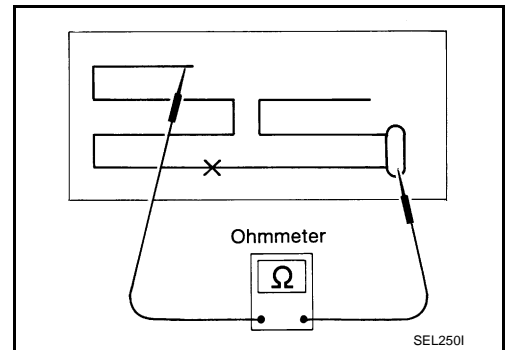
- | | | |
|-----------------------------------|------------------------------|----------------------------------|
| 1. Audio unit | 2. Audio unit antenna feeder | 3. In-line connectors M103, M105 |
| 4. Antenna amp. | 5. Window antenna | 6. Satellite radio tuner |
| 7. Satellite radio antenna feeder | 8. Satellite radio antenna | |

Window Antenna Repair

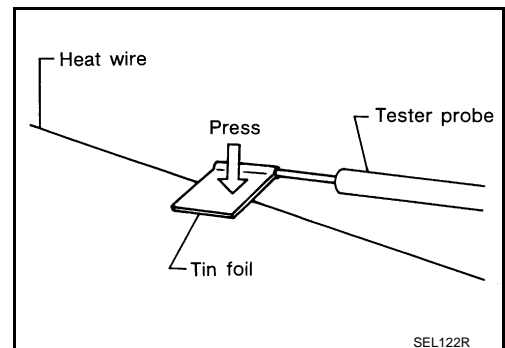
INFOID:000000003899658

ELEMENT CHECK

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



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



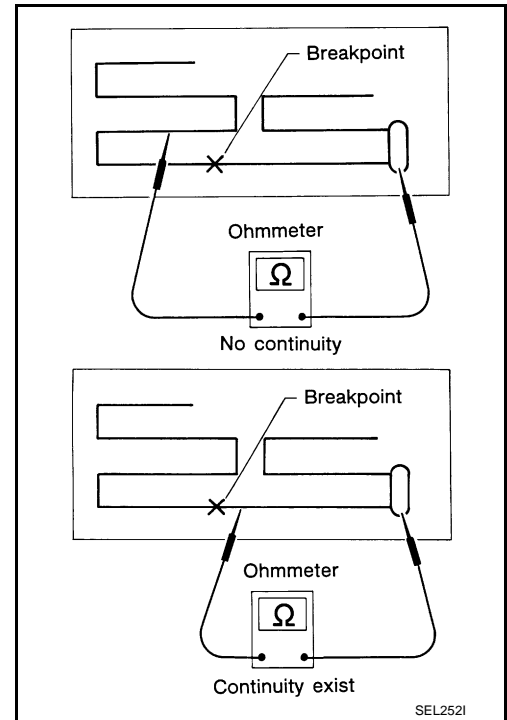
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AUDIO ANTENNA

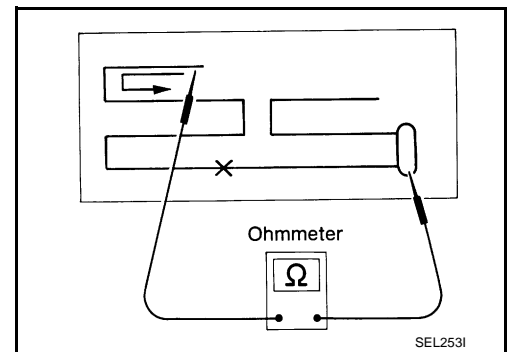
< ON-VEHICLE REPAIR >

[BASE AUDIO]

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



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



REPAIR EQUIPMENT

- Conductive silver composition (DuPont No. 4817 or equivalent)
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

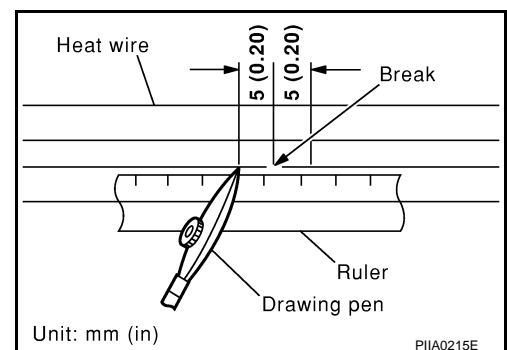
REPAIRING PROCEDURE

1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen.

NOTE:

Shake silver composition container before use.

3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.

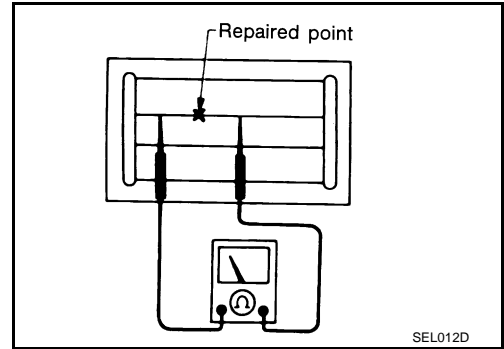


AUDIO ANTENNA

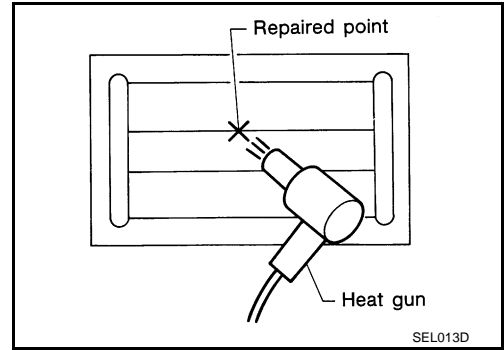
< ON-VEHICLE REPAIR >

[BASE AUDIO]

4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited. Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.



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ANTENNA AMP.

< ON-VEHICLE REPAIR >

[BASE AUDIO]

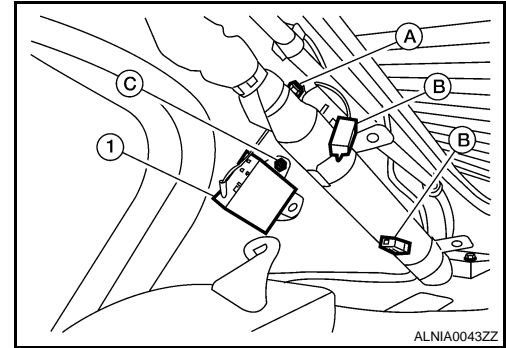
ANTENNA AMP.

Removal and Installation

INFOID:000000003899654

REMOVAL

1. Remove the rear pillar finisher RH. Refer to [INT-23. "Exploded View"](#).
2. Partially remove the side curtain air bag module RH to gain access to the antenna amp. Refer to [SR-12. "Removal and Installation"](#).
3. Detach the antenna amp. harness clip (A), disconnect the antenna amp. connectors (B), remove the antenna amp. screw (C) and remove the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

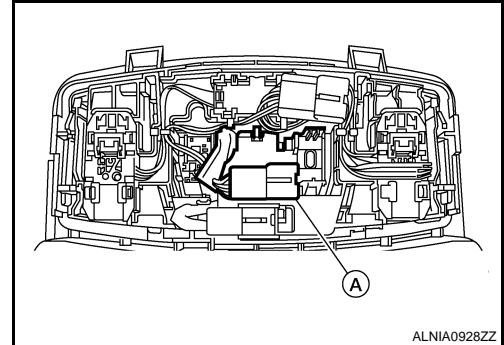
MICROPHONE

Removal and Installation

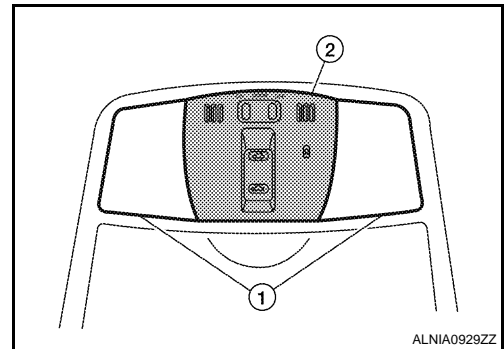
INFOID:000000004269534

REMOVAL

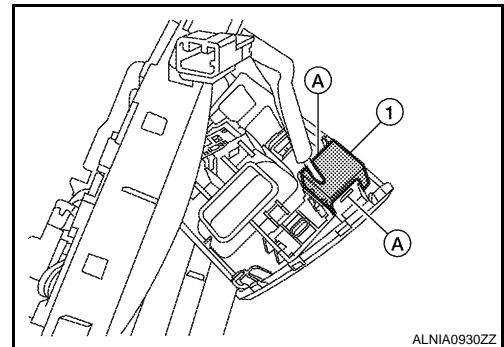
1. Remove the map lamp assembly. Refer to [INL-96. "Removal and Installation"](#).
2. Detach the microphone connector (A).



3. Remove the map lamp covers (1), then remove the map lamp assembly cover (2).



4. Release the microphone tabs (A), then remove the microphone (1).



INSTALLATION

Installation is in the reverse order of removal.

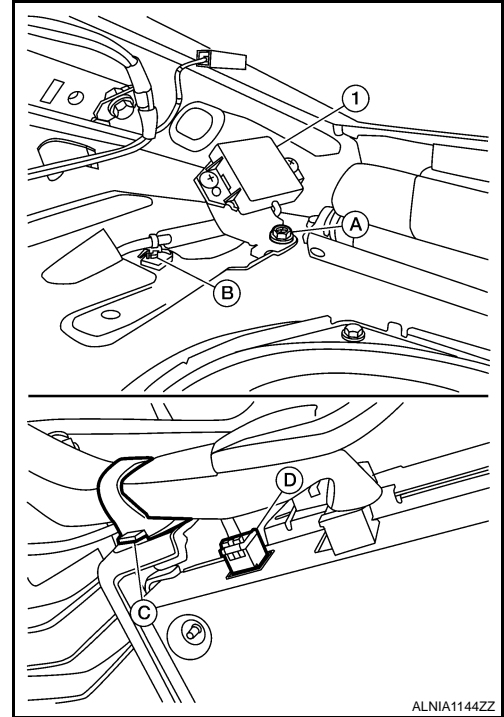
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TEL ANTENNA**Removal and Installation**

INFOID:000000004269537

REMOVAL

1. Remove the rear parcel shelf. Refer to [INT-26, "Removal and Installation"](#).
2. Remove the Bluetooth antenna screw (A), detach the Bluetooth antenna harness clip (B).
3. Fold down the rear seat, if equipped or open the trunk lid, then detach the Bluetooth harness clip (C), disconnect the Bluetooth harness connector (D) and remove the Bluetooth antenna (1) through the opening in the parcel shelf.



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INSTALLATION

Installation is in the reverse order of removal.

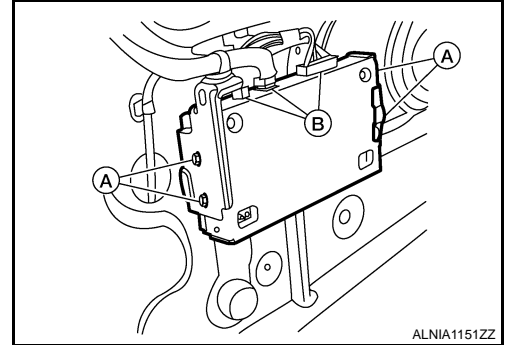
BLUETOOTH CONTROL UNIT

Removal and Installation

INFOID:000000004269539

REMOVAL

1. Disconnect the negative battery terminal.
2. Open the trunk lid or fold down the rear seat back, if equipped.
3. Remove the Bluetooth control unit screws (A), disconnect the Bluetooth control unit connectors (B) and remove the Bluetooth control unit (1).



INSTALLATION

Installation is in the reverse order of removal.

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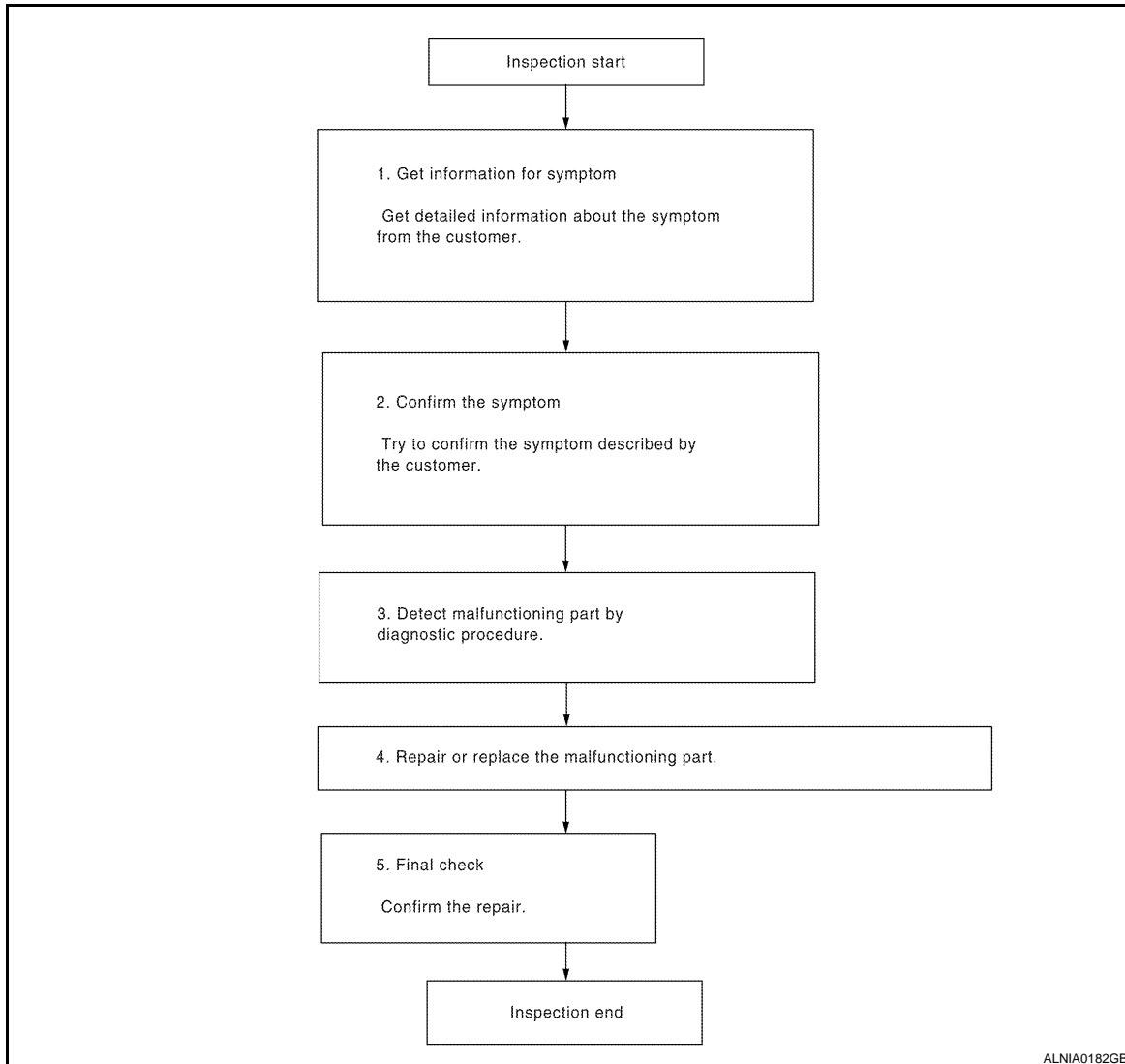
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000004269492

OVERALL SEQUENCE



ALNIA0182GB

DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2.

2.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer. Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 3.

3.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

DIAGNOSIS AND REPAIR WORKFLOW

[BOSE W/ MONOCHROME DISPLAY]

< BASIC INSPECTION >

Is malfunctioning part detected?

YES >> GO TO 4.

NO >> GO TO 2.

4.REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnostic Procedure.

>> GO TO 5.

5.FINAL CHECK

Refer to confirmed symptom in step 2, and make sure that the symptom is not detected.

Has the symptom been repaired?

YES >> Inspection End.

NO >> GO TO 2.

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AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

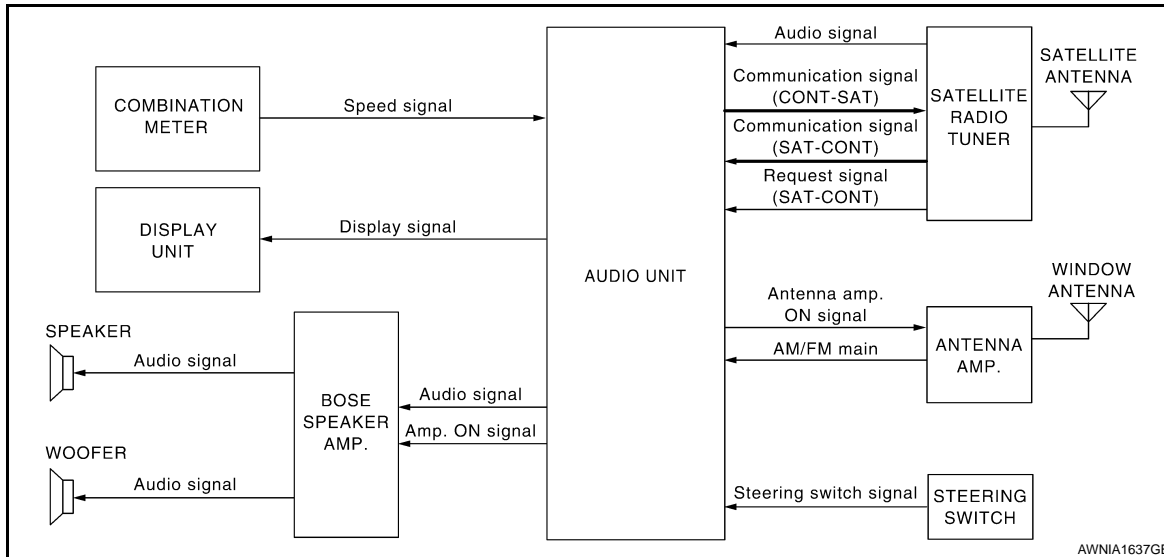
FUNCTION DIAGNOSIS

AUDIO SYSTEM

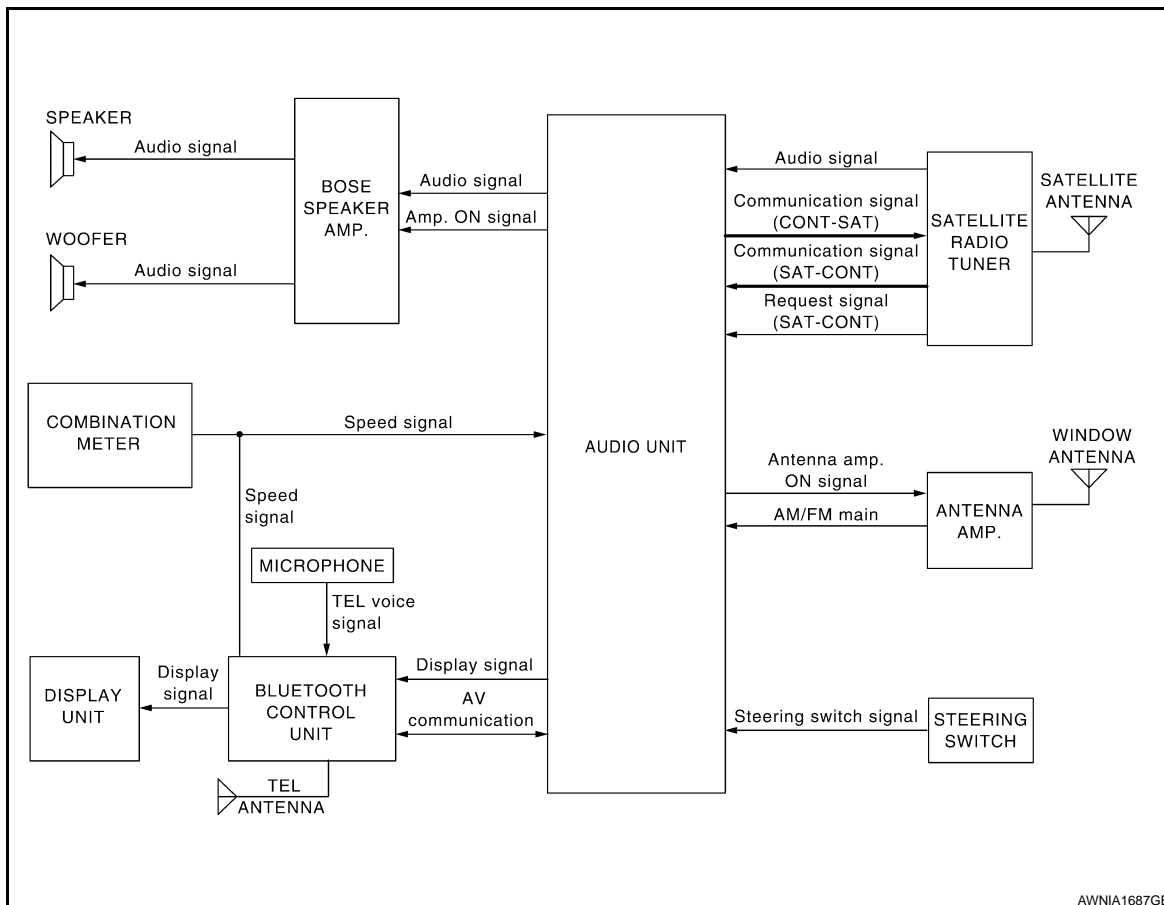
System Diagram

INFOID:000000004269468

WITHOUT BLUETOOTH



WITH BLUETOOTH



System Description

INFOID:000000004269469

AUDIO SYSTEM

AUDIO SYSTEM

[BOSE W/ MONOCHROME DISPLAY]

< FUNCTION DIAGNOSIS >

The audio system consists of the following components

- Audio unit
- Display unit
- Bluetooth control unit (with Bluetooth)
- Window antenna
- BOSE speaker amp.
- Steering wheel audio control switches
- Front door speakers
- Tweeters
- Center speaker
- Rear door speakers
- Rear subwoofers

When the audio system is on, radio signals are received by the window antenna. The audio unit then sends audio signals to BOSE speaker amp. The Bose speaker amp. sends the audio signals to the front door speakers, tweeters, center speaker, rear door speakers and rear subwoofers.

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

SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components

- Roof antenna (satellite)
- Satellite radio tuner

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

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

SPEED SENSITIVE VOLUME SYSTEM

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

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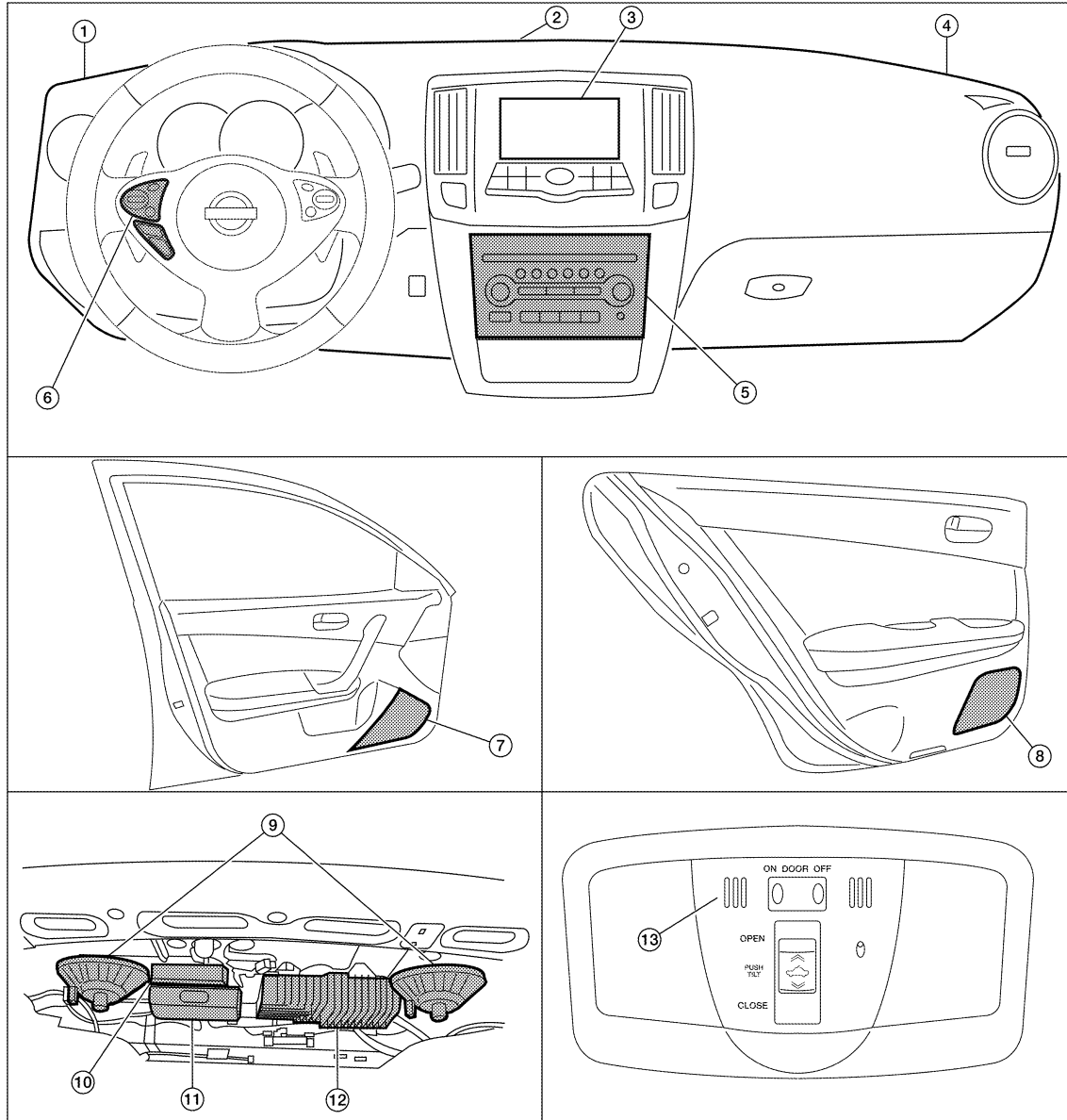
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Component Parts Location

INFOID:000000004269470



AWNIA1688ZZ

- | | | |
|---|--|---|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Display unit
M93 (with Bluetooth)
M109 (without Bluetooth) |
| 4. Tweeter RH M52 | 5. Audio unit M132, M136, M138 | 6. Steering wheel audio control switches |
| 7. Front door speaker
LH D3
RH D103 | 8. Rear door speaker
LH D202
RH D302 | 9. Rear subwoofer
LH B106
RH B107 |
| 10. Bluetooth control unit (with Bluetooth)
B125, B126 | 11. Satellite radio tuner (if equipped) B111 | 12. BOSE speaker amp. B109, B110 |
| 13. Microphone R7 | | |

AUDIO SYSTEM

[BOSE W/ MONOCHROME DISPLAY]

< FUNCTION DIAGNOSIS >

Component Description

INFOID:000000004269471

Part name	Description
Audio unit	Controls audio system and satellite radio system functions
Bluetooth control unit (with Bluetooth)	<ul style="list-style-type: none"> • Receives display signals from the audio unit. • Outputs display signals to the display unit.
Display unit	<ul style="list-style-type: none"> • Receives display signals from the Bluetooth control unit (with Bluetooth) or from the audio unit. • Displays audio system information.
BOSE speaker amp.	Receives power (amp ON) and audio signals from audio unit, and outputs audio signals to each speaker.
Steering wheel audio control switches	<ul style="list-style-type: none"> • Each audio operation can be operated • Steering switch signal (operation signal) is output to audio unit
Front door speakers	<ul style="list-style-type: none"> • Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds
Center speaker	<ul style="list-style-type: none"> • Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds
Tweeters	<ul style="list-style-type: none"> • Outputs audio signal from BOSE speaker amp. • Outputs high range sounds
Rear door speakers	<ul style="list-style-type: none"> • Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds
Rear subwoofers	<ul style="list-style-type: none"> • Outputs audio signal from BOSE speaker amp. • Outputs low range sounds
Satellite radio tuner (if equipped)	<ul style="list-style-type: none"> • Receives radio signals from satellite antenna • Sends audio signals to audio unit
Satellite antenna (if equipped)	Audio signal (satellite radio) is received and output to audio unit.

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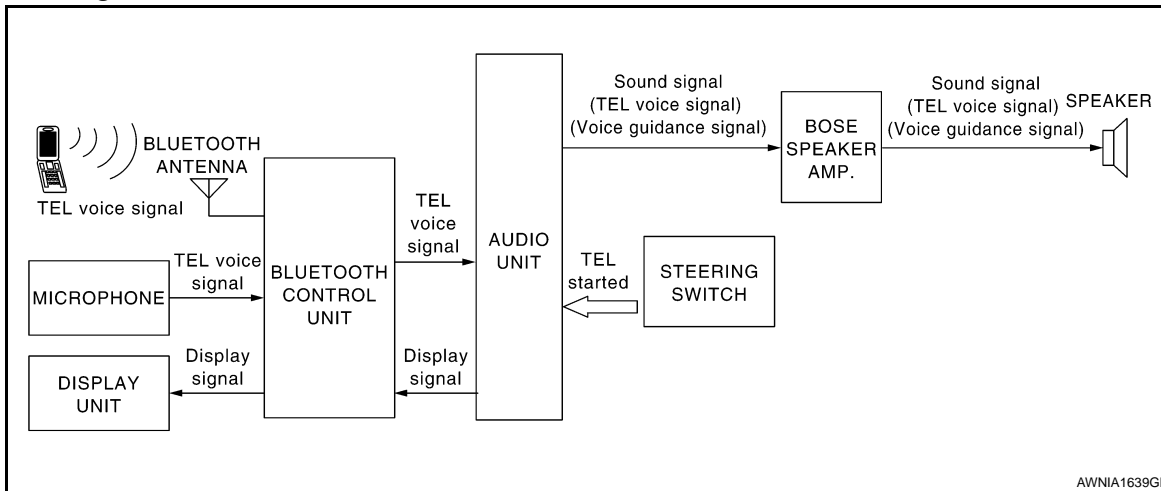
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

HANDS-FREE PHONE SYSTEM

System Diagram



System Description

INFOID:000000004269494

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

NOTE:

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

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

BLUETOOTH CONTROL UNIT

When the ignition switch is turned to ACC or ON, the Bluetooth control unit will power up. During power up, the Bluetooth control unit is initialized and performs various self-checks. Initialization may take up to 10 seconds. If a phone is present in the vehicle and paired with the Bluetooth control unit, Nissan Voice Recognition will then become active. Bluetooth telephone functions can be turned off using the Nissan Voice Recognition system.

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

MICROPHONE

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

AUDIO UNIT

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

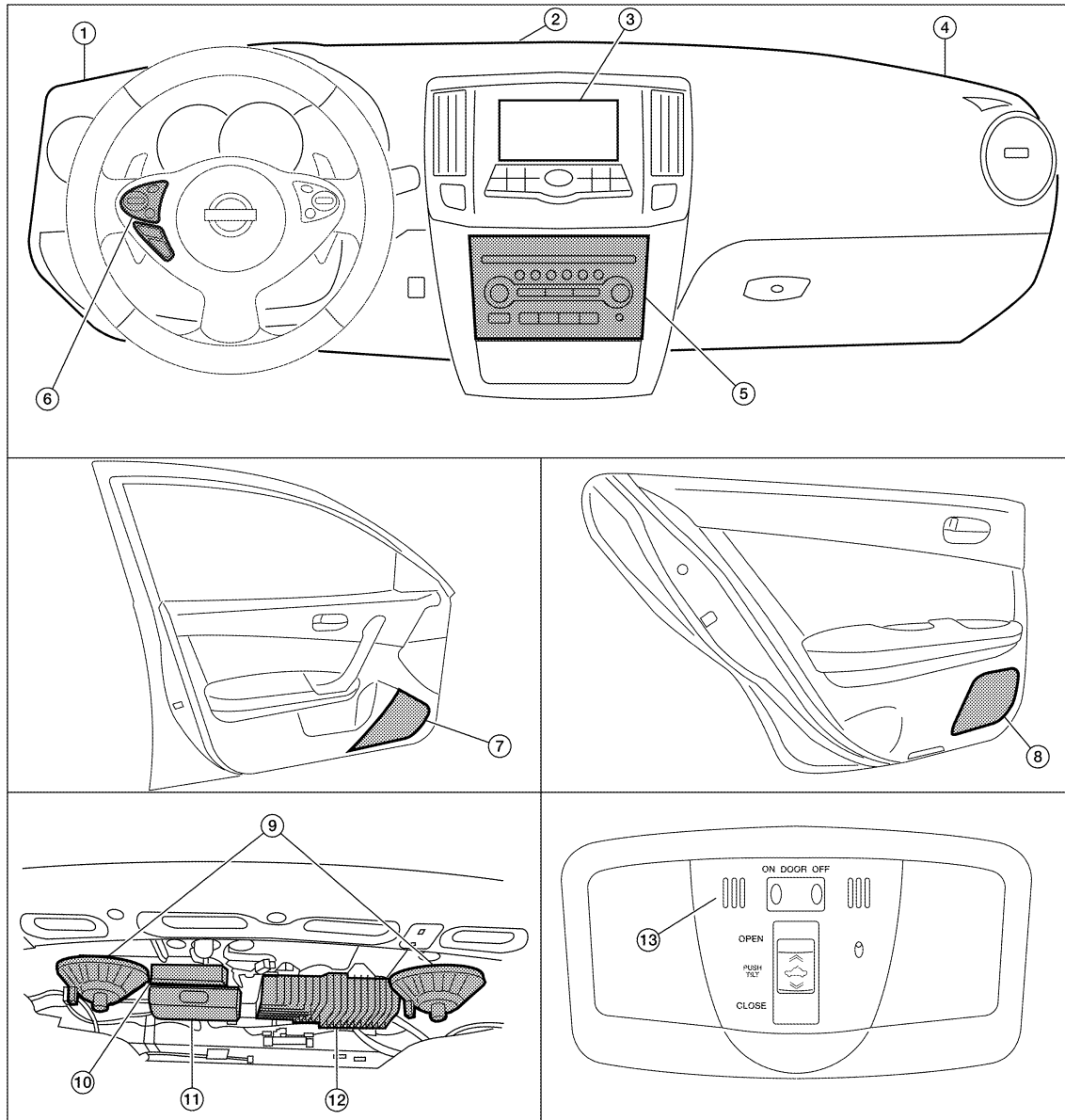
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Component Parts Location

INFOID:000000004296279



AWNIA1688ZZ

- | | | |
|---|--|---|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Display unit
M93 (with Bluetooth)
M109 (without Bluetooth) |
| 4. Tweeter RH M52 | 5. Audio unit M132, M136, M138 | 6. Steering wheel audio control switches |
| 7. Front door speaker
LH D3
RH D103 | 8. Rear door speaker
LH D202
RH D302 | 9. Rear subwoofer
LH B106
RH B107 |
| 10. Bluetooth control unit (with Bluetooth)
B125, B126 | 11. Satellite radio tuner (if equipped) B111 | 12. BOSE speaker amp. B109, B110 |
| 13. Microphone R7 | | |

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HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Component Description

INFOID:000000004269496

Part name	Description
Audio unit	<ul style="list-style-type: none">• Receives telephone voice signal from Bluetooth control unit• Sends telephone voice and voice guidance signals to BOSE speaker amp.
BOSE speaker amp.	Inputs power (amp ON) and sound signal from audio unit, and outputs sound signal to each speaker.
Door speaker	Receives telephone voice and voice guidance signals from BOSE speaker amp.
Front tweeter	
Center speaker	
Steering wheel audio control switches	<ul style="list-style-type: none">• Start a voice recognition session• Answer and end telephone calls• Adjust the volume level
Microphone	Sends voice signals to Bluetooth control unit
Bluetooth control unit	Controls hands-free phone functions
Bluetooth antenna	Sends telephone voice signal to Bluetooth control unit

DIAGNOSIS SYSTEM (AUDIO UNIT)

[BOSE W/ MONOCHROME DISPLAY]

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (AUDIO UNIT)

Diagnosis Description

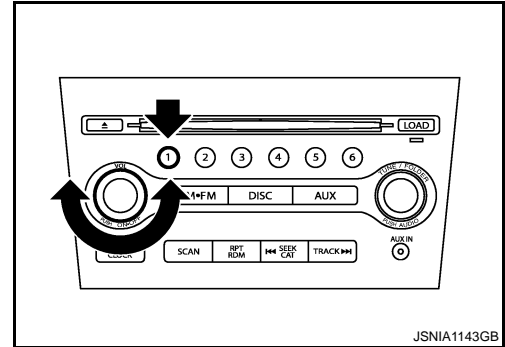
INFOID:000000004364422

Self-diagnosis mode can perform the following items.

- Versions display
- Channel check diagnosis
- Key check diagnosis
- AV communication diagnosis

VERSIONS DISPLAY FUNCTION

1. Turn ignition switch ON.
2. Turn the audio unit off.
3. While pressing "1" button, turn volume control dial clockwise or counterclockwise for 30 clicks or more.



4. Diagnosis default screen of audio display unit is displayed.

NOTE:

Diagnosis default screen = All icons and segments of the audio display unit are turned on.

5. Pressing the AUDIO switch briefly displays the version display mode. Pressing the AUDIO switch briefly switches to each version display. Pressing and holding the AUDIO switch when displaying each software version returns to the diagnosis default screen.

Version display item

	Mode	Description
Versions display	Software V#####	Audio unit software version is displayed.
	Hardware V#####	Audio unit hardware version is displayed.
	CD Mech V#####	Audio unit CD mechanism version is displayed.
	EEPROM V#####	Audio unit EEPROM version is displayed.
	Disp SW V#####	Display unit software version is displayed.
	Disp HW V#####	Display unit hardware version is displayed.
	SDARS V#####	Audio unit SDARS version is displayed. NOTE: "VFFFFFF" is displayed when SDARS is not available.

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

CHANNEL CHECK DIAGNOSIS FUNCTION

1. Turn ignition switch ON.
2. Turn the audio unit off.

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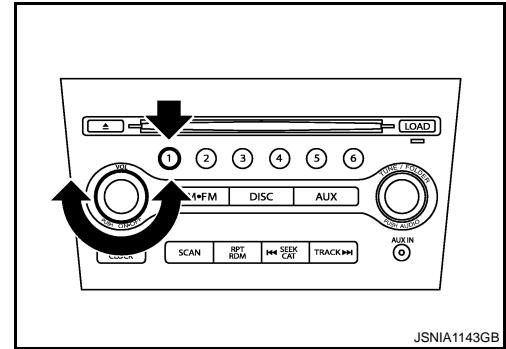
AV

DIAGNOSIS SYSTEM (AUDIO UNIT)

[BOSE W/ MONOCHROME DISPLAY]

< FUNCTION DIAGNOSIS >

- While pressing the “1” button, turn the volume control dial clockwise or counterclockwise for 30 clicks or more.



- The diagnosis default screen of audio display unit is displayed.

NOTE:

Diagnosis default screen = All icons and segments of the audio display unit are turned on.

- Turning the TUNE/FOLDER dial clockwise displays the channel check mode. Pressing and holding the AUDIO switch during each channel check or waiting approximately 1 second after finishing all channel checks returns to the diagnosis default screen.

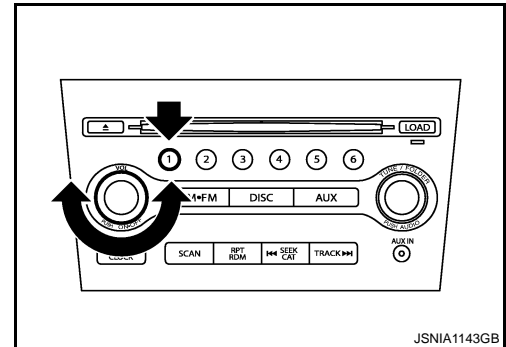
Channel check item

	Mode	Description
Channel check	Channel Check Front Left	Connection of a speaker can be confirmed by test tone.
	Channel Check Front Right	
	Channel Check Rear Right	
	Channel Check Rear Left	

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

KEY CHECK DIAGNOSIS FUNCTION

- Turn ignition switch ON.
- Turn the audio unit off.
- While pressing the “1” button, turn the volume control dial clockwise or counterclockwise for 30 clicks or more.



- The diagnosis default screen of audio display unit is displayed.

NOTE:

Diagnosis default screen = All icons and segments of the audio display unit are turned on.

- Turning the TUNE/FOLDER dial counterclockwise displays the key check mode, and the pressed switch name is shown. Pressing and holding the AUDIO switch during the key check mode returns to the diagnosis default screen.

DIAGNOSIS SYSTEM (AUDIO UNIT)



[BOSE W/ MONOCHROME DISPLAY]

< FUNCTION DIAGNOSIS >

Key check item (audio unit)

Mode	Display item	Switch name	
Key check	1	Preset button "1" switch	A
	2	Preset button "2" switch	B
	3	Preset button "3" switch	C
	4	Preset button "4" switch	D
	5	Preset button "5" switch	E
	6	Preset button "6" switch	F
	POWER	ON-OFF switch	G
	VOLUME up	VOL up switch	H
	VOLUME down	VOL down switch	I
	AM-FM	AM-FM switch	J
	DISC	DISC switch	K
	AUX	AUX switch	L
	AUDIO	AUDIO switch	M
	TUNE/FOLDER up	TUNE/FOLDER up switch	
	TUNE/FOLDER down	TUNE/FOLDER up switch	
	DISP CLOCK	DISP CLOCK switch	
	SCAN	SCAN switch	
	RPT/RDM	RPT RDM switch	
	SEEK/TRACK up	SEEK CAT switch	
	SEEK/TRACK down	TRACK switch	
LOAD	LOAD switch		
EJECT	EJECT switch		

Key check item (steering switch)

Mode	Display item	Switch name	
Key check	STR SOURCE	SOURCE switch	J
	STR VOL UP	VOL up switch	K
	STR VOL DOWN	VOL down switch	L
	STR UP	MENU up switch	
	STR DOWN	MENU down switch	
	STR TEL END*	 switch	M
	STR TEL SEND*	 switch	

*with Bluetooth.

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

AV COMMUNICATION DIAGNOSIS FUNCTION

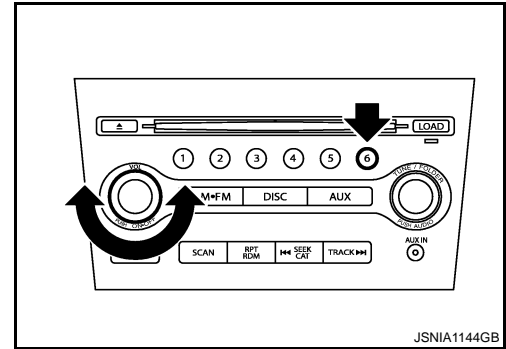
1. Turn ignition switch ON.
2. Turn the audio unit off.

DIAGNOSIS SYSTEM (AUDIO UNIT)

[BOSE W/ MONOCHROME DISPLAY]

< FUNCTION DIAGNOSIS >

- While pressing the “6” button, turn the volume control dial clockwise or counterclockwise for 30 clicks or more.



- Returns to diagnosis default screen and displays “AV DIAGNOSIS”.
- Pressing the AUDIO switch briefly displays the AV communication diagnosis mode. Pressing the AUDIO switch briefly again switches to each AV communication display.

AV communication diagnosis item

Display item			Description
AV communication item	Current	Past	
TRANSMIT	OK / UN	OK / 0 -39	The communication condition and error counter from the audio unit to the audio display unit are displayed.
DISP	OK / UN	OK / 0 -39	The communication condition and error counter from the audio display unit to the audio unit.
DISP MPDT	OK / UN	OK / 0 -39	
BTHF MPDT*	OK / UN	OK / 0 -39	The communication condition and error counter from the audio unit to the Bluetooth control unit.
NO HISTORY BTHF	—	—	This is displayed on models without Bluetooth.
AV TROUBLE DEL.	—	—	The error record can be deleted.

*With Bluetooth.

- Pressing the SEEK up switch displays the confirmation screen of “delete error record”. Press the SEEK down switch if returning from RECORD DEL YES? to RECORD DEL NO?
The item is automatically determined approximately 6 seconds after it is displayed. Then the display returns to AV TROUBLE DEL display item.

Display item	Description
RECORD DEL-NO?	Does not delete error record.
RECORD DEL-YES?	Deletes error record.

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

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

Diagnosis Description

INFOID:000000004291548

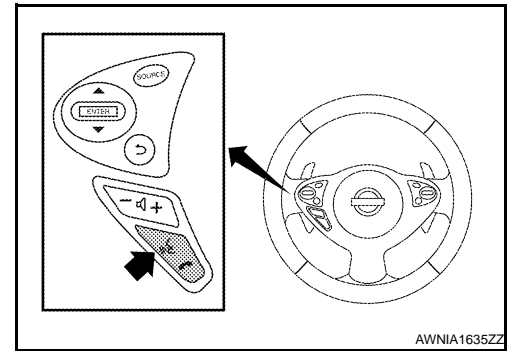
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

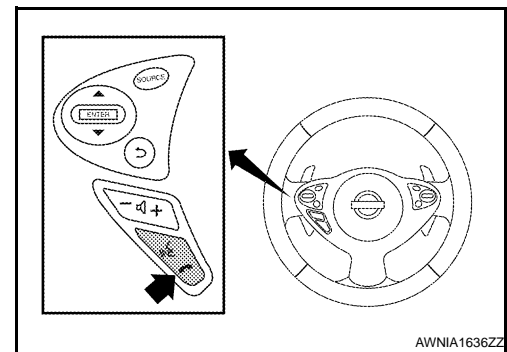
- Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

OPERATION PROCEDURE

1. Turn ignition switch to ACC or ON.
2. Wait for the Bluetooth system to complete initialization. This may take up to 10 seconds.
3. Press and hold the steering wheel audio control switch SEND button for at least 5 seconds. The Bluetooth system will begin to play a verbal prompt.



4. While the prompt is playing, press and hold the steering wheel audio control switch END button until you hear the "Diagnostics mode" prompt. The Bluetooth system will sound a 5-second beep.
5. While the beep is sounding, press and hold the steering wheel audio control switch END button again until you hear prompts.
6. The Bluetooth system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician. Refer to [AV-93, "Work Flow"](#).
7. After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails, refer to [AV-93, "Work Flow"](#).
8. Self-diagnosis mode is complete when the voice prompt says "All diagnostic functions completed".



Work Flow

INFOID:000000004291549

Failure Message	Action
"Internal failure"	Replace Bluetooth control unit. Refer to AV-79, "Removal and Installation" .
"Bluetooth antenna open"	1. Inspect harness connection. 2. Replace Bluetooth antenna. Refer to AV-78, "Removal and Installation" .
"Bluetooth antenna shorted"	
"Phone/Send for Hands Free System is stuck"	Check steering wheel audio control switches. Refer to AV-72, "Removal and Installation" .
"Phone/End for the Hands Free System is stuck"	
"Microphone test" (failed interactive test)	1. Inspect harness between Bluetooth control unit and microphone. 2. Replace microphone. Refer to AV-77, "Removal and Installation" .

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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:000000004269497

1.CHECK FUSES

Check that the following fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Audio unit	19	Battery power	24
	7	Ignition switch ACC or ON	17

Are the fuses OK?

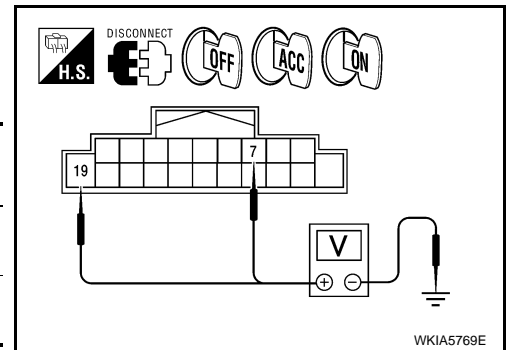
YES >> GO TO 2.

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect audio unit connector M132.
2. Check voltage between the audio unit connector M132 and ground.

(+) Connector		(-)	OFF	ACC	ON
Terminal					
M132	19	Ground	Battery voltage	Battery voltage	Battery voltage
	7	Ground	0V	Battery voltage	Battery voltage



Are the voltage results as specified?

YES >> GO TO 3.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.GROUND CIRCUIT CHECK

Inspect audio unit case ground.

Does case ground pass inspection?

YES >> Inspection End.

NO >> Repair audio unit case ground.

DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:000000004394081

1.CHECK FUSES

Check that the following fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Display unit	9	Battery power	24
	8	Ignition switch ACC or ON	17

Are the fuses OK?

YES >> GO TO 2.

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

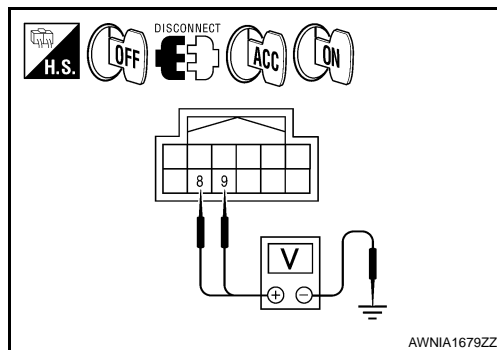
POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect display unit connector.
3. Check voltage between the display unit and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M93 (without Bluetooth)	9	Ground	Battery voltage	Battery voltage	Battery voltage
M109 (with Bluetooth)	8	Ground	0V	Battery voltage	Battery voltage



Are the voltage results as specified?

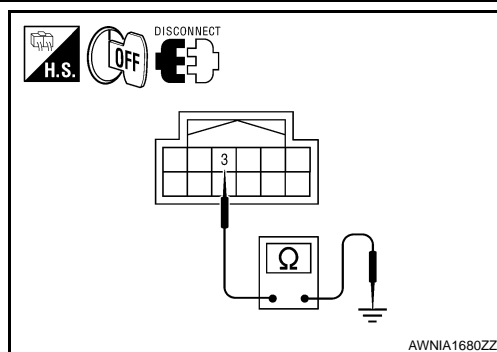
YES >> GO TO 3.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3. GROUND CIRCUIT CHECK

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

Connector	Terminal	—	Continuity
M93	3	Ground	Yes



Is the inspection result normal?

YES >> Inspection End.

NO >> Repair harness or connector.

BOSE SPEAKER AMP

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:000000004269498

1. CHECK FUSE

Check for blown fuses.

Unit	Terminals	Signal name	Fuse No.
BOSE speaker amp.	10	Battery power	25
	11		26

Are the fuses OK?

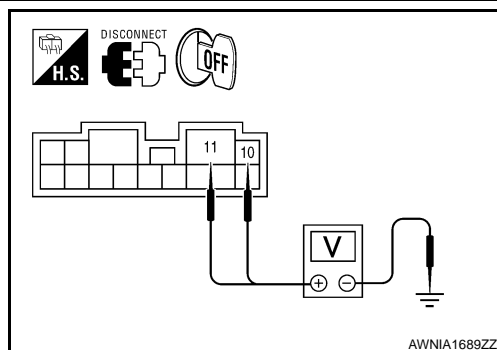
YES >> GO TO 2.

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

2. CHECK POWER SUPPLY CIRCUIT

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

(+)		(-)	Voltage (approx.)
Connector	Terminal		
B110	10	Ground	Battery voltage
	11		



Is battery voltage present?

YES >> GO TO 3.

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

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

3. CHECK GROUND CIRCUIT

Check continuity between BOSE speaker amp harness connector and ground.

(+)		(-)	Continuity
Connector	Terminal		
B110	7	Ground	Yes
	12		

Does continuity exist?

- YES >> Inspection End.
 NO >> Repair harness or connector.

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000004269499

1. CHECK FUSES

Check that the following fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Satellite radio tuner (factory installed)	32	Battery power	24
	36	Ignition switch ACC or ON	17

Are the fuses OK?

- YES >> GO TO 2.
 NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. POWER SUPPLY CIRCUIT CHECK

- Turn ignition switch OFF.
- Disconnect satellite radio tuner (factory installed) connector B111.
- Check voltage between the satellite radio tuner (factory installed) and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
B111	32	Ground	Battery voltage	Battery voltage	Battery voltage
	36	Ground	0V	Battery voltage	Battery voltage

Are the voltage results as specified?

- YES >> GO TO 3.
 NO >> • Check connector housings for disconnected or loose terminals.
 • Repair harness or connector.

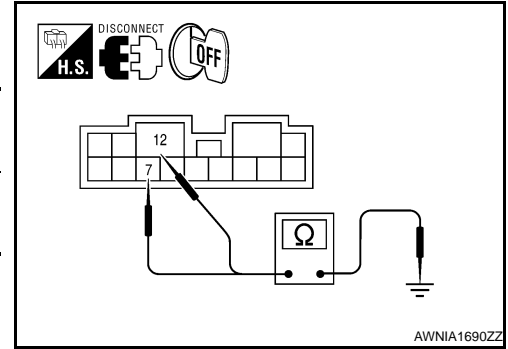
3. GROUND CIRCUIT CHECK

- Turn ignition switch OFF.
- Check continuity between satellite radio tuner (factory installed) connector and ground.

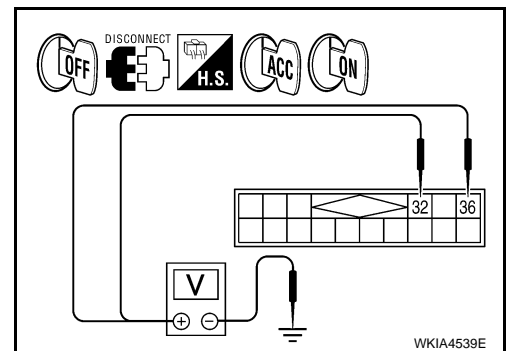
Connector	Terminal	—	Continuity
B111	35	Ground	Yes

Is inspection result OK?

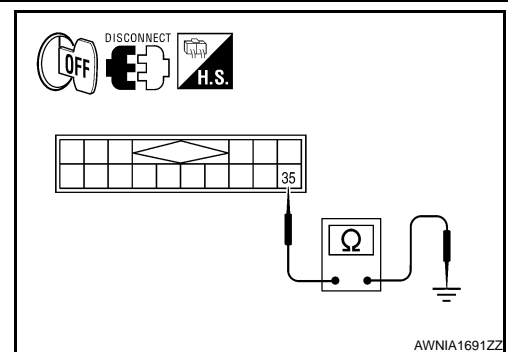
- YES >> Inspection End.
 NO >> Repair harness or connector.



AWNIA1690ZZ



WKIA4539E



AWNIA1691ZZ

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

BLUETOOTH CONTROL UNIT

BLUETOOTH CONTROL UNIT : Diagnosis Procedure

INFOID:000000004394082

1. CHECK FUSE

Check that the following fuses of the Bluetooth control unit are not blown.

Power source	Fuse No.
Battery	24
Ignition switch ACC or ON	17
Ignition switch ON or START	3

Are the fuses OK?

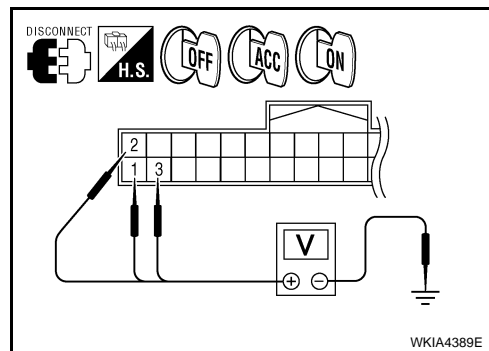
YES >> GO TO 2.

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

2. CHECK POWER SUPPLY CIRCUIT

Check voltage between Bluetooth control unit harness connector and ground.

(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
B126	1	Ground	OFF	Battery voltage
	2		ACC	
	3		ON	



Are the voltage results as specified?

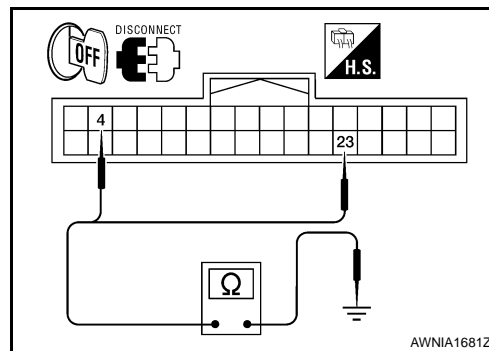
YES >> GO TO 3.

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

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit connector B126.
3. Check continuity between Bluetooth control unit harness connector and ground.

(+)		(-)	Continuity
Connector	Terminal		
B126	4	Ground	Yes
	23		



Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

MICROPHONE

MICROPHONE : Diagnosis Procedure

INFOID:000000004394083

1. CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

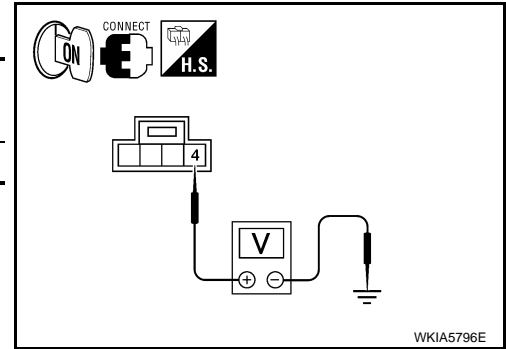
< COMPONENT DIAGNOSIS >

Check voltage between microphone harness connector and ground.

(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
R7	4	Ground	ON	5V

Is proper voltage present?

- YES >> GO TO 3.
NO >> GO TO 2.

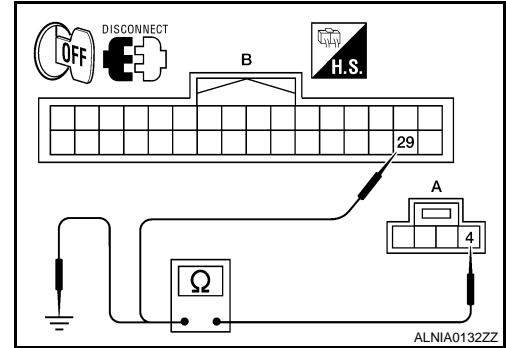


2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

- Turn ignition switch OFF.
- Disconnect Bluetooth control unit and microphone connectors.
- Check continuity between microphone harness connector R7 (A) terminal 4 and Bluetooth control unit harness connector B126 (B) terminal 29.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	4	B126	29	Yes

- Check continuity between microphone harness connector R7 (A) terminal 4 and ground.



A		—	Continuity
Connector	Terminal		
R7	4	Ground	No

Are continuity results as specified?

- YES >> Replace the Bluetooth control unit. Refer to [AV-79. "Removal and Installation"](#).
NO >> Repair harness or connector.

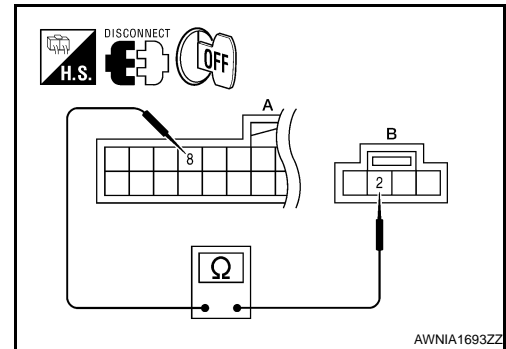
3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect Bluetooth control unit and microphone connectors.
- Check continuity between Bluetooth control unit harness connector B126 (A) terminal 8 and microphone harness connector R7 (B) terminal 2.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B126	8	R7	2	Yes

Is continuity present?

- YES >> Inspection End.
NO >> Repair harness or connector.



FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

FRONT DOOR SPEAKER

Description

INFOID:000000004269472

The audio unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the front door speakers using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004269473

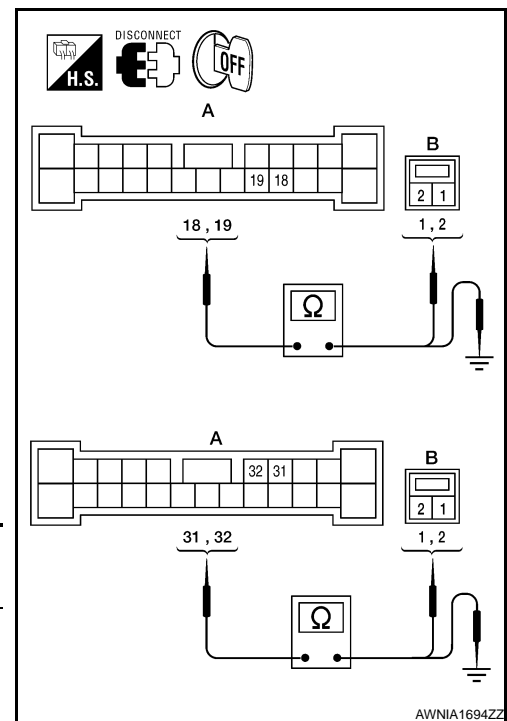
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B109 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connector B109 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B109	18	D3	1	Yes
	19		2	
	31	D103	1	
	32		2	

3. Check continuity between BOSE speaker amp. harness connector B109 (A) and ground.

A		B	Continuity
Connector	Terminal		
B109	18	Ground	No
	19		
	31		
	32		



Are continuity test results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2. FRONT DOOR SPEAKER SIGNAL CHECK

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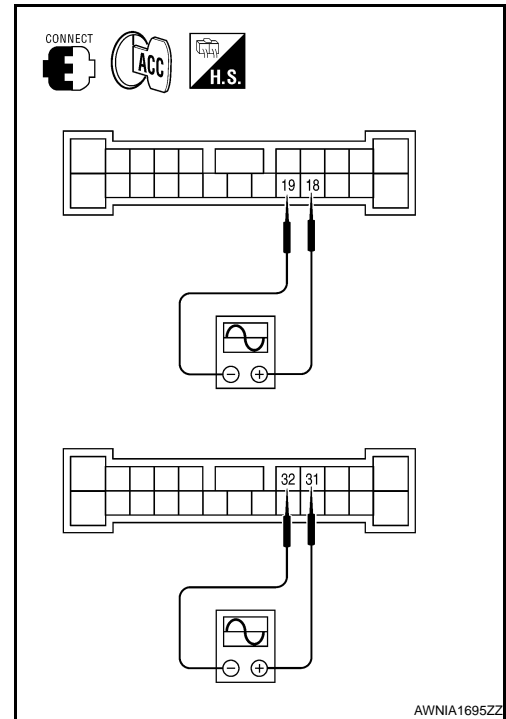
FRONT DOOR SPEAKER

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connector B109 and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B109 terminals with CONSULT-III or oscilloscope.

Connector	Terminal		Condition	Reference signal
	(+)	(-)		
B109	18	19	Receive audio signal	
	31	32		



Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to [AV-161, "Removal and Installation"](#).

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect audio unit connector M132 and BOSE speaker amp. connector B109.
2. Check continuity between audio unit harness connector M132 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M132	2	B109	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between audio unit harness connector M132 (A) and ground.

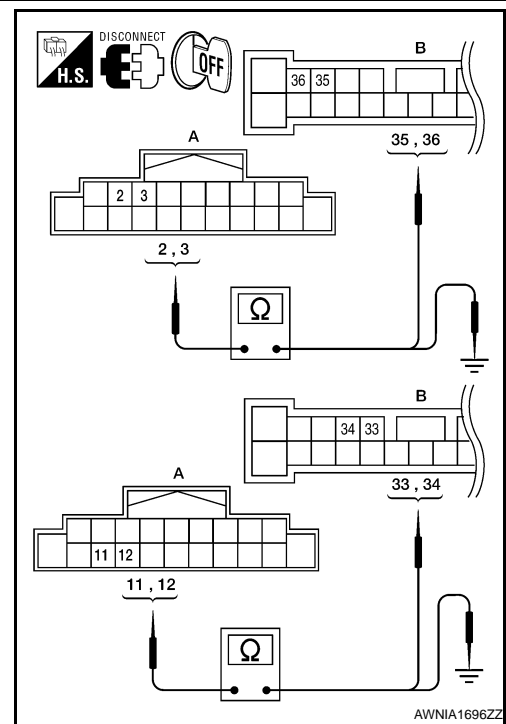
A		—	Continuity
Connector	Terminal		
M132	2	Ground	No
	3		
	11		
	12		

Are continuity test results as specified?

YES >> GO TO 4.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. FRONT DOOR SPEAKER SIGNAL CHECK



FRONT DOOR SPEAKER

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

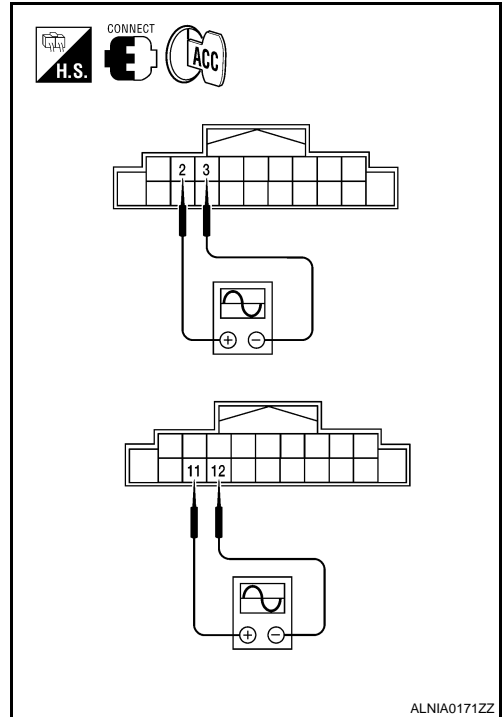
1. Connect audio unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M132	2	3	Receive audio signal	
	11	12		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-164, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-156, "Removal and Installation"](#).



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TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

TWEETER

Description

INFOID:000000004269474

The audio unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the tweeters using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004269475

1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B110 and suspect tweeter connector.
2. Check continuity between BOSE speaker amp. harness connector B110 (A) and suspect tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B110	1	M51	1	Yes
	2		2	
	4	M52	1	
	3		2	

3. Check continuity between BOSE speaker amp. harness connector B110 (A) and ground.

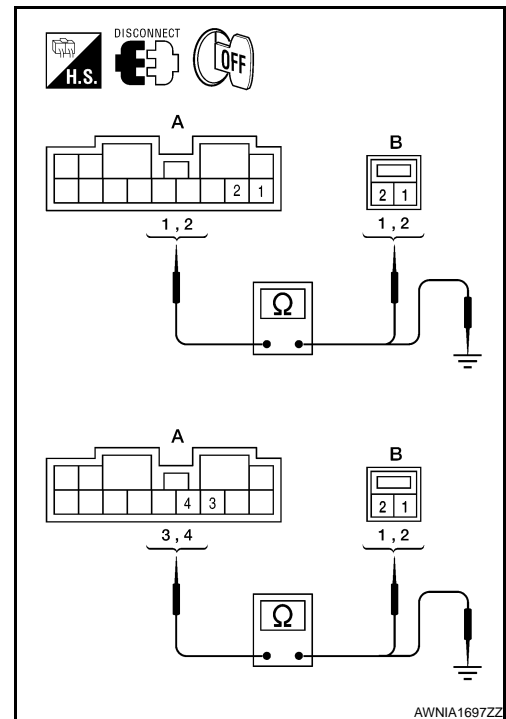
A		—	Continuity
Connector	Terminal		
B110	1	Ground	No
	2		
	4		
	3		

Are continuity test results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2. TWEETER SIGNAL CHECK

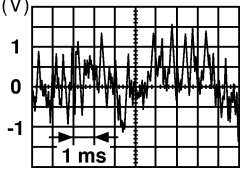


TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

1. Connect BOSE speaker amp. connector B110 and suspect tweeter connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B110 terminals with CONSULT-III or oscilloscope.

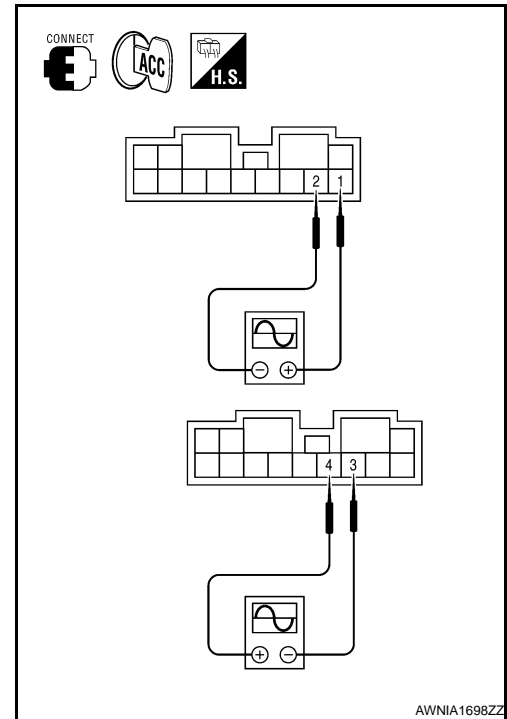
Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B110	1	2	Receive audio signal	
	4	3		

SKIA0177E

Are the audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to [AV-159, "Removal and Installation"](#).

NO >> GO TO 3.



3. HARNESS CHECK

1. Disconnect audio unit connector M132 and BOSE speaker amp. connector B109.
2. Check continuity between audio unit harness connector M132 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M132	2	B109	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between audio unit harness connector M132 (A) and ground.

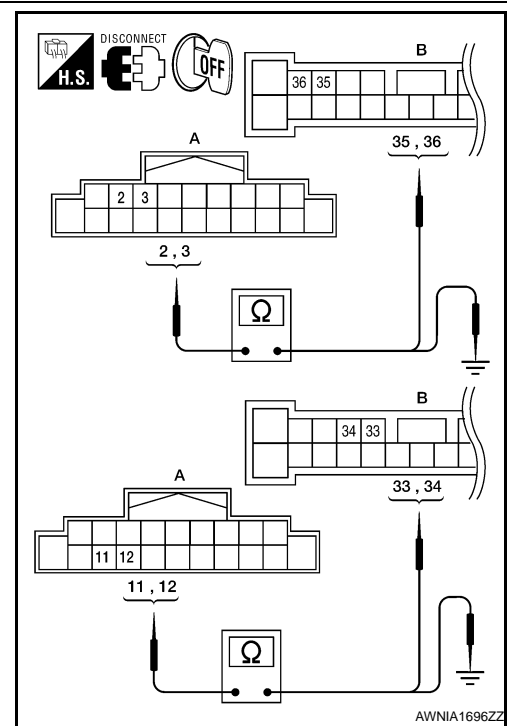
A		—	Continuity
Connector	Terminal		
M132	2	Ground	No
	3		
	11		
	12		

Are continuity test results as specified?

YES >> GO TO 4.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. TWEETER SIGNAL CHECK



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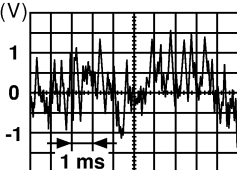
AV

TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

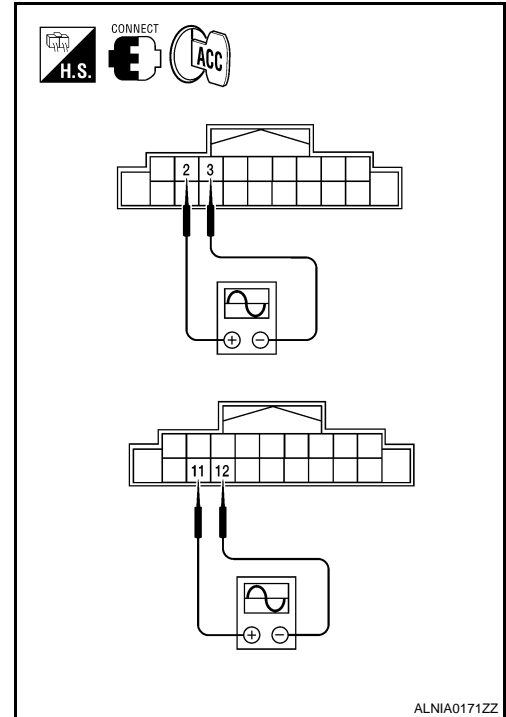
1. Connect audio unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M132	2	3	Receive audio signal	
	11	12		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-164, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-156, "Removal and Installation"](#).



ALNIA0171ZZ

CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

CENTER SPEAKER

Description

INFOID:000000004269476

The audio unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the center speaker using the audio signal circuits.

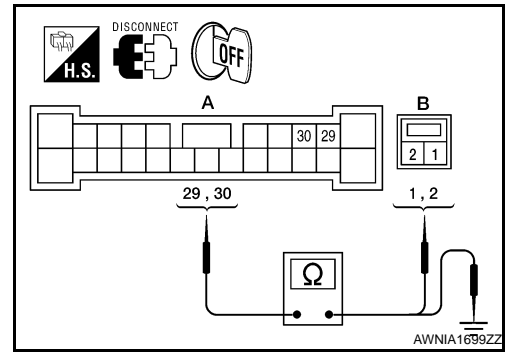
Diagnosis Procedure

INFOID:000000004269477

1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B109 and center speaker connector M130.
2. Check continuity between BOSE speaker amp. harness connector B109 (A) and center speaker harness connector M130 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B109	29	M130	1	Yes
	30		2	



3. Check continuity between BOSE speaker amp. harness connector B109 (A) and ground.

A		—	Continuity
Connector	Terminal		
B109	29	Ground	No
	30		

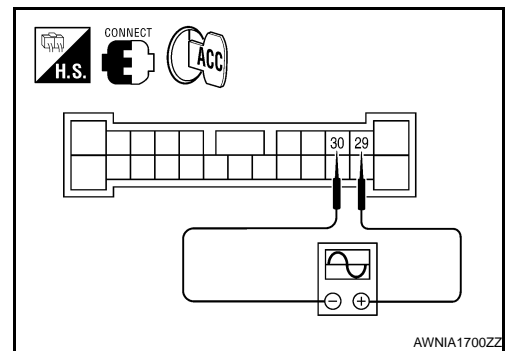
Are continuity test results as specified?

- YES >> GO TO 2.
 NO >> • Check connector housings for disconnected or loose terminals.
 • Repair harness or connector.

2. CENTER SPEAKER SIGNAL CHECK

1. Connect BOSE speaker amp. connector B109 and center speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B109 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B109	29	30	Receive audio signal	<p>SKIA0177E</p>



Is the audio signal voltage reading as specified?

- YES >> Replace center speaker. Refer to [AV-160. "Removal and Installation"](#).
 NO >> GO TO 3.

3. HARNESS CHECK

CENTER SPEAKER

[BOSE W/ MONOCHROME DISPLAY]

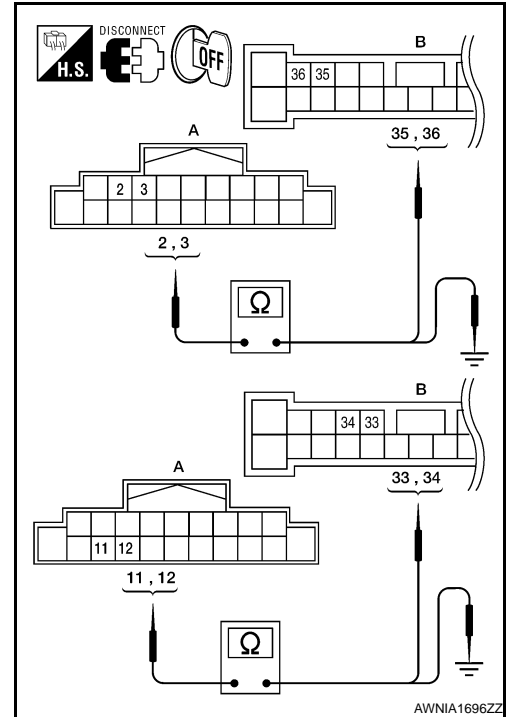
< COMPONENT DIAGNOSIS >

1. Disconnect audio unit connector M132 and BOSE speaker amp. connector B109.
2. Check continuity between audio unit harness connector M132 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M132	2	B109	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between audio unit harness connector M132 (A) and ground.

A		—	Continuity
Connector	Terminal		
M132	2	Ground	No
	3		
	11		
	12		



Are continuity test results as specified?

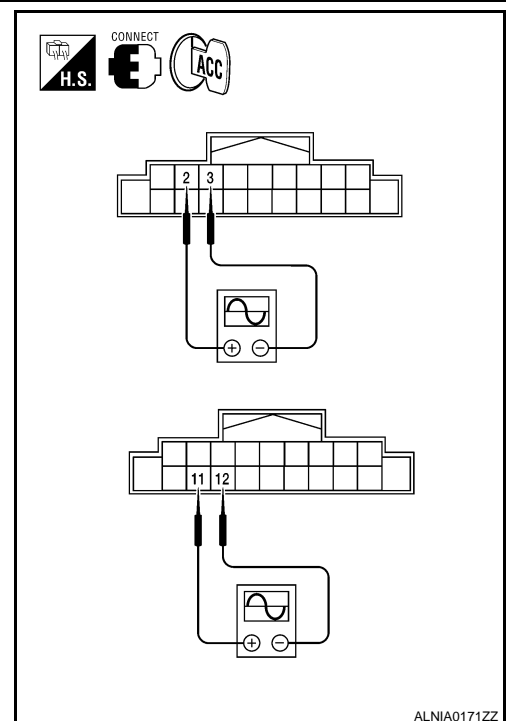
YES >> GO TO 4.

- NO >> • Check connector housings for disconnected or loose terminals.
 • Repair harness or connector.

4. CENTER SPEAKER SIGNAL CHECK

1. Connect audio unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M132	2	3	Receive audio signal	
	11	12		



Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to [AV-164, "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-156, "Removal and Installation"](#).

REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

REAR DOOR SPEAKER

Description

INFOID:000000004269478

The audio unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the rear door speakers using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004269479

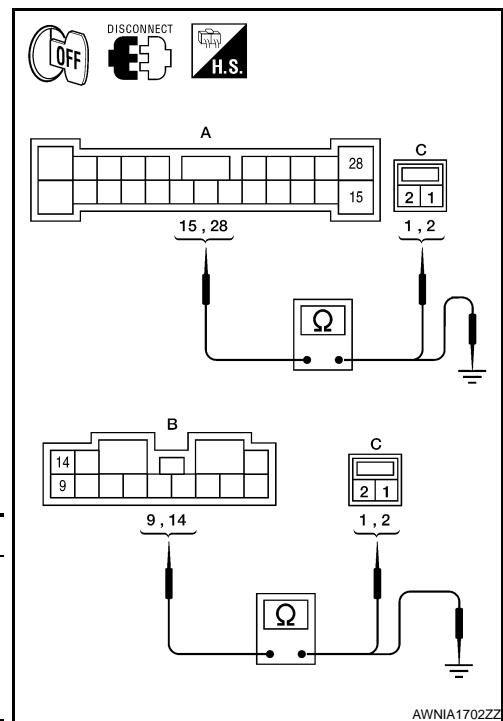
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connectors B109, B110 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connectors B109 (A) and B110 (B) and suspect speaker harness connector (C).

Connector	Terminal	Connector	Terminal	Continuity
A: B109	15	C: D202	2	Yes
	28		1	
B: B110	9	C: D302	2	
	14		1	

3. Check continuity between BOSE speaker amp. harness connectors B109 (A) and B110 (B) and ground.

Connector	Terminal	-	Continuity
A: B109	15	Ground	No
	28		
B: B110	9		
	14		



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Are the continuity test results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2. REAR DOOR SPEAKER SIGNAL CHECK

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REAR DOOR SPEAKER

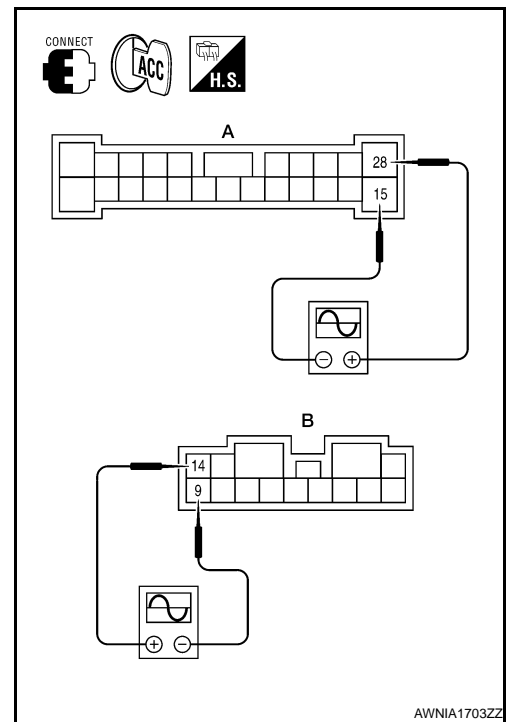
[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connectors and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connectors B109 (A) and B110 (B) terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
A: B109	28	15	Receive audio signal	
B: B110	14	9		

SKIA0177E



Are audio signal voltage readings as specified?

- YES >> Replace suspect speaker. Refer to [AV-162. "Removal and Installation"](#).
- NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect audio unit connector M132 and BOSE speaker amp. connector B109.
2. Check continuity between audio unit harness connector M132 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M132	4	B109	24	Yes
	5		23	
	13		26	
	14		25	

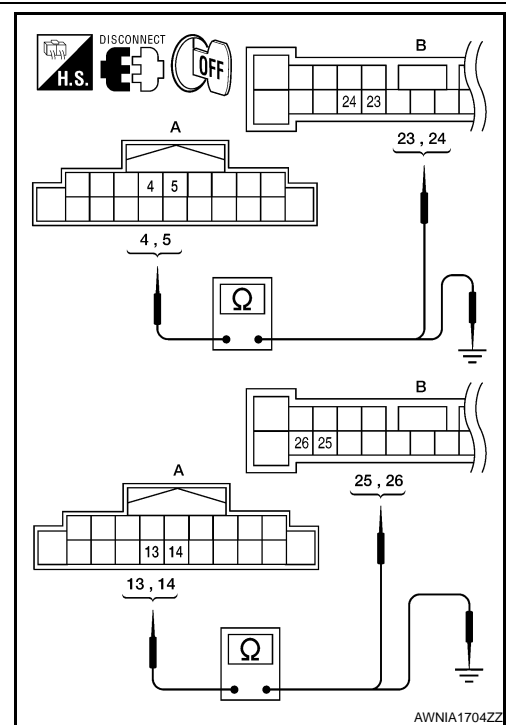
3. Check continuity between audio unit harness connector M132 (A) and ground.

A		—	Continuity
Connector	Terminal		
M132	4	Ground	No
	5		
	13		
	14		

Are the continuity test results as specified?

- YES >> GO TO 4.
- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. REAR DOOR SPEAKER SIGNAL CHECK

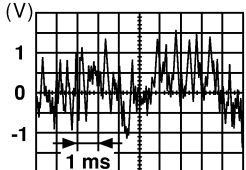


REAR DOOR SPEAKER

[BOSE W/ MONOCHROME DISPLAY]

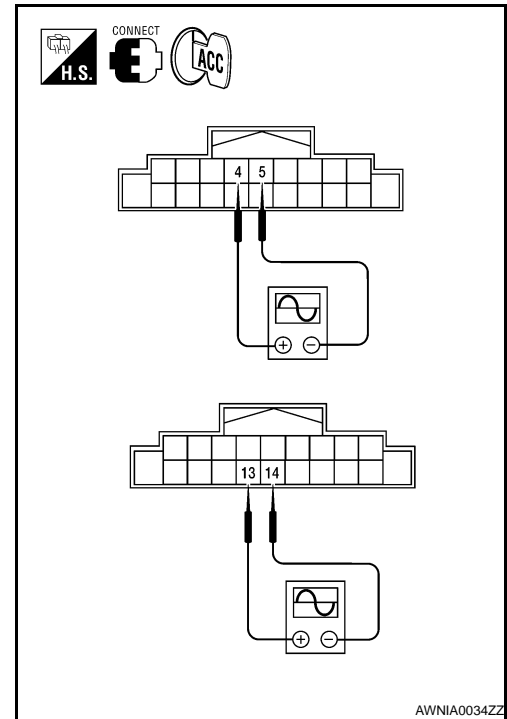
< COMPONENT DIAGNOSIS >

1. Connect audio unit connector M132 and BOSE speaker amp. connector B109.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M132	4	5	Receive audio signal	 <small>SKIA0177E</small>
	13	14		

Is the audio signal voltage reading as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-164, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-156, "Removal and Installation"](#).



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SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

SUBWOOFER

Description

INFOID:000000004269480

The audio unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the subwoofers using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004269481

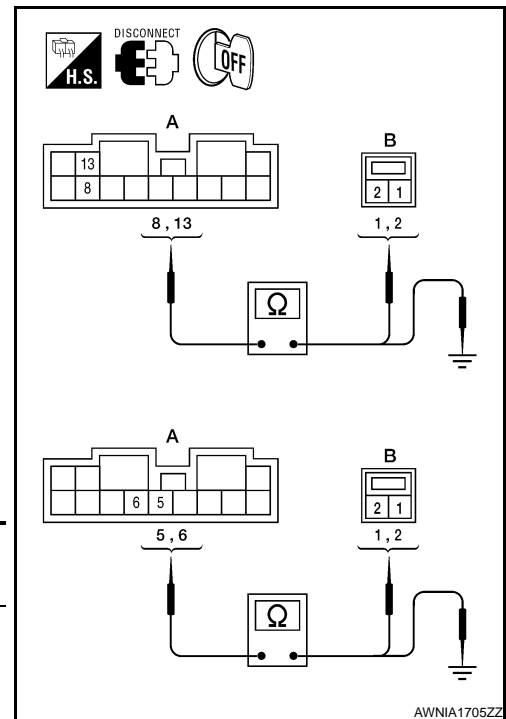
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B110 and suspect rear subwoofer connector.
2. Check continuity between BOSE speaker amp. harness connector B110 (A) and suspect rear subwoofer harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B110	13	B106	1	Yes
	8		2	
	5	B107	1	
	6		2	

3. Check continuity between BOSE speaker amp. harness connector B110 (A) and ground.

A		—	Continuity
Connector	Terminal		
B110	13	Ground	No
	8		
	5		
	6		



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Are the continuity test results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

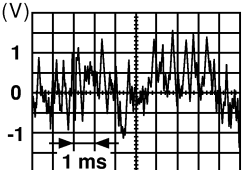
2. REAR SUBWOOFER SIGNAL CHECK

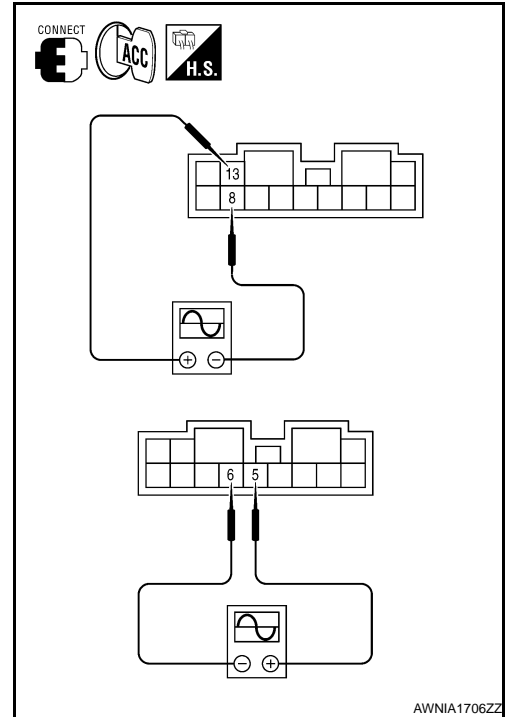
SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

1. Connect BOSE speaker amp. connector B110 and suspect rear subwoofer connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B110 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B110	13	8	Receive audio signal	
	5	6		



Is the audio signal voltage as specified?

YES >> Replace suspect rear subwoofer. Refer to [AV-163](#), "[Removal and Installation](#)".

NO >> GO TO 3.

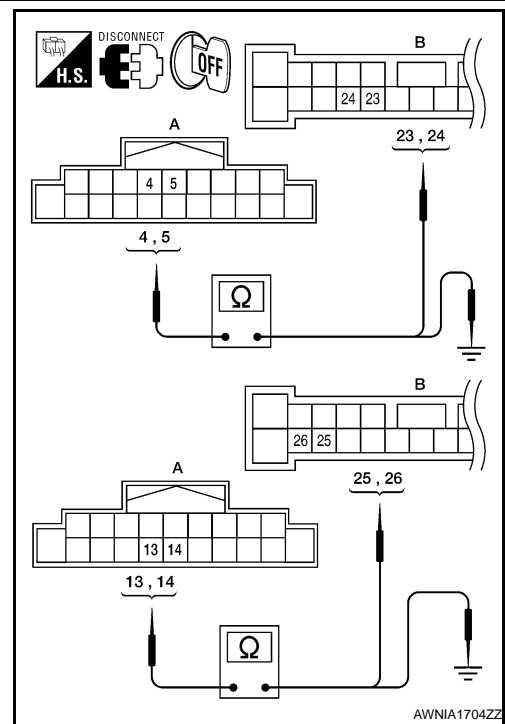
3. HARNESS CHECK

1. Disconnect audio unit connector M132 and BOSE speaker amp. connector B109.
2. Check continuity between audio unit harness connector M132 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M132	4	B109	24	Yes
	5		23	
	13		26	
	14		25	

3. Check continuity between audio unit harness connector M132 (A) terminal and ground.

A		—	Continuity
Connector	Terminal		
M132	4	Ground	No
	5		
	13		
	14		



Are continuity test results as specified?

YES >> GO TO 4.

- NO >> • Check connector housings for disconnected or loose terminals.
 • Repair harness or connector.

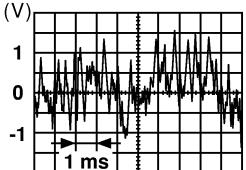
4. REAR SUBWOOFER SIGNAL CHECK

SUBWOOFER

[BOSE W/ MONOCHROME DISPLAY]

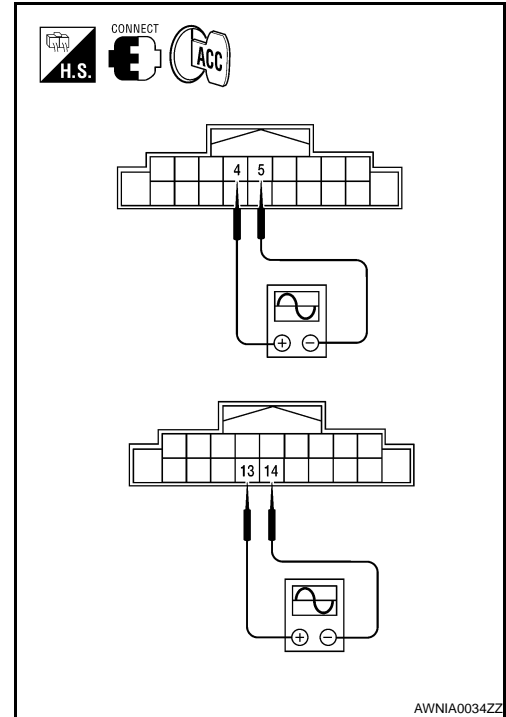
< COMPONENT DIAGNOSIS >

1. Connect audio unit connector M132 and BOSE speaker amp. connector B109.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M132	4	5	Receive audio signal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
	13	14		

Is the audio signal voltage as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-164, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-156, "Removal and Installation"](#).



AMP ON SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

AMP ON SIGNAL CIRCUIT

Description

INFOID:000000004269482

When the audio system is turned on, a voltage signal is supplied from the audio unit to the BOSE speaker amp. When this signal is received, the BOSE speaker amp. will turn on.

Diagnosis Procedure

INFOID:000000004269483

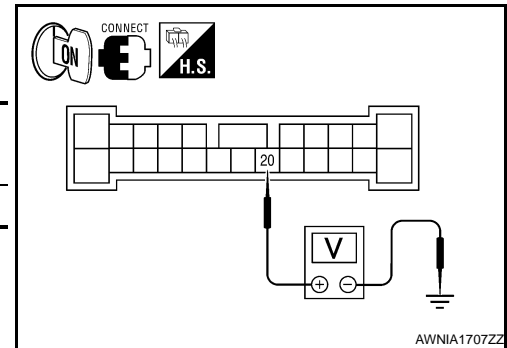
1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

1. Turn audio system ON.
2. Check voltage between BOSE speaker amp. harness connector B109 terminal 20 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
B109	20	Ground	Battery voltage

Is inspection result normal?

- YES >> Inspection End.
NO >> GO TO 2.



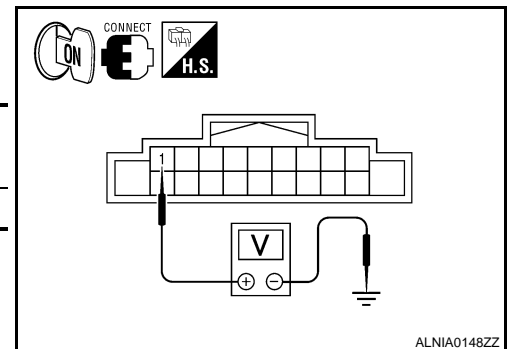
2. CHECK AMP ON SIGNAL (AUDIO UNIT)

Check voltage between audio unit harness connector M132 terminal 1 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
M132	1	Ground	Battery voltage

Is inspection result normal?

- YES >> Repair harness or connector.
NO >> Replace audio unit. Refer to [AV-156. "Removal and Installation"](#).



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STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

STEERING SWITCH

Description

INFOID:000000004291569

When one of the steering wheel AV control switches is pushed, the resistance in the steering wheel AV control switch circuit changes, depending on which button is pushed.





Diagnosis Procedure

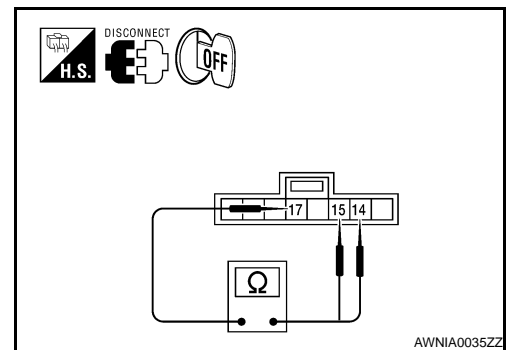
INFOID:00000000439699

WITH BLUETOOTH

1. CHECK STEERING SWITCH RESISTANCE

1. Disconnect steering switch connector M88.
2. Check resistance between steering switch connector terminals.

Terminal	Signal name	Condition	Resistance (Ω) (Approx.)	
15	17	Source	Depress SOURCE switch.	680
		Phone/Send	Depress  switch.	220
		Volume (up)	Depress volume UP switch.	110
		Volume (down)	Depress volume DOWN switch.	0
14	17	Seek (down)	Depress  switch.	220
		Seek (up)	Depress  switch.	110
		Phone/End	Depress  switch.	0



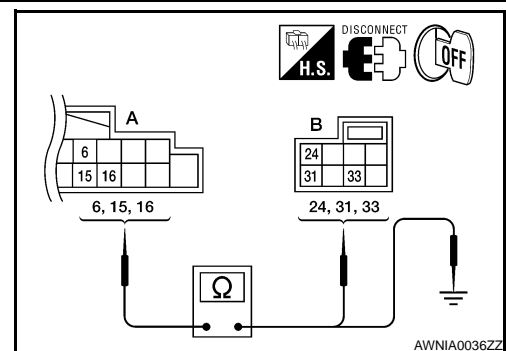
Do the steering switches check OK?

- YES >> GO TO 2.
 NO >> Replace steering switch. Refer to [AV-72. "Removal and Installation"](#).

2. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M133 and spiral cable connector M30.
3. Check continuity between audio unit harness connector M133 (A) and spiral cable harness connector M30 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M133	6	M30	24	Yes
	16		31	
	15		33	



4. Check continuity between audio unit connector M133 (A) and ground.

A		—	Continuity
Connector	Terminal		
M133	6	Ground	No
	15		
	16		

Are the continuity results as specified?

- YES >> GO TO 3.
 NO >> Repair harness.

STEERING SWITCH

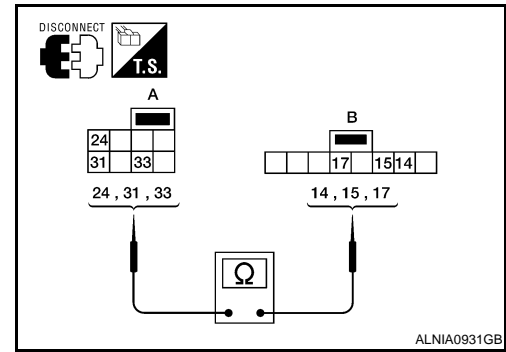
< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M88.
2. Check continuity between spiral cable harness connector M30 (A) and M88 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M88	14	Yes
	31		15	
	33		17	



Does the spiral cable check OK?

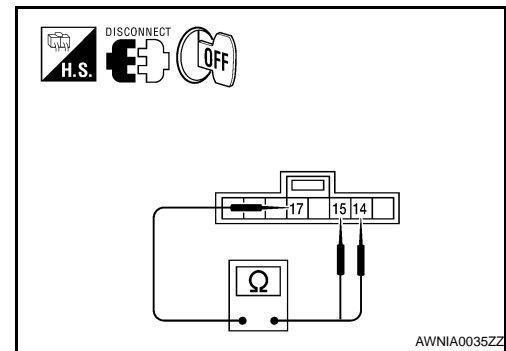
- YES >> Inspection End.
 NO >> Replace spiral cable. Refer to [SR-8, "Removal and Installation"](#).

WITHOUT BLUETOOTH

1. CHECK STEERING SWITCH RESISTANCE

1. Disconnect steering switch connector M88.
2. Check resistance between steering switch connector terminals.

Terminal	Signal name	Condition	Resistance (Ω) (Approx.)
15	Volume (up)	Depress volume up switch.	121
	Volume (down)	Depress volume down switch.	0
14	Seek (down)	Depress ▽ switch.	321
	Seek (up)	Depress △ switch.	121
	Source	Depress source switch.	0



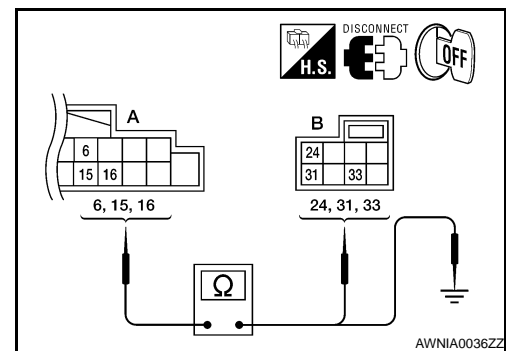
Do the steering switches check OK?

- YES >> GO TO 2.
 NO >> Replace steering switch. Refer to [AV-72, "Removal and Installation"](#).

2. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M133 and spiral cable connector M30.
3. Check continuity between audio unit harness connector M133 (A) and spiral cable harness connector M30 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M133	6	M30	24	Yes
	16		31	
	15		33	



4. Check continuity between audio unit connector M133 (A) and ground.

A		—	Continuity
Connector	Terminal		
M133	6	Ground	No
	15		
	16		

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STEERING SWITCH

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

Are the continuity results as specified?

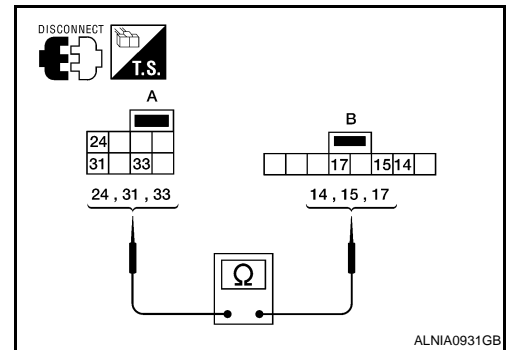
YES >> GO TO 3.

NO >> Repair harness.

3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M88.
2. Check continuity between spiral cable harness connector M30 (A) and M88 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M88	14	Yes
	31		15	
	33		17	



Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to [SR-8, "Removal and Installation"](#).

COMMUNICATION SIGNAL CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

COMMUNICATION SIGNAL CIRCUIT SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000004291571

Communication signals are exchanged between the audio unit and satellite radio tuner using the communication circuits.

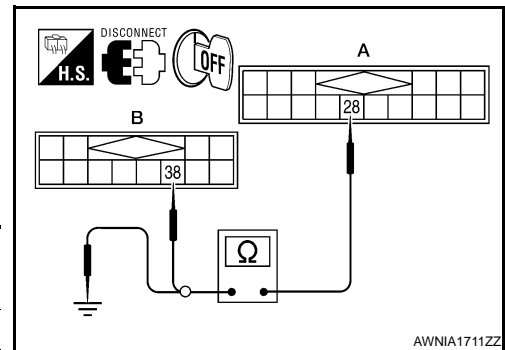
SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000004291572

1.CHECK HARNESS - 1

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B111 and audio unit connector M138.
3. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 28 and audio unit harness connector M138 (B) terminal 38.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	28	M138	38	Yes



4. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 28 and ground.

A		—	Continuity
Connector	Terminal		
B111	28	Ground	No

Are continuity results as specified?

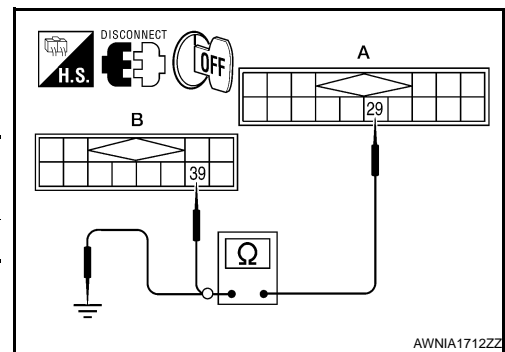
YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK HARNESS - 2

1. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 29 and audio unit harness connector M138 (B) terminal 39.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	29	M138	39	Yes



2. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 29 and ground.

A		—	Continuity
Connector	Terminal		
B111	29	Ground	No

Are continuity results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK HARNESS - 3

COMMUNICATION SIGNAL CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

1. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 30 and audio unit harness connector M138 (B) terminal 40.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	30	M138	40	Yes

2. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 30 and ground.

A		—	Continuity
Connector	Terminal		
B111	30	Ground	No

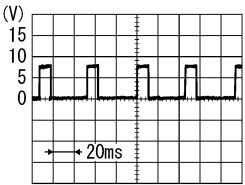
Are continuity results as specified?

YES >> GO TO 4.

NO >> Repair harness or connector.

4. CHECK REQ1 SIGNAL

1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
2. Turn ignition switch to ACC.
3. Check signal between satellite radio tuner (factory installed) harness connector B111 terminal 28 and ground with CONSULT-III or oscilloscope.

(+)		(-)	Reference signal
Connector	Terminal		
B111	28	Ground	 <p>SKIB3825E</p>

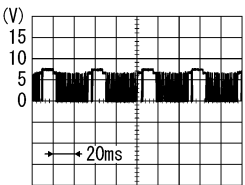
Are voltage readings as specified?

YES >> GO TO 5.

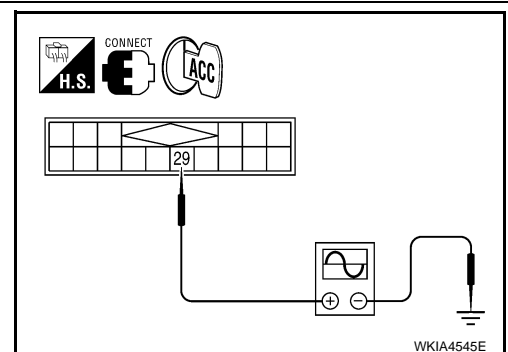
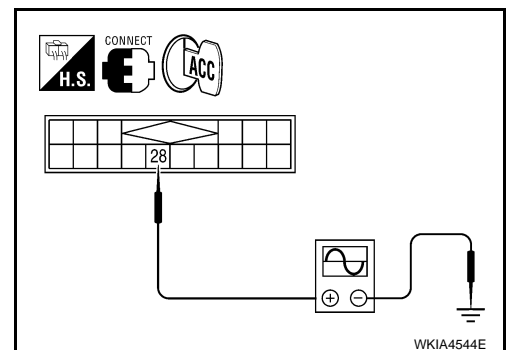
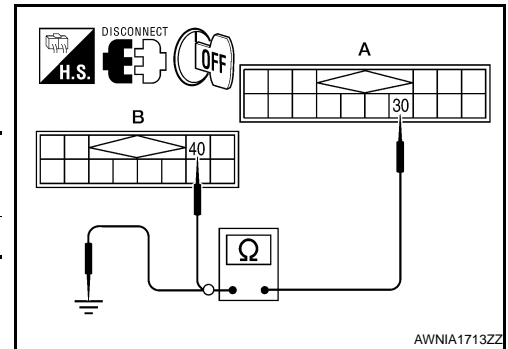
NO >> Replace audio unit. Refer to [AV-156. "Removal and Installation"](#).

5. CHECK TXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector B111 terminal 29 and ground with CONSULT-III or oscilloscope.

(+)		(-)	Reference signal
Connector	Terminal		
B111	29	Ground	 <p>SKIB3824E</p>

Are the voltage readings as specified?



COMMUNICATION SIGNAL CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

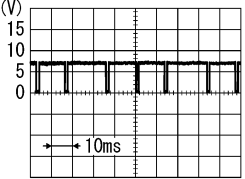
< COMPONENT DIAGNOSIS >

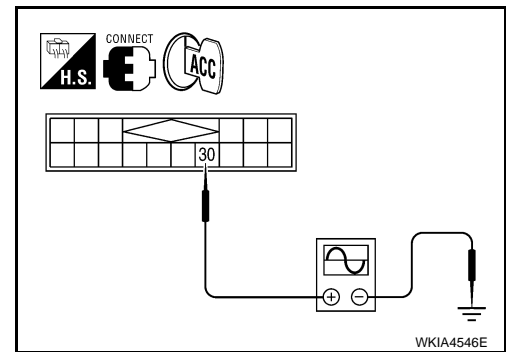
YES >> GO TO 6.

NO >> Replace satellite radio tuner. Refer to [AV-165, "Removal and Installation"](#).

6. CHECK RXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector B111 terminal 30 and ground with CONSULT-III or oscilloscope.

(+)		(-)	Reference signal
Connector	Terminal		
B111	30	Ground	 <p style="text-align: right; font-size: small;">SKIB3826E</p>



Are the voltage readings as specified?

YES >> Replace satellite radio tuner. Refer to [AV-165, "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-156, "Removal and Installation"](#).

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SOUND SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

SOUND SIGNAL CIRCUIT SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000004291581

Left and right channel audio signals are supplied from the satellite radio tuner to the audio unit through the sound signal circuits.

SATELLITE RADIO TUNER : Diagnosis Procedure

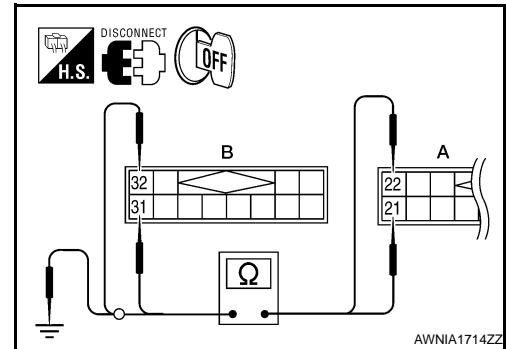
INFOID:000000004291582

LEFT CHANNEL

1.CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B111 and audio unit connector M138.
3. Check continuity between satellite radio tuner (factory installed) connector B111 (A) and audio unit connector M138 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	21	M138	31	Yes
	22		32	



4. Check continuity between satellite radio tuner (factory installed) connector B111 (A) and ground.

A		—	Continuity
Connector	Terminal		
B111	21	Ground	No
	22		

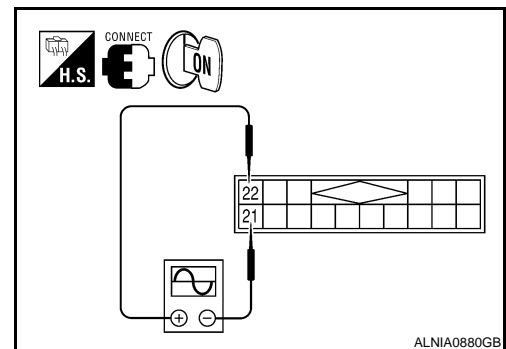
Are continuity results as specified?

- YES >> GO TO 2.
NO >> Repair harness or connector.

2.CHECK LEFT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and audio unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector B111 terminals 21 and 22 with CONSULT-III or oscilloscope.

(+) Terminal		(-) Terminal		Reference signal
Connector	Terminal	Connector	Terminal	
B111	22	B111	21	<p>SKIB3609E</p>



Are voltage readings as specified?

- YES >> Replace audio unit. Refer to [AV-156. "Removal and Installation"](#).
NO >> Replace satellite radio tuner. Refer to [AV-165. "Removal and Installation"](#).

RIGHT CHANNEL

SOUND SIGNAL CIRCUIT

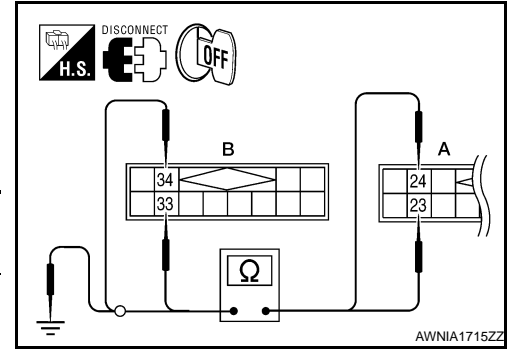
< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

1. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B111 and audio unit connector M138.
3. Check continuity between satellite radio tuner (factory installed) B111 (A) and audio unit M138 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	23	M138	33	Yes
	24		34	



4. Check continuity between satellite radio tuner (factory installed) connector B111 (A) and ground.

A		—	Continuity
Connector	Terminal		
B111	23	Ground	No
	24		

Are continuity results as specified?

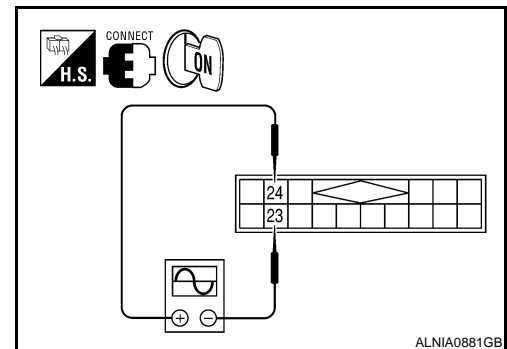
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and audio unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector B111 terminals 23 and 24 with CONSULT-III or oscilloscope.

(+)		(-)	Reference signal
Connector	Terminal	Terminal	
B111	24	23	



Are voltage readings as specified?

YES >> Replace audio unit. Refer to [AV-156. "Removal and Installation"](#).

NO >> Replace satellite radio tuner. Refer to [AV-165. "Removal and Installation"](#).

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MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000004291583

Voice signals are transmitted from the microphone to the Bluetooth control unit using the microphone signal circuits.

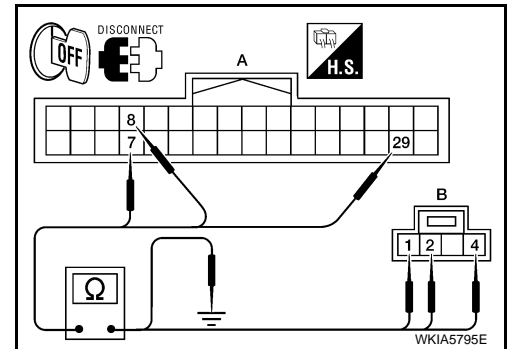
Diagnosis Procedure

INFOID:000000004364424

1. CHECK HARNESS BETWEEN BLUETOOTH CONTROL UNIT AND MICROPHONE

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit connector and microphone connector.
3. Check continuity between Bluetooth control unit harness connector B126 (A) and microphone harness connector R7 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B126	7	R7	1	Yes
	8		2	
	29		4	



4. Check continuity between Bluetooth control unit harness connector B126 (A) and ground.

A		—	Continuity
Connector	Terminal		
B126	7	Ground	No
	8		
	29		

Are the continuity test results as specified?

- YES >> GO TO 2.
 NO >> Repair harness or connector.

2. CHECK MICROPHONE POWER SUPPLY

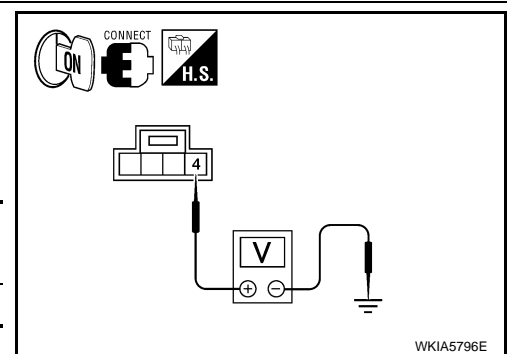
1. Connect Bluetooth control unit connector and microphone connector.
2. Turn ignition switch ON.
3. Check voltage between microphone harness connector R7 terminal 4 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
R7	4	Ground	5V

Is voltage reading approx. 5 volts?

- YES >> GO TO 3.
 NO >> Replace Bluetooth control unit. Refer to [AV-174, "Removal and Installation"](#).

3. CHECK MICROPHONE SIGNAL

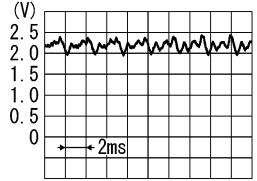


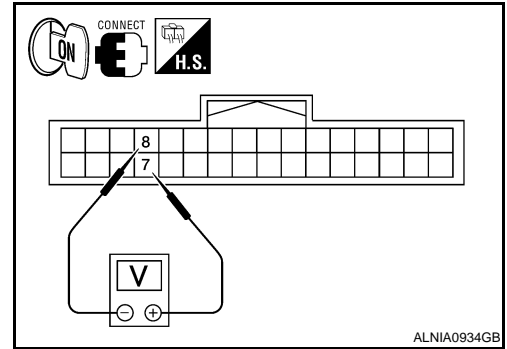
MICROPHONE SIGNAL CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

Check signal between Bluetooth control unit harness connector B126 terminals 7 and 8.

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
B126	7	8	While talking into microphone  <small>PKIB5037J</small>



Are voltage readings as specified?

- YES >> Replace Bluetooth control unit. Refer to [AV-174, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-172, "Removal and Installation"](#).

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AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

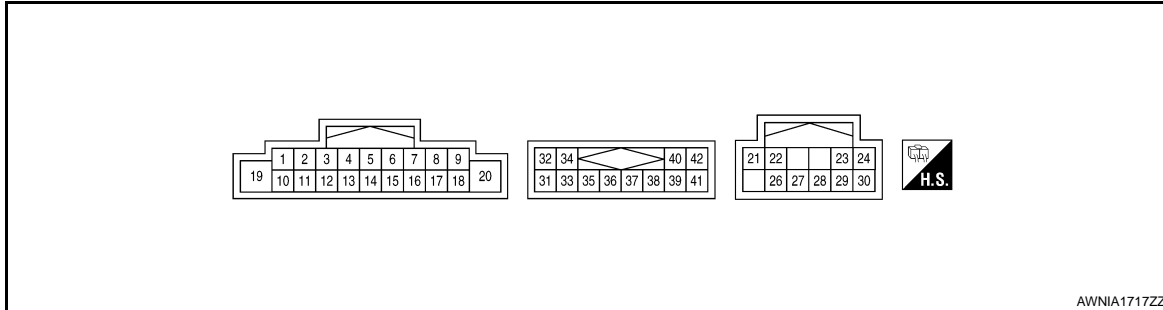
ECU DIAGNOSIS

AUDIO UNIT

Reference Value

INFOID:000000004364425

TERMINAL LAYOUT



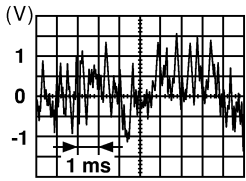
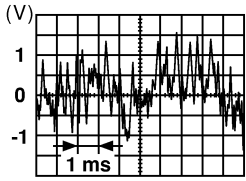

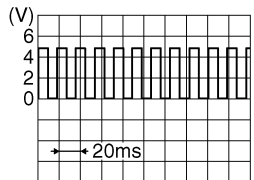



PHYSICAL VALUES - WITH BLUETOOTH

Terminal (Wire color)		Item	Signal input/output	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
1 (B/P)	Ground	Amp ON	Output	ON	—	Battery voltage
2 (G)	3 (R)	Audio signal front LH	Output	ON	Receive audio signal	 SKIA0177E
4 (W/R)	5 (W/L)	Audio signal rear LH	Output	ON	Receive audio signal	 SKIA0177E
6 (W/G)	Ground	Steering switch signal A	Input	ON	Depress ▽ switch.	220Ω
					Depress △ switch.	110Ω
					Depress ◐ switch.	0Ω
7 (V/Y)	Ground	ACC power	Input	ON	Ignition switch ACC or ON	Battery voltage
9 (R/L)	8 (R/Y)	ILL signal	Input	ON	Parking lamps ON	Battery voltage
10	—	Shield	—	—	—	—

AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]


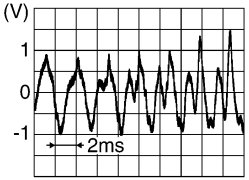
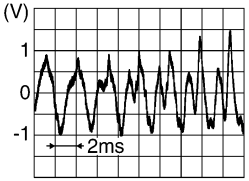
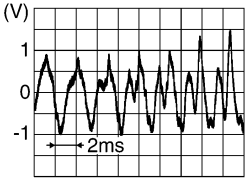
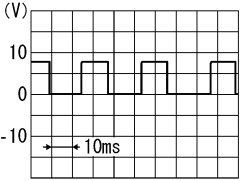
Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
11 (B)	12 (W)	Audio signal front RH	Output	ON	Receive audio sig- nal	 <small>SKIA0177E</small>
13 (V)	14 (LG)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	 <small>SKIA0177E</small>
15 (L/B)	-	Steering switch ground	-	-	-	-
16 (GR/L)	Ground	Steering switch signal B	Input	ON	Depress SOURCE switch.	680Ω
					Depress  switch.	220Ω
					Depress volume UP switch.	110Ω
					Depress volume DOWN switch.	0Ω
18 (V/W)	Ground	Speed signal	Input	ON	When vehicle speed is approx 40 km/hr (25 mph)	 <small>SKIA6649J</small>
19 (Y/R)	Ground	Battery power	Input	-	-	Battery voltage
20	-	Shield	-	-	-	-
21 (G)	22 (R)	Multimedia CAN	Input	-	-	-
23 (W/B)	Ground	Steering switch signal A	Output	ON	Depress  switch.	220Ω
					Depress  switch.	110Ω
					Depress  switch.	0Ω

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AUDIO UNIT

< ECU DIAGNOSIS >

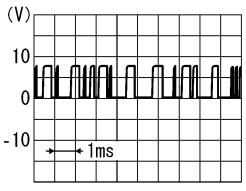
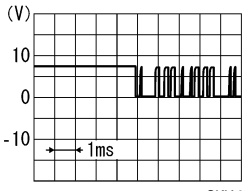
[BOSE W/ MONOCHROME DISPLAY]

Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
24 (GR/R)	Ground	Steering switch signal B	Output	ON	Depress SOURCE switch.	680Ω
					Depress  switch.	220Ω
					Depress volume UP switch.	110Ω
					Depress volume DOWN switch.	0Ω
26	-	Shield	-	-	-	-
27 (BR)	28 (Y)	Tel Voice sig- nal	Input	ON	With Bluetooth transmitting tel- voice signals to the audio unit.	 <small>SKIB3609E</small>
29 (G/O)	Ground	Telephone ON	Output	ON	-	-
30 (LG/B)	-	Shield	-	-	-	-
32 (Y/L)	31 (W/L)	Satellite radio sound signal LH	Input	ON	When satellite mode is selected	 <small>SKIB3609E</small>
34 (BR/L)	33 (Y/G)	Satellite radio sound signal RH	Input	ON	When satellite mode is selected	 <small>SKIB3609E</small>
35	-	Shield	-	-	-	-
36	-	Shield	-	-	-	-
38 (R)	Ground	Request sig- nal (SAT- CONT)	Input	ON	When satellite mode is selected	 <small>SKIA9299J</small>

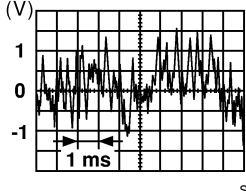
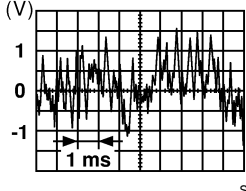
AUDIO UNIT

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[BOSE W/ MONOCHROME DISPLAY]

Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
39 (B)	Ground	Communica- tion signal (SAT-CONT)	Input	ON	When satellite mode is selected	 SKIA9300J
40 (G)	Ground	Communica- tion signal (CONT-SAT)	Input	ON	When satellite mode is selected	 SKIA9301J

PHYSICAL VALUES - WITHOUT BLUETOOTH

Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
1 (B/P)	Ground	Amp ON	Output	ON	—	Battery voltage
2 (G)	3 (R)	Audio signal front LH	Output	ON	Receive audio sig- nal	 SKIA0177E
4 (W/R)	5 (W/L)	Audio signal rear LH	Output	ON	Receive audio sig- nal	 SKIA0177E
6 (W/G)	Ground	Steering switch signal A	Input	ON	Depress ▽ switch.	321Ω
					Depress △ switch.	121Ω
					Depress source switch.	0Ω
7 (V/Y)	Ground	ACC power	Input	ON	Ignition switch ACC or ON	Battery voltage
9 (R/L)	8 (R/Y)	ILL signal	Input	ON	Parking lamps ON	Battery voltage
10	—	Shield	—	—	—	—

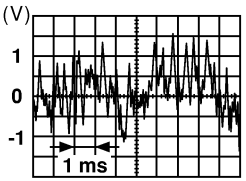
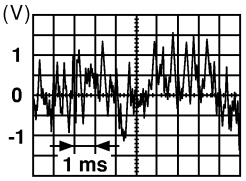
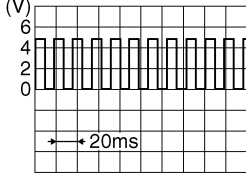
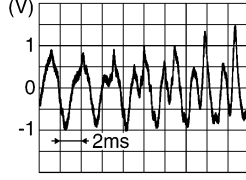
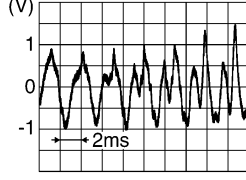
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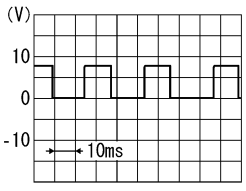
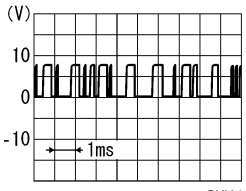
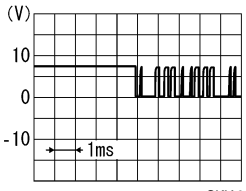
[BOSE W/ MONOCHROME DISPLAY]

Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
11 (B)	12 (W)	Audio signal front RH	Output	ON	Receive audio sig- nal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
13 (V)	14 (LG)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
15 (L/B)	-	Steering switch ground	-	-	-	-
16 (GR/L)	Ground	Steering switch signal B	Input	ON	Depress volume up switch.	121Ω
					Depress volume down switch.	0Ω
18 (V/W)	Ground	Speed signal	Input	ON	When vehicle speed is approx 40 km/hr (25 mph)	 <p style="text-align: right; font-size: small;">SKIA6649J</p>
19 (Y/R)	Ground	Battery power	Input	-	-	Battery voltage
20	-	Shield	-	-	-	-
21 (G)	22 (R)	Multimedia CAN	Input	-	-	-
32 (Y/L)	31 (W/L)	Satellite radio sound signal LH	Input	ON	When satellite mode is selected	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
34 (BR/L)	33 (Y/G)	Satellite radio sound signal RH	Input	ON	When satellite mode is selected	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
35	-	Shield	-	-	-	-
36	-	Shield	-	-	-	-

AUDIO UNIT

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[BOSE W/ MONOCHROME DISPLAY]

Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
38 (R)	Ground	Request sig- nal (SAT- CONT)	Input	ON	When satellite mode is selected	
39 (B)	Ground	Communica- tion signal (SAT-CONT)	Input	ON	When satellite mode is selected	
40 (G)	Ground	Communica- tion signal (CONT-SAT)	Input	ON	When satellite mode is selected	

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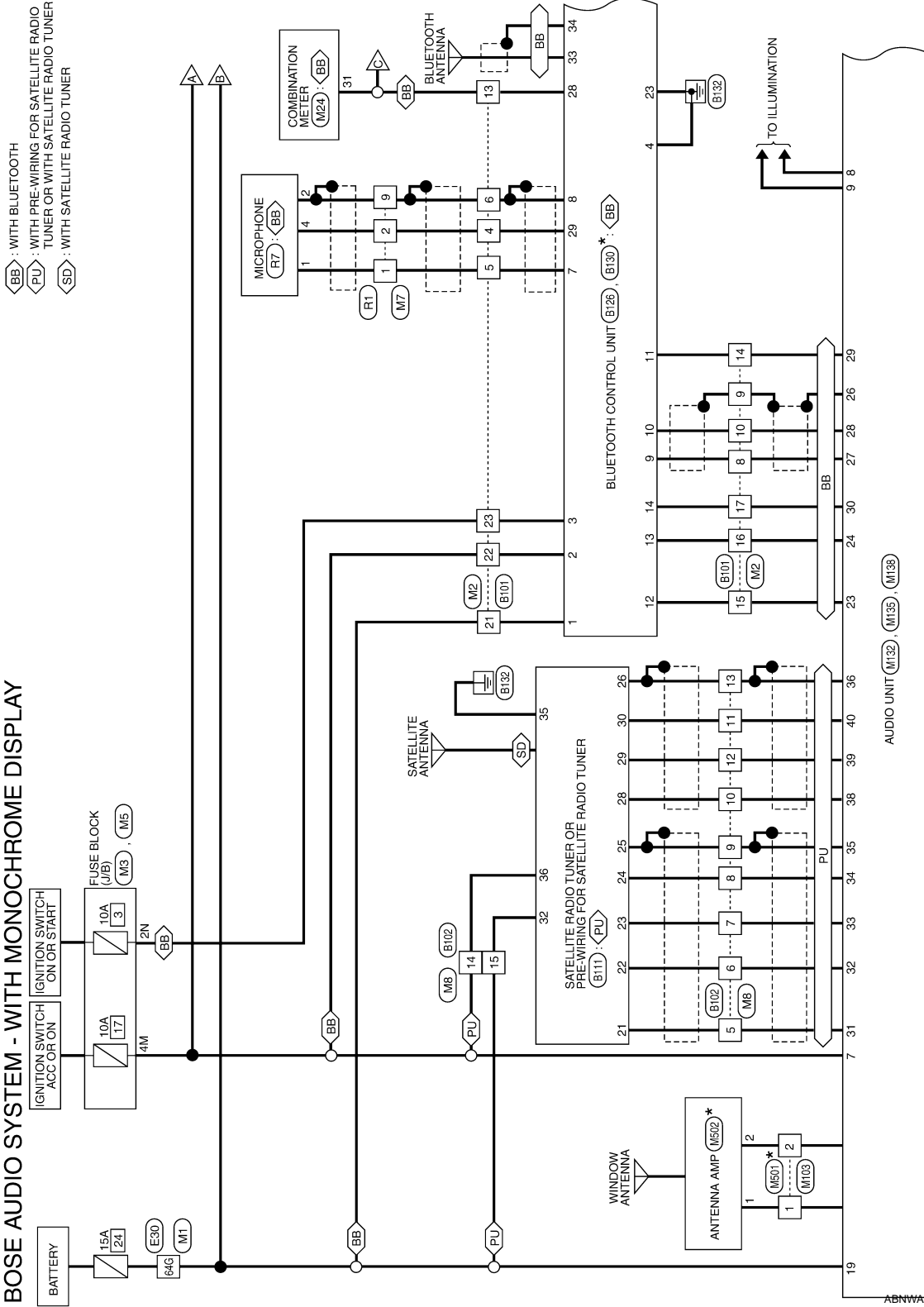
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[BOSE W/ MONOCHROME DISPLAY]

INFOID:000000004252356

Wiring Diagram

BOSE AUDIO SYSTEM - WITH MONOCHROME DISPLAY



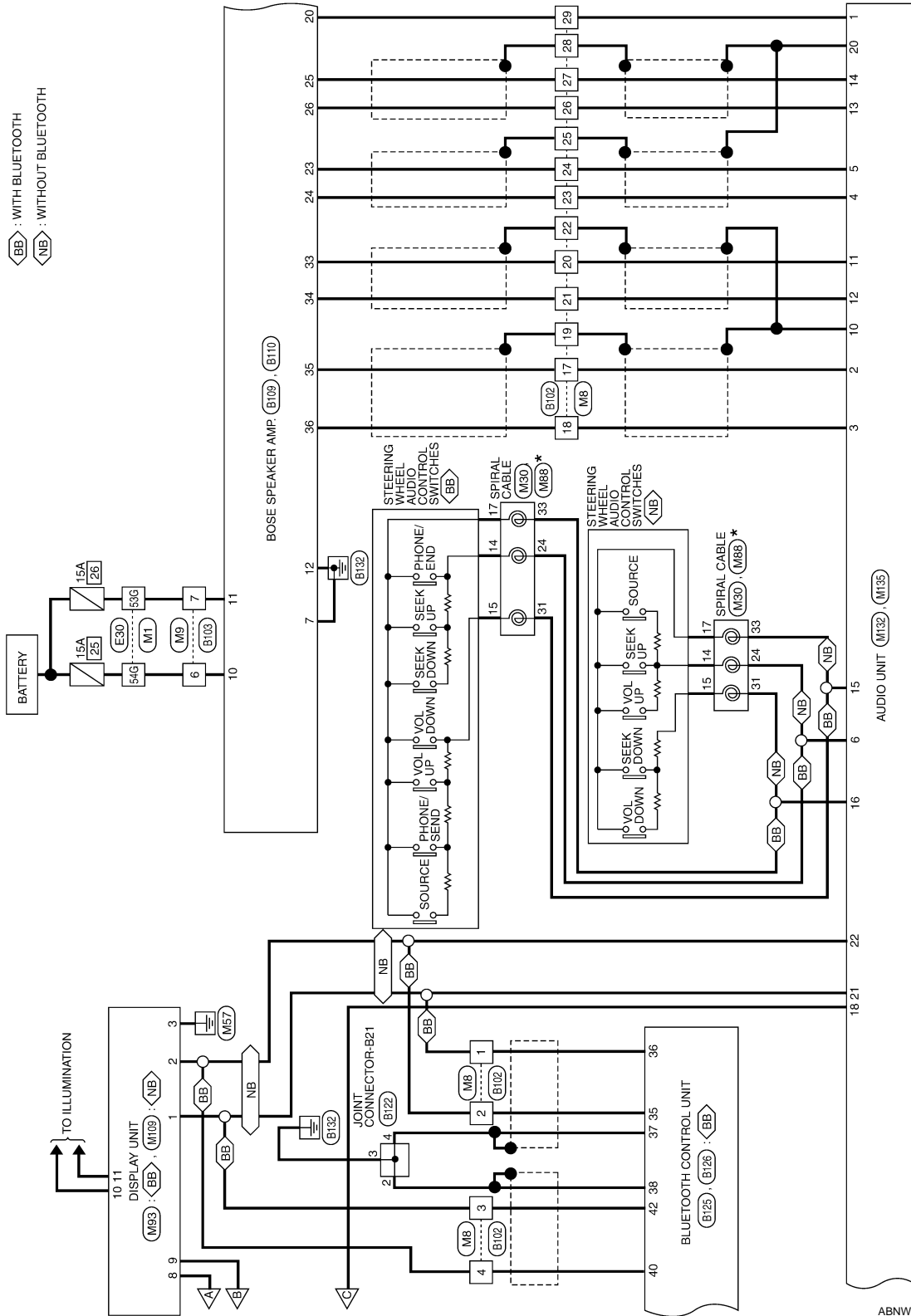
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

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[BOSE W/ MONOCHROME DISPLAY]



* : THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT" OF PG SECTION.

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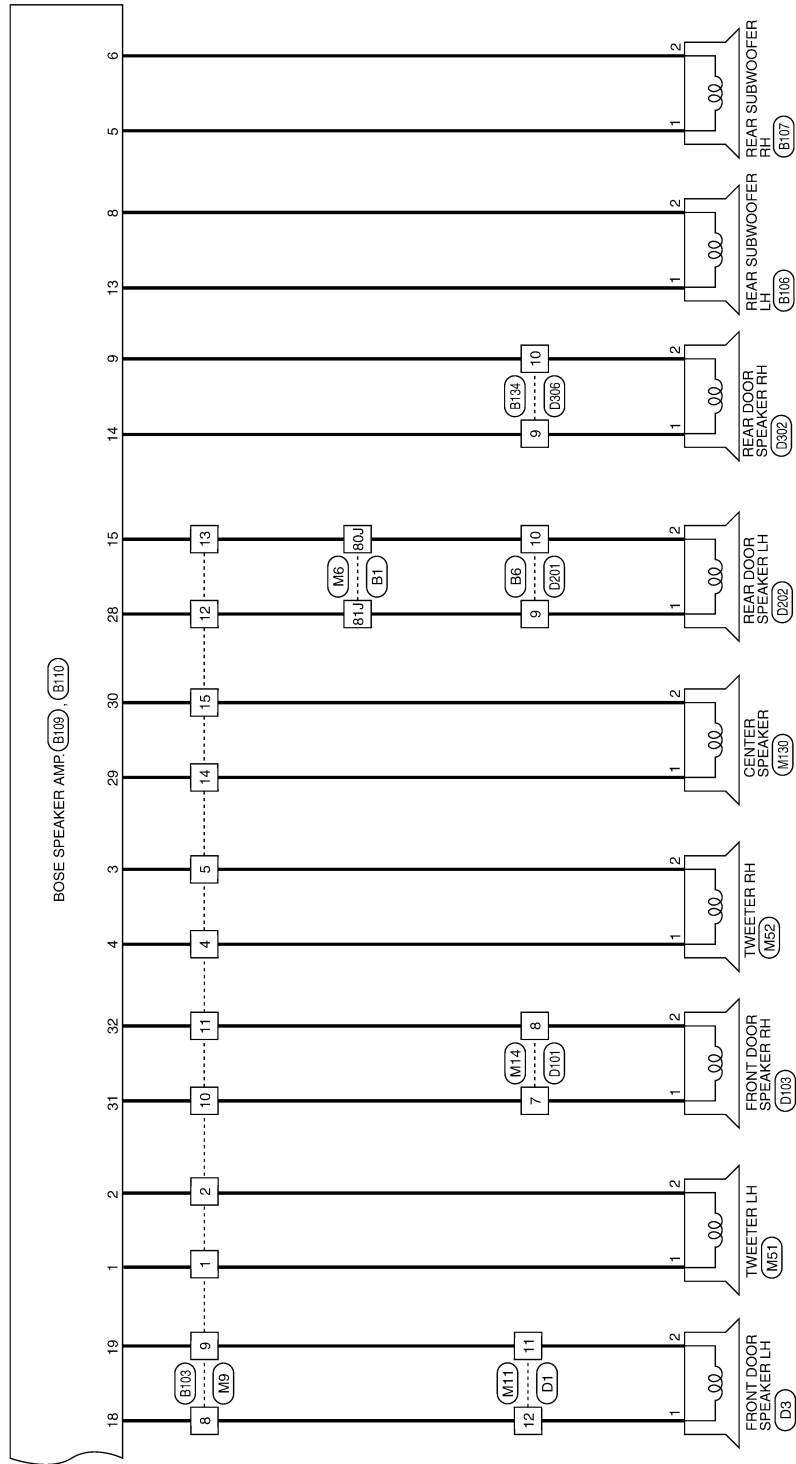
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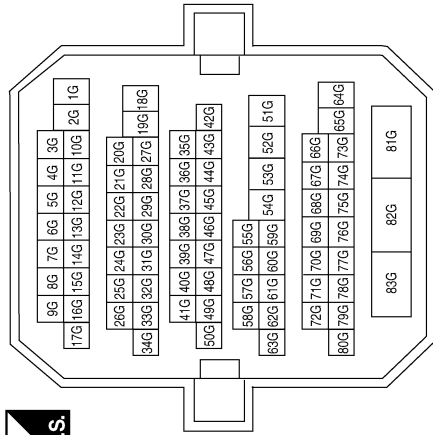
[BOSE W/ MONOCHROME DISPLAY]



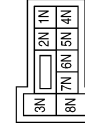
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BOSE AUDIO SYSTEM CONNECTORS - WITH MONOCHROME DISPLAY

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

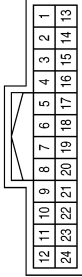


Terminal No.	Color of Wire	Signal Name
53G	B/R	-
54G	BR	-
64G	Y/R	-



Terminal No.	2N	Color of Wire	G	Signal Name	-
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Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	R	-
5	L	-
6	SHIELD	-
8	BR	-
9	SHIELD	-
10	Y	-
13	V/W	-
14	SB	-
15	W/B	-
16	GR/R	-
17	LG/B	-
21	Y/R	-



Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

Terminal No.	4M	Color of Wire	V/Y	Signal Name	-
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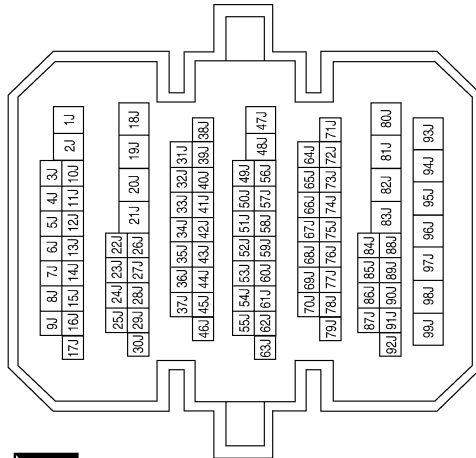
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[BOSE W/ MONOCHROME DISPLAY]

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



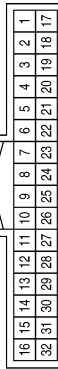
Terminal No.	Color of Wire	Signal Name
80J	B/Y	-
81J	LG	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	R	-
9	SHIELD	-

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-
3	G	-
4	R	-
5	W/L	-

Terminal No.	Color of Wire	Signal Name
6	Y/L	-
7	Y/G	-
8	BR/L	-
9	SHIELD	-
10	R	-
11	G	-
12	B	-
13	SHIELD	-
14	V/Y	-
15	Y/R	-
17	G	-
18	R	-
19	SHIELD	-
20	B	-

Terminal No.	Color of Wire	Signal Name
21	W	-
22	SHIELD	-
23	W/R	-
24	W/L	-
25	SHIELD	-
26	V	-
27	LG	-
28	SHIELD	-
29	B/P	-

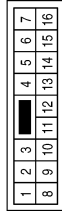
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AUDIO UNIT

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[BOSE W/ MONOCHROME DISPLAY]

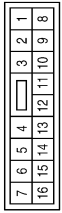
Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	B/W	-
12	L	-

Terminal No.	Color of Wire	Signal Name
9	B/W	-
10	BR	-
11	B/R	-
12	LG	-
13	B/Y	-
14	B/P	-
15	O/B	-

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE



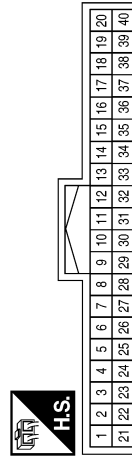
Terminal No.	Color of Wire	Signal Name
1	LG	-
2	B/Y	-
4	L/O	-
5	GR/L	-
6	BR	-
7	B/R	-
8	L	-

Connector No.	M30
Connector Name	SPIRAL CABLE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	W/G	AUDIO STRG SW REMOTE A
31	GR/L	AUDIO STRG SW REMOTE B
33	L/B	AUDIO STRG SW GND

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
31	V/W	8P/R OUT

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	BR	-
8	B/R	-

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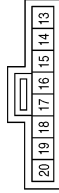
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[BOSE W/ MONOCHROME DISPLAY]

Connector No.	M88
Connector Name	SPIRAL CABLE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14	W	REMOTE A
15	L	REMOTE B
17	BR	GND

Connector No.	M52
Connector Name	TWEETER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



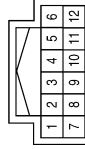
Terminal No.	Color of Wire	Signal Name
1	L/O	-
2	GR/L	-

Connector No.	M51
Connector Name	TWEETER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L/G	-
2	B/Y	-

Connector No.	M109
Connector Name	DISPLAY UNIT (WITH MONOCHROME DISPLAY, WITH BLUETOOTH)
Connector Color	WHITE



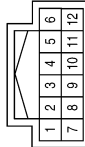
Terminal No.	Color of Wire	Signal Name
1	G	M-CAN L
2	R	M-CAN H
3	B	GND
8	V/Y	ACC
9	Y/R	+B
10	R/L	ILL+
11	R/Y	ILL-

Connector No.	M103
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

Connector No.	M93
Connector Name	DISPLAY UNIT (WITH MONOCHROME DISPLAY, WITHOUT BLUETOOTH)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	M-CAN L
2	R	M-CAN H
3	B	GND
8	V/Y	ACC
9	Y/R	+B
10	R/L	ILL+
11	R/Y	ILL-

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AUDIO UNIT

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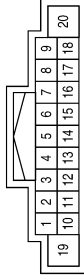
[BOSE W/ MONOCHROME DISPLAY]

Connector No.	M130
Connector Name	CENTER SPEAKER
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B/P	-
2	O/B	-

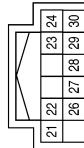
Connector No.	M132
Connector Name	AUDIO UNIT (WITH BOSE AUDIO SYSTEM-WITH MONOCHROME DISPLAY)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B/P	AMP ON
2	G	FR SP LH(+)
3	R	FR SP LH(-)
4	W/R	RR SP LH(+)
5	W/L	RR SP LH(-)
6	W/G	STRG SW A
7	V/Y	ACC

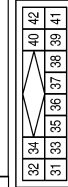
Terminal No.	Color of Wire	Signal Name
8	R/Y	ILL(-)
9	R/L	ILL(+),LIGHT SW
10	SHIELD	GND,SHIELD1
11	B	FR SP RH(+)
12	W	FR SP RH(-)
13	V	RR SP RH(+)
14	LG	RR SP RH(-)
15	L/B	STRG SW GND
16	GR/L	STRG SW B
17	-	-
18	V/W	SPEED SIGNAL
19	Y/R	BAT
20	SHIELD	SHIELD2

Connector No.	M135
Connector Name	AUDIO UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	G	MULTIMEDIA CAN L
22	R	MULTIMEDIA CAN H
23	W/B	LADDER OUT 1
24	GR/R	LADDER OUT 2
25	-	-
26	SHIELD	TEL SHIELD
27	BR	TEL I/F+
28	Y	TEL I/F-
29	G/O	TEL ON
30	LG/B	LADDER SHIELD

Connector No.	M138
Connector Name	AUDIO UNIT (WITH BOSE AUDIO SYSTEM-WITH MONOCHROME DISPLAY)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
31	W/L	SAT LH INPUT(-)
32	Y/L	SAT LH INPUT(+)
33	Y/G	SAT RH INPUT(-)
34	BR/L	SAT RH INPUT(+)
35	SHIELD	EARTH
36	SHIELD	DATA EARTH

Terminal No.	Color of Wire	Signal Name
37	-	-
38	R	REQ(SAT-COMBI)
39	B	RX(SAT-COMBI)
40	G	TX(COMBI-SAT)
41	-	-
42	-	-

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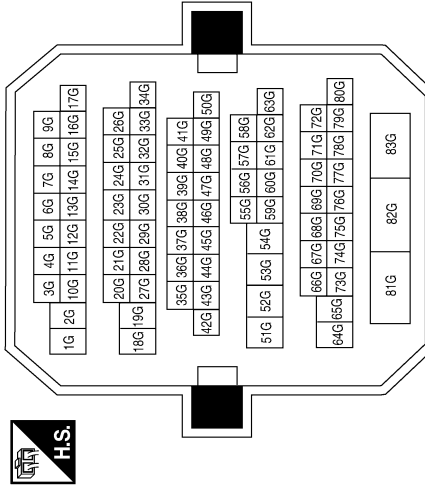
[BOSE W/ MONOCHROME DISPLAY]

Connector No.	M501
Connector Name	WIRE TO WIRE
Connector Color	GRAY



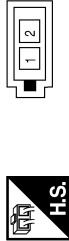
Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE



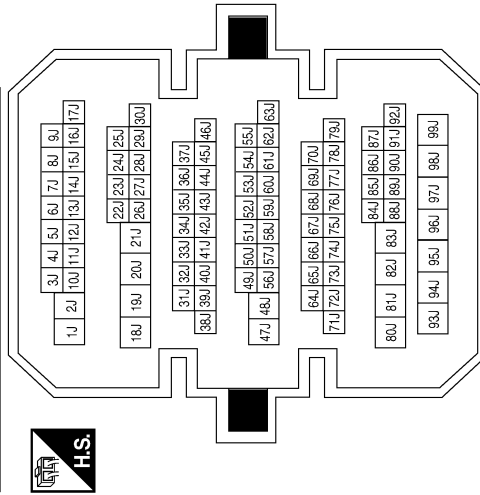
Terminal No.	Color of Wire	Signal Name
53G	GR	-
54G	BR	-
64G	V	-

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



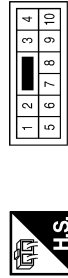
Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
80J	O	-
81J	LG	-

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

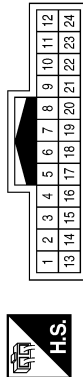
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AUDIO UNIT

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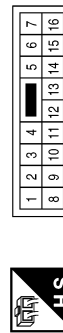
[BOSE W/ MONOCHROME DISPLAY]

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



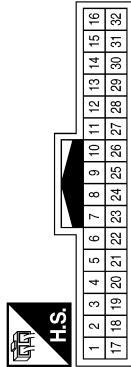
Terminal No.	Color of Wire	Signal Name
4	R	-
5	L	-
6	SHIELD	-
8	BR	-
9	SHIELD	-
10	Y	-
13	BR	-
14	SB	-
15	L	-
16	P	-
17	R	-
21	V	-
22	GR	-
23	O	-

Connector No.	B103
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	V	-
4	P	-

Connector No.	B102
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	P	-
2	L	-
3	R	-
4	G	-
5	W/L	-
6	Y/L	-
7	Y/G	-
8	BR/L	-
9	SHIELD	-
10	R/L	-
11	R/W	-
12	B	-

Terminal No.	Color of Wire	Signal Name
5	R	-
6	SB	-
7	GR	-
8	W	-
9	B	-
10	GR	-
11	O	-
12	G	-
13	L	-
14	V	-
15	P	-

Terminal No.	Color of Wire	Signal Name
13	SHIELD	-
14	GR	-
15	P	-
17	W/R	-
18	B/R	-
19	SHIELD	-
20	W/L	-
21	GR/V	-
22	SHIELD	-
23	BR	-
24	Y	-
25	SHIELD	-
26	V	-
27	LG	-
28	SHIELD	-
29	SB	-

Connector No.	B106
Connector Name	REAR SUBWOOFER LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	BR	-

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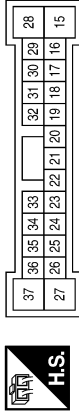
AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Terminal No.	Color of Wire	Signal Name
31	GR	FR DOOR RH+ OUT
32	O	FR DOOR RH- OUT
33	W/L	FR RH+IN
34	GR/V	FR RH-IN
35	W/R	FR LH+IN
36	B/R	FR LH-IN

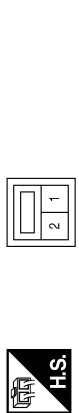
Connector No.	B109
Connector Name	BOSE SPEAKER AMP
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
15	L	RR DOOR LH- OUT
20	SB	AMP ON
23	Y	RR LH-IN
24	BR	RR LH+IN
25	LG	RR RH-IN
26	V	RR RH+IN
28	G	RR DOOR LH+ OUT
29	V	INST CTR TWDR+ OUT
30	P	INST CTR TWDR- OUT

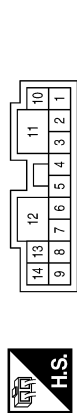
Terminal No.	Color of Wire	Signal Name
10	SB	BAT
11	GR	BAT
12	B	GND
13	W	LH WOOFER+ OUT
14	LG	RR DOOR RH+ OUT

Connector No.	B107
Connector Name	REAR SUBWOOFER RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	G	-

Connector No.	B110
Connector Name	BOSE SPEAKER AMP
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	FR TWDR LH+ OUT
2	V	FR TWDR LH- OUT
3	R	FR TWDR RH- OUT
4	P	FR TWDR RH+ OUT
5	Y	RH WOOFER+ OUT
6	G	RH WOOFER- OUT
7	B	GND
8	BR	LH WOOFER- OUT
9	O	RR DOOR RH- OUT

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AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Connector No.	B122
Connector Name	JOINT CONNECTOR-B21
Connector Color	WHITE

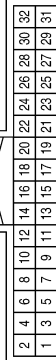


Terminal No.	Color of Wire	Signal Name
2	SHIELD	-
3	B	-
4	SHIELD	-

Terminal No.	Color of Wire	Signal Name
24	BR/L	SAT RCH(+)
25	SHIELD	SIG EARTH
26	SHIELD	DATA EARTH
28	R/L	REQ1(SAT->COMB)
29	B	TXD(SAT->COMB)
30	R/W	RXD(COMB->SAT)
32	P	BAT
35	B	HARN EARTH
36	GR	ACC

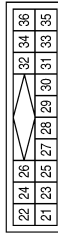
Terminal No.	Color of Wire	Signal Name
12	L	LADDER IN1 (WITH MONOCHROME DISPLAY)
13	P	LADDER IN2 (WITH MONOCHROME DISPLAY)
14	R	LADDER GND (WITH MONOCHROME DISPLAY)
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	B	CONTA (WITH MONOCHROME DISPLAY)
24	-	-
25	-	-
26	-	-
27	-	-
28	BR	SPEED
29	R	MIC POWER
30	-	-
31	-	-
32	-	-

Connector No.	B126
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	V	+B
2	GR	ACC
3	O	IGN
4	B	GND
5	L	MIC IN +
6	SHIELD	MIC IN -
7	BR	AUDIO OUT (+)
8	SHIELD	MIC IN -
9	BR	AUDIO OUT (+)
10	Y	AUDIO OUT (-)
11	SB	MUTE CONTROL (WITH MONOCHROME DISPLAY)

Connector No.	B111
Connector Name	SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	W/L	SAT LCH(-)
22	Y/L	SAT LCH(+)
23	Y/G	SAT RCH(-)

Connector No.	B125
Connector Name	BLUETOOTH CONTROL UNIT (WITH MONOCHROME DISPLAY)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
35	L	CAN H-1
36	P	CAN L-1
37	SHIELD	CAN SHIELD 1
38	SHIELD	CAN SHIELD 2
39	-	-
40	G	CAN H2
41	-	-
42	R	CAN L2

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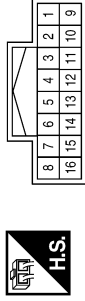
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AUDIO UNIT

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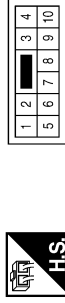
[BOSE W/ MONOCHROME DISPLAY]

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	R	-
9	SHIELD	-

Connector No.	B134
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	B130
Connector Name	BLUETOOTH CONTORL UNIT
Connector Color	BLACK



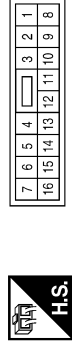
Terminal No.	Color of Wire	Signal Name
33	B	-
34	B	-

Connector No.	D3
Connector Name	FRONT DOOR SPEAKER LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	O	-
12	LG	-

Connector No.	R7
Connector Name	MICROPHONE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	MIC SIG
2	SHIELD	MIC GEN
4	R	MIC VCC

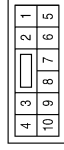
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AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



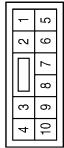
Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	D103
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	LG	-
8	O	-

Connector No.	D306
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	D302
Connector Name	REAR DOOR SPEAKER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

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DISPLAY UNIT

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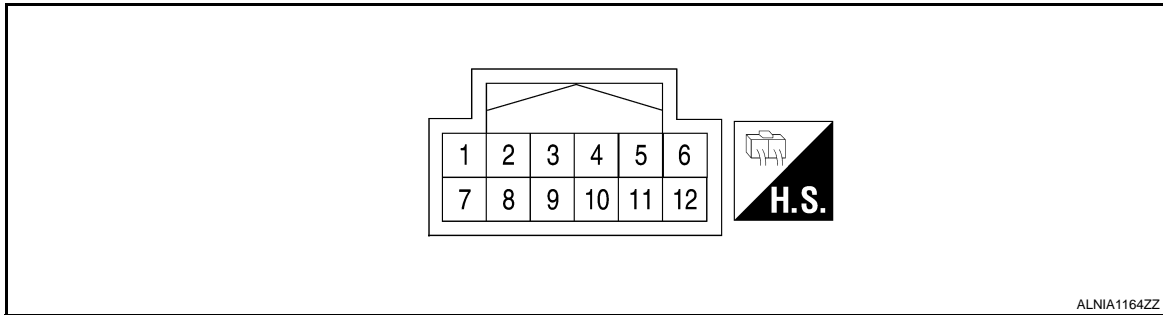
[BOSE W/ MONOCHROME DISPLAY]

DISPLAY UNIT

Reference Values

INFOID:000000004252358

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
1 (G)	Ground	M-CAN L	—	—	—	—
2 (R)	Ground	M-CAN H	—	—	—	—
3 (B)	Ground	Ground	Input	ACC	—	0V
8 (V/R)	Ground	ACC power	Input	ACC	—	Battery voltage
9 (Y/R)	Ground	Battery power	Input	OFF	—	Battery voltage
10 (R/L)	11 (R/Y)	Illumination	Input	—	With parking lights ON	Battery voltage

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

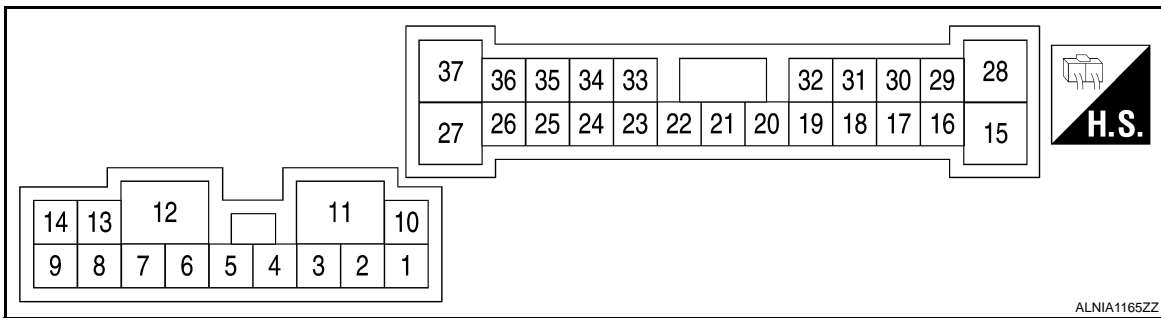
[BOSE W/ MONOCHROME DISPLAY]

BOSE SPEAKER AMP

Reference Values

INFOID:000000004252361

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
1 (LG)	2 (V)	Sound signal front tweeter LH	Output	Ignition switch ON	Sound output.	
4 (P)	3 (R)	Sound signal front tweeter RH	Output	Ignition switch ON	Sound output.	
5 (Y)	6 (G)	Sound signal rear subwoofer RH	Output	Ignition switch ON	Sound output.	
7 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
10 (SB)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
11 (GR)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V

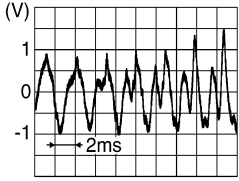
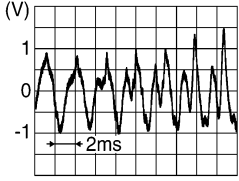
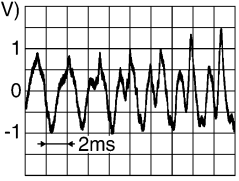
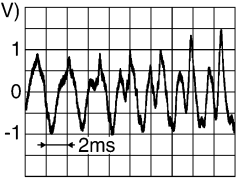
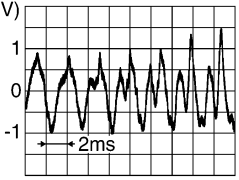
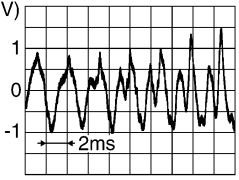
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BOSE SPEAKER AMP

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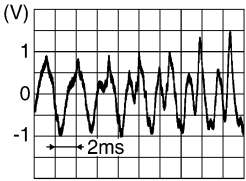
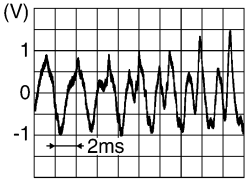
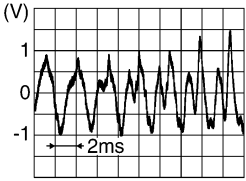
[BOSE W/ MONOCHROME DISPLAY]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
13 (W)	8 (BR)	Sound signal rear subwoofer LH	Output	Ignition switch ON	Sound output.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
14 (LG)	9 (O)	Sound signal rear door speaker RH	Output	Ignition switch ON	Sound output.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
18 (W)	19 (B)	Sound signal front door speaker LH	Output	Ignition switch ON	Sound output.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
20 (SB)	Ground	Amp. ON signal	Input	Ignition switch ACC	—	Battery voltage
26 (V)	25 (LG)	Sound signal rear RH	Input	Ignition switch ON	Sound output.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
28 (G)	15 (L)	Sound signal rear door speaker LH	Output	Ignition switch ON	Sound output.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
29 (V)	30 (P)	Sound signal center speaker	Output	Ignition switch ON	Sound output.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
31 (GR)	32 (O)	Sound signal front door speaker RH	Output	Ignition switch ON	Sound output.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
33 (W/L)	34 (GR/V)	Sound signal front RH	Input	Ignition switch ON	Sound output.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
35 (W/R)	36 (B/R)	Sound signal front LH	Input	Ignition switch ON	Sound output.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

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SATELLITE RADIO TUNER

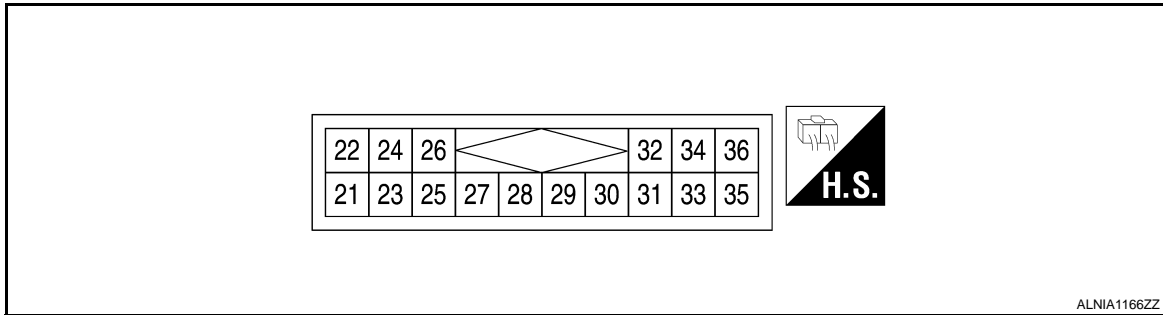
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[BOSE W/ MONOCHROME DISPLAY]

SATELLITE RADIO TUNER

Reference Values

INFOID:000000004252370



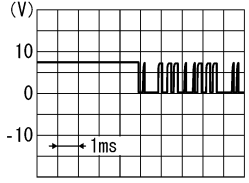
PHYSICAL VALUES

Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/Output			
22 (Y/L)	21 (W/L)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	
24 (BR/L)	23 (Y/G)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	
25	—	Shield	—	—	—	—
26	—	Shield	—	—	—	—
28 (R/L)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	
29 (B)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	

SATELLITE RADIO TUNER

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/Output			
30 (R/W)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	
32 (P)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
35 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
36 (GR)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

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BLUETOOTH CONTROL UNIT

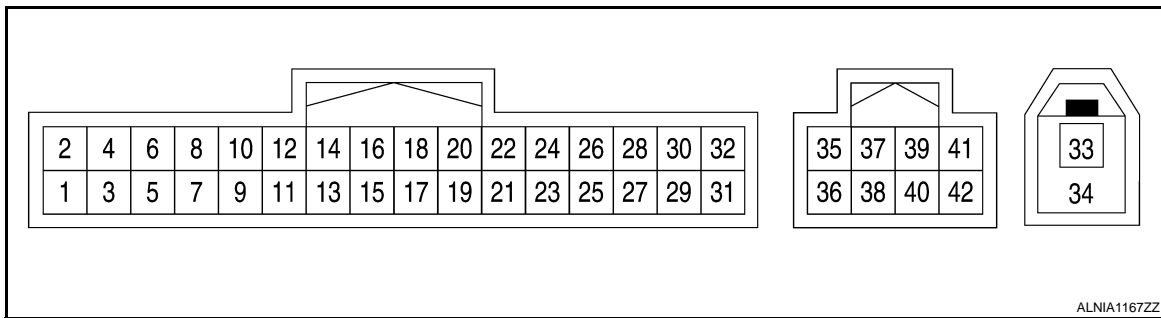
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[BOSE W/ MONOCHROME DISPLAY]

BLUETOOTH CONTROL UNIT

Reference Values

INFOID:000000004252376



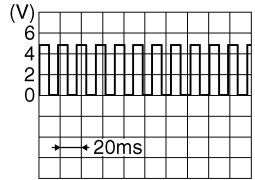
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
1 (V)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
2 (GR)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
3 (O)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
4 (B)	Ground	ground	—	Ignition switch ON	—	0 V
7 (L)	Ground	Microphone signal	Input	Ignition switch ON	Give a voice	<p>PKIB5037J</p>
8	—	Shield	—	—	—	—
9 (BR)	10 (Y)	TEL voice signal	Output	Ignition switch ON	During voice guide output with the switch pressed	<p>SKIB3609E</p>
11 (SB)	—	Mute control	—	Ignition switch ON	—	—

BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
12 (L)	Ground	Steering switch signal A	Output	ON	Press SOURCE switch	Approx. 0.0V
					Press SEEK UP switch	Approx. 0.75V
					Press VOL UP switch	Approx. 2.0V
					Except for above	Approx. 5.0V
13 (P)	Ground	Steering switch signal B	Output	ON	Press SEEK DOWN switch	Approx. 0.75V
					Press VOL DOWN switch	Approx. 2.0V
					Except for above	Approx. 5.0V
14 (R)	-	Shield	-	-	-	-
23 (B)	Ground	Ground	Input	Ignition switch ON	—	0V
28 (BR)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is ap- prox. 40 km/h (25MPH)	 <p style="text-align: right; font-size: small;">SKIA6649J</p>
29 (R)	Ground	Microphone power	Output	Ignition switch ON	—	5.0V
33 (B)	—	TEL antenna	Input	—	—	—
34 (B)	—	Shield	—	—	—	—
35 (G)	—	AV communication signal (H)	Input/ Output	—	—	—
36 (L)	—	AV communication signal (L)	Input/ Output	—	—	—
37 (B)	—	Shield	—	—	—	—
38 (B)	—	Shield	—	—	—	—
40 (G)	—	AV communication signal (H)2	Input/ Output	—	—	—
42 (L)	—	AV communication signal (L)2	Input/ Output	—	—	—

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AUDIO SYSTEM

[BOSE W/ MONOCHROME DISPLAY]

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:000000004364432

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">• Audio unit power supply and ground circuit• Audio unit	<ul style="list-style-type: none">• AV-94• AV-156
Steering switch does not operate	<ul style="list-style-type: none">• Steering wheel audio control switch• Audio unit	<ul style="list-style-type: none">• AV-114• AV-156
All speakers do not sound	<ul style="list-style-type: none">• Audio unit• Audio unit power supply and ground circuit• BOSE speaker amp. ON signal• BOSE speaker amp.	<ul style="list-style-type: none">• AV-156• AV-94• AV-113• AV-164
One or several speakers do not sound	<ul style="list-style-type: none">• Front door speaker• Tweeter• Center speaker• Rear door speaker• Rear subwoofer	<ul style="list-style-type: none">• AV-99• AV-102• AV-105• AV-107• AV-110

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	Audio unit	AV-156
CD cannot be ejected.		
The CD cannot be played.		
The sound skips, stops suddenly, or is distorted.		

SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">• Satellite radio tuner power or ground circuit• Satellite radio tuner communication circuit• Satellite radio tuner	<ul style="list-style-type: none">• AV-96• AV-117• AV-165
Right or left channel does not sound	<ul style="list-style-type: none">• Satellite radio tuner right channel audio signal circuit• Satellite radio tuner left channel audio signal circuit• Satellite radio tuner	<ul style="list-style-type: none">• AV-120• AV-120• AV-165

HANDS-FREE PHONE

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">• Bluetooth control unit power and ground circuit• Bluetooth control unit	<ul style="list-style-type: none">• AV-97• AV-174
Steering switch does not operate	<ul style="list-style-type: none">• Steering wheel audio control switch• audio unit• Bluetooth control unit	<ul style="list-style-type: none">• AV-114• AV-156• AV-174
Voice activated control does not operate	<ul style="list-style-type: none">• Microphone• Steering wheel audio control switch• Bluetooth control unit	<ul style="list-style-type: none">• AV-122• AV-114• AV-174

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

NORMAL OPERATING CONDITION

Description

INFOID:000000004364433

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

NOISE

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

- Fading noise: This noise occurs because of variations in the field strength in a narrow range due to mountains or buildings blocking the signal.
- Multi-path noise: This noise results from the waves sent directly from the broadcast station arriving at the antenna at a different time from the waves which reflect off mountains or buildings.

The vehicle itself can be a source of noise, if noise prevention parts or electrical equipment are malfunctioning. Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and determine the cause.

NOTE:

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

Type of Noise and Possible Cause

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

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PRECAUTION

PRECAUTIONS

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

INFOID:000000004230756

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 SR and SB section of this Service Manual.

WARNING:

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

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:000000004399690

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

PREPARATION

< PREPARATION >

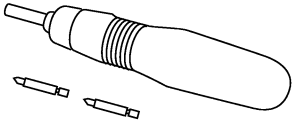
[BOSE W/ MONOCHROME DISPLAY]

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000004230757

Tool name	Description
<p>Power tool</p>  <p>PBIC0191E</p>	<p>Loosening bolts and nuts</p>

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AUDIO UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

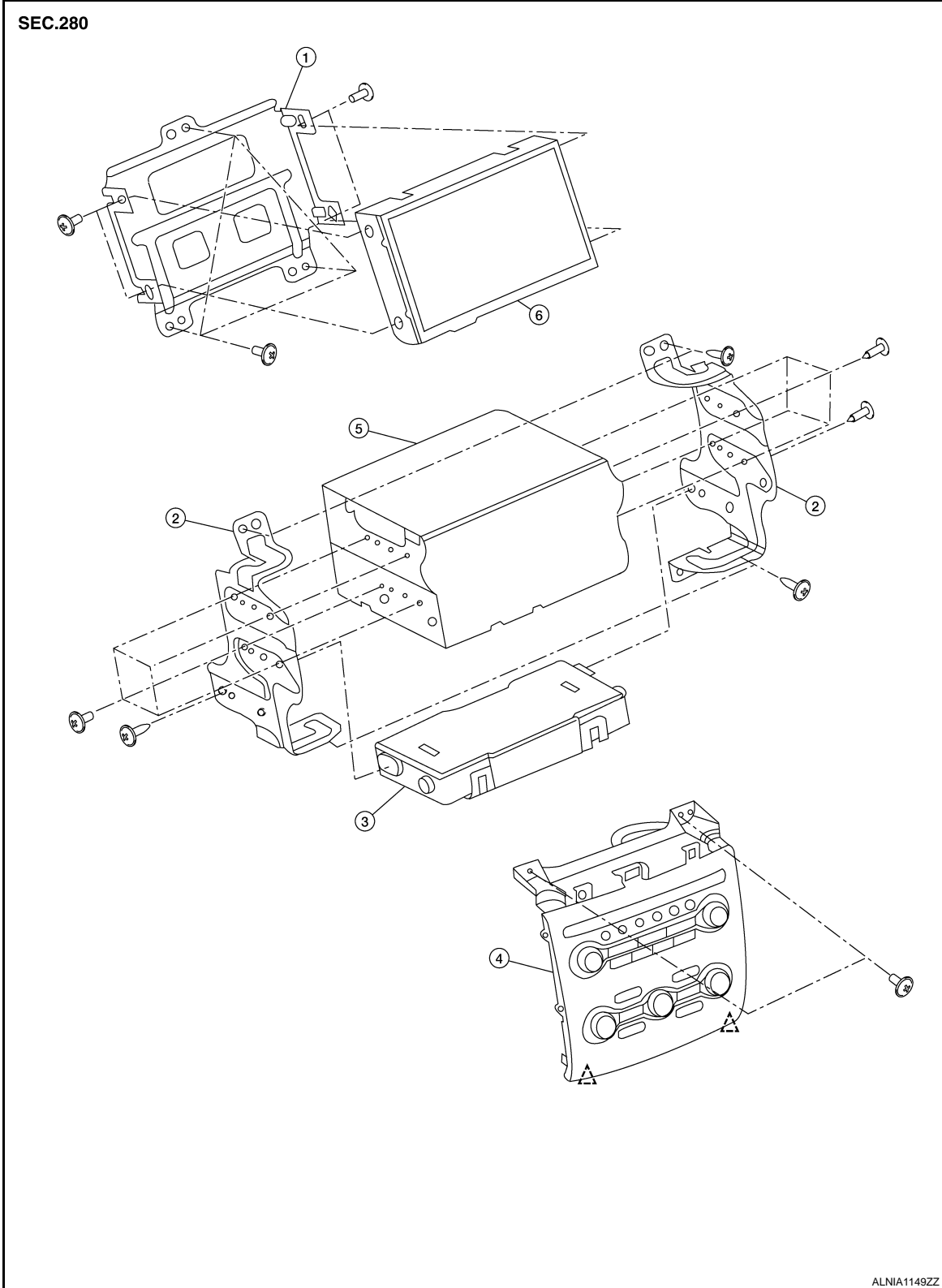
ON-VEHICLE REPAIR

AUDIO UNIT

Removal and Installation

INFOID:000000004269504

Bose Audio



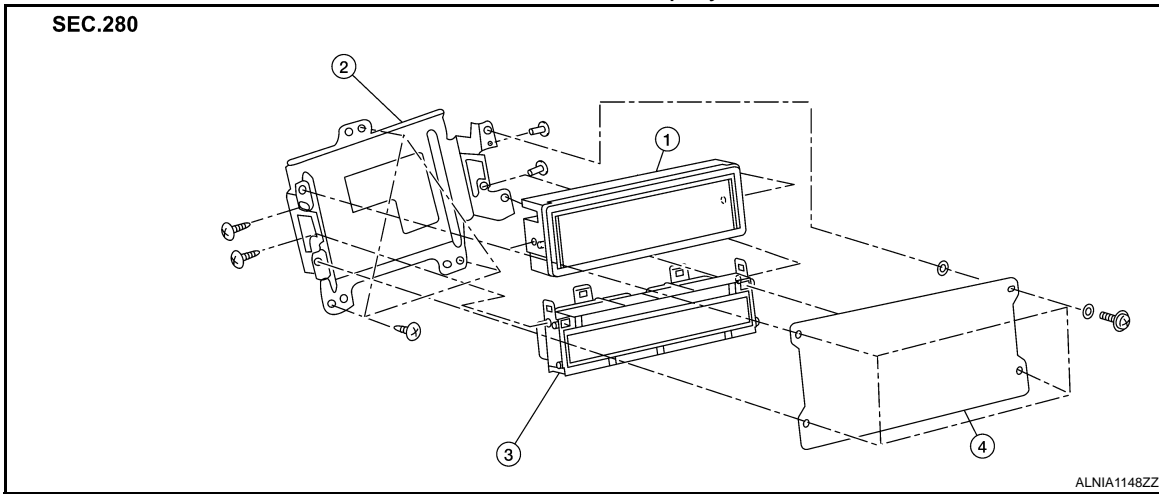
AUDIO UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

- | | | |
|-------------------------------|------------------------------|-----------------------|
| 1. Audio display unit bracket | 2. Audio unit brackets LH/RH | 3. A/C auto amp. |
| 4. Cluster lid C | 5. Audio unit | 6. Audio display unit |
- △ Clips

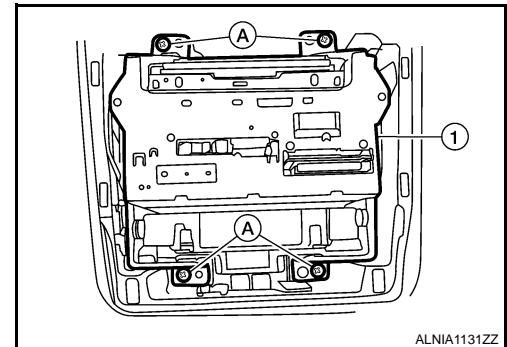
Monochrome Display



- | | | |
|-----------------------|-------------------------------|---------------------|
| 1. Audio display unit | 2. Audio display unit bracket | 3. A/C display unit |
| 4. Front cover | | |

REMOVAL

1. Remove the cluster lid D. Refer to [IP-12. "Removal and Installation"](#).
2. Remove the cluster lid C. Refer to [IP-11. "Exploded View"](#).
3. Remove the audio unit screws (A), then pull out the audio unit (1), disconnect the audio unit connectors and remove the audio unit (1).



INSTALLATION

Installation is in the reverse order of removal.

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AV

AUDIO DISPLAY UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

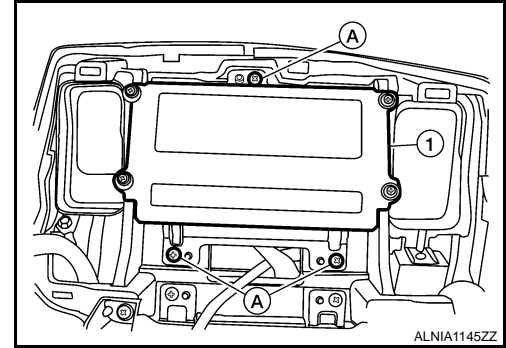
AUDIO DISPLAY UNIT

Removal and Installation

INFOID:000000004292740

REMOVAL

1. Remove the cluster lid D. Refer to [IP-12. "Removal and Installation"](#).
2. Remove the audio display unit screws (A), then pull out the audio display unit (1), disconnect the audio display unit (1) connectors and remove the audio display unit (1).



INSTALLATION

Installation is in the reverse order of removal.

FRONT TWEETER

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

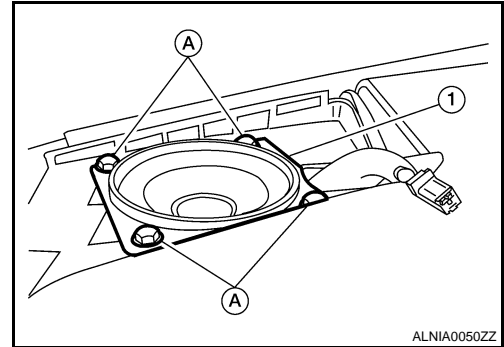
FRONT TWEETER

Removal and Installation

INFOID:000000004269507

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-23. "Exploded View"](#).
2. Remove the front tweeter speaker grille. Refer to [IP-12. "Removal and Installation"](#).
3. Remove the front tweeter speaker screws (A), then pull out the front tweeter speaker (1), disconnect the front tweeter speaker connector and remove the front tweeter speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

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CENTER SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

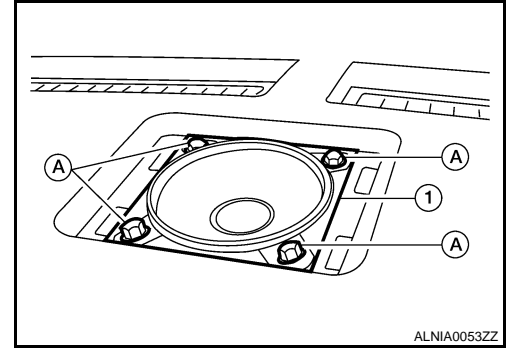
CENTER SPEAKER

Removal and Installation

INFOID:000000004269508

REMOVAL

1. Remove the center speaker grille. Refer to [IP-12. "Removal and Installation"](#).
2. Remove the center speaker screws (A), then pull out the center speaker (1), then disconnect the center speaker connector and remove the center speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

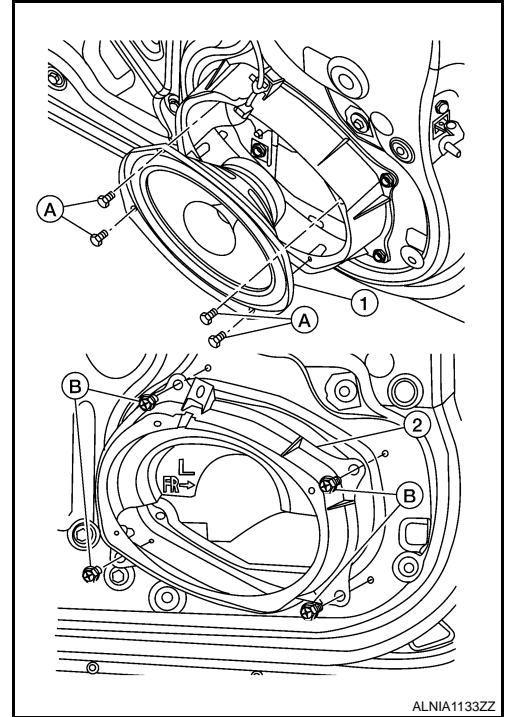
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000004289500

REMOVAL

1. Remove the front door finisher. Refer to [INT-18. "Removal and Installation"](#).
2. Remove the front door speaker screws (A), then disconnect the front door speaker connector and remove the front door speaker (1).
3. Remove the front door speaker spacer screws (B) and remove the front door speaker spacer (2).



INSTALLATION

Installation is in the reverse order of removal.

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REAR DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

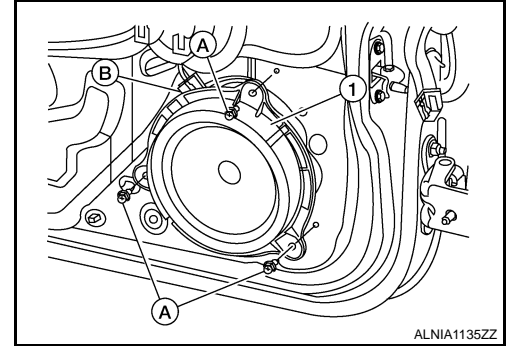
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000004289502

REMOVAL

1. Remove the rear door finisher. Refer to [INT-21. "Removal and Installation"](#).
2. Remove the rear door speaker screws (A), then disconnect the rear door speaker connector (B) and remove the rear door speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

SUBWOOFER

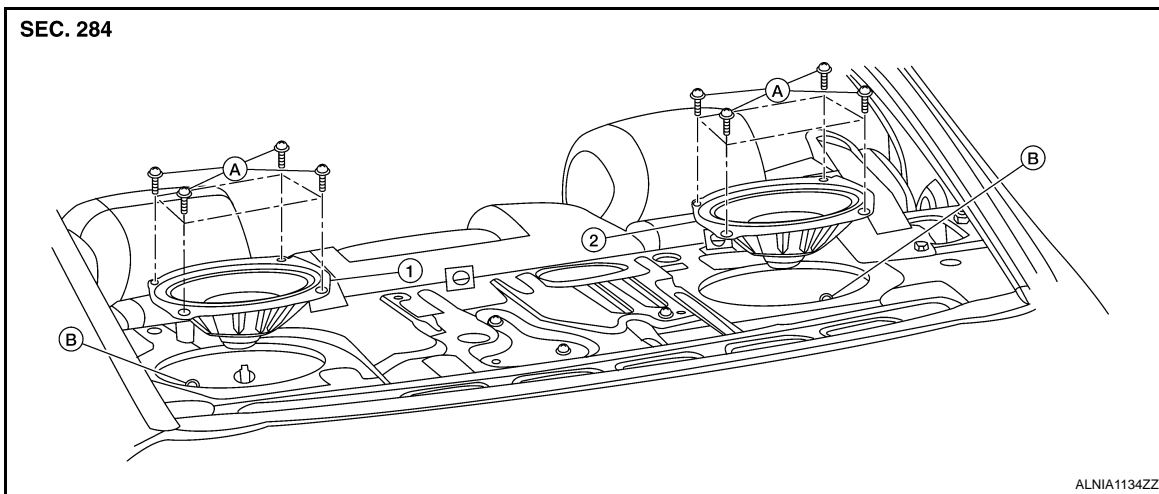
< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

SUBWOOFER

Removal and Installation

INFOID:000000004289507



- 1. Subwoofer LH
- 2. Subwoofer RH
- A. Subwoofer screws
- B. Subwoofer connectors

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-26. "Removal and Installation"](#).
2. Remove the subwoofer screws, then pull out the subwoofer, disconnect the subwoofer connector and remove the subwoofer.

INSTALLATION

Installation is in the reverse order of removal.

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BOSE SPEAKER AMP

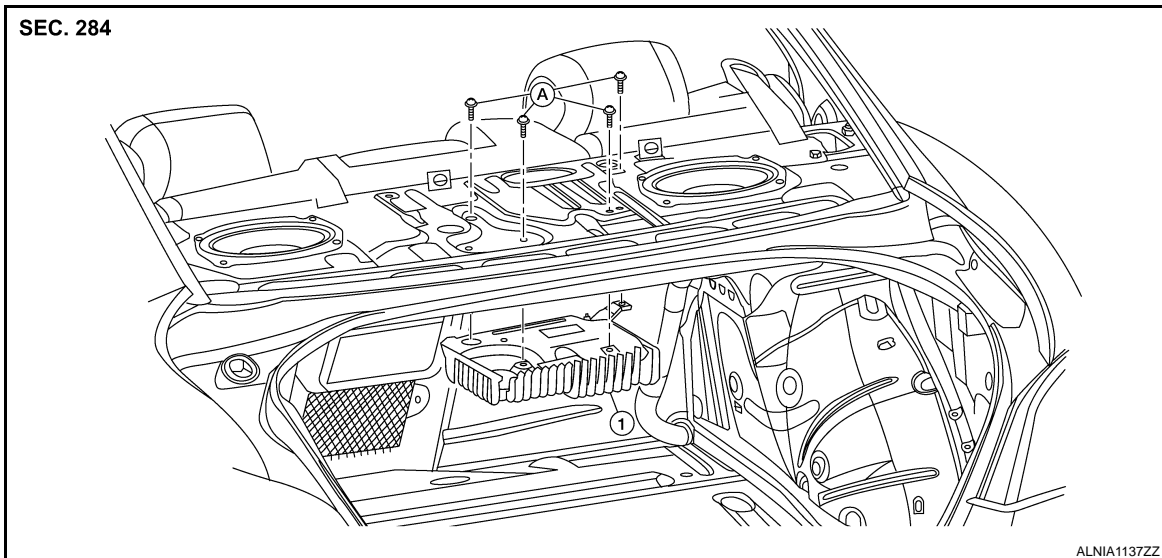
< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

BOSE SPEAKER AMP

Removal and Installation

INFOID:000000004269506



1. Bose speaker amp.

A. Screws

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the rear parcel shelf. Refer to [INT-26, "Removal and Installation"](#).
3. Remove the Bose speaker amp. screws, then disconnect the Bose speaker amp. connectors and remove the Bose speaker amp.

INSTALLATION

Installation is in the reverse order of removal.

SATELLITE RADIO TUNER

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

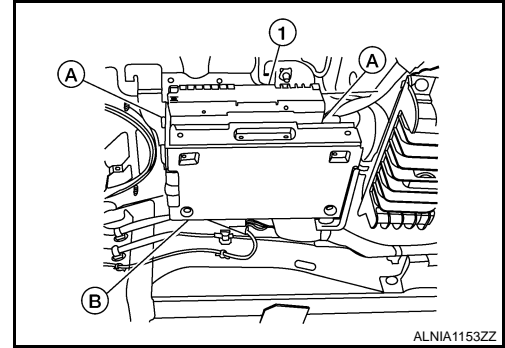
SATELLITE RADIO TUNER

Removal and Installation

INFOID:000000004269516

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the satellite radio tuner unit screws (A), disconnect the satellite tuner harness connectors (B) and remove the satellite radio tuner (1).



INSTALLATION

Installation is in the reverse order of removal.

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SATELLITE RADIO ANTENNA

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

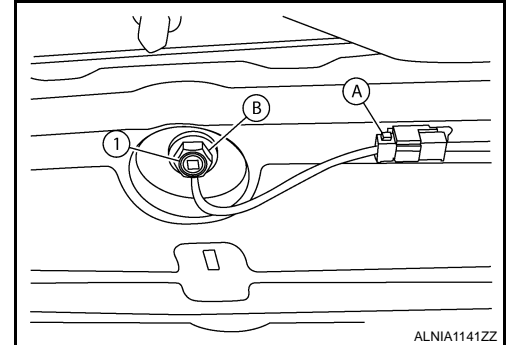
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:000000004269517

REMOVAL

1. Lower the headliner at the rear. Refer to [INT-32. "Exploded View"](#).
2. Disconnect the satellite radio antenna connector (A), then remove the satellite radio antenna nut (B) and remove the satellite radio antenna (1).



INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

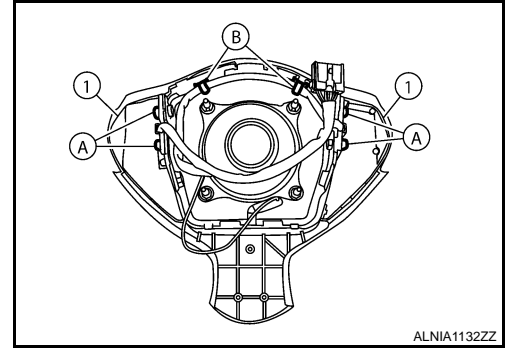
STEERING SWITCH

Removal and Installation

INFOID:000000004289508

REMOVAL

1. Remove the driver airbag module. Refer to [SR-5. "Removal and Installation"](#).
2. Remove the steering wheel switch assembly screws (A), then detach the steering wheel switch harness clips (B) and remove the steering wheel switches (1).



INSTALLATION

Installation is in the reverse order of removal.

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AUDIO ANTENNA

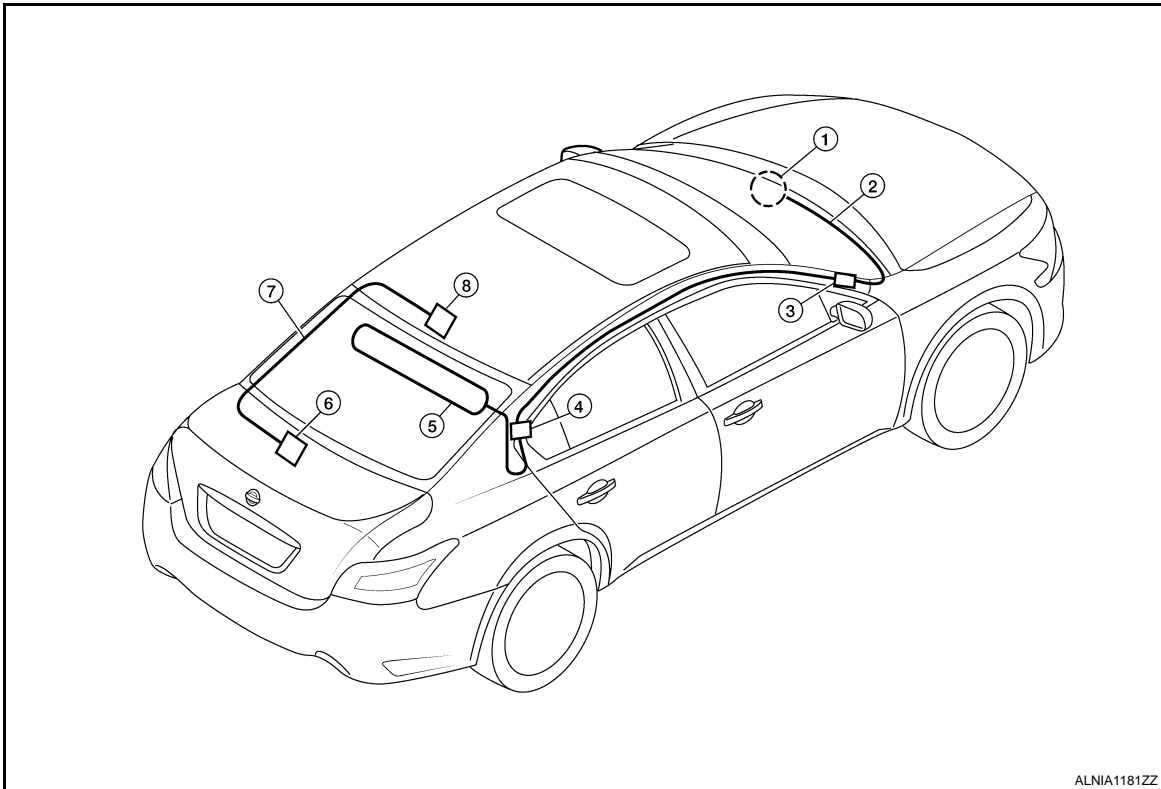
< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

AUDIO ANTENNA

Location of Antenna

INFOID:000000004399701



ALNIA1181ZZ

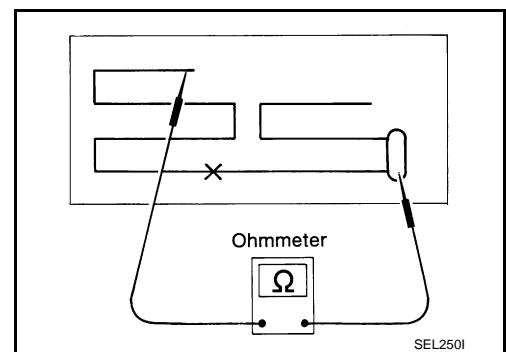
- | | | |
|-----------------------------------|------------------------------|----------------------------------|
| 1. Audio unit | 2. Audio unit antenna feeder | 3. In-line connectors M103, M105 |
| 4. Antenna amp. | 5. Window antenna | 6. Satellite radio tuner |
| 7. Satellite radio antenna feeder | 8. Satellite radio antenna | |

Window Antenna Repair

INFOID:000000004269520

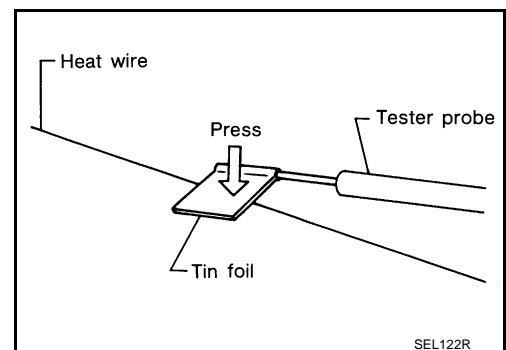
ELEMENT CHECK

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



SEL250I

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



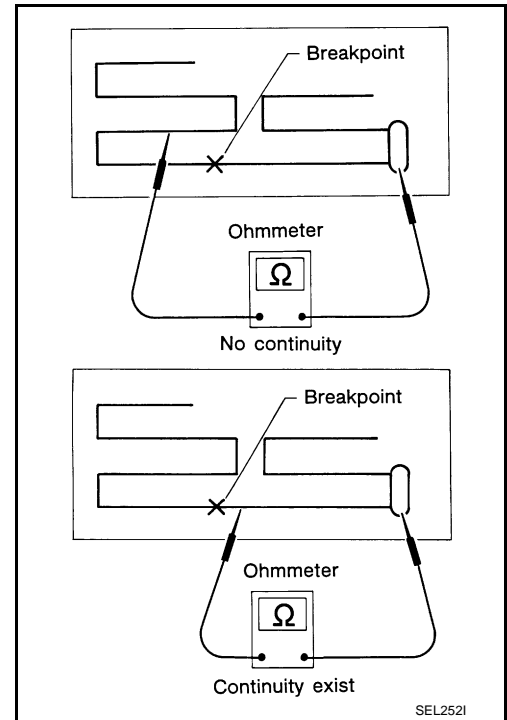
SEL122R

AUDIO ANTENNA

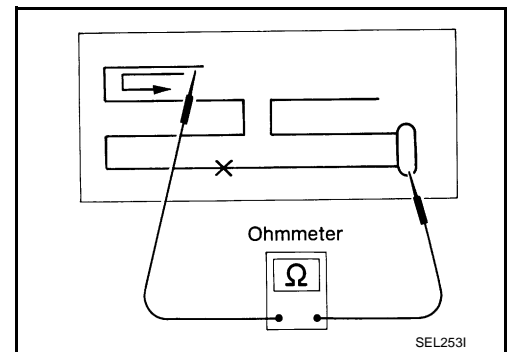
< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

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



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



REPAIR EQUIPMENT

- Conductive silver composition (DuPont No. 4817 or equivalent)
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

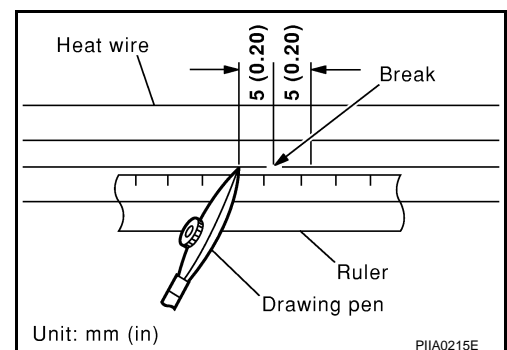
REPAIRING PROCEDURE

- Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
- Apply a small amount of conductive silver composition to tip of drawing pen.

NOTE:

Shake silver composition container before use.

- Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.



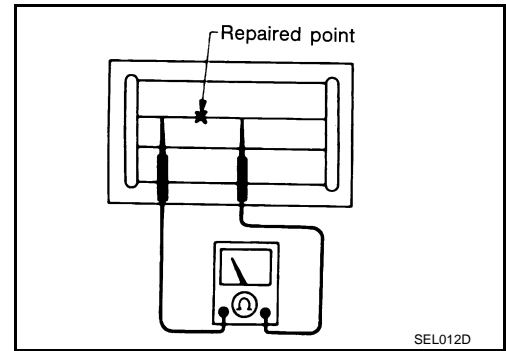
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AUDIO ANTENNA

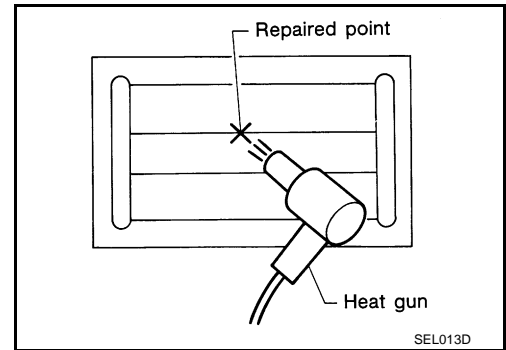
< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited. Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.



ANTENNA AMP.

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

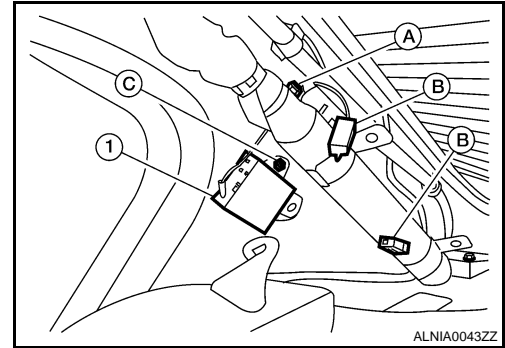
ANTENNA AMP.

Removal and Installation

INFOID:000000004289509

REMOVAL

1. Remove the rear pillar finisher RH. Refer to [INT-23, "Exploded View"](#).
2. Partially remove the side curtain air bag module RH to gain access to the antenna amp. Refer to [SR-12, "Removal and Installation"](#).
3. Detach the antenna amp. harness clip (A), disconnect the antenna amp. connectors (B), remove the antenna amp. screw (C) and remove the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

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MICROPHONE

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

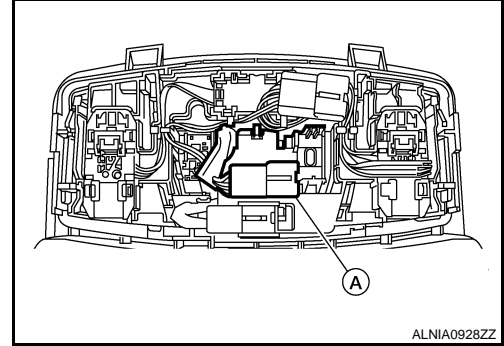
MICROPHONE

Removal and Installation

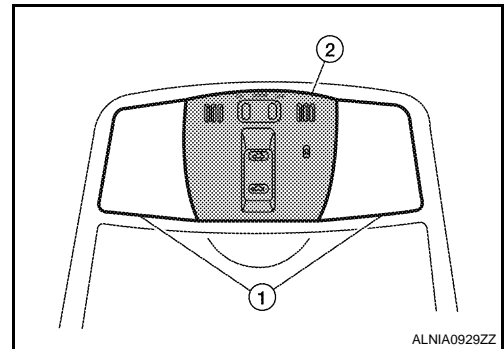
INFOID:000000004279058

REMOVAL

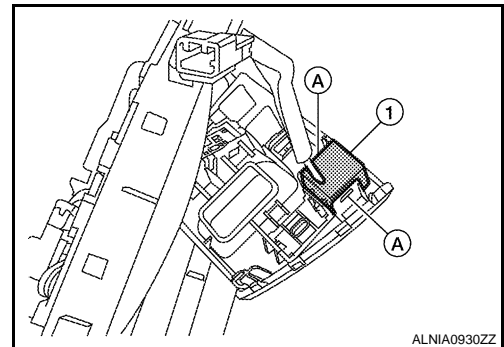
1. Remove the map lamp assembly. Refer to [INL-96. "Removal and Installation"](#).
2. Detach the microphone connector (A).



3. Remove the map lamp covers (1), then remove the map lamp assembly cover (2).



4. Release the microphone tabs (A), then remove the microphone (1).



INSTALLATION

Installation is in the reverse order of removal.

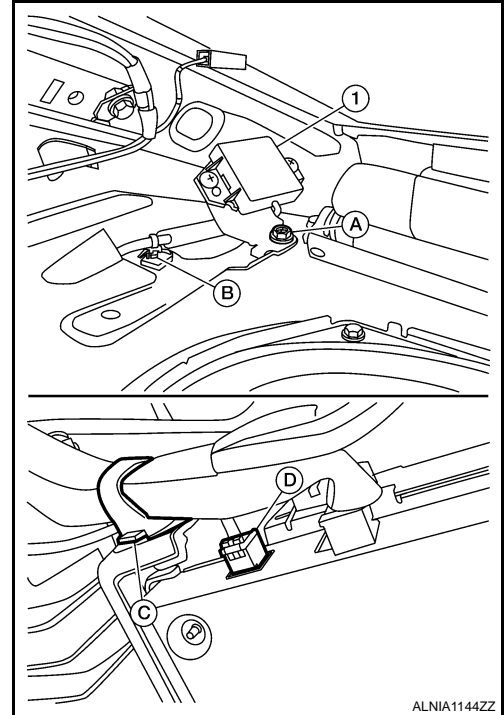
TEL ANTENNA

Removal and Installation

INFOID:000000004289510

REMOVAL

1. Remove the rear parcel shelf. Refer to [INT-26, "Removal and Installation"](#).
2. Remove the Bluetooth antenna screw (A), detach the Bluetooth antenna harness clip (B).
3. Fold down the rear seat, if equipped or open the trunk lid, then detach the Bluetooth harness clip (C), disconnect the Bluetooth harness connector (D) and remove the Bluetooth antenna (1) through the opening in the parcel shelf.



INSTALLATION

Installation is in the reverse order of removal.

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AV

BLUETOOTH CONTROL UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

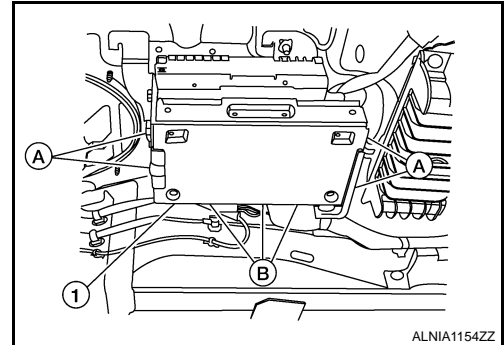
BLUETOOTH CONTROL UNIT

Removal and Installation

INFOID:000000004269528

REMOVAL

1. Disconnect the negative battery terminal.
2. Open the trunk lid or fold down the rear seat back, if equipped.
3. Remove the Bluetooth control unit screws (A), disconnect the Bluetooth control unit connectors (B) and remove the Bluetooth control unit (1).



INSTALLATION

Installation is in the reverse order of removal.

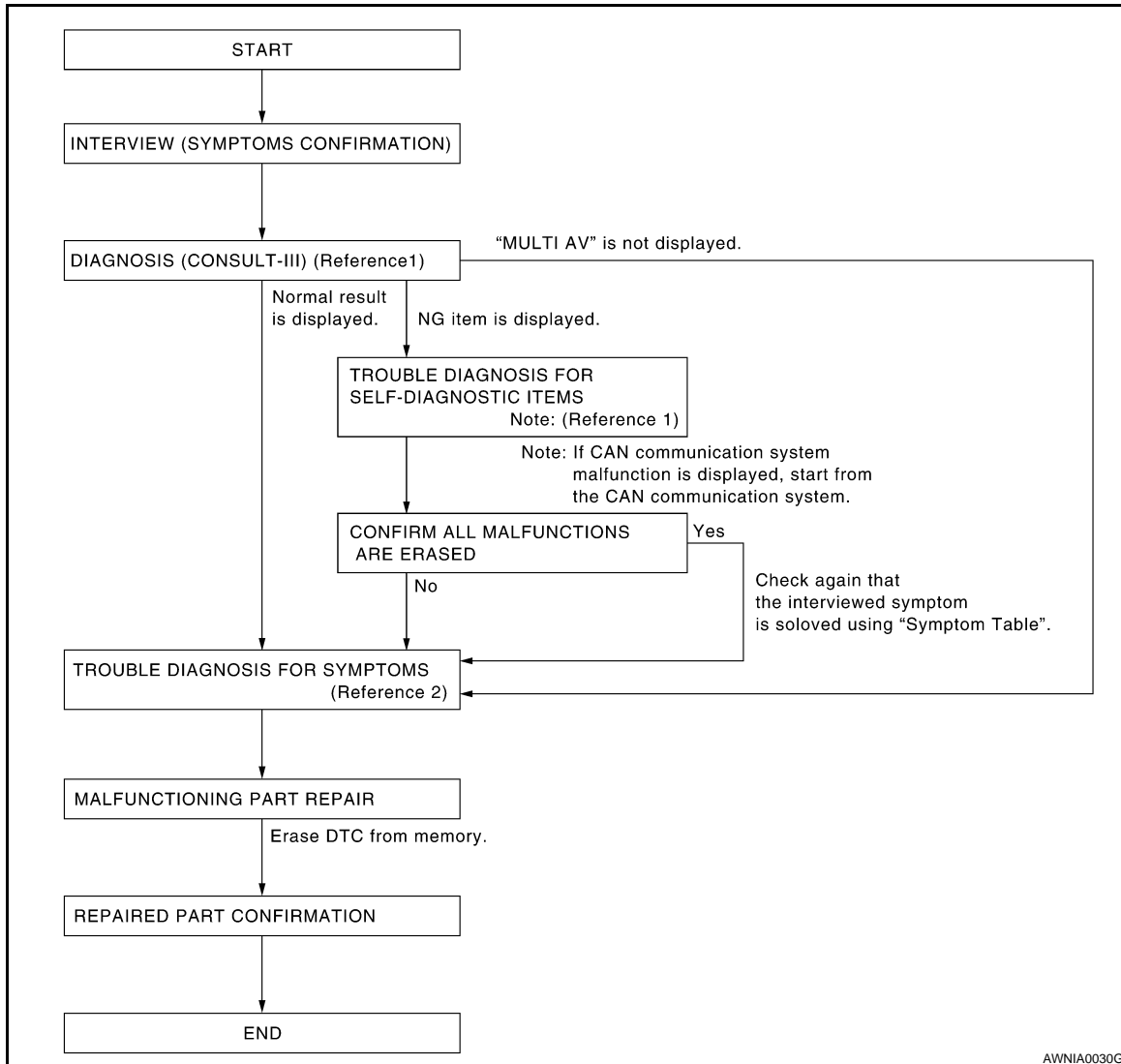
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000004364434

OVERALL SEQUENCE



- Reference 1... Refer to [AV-202, "CONSULT-III Function \(MULTI AV\)"](#).
- Reference 2... Refer to [AV-309, "Symptom Table"](#).

DETAILED FLOW

1. CHECK SYMPTOM

Check the malfunction symptoms by performing the following items.

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

>> GO TO 2

2. SELF-DIAGNOSIS (CONSULT-III)

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

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AV

DIAGNOSIS AND REPAIR WORKFLOW

[BOSE W/ COLOR DISPLAY W/O NAVI]

< BASIC INSPECTION >

Is any DTC No. displayed?

YES >> GO TO 3

NO >> GO TO 4

3.CHECK SELF-DIAGNOSIS RESULTS (CONSULT-III)

1. Check the DTC No. indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC No. list. Refer to [AV-292, "DTC Index"](#).

NOTE:

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

>> GO TO 5

4.PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to [AV-309, "Symptom Table"](#).

>> GO TO 5

5.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

NOTE:

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

>> GO TO 6

6.CHECK AFTER REPAIR

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

Is any DTC No. displayed?

YES >> GO TO 3

NO >> GO TO 7

7.FINAL CHECK

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

Are any symptoms present?

YES >> GO TO 4

NO >> Inspection End.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR DISPLAY W/O NAVI]

INSPECTION AND ADJUSTMENT

REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUSTMENT

REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUSTMENT : Description

INFOID:000000004364435

Adjust the center position of the possible route line of the rear view monitor if it is shifted.

REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUSTMENT : Special Repair Requirement

INFOID:000000004364436

1. STEERING OPERATION

Steer the steering wheel to the leftmost and rightmost positions.

>> 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

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AV

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

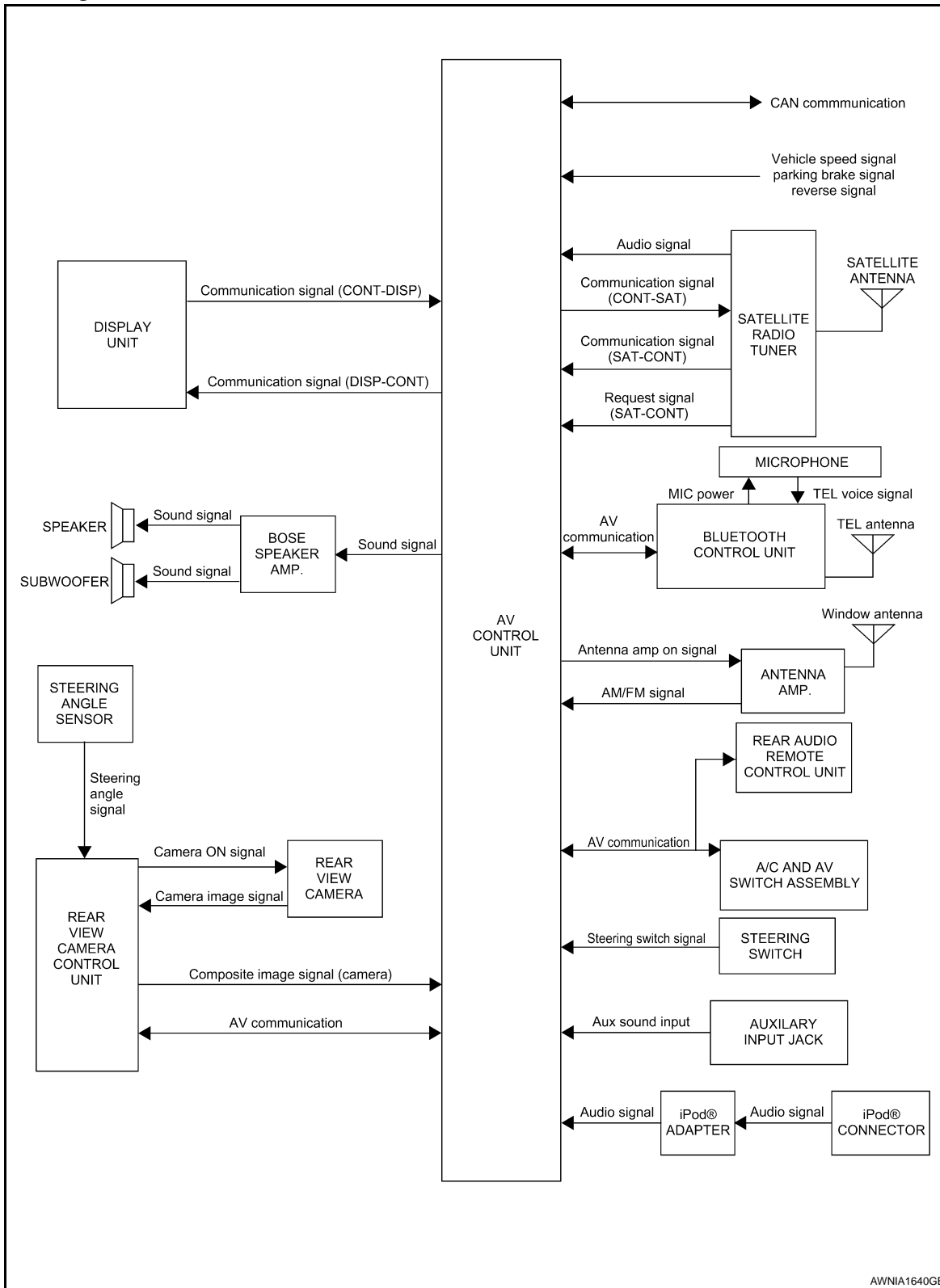
[BOSE W/ COLOR DISPLAY W/O NAVI]

FUNCTION DIAGNOSIS

AUDIO SYSTEM

System Diagram

INFOID:000000004277271



AWNIA1640GE

System Description

INFOID:000000004277272

AUDIO SYSTEM

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

The audio system consists of the following components

- AV control unit
- Display unit
- BOSE speaker amp.
- iPod® adapter
- iPod® connector
- Window antenna
- Steering switches
- A/C and AV switch assembly
- Rear audio and remote control unit
- Front door speakers
- Tweeters
- Center speaker
- Rear door speakers
- Rear subwoofer

When the audio system is on, radio signals are received by the window antenna. The AV control unit then sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the front door speakers, tweeters, center speaker, rear door speakers and rear subwoofers. Refer to Owner's Manual for audio system operating instructions.

SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components

- Satellite antenna
- Satellite radio tuner

When the satellite radio system is on, radio signals are supplied to the satellite radio tuner from the satellite antenna. The satellite radio tuner then sends audio signals to the AV control unit. Refer to Owner's Manual for satellite radio system operating instructions.

SPEED SENSITIVE VOLUME SYSTEM

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

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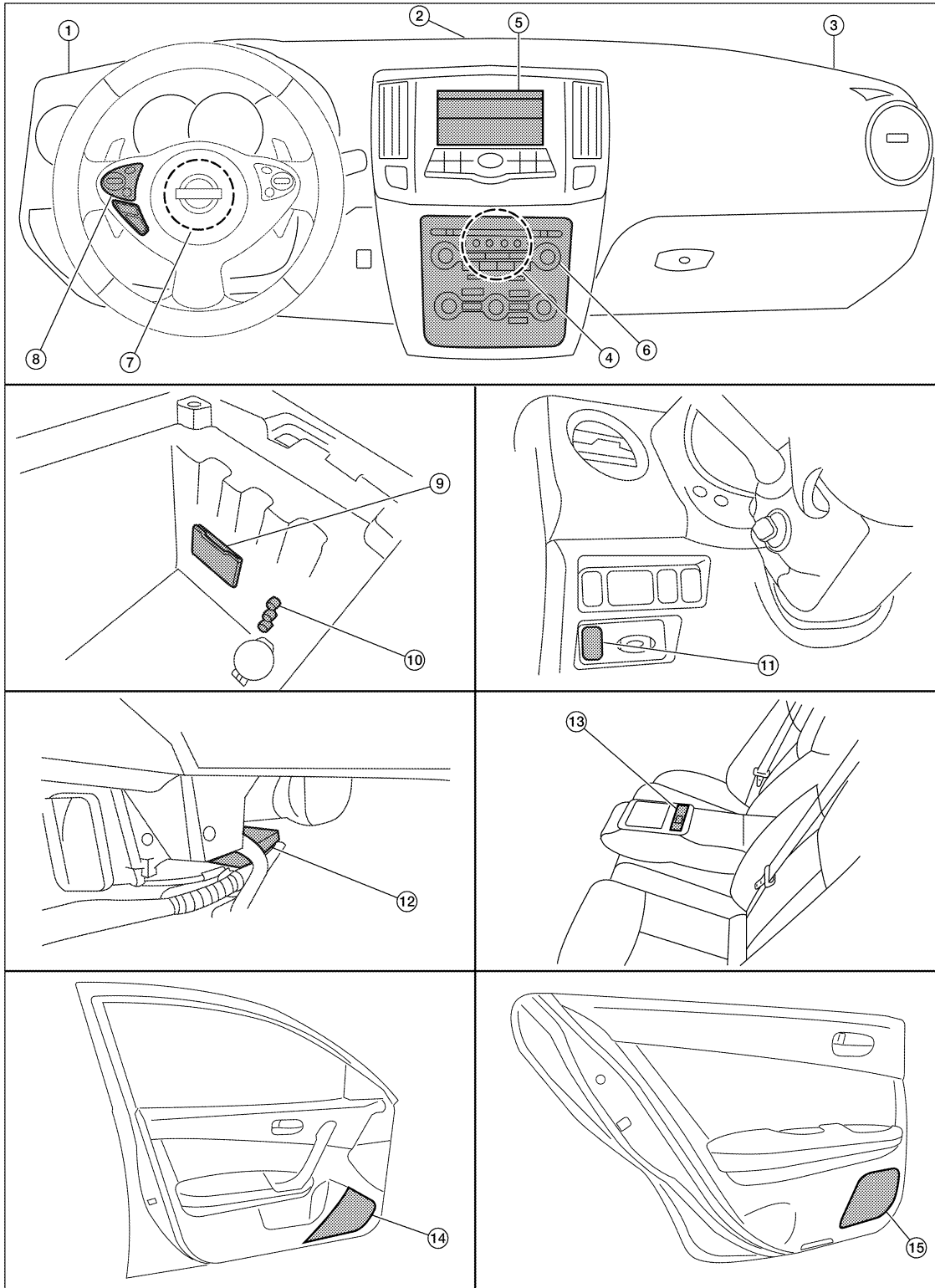
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Component Parts Location

INFOID:000000004277273

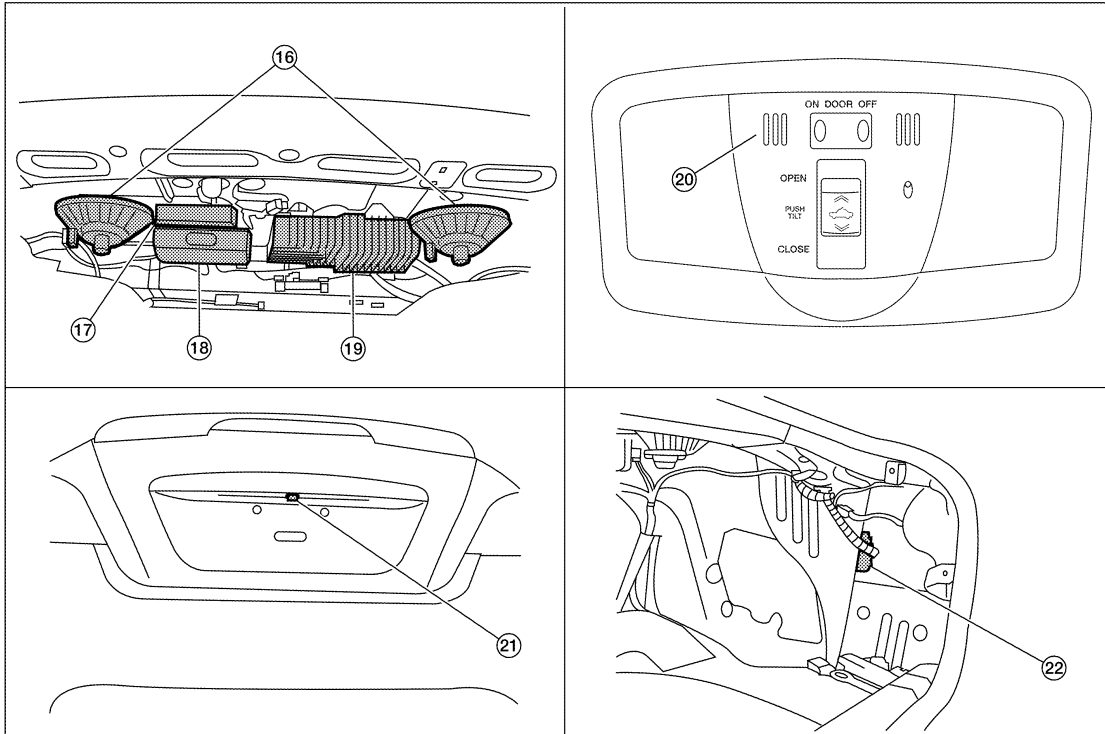


AWNIA1645ZZ

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]



AWNIA1646ZZ

- | | | |
|--|--|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M42, M43, M44, M45, M46, M47, M48 (located behind A/C and AV switch assembly) | 5. Display unit M141 | 6. A/C and AV switch assembly M98 |
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. iPod® connector M207 (view in center console) |
| 10. Aux jack M209 | 11. Rear control cancel switch M89 | 12. iPod® adapter M91 (view with console side finisher - RH removed) |
| 13. Rear control switch B402, B403, B404 | 14. Front door speaker LH D3
RH D103 | 15. Rear door speaker LH D202
RH D302 |
| 16. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | 17. Satellite radio tuner B111 | 18. Bluetooth control unit B126, B128, B130 |
| 19. BOSE speaker amp B109, B110 | 20. Microphone R7 | 21. Rear view camera T101 |
| 22. Rear view camera control unit B119 (located behind trunk side finisher RH) | | |

Component Description

INFOID:000000004277274

Part name	Description
AV control unit	Controls audio system and satellite radio system functions
Display unit	Displays all audio and climate control related information
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit and outputs audio signals to each speaker.
Steering switches	<ul style="list-style-type: none"> • Audio operation can be operated • Steering switch signal is output to AV control unit

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AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Part name	Description
Front door speakers	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs high, mid and low range sounds
Tweeters	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs high range sounds
Center speaker	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs high range sounds
Rear door speakers	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs high, mid and low range sounds
Rear subwoofer	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs low range sounds
Satellite radio tuner	<ul style="list-style-type: none">• Receives radio signals from satellite antenna• Sends audio signals to AV control unit
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.
iPod® adapter	<ul style="list-style-type: none">• Receives audio signals from iPod® connector.• Outputs audio signals to the AV control unit.

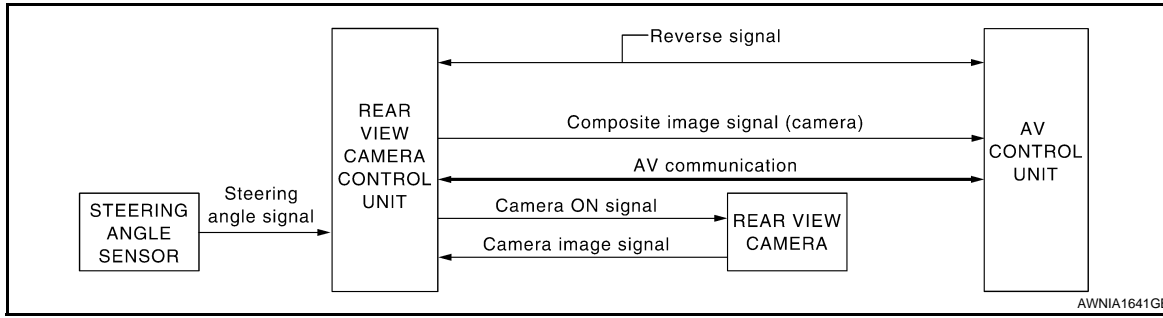
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

REAR VIEW MONITOR SYSTEM

System Diagram



System Description

INFOID:000000004277276

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

AV COMMUNICATION LINE

The rear view camera control unit is connected to the AV control unit using an AV communication line. This line is used to transmit and receive data.

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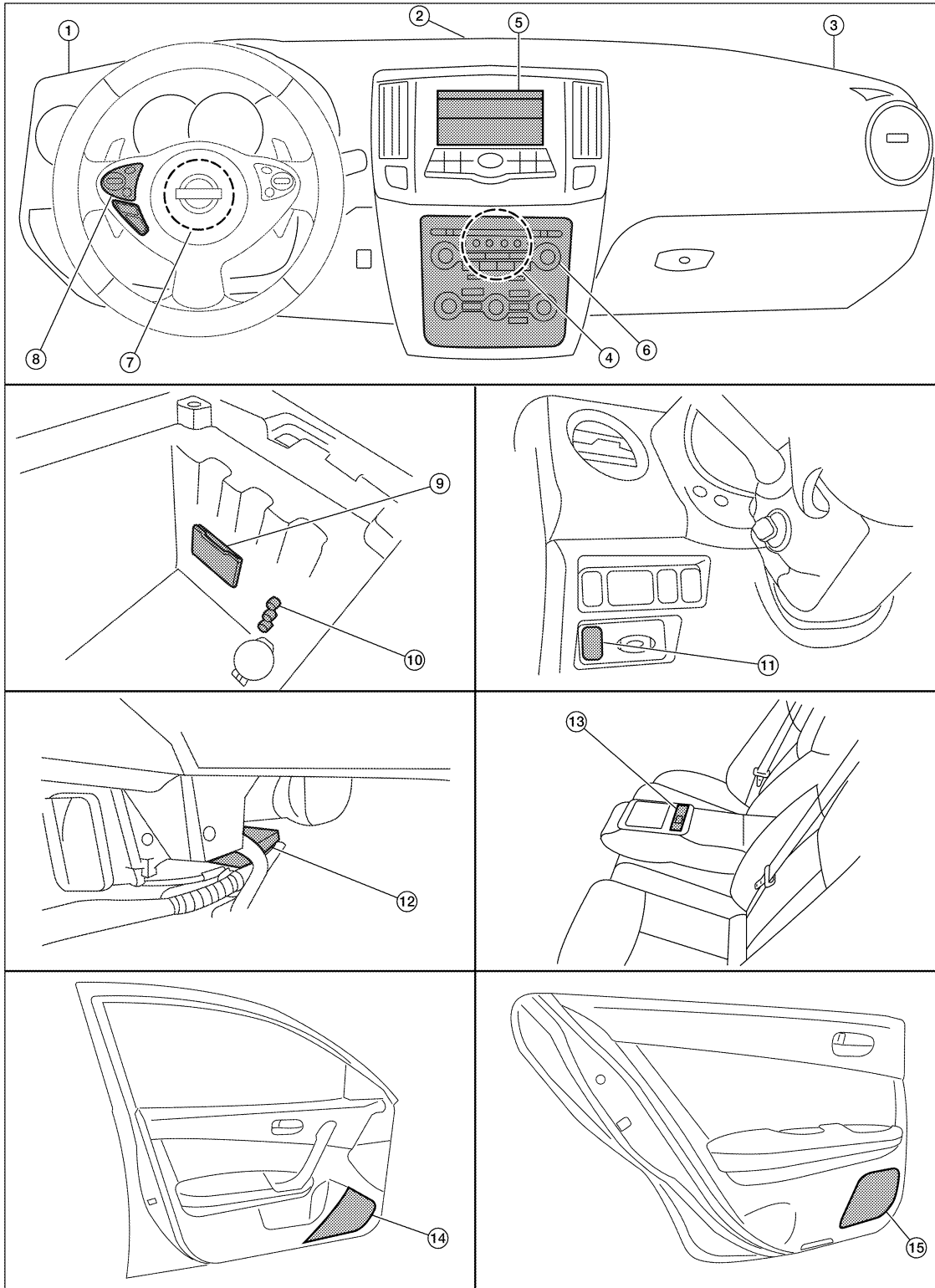
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Component Parts Location

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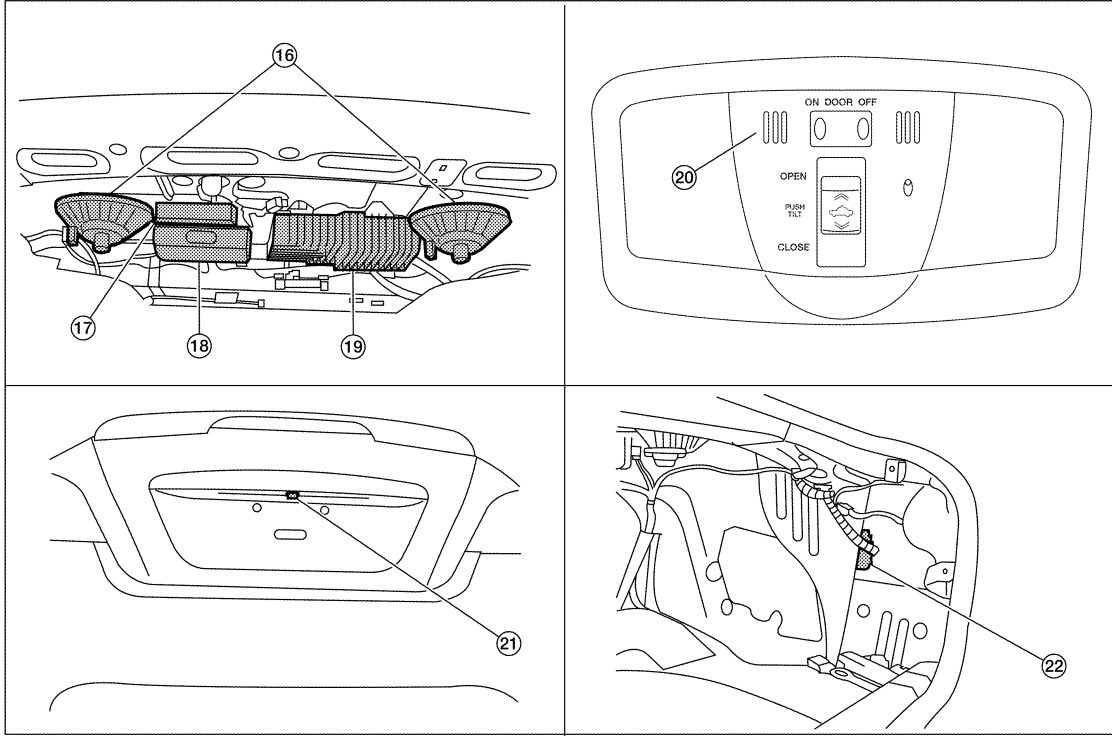


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REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]



AWNIA1646ZZ

- | | | |
|--|--|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M42, M43, M44, M45, M46, M47, M48 (located behind A/C and AV switch assembly) | 5. Display unit M141 | 6. A/C and AV switch assembly M98 |
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. iPod® connector M207 (view in center console) |
| 10. Aux jack M209 | 11. Rear control cancel switch M89 | 12. iPod® adapter M91 (view with console side finisher - RH removed) |
| 13. Rear control switch B402, B403, B404 | 14. Front door speaker LH D3
RH D103 | 15. Rear door speaker LH D202
RH D302 |
| 16. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | 17. Satellite radio tuner B111 | 18. Bluetooth control unit B126, B128, B130 |
| 19. BOSE speaker amp B109, B110 | 20. Microphone R7 | 21. Rear view camera T101 |
| 22. Rear view camera control unit B119 (located behind trunk side finisher RH) | | |

Component Description

INFOID:000000004277278

Part name	Description
AV control unit	Camera image signal is sent from rear view camera control unit
Rear view camera control unit	<ul style="list-style-type: none"> • Receives reverse signal from back-up lamp relay • Receives rear view camera image signal • Receives steering angle sensor signal • Sends camera ON signal to rear view camera • Sends image signal to AV control unit

REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Part name	Description
Rear view camera	<ul style="list-style-type: none">• Receives camera ON signal from rear view camera control unit• Sends image signal to rear view camera control unit
Steering angle sensor	Sends steering angle information to the rear view camera control unit

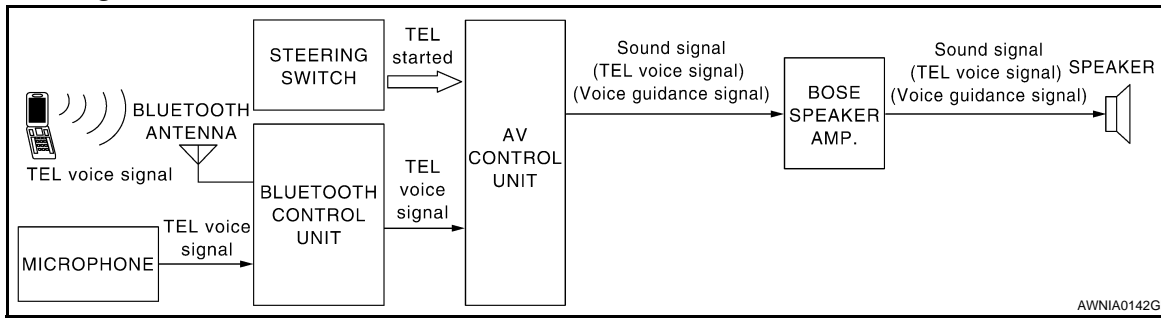
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

HANDS-FREE PHONE SYSTEM

System Diagram



System Description

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

NOTE:

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

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

BLUETOOTH CONTROL UNIT

When the ignition switch is turned to ACC or ON, the Bluetooth control unit will power up. During power up, the Bluetooth control unit is initialized and performs various self-checks. Initialization may take up to 10 seconds. If a phone is present in the vehicle and paired with the Bluetooth control unit, Nissan Voice Recognition will then become active. Bluetooth telephone functions can be turned off using the Nissan Voice Recognition system.

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

MICROPHONE

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

AV CONTROL UNIT

The AV control unit receives signals from the Bluetooth control unit and sends audio signals to the BOSE speaker amp. then on to the speakers.

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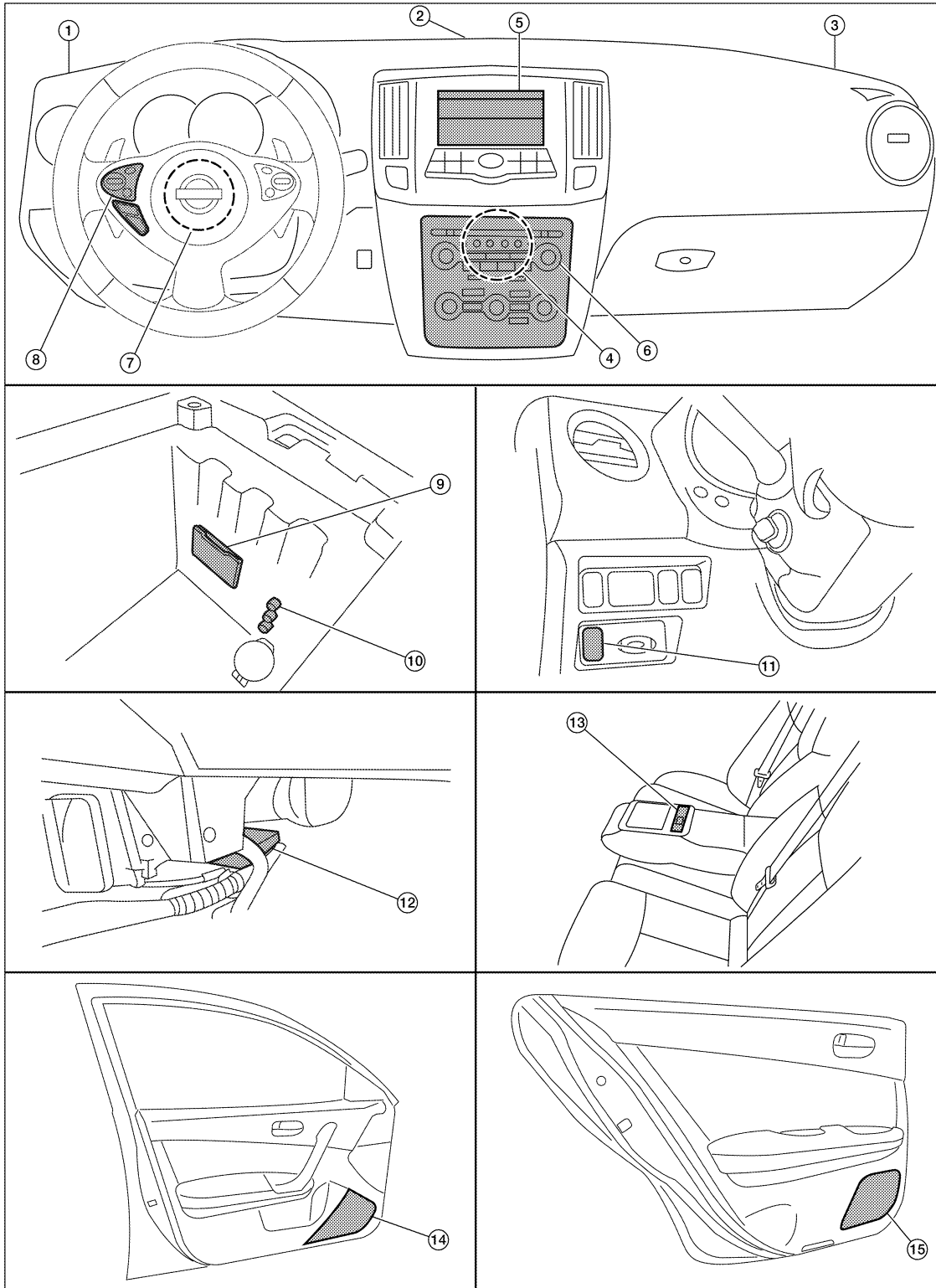
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Component Parts Location

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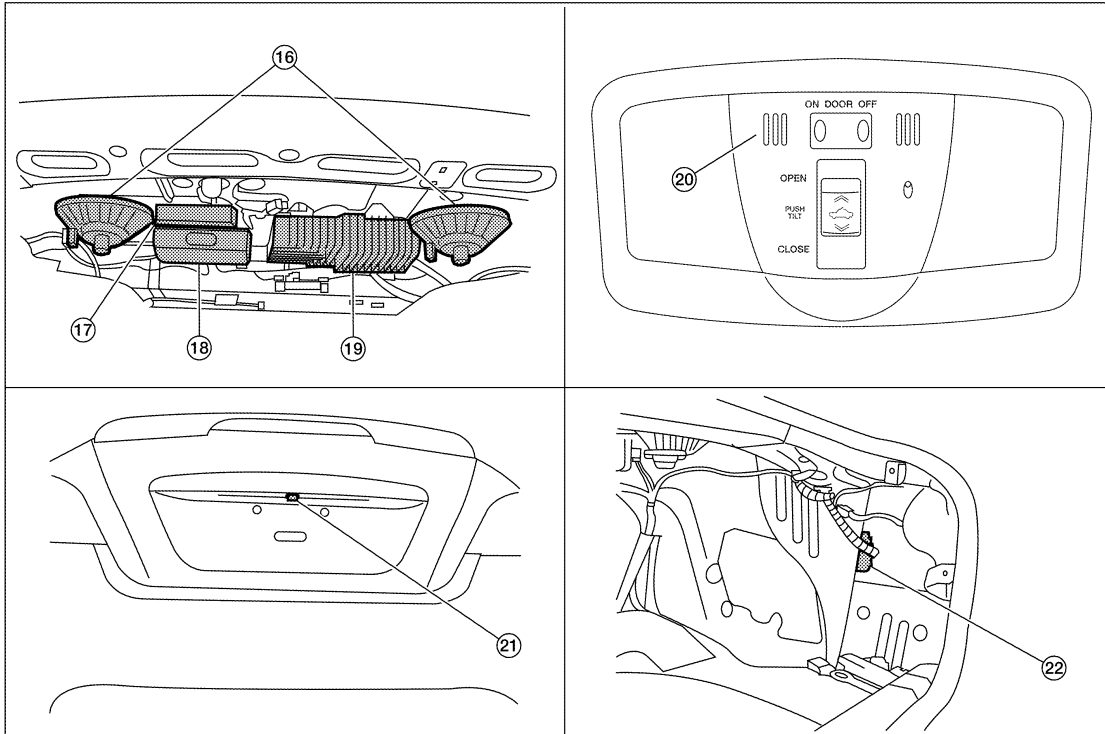


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HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]



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| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M42, M43, M44, M45, M46, M47, M48 (located behind A/C and AV switch assembly) | 5. Display unit M141 | 6. A/C and AV switch assembly M98 |
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. iPod® connector M207 (view in center console) |
| 10. Aux jack M209 | 11. Rear control cancel switch M89 | 12. iPod® adapter M91 (view with console side finisher - RH removed) |
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RH D302 |
| 16. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | 17. Satellite radio tuner B111 | 18. Bluetooth control unit B126, B128, B130 |
| 19. BOSE speaker amp B109, B110 | 20. Microphone R7 | 21. Rear view camera T101 |
| 22. Rear view camera control unit B119 (located behind trunk side finisher RH) | | |

Component Description

INFOID:000000004277286

Part name	Description
AV control unit	<ul style="list-style-type: none"> Receives telephone voice signal from Bluetooth control unit Sends telephone voice and voice guidance signals to the speakers
BOSE speaker amp.	<ul style="list-style-type: none"> Receives audio signals from the AV control unit Outputs amplified audio signals to the speakers.
Front door speaker	Receives telephone voice and voice guidance signals from the AV control unit
Front tweeter	
Center speaker	

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HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Part name	Description
Steering switches	<ul style="list-style-type: none">• Start a voice recognition session• Answer and end telephone calls• Adjust the volume level
Microphone	Sends voice signals to Bluetooth control unit
Bluetooth control unit	Controls hands-free phone functions
Bluetooth antenna	Sends telephone voice signal to Bluetooth control unit

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

DIAGNOSIS SYSTEM (AV CONTROL UNIT)


Diagnosis Description

INFOID:000000004364437

MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

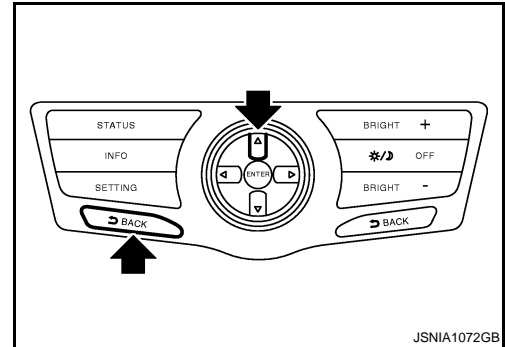
The ON/OFF operation (continuity) of each switch in the multifunction switch and preset switch can be checked.

Self-Diagnosis Mode

- Press the BACK switch and the  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 at the ON position can be checked by pressing the switch. The buzzer sounds if the switch is normal.

NOTE:

The disk eject switch cannot be checked.



JSNIA1072GB

Finishing Self-diagnosis Mode

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

MULTI AV SYSTEM ON BOARD DIAGNOSIS FUNCTION

- The AV control unit diagnosis function starts up with multifunction switch operation and the 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., if 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 the AV control unit diagnosis and the connection diagnosis between each of the units that make up the system, and it indicates the results to the display.
- The confirmation/adjustment mode allows the technician to check, modify or adjust the vehicle signals and set values, as well as to monitor the system error records and system communication status. The checking, modifying or adjusting generally requires human intervention and judgment (the system cannot make judgment automatically).

On Board Diagnosis Item

Mode	Description
Self-Diagnosis	<ul style="list-style-type: none"> • AV control unit diagnosis • Perform the connection diagnosis between each of the units.

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

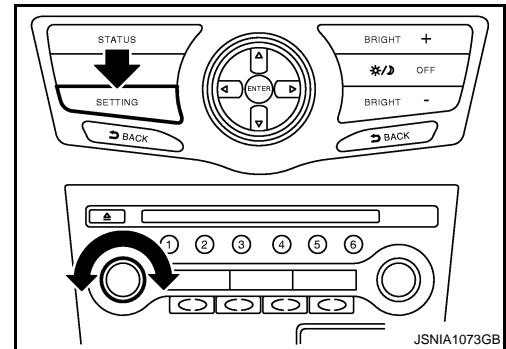
	Mode	Description
Confirmation/ Adjustment	Display Diagnosis	The confirmation of the tint with the color spectrum bar display and shading of color with the gradation bar display can be performed.
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse.
	Speaker Test	The connection of a speaker can be confirmed by test tone.
	Climate Control*	Not used.
	Error History (Detailed)	System malfunctions 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.
	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.
	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.
	Delete Unit Connection Log	Erase the connection history of unit and error history
Initialize Settings	Initializes the AV control unit memory.	

NOTE:

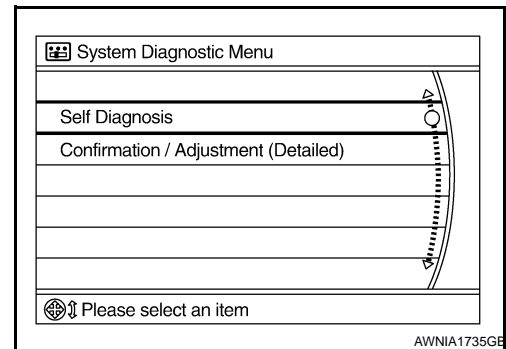
*: On-board self-diagnosis is not supported. Only CONSULT-III is supported.

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 started, a short beep will be heard.)
 - Shifting from current screen to previous screen is performed by pressing the BACK button.



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



SELF-DIAGNOSIS MODE

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[BOSE W/ COLOR DISPLAY W/O NAVI]

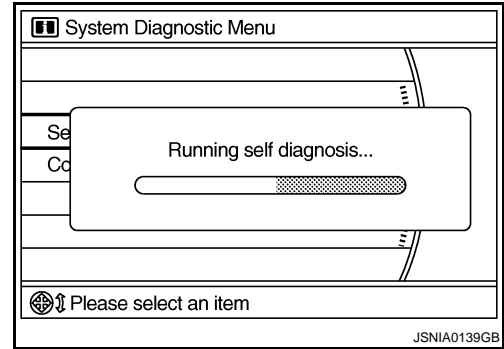
< FUNCTION DIAGNOSIS >

1. Start the self-diagnosis function and select "Self-diagnosis".

NOTE:

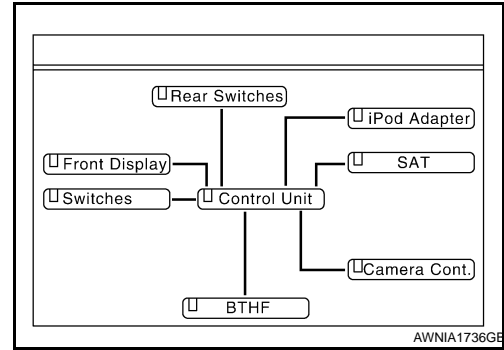
Because the start condition of diagnosis function is a switch operation, the on board diagnosis function cannot start up if any malfunction is detected in the AV communication circuit between AV control unit and multifunction switch.

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



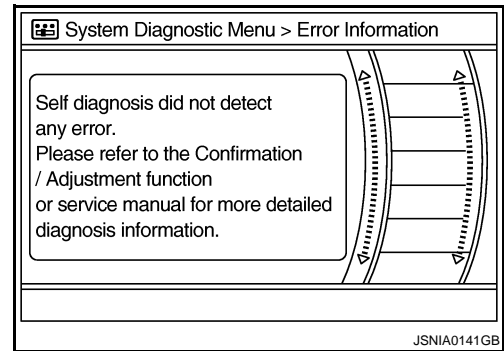
2. Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

Diagnosis results	Unit	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 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

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

NOTE:

Because the start condition of diagnosis function is a switch operation, the on board diagnosis function cannot be started up if any malfunction is detected in the AV communication circuit between AV control unit and multifunction switch.

Self-diagnosis Result Chart

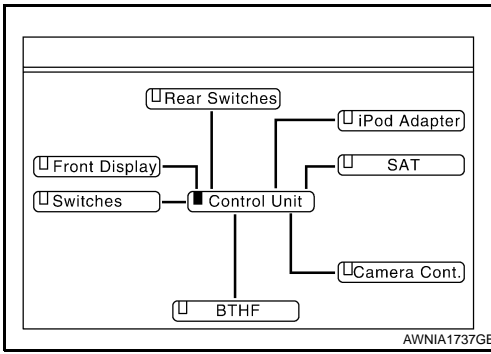
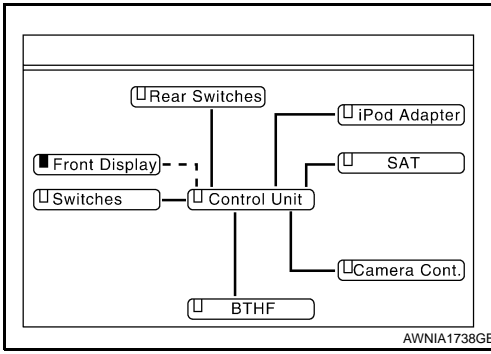
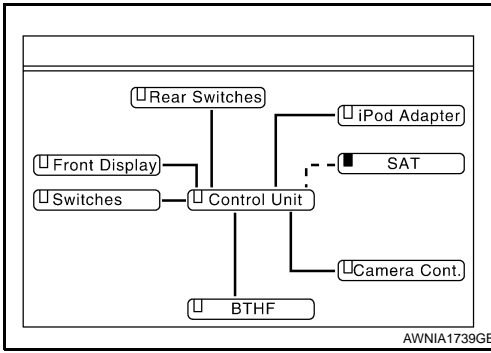
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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

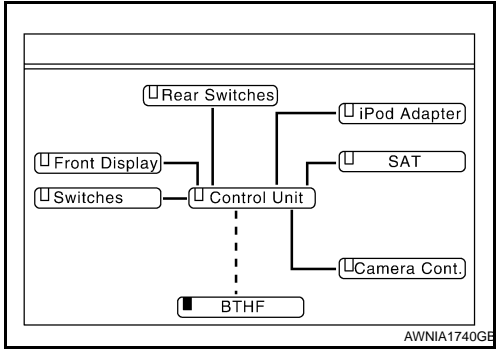
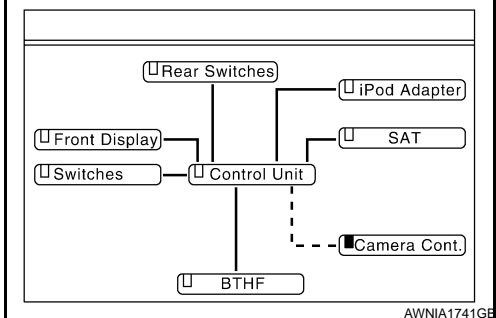
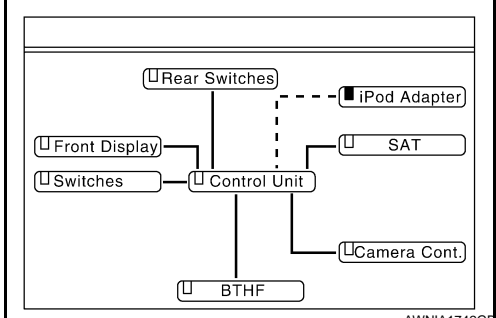
[BOSE W/ COLOR DISPLAY W/O NAVI]

Diagnosis results	Detection logic	Possible malfunction location / Action to take
 <p style="text-align: right; font-size: small;">AWNIA1737GE</p>	<p>Malfunction is detected in AV control unit power supply and ground circuits.</p>	<p>Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.</p>
<p>NOTE: When a control unit malfunction is detected (red in unit display), connection malfunctions with other connection unit may be displayed. “Self-Diagnosis did not run because of a control unit malfunction”</p>		
 <p style="text-align: right; font-size: small;">AWNIA1738GE</p>	<p>When either one of the following items are detected:</p> <ul style="list-style-type: none"> • serial communication circuits between AV control unit and front display unit are malfunctioning. • serial communication signal between AV control unit and front display unit is malfunctioning. 	<p>Serial communication circuits between AV control unit and front display unit.</p>
 <p style="text-align: right; font-size: small;">AWNIA1739GE</p>	<p>When any one of the following items is detected:</p> <ul style="list-style-type: none"> • satellite radio tuner power supply and ground circuits are malfunctioning. • serial communication circuits between AV control unit and satellite radio tuner are malfunctioning. • serial communication or request signal between AV control unit and satellite radio tuner is malfunctioning. • request signal circuit between AV control unit and satellite radio tuner is malfunctioning. 	<ul style="list-style-type: none"> • Satellite radio tuner power supply and ground circuits. • Serial communication circuits between AV control unit and satellite radio tuner. • Request signal circuit between AV control unit and satellite radio tuner.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

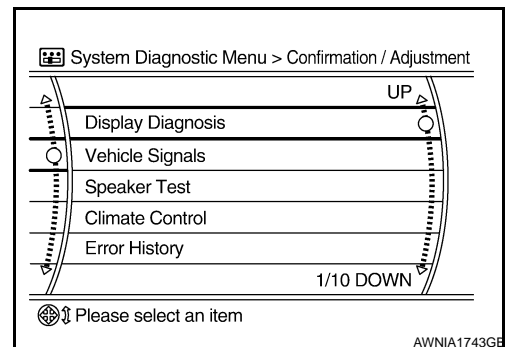
Diagnosis results	Detection logic	Possible malfunction location / Action to take
 <p style="text-align: right; font-size: small;">AWNIA1740GE</p>	<p>When any one of the following items is detected:</p> <ul style="list-style-type: none"> • TEL adapter unit power supply and ground circuits are malfunctioning. • AV communication circuits between camera control unit and TEL adapter unit are malfunctioning. • AV communication circuits between multifunction switch and camera control unit are malfunctioning. (without DVD player models) • AV communication circuits between DVD player and camera control unit are malfunctioning. (with DVD player models) • AV communication signal between AV control unit and TEL adapter unit is malfunctioning. 	<ul style="list-style-type: none"> • TEL adapter unit power supply and ground circuits. • AV communication circuits between camera control unit and TEL adapter unit. • AV communication circuits between multifunction switch and camera control unit. (without DVD player models) • AV communication circuits between DVD player and camera control unit. (with DVD player models) • AV communication circuits between multifunction switch and TEL adapter unit. (without rear view camera)
 <p style="text-align: right; font-size: small;">AWNIA1741GE</p>	<p>Malfunction is detected in camera-connection recognition signal circuit.</p>	<p>Camera connection recognition signal circuit.</p>
 <p style="text-align: right; font-size: small;">AWNIA1742GE</p>	<p>When any one of the following items is detected:</p> <ul style="list-style-type: none"> • iPod adapter power supply and ground circuits are malfunctioning. • AV communication circuits between multifunction switch and iPod adapter are malfunctioning. • AV communication signal between AV control unit and iPod adapter is malfunctioning. 	<ul style="list-style-type: none"> • iPod adapter power supply and ground circuits. • AV communication circuits between multifunction switch and iPod adapter.

NOTE:

The number of units that are displayed on the on board self-diagnosis display according to equipment.

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.
2. 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.

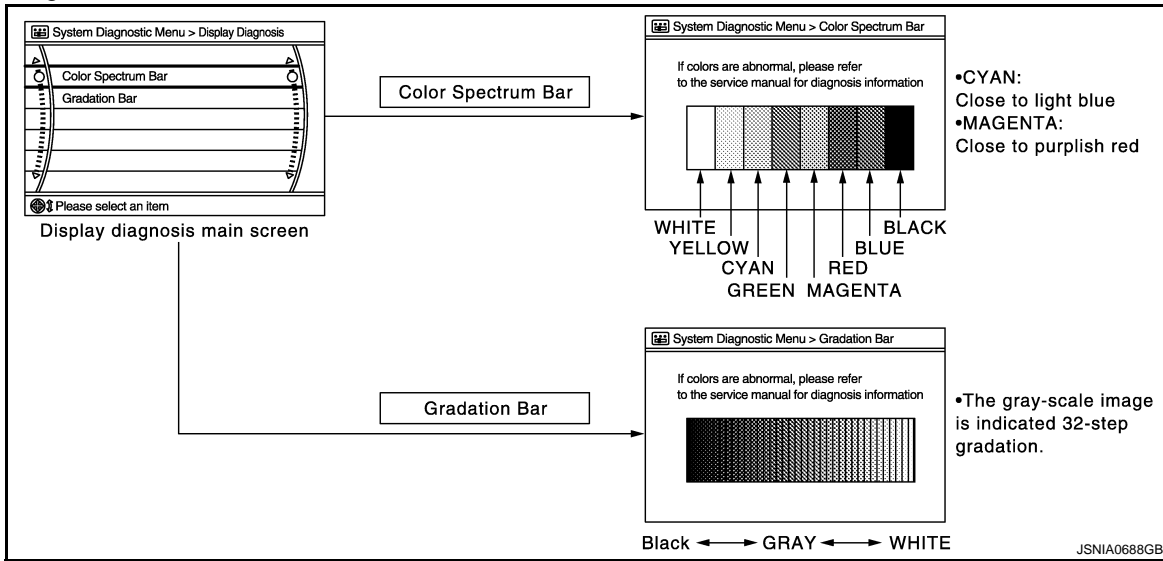


DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Display Diagnosis

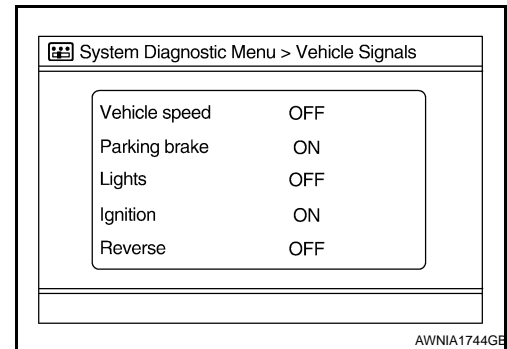


The tint of the color bar indication is as per the following list if RGB image signal error is detected.

- 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)	Changes in indication may be delayed. This is normal.
		Vehicle speed = 0 km/h (0 MPH)	
Parking brake	ON	Parking brake is applied.	
	OFF	Parking brake is released.	
Lights	ON	Light switch ON	—
	OFF	Light switch OFF	
Ignition	ON	Ignition switch ON	—
	OFF	Ignition switch in the ACC position	
Reverse	ON	Shift the selector lever to the "R" position	Changes in indication may be delayed. This is normal.
	OFF	Shift the selector lever to a position other than the "R" position	

Speaker Test

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

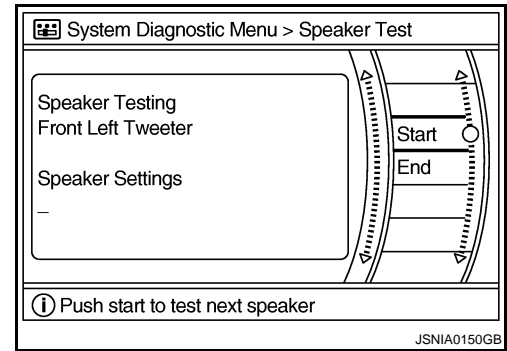
[BOSE W/ COLOR DISPLAY W/O NAVI]

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

On-board self-diagnosis is not supported. Only CONSULT-III is supported.

Refer to [AV-202, "CONSULT-III Function \(MULTI AV\)"](#).

Error History

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

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

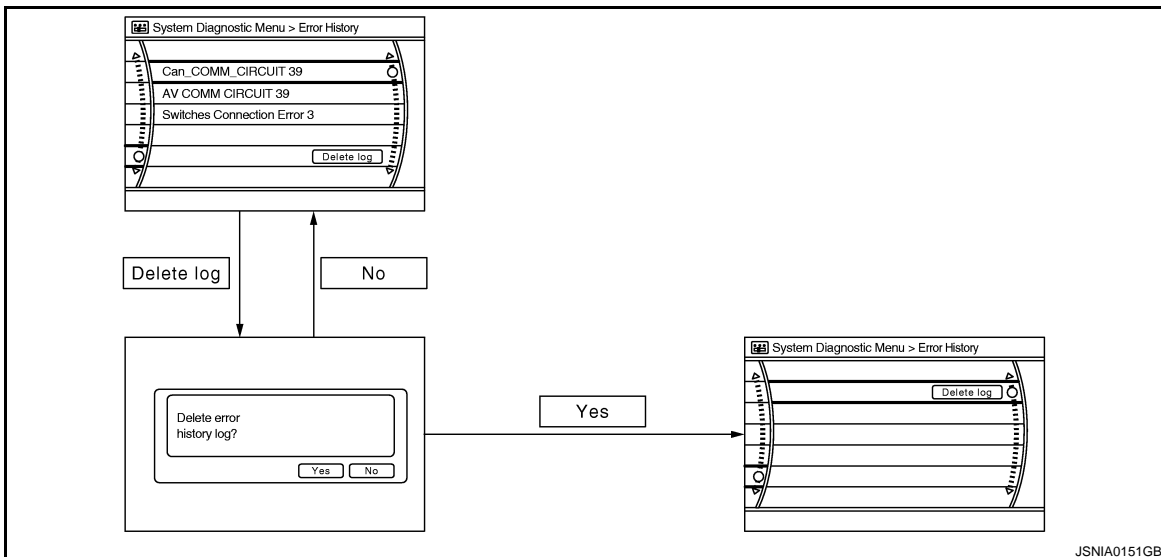
Count up method A

- 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 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 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 occurrence 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.

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AV

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

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-202, "CONSULT-III Function (MULTI AV)" .
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit.
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit CAN Controller Memory Error	AV control unit malfunction is detected.	
Front Display Connection Error	When one of the following items is detected: <ul style="list-style-type: none"> front display unit power supply and ground circuits are malfunctioning. serial communication circuits between AV control unit and front display unit are malfunctioning. serial communication signal between AV control unit and front display unit is malfunctioning. 	<ul style="list-style-type: none"> Front display unit power supply and ground circuits. Serial communication circuits between AV control unit and front display unit.
Rear Display Connection Error	When any one of the following items is detected: <ul style="list-style-type: none"> rear display unit power supply and ground circuits are malfunctioning. serial communication circuits between video distributor and rear display unit are malfunctioning. serial communication signal between video distributor and rear display unit is malfunctioning. 	<ul style="list-style-type: none"> Rear display unit power supply and ground circuits. Serial communication circuits between video distributor and rear display unit.
Camera Control Unit Connection Error	Malfunction is detected in camera connection recognition circuit between AV control unit and camera control unit.	Camera-connection recognition circuit between AV control unit and camera control unit.
SAT Connection Error	When any one of the following items is detected: <ul style="list-style-type: none"> satellite radio tuner power supply and ground circuits are malfunctioning. serial communication circuits between AV control unit and satellite radio tuner are malfunctioning. serial communication or request signal between AV control unit and satellite radio tuner is malfunctioning. request signal circuit between AV control unit and satellite radio tuner is malfunctioning. 	<ul style="list-style-type: none"> Satellite radio tuner power supply and ground circuits. Serial communication circuits between AV control unit and satellite radio tuner. Request signal circuit between AV control unit and satellite radio tuner.
<ul style="list-style-type: none"> AV COMM CIRCUIT Switches Connection Error 	When any one of the following items is detected: <ul style="list-style-type: none"> multifunction switch power supply and ground circuits are malfunctioning. AV communication circuits between AV control unit and multifunction switch are malfunctioning. AV communication signal between AV control unit and multifunction switch is malfunctioning. 	<ul style="list-style-type: none"> Multifunction switch power supply and ground circuits. AV communication circuits between AV control unit and multifunction switch.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Error item	Description	Possible malfunction factor/Action to take
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Video Distributor Connection Error 	When any one of the following items is detected: <ul style="list-style-type: none"> • video distributor power supply and ground circuits are malfunctioning. • AV communication signal between AV control unit and video distributor is malfunctioning. 	Video distributor power supply and ground circuits.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • DVD Deck Connection Error 	When any one of the following items is detected: <ul style="list-style-type: none"> • DVD player power supply and ground circuits are malfunctioning. • AV communication signal between AV control unit and DVD player is malfunctioning. 	DVD player power supply and ground circuits.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Rearview Camera Connection Error 	When any one of the following items is detected: <ul style="list-style-type: none"> • camera control unit power supply and ground circuits are malfunctioning. • AV communication signal between AV control unit and camera control unit is malfunctioning. • AV communication circuits between multifunction and camera control unit are malfunctioning. (Without DVD entertainment system models) 	<ul style="list-style-type: none"> • Camera control unit power supply and ground circuits. • AV communication circuits between multifunction and camera control unit. (Without DVD entertainment system models)
<ul style="list-style-type: none"> • AV COMM CIRCUIT • iPod Connection Error 	When any one of the following items is detected: <ul style="list-style-type: none"> • iPod adapter power supply and ground circuits are malfunctioning. • AV communication circuits between multifunction switch and iPod adapter are malfunctioning. • AV communication signal between AV control unit and iPod adapter is malfunctioning. 	<ul style="list-style-type: none"> • iPod adapter power supply and ground circuits. • AV communication circuits between multifunction switch and iPod adapter.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • H/F Unit Connection Error 	When any one of the following items is detected: <ul style="list-style-type: none"> • TEL adapter unit power supply and ground circuits are malfunctioning. • AV communication circuits between camera control unit and TEL adapter unit are malfunctioning. • AV communication signal between AV control unit and TEL adapter unit is malfunctioning. 	<ul style="list-style-type: none"> • TEL adapter unit power supply and ground circuits. • AV communication circuits between camera control unit and TEL adapter unit. • AV communication circuits between multifunction switch and TEL adapter unit. (without rear view camera models)
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Rearview Camera Connection Error • H/F Unit Connection Error* 	When any one of the following items is detected: <ul style="list-style-type: none"> • AV communication circuits between multifunction switch and camera control unit are malfunctioning. (without DVD player models) • AV communication circuits between DVD player and camera control unit are malfunctioning. (with DVD player models) 	<ul style="list-style-type: none"> • AV communication circuits between multifunction switch and camera control unit. (without DVD player models) • AV communication circuits between DVD player and camera control unit. (with DVD player models)
<ul style="list-style-type: none"> • AV COMM CIRCUIT • DVD Deck Connection Error • Rearview Camera Connection Error • H/F Unit Connection Error 	Malfunction is detected in AV communication circuits between video distributor and DVD player.	AV communication circuits between video distributor and DVD player.

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Error item	Description	Possible malfunction factor/Action to take
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Video Distributor Connection Error • DVD Deck Connection Error • Rearview Camera Connection Error • H/F Unit Connection Error 	Malfunction is detected in AV communication circuits between multifunction switch and video distributor.	AV communication circuits between multifunction switch and video distributor.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Video Distributor Connection Error • DVD Deck Connection Error • Rearview Camera Connection Error • iPod Connection Error • H/F Unit Connection Error 	Malfunction is detected in AV communication circuits between multifunction switch and iPod adapter.	AV communication circuits between multifunction switch and iPod adapter.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Switches Connection Error • Rearview Camera Connection Error • iPod Connection Error* • H/F Unit Connection Error* 	When any one of the following items is detected: <ul style="list-style-type: none"> • AV communication circuits between AV control unit and the branch point multifunction switch and AV control unit are malfunctioning. • AV communication circuits are malfunctioning. 	<ul style="list-style-type: none"> • AV communication circuits between AV control unit and the branch point multifunction switch and AV control unit. • Check and repair the short circuit in AV communication circuits.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Switches Connection Error • Video Distributor Connection Error • DVD Deck Connection Error • Rearview Camera Connection Error • iPod Connection Error • H/F Unit Connection Error 		

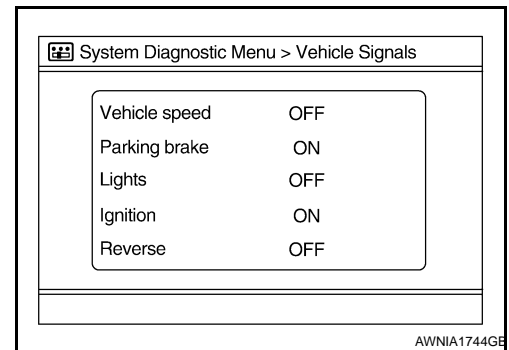
*: Non-equipped item is not displayed.

Camera Cont.

The two functions of “Connection Confirmation” and “Adjust Offset of Rear View Camera” are available.

CONNECTION CONFIRMATION

The vehicle speed sensor, parking brake, park lights, ignition switch and reverse 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	<ul style="list-style-type: none"> • Ignition switch at ACC. • No steering with ignition switch ON.
	—	Malfunction detected in camera connection recognition signal.
Reverse Sensor	ON	Selector lever is in “R” with ignition switch ON.
	OFF	<ul style="list-style-type: none"> • Ignition switch at ACC. • Selector lever is in position other than “R” with ignition switch ON.
	—	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	<ul style="list-style-type: none"> • 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.

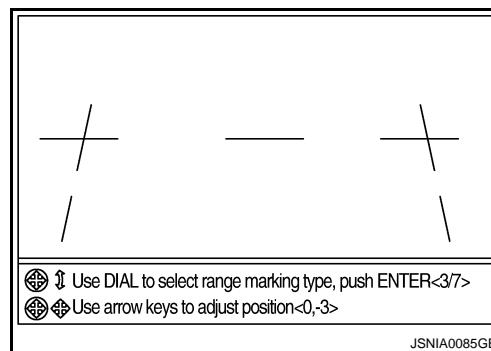
DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[BOSE W/ COLOR DISPLAY W/O NAVI]

< FUNCTION DIAGNOSIS >

ADJUST OFFSET OF REAR VIEW CAMERA

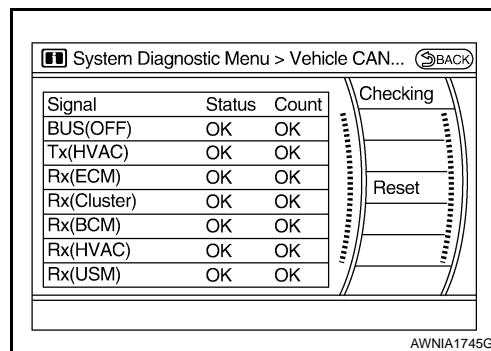
Use this mode to adjust the guide line display position of the rear-view monitor if necessary after removing the rear view monitor camera.



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 status is normal at the next ignition switch ON cycle. The upper limit of the counter is 39.
- The error counter is erased if reset.

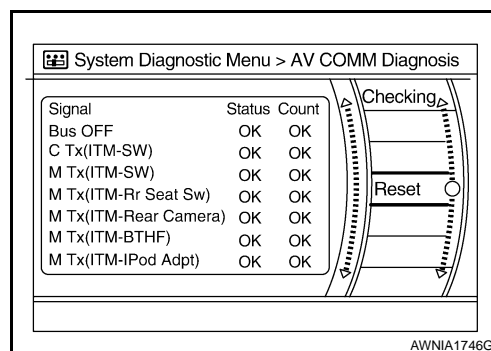
Items	Display (Current)	Malfunction counter (Past)
BUS-OFF	OK / UNKWN	OK / 0 - 39
Tx (HVAC)	OK / UNKWN	OK / 0 - 39
Rx (ECM)	OK / UNKWN	OK / 0 - 39
Rx (Cluster)	OK / UNKWN	OK / 0 - 39
Rx (BCM)	OK / UNKWN	OK / 0 - 39
Rx (HVAC)	OK / UNKWN	OK / 0 - 39
Rx (USM)	OK / UNKWN	OK / 0 - 39



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.
- If it resets, the error counter is erased.

Items	Status (Current)	Counter (Past)
BUSS-OFF	OK / UNKWN	OK / 0 - 39
C Tx(ITM-SW)	OK / UNKWN	OK / 0 - 39
M Tx(ITM-SW)	OK / UNKWN	OK / 0 - 39
M Tx(ITM-RrSeatSW)	OK / UNKWN	OK / 0 - 39
M Tx(ITM-RearCamera)	OK / UNKWN	OK / 0 - 39
M Tx(ITM-BTHF)	OK / UNKWN	OK / 0 - 39
M Tx(ITM-iPodAdapt)	OK / UNKWN	OK / 0 - 39
M Tx(ITM-iPodAudio)	OK / UNKWN	OK / 0 - 39
C Rx(SW-ITM)	OK / UNKWN	OK / 0 - 39
C Rx(RrSeatSW-ITM)	OK / UNKWN	OK / 0 - 39
C Rx(RearCamera-ITM)	OK / UNKWN	OK / 0 - 39
C Rx(BTHF-ITM)	OK / UNKWN	OK / 0 - 39



DIAGNOSIS SYSTEM (AV CONTROL UNIT)

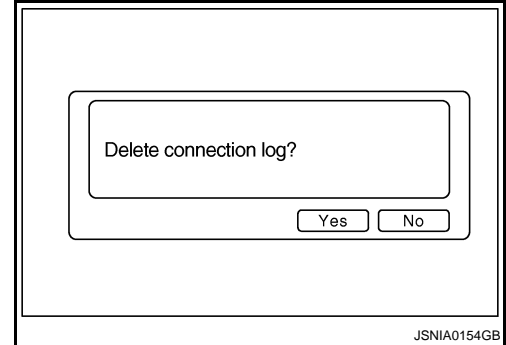
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Items	Status (Current)	Counter (Past)
C Rx(iPodAdapt-ITM)	OK / UNKWN	OK / 0 - 39
C Rx(iPodAudio-ITM)	OK / UNKWN	OK / 0 - 39

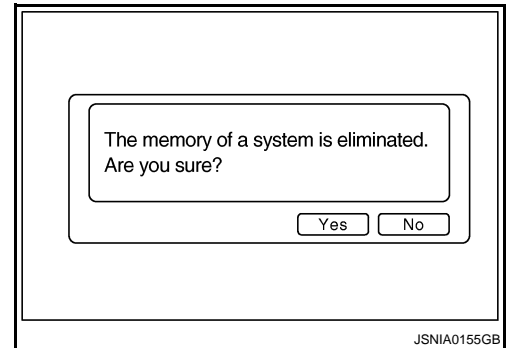
Delete Unit Connection Log

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



Initialize Settings

Initializes the AV control unit memory.



CONSULT-III Function (MULTI AV)

INFOID:000000004364438

CONSULT-III functions

CONSULT-III performs the following functions via communication with the 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 the 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 the 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 collectively.
- The current malfunction indicates "CRNT". The past malfunction indicates "PAST".
- The timing is displayed as "0" if any of the error codes [U1000], [U1010], [U1300] and [U1310] is detected. The counter increases by 1 if the condition is normal at the next ignition switch ON cycle.

Self-diagnosis Results Display Item

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Refer to AV-206, "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 the AV control unit. Refer to AV-313, "Removal and Installation" .
Control Unit FLASH-ROM [U1200]	AV control unit malfunction is detected.	
CAN CONT [U1216]		
FRONT DISP CONN [U1243]	When any one of the following items is detected: <ul style="list-style-type: none"> front display unit power supply and ground circuits are malfunctioning. serial communication circuits between AV control unit and front display unit are malfunctioning. serial communication signal between AV control unit and front display unit is malfunctioning. 	<ul style="list-style-type: none"> Front display unit power supply and ground circuits. Serial communication circuits between AV control unit and front display unit.
CAMERA CONT CONN [U1250]	Malfunction is detected in camera connection recognition circuit between AV control unit and camera control unit.	Camera-connection recognition circuit between AV control unit and camera control unit.
SAT CONN [U1255]	When any one of the following items is detected: <ul style="list-style-type: none"> satellite radio tuner power supply and ground circuits are malfunctioning. serial communication circuits between AV control unit and satellite radio tuner are malfunctioning. serial communication or request signal between AV control unit and satellite radio tuner is malfunctioning. request signal circuit between AV control unit and satellite radio tuner is malfunctioning. 	<ul style="list-style-type: none"> Satellite radio tuner power supply and ground circuits. Serial communication circuits between AV control unit and satellite radio tuner. Request signal circuit between AV control unit and satellite radio tuner.
HAND FREE CONN [U1256]	When any one of the following items is detected: <ul style="list-style-type: none"> TEL adapter unit power supply and ground circuits are malfunctioning. AV communication circuits between camera control unit and TEL adapter unit are malfunctioning. AV communication signal between AV control unit and TEL adapter unit is malfunctioning. 	<ul style="list-style-type: none"> TEL adapter unit power supply and ground circuits. AV communication circuits between camera control unit and TEL adapter unit. AV communication circuits between multifunction switch and TEL adapter unit. (without rear view camera models)
<ul style="list-style-type: none"> AV COMM CIRCUIT [U1300] 	When a malfunction occurs in communication signal of multi-AV system.	AV communication system.

NOTE:

*: Non-equipped item is not displayed.

DATA MONITOR

ALL SIGNALS

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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

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

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	The same as when "ALL SIGNALS" is selected.
PKB SIG	
ILLUM SIG	
IGN SIG	
REV SIG	

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

Diagnosis Description

INFOID:000000004291585

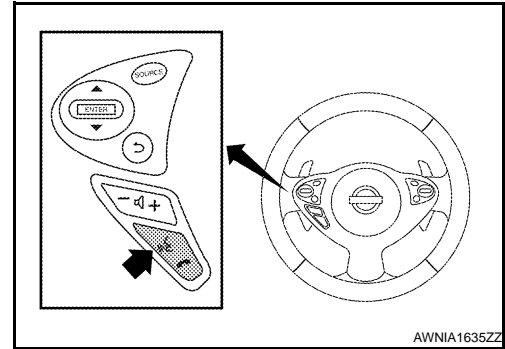
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

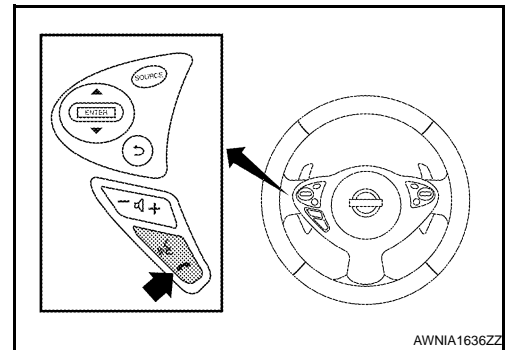
- Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

OPERATION PROCEDURE

1. Turn ignition switch to ACC or ON.
2. Wait for the Bluetooth system to complete initialization. This may take up to 10 seconds.
3. Press and hold the steering wheel audio control switch SEND button for at least 5 seconds. The Bluetooth system will begin to play a verbal prompt.



4. While the prompt is playing, press and hold the steering wheel audio control switch END button until you hear the "Diagnostics mode" prompt. The Bluetooth system will sound a 5-second beep.
5. While the beep is sounding, press and hold the steering wheel audio control switch END button again until you hear prompts.
6. The Bluetooth system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician. Refer to [AV-205, "Work Flow"](#).
7. After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails, refer to [AV-205, "Work Flow"](#).
8. Self-diagnosis mode is complete when the voice prompt says "All diagnostic functions completed".



Work Flow

INFOID:000000004291586

Failure Message	Action
"Internal failure"	Replace Bluetooth control unit. Refer to AV-79, "Removal and Installation" .
"Bluetooth antenna open"	<ol style="list-style-type: none"> 1. Inspect harness connection. 2. Replace Bluetooth antenna. Refer to AV-78, "Removal and Installation".
"Bluetooth antenna shorted"	
"Phone/Send for Hands Free System is stuck"	Check steering wheel audio control switches. Refer to AV-72, "Removal and Installation" .
"Phone/End for the Hands Free System is stuck"	
"Microphone test" (failed interactive test)	<ol style="list-style-type: none"> 1. Inspect harness between Bluetooth control unit and microphone. 2. Replace microphone. Refer to AV-77, "Removal and Installation".

U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:000000004277292

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 on 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.

DTC Logic

INFOID:000000004277293

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-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:000000004277294

1. PERFORM SELF DIAGNOSTIC

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

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to "LAN system". Refer to [LAN-15, "Trouble Diagnosis Flow Chart"](#).
NO >> Refer to GI section. Refer to [GI-39, "Intermittent Incident"](#).

U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

U1010 CONTROL UNIT (CAN)

Description

INFOID:000000004277295

Initial diagnosis of AV control unit.

DTC Logic

INFOID:000000004277296

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-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:000000004277297

1. REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit. Refer to [AV-313. "Removal and Installation"](#).

>> Inspection End.

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U1200 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

U1200 AV CONTROL UNIT

Description

INFOID:000000004277298

Replace the AV control unit if this DTC is displayed. Refer to [AV-313. "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• 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.• AV control unit includes audio function and vehicle information function.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004277299

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1200	Control Unit FLASH- ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	Replace AV control unit. Refer to AV-313. "Removal and Installation" .

U1216 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

U1216 AV CONTROL UNIT

Description

INFOID:000000004277300

Replace the AV control unit if this DTC is displayed. Refer to [AV-313, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• 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.• AV control unit includes audio function and vehicle information function.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004277301

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. Refer to AV-313, "Removal and Installation" .

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U1243 DISPLAY UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

U1243 DISPLAY UNIT

Description

INFOID:000000004277303

Part name	Description
DISPLAY UNIT	<ul style="list-style-type: none"> • Display image is controlled by the serial communication from AV control unit. • 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. • Outputs the synchronizing signals (HP and VP) to the AV control unit.

DTC Logic

INFOID:000000004277304

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1243	FRONT DISP CONN [U1243]	<ul style="list-style-type: none"> • Display unit power supply and ground circuit malfunction is detected. • Malfunction is detected on communication circuit between display unit and AV control unit. • Malfunction is detected on communication signal between display unit and AV control unit. 	<ul style="list-style-type: none"> • Display unit power supply and ground circuit. • Communication circuit between display unit and AV control unit.

Diagnosis Procedure

INFOID:000000004277305

1. CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuit. Refer to [AV-219, "DISPLAY UNIT : Diagnosis Procedure"](#).

Is inspection result OK?

YES >> GO TO 2.

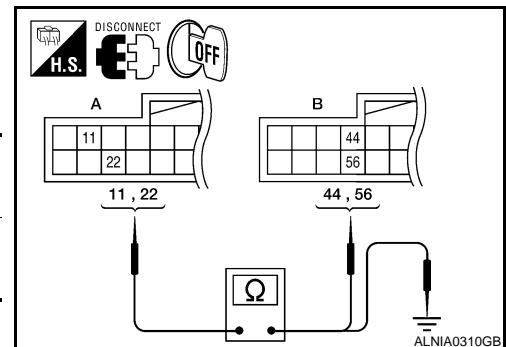
NO >> Repair malfunctioning parts.

2. CHECK CONTINUITY OF 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 M141 (A) terminals 11, 22 and AV control unit harness connector M44 (B) terminals 56, 44.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	11	M44	56	Yes
	22		44	

4. Check continuity between display unit harness connector M141 (A) terminals 11, 22 and ground.



A		—	Continuity
Connector	Terminal		
M141	11	Ground	No
	22		

Are continuity results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK COMMUNICATION SIGNAL

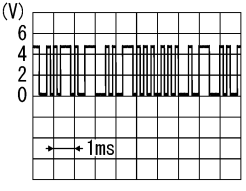
1. Connect display unit connector and AV control unit connector.
2. Turn ignition switch ON.

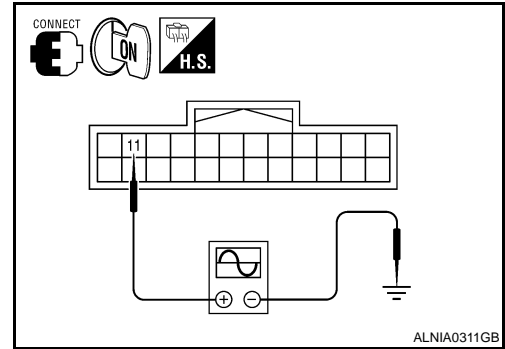
U1243 DISPLAY UNIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

< COMPONENT DIAGNOSIS >

3. Check signal between display unit harness connector M141 terminal 11 and ground with an oscilloscope or CONSULT-III.

(+)		(-)	Reference signal
Connector	Terminal		
M141	11	Ground	



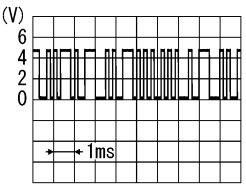
Are voltage readings as specified?

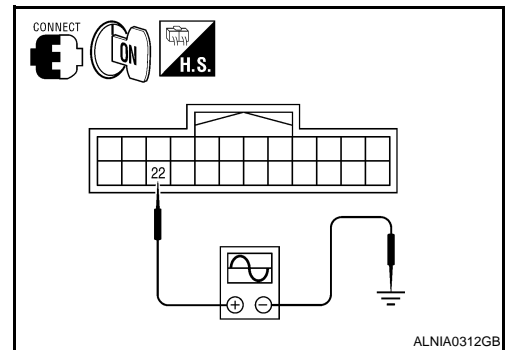
YES >> GO TO 4.

NO >> Replace AV control unit. Refer to [AV-313. "Removal and Installation"](#).

4. CHECK COMMUNICATION SIGNAL

- Check signal between display unit harness connector M141 terminal 22 and ground with an oscilloscope or CONSULT-III.

(+)		(-)	Reference signal
Connector	Terminal		
M141	22	Ground	



Are voltage readings as specified?

YES >> Inspection End.

NO >> Replace display unit. Refer to [AV-315. "Removal and Installation"](#).

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U1250 CAMERA CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

U1250 CAMERA CONTROL UNIT

Description

INFOID:000000004394085

Part name	Description
CAMERA CONTROL UNIT	<ul style="list-style-type: none">• Camera image signal is input from rear view camera. Camera image signal output to AV control unit.• Power (camera ON signal) is transmitted to rear view camera.• AV control unit recognizes the presence of camera system with camera connection recognition signal.• Camera control unit is connected via AV communication.

DTC Logic

INFOID:000000004394086

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

Diagnosis Procedure

INFOID:000000004394087

1. CHECK CAMERA-CONNECTION RECOGNITION SIGNAL CIRCUIT

1. 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	
M130	68	B60	14	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.

(+)		(-)	Voltage (Approx.)
AV control unit			
Connector	Terminal		
M130	68	Ground	5.0 V

Is the inspection result normal?

- YES >> Replace camera control unit.
NO >> Replace AV control unit.

U1255 SATELLITE RADIO TUNER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

U1255 SATELLITE RADIO TUNER

Description

INFOID:000000004394092

Part name	Description
SATELLITE RADIO TUNER	<ul style="list-style-type: none"> Inputs the satellite radio signal from satellite radio antenna and outputs the sound signal to the AV control unit. It is controlled with the AV control unit and serial communication (communication signal and request signal).

DTC Logic

INFOID:000000004394093

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1255	SAT CONN [U1255]	When either one of the following items are detected: <ul style="list-style-type: none"> satellite radio tuner power supply and ground circuits are malfunctioning. serial communication circuits between AV control unit and satellite radio tuner are malfunctioning. serial communication or request signal between AV control unit and satellite radio tuner is malfunctioning. request signal circuit between AV control unit and satellite radio tuner is malfunctioning. 	<ul style="list-style-type: none"> Satellite radio tuner power supply and ground circuits. Serial communication circuits between AV control unit and satellite radio tuner. Request signal circuit between AV control unit and satellite radio tuner.

Diagnosis Procedure

INFOID:000000004394094

1. CHECK SATELLITE RADIO TUNER POWER SUPPLY AND GROUND CIRCUIT

Check satellite radio tuner power supply and ground circuit. Refer to [AV-222, "SATELLITE RADIO TUNER : Diagnosis Procedure"](#).

Is the inspection result normal?

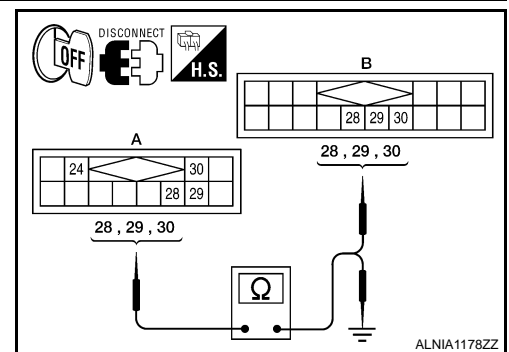
YES >> GO TO 2.

NO >> Repair malfunctioning parts.

2. CHECK CONTINUITY COMMUNICATION CIRCUIT AND REQUEST SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect AV control unit connector M43 and satellite radio tuner connector B111.
- Check continuity between AV control unit harness connector M43 (A) and satellite radio tuner harness connector B111 (B).

A		B		Continuity
Connector	Terminals	Connector	Terminals	
M43	28	B111	28	Yes
	29		29	
	30		30	



- Check continuity between AV control unit harness connector M43 (A) and ground.

A		—	Continuity
Connector	Terminals		
M43	28	Ground	No
	29		
	30		

Is the inspection result normal?

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U1255 SATELLITE RADIO TUNER

[BOSE W/ COLOR DISPLAY W/O NAVI]

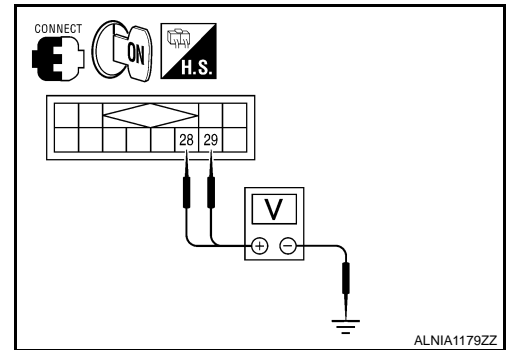
< COMPONENT DIAGNOSIS >

- YES >> GO TO 3.
 NO >> Repair harness or connector.

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 M43 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminals		
M43	28	Ground	7.0V
	29		



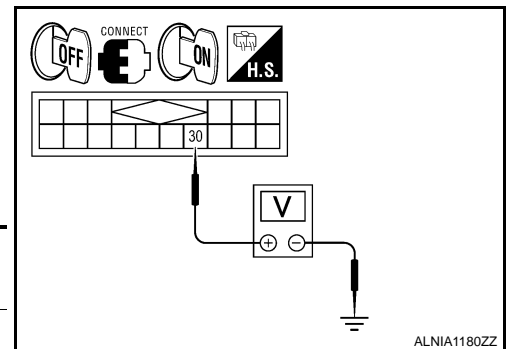
Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Replace AV control unit. Refer to [AV-218, "AV CONTROL UNIT : Diagnosis Procedure"](#).

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 terminal ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
B111	30	Ground	7.0V



Is the inspection result normal?

- YES >> Inspection End.
 NO >> Replace satellite radio tuner. Refer to [AV-322, "Removal and Installation"](#).

U1256 HAND FREE CONN

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

U1256 HAND FREE CONN

Description

INFOID:000000004277312

U1256 is indicated when malfunction occurs in communication signal of multi AV system. 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
U1256	<ul style="list-style-type: none">HAND FREE CONN [U1256]	<ul style="list-style-type: none">Bluetooth control unit power supply and ground circuit malfunction is detected.A malfunction is detected in communication circuit between AV control unit and Bluetooth control unit.A malfunction is detected in communication signal between AV control unit and Bluetooth control unit.	<ul style="list-style-type: none">Bluetooth control unit power supply and ground circuits.Communication circuit between AV control unit and Bluetooth control unit.

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U1300 AV COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

U1300 AV COMM CIRCUIT

Description

INFOID:000000004277313

U1300 is indicated when malfunction occurs in communication signal of multi AV system. Determine the possible malfunction cause from the table below.

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1300	<ul style="list-style-type: none">AV COMM CIRCUIT [U1300]	When AV control unit is not transmitting or receiving AV communication signal for 2 seconds or more.	AV communication system.

U1310 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

U1310 AV CONTROL UNIT

Description

INFOID:000000004277314

Replace the AV control unit if this DTC is displayed. Refer to [AV-218. "AV CONTROL UNIT : Diagnosis Procedure"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• 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.• AV control unit includes audio function and vehicle information function.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004277315

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. Refer to AV-218. "AV CONTROL UNIT : Diagnosis Procedure" .

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AV

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:000000004277316

1. CHECK FUSES

Check that the following fuses of the AV control unit are not blown.

Unit	Terminals	Signal name	Fuse No.
AV control unit	19	Battery power	24
	7	Ignition switch ACC or ON	17
	104	Ignition switch ON or START	3

Are the fuses OK?

YES >> GO TO 2.

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. POWER SUPPLY CIRCUIT CHECK

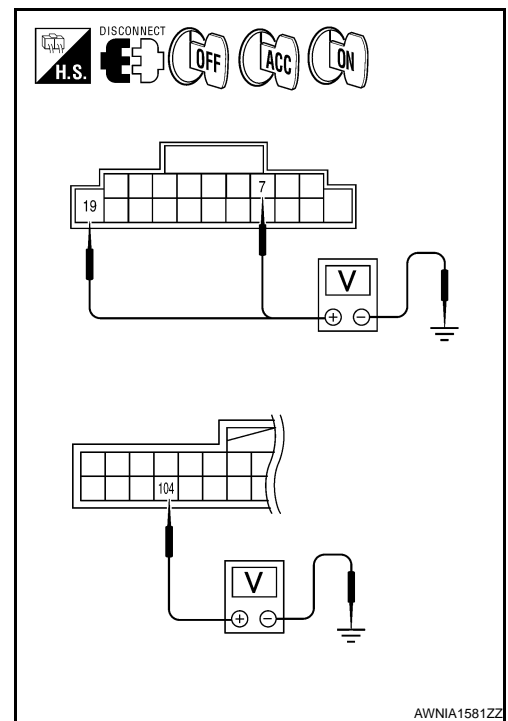
1. Disconnect AV control unit connectors M42 and M46.
2. Check voltage between the AV control unit connectors M42 and M46 and ground.

(+) Connector		Terminal	(-)	OFF	ACC	ON
M42	7					
M42	19	Ground	Battery voltage	Battery voltage	Battery voltage	
M46	104	Ground	0V	0V	Battery voltage	

Are the voltage results as specified?

YES >> GO TO 3.

- NO >>
- Check connector housings for disconnected or loose terminals.
 - Repair harness or connector.



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3. GROUND CIRCUIT CHECK

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

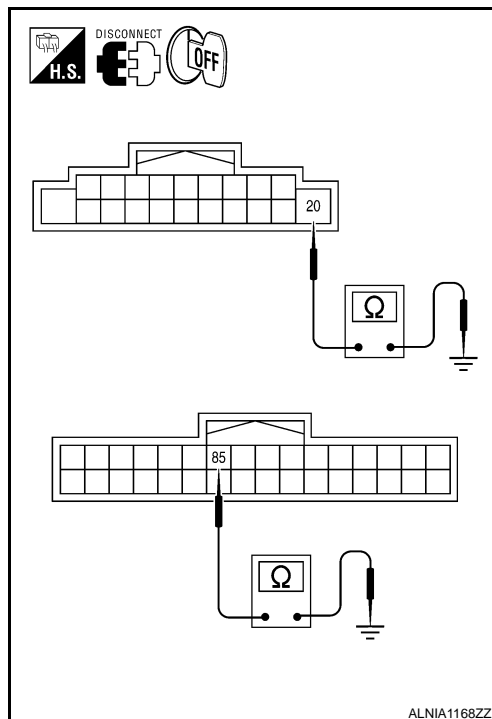
< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Check continuity between AV control unit harness connector and ground.

Connector	Terminal	—	Continuity
M42	20	Ground	Yes
	85		

Are the inspection results OK?

- YES >> Inspection End.
 NO >> Repair AV control unit ground.



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DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:000000004277317

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch to ACC.
2. Check voltage between display unit harness connector M141 and ground.

(+)		(-)	Value (Approx.)
Connector	Terminal		
M141	2	Ground	9V
	3		

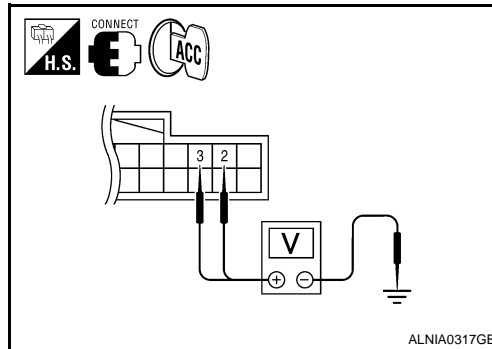
Does specified voltage exist?

- YES >> GO TO 3.
 NO >> GO TO 2.

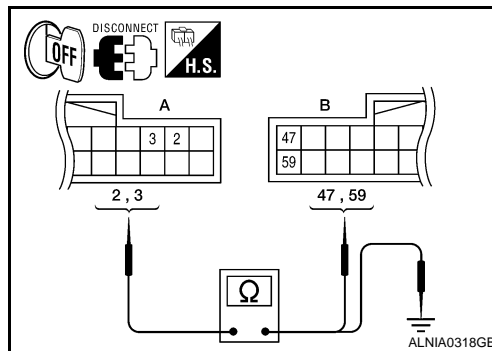
2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the display unit connector M141 and the AV control unit connector M44.
3. Check continuity between the display unit harness connector M141 (A) and the AV control unit connector M44 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	2	M44	59	Yes
	3		47	



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ALNIA0318GB

4. Check continuity between the display unit harness connector M141 (A) and ground.

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AV

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

A		—	Continuity
Connector	Terminal		
M141	2	Ground	No
	3		

Are continuity results as specified?

YES >> Check AV control unit power and ground supply. Refer to [AV-218, "AV CONTROL UNIT : Diagnosis Procedure"](#).

NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

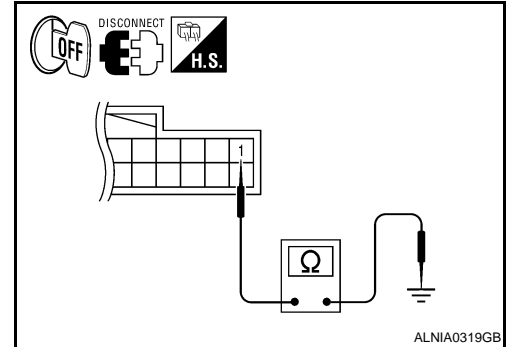
1. Turn ignition switch OFF.
2. Disconnect display unit connector.
3. Check continuity between display unit harness connector and ground.

Connector	Terminal	—	Continuity
M141	1	Ground	Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.



A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure

INFOID:000000004277318

1.CHECK FUSE

Check that the fuse of the AC and AV switch assembly is not blown.

Unit	Terminal	Signal name	Fuse No.
A/C and AV switch assembly	3	Ignition switch ACC or ON	17

Is the fuse OK?

YES >> GO TO 2.

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect A/C and AV switch assembly connector M98.
2. Check voltage between the A/C and AV switch assembly connector M98 and ground.

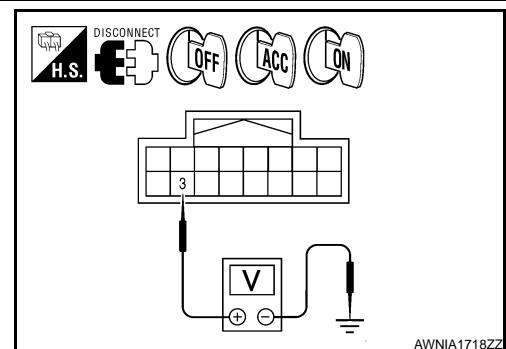
(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M98	3	Ground	0V	Battery voltage	Battery voltage

Are the voltage results as specified?

YES >> GO TO 3.

NO >> • Check connector housings for disconnected or loose terminals.

- Repair harness or connector.



3.GROUND CIRCUIT CHECK

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

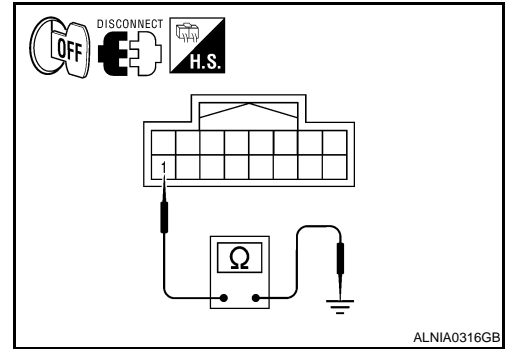
< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Check continuity between A/C and AV switch assembly harness connector M98 and ground.

Connector	Terminal	—	Continuity
M98	1	Ground	Yes

Are the continuity results as specified?

- YES >> Inspection End.
 NO >> Repair harness or ground.



BOSE SPEAKER AMP

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:000000004277319

1. CHECK FUSE

Check that the BOSE speaker amp. fuse is not blown.

Unit	Terminal	Signal name	Fuse No.
BOSE speaker amp.	11	Battery power	26
	10		25

Are the fuses OK?

- YES >> GO TO 2.
 NO >> Be sure to eliminate cause of malfunction before installing new fuse.

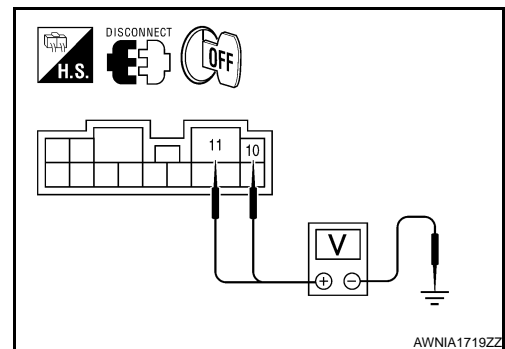
2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BOSE speaker amp. connector.
3. Check voltage between BOSE speaker amp. harness connector B110 terminal 10, 11 and ground.

(+)		(-)	Voltage (approx.)
Connector	Terminal		
B110	10	Ground	Battery voltage
	11		

Is battery voltage present?

- YES >> GO TO 3.
 NO >> Check harness between BOSE speaker amp. and fuse.



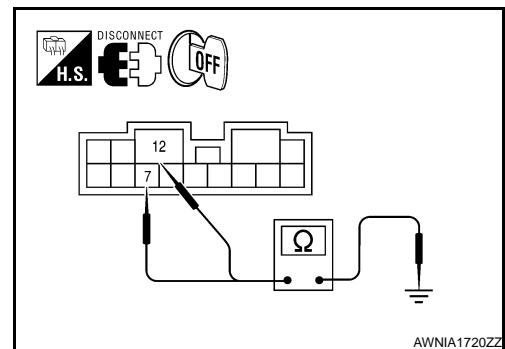
3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BOSE speaker amp. connector.
3. Check continuity between BOSE speaker amp. harness connector B110 terminal 7, 12 and ground.

(+)		(-)	Continuity
Connector	Terminal		
B110	7	Ground	Yes
	12		

Does continuity exist?

- YES >> Inspection End.
 NO >> Repair harness or connector.



SATELLITE RADIO TUNER

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AV

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000004277321

1.CHECK FUSES

Check that the following fuses of the satellite radio tuner (factory installed) are not blown.

Unit	Terminals	Signal name	Fuse No.
Satellite radio tuner (factory installed)	32	Battery power	24
	36	Ignition switch ACC or ON	17

Are the fuses OK?

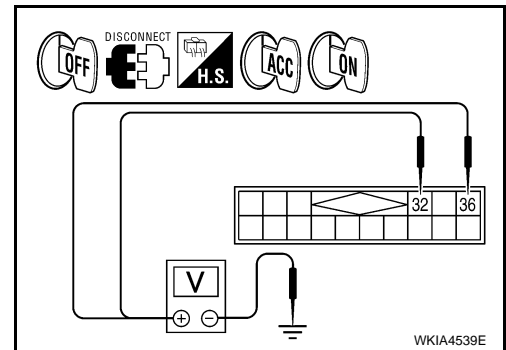
YES >> GO TO 2.

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

- Turn ignition switch OFF.
- Disconnect satellite radio tuner (factory installed) connector B111.
- Check voltage between the satellite radio tuner (factory installed) and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
B111	32	Ground	Battery voltage	Battery voltage	Battery voltage
	36		0V	Battery voltage	Battery voltage



Are the voltage readings as specified?

YES >> GO TO 3.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.GROUND CIRCUIT CHECK

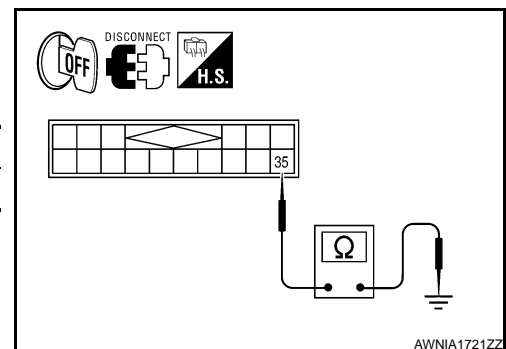
- Turn ignition switch OFF.
- Check continuity between satellite radio tuner (factory installed) harness connector and ground.

Connector	Terminal	—	Continuity
B111	35	Ground	Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair satellite radio tuner (factory installed) harness or connector.



REAR VIEW CAMERA CONTROL UNIT

REAR VIEW CAMERA CONTROL UNIT : Diagnosis Procedure

INFOID:000000004277322

1.CHECK FUSE

Check that the following fuses of the rear view camera control unit are not blown.

Unit	Terminals	Signal name	Fuse No.
Rear view camera control unit	32	Battery power	24
	30	Ignition switch ACC or ON	17

Are the fuses OK?

YES >> GO TO 2.

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

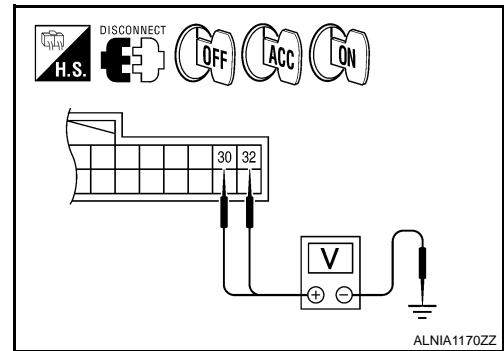
< COMPONENT DIAGNOSIS >

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera control unit connector B119.
3. Check voltage between rear view camera control unit harness connector B119 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
B119	32	Ground	Battery voltage	Battery voltage	Battery voltage
	30		0V	Battery voltage	Battery voltage



Are the voltage readings as specified?

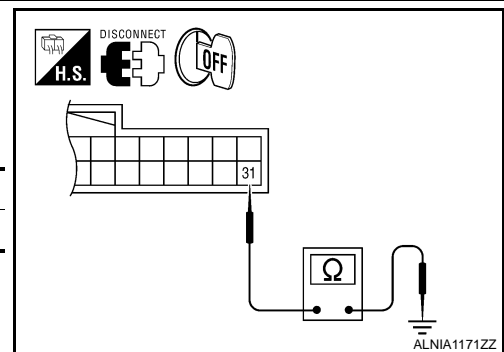
YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera control unit connector.
3. Check continuity between rear view camera control unit harness connector B119 terminal 31 and ground.

Connector	Terminal	—	Continuity
B119	31	Ground	Yes



Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

REAR VIEW CAMERA

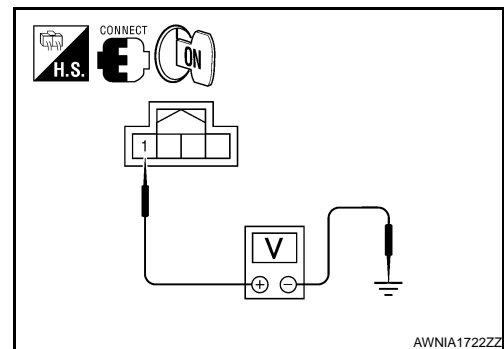
REAR VIEW CAMERA : Diagnosis Procedure

INFOID:000000004277323

1.CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA SIDE)

1. Turn ignition switch ON.
2. Shift transmission into Reverse.
3. Check voltage between rear view camera harness connector T101 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
T101	1	Ground	Reverse	6V



Is voltage reading approximately 6 volts?

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

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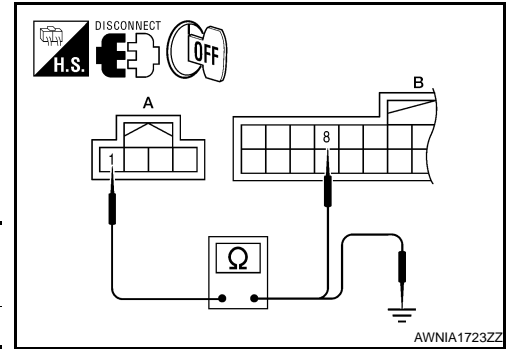
POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

1. Turn ignition switch OFF.
2. Disconnect rear view camera and rear view camera control unit connectors.
3. Check continuity between rear view camera harness connector T101 (A) terminal 1 and rear view camera control unit harness connector B119 (B) terminal 8.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
T101	1	B119	8	Yes



4. Check continuity between rear view camera harness connector T101 (A) terminal 1 and ground.

A		—	Continuity
Connector	Terminal		
T101	1	Ground	No

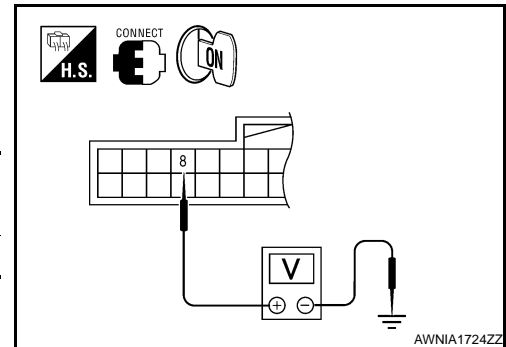
Are continuity test results as specified?

- YES >> GO TO 3.
NO >> Repair harness or connector.

3.CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA CONTROL UNIT SIDE)

1. Connect rear view camera control unit harness connector.
2. Turn ignition switch ON.
3. Check voltage between rear view camera control unit harness connector B119 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
B119	8	Ground	Reverse	6V



Is voltage reading approximately 6 volts?

- YES >> Inspection End.
NO >> Replace rear view camera control unit. Refer to [AV-506](#).
["Removal and Installation"](#).

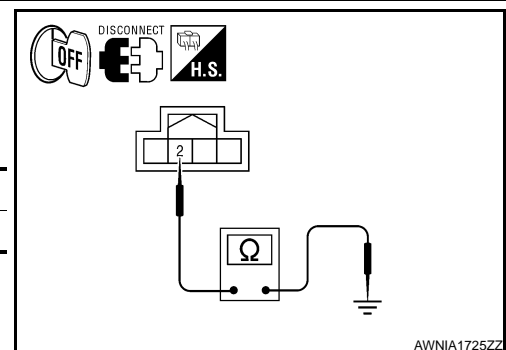
4.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera harness connector.
3. Check continuity between rear view camera harness connector T101 terminal 2 and ground.

Connector	Terminal	—	Continuity
T101	2	Ground	Yes

Does continuity exist?

- YES >> Inspection End.
NO >> Repair harness or connector.



BLUETOOTH CONTROL UNIT

BLUETOOTH CONTROL UNIT : Diagnosis Procedure

INFOID:000000004277326

1.CHECK FUSE

Check that the following fuses of the Bluetooth control unit are not blown.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Power source	Fuse No.
Battery	24
Ignition switch ACC or ON	17
Ignition switch ON or START	3

Is inspection result OK?

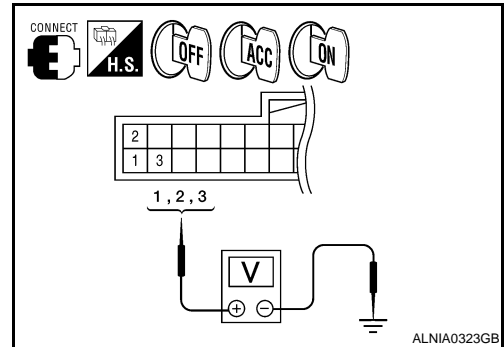
YES >> GO TO 2.

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between Bluetooth control unit harness connector B126 and ground.

(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
B126	1	Ground	OFF	Battery voltage
	2		ACC	
	3		ON	



Is battery voltage present as specified?

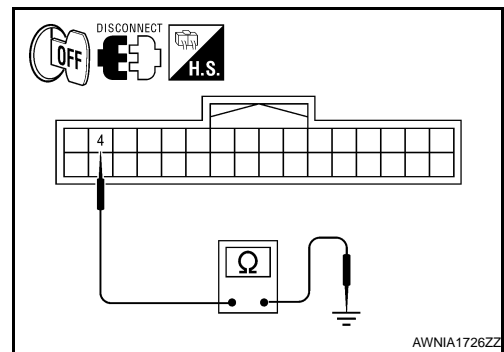
YES >> GO TO 3.

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit connector.
3. Check continuity between Bluetooth control unit harness connector B126 and ground.

Connector.	Terminal	—	Continuity
B126	4	Ground	Yes



Are continuity results as specified?

YES >> Inspection End.

NO >> Repair harness or connector.

MICROPHONE

MICROPHONE : Diagnosis Procedure

INFOID:000000004277327

1.CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

1. Turn ignition switch ON.
2. Check voltage between microphone harness connector R7 terminal 4 and ground.

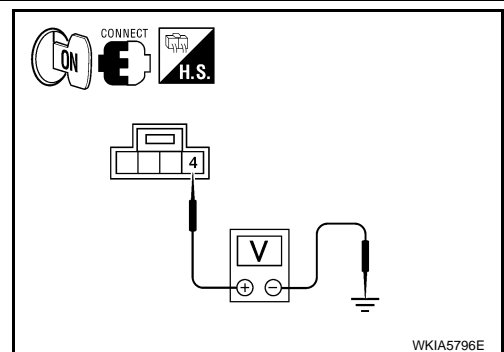
(+)		(-)	Value (Approx.)
Connector	Terminal		
R7	4	Ground	5V

Is approximately 5V present?

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)



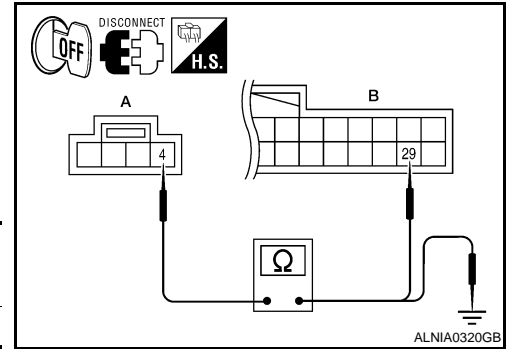
POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect microphone and Bluetooth control unit harness connectors.
3. Check continuity between microphone harness connector R7 (A) terminal 4 and Bluetooth control unit harness connector B126 (B) terminal 29.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	4	B126	29	Yes



4. Check continuity between microphone harness connector R7 (A) terminal 4 and ground.

A		—	Continuity
Connector	Terminal		
R7	4	Ground	No

Are the continuity test results as specified?

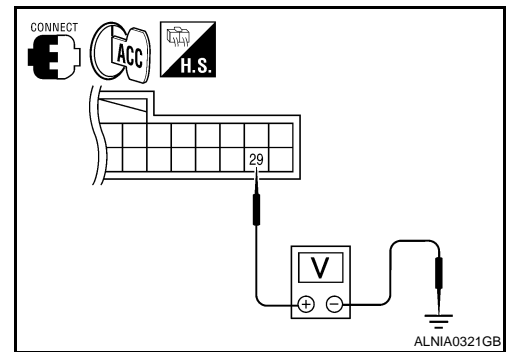
YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK POWER SUPPLY CIRCUIT (BLUETOOTH CONTROL UNIT SIDE)

1. Connect Bluetooth control unit harness connector.
2. Turn ignition switch to ACC.
3. Check voltage between Bluetooth control unit harness connector B126 terminal 29 and ground.

(+)		(-)	Value (Approx.)
Connector	Terminal		
B126	29	Ground	5V



Is approximately 5V present?

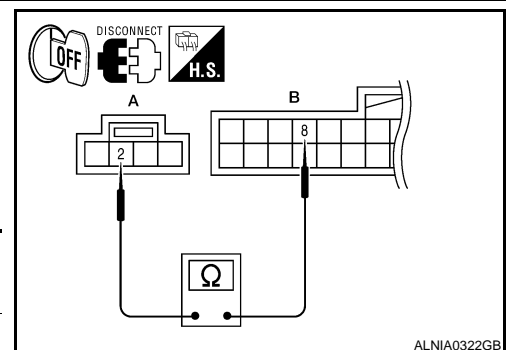
YES >> Go to 4.

NO >> Replace Bluetooth control unit. Refer to [AV-331](#), "Removal and Installation".

4. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect microphone harness connector R7 and Bluetooth control unit harness connector B126.
3. Check continuity between microphone harness connector R7 (A) terminal 2 and Bluetooth control unit harness connector B126 (B) terminal 8.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	2	B126	8	Yes



Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

RGB (R: RED) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

RGB (R: RED) SIGNAL CIRCUIT

Description

INFOID:000000004277328

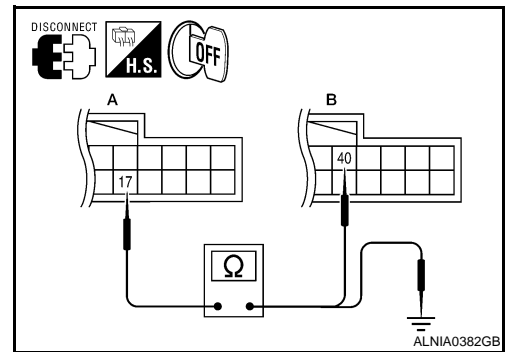
Transmit the image displayed with AV control unit with RGB signal to the display unit.

Diagnosis Procedure

INFOID:000000004277329

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M44.
3. Check continuity between display unit harness connector M141 (A) terminal 17 and AV control unit harness connector M44 (B) terminal 40.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	17	M44	40	Yes

4. Check continuity between display unit harness connector M141 (A) terminal 17 and ground.

A		—	Continuity
Connector	Terminal		
M141	17	Ground	No

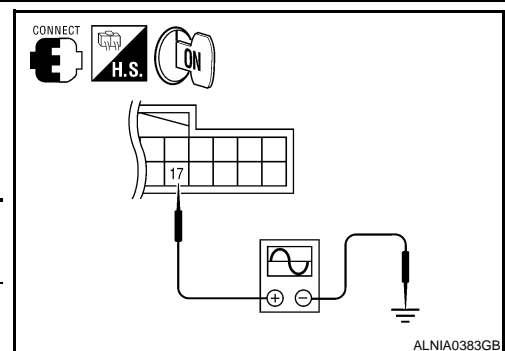
Are the continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB (R: RED) SIGNAL

1. Connect display unit connector M141 and AV control unit connector M44.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M141 terminal 17 and ground.



(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M141	17	Ground	Receive audio signal	<p>SKIB2238J</p>

Are the voltage readings as specified?

YES >> Replace display unit. Refer to [AV-315, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-313, "Removal and Installation"](#).

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RGB (G: GREEN) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

RGB (G: GREEN) SIGNAL CIRCUIT

Description

INFOID:000000004277330

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

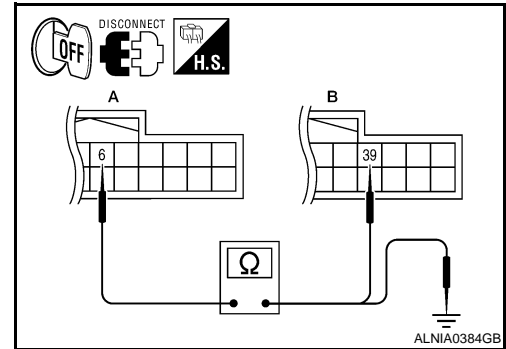
Diagnosis Procedure

INFOID:000000004277331

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M44.
3. Check continuity between display unit harness connector M141 (A) terminal 6 and AV control unit harness connector M44 (B) terminal 39.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	6	M44	39	Yes



4. Check continuity between display unit harness connector M141 (A) terminal 6 and ground.

A		—	Continuity
Connector	Terminal		
M141	6	Ground	No

Are the continuity results as specified?

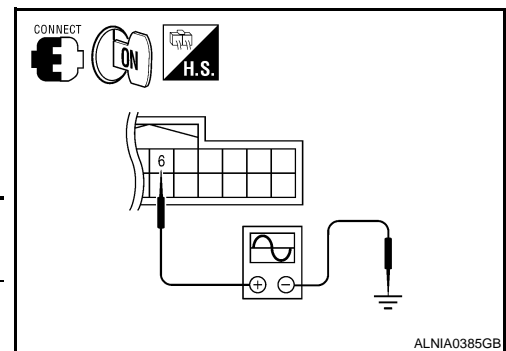
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB (G: GREEN) SIGNAL

1. Connect display unit connector M141 and AV control unit connector M44.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M141 terminal 6 and ground.

(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M141	6	Ground	Receive audio signal	



Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-315, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-313, "Removal and Installation"](#).

RGB (B: BLUE) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

RGB (B: BLUE) SIGNAL CIRCUIT

Description

INFOID:000000004277332

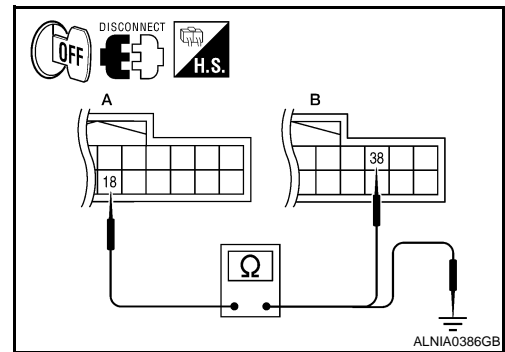
Transmit the image displayed with AV control unit with RGB signal to the display unit.

Diagnosis Procedure

INFOID:000000004277333

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M44.
3. Check continuity between display unit harness connector M141 (A) terminal 18 and AV control unit harness connector M44 (B) terminal 38.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	18	M44	38	Yes

4. Check continuity between display unit harness connector M141 (A) terminal 18 and ground.

A		—	Continuity
Connector	Terminal		
M141	18	Ground	No

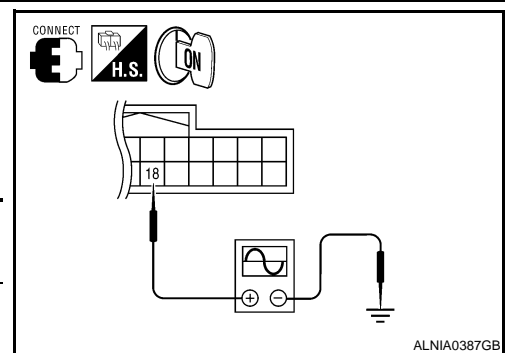
Are continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB (B: BLUE) SIGNAL

1. Connect display unit connector M141 and AV control unit connector M44.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M141 terminal 18 and ground.



(+) Connector		(-) Terminal	Condition	Reference signal
M141	18	Ground		

Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-315, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-313, "Removal and Installation"](#).

RGB SYNCHRONIZING SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

RGB SYNCHRONIZING SIGNAL CIRCUIT

Description

INFOID:000000004277334

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

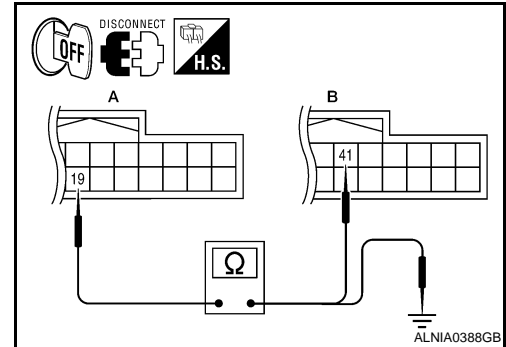
Diagnosis Procedure

INFOID:000000004277335

1. CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M44.
3. Check continuity between display unit harness connector M141 (A) terminal 19 and AV control unit harness connector M44 (B) terminal 41.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	19	M44	41	Yes



4. Check continuity between display unit harness connector M141 (A) terminal 19 and ground.

A		—	Continuity
Connector	Terminal		
M141	19	Ground	No

Are continuity results as specified?

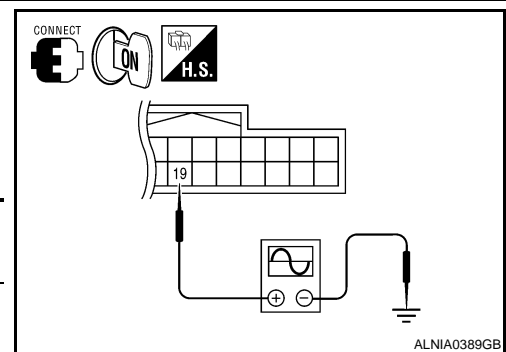
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB SYNCHRONIZING SIGNAL

1. Connect display unit connector M141 and AV control unit connector M44.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M141 terminal 19 and ground.

(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M141	19	Ground	Receive audio signal	



Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-315, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-313, "Removal and Installation"](#).

RGB AREA (YS) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

RGB AREA (YS) SIGNAL CIRCUIT

Description

INFOID:000000004277336

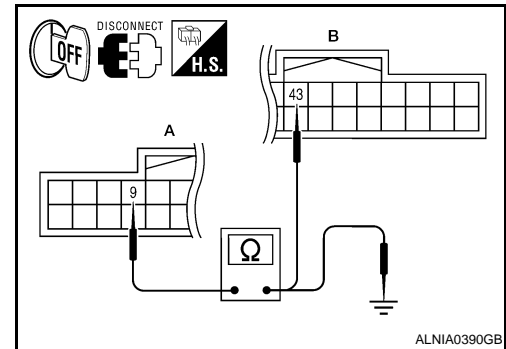
Transmits the display area of RGB image displayed by AV control unit with RGB area (YS) signal to display unit.

Diagnosis Procedure

INFOID:000000004277337

1. CHECK CONTINUITY RGB AREA (YS) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M44.
3. Check continuity between display unit harness connector M141 (A) terminal 9 and AV control unit harness connector M44 (B) terminal 43.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	9	M44	43	Yes

4. Check continuity between display unit harness connector M141 (A) terminal 9 and ground.

A		—	Continuity
Connector	Terminal		
M141	9	Ground	No

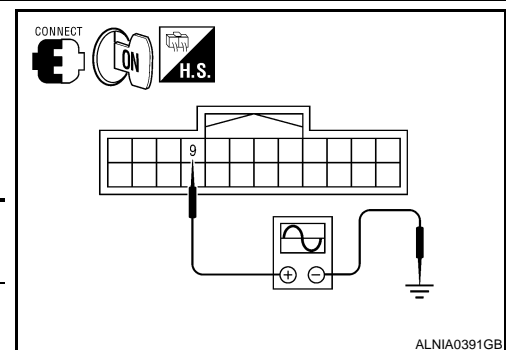
Are continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB SYNCHRONIZING SIGNAL

1. Connect display unit connector M141 and AV control unit connector M44.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M141 terminal 9 and ground.



(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M141	9	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-315, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-313, "Removal and Installation"](#).

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Description

INFOID:000000004277338

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.

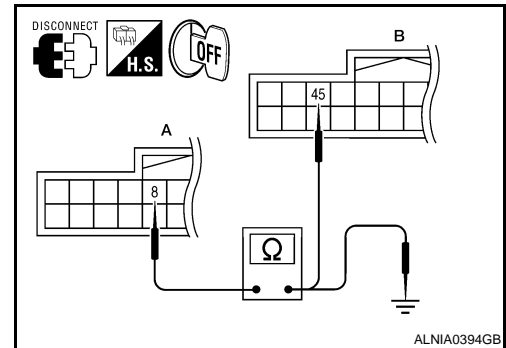
Diagnosis Procedure

INFOID:000000004277339

1. CHECK CONTINUITY HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M44.
3. Check continuity between display unit harness connector M141 (A) terminal 8 and AV control unit harness connector M44 (B) terminal 45.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	8	M44	45	Yes



4. Check continuity between display unit harness connector M141 (A) terminal 8 and ground.

A		—	Continuity
Connector	Terminal		
M141	8	Ground	No

Are continuity results as specified?

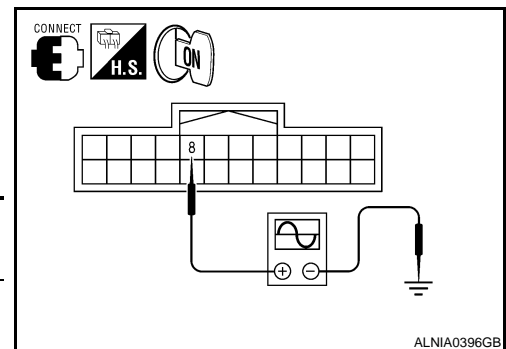
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

1. Connect display unit connector M141 and AV control unit connector M44.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M141 terminal 8 and ground.

(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M141	8	Ground	Receive audio signal	



Are voltage readings as specified?

YES >> Replace AV control unit. Refer to [AV-313. "Removal and Installation"](#).

NO >> Replace display unit. Refer to [AV-315. "Removal and Installation"](#).

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description

INFOID:000000004277340

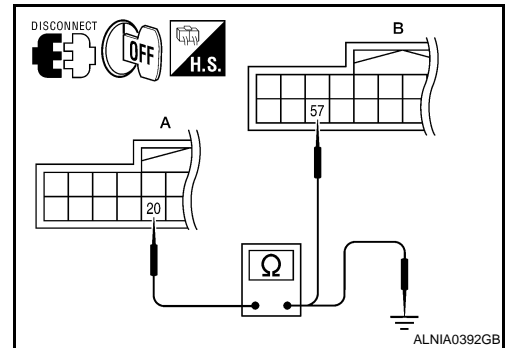
In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit, such as the image quality adjusting menu, etc.

Diagnosis Procedure

INFOID:000000004277341

1. CHECK CONTINUITY VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M44.
3. Check continuity between display unit harness connector M141 (A) terminal 20 and AV control unit harness connector M44 (B) terminal 57.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	20	M44	57	Yes

4. Check continuity between display unit harness connector M141 (A) terminal 20 and ground.

A		—	Continuity
Connector	Terminal		
M141	20	Ground	No

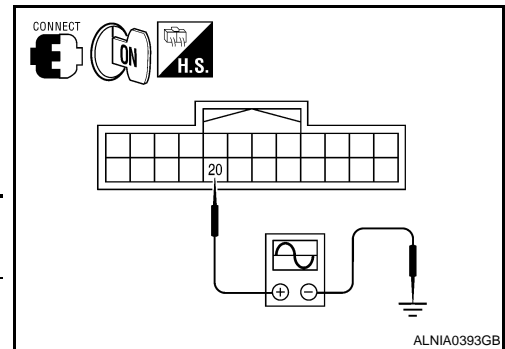
Are continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

1. Connect display unit connector M141 and AV control unit connector M44.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M141 terminal 20 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M141	20	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to [AV-313. "Removal and Installation"](#).

NO >> Replace display unit. Refer to [AV-315. "Removal and Installation"](#).

FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

FRONT DOOR SPEAKER

Description

INFOID:000000004364439

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the front door speakers using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004364440

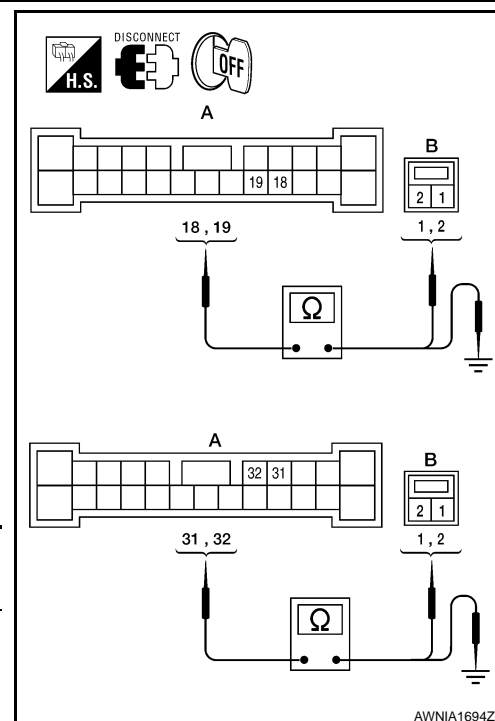
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B109 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connector B109 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B109	18	D3	1	Yes
	19		2	
	31	D103	1	
	32		2	

3. Check continuity between BOSE speaker amp. harness connector B109 (A) and ground.

A		B	Continuity
Connector	Terminal		
B109	18	Ground	No
	19		
	31		
	32		



Are continuity test results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

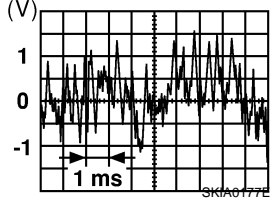
2. FRONT DOOR SPEAKER SIGNAL CHECK

FRONT DOOR SPEAKER

[BOSE W/ COLOR DISPLAY W/O NAVI]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connector B109 and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B109 terminals with CONSULT-III or oscilloscope.

Conne- tor	Terminal		Condition	Reference signal
	(+)	(-)		
B109	18	19	Receive audio sig- nal	
	31	32		

Is audio signal voltage as specified?

- YES >> Replace suspect speaker. Refer to [AV-318. "Removal and Installation"](#).
- NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M47 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M47	113	B109	35	Yes
	119		36	
	109		33	
	115		34	

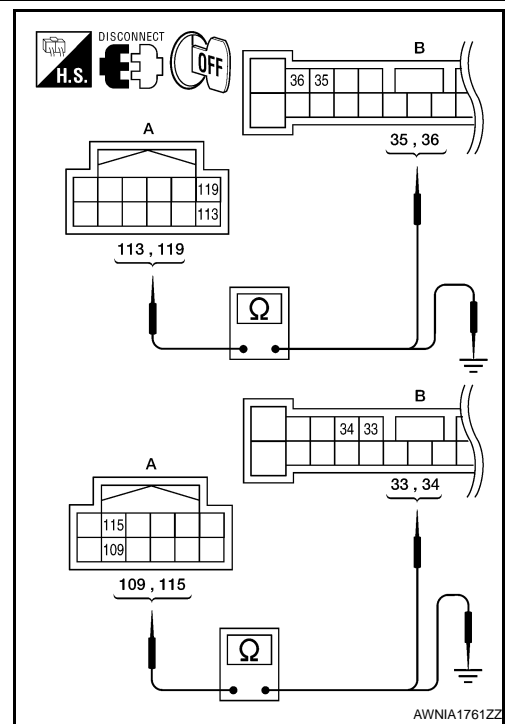
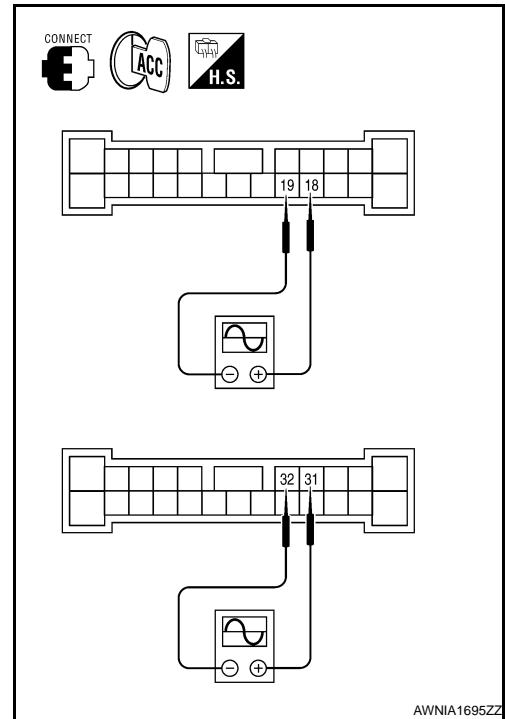
3. Check continuity between AV control unit harness connector M47 (A) and ground.

A		—	Continuity
Connector	Terminal		
M47	113	Ground	No
	119		
	109		
	115		

Are continuity test results as specified?

- YES >> GO TO 4.
- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. FRONT DOOR SPEAKER SIGNAL CHECK



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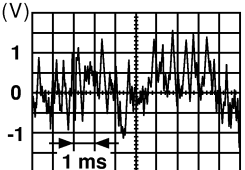
AV

FRONT DOOR SPEAKER

[BOSE W/ COLOR DISPLAY W/O NAVI]

< COMPONENT DIAGNOSIS >

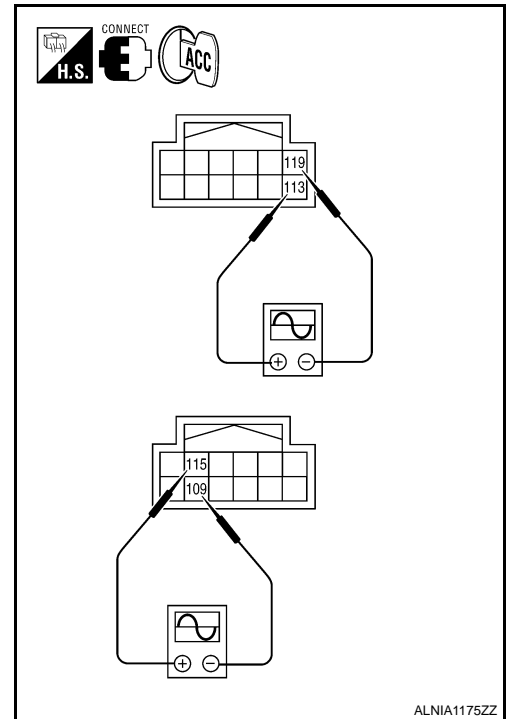
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M47	113	119	Receive audio signal	
	109	115		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-321, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-313, "Removal and Installation"](#).



ALNIA1175ZZ

TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

TWEETER

Description

INFOID:000000004364441

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the tweeters using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004364442

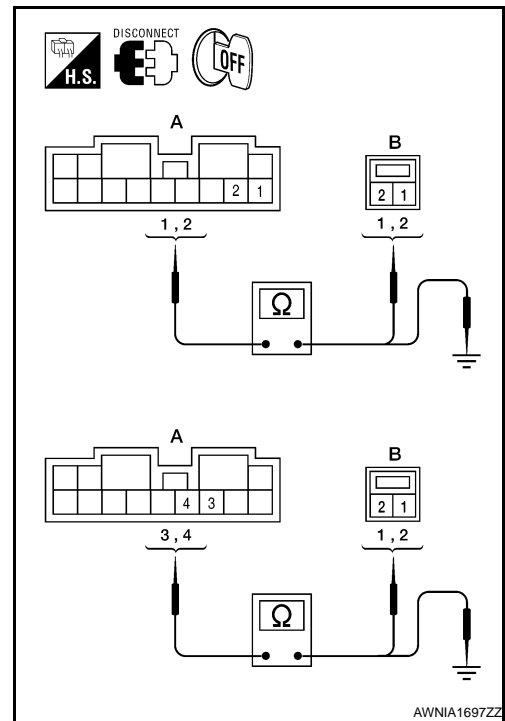
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B110 and suspect tweeter connector.
2. Check continuity between BOSE speaker amp. harness connector B110 (A) and suspect tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B110	1	M51	1	Yes
	2		2	
	4	M52	1	
	3		2	

3. Check continuity between BOSE speaker amp. harness connector B110 (A) and ground.

A		—	Continuity
Connector	Terminal		
B110	1	Ground	No
	2		
	4		
	3		



Are continuity test results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2. TWEETER SIGNAL CHECK

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AV

TWEETER

[BOSE W/ COLOR DISPLAY W/O NAVI]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connector B110 and suspect tweeter connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B110 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B110	1	2	Receive audio signal	
	4	3		

SKIA0177E

Are the audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to [AV-159, "Removal and Installation"](#).

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M47 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M47	113	B109	35	Yes
	119		36	
	109		33	
	115		34	

3. Check continuity between AV control unit harness connector M47 (A) and ground.

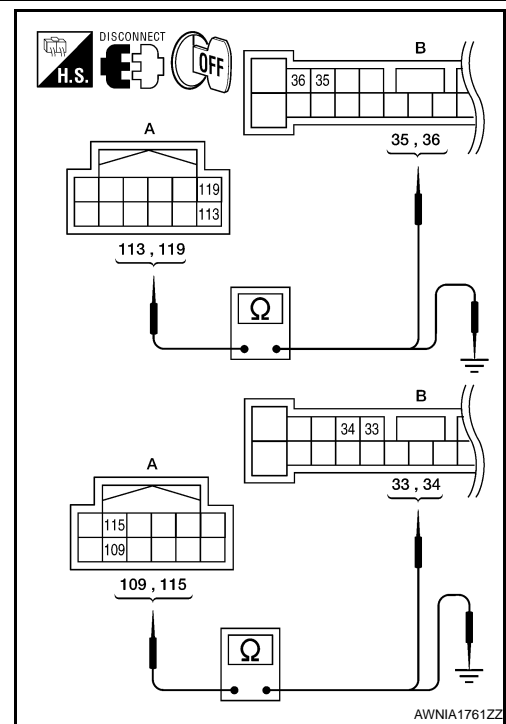
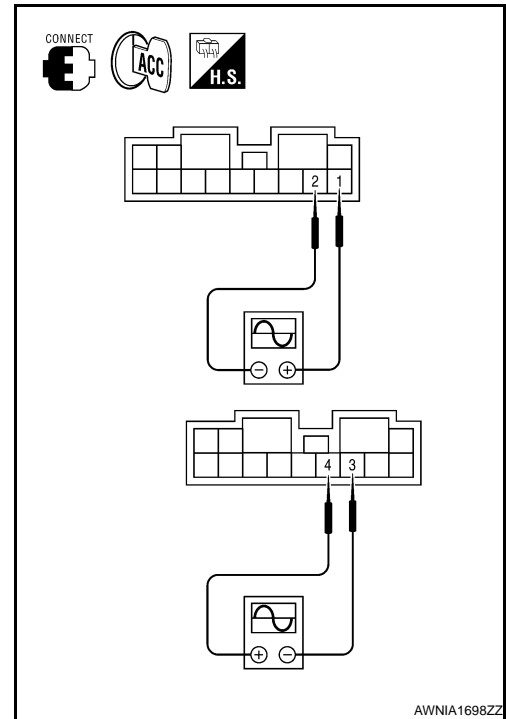
A		—	Continuity
Connector	Terminal		
M47	113	Ground	No
	119		
	109		
	115		

Are continuity test results as specified?

YES >> GO TO 4.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. TWEETER SIGNAL CHECK

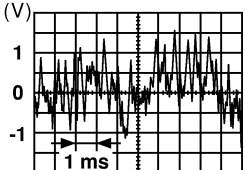


TWEETER

[BOSE W/ COLOR DISPLAY W/O NAVI]

< COMPONENT DIAGNOSIS >

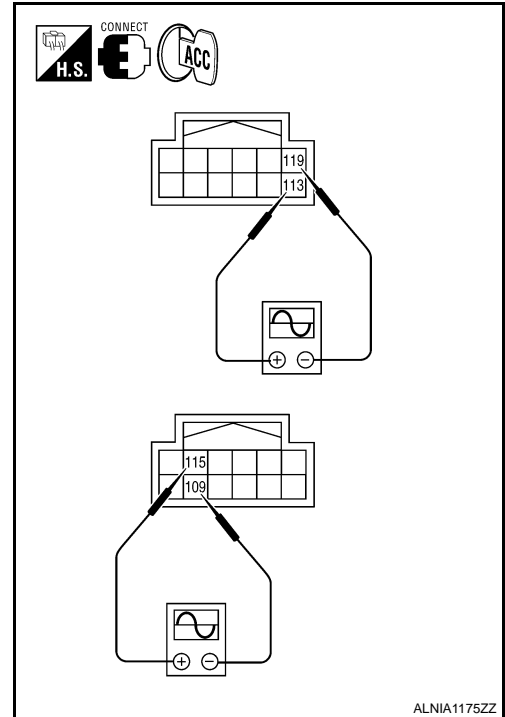
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M47	113	119	Receive audio signal	
	109	115		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-164, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-156, "Removal and Installation"](#).



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AV

CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

CENTER SPEAKER

Description

INFOID:000000004364443

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the center speaker using the audio signal circuits.

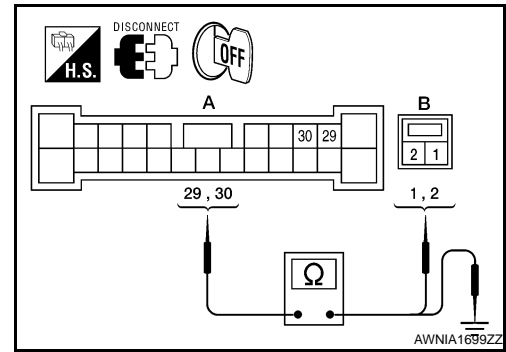
Diagnosis Procedure

INFOID:000000004364444

1.HARNES CHECK

1. Disconnect BOSE speaker amp. connector B109 and center speaker connector M130.
2. Check continuity between BOSE speaker amp. harness connector B109 (A) and center speaker harness connector M130 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B109	29	M130	1	Yes
	30		2	



3. Check continuity between BOSE speaker amp. harness connector B109 (A) and ground.

A		—	Continuity
Connector	Terminal		
B109	29	Ground	No
	30		

Are continuity test results as specified?

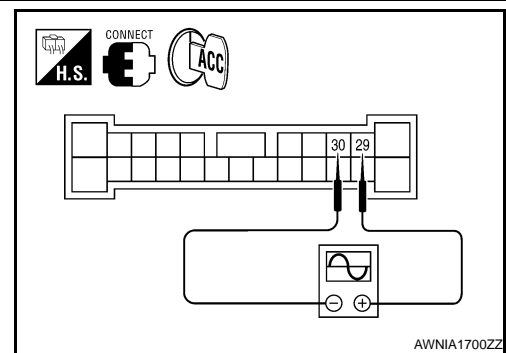
YES >> GO TO 2.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2.CENTER SPEAKER SIGNAL CHECK

1. Connect BOSE speaker amp. connector B109 and center speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B109 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B109	29	30	Receive audio signal	<p>SKIA0177E</p>



Is the audio signal voltage reading as specified?

YES >> Replace center speaker. Refer to [AV-160. "Removal and Installation"](#).

NO >> GO TO 3.

3.HARNES CHECK

CENTER SPEAKER

[BOSE W/ COLOR DISPLAY W/O NAVI]

< COMPONENT DIAGNOSIS >

1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M47 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M47	113	B109	35	Yes
	119		36	
	109		33	
	115		34	

3. Check continuity between AV control unit harness connector M47 (A) and ground.

A		—	Continuity
Connector	Terminal		
M47	113	Ground	No
	119		
	109		
	115		

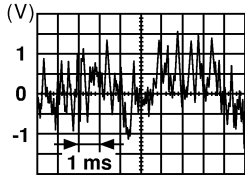
Are continuity test results as specified?

YES >> GO TO 4.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. CENTER SPEAKER SIGNAL CHECK

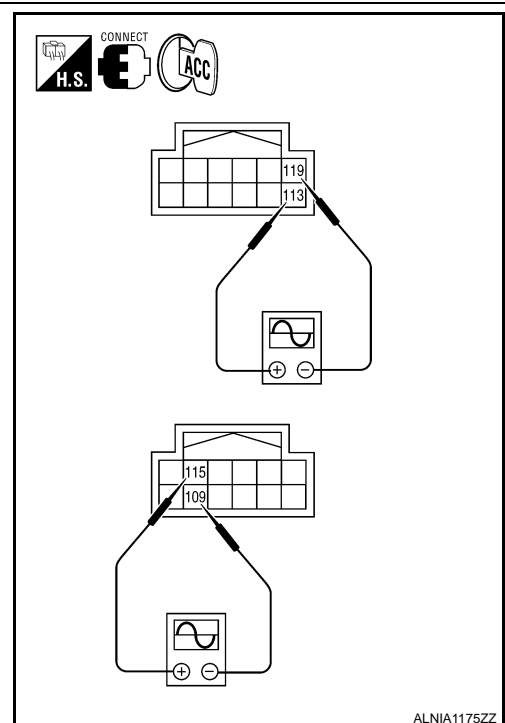
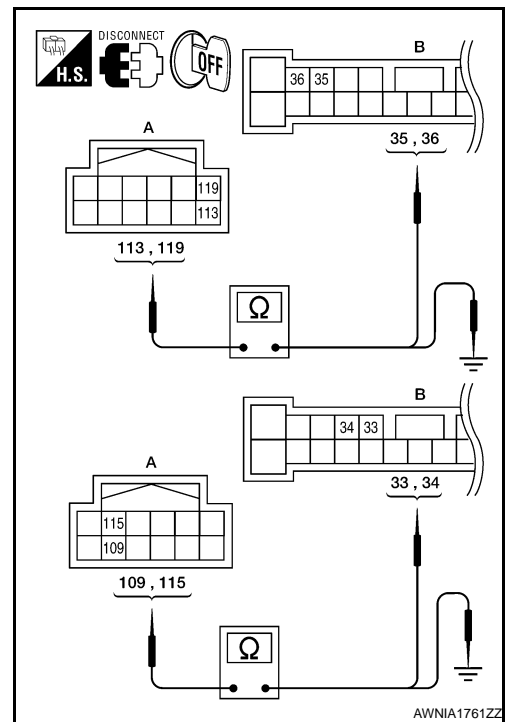
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M47	113	119	Receive audio signal	
	109	115		

Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to [AV-164, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-156, "Removal and Installation"](#).



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AV

REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

REAR DOOR SPEAKER

Description

INFOID:000000004364445

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the rear door speakers using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004364446

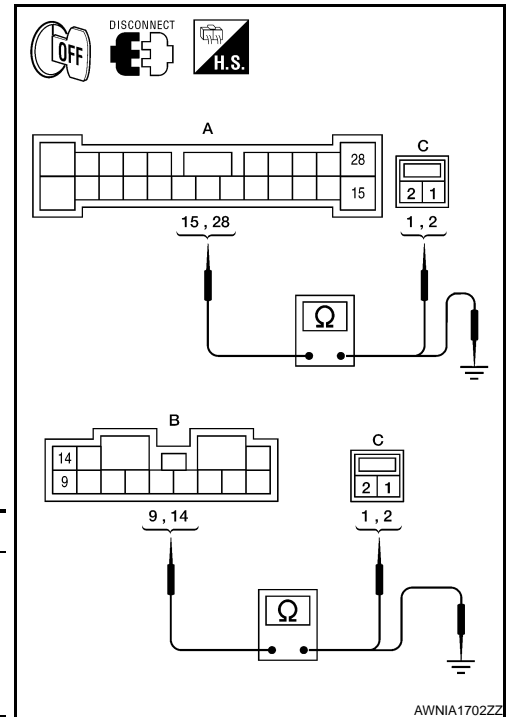
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connectors B109, B110 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connectors B109 (A) and B110 (B) and suspect speaker harness connector (C).

Connector	Terminal	Connector	Terminal	Continuity
A: B109	15	C: D202	2	Yes
	28		1	
B: B110	9	C: D302	2	
	14		1	

3. Check continuity between BOSE speaker amp. harness connectors B109 (A) and B110 (B) and ground.

Connector	Terminal	-	Continuity
A: B109	15	Ground	No
	28		
B: B110	9		
	14		



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Are the continuity test results as specified?

YES >> GO TO 2.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2. REAR DOOR SPEAKER SIGNAL CHECK

REAR DOOR SPEAKER

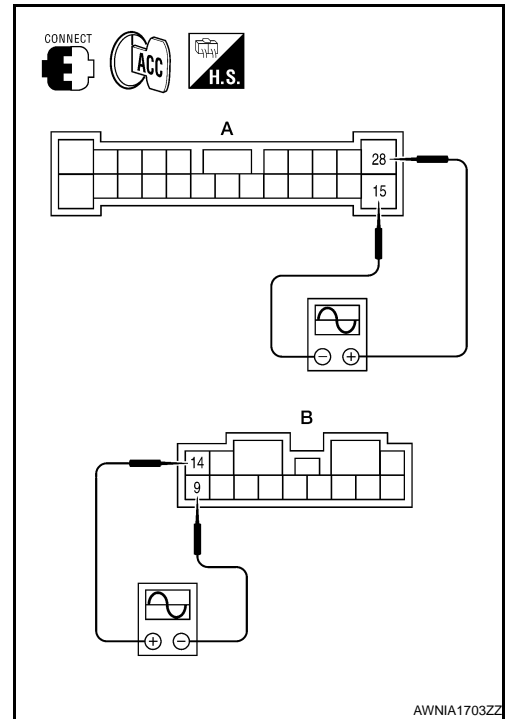
[BOSE W/ COLOR DISPLAY W/O NAVI]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connectors and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connectors B109 (A) and B110 (B) terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
A: B109	28	15	Receive audio signal	
B: B110	14	9		

SKIA0177E



Are audio signal voltage readings as specified?

- YES >> Replace suspect speaker. Refer to [AV-319. "Removal and Installation"](#).
- NO >> GO TO 3.

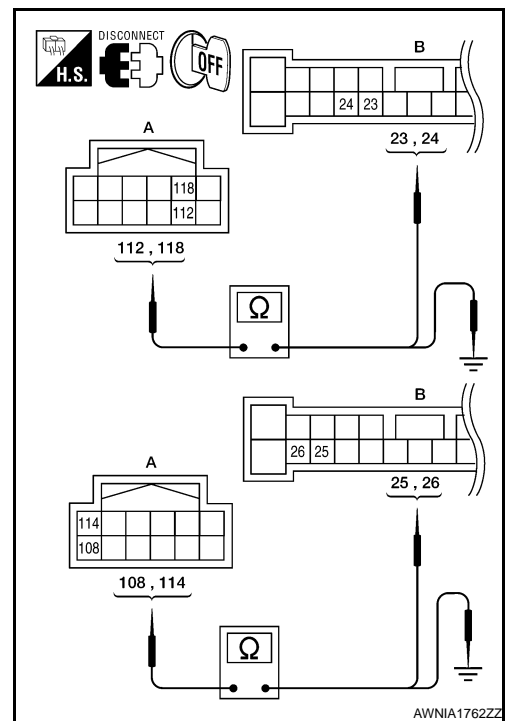
3. HARNESS CHECK

1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M47 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M47	112	B109	24	Yes
	118		23	
	108		26	
	114		25	

3. Check continuity between AV control unit harness connector M47 (A) and ground.

A		—	Continuity
Connector	Terminal		
M47	112	Ground	No
	118		
	108		
	114		



Are the continuity test results as specified?

- YES >> GO TO 4.
- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. REAR DOOR SPEAKER SIGNAL CHECK

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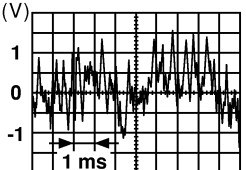
AV

REAR DOOR SPEAKER

[BOSE W/ COLOR DISPLAY W/O NAVI]

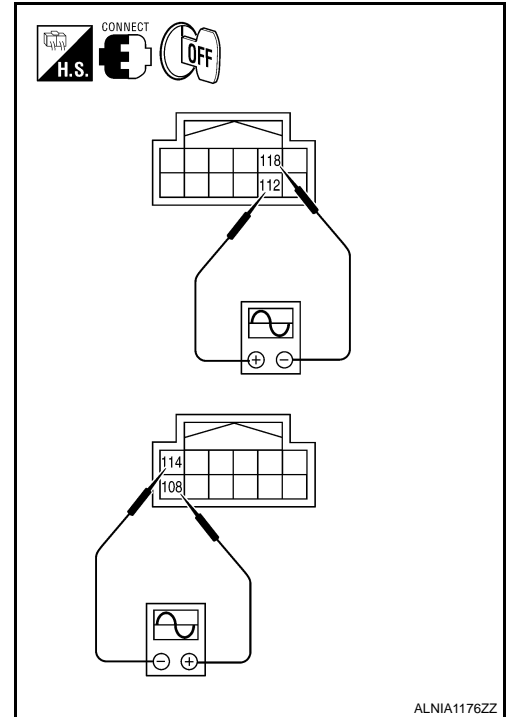
< COMPONENT DIAGNOSIS >

1. Connect AV control unit connector M47 and BOSE speaker amp. connector B109.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M47	112	118	Receive audio signal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
	108	114		

Is the audio signal voltage reading as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-321, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-313, "Removal and Installation"](#).



SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

SUBWOOFER

Description

INFOID:000000004364447

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the subwoofers using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004364448

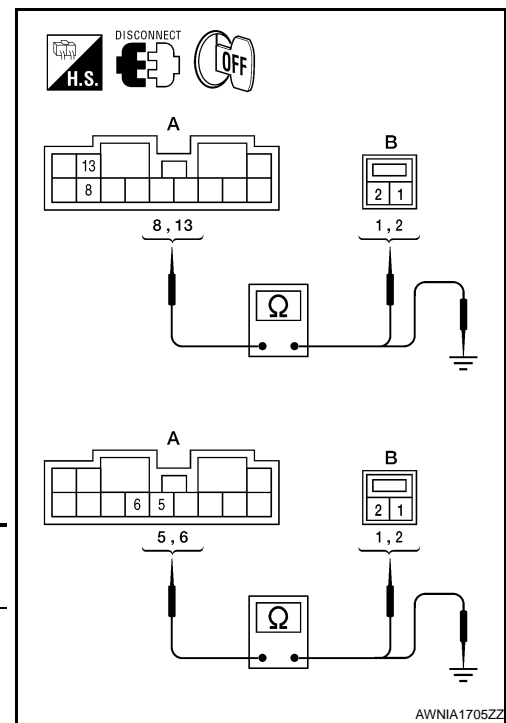
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B110 and suspect rear subwoofer connector.
2. Check continuity between BOSE speaker amp. harness connector B110 (A) and suspect rear subwoofer harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B110	13	B106	1	Yes
	8		2	
	5	B107	1	
	6		2	

3. Check continuity between BOSE speaker amp. harness connector B110 (A) and ground.

A		—	Continuity
Connector	Terminal		
B110	13	Ground	No
	8		
	5		
	6		



Are the continuity test results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2. REAR SUBWOOFER SIGNAL CHECK

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SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

1. Connect BOSE speaker amp. connector B110 and suspect rear subwoofer connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B110 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B110	13	8	Receive audio signal	
	5	6		

SKIA0177E

Is the audio signal voltage as specified?

YES >> Replace suspect rear subwoofer. Refer to [AV-163](#), "[Removal and Installation](#)".

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M47 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M47	112	B109	24	Yes
	118		23	
	108		26	
	114		25	

3. Check continuity between AV control unit harness connector M47 (A) terminal and ground.

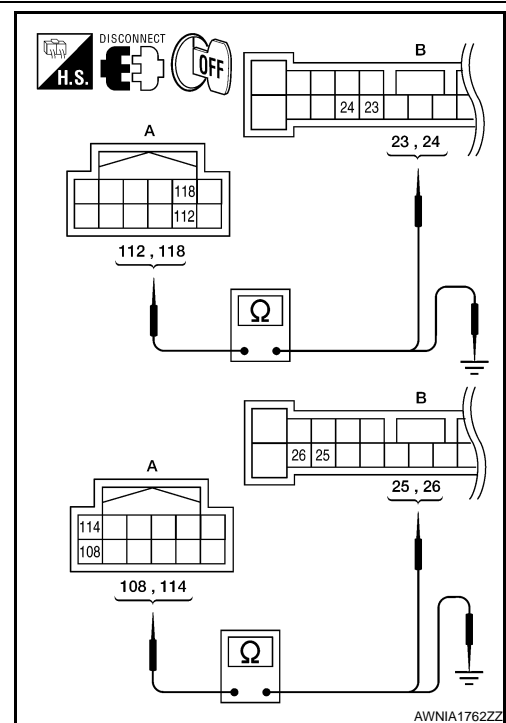
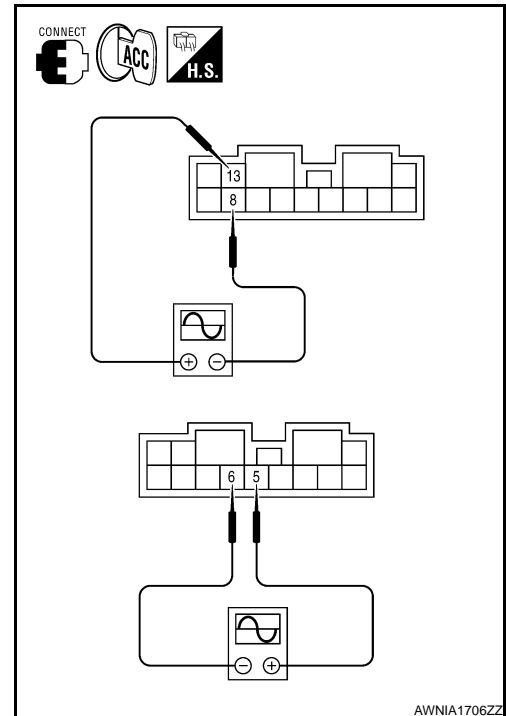
A		—	Continuity
Connector	Terminal		
M47	112	Ground	No
	118		
	108		
	114		

Are continuity test results as specified?

YES >> GO TO 4.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. REAR SUBWOOFER SIGNAL CHECK

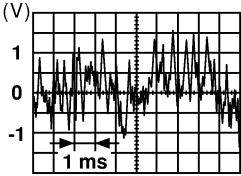


SUBWOOFER

[BOSE W/ COLOR DISPLAY W/O NAVI]

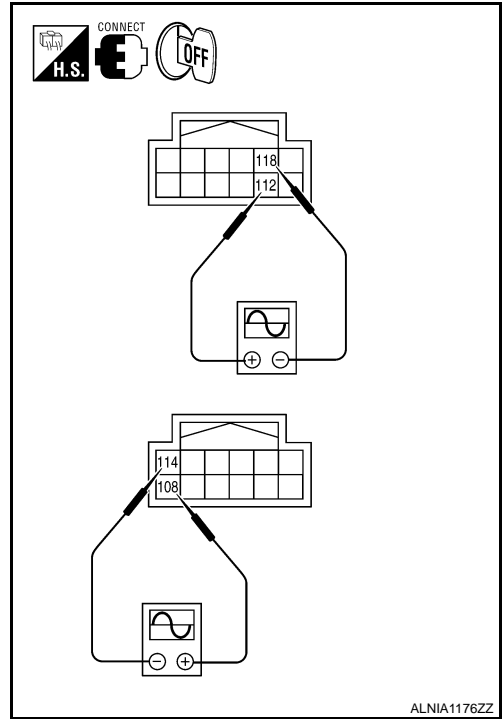
< COMPONENT DIAGNOSIS >

1. Connect AV control unit connector M47 and BOSE speaker amp. connector B109.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M47	112	118	Receive audio signal	 <small>SKIA0177E</small>
	108	114		

Is the audio signal voltage as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-164, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-156, "Removal and Installation"](#).



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AV

AMP ON SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

AMP ON SIGNAL CIRCUIT

Description

INFOID:000000004277356

When the audio system is turned on, a voltage signal is supplied from the AV control unit to the BOSE speaker amp. When this signal is received, the BOSE speaker amp. will turn on.

Diagnosis Procedure

INFOID:000000004364449

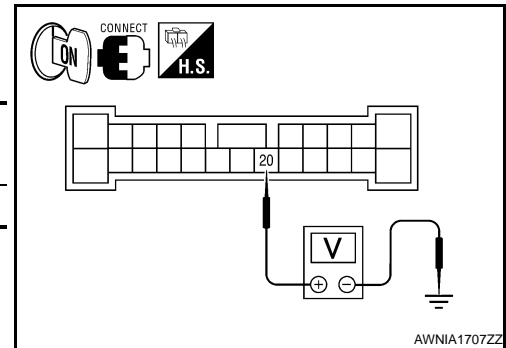
1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

1. Turn audio system ON.
2. Check voltage between BOSE speaker amp. harness connector B109 terminal 20 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
B109	20	Ground	Battery voltage

Is inspection result normal?

- YES >> Inspection End.
NO >> GO TO 2.



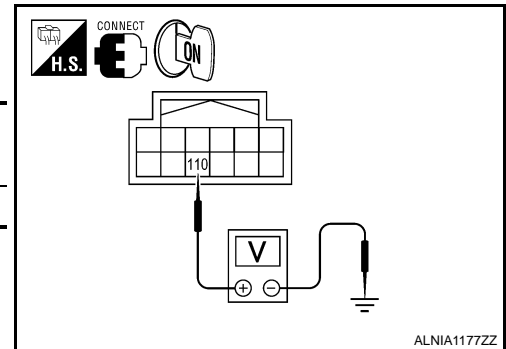
2. CHECK AMP ON SIGNAL (AV CONTROL UNIT)

Check voltage between AV control unit harness connector M47 terminal 110 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
M47	110	Ground	Battery voltage

Is inspection result normal?

- YES >> Repair harness or connector.
NO >> Replace AV control unit. Refer to [AV-156. "Removal and Installation"](#).



STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

STEERING SWITCH

Description

INFOID:000000004277358

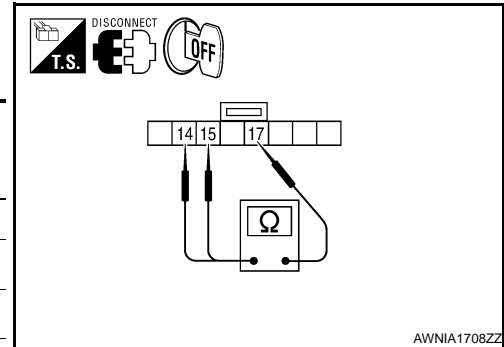
When one of the steering wheel AV control switches is pushed, the resistance in the steering wheel AV control switch circuit changes, depending on which button is pushed.

Diagnosis Procedure

INFOID:000000004277359

1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect steering wheel audio control switch connector M88.
3. Check resistance between steering switch connector terminals.



Terminal	Signal name	Condition	Resistance (Ω) (Approx.)	
14	17	Enter	Depress ENTER switch.	2023
		Voice recognition	Depress switch.	723
		Menu (down)	Depress switch.	321
		Menu (up)	Depress switch.	121
		Source	Depress SOURCE switch.	0
15	17	Menu back	Depress the back switch.	723
		Phone	Depress switch.	321
		Volume (up)	Depress VOL up switch.	121
		Volume (down)	Depress VOL down switch.	0

Do the steering wheel audio control switches check OK?

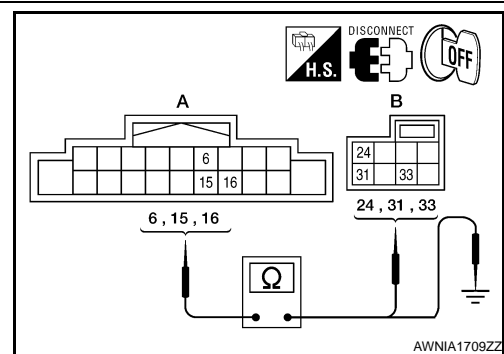
YES >> GO TO 2.

NO >> Replace steering wheel audio control switch. Refer to XX-XX, "*****".

2. CHECK HARNESS

1. Disconnect AV control unit connector M42 and spiral cable connector M30.
2. Check continuity between AV control unit harness connector M42 (A) and spiral cable harness connector M30 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M42	6	M30	24	Yes
	15		33	
	16		31	



3. Check continuity between AV switch connector M42 (A) and ground.

A		—	Continuity
Connector	Terminal		
M42	6	Ground	No
	15		
	16		

Are the continuity results as specified?

STEERING SWITCH

[BOSE W/ COLOR DISPLAY W/O NAVI]

< COMPONENT DIAGNOSIS >

- YES >> GO TO 3.
- NO >> Repair harness.

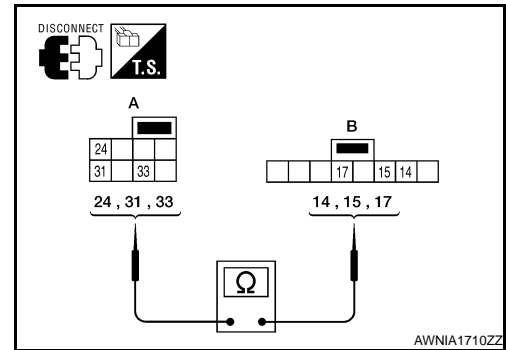
3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M88.
2. Check continuity between spiral cable harness connector M30 (A) and M88 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M88	14	Yes
	31		15	
	33		17	

Does the spiral cable check OK?

- YES >> Inspection End.
- NO >> Replace spiral cable. Refer to XX-XX, "*****".



COMMUNICATION SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

COMMUNICATION SIGNAL CIRCUIT

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000004277360

Communication signals are exchanged between the AV control unit and satellite radio tuner using the communication circuits.

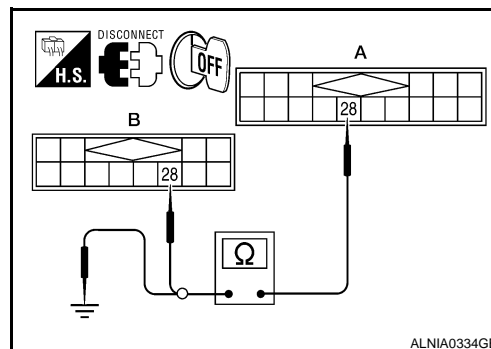
SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000004277361

1.CHECK HARNESS - 1

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B111 and AV control unit connector M43.
3. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 28 and AV control unit harness connector M43 (B) terminal 28.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	28	M43	28	Yes



4. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 28 and ground.

A		—	Continuity
Connector	Terminal		
B111	28	Ground	No

Are continuity results as specified?

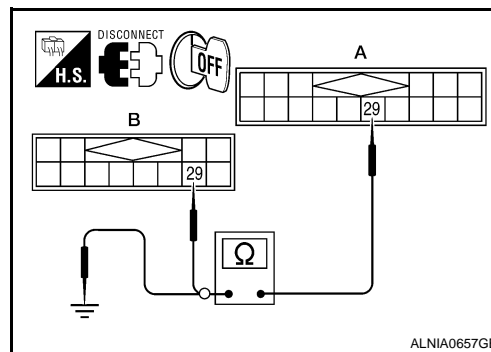
YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK HARNESS - 2

1. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 29 and AV control unit harness connector M43 (B) terminal 29.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	29	M43	29	Yes



2. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 29 and ground.

A		—	Continuity
Connector	Terminal		
B111	29	Ground	No

Are continuity results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK HARNESS - 3

COMMUNICATION SIGNAL CIRCUIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

< COMPONENT DIAGNOSIS >

1. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 30 and AV control unit harness connector M43 (B) terminal 30.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	30	M43	30	Yes

2. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 30 and ground.

A		—	Continuity
Connector	Terminal		
B111	30	Ground	No

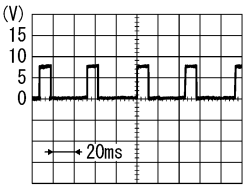
Are continuity results as specified?

YES >> GO TO 4.

NO >> Repair harness or connector.

4. CHECK REQ1 SIGNAL

1. Connect satellite radio tuner (factory installed) connector and AV control unit connector.
2. Turn ignition switch to ACC.
3. Check signal between satellite radio tuner (factory installed) harness connector B111 terminal 28 and ground with CONSULT-III or oscilloscope.

(+) Connector		Terminal	(-)	Reference signal
Connector	Terminal			
B111	28	Ground	 <p>SKIB3825E</p>	

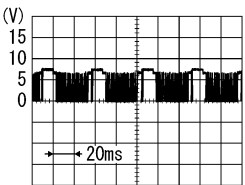
Are voltage readings as specified?

YES >> GO TO 5.

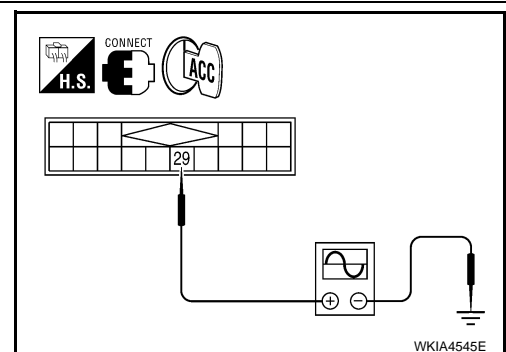
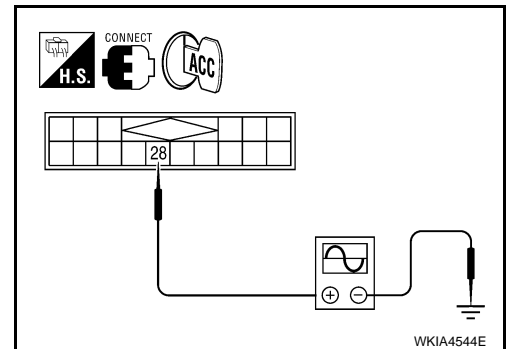
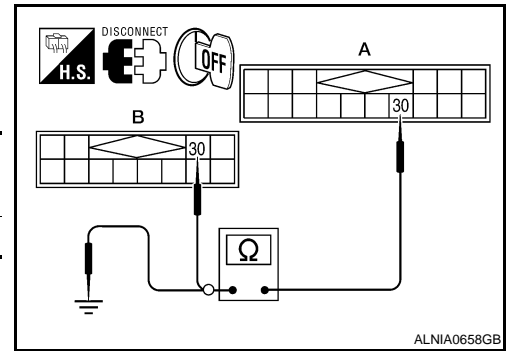
NO >> Replace AV control unit. Refer to [AV-313, "Removal and Installation"](#).

5. CHECK TXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector B111 terminal 29 and ground with CONSULT-III or oscilloscope.

(+) Connector		Terminal	(-)	Reference signal
Connector	Terminal			
B111	29	Ground	 <p>SKIB3824E</p>	

Are the voltage readings as specified?



COMMUNICATION SIGNAL CIRCUIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

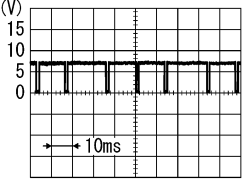
< COMPONENT DIAGNOSIS >

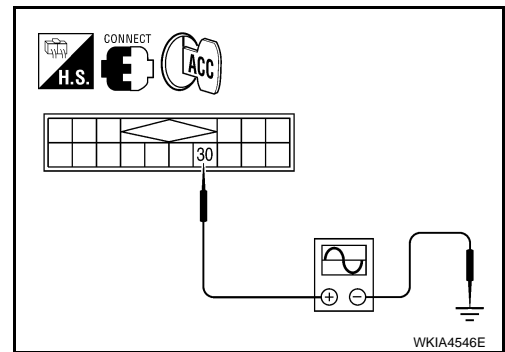
YES >> GO TO 6.

NO >> Replace satellite radio tuner. Refer to [AV-322, "Removal and Installation"](#).

6. CHECK RXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector B111 terminal 30 and ground with CONSULT-III or oscilloscope.

(+)		(-)	Reference signal
Connector	Terminal		
B111	30	Ground	 <p style="text-align: right; font-size: small;">SKIB3826E</p>



Are the voltage readings as specified?

YES >> Replace satellite radio tuner. Refer to [AV-322, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-313, "Removal and Installation"](#).

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AV

SOUND SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

SOUND SIGNAL CIRCUIT SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000004277362

Left and right channel audio signals are supplied from the satellite radio tuner to the AV control unit through the sound signal circuits.

SATELLITE RADIO TUNER : Diagnosis Procedure

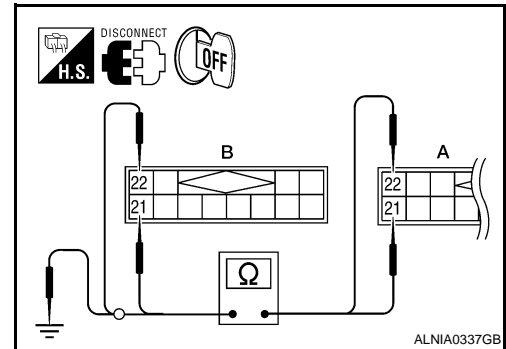
INFOID:000000004277363

LEFT CHANNEL

1.CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B111 and AV control unit connector M43.
3. Check continuity between satellite radio tuner (factory installed) connector B111 (A) and AV control unit connector M43 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	21	M43	21	Yes
	22		22	



4. Check continuity between satellite radio tuner (factory installed) connector B111 (A) and ground.

A		—	Continuity
Connector	Terminal		
B111	21	Ground	No
	22		

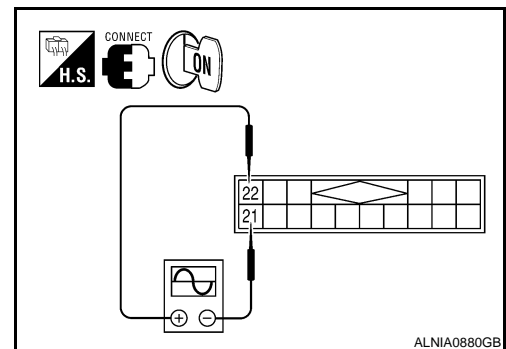
Are continuity results as specified?

- YES >> GO TO 2.
NO >> Repair harness or connector.

2.CHECK LEFT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and AV control unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector B111 terminals 21 and 22 with CONSULT-III or oscilloscope.

(+)		(-)		Reference signal
Connector	Terminal	Connector	Terminal	
B111	22	B111	21	<p>SKIB3609E</p>



Are voltage readings as specified?

- YES >> Replace AV control unit. Refer to [AV-313, "Removal and Installation"](#).
NO >> Replace satellite radio tuner. Refer to [AV-322, "Removal and Installation"](#).

RIGHT CHANNEL

SOUND SIGNAL CIRCUIT

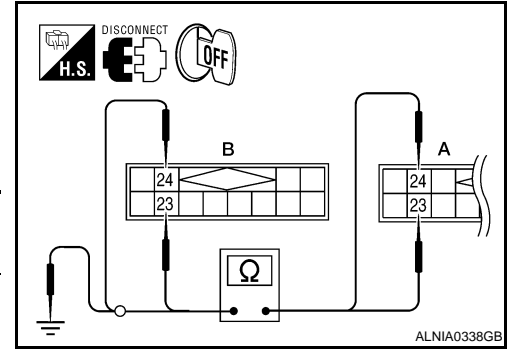
< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

1. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B111 and AV control unit connector M43.
3. Check continuity between satellite radio tuner (factory installed) B111 (A) and AV control unit M43 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	23	M43	23	Yes
	24		24	



4. Check continuity between satellite radio tuner (factory installed) connector B111 (A) and ground.

A		—	Continuity
Connector	Terminal		
B111	23	Ground	No
	24		

Are continuity results as specified?

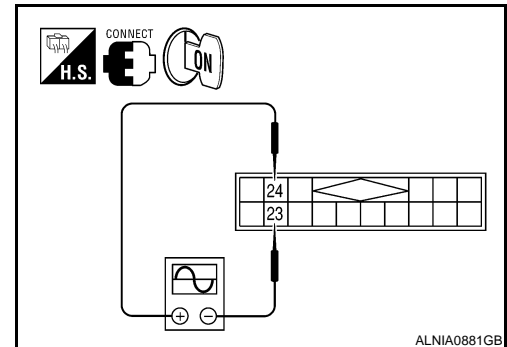
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and AV control unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector B111 terminals 23 and 24 with CONSULT-III or oscilloscope.

(+)		(-)		Reference signal
Connector	Terminal			
B111	24	23		



Are voltage readings as specified?

YES >> Replace AV control unit. Refer to [AV-313. "Removal and Installation"](#).

NO >> Replace satellite radio tuner. Refer to [AV-322. "Removal and Installation"](#).

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MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000004277364

Voice signals are transmitted from the microphone to the Bluetooth control unit using the microphone signal circuits.

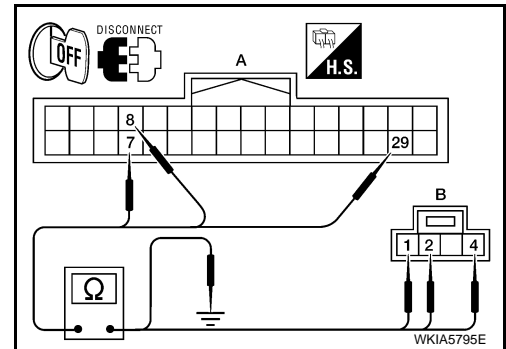
Diagnosis Procedure

INFOID:000000004277365

1. CHECK HARNESS BETWEEN BLUETOOTH CONTROL UNIT AND MICROPHONE

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit connector and microphone connector.
3. Check continuity between Bluetooth control unit harness connector B126 (A) and microphone harness connector R7 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B126	7	R7	1	Yes
	8		2	
	29		4	



4. Check continuity between Bluetooth control unit harness connector B126 (A) and ground.

A		—	Continuity
Connector	Terminal		
B126	7	Ground	No
	8		
	29		

Are the continuity test results as specified?

- YES >> GO TO 2.
 NO >> Repair harness or connector.

2. CHECK MICROPHONE POWER SUPPLY

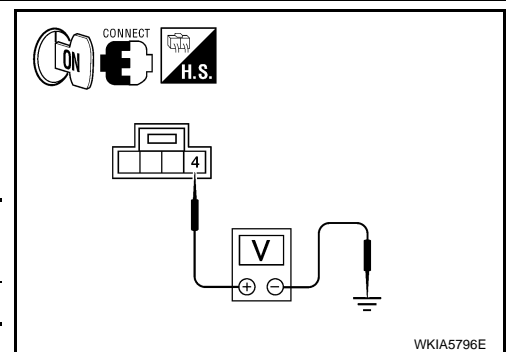
1. Connect Bluetooth control unit connector and microphone connector.
2. Turn ignition switch ON.
3. Check voltage between microphone harness connector R7 terminal 4 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
R7	4	Ground	5V

Is voltage reading approx. 5 volts?

- YES >> GO TO 3.
 NO >> Replace Bluetooth control unit. Refer to [AV-331, "Removal and Installation"](#).

3. CHECK MICROPHONE SIGNAL

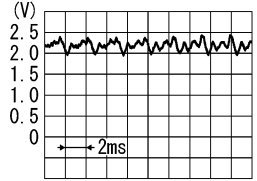


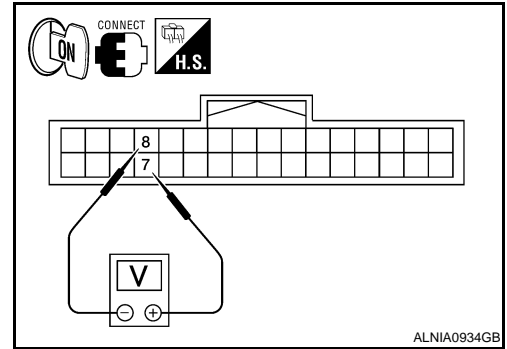
MICROPHONE SIGNAL CIRCUIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

< COMPONENT DIAGNOSIS >

Check signal between Bluetooth control unit harness connector B126 terminals 7 and 8.

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
B126	7	8	<p>While talking into microphone</p>  <p style="text-align: right;">PKIB5037J</p>



Are voltage readings as specified?

- YES >> Replace Bluetooth control unit. Refer to [AV-331, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-329, "Removal and Installation"](#).

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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

ECU DIAGNOSIS

AV CONTROL UNIT

Reference Value

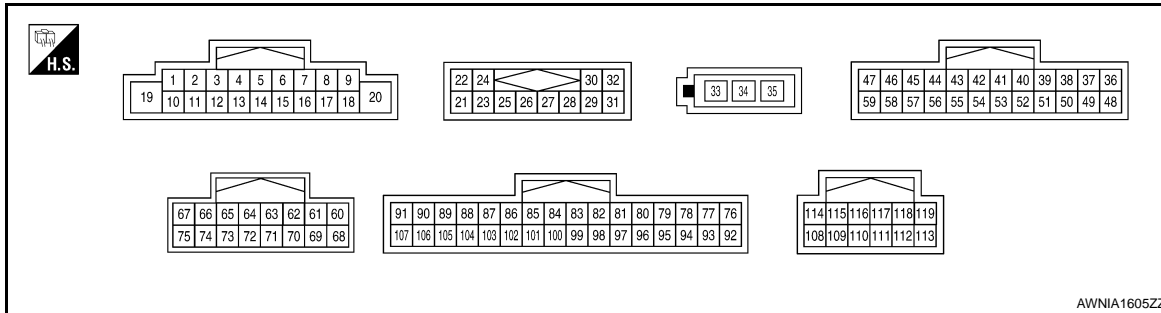
INFOID:000000004277366

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III data 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 normal.
	OFF	Vehicle speed =0 km/h (0 MPH)	
PKB SIG	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.
	OFF	Parking brake is released.	
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON .	—
	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.	
IGN SIG	ON	Ignition switch ON	—
	OFF	Ignition switch in ACC position	
REV SIG	ON	Selector lever in R position	Changes in indication may be delayed. This is normal.
	OFF	Selector lever in any position other than R	

TERMINAL LAYOUT



AWNIA1605ZZ

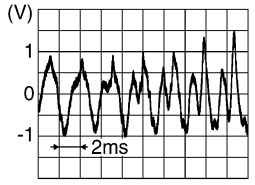
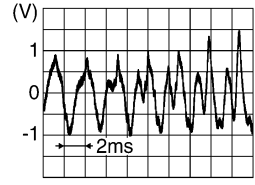
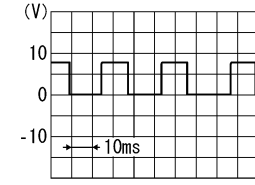
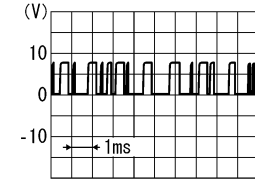
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)	
+	-	Signal name	Input/ Output			
6 (W/G)	15 (L/B)	Steering switch signal A	Input	Ignition switch OFF	Depress ENTER switch.	2023Ω
				Depress switch.	723Ω	
				Depress switch.	321Ω	
				Depress switch.	121Ω	
				Depress SOURCE switch.	0Ω	
7 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

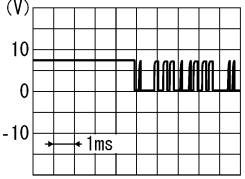
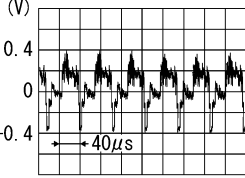
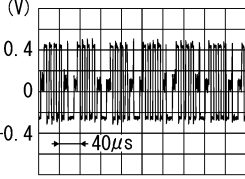
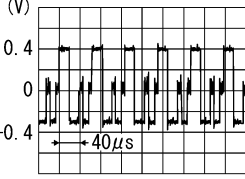
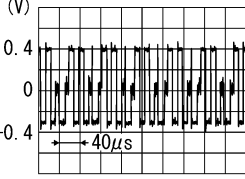
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
9 (R/L)	Ground	Illumination signal	Input	OFF	Lighting switch is OFF.	0V
					Lighting switch is ON.	Battery voltage
16 (GR/L)	15 (L/B)	Steering switch signal B	Input	Ignition switch ON	Depress the back switch.	723Ω
					Depress switch.	321Ω
					Depress VOL up switch.	121Ω
					Depress VOL down switch.	0Ω
19 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0V
22 (Y/L)	21 (W/L)	Satellite radio sound signal LH	Input	Ignition switch ON	When satellite radio mode is selected	 SKIB3609E
24 (BR/L)	23 (Y/G)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected	 SKIB3609E
25	—	Shield	—	—	—	—
26	—	Shield	—	—	—	—
28 (R)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	 SKIA9299J
29 (B)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	 SKIA9300J

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AV CONTROL UNIT

< ECU DIAGNOSIS >

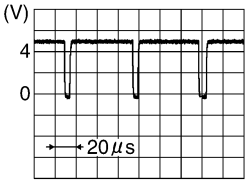
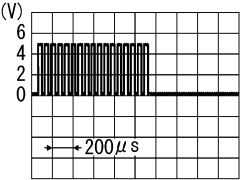
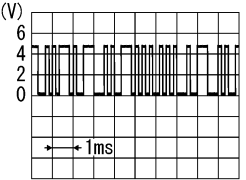
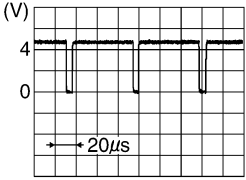
[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
30 (G)	Ground	Communication signal (CONT→SAT)	Output	Ignition switch ON	When satellite radio mode is selected	 <p style="text-align: right; font-size: small;">SKIA9301J</p>
34 (B)	—	Antenna main	—	—	—	—
35 (B)	—	Antenna power	—	—	—	—
36 (R/L)	Ground	AUX image signal	Output	Ignition switch ON	When AUX mode is select- ed	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
37 (B)	Ground	AUX image ground	—	Ignition switch ON	—	0V
38 (W)	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.	 <p style="text-align: right; font-size: small;">SKIB2237J</p>
39 (R)	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.	 <p style="text-align: right; font-size: small;">SKIB2236J</p>
40 (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.	 <p style="text-align: right; font-size: small;">SKIB2238J</p>

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
41 (G)	Ground	RGB synchronizing signal	Output	Ignition switch ON	—	 <p style="text-align: right; font-size: small;">SKIB3603E</p>
42	—	RGB synchronizing ground	—	Ignition switch ON	—	0V
43 (B)	Ground	RGB area (YS) signal	Output	Ignition switch ON	RGB image	5V
					AUX image	 <p style="text-align: right; font-size: small;">PKIB4948J</p>
44 (BR)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display- brightness	 <p style="text-align: right; font-size: small;">PKIB5039J</p>
45 (R)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON	—	 <p style="text-align: right; font-size: small;">SKIB3601E</p>
46 (LG)	Ground	Signal ground	—	Ignition switch	—	0V
47 (O)	Ground	Signal VCC	Output	Ignition switch ACC	—	9V
48 (R/W)	Ground	Composite out synchroniz- ing signal GND	—	Ignition switch ON	—	0V
49	—	Shield	—	—	—	—
50	—	Shield	—	—	—	—
55	—	Shield	—	—	—	—

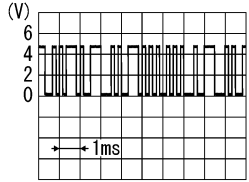
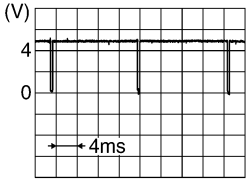
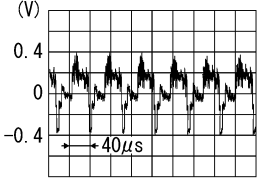
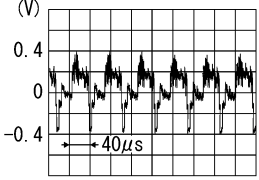
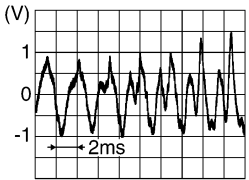
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AV CONTROL UNIT

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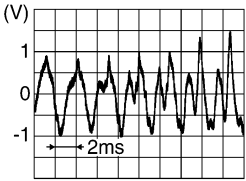
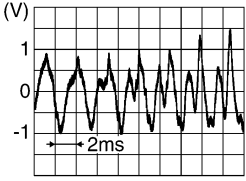
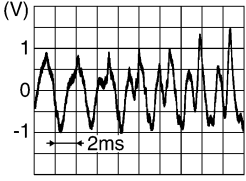
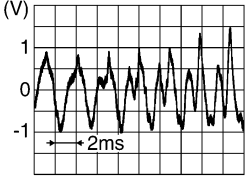
[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
56 (Y)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display- brightness	 <p style="text-align: right; font-size: small;">PKIB5039J</p>
57 (W)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch On	—	 <p style="text-align: right; font-size: small;">SKIB3598E</p>
58 (BR)	Ground	Inverter ground	—	Ignition switch ON	—	0V
59 (Y)	Ground	Inverter VCC	Output	Ignition switch ACC	—	9V
64 (B)	—	Shield	—	—	—	—
65 (W)	Ground	Rear view camera video in (+)	Input	Ignition switch ON	With rear view camera ON	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
66 (LG)	74 (V)	Aux image signal	Input	Ignition switch ON	When aux mode is selected	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
68 (V/G)	Ground	RV_CAM_SIG	—	—	—	—
73	—	Shield	—	—	—	—
80 (BR)	79 (Y)	TEL voice audio signal	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then Voice Microphone Test by select- ing "Voice Microphone Test" on Handsfree Micro- phone screen.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
81	—	Shield	—	—	—	—

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
83 (B)	82 (R)	iPod® audio signal RH	Input	Ignition switch ON	With iPod® operating	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
85 (B)	Ground	Ground	—	Ignition switch ON	—	0V
86 (L)	—	CAN-H	Input/ Output	—	—	—
87 (P)	—	CAN-L	Input/ Output	—	—	—
88 (R)*1 (L)*2	—	AV communication signal 1 (H)	Input/ Output	—	—	—
89 (G)*1 (P)*2	—	AV communication signal 1 (L)	Input/ Output	—	—	—
90 (R)	—	AV communication signal 2 (H)	Input/ Output	—	—	—
91 (G)	—	AV communication signal 2 (L)	Input/ Output	—	—	—
95 (B)	97 (R)	AUX audio signal RH	Input	Ignition switch ON	When AUX mode is select- ed	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
96 (W)	97 (R)	AUX audio signal LH	Input	Ignition switch ON	When AUX mode is select- ed	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
98 (W)	99 (G)	iPod® audio signal LH	Input	Ignition switch ON	With iPod® operating	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
100	—	Shield	—	—	—	—
101 (BR)	Ground	A/C and AV switch assem- bly ground	—	Ignition switch ON	—	0V

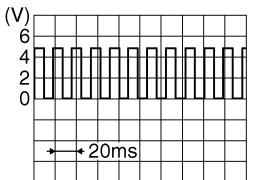
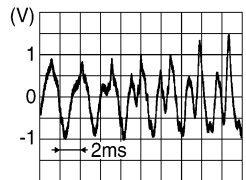
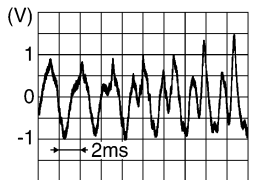
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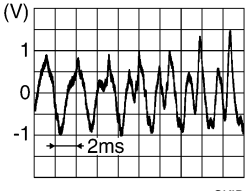
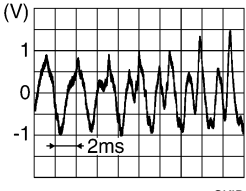
[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
103 (SB)	Ground	CD eject signal	Input	—	Pressing the eject switch	0V
					Except for above	3.3V
104 (G)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
105 (P/B)	Ground	Reverse signal	Input	Ignition switch ON	R position	Battery voltage
					Other than R position	0V
106 (G/R)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake ON	0V
					Parking brake OFF	Battery voltage
107 (V/W)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is ap- prox. 40 km/h (25 MPH)	 <p style="text-align: right; font-size: small;">SKIA6649J</p>
108 (V)	114 (LG)	Rear RH pre-amp. sound signal	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
109 (B)	115 (W)	Front RH pre-amp. sound signal	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
110 (B/P)	Ground	Amp. ON signal	Output	Ignition switch ON		Battery voltage
111	—	Shield	—	—	—	—

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
112 (W/R)	118 (W/L)	Rear LH pre-amp. sound signal	Output	Ignition switch ON	Audio output	
113 (G)	119 (G)	Front LH pre-amp. sound signal	Output	Ignition switch ON	Audio output	

*1 Early Production

*2 Late Production

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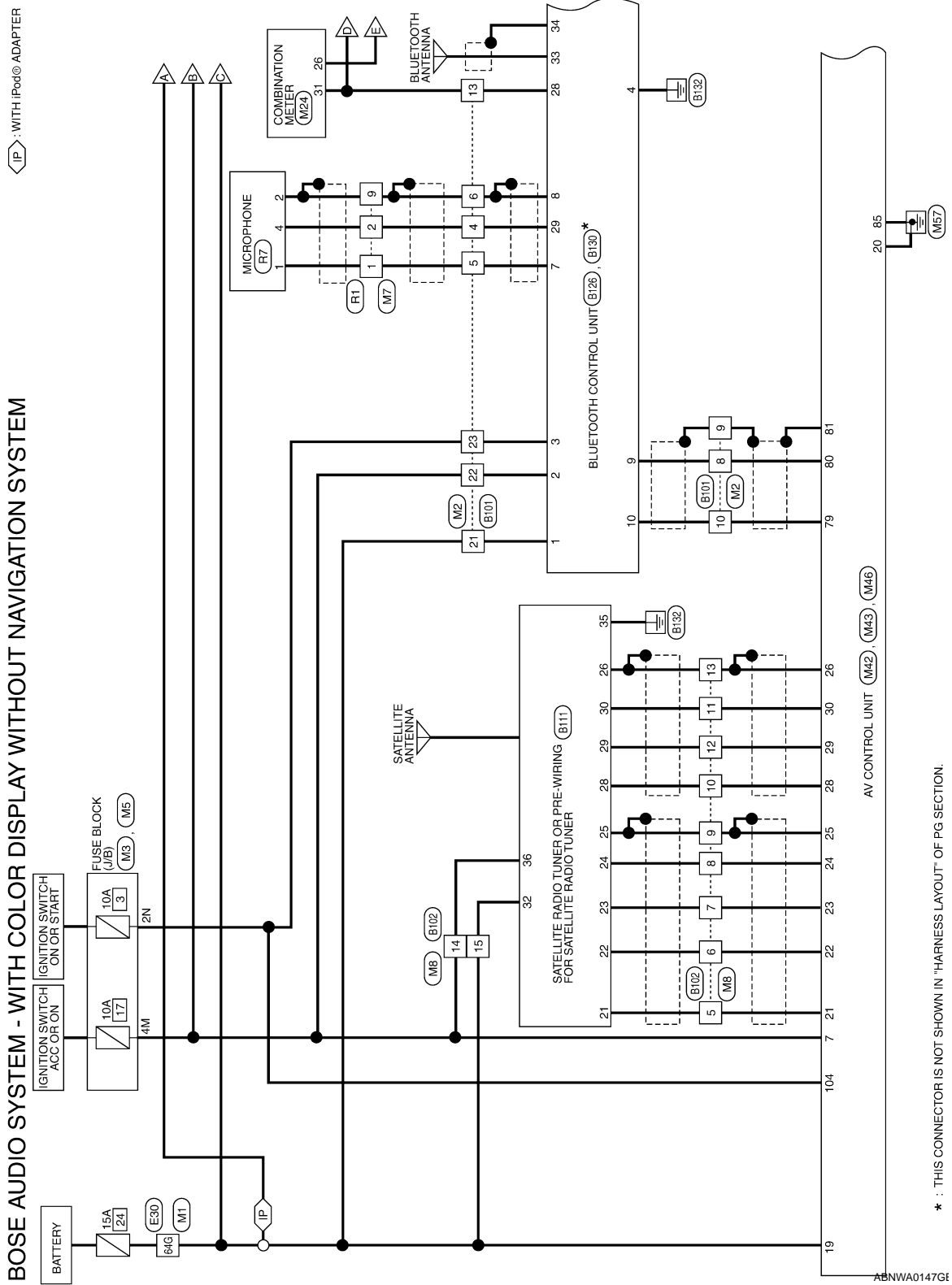
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[BOSE W/ COLOR DISPLAY W/O NAVI]

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Wiring Diagram

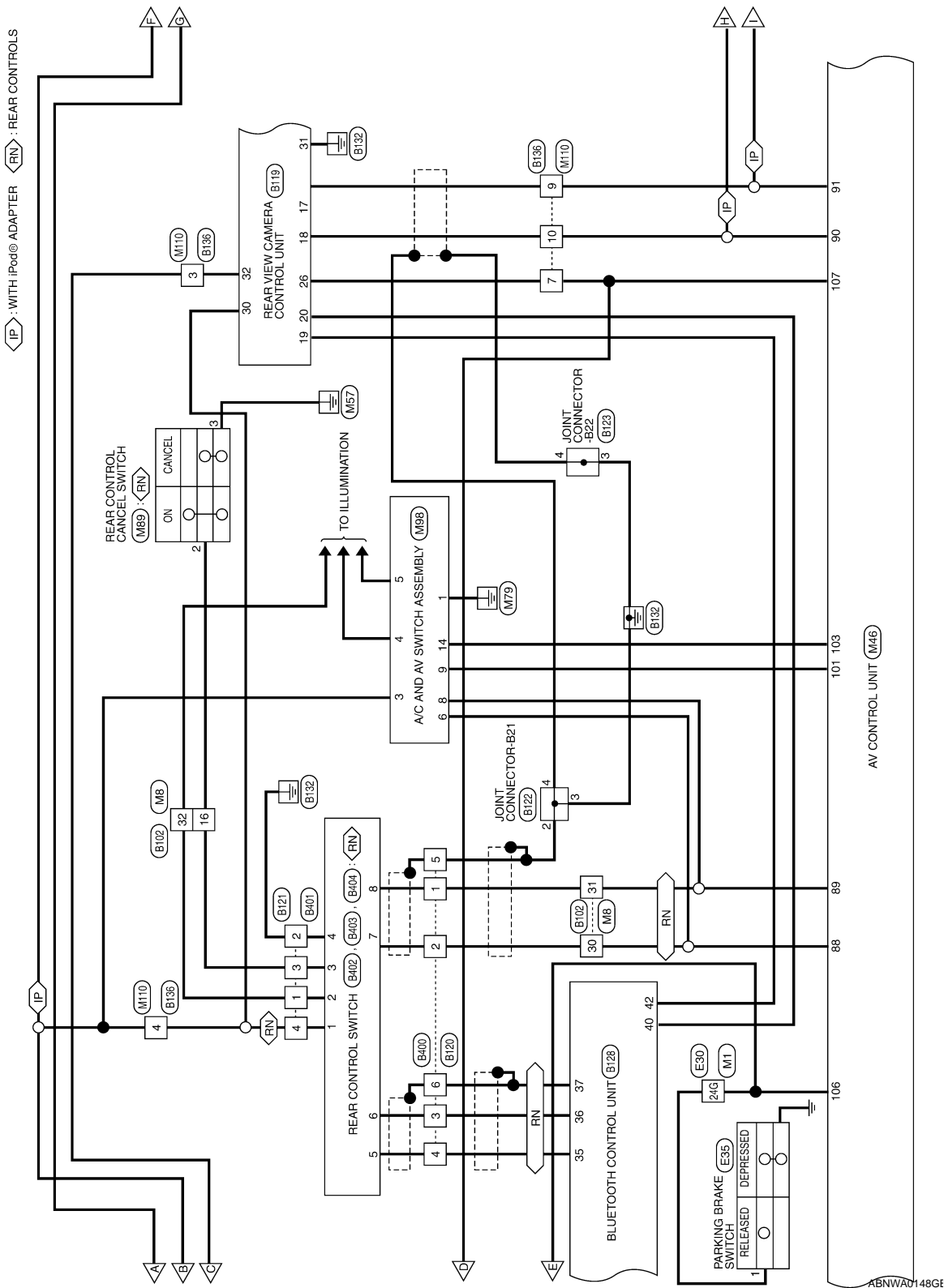
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[BOSE W/ COLOR DISPLAY W/O NAVI]



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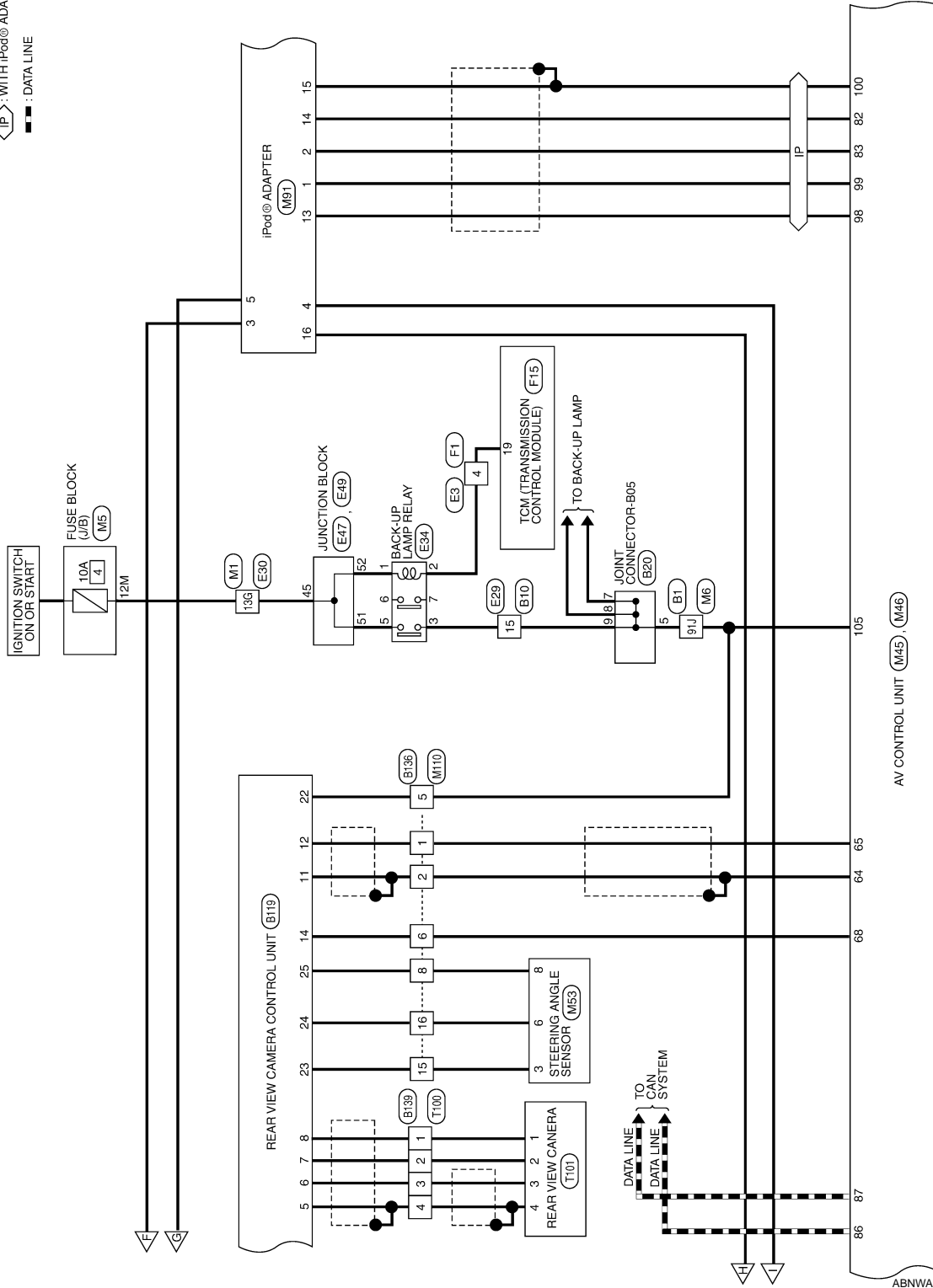
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[BOSE W/ COLOR DISPLAY W/O NAVI]

IP : WITH IPOD® ADAPTER

--- : DATA LINE



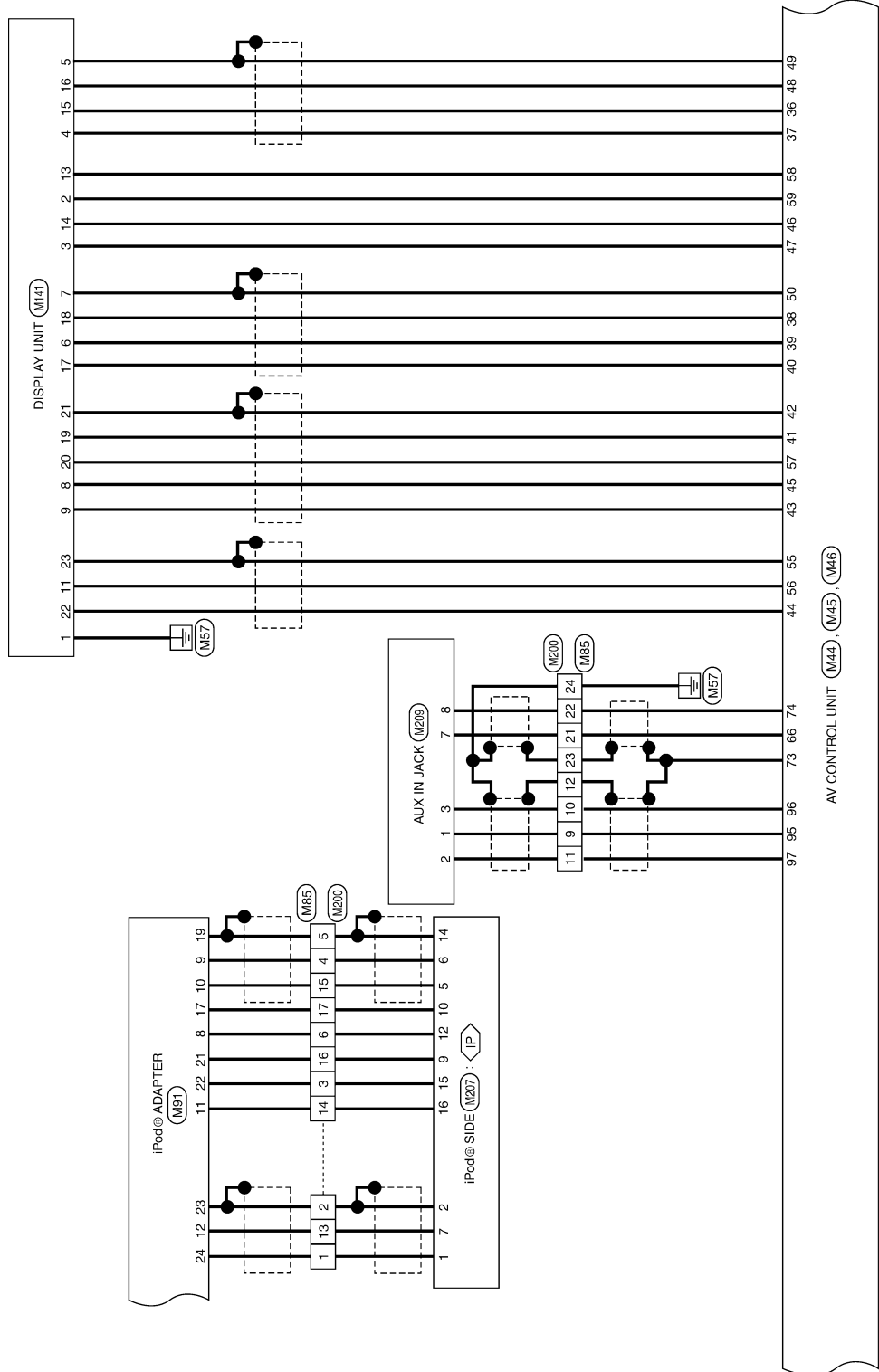
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[BOSE W/ COLOR DISPLAY W/O NAVI]

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IP : WITH IPOD® ADAPTER



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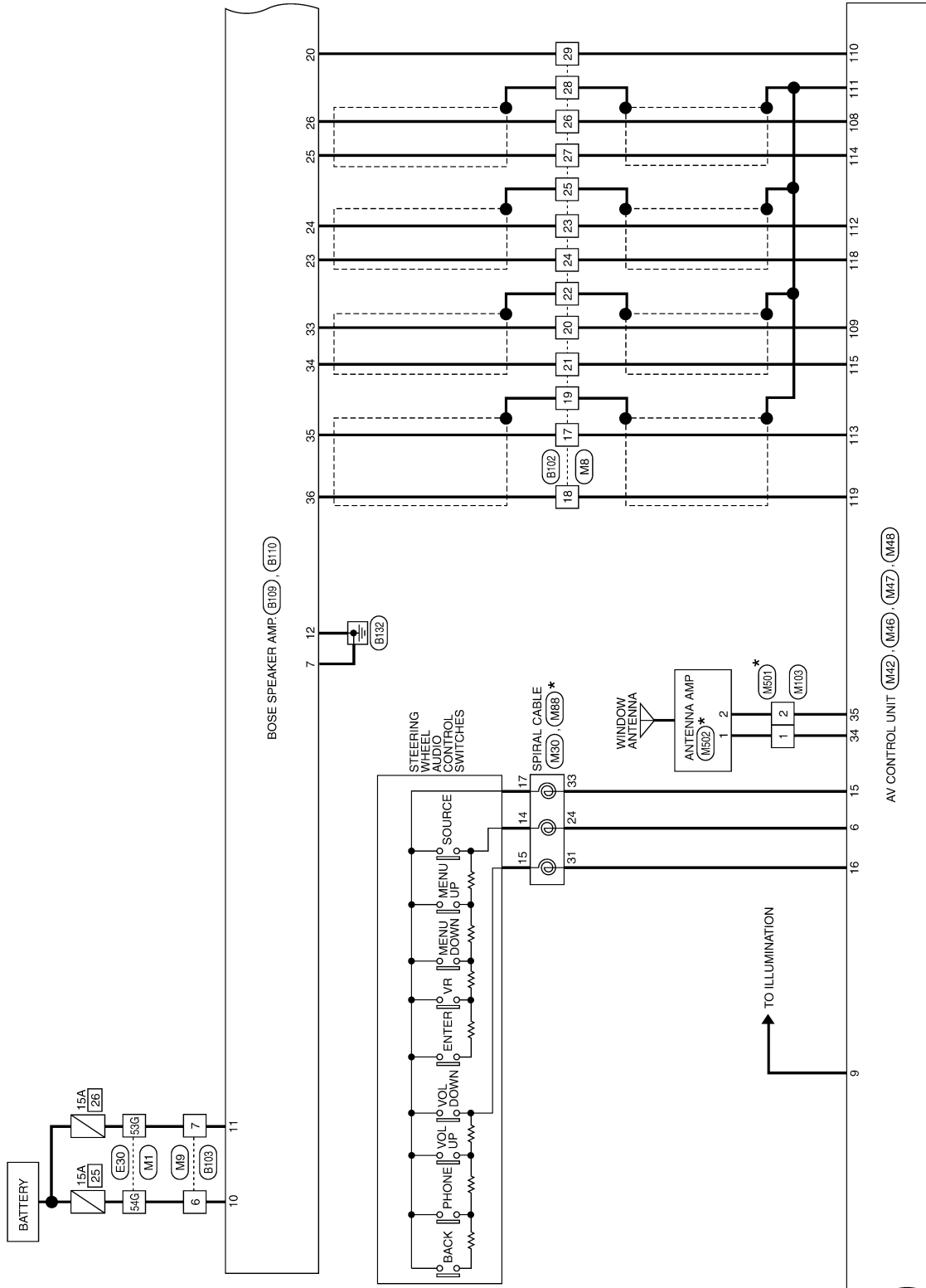
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[BOSE W/ COLOR DISPLAY W/O NAVI]



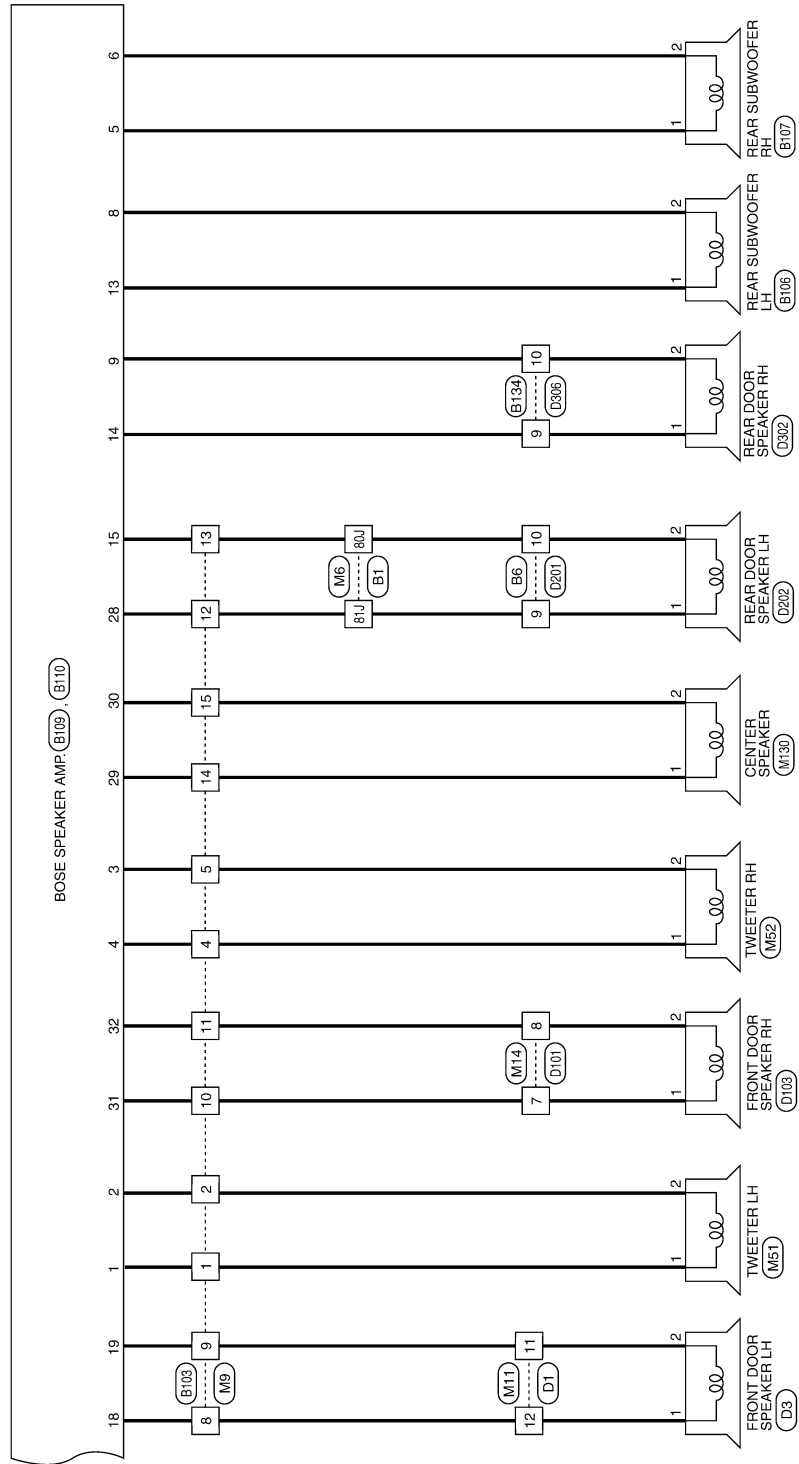
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* : THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT" OF PG SECTION.

AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

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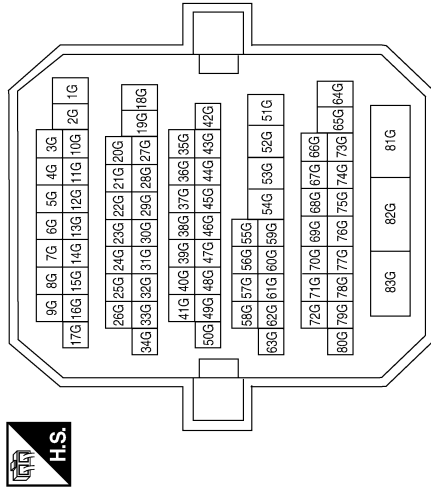
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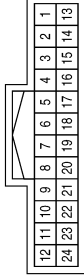
BOSE AUDIO SYSTEM CONNECTORS - WITH COLOR DISPLAY WITHOUT NAVIGATION SYSTEM

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



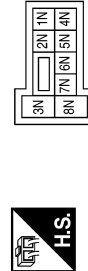
Terminal No.	Color of Wire	Signal Name
13G	O	-
24G	G/R	-
53G	B/R	-
54G	BR	-
64G	Y/R	-

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



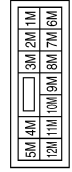
Terminal No.	Color of Wire	Signal Name
4	R	-
5	L	-
6	SHIELD	-
8	BR	-
9	SHIELD	-
10	Y	-
13	V/W	-
21	Y/R	-
22	V/Y	-
23	G	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2N	G	-

Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



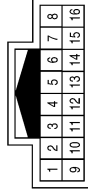
Terminal No.	Color of Wire	Signal Name
4M	V/Y	-
12M	O	-

AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY W/O NAVI]

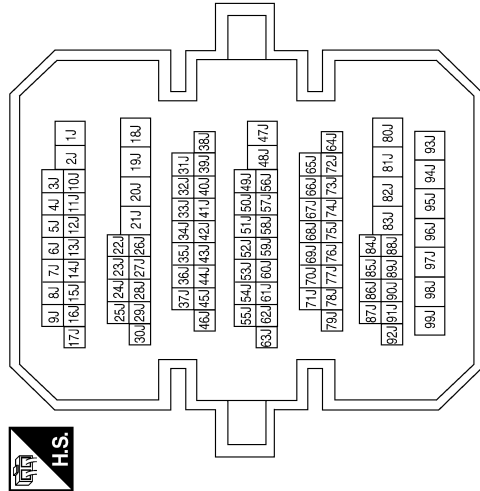
Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	R	-
9	SHIELD	-

Terminal No.	Color of Wire	Signal Name
80J	B/Y	-
81J	LG	-
90J	P	-

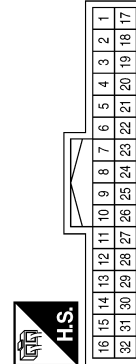
Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
24	W/L	-
25	SHIELD	-
26	V	-
27	LG	-
28	SHIELD	-
29	B/P	-
30	V/Y	- (EARLY PRODUCTION)
30	L	- (LATE PRODUCTION)
31	Y/R	- (EARLY PRODUCTION)
31	P	- (LATE PRODUCTION)
32	R/L	-

Terminal No.	Color of Wire	Signal Name
10	R	-
11	G	-
12	B	-
13	SHIELD	-
14	V/Y	-
15	Y/R	-
16	BR	-
17	G	-
18	R	-
19	SHIELD	-
20	B	-
21	W	-
22	SHIELD	-
23	W/R	-

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	W/L	-
6	Y/L	-
7	Y/G	-
8	BR/L	-
9	SHIELD	-

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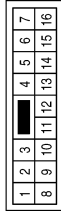
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[BOSE W/ COLOR DISPLAY W/O NAVI]

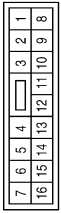
Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	B/W	-
12	L	-

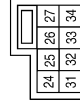
Terminal No.	Color of Wire	Signal Name
9	B/W	-
10	BR	-
11	B/R	-
12	LG	-
13	B/Y	-
14	B/P	-
15	O/B	-

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE



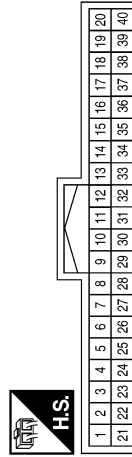
Terminal No.	Color of Wire	Signal Name
1	LG	-
2	B/Y	-
4	L/O	-
5	GR/L	-
6	BR	-
7	B/R	-
8	L	-

Connector No.	M30
Connector Name	SPIRAL CABLE
Connector Color	GRAY



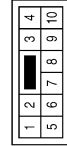
Terminal No.	Color of Wire	Signal Name
24	W/G	AUDIO STRG SW REMOTE A
31	GR/L	AUDIO STRG SW REMOTE B
33	L/B	AUDIO STRG SW GND

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
26	G/R	PKB
31	V/W	8P/R OUT

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	BR	-
8	B/R	-

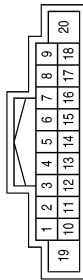
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AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY W/O NAVI]

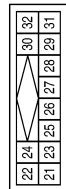
Connector No.	M42
Connector Name	AV CONTROL UNIT (WITHOUT NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	W/G	STRG SW A
7	V/Y	ACC
8	-	-
9	R/L	ILL
10	-	-
11	-	-
12	-	-

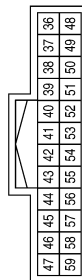
Terminal No.	Color of Wire	Signal Name
13	-	-
14	-	-
15	L/B	STRG SW GND
16	GR/L	STRG SW B
17	-	-
18	-	-
19	Y/R	BAT
20	B	GND

Connector No.	M43
Connector Name	AV CONTROL UNIT (WITHOUT NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	W/L	NBUS LH-
22	Y/L	NBUS LH+
23	Y/G	NBUS RH-
24	BR/L	NBUS RH+
25	SHIELD	NBUS SHIELD
26	SHIELD	DATA GND
27	-	-
28	R	REQI(TO HU)
29	B	RX(TO HU)
30	G	TX(FROM HU)
31	-	-
32	-	-

Connector No.	M44
Connector Name	AV CONTROL UNIT (WITHOUT NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
36	R/L	COMP OUT+
37	B	COMP OUT-
38	W	B
39	R	G
40	B	R
41	G	RGB SYNC

Terminal No.	Color of Wire	Signal Name
42	SHIELD	RGB SYNC GND
43	B	YS
44	BR	DISP IT
45	R	HP
46	LG	SIG GND
47	O	SIG VCC
48	R/W	COMP OUT SYNC
49	SHIELD	COMP OUT SHIELD
50	SHIELD	RGB GND
51	-	-
52	-	-
53	-	-
54	-	-

Terminal No.	Color of Wire	Signal Name
55	SHIELD	SHIELD
56	Y	IT DISP
57	W	VP
58	BR	INV GND
59	Y	INV VCC

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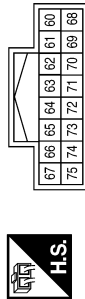
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AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

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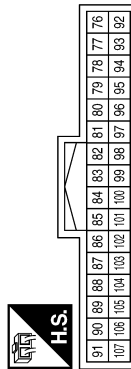
Connector No.	M45
Connector Name	AV CONTROL UNIT (WITHOUT NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
60	-	-
61	-	-
62	-	-
63	-	-
64	SHIELD	COMP2 GND
65	W	COMP2 IN+
66	LG	COMP1 IN+
67	-	-
68	V/G	RV CAM SIG

Terminal No.	Color of Wire	Signal Name
69	-	-
70	-	-
71	-	-
72	-	-
73	SHIELD	COMP1 IN SHIELD
74	V	COMP1 IN-
75	-	-

Connector No.	M46
Connector Name	AV CONTROL UNIT (WITHOUT NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
81	SHIELD	VOICE SHIELD
82	R	AUDIO BUS RH-
83	B	AUDIO BUS RH+
84	-	-
85	B	GND
86	L	CAN-H
87	P	CAN-L
88	R	M-CAN H (EARLY PRODUCTION)
88	L	M-CAN H (LATE PRODUCTION)
89	G	M-CAN L (EARLY PRODUCTION)
89	P	M-CAN L (LATE PRODUCTION)
90	R	-
91	G	-
92	-	-
93	-	-

Terminal No.	Color of Wire	Signal Name
94	-	-
95	B	AUX AUDIO RH+
96	W	AUX AUDIO LH+
97	R	AUX GND
98	W	AUDIO BUS LH-
99	G	AUDIO BUS LH+
100	SHIELD	AUDIO BUS SHIELD
101	BR	SW GND
102	-	-
103	SB	CN(DVD) EJECT
104	G	IGN
105	P/B	REVERSE SIG
106	G/R	PKB SIG
107	V/W	SPEED 8P

Terminal No.	Color of Wire	Signal Name
76	-	-
77	-	-
78	-	-
79	Y	TEL VOICE(TO IT)-
80	BR	TEL VOICE(TO IT)+

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AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY W/O NAVI]

Connector No.	M51
Connector Name	TWEETER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



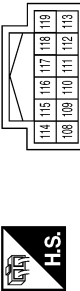
Terminal No.	Color of Wire	Signal Name
1	LG	-
2	B/Y	-

Connector No.	M48
Connector Name	AV CONTROL UNIT (WITHOUT NAVI)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
34	B	ANT MAIN
35	B	ANT +B

Connector No.	M47
Connector Name	AV CONTROL UNIT (WITHOUT NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
108	V	RR RH PRE-
109	B	FR RH PRE+
110	B/P	AMP ON
111	SHIELD	-
112	W/R	RR LH PRE+
113	G	FR LH PRE+
114	LG	RR RH PRE-
115	W	FR RH PRE-
116	-	-
117	-	-
118	W/L	RR LH PRE-
119	R	FR LH PRE-

Connector No.	M53
Connector Name	STEERING ANGLE SENSOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	R	SEN STEERING 1
6	G	SEN STEERING 2
8	W	SEN STEERING 3

Connector No.	M52
Connector Name	TWEETER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L/O	-
2	GR/L	-

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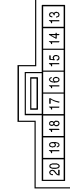
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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Connector No.	M88
Connector Name	SPIRAL CABLE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14	W	REMOTE A
15	L	REMOTE B
17	BR	GND

Terminal No.	Color of Wire	Signal Name
9	B	-
10	W	-
11	R	-
12	SHIELD	-
13	BR	-
14	B/R	-
15	V	-
16	L/B	-
17	P	-
21	LG	-
22	V	-
23	SHIELD	-
24	B	-

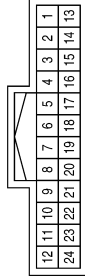
Connector No.	M85
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	SHIELD	-
3	R/B	-
4	LG	-
5	SHIELD	-
6	W/G	-

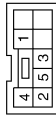
Terminal No.	Color of Wire	Signal Name
11	B/R	ACCESSORY IDENTIFY
12	BR	AUDIO R+
13	W	L-CH (-)
14	R	R-CH (-)
15	SHIELD	AUDIO-GND
16	R	CAN-H
17	P	EARTH
18	-	-
19	SHIELD	DIGITAL GND
20	-	-
21	L/B	ACCESSORY 3.3V
22	R/B	ACCESSORY DETECT
23	SHIELD	SHIELD
24	Y	AUDIO L+

Connector No.	M91
Connector Name	iPod®ADAPTER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	L-CH(+)
2	B	R-CH(+)
3	V/Y	ACC
4	G	CAN-L
5	Y/R	BAT
6	-	-
7	-	-
8	W/G	CHARGE POWER
9	LG	TX (iPod®-IN)
10	V	RX (iPod®-OUT)

Connector No.	M89
Connector Name	REAR CONTROL CANCEL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	BR	-
3	B	-

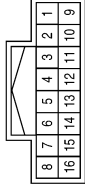
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AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY W/O NAVI]

Connector No.	M110
Connector Name	WIRE TO WIRE
Connector Color	WHITE



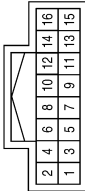
Terminal No.	Color of Wire	Signal Name
1	W	-
2	SHIELD	-
3	Y/R	-
4	V/Y	-
5	P/B	-
6	V/G	-
7	V/W	-
8	W	-
9	G	-
10	R	-
15	R	-
16	G	-

Connector No.	M103
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

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



Terminal No.	Color of Wire	Signal Name
1	B	GND
3	V/Y	ACC
4	R/L	ILL+
5	R/Y	ILL CONT GND
6	R	CAN H
8	G	CAN L
9	BR	SW GND
14	SB	CD (DVD) EJECT

Connector No.	M130
Connector Name	CENTER SPEAKER
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B/P	-
2	O/B	-

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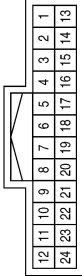
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AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

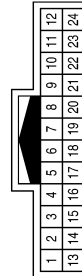
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Connector No.	M141
Connector Name	DISPLAY UNIT (WITH COLOR DISPLAY, WITHOUT NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	GND
2	Y	INV VCC
3	O	SIG VCC
4	B	COMP IN-

Connector No.	M200
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	SHIELD	-
3	R/B	-
4	LG	-
5	SHIELD	-
6	W/G	-
9	B	-
10	W	-
11	R	-
12	SHIELD	-

Terminal No.	Color of Wire	Signal Name
18	W	B
19	G	RGB SYNC
20	W	VP
21	SHIELD	RGB SYNC GND
22	BR	DISP ITM
23	SHIELD	BUS GND
24	-	-

Terminal No.	Color of Wire	Signal Name
5	SHIELD	COMP IN SHIELD
6	R	G
7	SHIELD	RGB GND
8	R	HP
9	B	YS
10	-	-
11	Y	IT DISP
12	-	-
13	BR	INV GND
14	LG	SIG GND
15	R/L	COMP IN+
16	R/W	COMP IN SYNC
17	B	R

Terminal No.	Color of Wire	Signal Name
13	BR	-
14	B/R	-
15	V	-
16	L/B	-
17	P	-
21	LG	-
22	V	-
23	SHIELD	-
24	GR	-

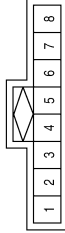
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AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

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Connector No.	M209
Connector Name	AUX IN JACK
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	AUX AUDIO RH+
2	R	AUX GND
3	W	AUX AUDIO LH+
7	LG	COMP OUT+
8	V	COMP OUT-

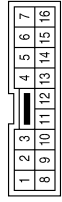
Terminal No.	Color of Wire	Signal Name
12	W/G	CHARGE POWER
14	SHIELD	DIGITAL GND
15	R/B	ACCESSORY DETECT
16	B/R	ACCESSORY IDENTIFY

Connector No.	M207
Connector Name	iPod@SIDE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	Y	AUDIO L+
2	SHIELD	SHIELD
5	V	RX (iPod@-OUT)
6	LG	TX (iPod@-IN)
7	BR	AUDIO R+
9	L/B	ACCESSORY 3.3V
10	P	EARTH

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



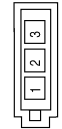
Terminal No.	Color of Wire	Signal Name
4	R	-

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



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

Connector No.	M501
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

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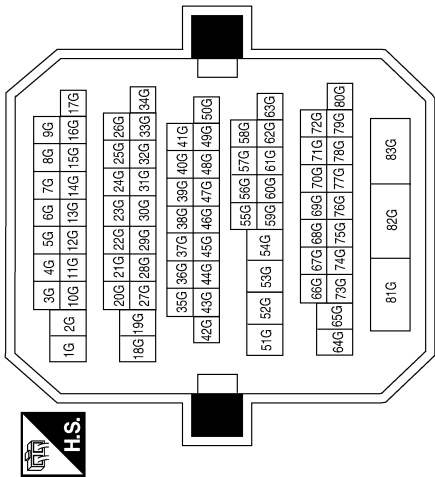
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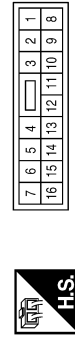
[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal No.	Color of Wire	Signal Name
13G	BR	-
24G	P	-
53G	GR	-
54G	BR	-
64G	V	-

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

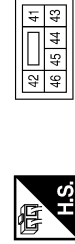


Connector No.	E29
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15	W	-

Connector No.	E47
Connector Name	JUNCTION BLOCK
Connector Color	WHITE



Connector No.	E35
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



Connector No.	E34
Connector Name	BACK-UP LAMP RELAY
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
45	BR	-

Terminal No.	Color of Wire	Signal Name
1	P	-

Terminal No.	Color of Wire	Signal Name
1	O	-
2	R	-
3	W	-
5	LG	-

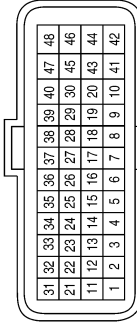
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[BOSE W/ COLOR DISPLAY W/O NAVI]

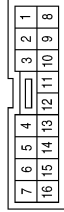
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Connector No.	F15
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	BLACK



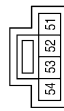
Terminal No.	Color of Wire	Signal Name
19	G/B	REV LAMP RLY

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



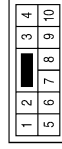
Terminal No.	Color of Wire	Signal Name
4	G/B	-

Connector No.	E49
Connector Name	JUNCTION BLOCK
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
51	LG	-
52	O	-

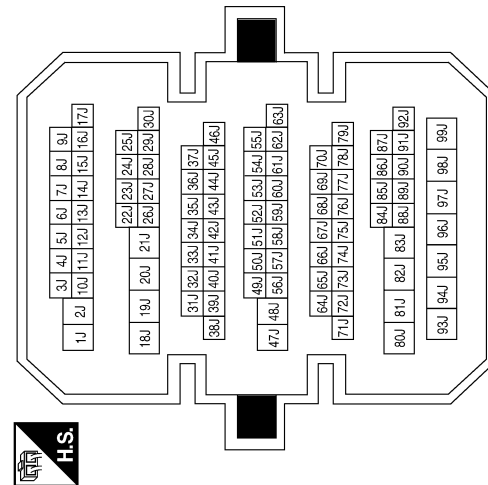
Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Terminal No.	Color of Wire	Signal Name
80J	O	-
81J	LG	-
91J	V	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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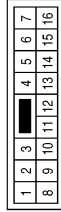
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[BOSE W/ COLOR DISPLAY W/O NAVI]

Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



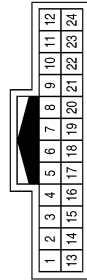
Terminal No.	Color of Wire	Signal Name
15	W	-

Connector No.	B20
Connector Name	JOINT CONNECTOR-B05
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
5	V	-
7	V	-
8	V	-
9	W	-

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	R	-
5	L	-
6	SHIELD	-
8	BR	-
9	SHIELD	-
10	Y	-
13	BR	-

Terminal No.	Color of Wire	Signal Name
21	V	-
22	GR	-
23	O	-

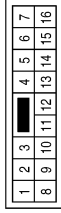
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[BOSE W/ COLOR DISPLAY W/O NAVI]

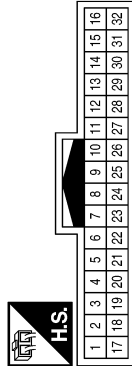
Connector No.	B103
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	V	-
4	P	-
5	R	-
6	SB	-
7	GR	-
8	W	-
9	B	-
10	GR	-
11	O	-
12	G	-
13	L	-
14	V	-
15	P	-

Terminal No.	Color of Wire	Signal Name
17	W/R	-
18	B/R	-
19	SHIELD	-
20	W/L	-
21	GR/V	-
22	SHIELD	-
23	BR	-
24	Y	-
25	SHIELD	-
26	V	-
27	LG	-
28	SHIELD	-
29	SB	-
30	R	-
31	G	-
32	P	-

Connector No.	B102
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	W/L	-
6	Y/L	-
7	Y/G	-
8	BR/L	-
9	SHIELD	-
10	R/L	-
11	R/W	-
12	B	-
13	SHIELD	-
14	GR	-
15	P	-
16	O	-

Connector No.	B107
Connector Name	REAR SUBWOOFER RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	G	-

Connector No.	B106
Connector Name	REAR SUBWOOFER LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	BR	-

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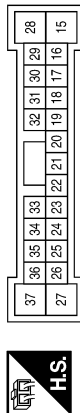
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[BOSE W/ COLOR DISPLAY W/O NAVI]

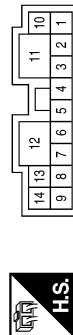
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Connector No.	B109
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
15	L	RR DOOR LH- OUT
20	SB	AMP ON
23	Y	RR LH IN
24	BR	RR LH+IN
25	LG	RR RH-IN
26	V	RR RH+IN
28	G	RR DOOR LH+ OUT
29	V	INST CTR TWDR+ OUT
30	P	INST CTR TWDR- OUT

Connector No.	B110
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	FR TWDR LH+ OUT
2	V	FR TWDR LH- OUT
3	R	FR TWDR RH- OUT
4	P	FR TWDR RH+ OUT
5	Y	RH WOOFER+ OUT
7	G	RH WOOFER- OUT
8	B	GND
9	BR	LH WOOFER- OUT
10	O	RR DOOR RH- OUT

Terminal No.	Color of Wire	Signal Name
31	GR	FR DOOR RH+ OUT
32	O	FR DOOR RH- OUT
33	W/L	FR RH+IN
34	GR/V	FR RH-IN
35	W/R	FR LH+IN
36	B/R	FR LH-IN

Terminal No.	Color of Wire	Signal Name
11	GR	BAT
12	B	GND
13	W	LH WOOFER+ OUT
14	LG	RR DOOR RH+ OUT

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AV CONTROL UNIT

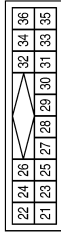
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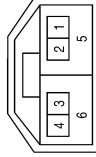
Terminal No.	Color of Wire	Signal Name
32	P	BAT
35	B	HARN EARTH
36	GR	ACC

Terminal No.	Color of Wire	Signal Name
15	W/L	SAT LCH(-)
20	Y/L	SAT LCH(+)
23	Y/G	SAT RCH(-)
24	BR/L	SAT RCH(+)
25	SHIELD	SIG EARTH
26	SHIELD	DATA EARTH
28	R/L	REQ1(SAT->COMB)
29	B	TXD(SAT->COMB)
30	R/W	RXD(COMB->SAT)

Connector No.	B111
Connector Name	SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER
Connector Color	WHITE



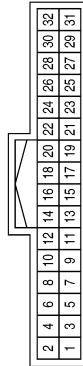
Connector No.	B120
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-
3	P	-
4	L	-
5	SHIELD	-
6	SHIELD	-

Terminal No.	Color of Wire	Signal Name
10	-	-
11	SHIELD	COMP OUT-
12	W	COMP OUT+
13	-	-
14	L	CONTROL1
15	-	-
16	-	-
17	G	M CAN-
18	R	M CAN+
19	P	M CAN-
20	LG	M CAN+
21	-	-
22	GR	REVERSE GEAR
23	V	STEERING SEN1
24	SB	STEERING SEN2
25	LG	STEERING SEN3
26	BR	SPEED SENSOR
27	-	-
28	-	-
29	-	-
30	Y	ACC
31	B	GND
32	V	+B

Connector No.	B119
Connector Name	REAR VIEW CAMERA CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	SHIELD	REARCAMERA VIDEO SIGNAL INPUT-
6	B	REARCAMERA VIDEO SIGNAL INPUT+
7	W	GND
8	R	REARCAMERA POWER
9	-	-

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[BOSE W/ COLOR DISPLAY W/O NAVI]

Connector No.	B123
Connector Name	JOINT CONNECTOR-B22
Connector Color	WHITE



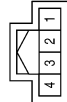
Terminal No.	Color of Wire	Signal Name
3	B	-
4	SHIELD	-

Connector No.	B122
Connector Name	JOINT CONNECTOR-B21
Connector Color	WHITE



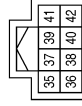
Terminal No.	Color of Wire	Signal Name
2	SHIELD	-
3	B	-
4	SHIELD	-

Connector No.	B121
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	P	-
2	B	-
3	O	-
4	Y	-

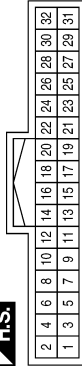
Connector No.	B128
Connector Name	BLUETOOTH CONTROL UNIT (WITH COLOR DISPLAY)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
35	R	CAN H1
36	G	CAN L1
37	SHIELD	CAN SHIELD 1
38	-	-
39	-	-
40	O	CAN H2
41	-	-
42	P	CAN L2

Terminal No.	Color of Wire	Signal Name
9	BR	AUDIO OUT (+)
10	Y	AUDIO OUT (-)
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	BR	SPEED
29	R	MIC POWER

Connector No.	B126
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	V	(+B)
2	GR	ACC
3	O	IGN
4	B	GND
5	-	-
6	-	-
7	L	MIC IN +
8	SHIELD	MIC IN -

ABNIA0473GB

AV CONTROL UNIT

< ECU DIAGNOSIS >

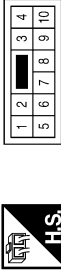
[BOSE W/ COLOR DISPLAY W/O NAVI]

Connector No.	B130
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	BLACK



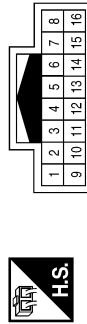
Terminal No.	Color of Wire	Signal Name
33	B	-
34	B	-

Connector No.	B134
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	B136
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	SHIELD	-
3	V	-
4	Y	-
5	GR	-
6	L	-
7	BR	-
8	LG	-

Terminal No.	Color of Wire	Signal Name
9	G	-
10	R	-
15	V	-
16	SB	-

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	-
2	W	-
3	B	-
4	SHIELD	-

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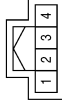
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Connector No.	B402
Connector Name	REAR CONTROL SWITCH
Connector Color	WHITE



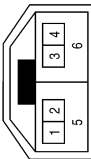
Terminal No.	Color of Wire	Signal Name
1	V/Y	-
2	R/L	-
3	BR	-
4	B	-

Connector No.	B401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



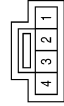
Terminal No.	Color of Wire	Signal Name
1	R/L	-
2	B	-
3	BR	-
4	V/Y	-

Connector No.	B400
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-
3	P	-
4	L	-
5	SHIELD	-
6	SHIELD	-

Connector No.	T100
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	-
2	W	-
3	B	-
4	SHIELD	-

Connector No.	B404
Connector Name	REAR CONTROL SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
7	R	-
8	G	-

Connector No.	B403
Connector Name	REAR CONTROL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	-
6	P	-

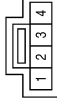
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AV CONTROL UNIT

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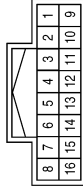
[BOSE W/ COLOR DISPLAY W/O NAVI]

Connector No.	R7
Connector Name	MICROPHONE
Connector Color	WHITE



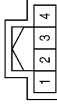
Terminal No.	Color of Wire	Signal Name
1	L	MIC SIG
2	SHIELD	MIC GEN
4	R	MIC VCC

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



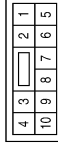
Terminal No.	Color of Wire	Signal Name
1	L	-
2	R	-
9	SHIELD	-

Connector No.	T101
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	CAMERA ON
2	W	GND
3	B	COMP+
4	GR	COMP-

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	LG	-
8	O	-

Connector No.	D3
Connector Name	FRONT DOOR SPEAKER LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	O	-
12	LG	-

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ABNIA0476GB

AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

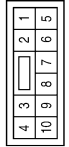
< ECU DIAGNOSIS >

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



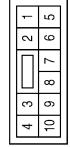
Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	D103
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D306
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	D302
Connector Name	REAR DOOR SPEAKER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

DTC Index

Self-diagnosis results display item

ABNIA0477GB

INFOID:000000004277368

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Error item	Refer to
CAN COMM CIRCUIT [U1000]	AV-206. "Description"
CONTROL UNIT (CAN) [U1010]	AV-207. "Description"
Control Unit FLASH-ROM [U1200]	AV-208. "Description"
CAN CONT [U1216]	AV-209. "Description"
FRONT DISP CONN [U1243]	AV-210. "Description"
SAT CONN [U1255]	AV-213. "Description"
HAND FREE CONN [U1256]	AV-215. "Description"
AV COMM CIRCUIT [U1300]	AV-216. "Description"
CONTROL UNIT (AV) [U1310]	AV-217. "Description"

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DISPLAY UNIT

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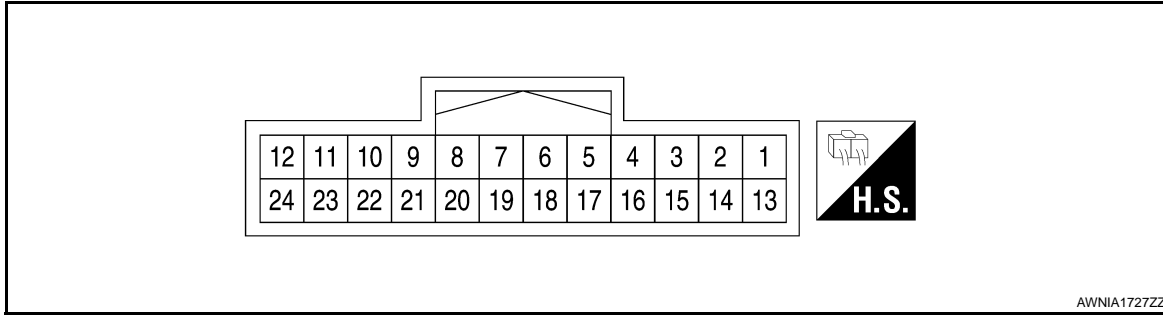
[BOSE W/ COLOR DISPLAY W/O NAVI]

DISPLAY UNIT

Reference Value

INFOID:000000004277369

TERMINAL LAYOUT



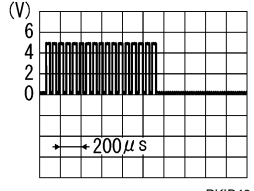
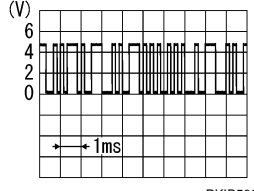
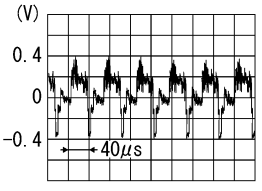
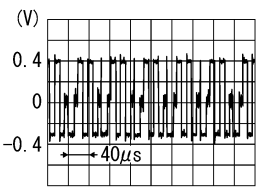
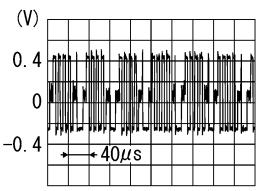
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	Ignition switch ON	—	0V
2 (Y)	Ground	Inverter VCC	Input	Ignition switch ACC	—	9V
3 (O)	Ground	Signal VCC	Input	Ignition switch ACC	—	9V
4 (B)	Ground	AUX image ground	—	Ignition switch ON	—	0V
5	—	Shield	—	—	—	—
6 (R)	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.	<p>SKIB2236J</p>
7	—	Shield	—	—	—	—
8 (R)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	—	<p>SKIB3601E</p>

DISPLAY UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	-	Signal name	Input/ Output		
9 (B)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At RGB image displayed 5V
				Ignition switch ON	At rear view camera image displayed 
11 (Y)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display-brightness 
13 (BR)	Ground	Inverter ground	—	Ignition switch ON	— 0V
14 (LG)	Ground	Signal ground	—	Ignition switch ON	— 0V
15 (R/L)	Ground	AUX image signal	Input	Ignition switch ON	When AUX mode is selected 
16 (R/W)	—	AUX image synchronizing signal	Input	—	—
17 (B)	Ground	RGB signal (R: red)	Input	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. 
18 (W)	Ground	RGB signal (B: blue)	Input	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. 

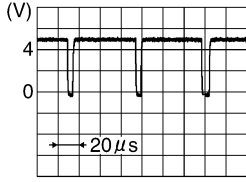
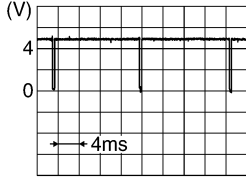
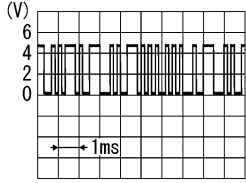
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DISPLAY UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
19 (G)	Ground	RGB synchronizing signal	Input	Ignition switch ON	—	 <p>SKIB3603E</p>
20 (W)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch On	—	 <p>SKIB3598E</p>
21	—	Shield	—	—	—	—
22 (BR)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display- brightness	 <p>PKIB5039J</p>
23	—	Shield	—	—	—	—

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

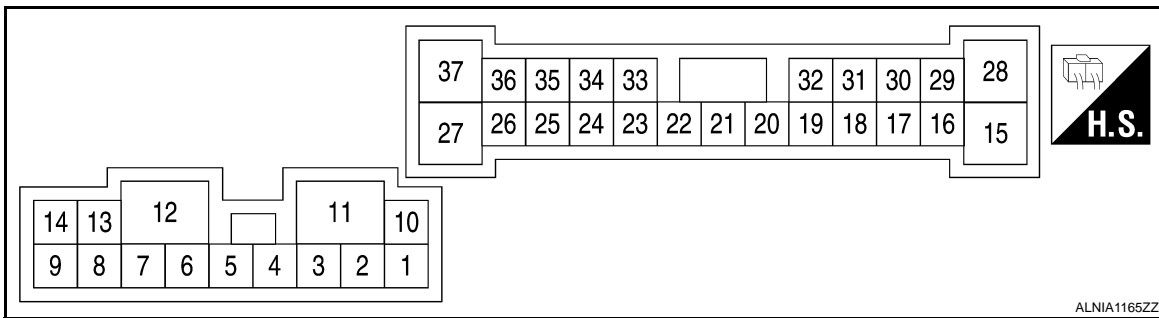
[BOSE W/ COLOR DISPLAY W/O NAVI]

BOSE SPEAKER AMP

Reference Value

INFOID:000000004277370

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
1 (LG)	2 (V)	Audio signal tweeter LH	Output	Ignition switch ON	Audio output	<p>SKIB3609E</p>
4 (P)	3 (R)	Audio signal tweeter RH	Output	Ignition switch ON	Audio output	<p>SKIB3609E</p>
5 (Y)	6 (G)	Audio signal subwoofer RH	Output	Ignition switch ON	Audio output	<p>SKIB3609E</p>
7 (B)	Ground	Ground	—	Ignition switch ON	—	0V
10 (SB)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
11 (GR)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0V

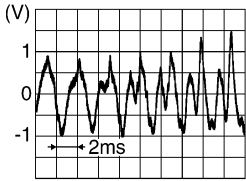
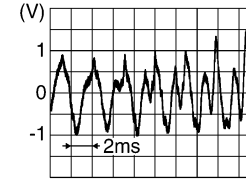
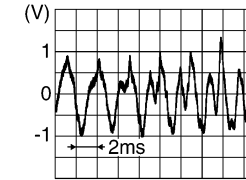
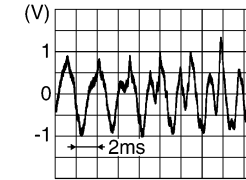
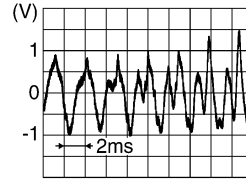
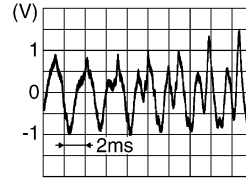
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BOSE SPEAKER AMP

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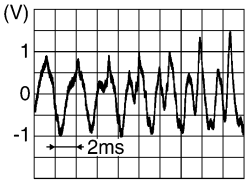
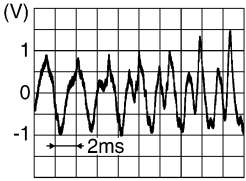
[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
13 (W)	8 (BR)	Audio signal subwoofer LH	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
14 (LG)	9 (O)	Audio signal rear door RH	Input	Ignition switch ON	Audio input	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
20 (SB)	Ground	Amp. ON signal	Input	Ignition switch ACC	—	Battery voltage
24 (BR)	23 (Y)	Audio signal rear LH	Input	Ignition switch ON	Audio input	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
26 (V)	25 (LG)	Audio signal rear RH	Input	Ignition switch ON	Audio input	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
28 (G)	15 (L)	Audio signal rear door LH	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
29 (V)	30 (P)	Audio signal center speak- er	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
33 (W/L)	34 (GR/V)	Audio signal front RH	Input	Ignition switch ON	Audio input	
35 (W/R)	36 (B/R)	Audio signal front LH	Input	Ignition switch ON	Audio input	

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SATELLITE RADIO TUNER

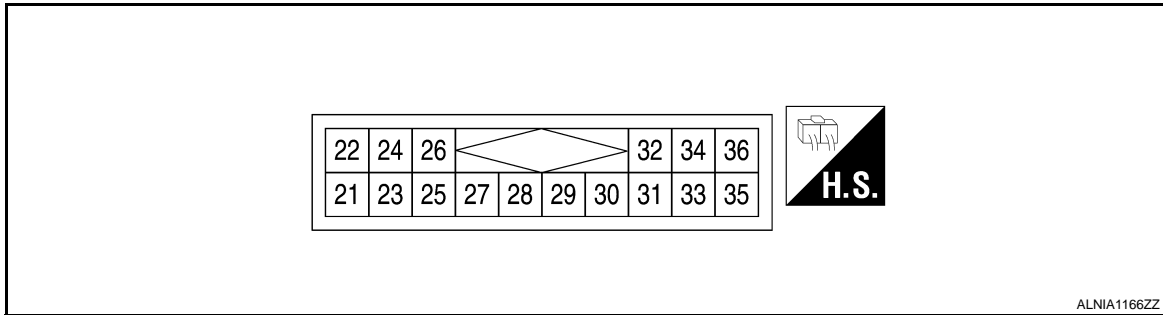
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[BOSE W/ COLOR DISPLAY W/O NAVI]

SATELLITE RADIO TUNER

Reference Value

INFOID:000000004277371



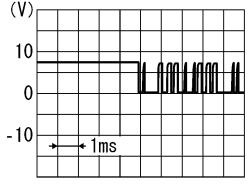
PHYSICAL VALUES

Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/Output			
22 (Y/L)	21 (W/L)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	
24 (BR/L)	23 (Y/G)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	
25	—	Shield	—	—	—	—
28 (R/L)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	
29 (B)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	

SATELLITE RADIO TUNER

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/Output			
30 (R/W)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	
32 (P)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
35	—	Shield	—	—	—	—
36 (GR)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

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BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS >

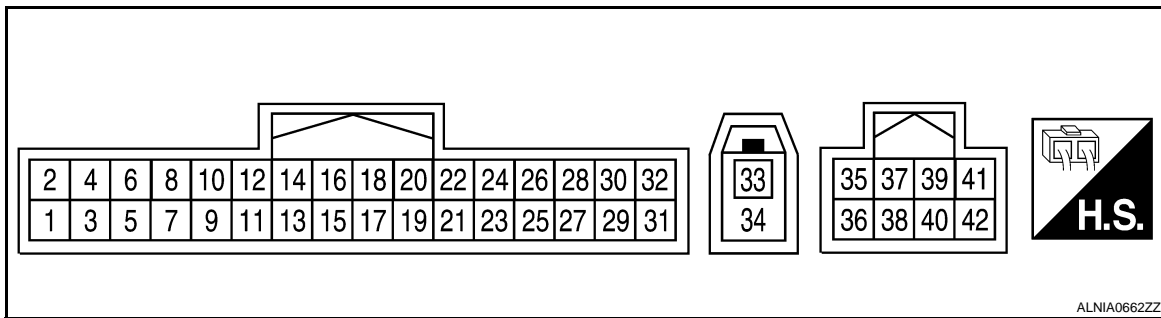
[BOSE W/ COLOR DISPLAY W/O NAVI]

BLUETOOTH CONTROL UNIT

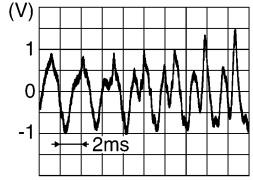
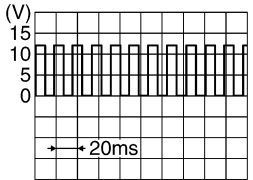
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TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ output			
1 (V)	Ground	Battery power	Input	-	-	Battery voltage
2 (GR)	Ground	ACC power	Input	Ignition switch ACC/ON	-	Battery voltage
3 (O)	Ground	IGN power	Input	Ignition switch ON/ START	-	Battery voltage
4 (B)	Ground	Ground	-	Ignition switch ON	-	0V
7 (L)	8	MIC in signal	Input	-	-	-
9 (BR)	10 (Y)	Audio out	Output	Ignition switch ACC/ON	Bluetooth control unit sends audio signal	 <p>SKIB3609E</p>
28 (BR)	Ground	Vehicle speed sig- nal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	 <p>PKIA1935E</p>
29 (R)	Ground	Microphone power	Output	Ignition switch ON	-	5V
33 (B)	-	Bluetooth antenna	-	-	-	-

BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ output			
34 (B)	-	Bluetooth antenna	-	-	-	—
35 (R)	-	M-CAN1 (+)	-	-	-	—
36 (G)	-	M-CAN1 (-)	-	-	-	—
37	-	Shield	-	-	-	—
40 (O)	-	M-CAN2 (-)	-	-	-	—
42 (P)	-	M-CAN2 (-)	-	-	-	—

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AV

IPOD ADAPTER

< ECU DIAGNOSIS >

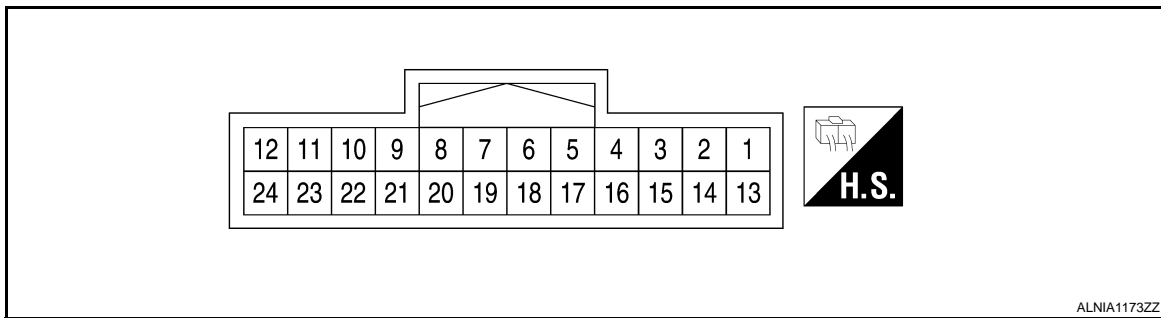
[BOSE W/ COLOR DISPLAY W/O NAVI]

IPOD ADAPTER

Reference Values

INFOID:000000004375778

TERMINAL LAYOUT



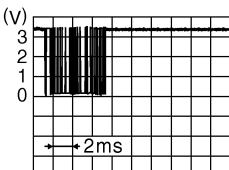
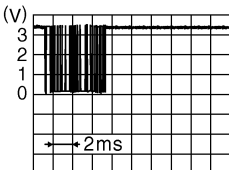
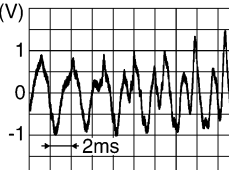
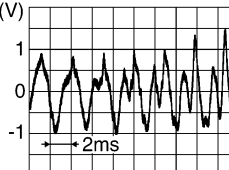
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
1 (G)	13 (W)	iPod sound signal LH	Output	Ignition switch ON	When iPod mode is select- ed.	 SKIB3609E
2 (B)	14 (R)	iPod sound signal RH	Output	Ignition switch ON	When iPod mode is select- ed.	 SKIB3609E
3 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
4 (G)	—	AV communication signal (L)	Input/ Output	—	—	—
5 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
8 (W/G)	Ground	iPod battery charge	Output	Ignition switch ON	Connected to iPod®.	Battery voltage

IPOD ADAPTER

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
9 (LG)	Ground	Communication signal (iPod adapter→iPod®)	Output	Ignition switch ON	The wave pattern is displayed just after iPod connection.	 <p style="text-align: right; font-size: small;">JPNIA0462GB</p> <p>NOTE: After the wave pattern display, the value continues Approx 3.3V</p>
10 (V)	Ground	Communication signal (iPod®→iPod adapter)	Input	Ignition switch ON	Connected to iPod®.	 <p style="text-align: right; font-size: small;">JPNIA0462GB</p>
11 (B/R)	Ground	ACCESSORY-IDENTIFY	—	Ignition switch ON	Connected to iPod®.	0V
12 (BR)	Ground	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
15	—	Shield	—	—	—	—
16 (R)	—	AV communication signal (H)	Input/ Output	—	—	—
17 (P)	Ground	Ground	—	Ignition switch ON	—	0V
19	—	Shield	—	—	—	—
21 (L/B)	Ground	iPod connection recognition signal	Input	Ignition switch ON	Not connected to iPod®.	4.0V
					Connected to iPod®.	0V
22 (R/B)	Ground	ACCESSORY-DETECT	—	Ignition switch ON	Connected to iPod®.	0V
23	—	Shield	—	—	—	—
24 (Y)	Ground	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

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AV

REAR VIEW CAMERA CONTROL UNIT

< ECU DIAGNOSIS >

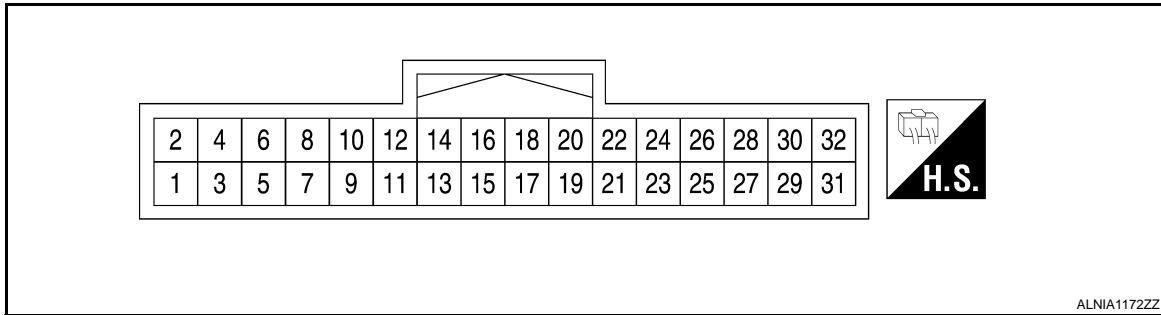
[BOSE W/ COLOR DISPLAY W/O NAVI]

REAR VIEW CAMERA CONTROL UNIT

Reference Values

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TERMINAL LAYOUT



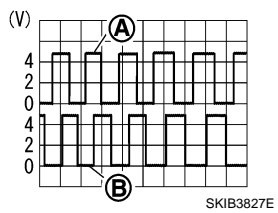
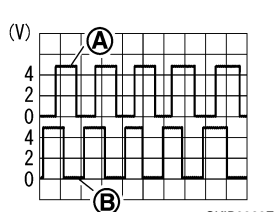
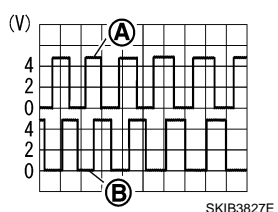
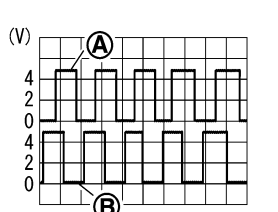
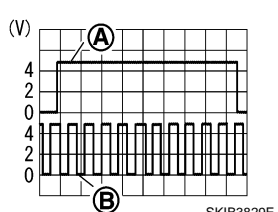
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
5	—	Shield	—	—	—	—
6 (B)	Ground	Camera image signal	Input	Ignition switch ON	When rear view camera im- age is displayed.	<p>SKIB2251J</p>
7 (W)	Ground	Rear view camera ground	—	Ignition switch ON	—	0V
8 (R)	Ground	Camera ON signal	Output	Ignition switch ON	R position.	6.0V
					Other than R position.	0V
11	—	Shield	—	—	—	—
12 (W)	Ground	Camera image signal	Output	Ignition switch ON	When rear view camera im- age is displayed.	<p>SKIB2251J</p>
14 (L)	Ground	Camera-connection recog- nition signal	Output	Ignition switch ON	Connected to camera con- trol unit connector.	0V
					Not connected to camera control unit connector.	5.0V
17 (G)	—	AV communication signal (L)	Input/ Output	—	—	—
18 (R)	—	AV communication signal (H)	Input/ Output	—	—	—
19 (P)	—	AV communication signal (L)	Input/ Output	—	—	—

REAR VIEW CAMERA CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

< ECU DIAGNOSIS >

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
20 (LG)	—	AV communication signal (H)	Input/ Output	—	—	—
22 (GR)	Ground	Reverse signal	Input	Ignition switch ON	R position.	Battery voltage
				Other than R position.	0V	
23 (V)	Ground	Sensor signal 1	Input	Ignition switch ON	Turn the steering to the right.	 <p style="text-align: center;">A: Sensor signal 1 B: Sensor signal 2</p>
					Turn the steering to the left.	 <p style="text-align: center;">A: Sensor signal 1 B: Sensor signal 2</p>
24 (SB)	Ground	Sensor signal 2	Input	Ignition switch ON	Turn the steering to the right.	 <p style="text-align: center;">A: Sensor signal 1 B: Sensor signal 2</p>
					Turn the steering to the left.	 <p style="text-align: center;">A: Sensor signal 1 B: Sensor signal 2</p>
25 (LG)	Ground	Sensor signal 3	Input	Ignition switch ON	Turn the steering around the neutral position.	 <p style="text-align: center;">A: Sensor signal 3 B: Sensor signal 1</p>

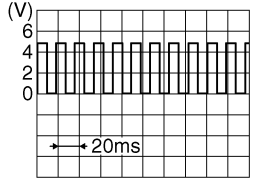
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AV

REAR VIEW CAMERA CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/O NAVI]

< ECU DIAGNOSIS >

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	-	Signal name	Input/ Output		
26 (BR)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is ap- prox. 40 km/h (25 MPH).
<p>NOTE: Maximum voltage may be 12V due to specifications (connected units).</p>  <p style="text-align: right; font-size: small;">SKIA6649J</p>					
30 (Y)	Ground	ACC power supply	Input	Ignition switch ACC	—
31 (B)	Ground	Ground	—	Ignition switch ON	—
32 (V)	Ground	Battery power supply	Input	Ignition switch OFF	—

AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:000000004277375

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">AV control unit power circuitAV control unit	<ul style="list-style-type: none">AV-218AV-313
Steering switch does not operate	<ul style="list-style-type: none">Steering switchAV control unit	<ul style="list-style-type: none">AV-249AV-313
All speakers do not sound	<ul style="list-style-type: none">AV control unitAV control unit power circuitBOSE speaker amp. ON signalBOSE speaker amp. power/ground circuitBOSE speaker amp.	<ul style="list-style-type: none">AV-313AV-218AV-248AV-221AV-321
One or several speakers do not sound	<ul style="list-style-type: none">Front door speakerTweeterCenter speakerRear door speakerSubwoofer	<ul style="list-style-type: none">AV-234AV-237AV-240AV-242AV-245

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	AV control unit	AV-313
CD cannot be ejected.		
The CD cannot be played.		
The sound skips, stops suddenly, or is distorted.		

SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">Satellite radio tuner power or ground circuitSatellite radio tuner communication circuitSatellite radio tuner	<ul style="list-style-type: none">AV-222AV-251AV-322
Right or left channel does not sound	<ul style="list-style-type: none">Satellite radio tuner right channel audio signal circuitSatellite radio tuner left channel audio signal circuitSatellite radio tuner	<ul style="list-style-type: none">AV-254AV-254AV-322

HANDS-FREE PHONE

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">Bluetooth control unit power and ground circuitBluetooth control unit	<ul style="list-style-type: none">AV-224AV-331
Steering switch does not operate	<ul style="list-style-type: none">Steering switchBluetooth control unit	<ul style="list-style-type: none">AV-324AV-331
Voice activated control does not operate	<ul style="list-style-type: none">MicrophoneSteering switchBluetooth control unit	<ul style="list-style-type: none">AV-329AV-324AV-331

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/O NAVI]

NORMAL OPERATING CONDITION

Description

INFOID:000000004277376

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

NOISE

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

- Fading noise: This noise occurs because of variations in the field strength in a narrow range due to mountains or buildings blocking the signal.
- Multi-path noise: This noise results from the waves sent directly from the broadcast station arriving at the antenna at a different time from the waves which reflect off mountains or buildings.

The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning. Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and determine the cause.

NOTE:

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

Type of Noise and Possible Cause

Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	<ul style="list-style-type: none"> • Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		<ul style="list-style-type: none"> • Fuel pump condenser
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	<ul style="list-style-type: none"> • Relay malfunction, AV control unit malfunction
	The noise occurs when various motors are operating.	<ul style="list-style-type: none"> • Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		<ul style="list-style-type: none"> • Rear defogger coil malfunction • Open circuit in printed heater • Poor ground of antenna feeder line
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		<ul style="list-style-type: none"> • Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

PRECAUTION

PRECAUTIONS

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

INFOID:000000003899735

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 SR and SB section of this Service Manual.

WARNING:

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

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:000000004399691

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
 - NOTE:**
Supply power using jumper cables if battery is discharged.
2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

PREPARATION

< PREPARATION >

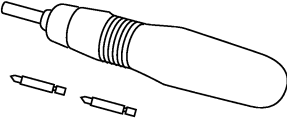
[BOSE W/ COLOR DISPLAY W/O NAVI]

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000003899736

Tool name	Description
<p>Power tool</p>  <p>PBIC0191E</p>	<p>Loosening bolts and nuts</p>

AUDIO UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

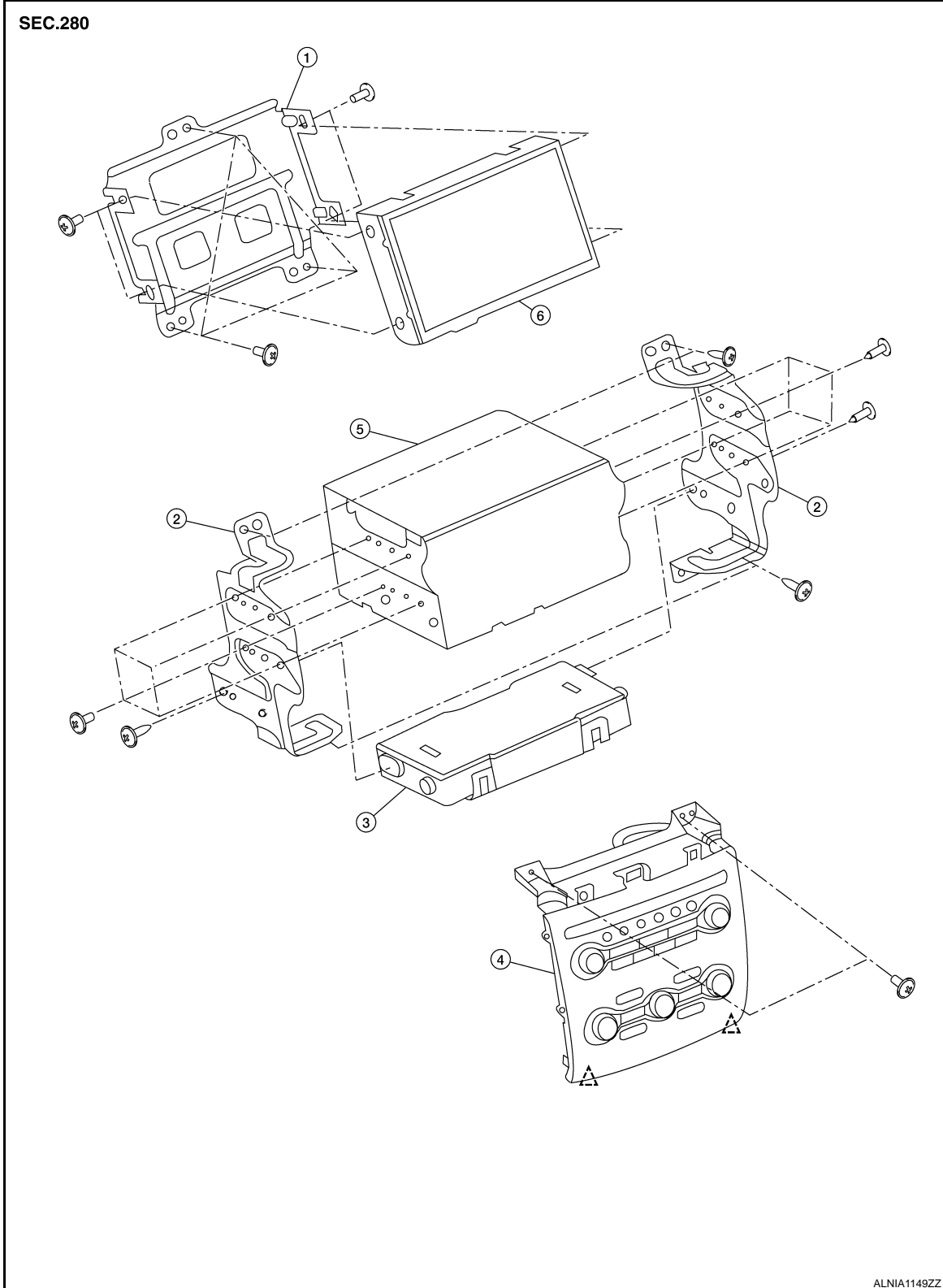
ON-VEHICLE REPAIR

AUDIO UNIT

Removal and Installation

INFOID:000000003899737

Bose Audio




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AUDIO UNIT

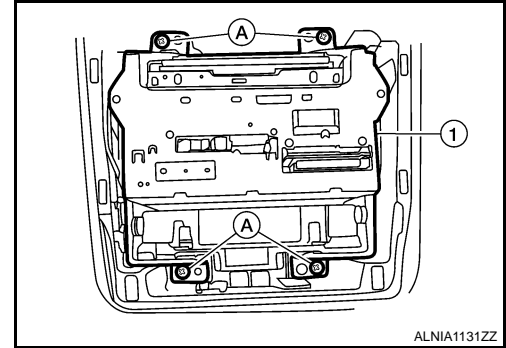
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

- | | | |
|-------------------------------|------------------------------|-----------------------|
| 1. Audio display unit bracket | 2. Audio unit brackets LH/RH | 3. A/C auto amp. |
| 4. Cluster lid C | 5. Audio unit | 6. Audio display unit |
-  Clip

Removal

1. Remove the cluster lid D. Refer to [IP-12, "Removal and Installation"](#).
2. Remove the audio unit screws (A), then pull out the audio unit (1), disconnect the connectors and remove the audio unit (1).



Installation

Installation is in the reverse order of removal.

AUDIO DISPLAY UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

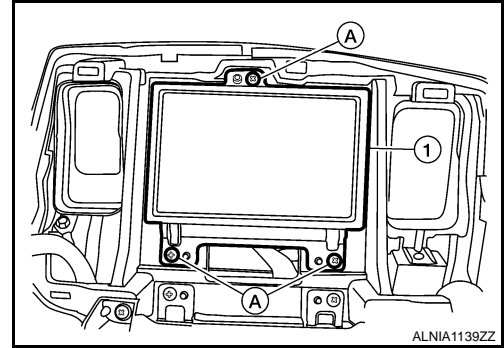
AUDIO DISPLAY UNIT

Removal and Installation

INFOID:000000004292735

REMOVAL

1. Remove the cluster lid D. Refer to [IP-12. "Removal and Installation"](#).
2. Remove the audio display unit screws (A), then pull out the audio display unit (1), disconnect the audio display unit connectors and remove the audio display unit (1).



INSTALLATION

Installation is in the reverse order of removal.

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AV

FRONT TWEETER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

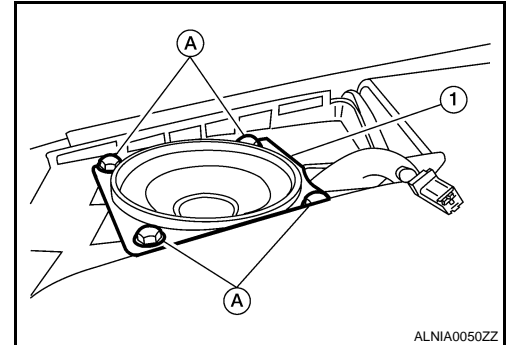
FRONT TWEETER

Removal and Installation

INFOID:000000003899741

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-24, "Removal and Installation"](#).
2. Remove tweeter speaker grille. Refer to [IP-12, "Removal and Installation"](#).
3. Remove the tweeter speaker screws (A), then pull out front tweeter speaker (1), disconnect the front tweeter speaker connector and remove the front tweeter speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

CENTER SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

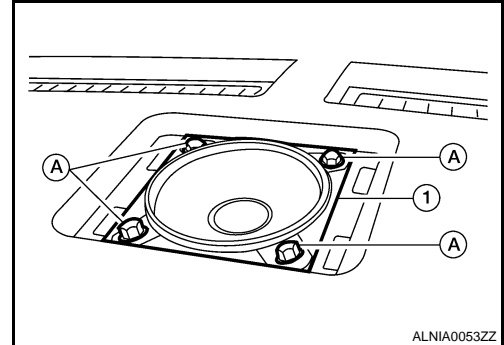
CENTER SPEAKER

Removal and Installation

INFOID:000000003899742

REMOVAL

1. Remove the center speaker grille. Refer to [IP-12. "Removal and Installation"](#).
2. Remove the center speaker screws (A), then pull out the center speaker (1), then disconnect the center speaker connector and remove the center speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

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FRONT DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

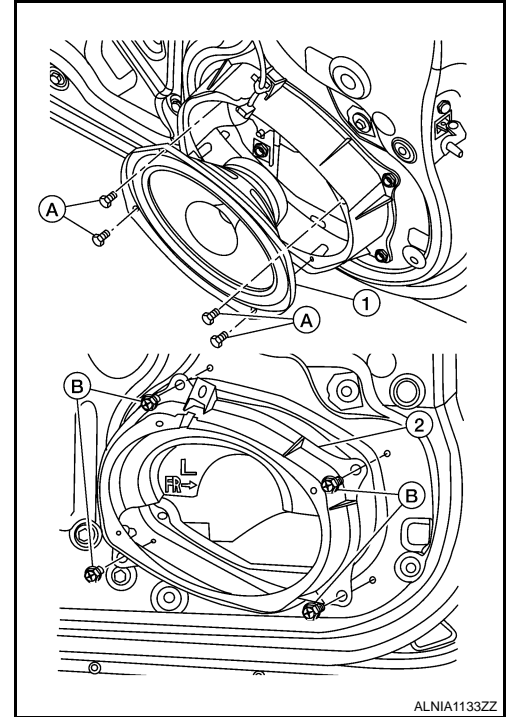
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000003899743

REMOVAL

1. Remove the front door finisher. Refer to [INT-18, "Removal and Installation"](#).
2. Remove the front door speaker screws (A), then disconnect the front door speaker connector and remove the front door speaker (1).
3. Remove the front door speaker spacer screws (B) and remove the front door speaker spacer (2).



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INSTALLATION

Installation is in the reverse order of removal.

REAR DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

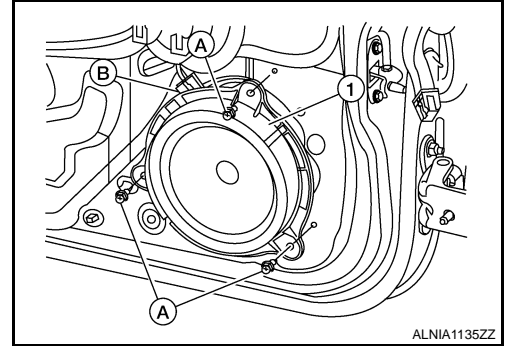
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000004292725

REMOVAL

1. Remove the rear door finisher. Refer to [INT-21. "Removal and Installation"](#).
2. Remove the rear door speaker screws (A), then disconnect the rear door speaker connector (B) and remove the rear door speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

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SUBWOOFER

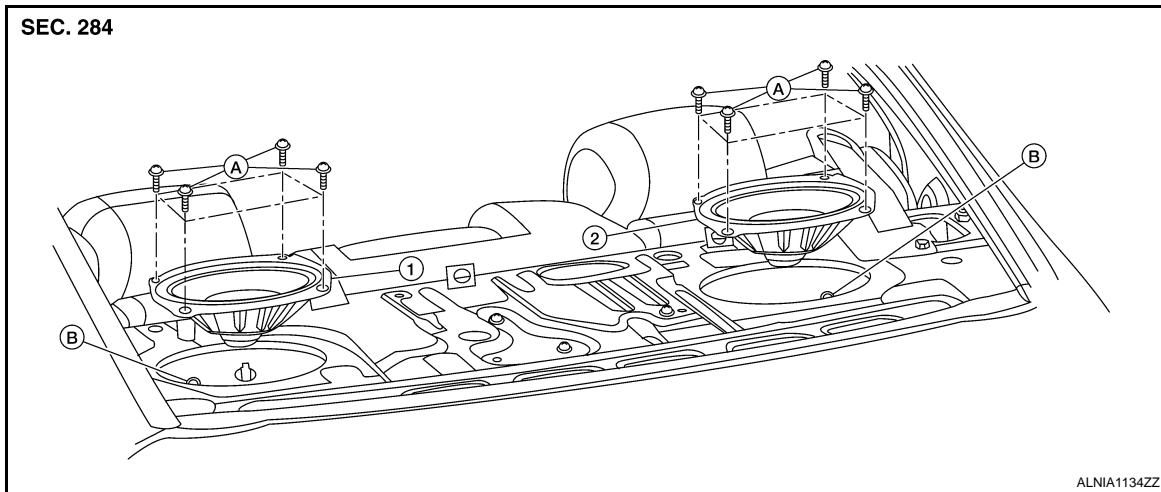
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

SUBWOOFER

Removal and Installation

INFOID:000000004292726



1. Subwoofer LH

2. Subwoofer RH

A. Subwoofer screws

B. Subwoofer connectors

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-26. "Removal and Installation"](#).
2. Remove the subwoofer screws, then pull out the subwoofer, disconnect the subwoofer connector and remove the subwoofer.

INSTALLATION

Installation is in the reverse order of removal.

BOSE SPEAKER AMP

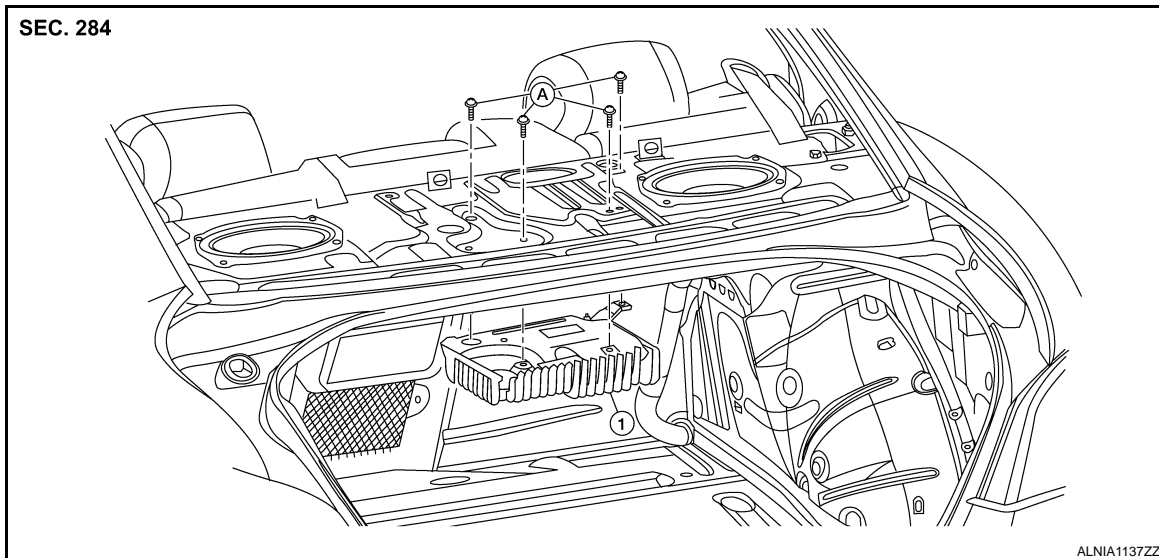
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

BOSE SPEAKER AMP

Removal and Installation

INFOID:000000004292727



1. Bose speaker amp.

A. Screws

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the rear parcel shelf. Refer to [INT-26, "Removal and Installation"](#).
3. Remove the Bose speaker amp. screws, then disconnect the Bose speaker amp. connectors and remove the Bose speaker amp.

INSTALLATION

Installation is in the reverse order of removal.

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AV

SATELLITE RADIO TUNER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

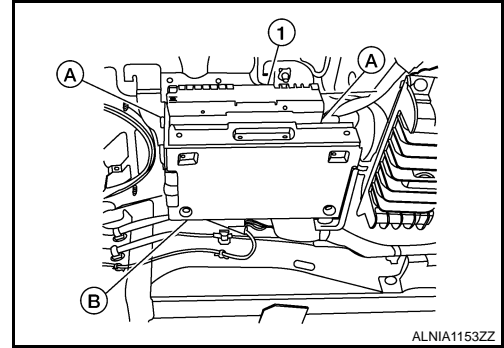
SATELLITE RADIO TUNER

Removal and Installation

INFOID:000000004292728

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the satellite radio tuner unit screws (A), disconnect the satellite tuner harness connectors (B) and remove the satellite radio tuner (1).



INSTALLATION

Installation is in the reverse order of removal.

SATELLITE RADIO ANTENNA

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

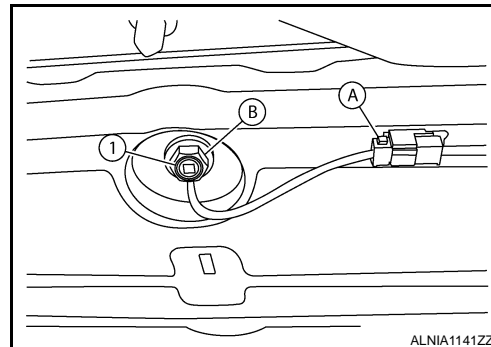
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:000000004292729

REMOVAL

1. Lower the headliner at the rear. Refer to [INT-32. "Exploded View"](#).
2. Disconnect the satellite radio antenna connector (A), then remove the satellite radio antenna nut (B) and remove the satellite radio antenna (1).



INSTALLATION

Installation is in the reverse order of removal.

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STEERING SWITCH

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

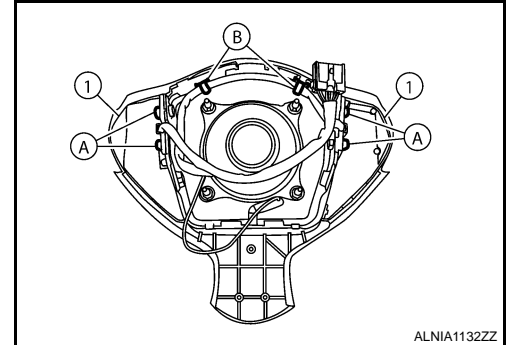
STEERING SWITCH

Removal and Installation

INFOID:000000004292730

REMOVAL

1. Remove the driver airbag module. Refer to [SR-5. "Removal and Installation"](#).
2. Remove the steering wheel switch assembly screws (A), then detach the steering wheel switch harness clips (B) and remove the steering wheel switches (1).



INSTALLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

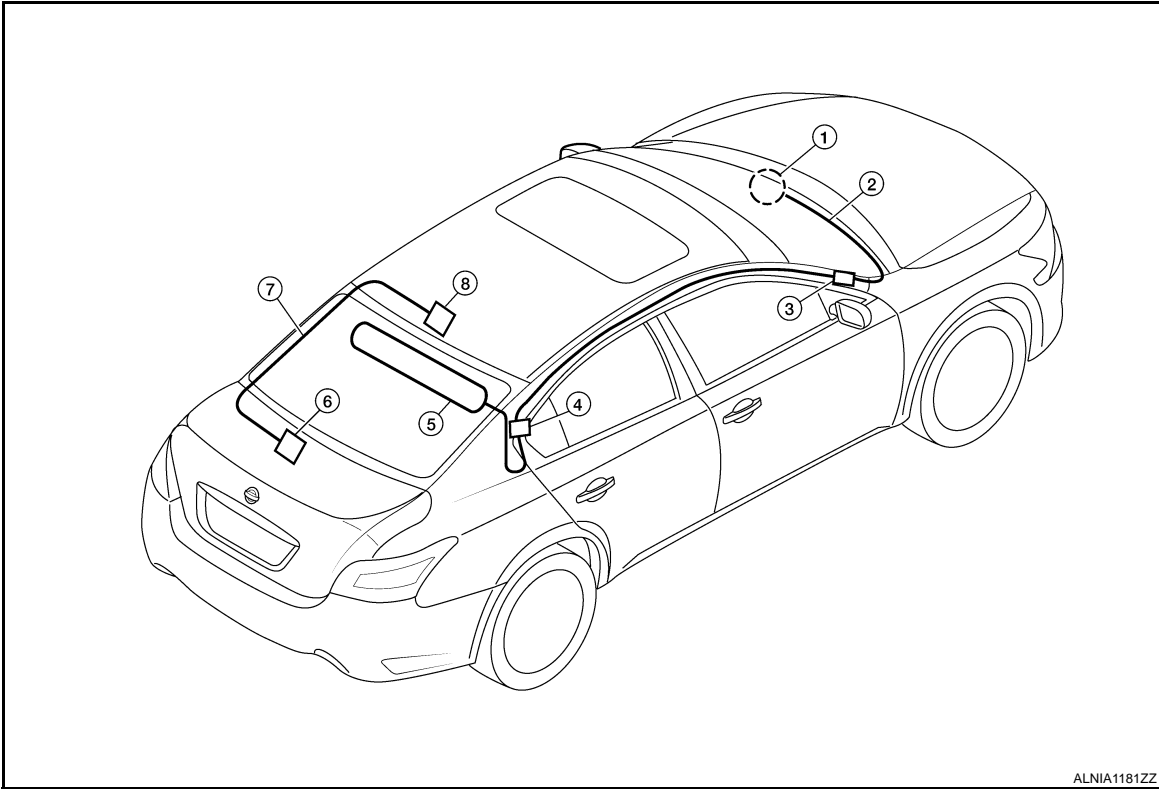
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

AUDIO ANTENNA

Location of Antenna

INFOID:000000004399702



ALNIA1181ZZ

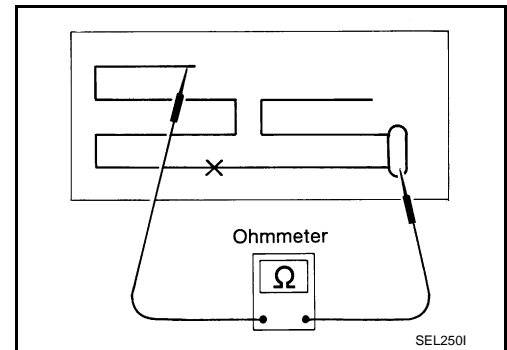
- | | | |
|-----------------------------------|------------------------------|----------------------------------|
| 1. Audio unit | 2. Audio unit antenna feeder | 3. In-line connectors M103, M105 |
| 4. Antenna amp. | 5. Window antenna | 6. Satellite radio tuner |
| 7. Satellite radio antenna feeder | 8. Satellite radio antenna | |

Window Antenna Repair

INFOID:000000003899757

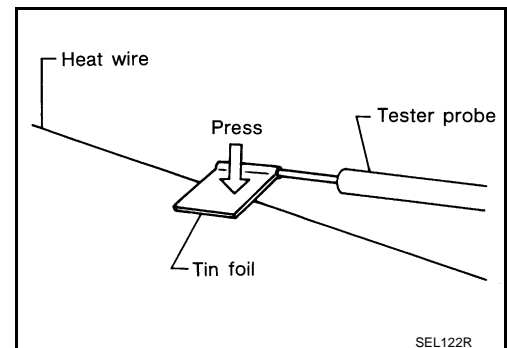
ELEMENT CHECK

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



SEL250I

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



SEL122R

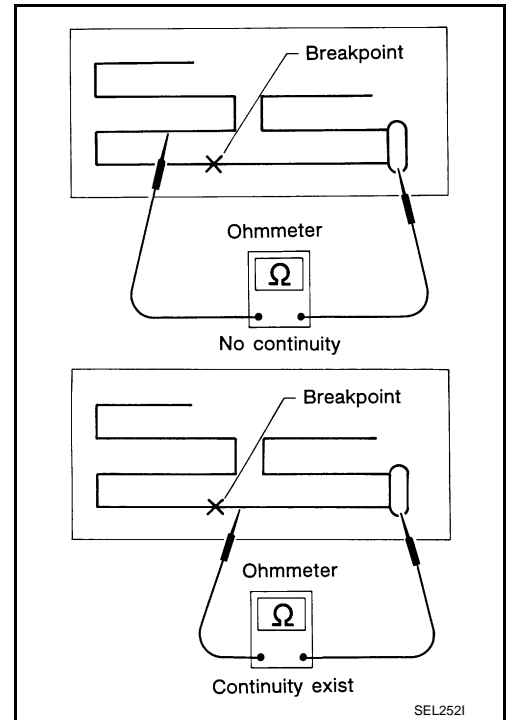
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AUDIO ANTENNA

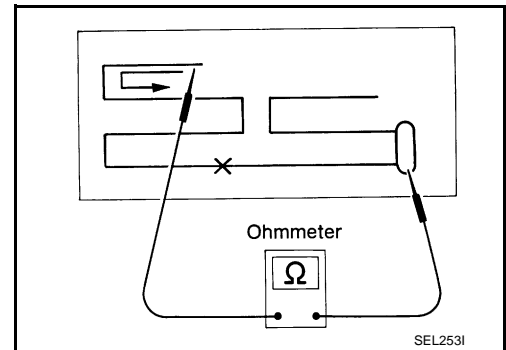
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

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



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



REPAIR EQUIPMENT

- Conductive silver composition (DuPont No. 4817 or equivalent)
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

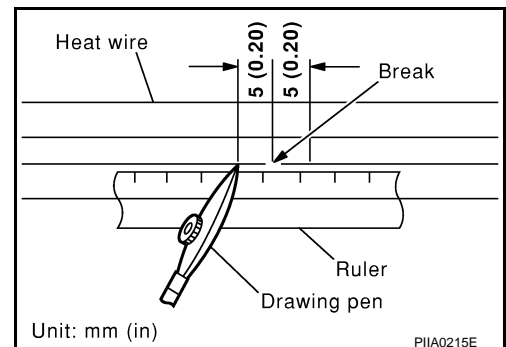
REPAIRING PROCEDURE

1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen.

NOTE:

Shake silver composition container before use.

3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.

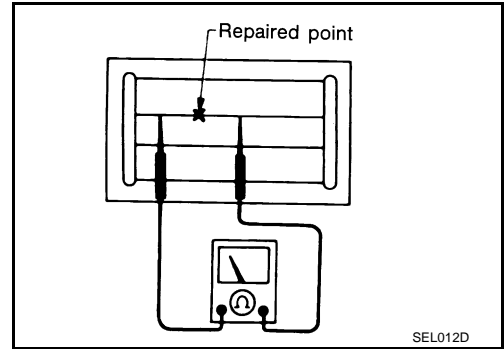


AUDIO ANTENNA

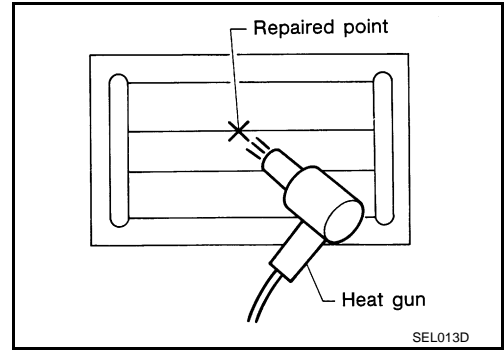
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited. Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.



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AV

ANTENNA AMP.

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

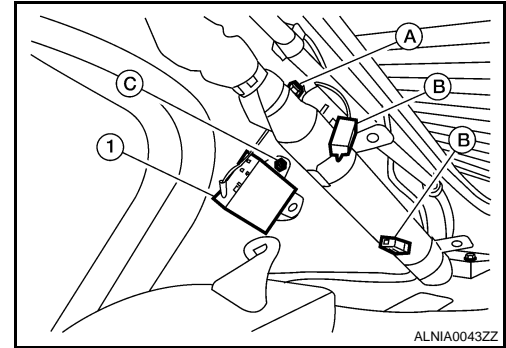
ANTENNA AMP.

Removal and Installation

INFOID:000000004292731

REMOVAL

1. Remove the rear pillar finisher RH. Refer to [INT-23. "Exploded View"](#).
2. Partially remove the side curtain air bag module RH to gain access to the antenna amp. Refer to [SR-12. "Removal and Installation"](#).
3. Detach the antenna amp. harness clip (A), disconnect the antenna amp. connectors (B), remove the antenna amp. screw (C) and remove the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

MICROPHONE

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

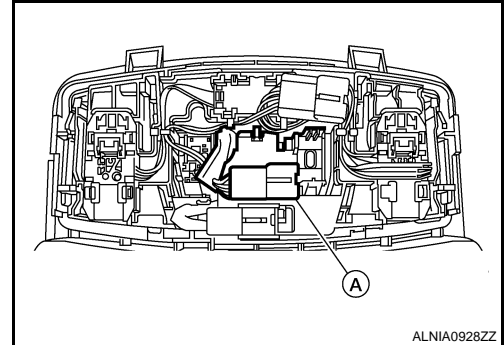
MICROPHONE

Removal and Installation

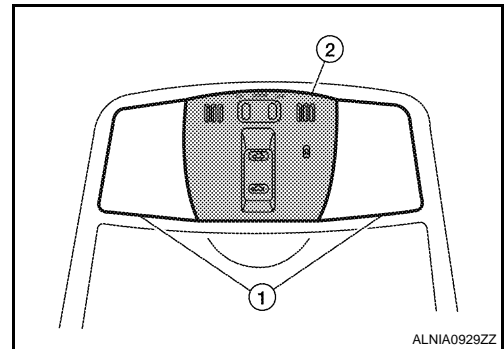
INFOID:000000004292732

REMOVAL

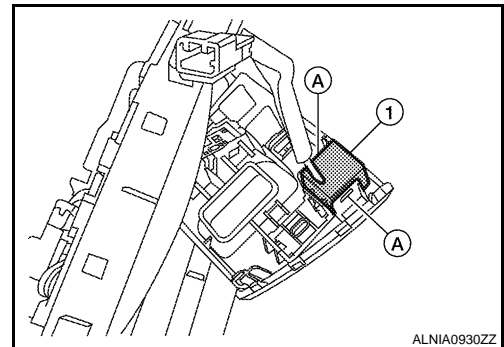
1. Remove the map lamp assembly. Refer to [INL-96. "Removal and Installation"](#).
2. Detach the microphone connector (A).



3. Remove the map lamp covers (1), then remove the map lamp assembly cover (2).



4. Release the microphone tabs (A), then remove the microphone (1).



INSTALLATION

Installation is in the reverse order of removal.

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AV

TEL ANTENNA

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

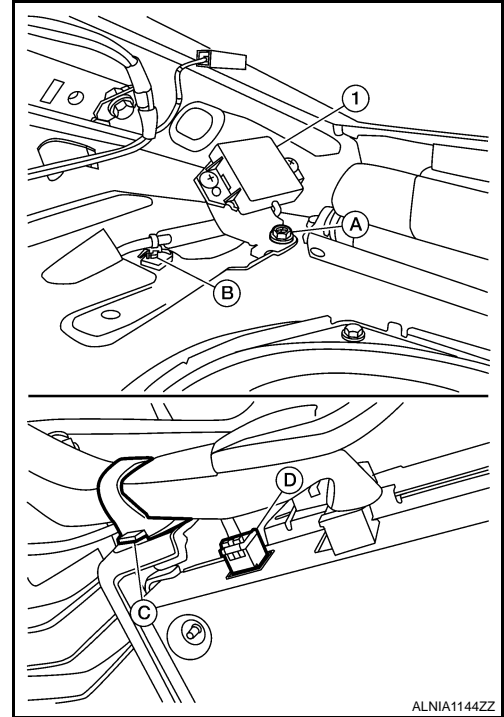
TEL ANTENNA

Removal and Installation

INFOID:000000004292733

REMOVAL

1. Remove the rear parcel shelf. Refer to [INT-26, "Removal and Installation"](#).
2. Remove the Bluetooth antenna screw (A), detach the Bluetooth antenna harness clip (B).
3. Fold down the rear seat, if equipped or open the trunk lid, then detach the Bluetooth harness clip (C), disconnect the Bluetooth harness connector (D) and remove the Bluetooth antenna (1) through the opening in the parcel shelf.



INSTALLATION

Installation is in the reverse order of removal.

BLUETOOTH CONTROL UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/O NAVI]

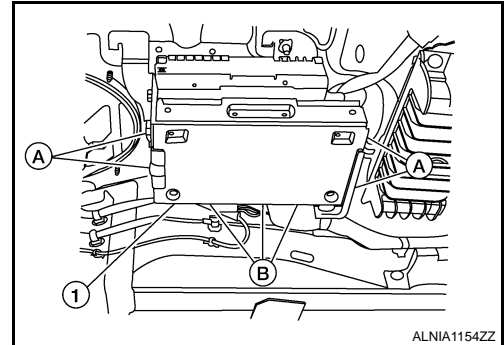
BLUETOOTH CONTROL UNIT

Removal and Installation

INFOID:000000004292734

REMOVAL

1. Disconnect the negative battery terminal.
2. Open the trunk lid or fold down the rear seat back, if equipped.
3. Remove the Bluetooth control unit screws (A), disconnect the Bluetooth control unit connectors (B) and remove the Bluetooth control unit (1).



INSTALLATION

Installation is in the reverse order of removal.

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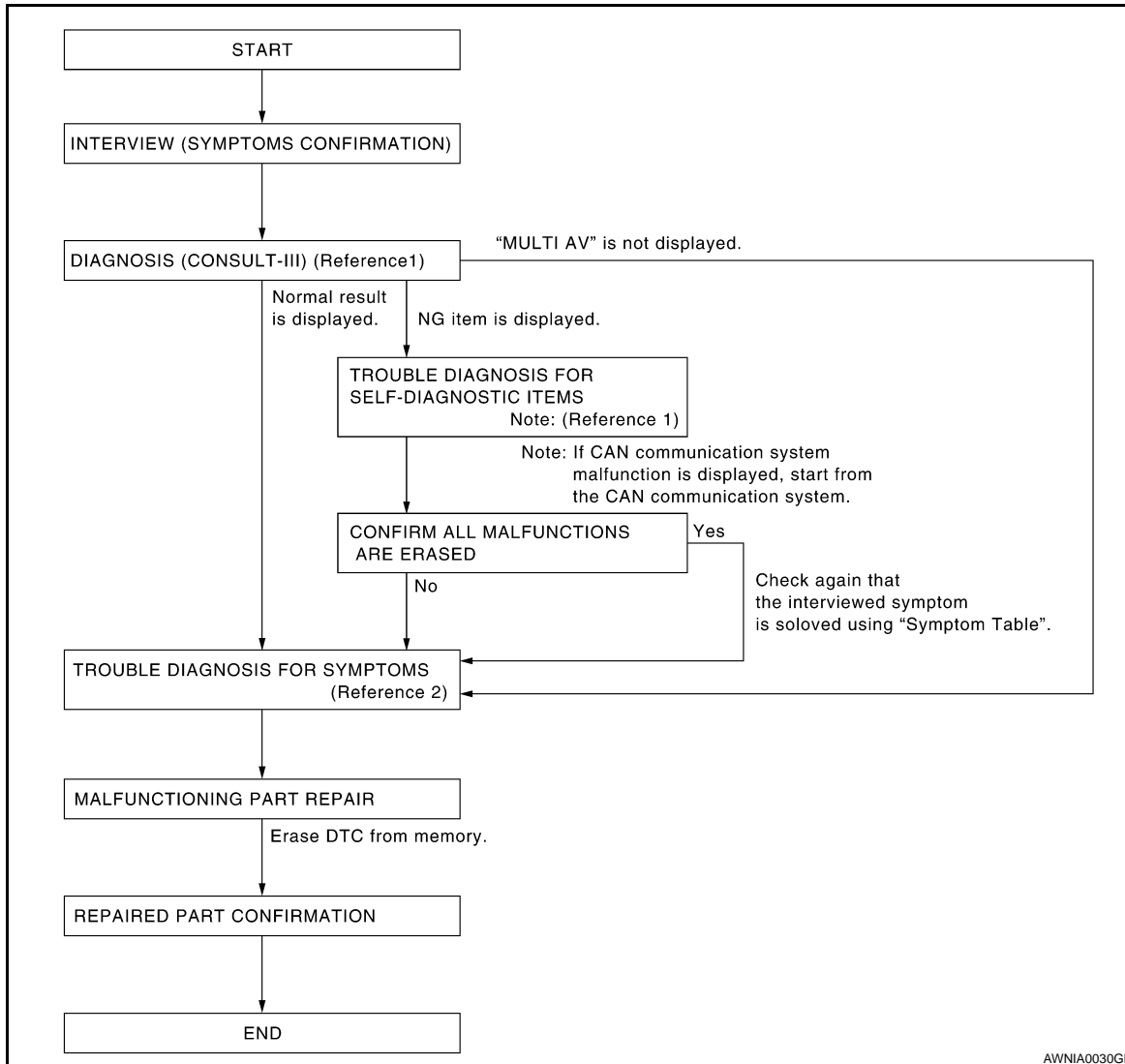
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000004278286

OVERALL SEQUENCE



AWNIA0030GE

- Reference 1... Refer to [AV-369. "CONSULT-III Function \(MULTI AV\)".](#)
- Reference 2... Refer to [AV-473. "Symptom Table".](#)

DETAILED FLOW

1. CHECK SYMPTOM

Check the malfunction symptoms by performing the following items.

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

>> GO TO 2.

2. SELF-DIAGNOSIS (CONSULT-III)

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

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Is any DTC No. displayed?

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

3.CHECK SELF-DIAGNOSIS RESULTS (CONSULT-III)

1. Check the DTC No. indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC No. list. Refer to [AV-462, "DTC Index"](#).

NOTE:

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

>> GO TO 5.

4.PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to [AV-473, "Symptom Table"](#).

>> GO TO 5.

5.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

NOTE:

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

>> GO TO 6.

6.CHECK AFTER REPAIR

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

Is any DTC No. displayed?

- YES >> GO TO 3.
- NO >> GO TO 7.

7.FINAL CHECK

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

Are any symptoms present?

- YES >> GO TO 4.
- NO >> Inspection End.

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AV

INSPECTION AND ADJUSTMENT

REAR VIEW MONITOR GUIDING LINE ADJUSTMENT

REAR VIEW MONITOR GUIDING LINE ADJUSTMENT : Description

INFOID:000000004278287

This mode is used to modify the side distance guidelines if they are dislocated from the rear view monitor image, because of variations of body/camera mounting conditions.

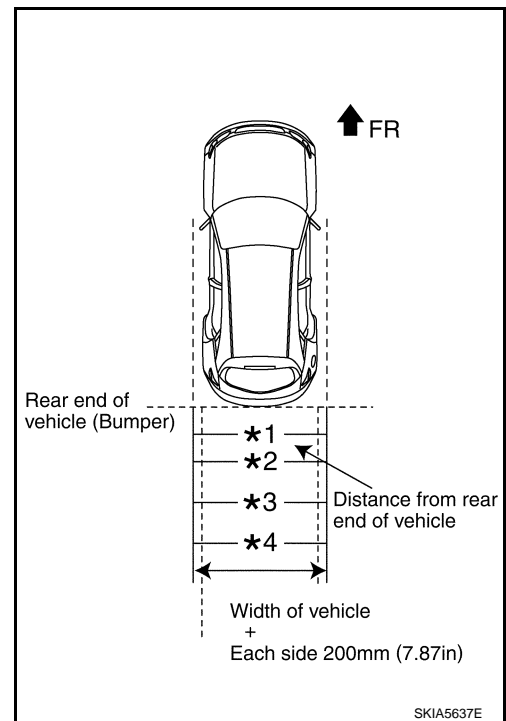
REAR VIEW MONITOR GUIDING LINE ADJUSTMENT : Special Repair Requirement

INFOID:000000004278288

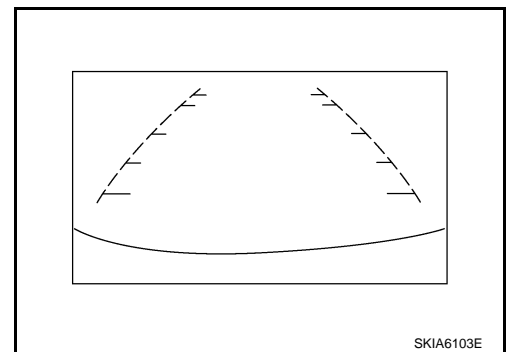
1. Create a correction line to modify the screen.
 Draw lines on the rearward of the vehicle passing through the following points: 200 mm (7.87 in) from both sides of the vehicle, and
 - *1: 0.5 m (1.5 ft)
 - *2: 1 m (3 ft)
 - *3: 2 m (7 ft)
 - *4: 3 m (10 ft)
 and from the rear end of the bumper
2. With the ignition switch OFF, connect CONSULT-III, then turn ignition switch ON. Select "REARVIEW CAMERA".

CAUTION:

Stop engine for safety when correcting side distance guideline.



3. Shift the A/T selector lever to R position.



4. Touch "SELCT GUIDELINE PATTERN" under "WORK SUPPORT" menu.
5. Touch "UP" or "DOWN", and select the guide line, "PATTERN NO. 0" or "PATTERN NO. 1", which is the closest to the corrected line.
6. Touch "SAVE", and confirm the guide line.
7. Touch "END".
8. Touch "ADJ GUIDELINE POSITION" under the "WORK SUPPORT" menu.
9. Adjust the guide line touching "X UP", "X DOWN", "Y UP" or "Y DOWN" so that the corrected line can fit the guide line.
10. Touch "SAVE", and confirm the guide line.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR DISPLAY W/ NAVI]

11. Touch "END" to finish correcting.

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AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

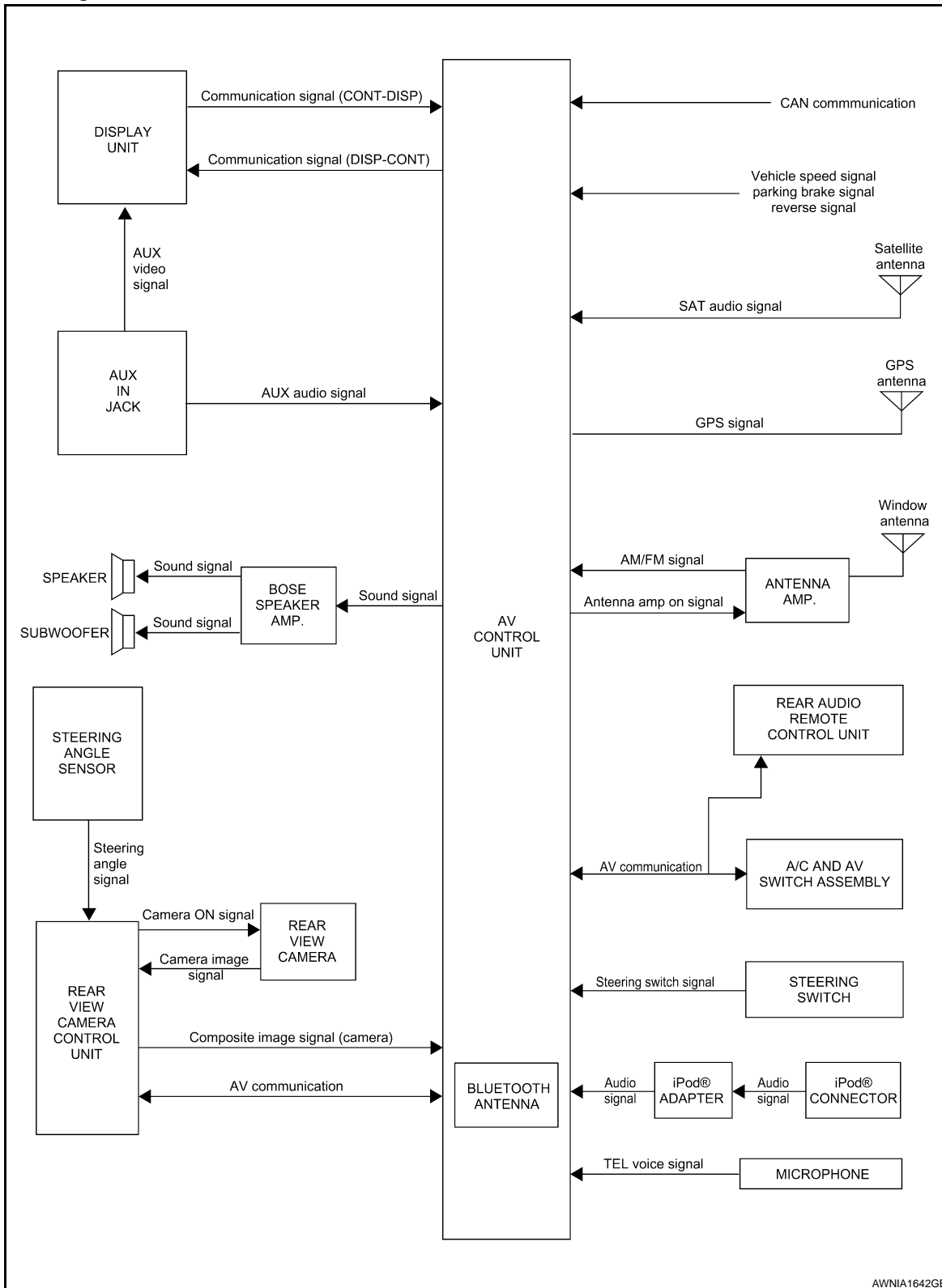
[BOSE W/ COLOR DISPLAY W/ NAVI]

FUNCTION DIAGNOSIS

AUDIO SYSTEM

System Diagram

INFOID:000000004278289



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System Description

INFOID:000000004278290

AUDIO SYSTEM

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

The audio system consists of the following components

- AV control unit
- Display unit
- iPod® adapter
- iPod® connector
- BOSE speaker amp.
- Window antenna
- Steering wheel audio control switches
- A/C and AV switch assembly
- Rear audio and remote control unit
- Front door speakers
- Tweeters
- Center speaker
- Rear door speakers
- Rear subwoofer

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

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

SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components

- Satellite antenna
- AV control unit

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

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

SPEED SENSITIVE VOLUME SYSTEM

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

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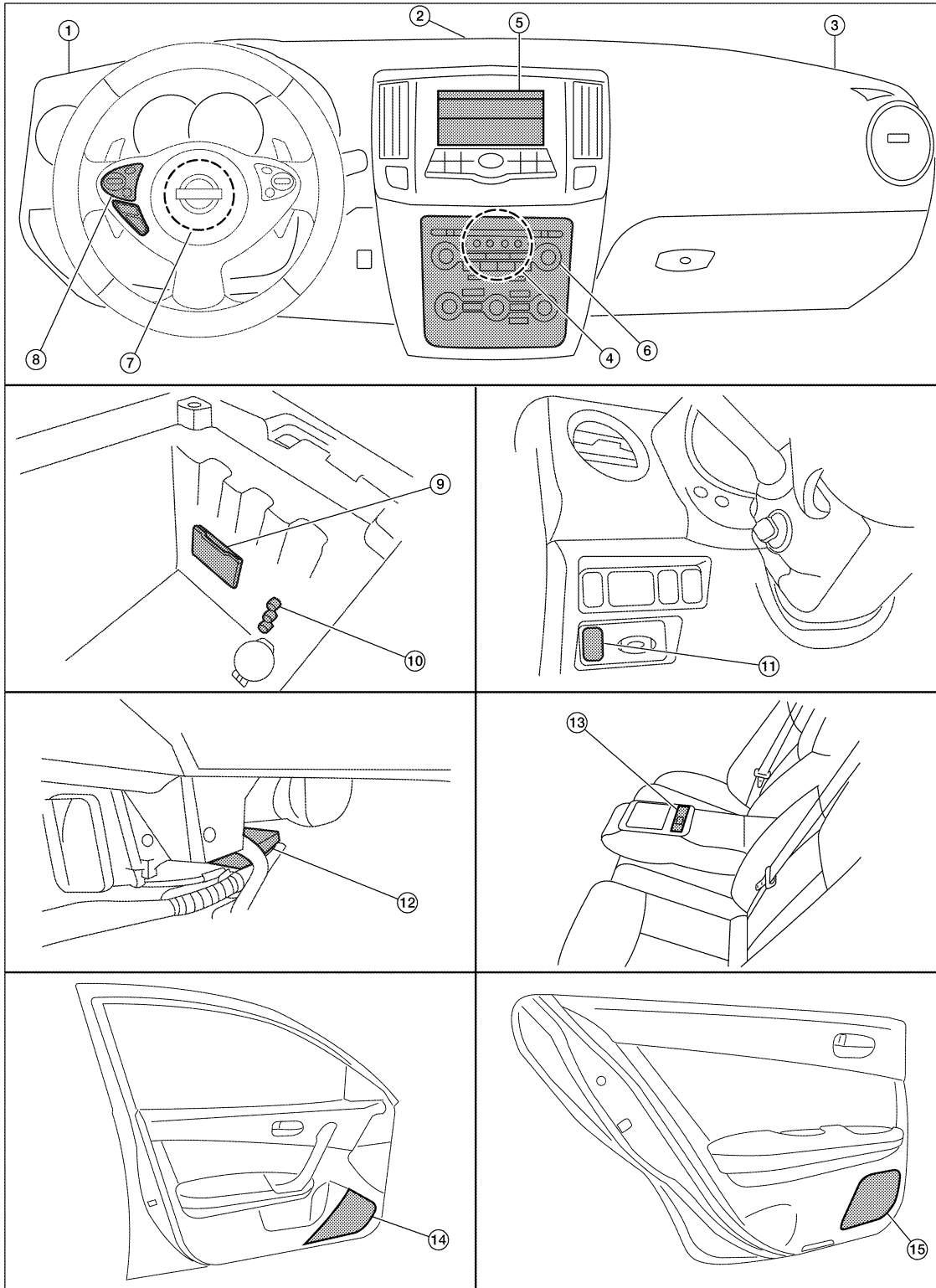
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Component Parts Location

INFOID:000000004278291

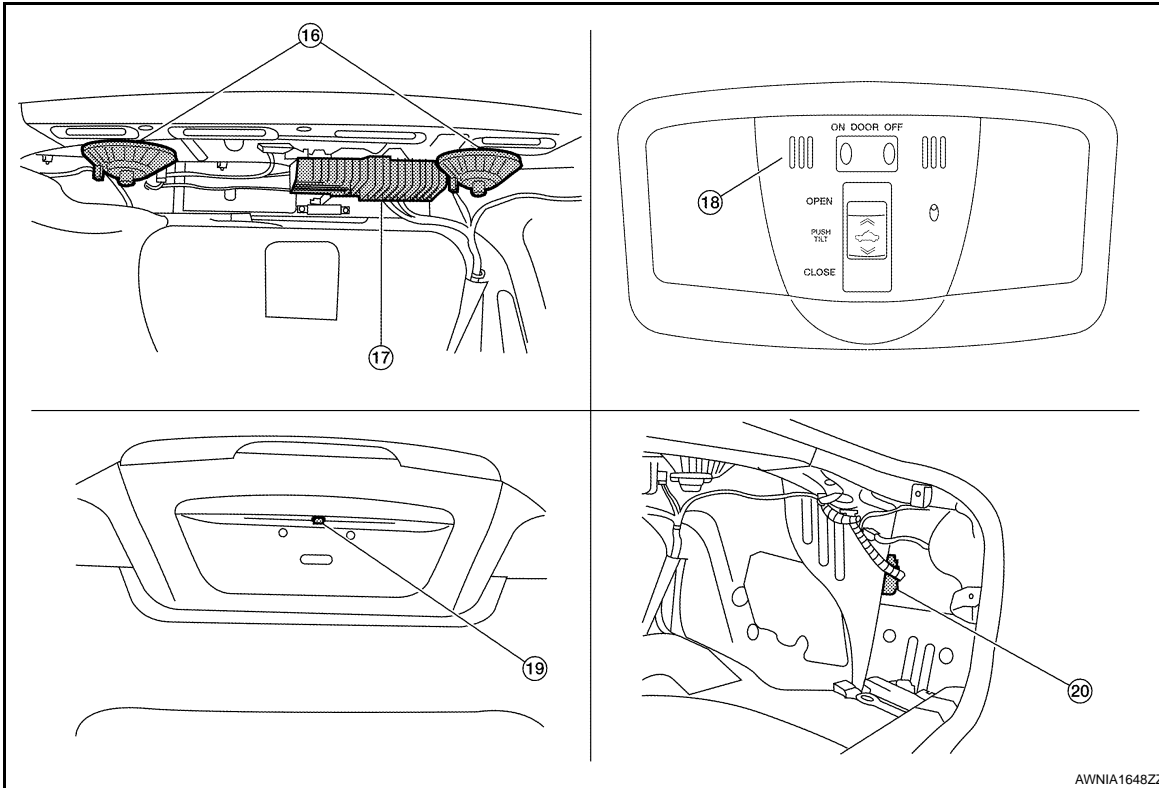


AWNIA1647ZZ

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]



- | | | |
|---|--|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M131, M134, M137, M139, M145, M146 (located behind A/C and AV switch assembly) | 5. Display unit M142 | 6. A/C and AV switch assembly M98 |
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. iPod® connector M207 (view in center console) |
| 10. Aux jack M209 | 11. Rear control cancel switch M89 | 12. iPod® adapter M91 (view with console side finisher - RH removed) |
| 13. Rear control switch B402, B403, B404 | 14. Front door speaker LH D3
RH D103 | 15. Rear door speaker LH D202
RH D302 |
| 16. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | 17. BOSE speaker amp M109, M110 | 18. Microphone R7 |
| 19. Rear view camera T101 | 20. Rear view camera control unit B119 (located behind trunk side finisher RH) | |

Component Description

INFOID:000000004278292

Part name	Description
AV control unit	Controls audio system, NAVI functions and satellite radio system functions.
Display unit	Displays all audio and climate control related information.
iPod® adapter	<ul style="list-style-type: none"> • Recieves audio signals from the iPod® through the iPod® connector. • Outputs audio signals to the audio unit.
iPod® connector	Connects iPod® to iPod® adapter.
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit and outputs audio signals to each speaker.

AUDIO SYSTEM

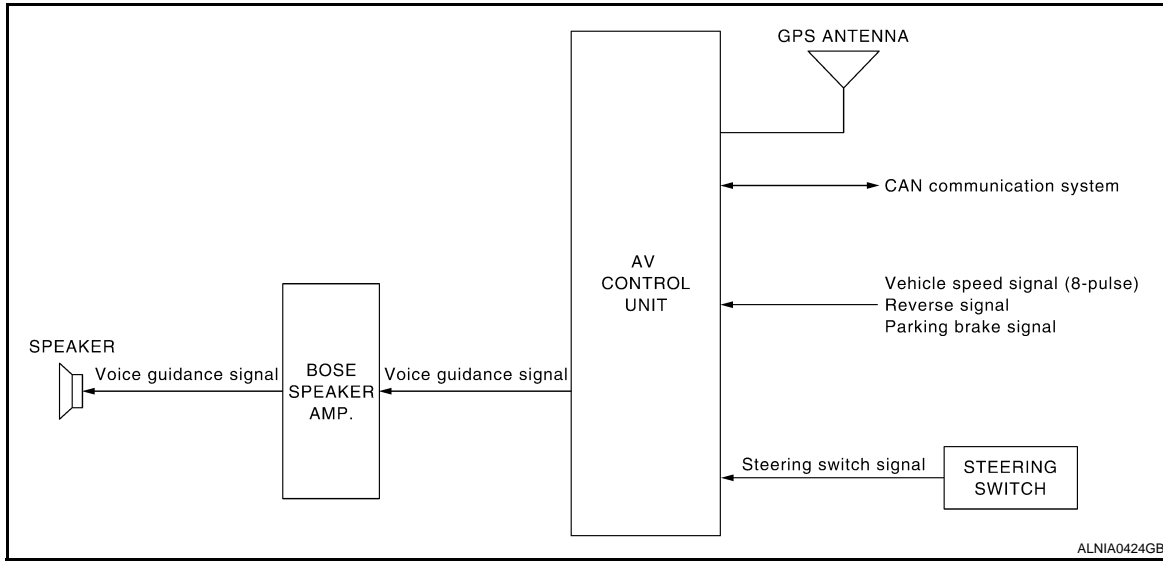
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Part name	Description
Steering switches	<ul style="list-style-type: none">• Audio operation can be operated.• Steering switch signal is output to AV control unit.
Front door speakers	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs high, mid and low range sounds.
Tweeters	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs high range sounds.
Center speaker	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs high range sounds.
Rear door speakers	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs high, mid and low range sounds.
Rear subwoofers	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs low range sounds.
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.

NAVIGATION SYSTEM

System Diagram



System Description

INFOID:000000004278294

NOTE:

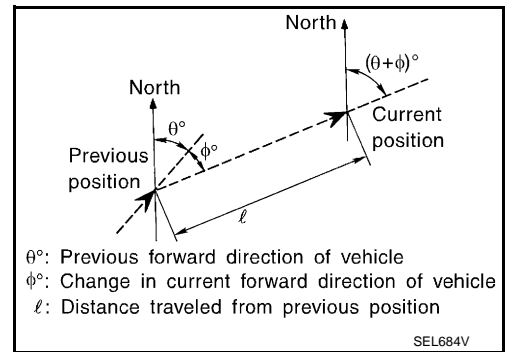
Refer to NAVI System Owner's Manual for system operation.

The navigation system periodically calculates the vehicle's current position according to the following three signals: Travel distance of the vehicle as determined by the vehicle speed sensor, turning angle of the vehicle as determined by the gyroscope (angular velocity sensor), and the direction of vehicle travel as determined by the GPS antenna (GPS information).

The current position of the vehicle is then identified by comparing the calculated vehicle position with map data read from the map data, which is stored in the hard disk drive (HDD)(map-matching), and indicated on the screen with a current-location mark.

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

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



TRAVEL DISTANCE

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

TRAVEL DIRECTION

Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). As the gyroscope and GPS antenna have both merit and demerit, input signals from them are prioritized in each situation. However, this order of priority may change in accordance with more detailed travel conditions so that the travel direction is detected more accurately.

NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Type	Advantage	Disadvantage
Gyroscope (angular velocity sensor)	<ul style="list-style-type: none"> Can detect the vehicle's turning angle quite accurately. 	<ul style="list-style-type: none"> Direction errors may accumulate when the vehicle is driven for long distances without stopping.
GPS antenna (GPS information)	<ul style="list-style-type: none"> Can detect the vehicle's travel direction (North/South/East/West). 	<ul style="list-style-type: none"> Correct direction cannot be detected when the vehicle speed is low.

MAP-MATCHING

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

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

CAUTION:

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

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

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

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

- Map-matching does not function correctly when the road on which the vehicle is driving is new and not recorded on the HDD, or when the road pattern stored in the map data and the actual road pattern are different due to repair.

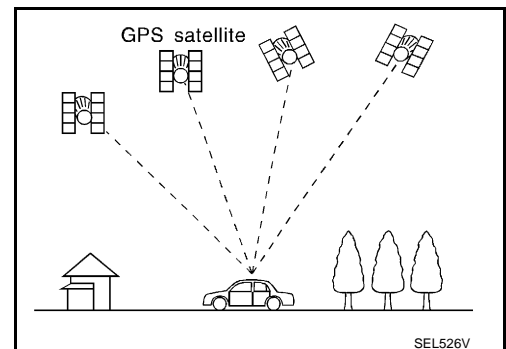
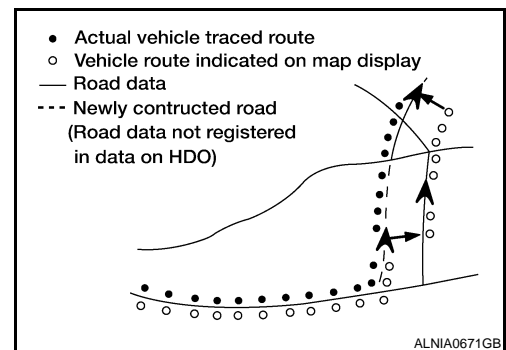
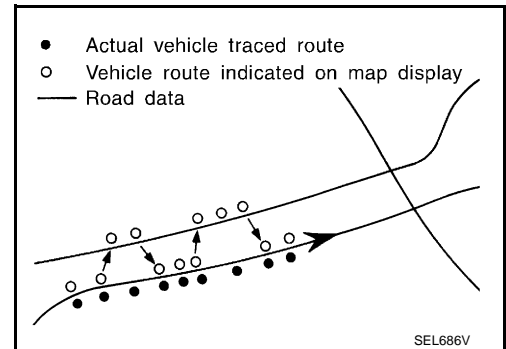
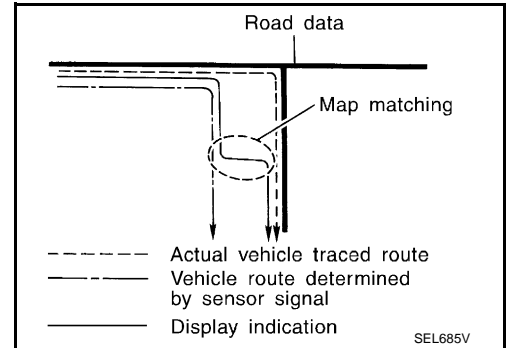
When driving on a road not present in the map, the map-matching function may find another road and position the current-location mark on it. Then, when the correct road is detected, the current-location mark may leap to it.

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

GPS (GLOBAL POSITIONING SYSTEM)

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

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



NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Accuracy of the GPS will deteriorate under the following conditions.

- In two-dimensional positioning, the GPS accuracy will deteriorate when the altitude of the vehicle position changes.
- There may be an error of approximately 10 m (30 ft.) in position detected by three-dimensional positioning, which is more accurate than two-dimensional positioning. The accuracy can be even lower depending on the arrangement of the GPS satellites utilized for the positioning.
- Position detection is not possible when the vehicle is in an area where radio waves from the GPS satellite do not reach, such as in a tunnel, parking lot in a building, and under an elevated highway. Radio waves from the GPS satellites may not be received when some object is located over the GPS antenna.
- Position correction by GPS is not available while the vehicle is stopped.

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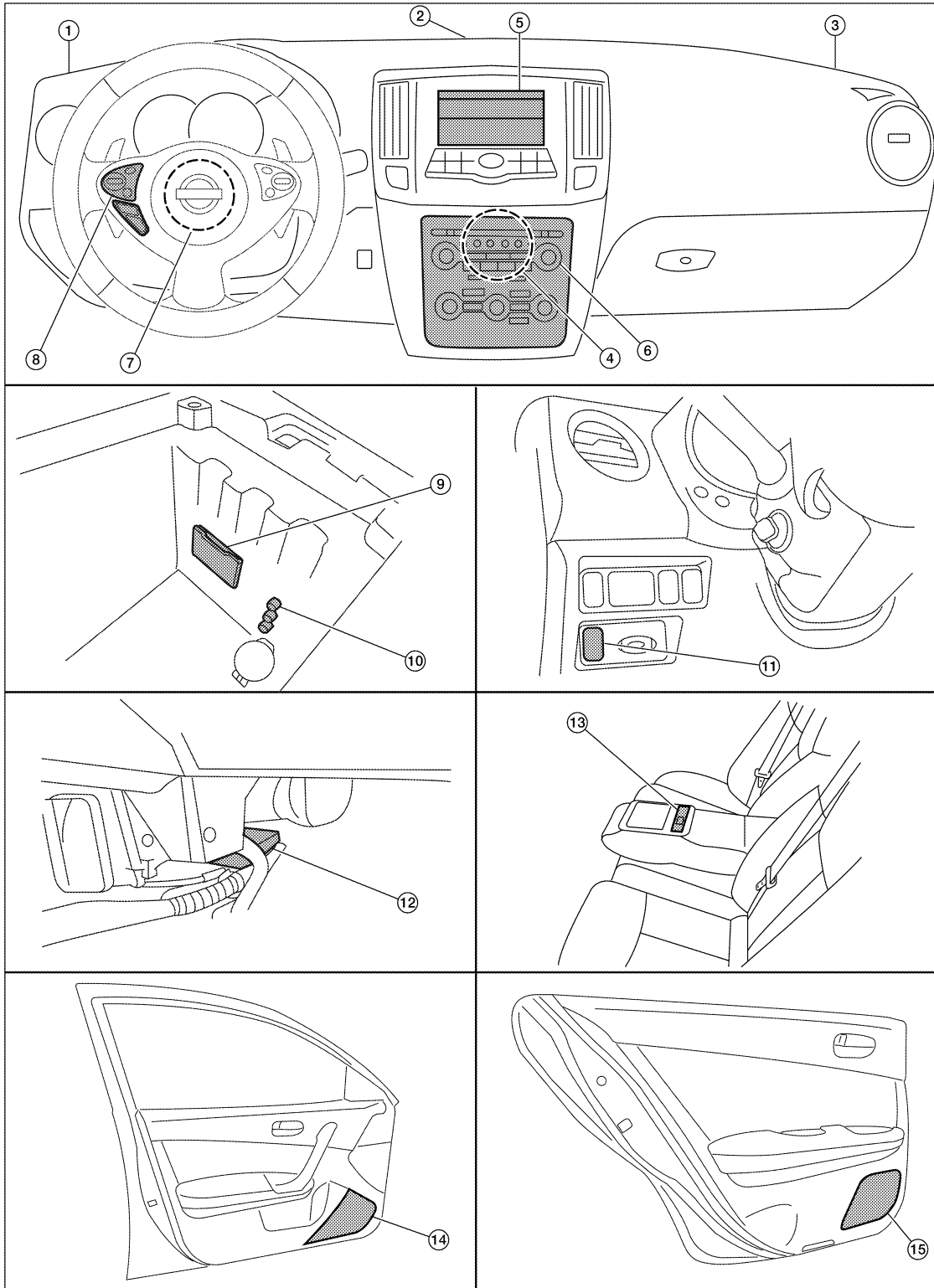
NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Component Parts Location

INFOID:000000004296303

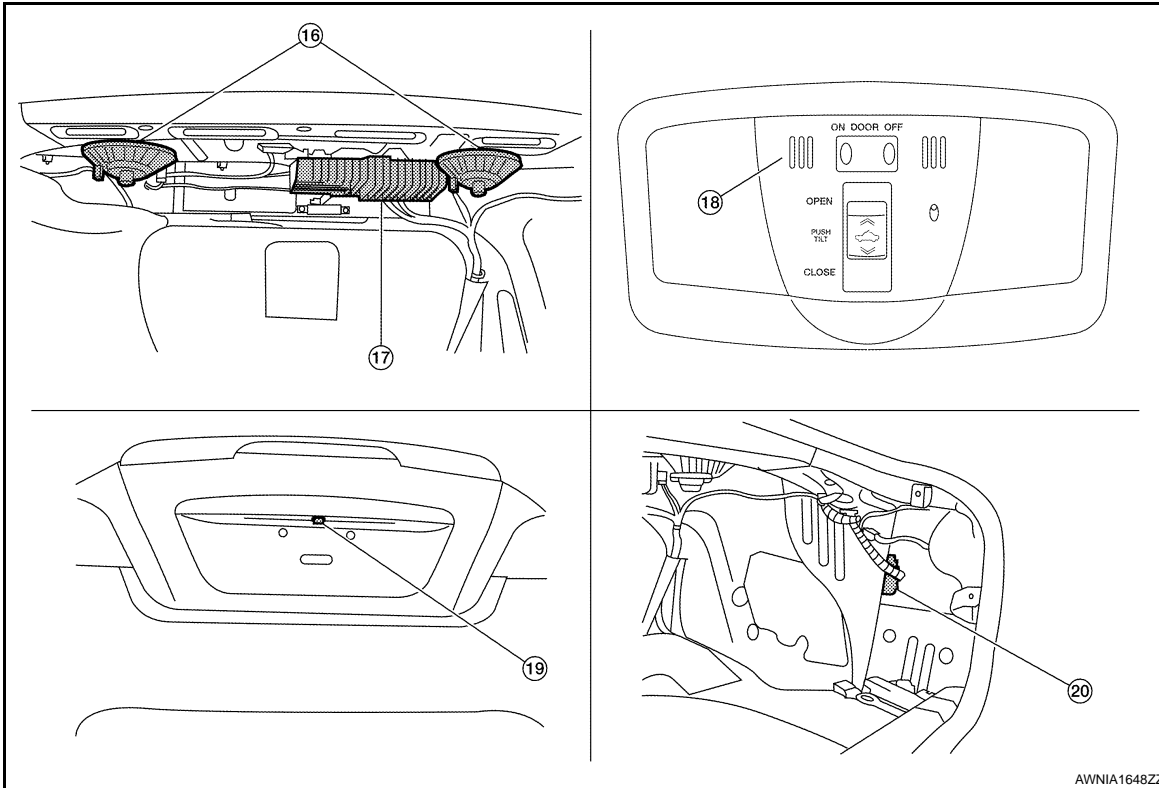


AWNIA1647ZZ

NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]



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| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M131, M134, M137, M139, M145, M146 (located behind A/C and AV switch assembly) | 5. Display unit M142 | 6. A/C and AV switch assembly M98 |
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. iPod® connector M207 (view in center console) |
| 10. Aux jack M209 | 11. Rear control cancel switch M89 | 12. iPod® adapter M91 (view with console side finisher - RH removed) |
| 13. Rear control switch B402, B403, B404 | 14. Front door speaker LH D3
RH D103 | 15. Rear door speaker LH D202
RH D302 |
| 16. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | 17. BOSE speaker amp M109, M110 | 18. Microphone R7 |
| 19. Rear view camera T101 | 20. Rear view camera control unit B119 (located behind trunk side finisher RH) | |

Component Description

INFOID:000000004278296

Part name	Description
AV control unit	<ul style="list-style-type: none"> Controls each operation of the navigation system HDD is built in Voice guidance signal is output to BOSE speaker amp.
BOSE speaker amp.	Voice guidance signal is input from AV control unit, and it is output to speakers.
Tweeter	Voice guidance signal from BOSE speaker amp. is output.
Steering switches	<ul style="list-style-type: none"> Each operation of navigation system can be performed Switch operating signal is output to AV control unit

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NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Part name	Description
Microphone	Sends voice signals to AV control unit
GPS antenna	GPS signal is received and is output to AV control unit.

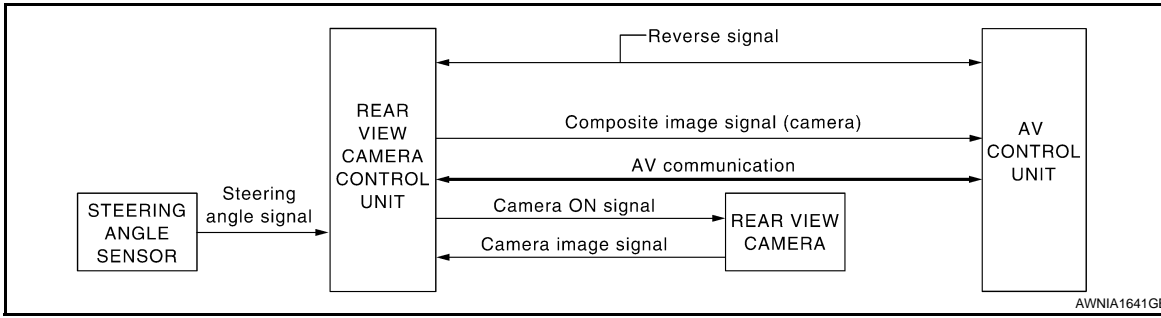
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

REAR VIEW MONITOR SYSTEM

System Diagram



System Description

INFOID:000000004292737

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

AV COMMUNICATION LINE

The rear view camera control unit is connected to the AV control unit using an AV communication line. This line is used to transmit and receive data.

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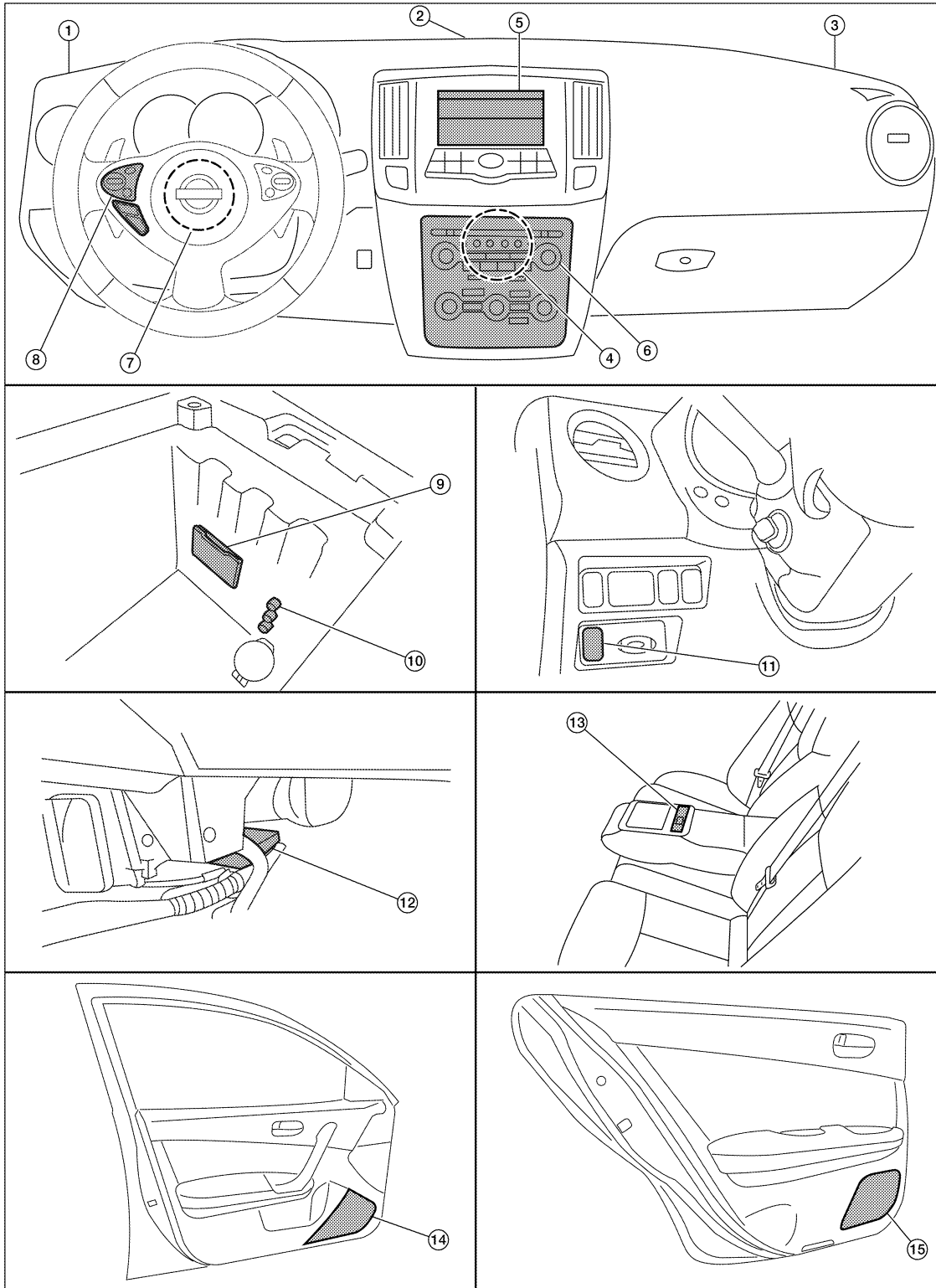
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Component Parts Location

INFOID:000000004296304

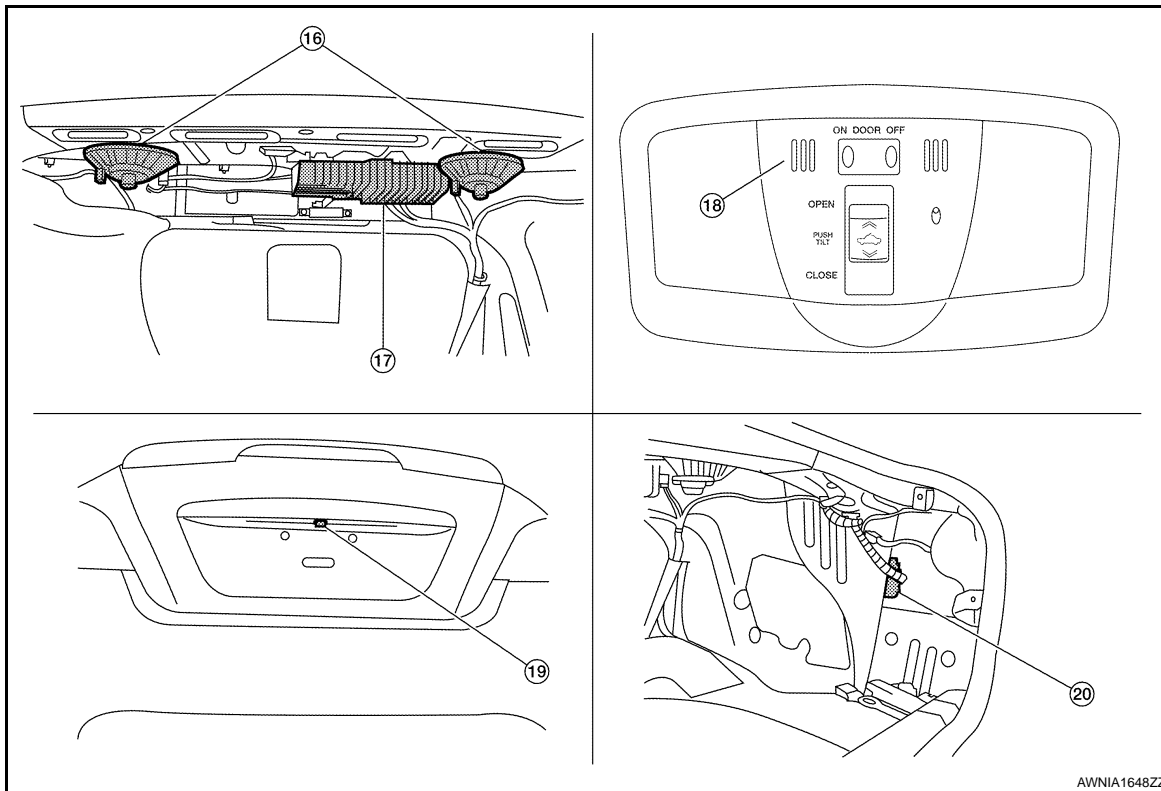


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REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]



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|---|--|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M131, M134, M137, M139, M145, M146 (located behind A/C and AV switch assembly) | 5. Display unit M142 | 6. A/C and AV switch assembly M98 |
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. iPod® connector M207 (view in center console) |
| 10. Aux jack M209 | 11. Rear control cancel switch M89 | 12. iPod® adapter M91 (view with console side finisher - RH removed) |
| 13. Rear control switch B402, B403, B404 | 14. Front door speaker LH D3
RH D103 | 15. Rear door speaker LH D202
RH D302 |
| 16. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | 17. BOSE speaker amp M109, M110 | 18. Microphone R7 |
| 19. Rear view camera T101 | 20. Rear view camera control unit B119 (located behind trunk side finisher RH) | |

Component Description

INFOID:000000004292739

Part name	Description
AV control unit	Camera image signal is sent from rear view camera control unit
Rear view camera control unit	<ul style="list-style-type: none"> • Receives reverse signal from back-up lamp relay • Receives rear view camera image signal • Receives steering angle sensor signal • Sends camera ON signal to rear view camera • Sends image signal to AV control unit

REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Part name	Description
Rear view camera	<ul style="list-style-type: none">• Receives camera ON signal from rear view camera control unit• Sends image signal to rear view camera control unit
Steering angle sensor	Sends steering angle information to the rear view camera control unit

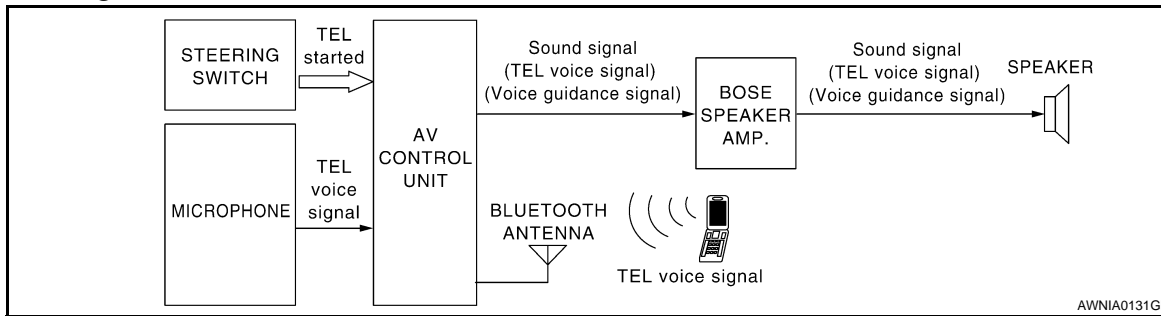
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

HANDS-FREE PHONE SYSTEM

System Diagram



System Description

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

NOTE:

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

Bluetooth telephone system allows users who have a Bluetooth equipped cellular telephone to make a wireless connection between their cellular telephone and the AV control unit. Hands-free cellular telephone calls can be sent and received. Personal memos can be created using the Nissan Voice Recognition system. Some Bluetooth cellular telephones may not be recognized by the AV control unit. When a cellular telephone or the AV control unit is replaced, the telephone must be paired with the AV control unit. Different cellular telephones may have different pairing procedures. Refer to the cellular telephone operating manual and the vehicle Owner's Manual for more information.

AV CONTROL UNIT

When the ignition switch is turned to ACC or ON, the AV control unit will power up. During power up, the Bluetooth feature is initialized and performs various self-checks. Initialization may take up to 10 seconds. If a phone is present in the vehicle and paired with the AV control unit, Nissan Voice Recognition will then become active. Bluetooth telephone functions can be turned off using the Nissan Voice Recognition system.

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

MICROPHONE

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

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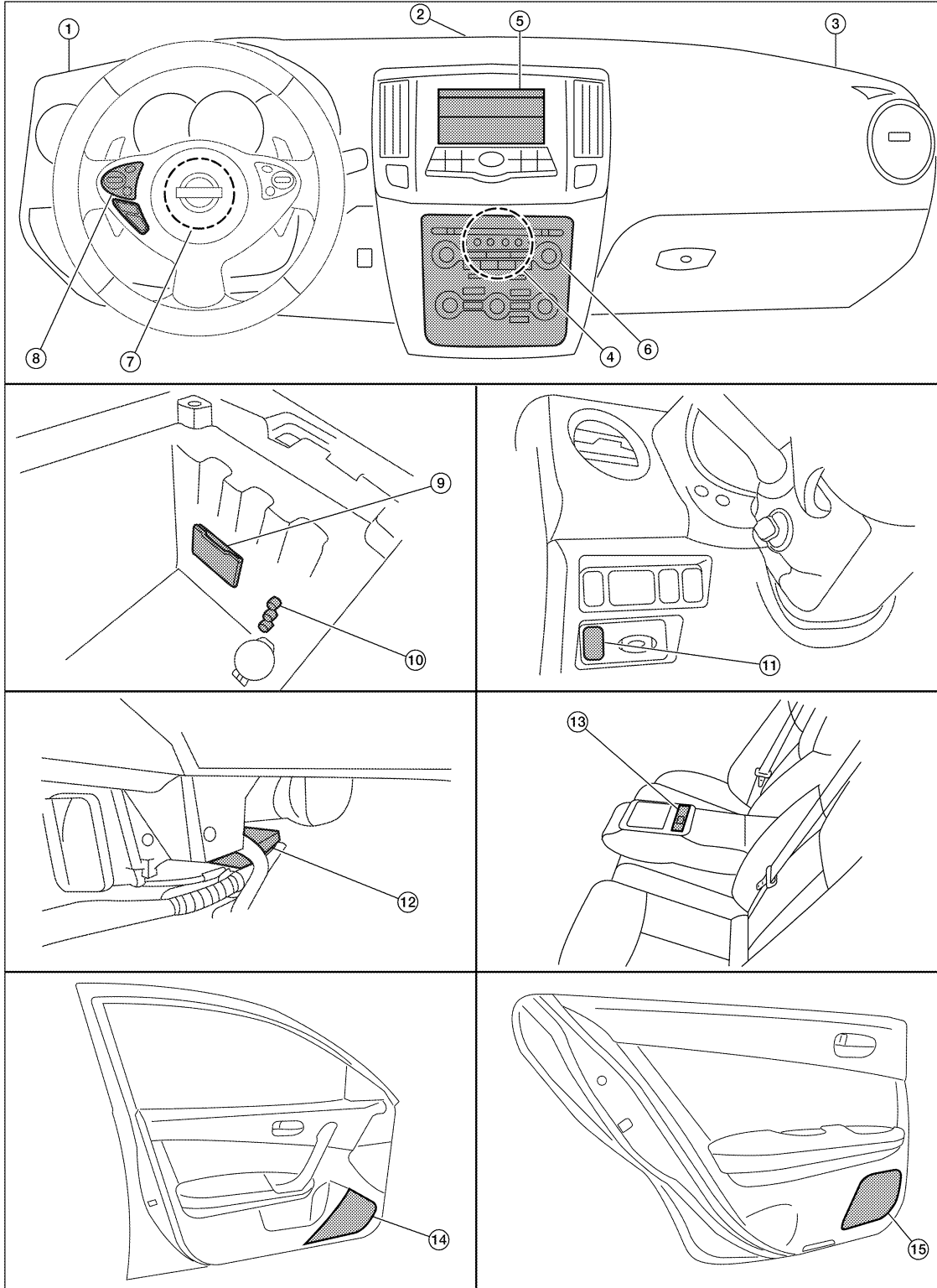
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Component Parts Location

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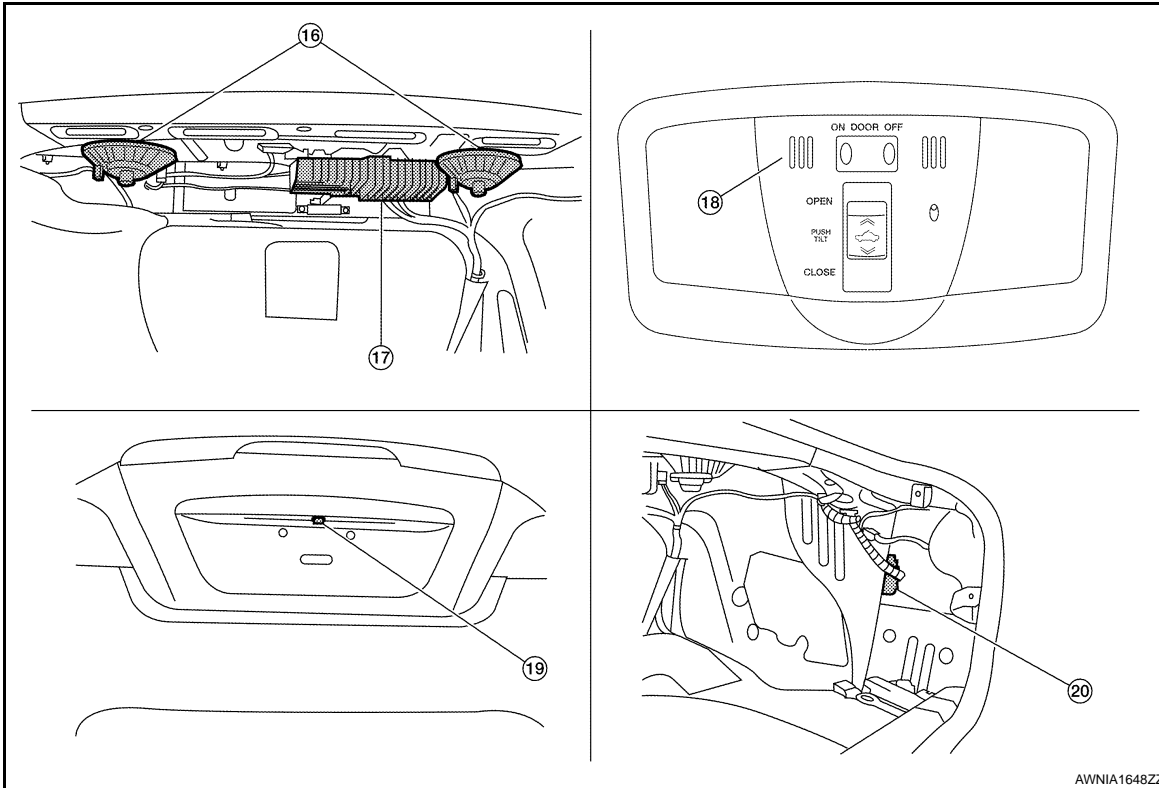


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HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]



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|---|--|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M131, M134, M137, M139, M145, M146 (located behind A/C and AV switch assembly) | 5. Display unit M142 | 6. A/C and AV switch assembly M98 |
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. iPod® connector M207 (view in center console) |
| 10. Aux jack M209 | 11. Rear control cancel switch M89 | 12. iPod® adapter M91 (view with console side finisher - RH removed) |
| 13. Rear control switch B402, B403, B404 | 14. Front door speaker LH D3
RH D103 | 15. Rear door speaker LH D202
RH D302 |
| 16. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | 17. BOSE speaker amp M109, M110 | 18. Microphone R7 |
| 19. Rear view camera T101 | 20. Rear view camera control unit B119 (located behind trunk side finisher RH) | |

Component Description

INFOID:000000004278308

Part name	Description
AV control unit	<ul style="list-style-type: none"> Receives telephone voice signal from antenna and microphone Sends telephone voice and voice guidance signals to the speakers
BOSE speaker amp.	<ul style="list-style-type: none"> Receives audio signals from the AV control unit Outputs amplified audio signals to the speakers.
Front door speaker	Receives telephone voice and voice guidance signals from the AV control unit through the BOSE speaker amp.
Front tweeter	
Center speaker	

HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Part name	Description
Steering switches	<ul style="list-style-type: none">• Start a voice recognition session• Answer and end telephone calls• Adjust the volume level
Microphone	Sends voice signals to AV control unit
Bluetooth antenna	Sends telephone voice signal to AV control unit

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

DIAGNOSIS SYSTEM (AV CONTROL UNIT)


Diagnosis Description

INFOID:000000004391563

MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

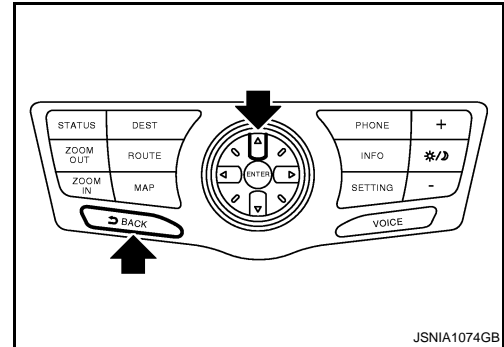
The ON/OFF operation (continuity) of each switch in the multifunction switch and preset switch can be checked.

Self-diagnosis Mode

- Press the BACK switch and the  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 front air control switch illuminate, and the self-diagnosis mode starts.
- The continuity of each switch at the ON position can be checked by pressing the switch. The buzzer sounds if the switch is normal.

NOTE:

The 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 the 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.
- The self-diagnosis mode performs diagnoses on the AV control unit, connections between system components as well as connections between AV control unit and GPS antenna and between AV control unit and satellite radio antenna. Then it displays the diagnosis results on 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 require human intervention and judgment (the system cannot automatically).

On Board Diagnosis Item

Mode	Description
Self-Diagnosis	<ul style="list-style-type: none"> • AV control unit diagnosis • Diagnoses the connections across system components, between AV control unit and GPS antenna and between AV control unit and satellite radio antenna.

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

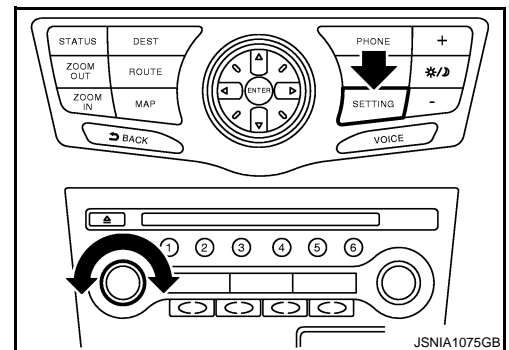
Mode		Description	
Confirmation/ Adjustment	Display Diagnosis	The following check functions are available: color tone check by color bar display, light and shade check by gray scale display and touch panel calibration response check.	
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse.	
	Speaker Test	The connection of a speaker can be confirmed by test tone.	
	Climate Control*	Not used.	
	Navigation	Steering Angle Adjustment	When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted.
		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.	
	Vehicle CAN Diagnosis	The transmitting/receiving of CAN communication can be monitored.	
	AV COMM Diagnosis	The communication condition of each unit of MULTI AV system can be monitored.	
	Handsfree Phone	The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.	
	Camera Cont.	The signal connected to camera control unit can be checked and the guiding line position that overlaps rear view camera image can be adjusted.	
	Bluetooth	The passkey and the device name can be checked and changed.	
	SAT	Change Channel	Any necessary channels required to receive traffic information from the satellite radio system can be set.
		Change Application ID	Any application ID-s required to receive traffic information from the satellite radio system can be set.
Diag		Not used.	
Delete Unit Connection Log	Erase the connection history of unit and error history.		
Initialize Settings	Initializes the AV control unit memory.		

NOTE:

*: On-board self-diagnosis is not supported. Only CONSULT-III is supported.

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 started, a short beep will be heard.)
 - Shifting from current screen to previous screen is performed by pressing the BACK button.

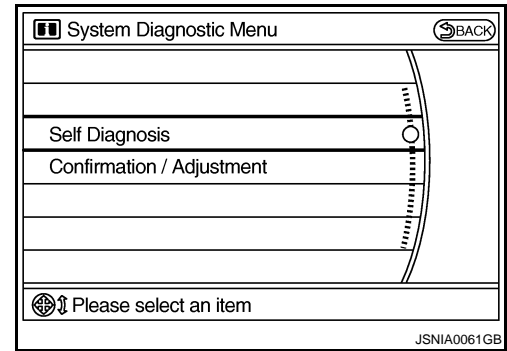


DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

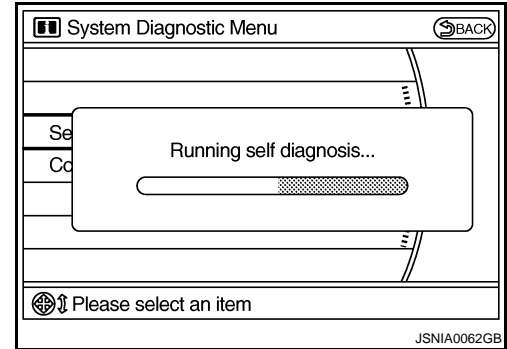
[BOSE W/ COLOR DISPLAY W/ NAVI]

- 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 self-diagnosis mode starts.
 - The bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.

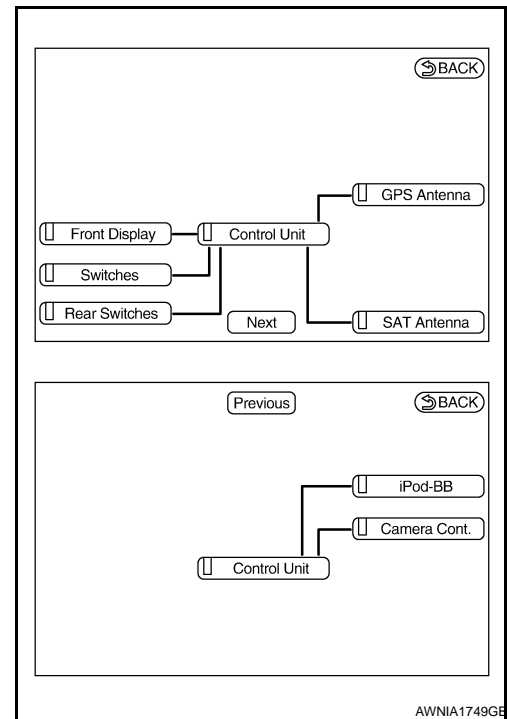


- Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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.
 - The number of units that is displayed on the on board self-diagnosis display according to equipment.
 - Replace AV control unit if "Self-Diagnosis did not run because of a control unit malfunction" is indicated. The symptom is 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.

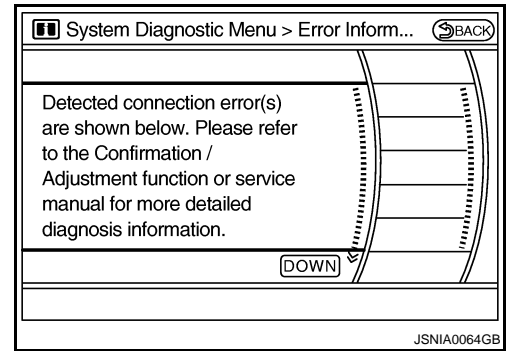


DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

- 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 the AV control unit.
- Because the start condition of 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.
- Check the applicable display in the following table, and then repair the malfunctioning parts.

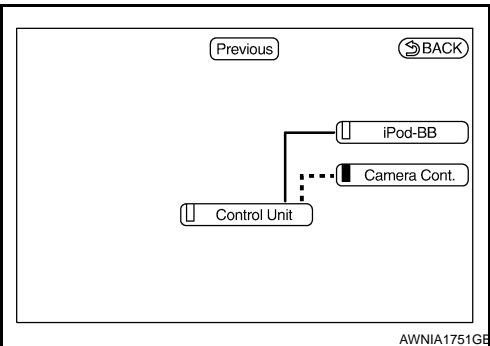
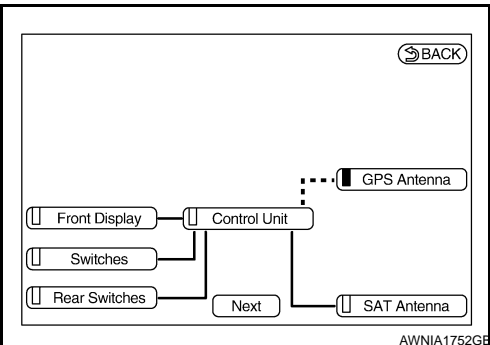
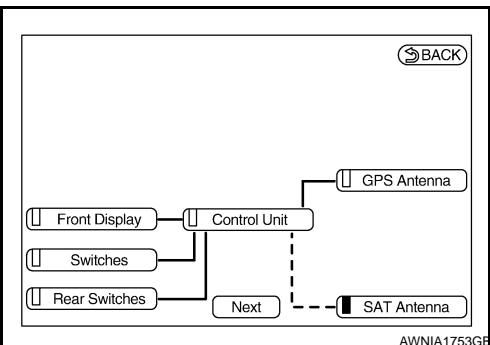
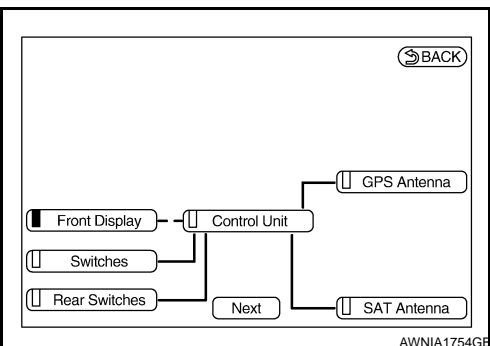
Self-diagnosis Result Chart

Diagnosis results	Detection logic	Possible malfunction location / Action to take
<p>The first screen shows a central "Control Unit" connected to "Front Display", "Switches", "Rear Switches", "GPS Antenna", and "SAT Antenna". A "Next" button is at the bottom right. The second screen shows the "Control Unit" connected to "iPod-BB" and "Camera Cont.". A "Previous" button is at the top left and a "BACK" button is at the top right. The part number "AWNIA1750GB" is at the bottom right.</p>	<p>Malfunction is detected in AV control unit power supply and ground circuits.</p>	<p>Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.</p>
<p>NOTE: When a control unit malfunction is detected (red in unit display), connection malfunctions with other connection unit may be displayed. "Self-Diagnosis did not run because of a control unit malfunction"</p>		

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Diagnosis results	Detection logic	Possible malfunction location / Action to take
 <p>AWNIA1751GE</p>	<p>Malfunction is detected in camera-connection recognition signal circuit.</p>	<p>Camera connection recognition signal circuit.</p>
 <p>AWNIA1752GE</p>	<p>GPS antenna connection malfunction is detected.</p>	<p>GPS antenna.</p>
 <p>AWNIA1753GE</p>	<p>Satellite radio antenna connection malfunction is detected.</p>	<ul style="list-style-type: none"> • Satellite radio antenna feeder. • Antenna base.
 <p>AWNIA1754GE</p>	<p>When any one of the following items is detected:</p> <ul style="list-style-type: none"> • serial communication circuits between AV control unit and front display unit are malfunctioning. • serial communication signal between AV control unit and front display unit is malfunctioning. 	<p>Serial communication circuits between AV control unit and front display unit.</p>

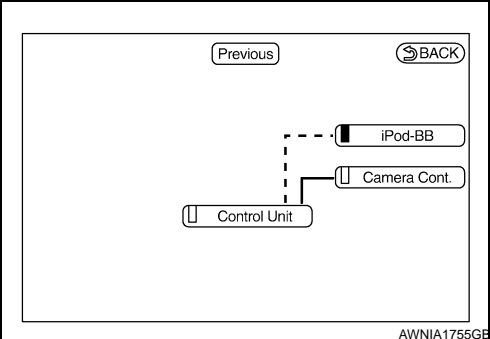
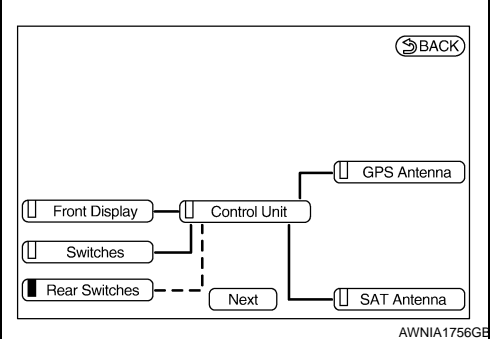
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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

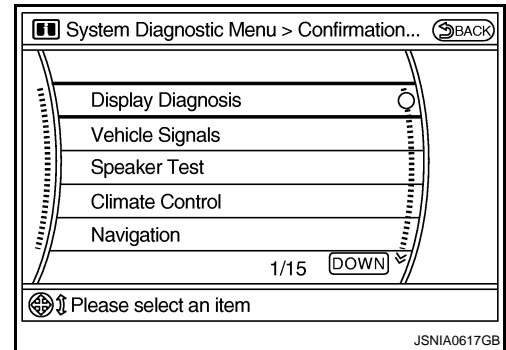
Diagnosis results	Detection logic	Possible malfunction location / Action to take
 <p style="text-align: right; font-size: small;">AWNIA1755GE</p>	<p>When any one of the following items is detected:</p> <ul style="list-style-type: none"> • iPod adapter power supply and ground circuits are malfunctioning. • AV communication circuits between multifunction switch and iPod adapter are malfunctioning. • AV communication signal between AV control unit and iPod adapter is malfunctioning. 	<ul style="list-style-type: none"> • iPod adapter power supply and ground circuits. • 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 iPod adapter.
 <p style="text-align: right; font-size: small;">AWNIA1756GE</p>	<p>When any one of the following items is detected:</p> <ul style="list-style-type: none"> • Rear control switch power supply and ground circuits are malfunctioning. • AV communication signal between AV control unit and rear control switch is malfunctioning. 	<ul style="list-style-type: none"> • Rear control switch power supply and ground circuits. • AV communication circuits between AV control unit and rear control switch.

NOTE:

The number of units that are displayed on the on board self-diagnosis display according to equipment.

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

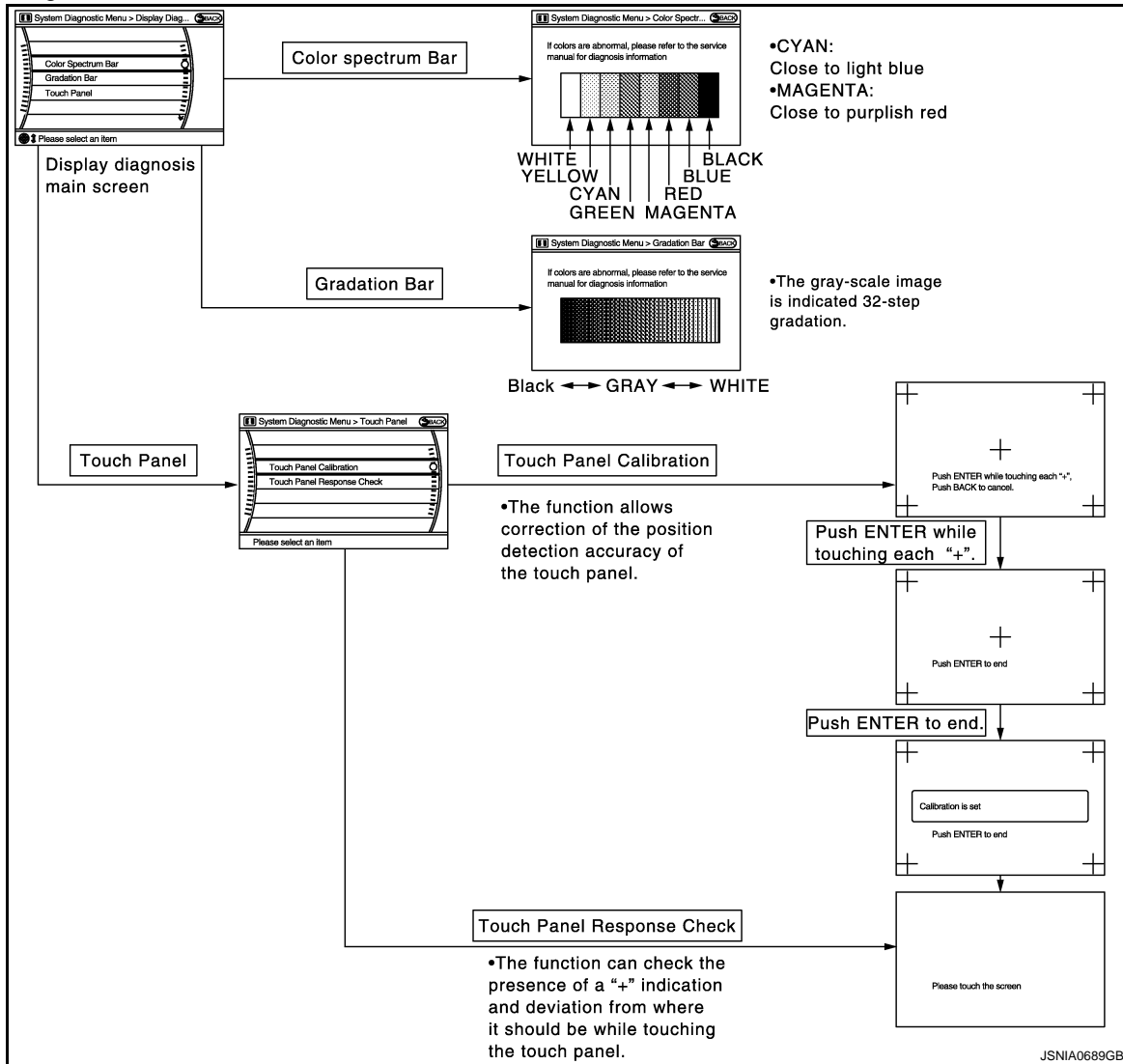


DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Display Diagnosis

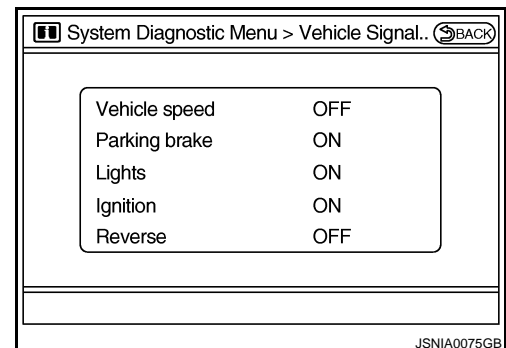


The tint of the color bar indication is as per the following list if RGB signal error is detected.

- 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 SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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

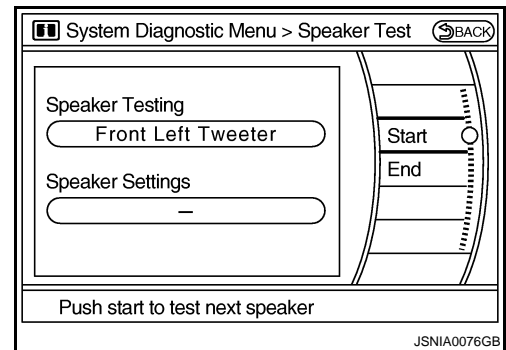
Speaker Test

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



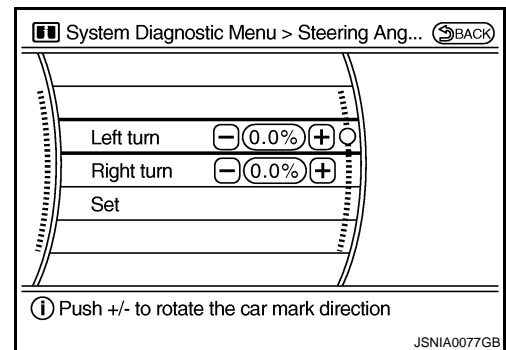
Climate Control

On-board self-diagnosis is not supported. Only CONSULT-III is supported.

Navigation

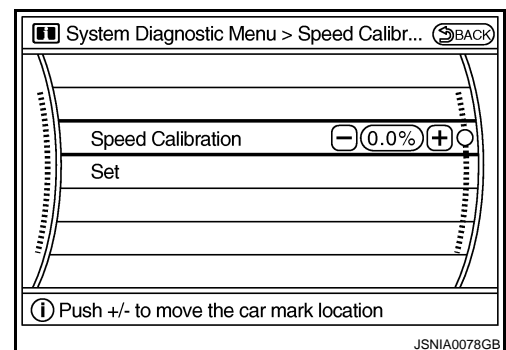
STEERING ANGLE ADJUSTMENT

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



SPEED CALIBRATION

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



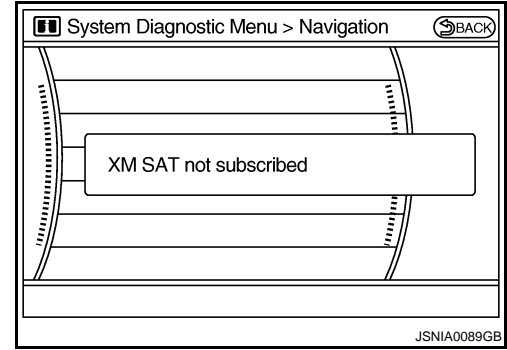
DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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 switch is turned ON and then no error has occurred until the self-diagnosis start. Check the “Error Record” to detect any error that may have occurred before the self-diagnosis start because of this situation.

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

- If there is a malfunction with the GPS antenna circuit board in the AV control unit, the correct date and time of occurrence may not be able to be displayed.
- Place of the error occurrence is represented by the position of the current location mark at the time the error occurred. If the current location mark has deviated from the correct position, then the place of the error occurrence cannot be correctly located.
- 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 switched is ON. The counter will not decrease even if the status 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 occurrence 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

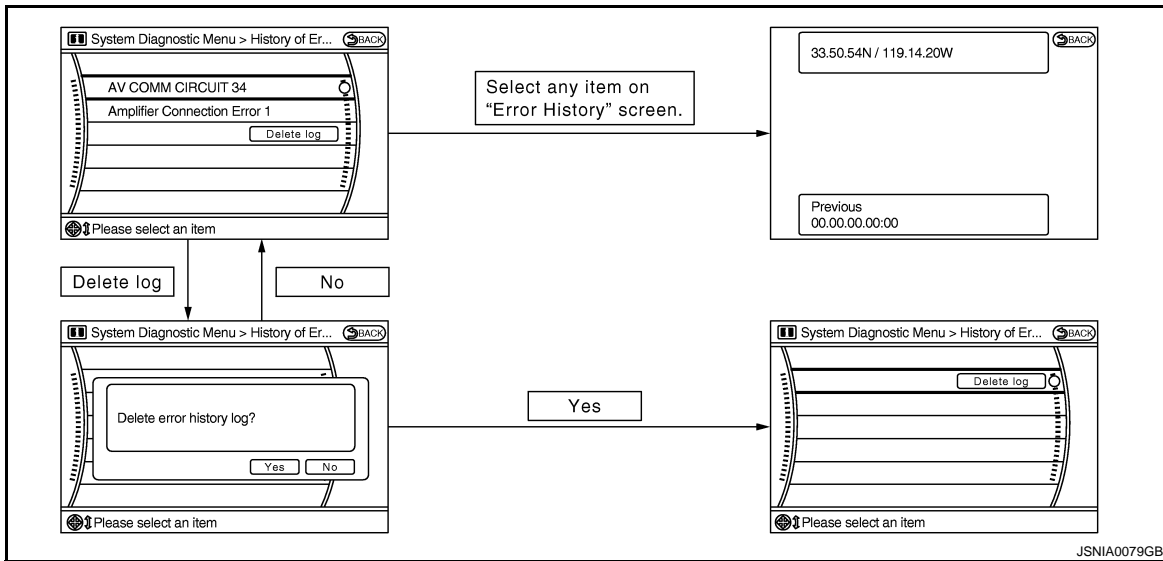
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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]



Error item

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-369, "CONSULT-III Function (MULTI AV)" .
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit.
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.	
Connection Of Gyro		
XM SERIAL COMM Error		
CAN Controller Memory Error		
Bluetooth Module Connection Error		
HDD CONN Error		
HDD READ Error		
HDD WRITE Error		
HDD COMM Error		
HDD ACCESS Error		
DSP CONN Error		
DSP COMM Error		
Internal Communication Error	Malfunction is detected in AV control unit power supply and ground circuits.	Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.
GPS Communication Error	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless a symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly.
GPS ROM Error		
GPS RAM Error		
GPS RTC Error		

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Error item	Description	Possible malfunction factor/Action to take
Front Display Connection Error	When any one of the following items is detected: <ul style="list-style-type: none"> • front display unit power supply and ground circuits are malfunctioning. • serial communication circuits between AV control unit and front display unit are malfunctioning. • serial communication signal between AV control unit and front display unit is malfunctioning. 	<ul style="list-style-type: none"> • Front display unit power supply and ground circuits. • Serial communication circuits between AV control unit and display unit.
GPS Antenna Error	GPS antenna connection malfunction is detected.	GPS antenna.
Camera Control Unit Connection Error	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.
XM Antenna Connection Error	Satellite radio antenna connection malfunction is detected.	<ul style="list-style-type: none"> • Satellite radio antenna feeder. • Antenna base.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Internal Communication Error 	Malfunction is detected in AV control unit power supply and ground circuits.	Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Switches Connection Error 	When any one of the following items is detected: <ul style="list-style-type: none"> • multifunction switch power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and multifunction switch are malfunctioning. • AV communication signal between AV control unit and multifunction switch is malfunctioning. 	<ul style="list-style-type: none"> • Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Rearview Camera Connection Error 	When any one of the following items is detected: <ul style="list-style-type: none"> • camera control unit power supply and ground circuits are malfunctioning. • AV communication circuits between multifunction switch and camera control unit is malfunctioning. • AV communication signal between AV control unit and camera control unit is malfunctioning. 	<ul style="list-style-type: none"> • Camera control unit power supply and ground circuits. • AV communication circuits between multifunction switch and camera control unit.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • iPod Connection Error 	When any one of the following items is detected: <ul style="list-style-type: none"> • iPod adapter power supply and ground circuits are malfunctioning. • AV communication circuits between multifunction switch and iPod adapter are malfunctioning. • AV communication signal between AV control unit and iPod adapter is malfunctioning. 	<ul style="list-style-type: none"> • iPod adapter power supply and ground circuits. • AV communication circuits between multifunction switch unit and iPod adapter.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Rearview Camera Connection Error • iPod Connection Error* 	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.

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Error item	Description	Possible malfunction factor/Action to take
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Switches Connection Error • Rearview Camera Connection Error • iPod Connection Error* 	Malfunction is detected in AV communication circuits between AV control unit and multifunction switch.	AV communication circuits between AV control unit and the junction of camera control unit and multifunction switch.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Internal Communication Error • Switches Connection Error • Rearview Camera Connection Error • iPod Connection Error* 	Malfunction is detected in AV communication circuits.	Check and repair the short circuit in AV communication circuits.

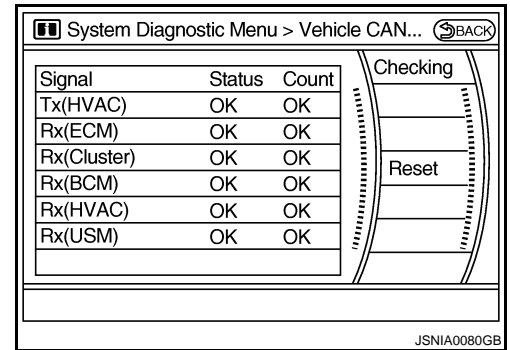
NOTE:

*: Non-equipped item is not displayed.

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 status 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.

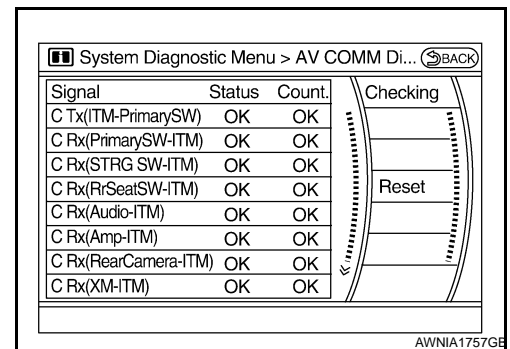
Items	Display (Current)	Malfunction counter (Past)
Tx (HVAC)	OK / UNKWN	OK / 0 – 39
Rx (ECM)	OK / UNKWN	OK / 0 – 39
Rx (Cluster)	OK / UNKWN	OK / 0 – 39
Rx (BCM)	OK / UNKWN	OK / 0 – 39
Rx (HVAC)	OK / UNKWN	OK / 0 – 39
Rx (USM)	OK / UNKWN	OK / 0 – 39



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” is pressed.

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(Amp-Audio)	—	—
C Rx(iPod-Audio)	OK / UNKWN	OK / 0 – 39
C Tx(Audio-ITM)	OK / UNKWN	OK / 0 – 39



NOTE:

- Any units with “—” displayed have no history of vehicle connection.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

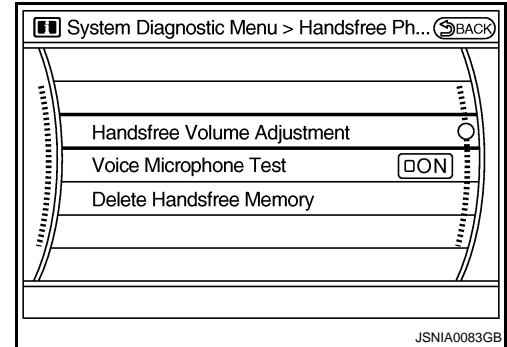
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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

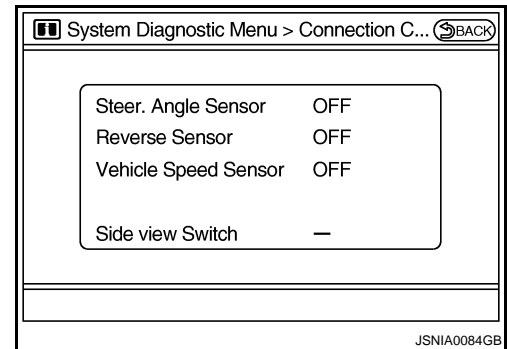


Camera Cont.

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
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	<ul style="list-style-type: none"> • Ignition switch at ACC • No steering with ignition switch ON
	—	Malfunction detected in camera connection recognition signal
Reverse Sensor	ON	Selector lever is in “R” with ignition switch ON.
	OFF	<ul style="list-style-type: none"> • Ignition switch at ACC • Selector lever is in position other than “R” with ignition switch ON.
	—	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	<ul style="list-style-type: none"> • 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

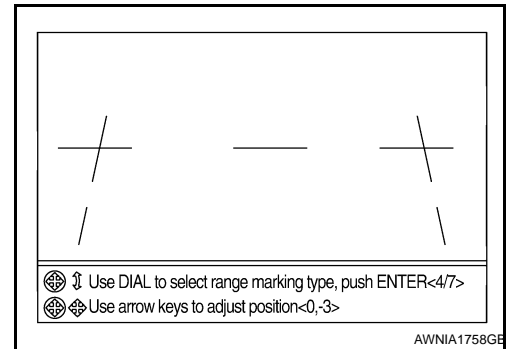
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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

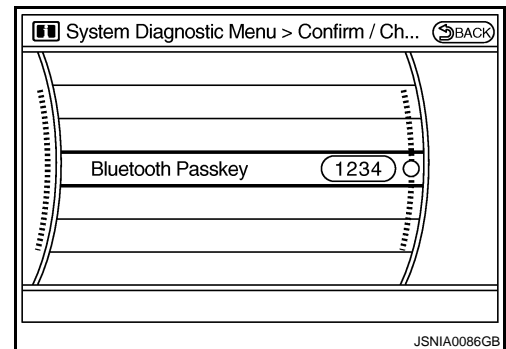
Use this mode to adjust the guide line display position of the rear-view monitor if necessary after removing the rear view monitor camera.



Bluetooth

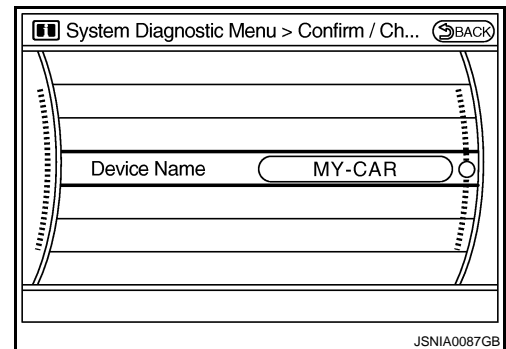
Confirm / Change Passkey

- The Bluetooth passkey can be confirmed and changed.
- The passkey can be changed by 4 digits within 0 to 9.



Confirm / Change Device Name

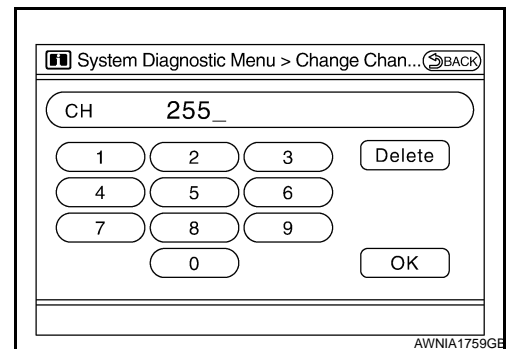
- The Bluetooth device name can be confirmed and changed.
- The device name can be changed by 16 digits from A to Z (small characters can be used) and "-" (hyphens).



SAT

Change Channel

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

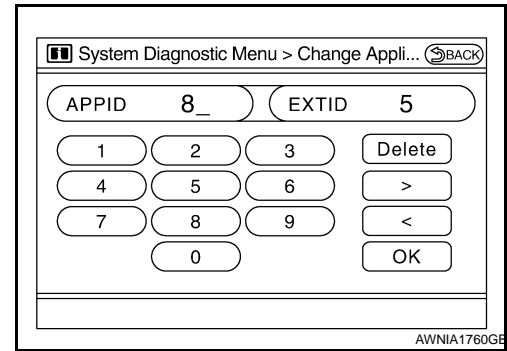


DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

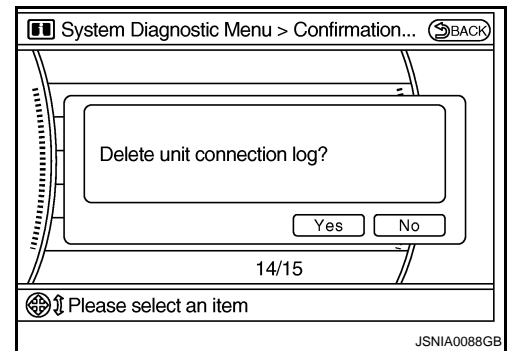
[BOSE W/ COLOR DISPLAY W/ NAVI]

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



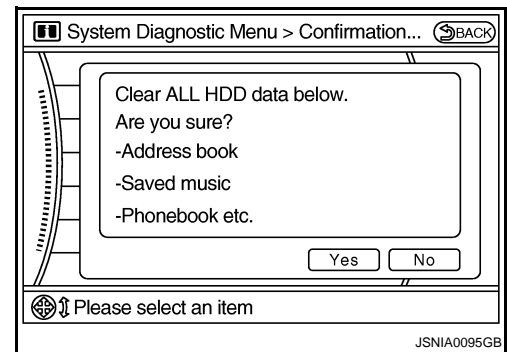
Delete Unit Connection Log

Deletes any unit connection records and error records from the 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:000000004391564

CONSULT-III FUNCTIONS

CONSULT-III performs the following functions via the communication with the 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 and 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 the 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 the AV control unit communication status and the error counter.

ECU IDENTIFICATION

The part number of AV control unit is displayed.

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

SELF DIAGNOSIS RESULT

- In CONSULT-III self-diagnosis, self-diagnosis results and error history are displayed collectively.
- A current malfunction indicates “crnt”. A past malfunction indicates “past”.
- The timing is displayed as “0” if any of the error codes [U1000], [U1010], [U1300] and [U1310] is detected. The counter increases by 1 if the status 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-372, "Diagnosis Procedure" .
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit.
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	
Control Unit FLASH-ROM [U1200]	AV control unit malfunction is detected.	
Gyro NO CONN [U1201]		
CAN CONT [U1216]		
BLUETOOTH CONN [U1217]		
HDD CONN [U1218]		
HDD READ [U1219]		
XM SERIAL COMM [U1220]		
HDD WRITE [U121A]		
HDD COMM [U121B]		
HDD ACCESS [U121C]		
DSP CONN [U121D]		
DSP COMM [U121E]		
INTERNAL COMM [U121F]		Malfunction is detected in AV control unit power supply and ground circuits.
GPS COMM [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless a symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly.
GPS ROM [U1205]		
GPS RAM [U1206]		
GPS RTC [U1207]		
FRONT DISP CONN [U1243]	When any one of the following items is detected: <ul style="list-style-type: none"> • front display unit power supply and ground circuits are malfunctioning. • serial communication circuits between AV control unit and front display unit are malfunctioning. • serial communication signal between AV control unit and front display unit is malfunctioning. 	<ul style="list-style-type: none"> • Front display unit power supply and ground circuits. • Serial communication circuits between AV control unit and display unit.
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna.
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.
XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	<ul style="list-style-type: none"> • Satellite radio antenna feeder. • Antenna base.
AV COMM CIRCUIT [U1300]	Malfunction is detected in AV communication system.	AV communication system.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

NOTE:

*: Non-equipped item is not displayed.

DATA MONITOR

All Signals

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

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

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	The same as when "ALL SIGNALS" is selected.
PKB SIG	
ILLUM SIG	
IGN SIG	
REV SIG	

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AV

U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:000000004278312

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.

DTC Logic

INFOID:000000004278313

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-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:000000004278314

1. PERFORM SELF DIAGNOSTIC

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

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to LAN system. Refer to [LAN-15, "Trouble Diagnosis Flow Chart"](#).
NO >> Refer to GI section. Refer to [GI-39, "Intermittent Incident"](#).

U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1010 CONTROL UNIT (CAN)

Description

INFOID:000000004278315

Initial diagnosis of AV control unit.

DTC Logic

INFOID:000000004278316

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-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:000000004278317

1. REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit. Refer to [AV-485. "Removal and Installation"](#).

>> Inspection End.

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U1200 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1200 AV CONTROL UNIT

Description

INFOID:000000004278318

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278319

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1200	Control Unit FLASH- ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	Replace AV control unit. Refer to AV-485, "Removal and Installation" .

U1201 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1201 AV CONTROL UNIT

Description

INFOID:000000004278320

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278321

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1201	GYRO NO CONN [U1201]	An internal malfunction is detected in AV control unit (gyrocompass disconnection).	Replace AV control unit. Refer to AV-485, "Removal and Installation" .

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U1204 GPS COMM

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1204 GPS COMM

Description

INFOID:000000004278322

Replace the AV control unit if this DTC is displayed. Refer to [AV-485. "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278323

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1204	GPS COMM [U1204]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-485. "Removal and Installation" .

U1205 GPS ROM

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1205 GPS ROM

Description

INFOID:000000004278324

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278325

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1205	GPS ROM [U1205]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-485, "Removal and Installation" .

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AV

U1206 GPS RAM

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1206 GPS RAM

Description

INFOID:000000004278326

Replace the AV control unit if this DTC is displayed. Refer to [AV-485. "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278327

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1206	GPS RAM [U1206]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-485. "Removal and Installation" .

U1207 GPS RTC

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1207 GPS RTC

Description

INFOID:000000004278328

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278329

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1207	GPS RTC [U1207]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-485, "Removal and Installation" .

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U1216 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1216 AV CONTROL UNIT

Description

INFOID:000000004278330

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278331

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. Refer to AV-485, "Removal and Installation" .

U1217 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1217 AV CONTROL UNIT

Description

INFOID:000000004278332

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278333

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1217	BLUETOOTH CONN [U1217]	An internal malfunction is detected in AV control unit (Bluetooth module connection malfunction).	Replace AV control unit. Refer to AV-485, "Removal and Installation" .

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U1218 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1218 AV CONTROL UNIT

Description

INFOID:000000004278334

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278335

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. Refer to AV-485, "Removal and Installation" .

U1219 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1219 AV CONTROL UNIT

Description

INFOID:000000004278336

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278337

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. Refer to AV-485, "Removal and Installation" .

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AV

U121A AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U121A AV CONTROL UNIT

Description

INFOID:000000004278338

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278339

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. Refer to AV-485, "Removal and Installation" .

U121B AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U121B AV CONTROL UNIT

Description

INFOID:000000004278340

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278341

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. Refer to AV-485, "Removal and Installation" .

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AV

U121C AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U121C AV CONTROL UNIT

Description

INFOID:000000004278342

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278343

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. Refer to AV-485, "Removal and Installation" .

U121D AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U121D AV CONTROL UNIT

Description

INFOID:000000004278344

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278345

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. Refer to AV-485, "Removal and Installation" .

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AV

U121E AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U121E AV CONTROL UNIT

Description

INFOID:000000004278346

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278347

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. Refer to AV-485, "Removal and Installation" .

U121F AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U121F AV CONTROL UNIT

Description

INFOID:000000004278348

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">Integrates HDD (hard disk drive) allowing map data and music data to be stored.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.The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278349

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U121F	INTERNAL COMM [U121F]	Internal malfunction of AV control unit (internal communication error) is detected.	AV control unit power supply and ground circuit.

Diagnosis Procedure

INFOID:000000004278350

1. CHECK AV CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check audio control unit power supply and ground circuit. Refer to [AV-399, "AV CONTROL UNIT : Diagnosis Procedure"](#).

Is inspection result OK?

- YES >> Inspection End.
- NO >> Repair malfunctioning parts.

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U1220 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1220 AV CONTROL UNIT

Description

INFOID:000000004278351

Replace the AV control unit if this DTC is displayed. Refer to [AV-485. "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278352

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1220	XM SERIAL COMM [U1220]	An internal malfunction is detected in AV control unit (satellite radio tuner communication malfunction).	Replace AV control unit. Refer to AV-485. "Removal and Installation" .

U1243 DISPLAY UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1243 DISPLAY UNIT

Description

INFOID:000000004278353

Part name	Description
DISPLAY UNIT	<ul style="list-style-type: none"> • Display image is controlled by the serial communication from AV control unit. • 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. • Synchronize signal (HP, VP) is output to AV control unit. • Touch panel function can be operated for each system by touching a display directly.

DTC Logic

INFOID:000000004278354

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1243	FRONT DISP CONN [U1243]	<ul style="list-style-type: none"> • Display unit power supply and ground circuit malfunction is detected. • Malfunction is detected on communication circuit between display unit and AV control unit. • Malfunction is detected on communication signal between display unit and AV control unit. 	<ul style="list-style-type: none"> • Display unit power supply and ground circuit. • Communication circuit between display unit and AV control unit.

Diagnosis Procedure

INFOID:000000004278355

1. CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuit. Refer to [AV-400. "DISPLAY UNIT : Diagnosis Procedure"](#).

Is inspection result OK?

YES >> GO TO 2.

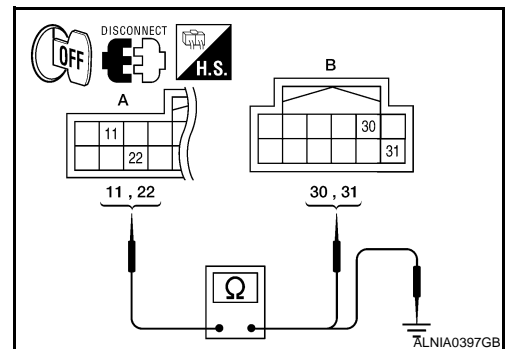
NO >> Repair malfunctioning parts.

2. CHECK CONTINUITY COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M142 and AV control unit connector M134.
3. Check continuity between display unit harness connector M142 (A) terminals 11, 22 and AV control unit harness connector M134 (B) terminals 30, 31.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M142	11	M134	30	Yes
	22		31	

4. Check continuity between display unit harness connector M142 (A) terminals 11, 22 and ground.



A		—	Continuity
Connector	Terminal		
M142	11	Ground	No
	22		

Are continuity results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

U1243 DISPLAY UNIT

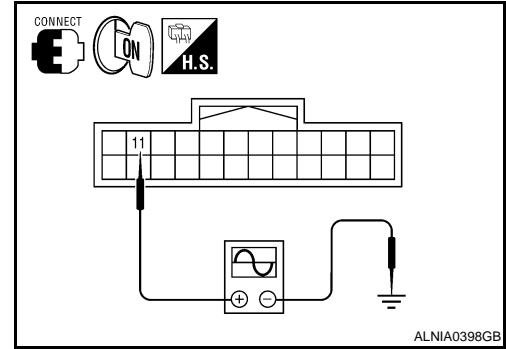
< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

3. CHECK COMMUNICATION SIGNAL

1. Connect display unit connector M142 and AV control unit connector M134.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M142 terminal 11 and ground.

Connector	Terminals		Reference Signal
	(+)	(-)	
M142	11	Ground	<p>PKIB5039J</p>



Are voltage readings as specified?

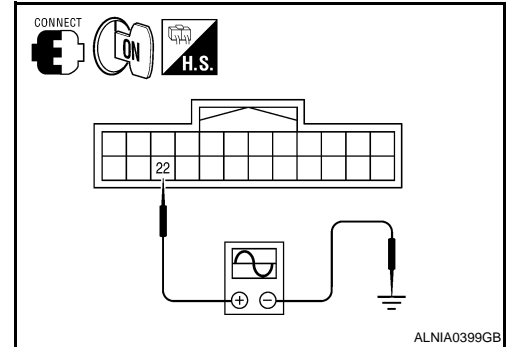
YES >> GO TO 4.

NO >> Replace AV control unit. Refer to [AV-485. "Removal and Installation"](#).

4. CHECK COMMUNICATION SIGNAL

Check signal between display unit harness connector M142 terminal 22 and ground.

Connector	Terminals		Reference Signal
	(+)	(-)	
M142	22	Ground	<p>PKIB5039J</p>



Are voltage readings as specified?

YES >> Inspection End.

NO >> Replace display unit. Refer to [AV-487. "Removal and Installation"](#).

U1244 GPS ANTENNA

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1244 GPS ANTENNA

Description

INFOID:000000004278356

Part Name	Description
GPS ANTENNA	GPS signal is detected and transmitted to the AV control unit.

DTC Logic

INFOID:000000004278357

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition
U1244	GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.

Diagnosis Procedure

INFOID:000000004278358

1. GPS ANTENNA CHECK

Inspect GPS antenna and antenna feeder for damage or poor connection.

Is the GPS antenna and feeder clean and undamaged?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2. CHECK AV CONTROL UNIT VOLTAGE

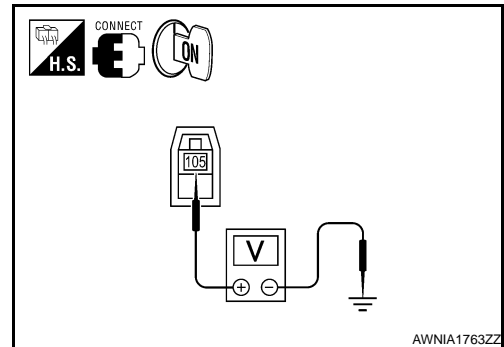
- Turn ignition switch ON.
- Check voltage between AV control unit connector M145 terminal 105 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
M145	105	Ground	5V

Is the voltage reading as specified?

YES >> Replace GPS antenna. Refer to [AV-497. "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-485. "Removal and Installation"](#).



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AV

U1250 CAMERA CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1250 CAMERA CONTROL UNIT

Description

INFOID:000000004278359

Part name	Description
CAMERA CONTROL UNIT	<ul style="list-style-type: none"> • Camera image signal is input from rear view camera, and camera image is indicated on the display. • Power (camera ON signal) is sent to rear view camera. • Controlled by audio communication sent from AV control unit. • AV control unit recognizes the presence of camera system with camera connection recognition signal.

DTC Logic

INFOID:000000004278360

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:000000004278361

1. CHECK CAMERA-CONNECTION RECOGNITION SIGNAL CIRCUIT

1. Disconnect AV control unit connector and camera control unit connector.
2. Check continuity between AV control unit harness connector M139 (A) terminal 84 and camera control unit harness connector B119 (B) terminal 14.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M139	84	B119	14	Yes

3. Check continuity between AV control unit harness connector M139 (A) terminal 84 and ground.

A		—	Continuity
Connector	Terminal		
M139	84	Ground	No

Are the continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

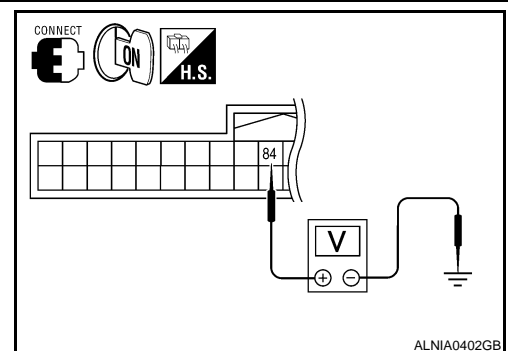
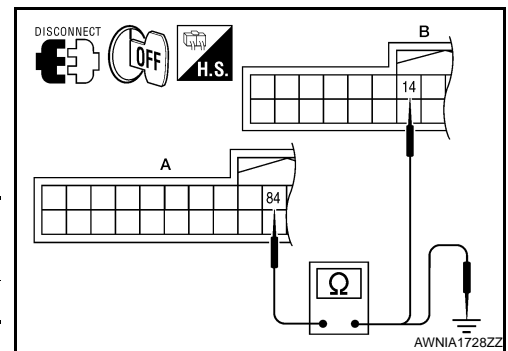
2. CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit harness connector M139 terminal 84 and ground.

Connector	Terminals		Voltage (Approx.)
	(+)	(-)	
M139	84	Ground	5V

Is voltage approximately 5 volts?

YES >> Replace camera control unit. Refer to [AV-506, "Removal and Installation"](#).



U1250 CAMERA CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

NO >> Replace AV control unit. Refer to [AV-485. "Removal and Installation"](#).

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U1258 SATELLITE RADIO ANTENNA

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1258 SATELLITE RADIO ANTENNA

Description

INFOID:000000004278362

Part name	Description
SATELLITE RADIO ANTENNA	Satellite radio signal is received and sent to audio control unit.

DTC Logic

INFOID:000000004278363

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1258	XM ANETNNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.

U1300 AV COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1300 AV COMM CIRCUIT

Description

INFOID:000000004278365

U1300 is indicated when malfunction occurs in communication signal of multi AV system. 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	• AV COMM CIRCUIT [U1300]	When AV control unit is not transmitting or receiving AV communication signal for 2 seconds or more.	AV communication system.

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U1310 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1310 AV CONTROL UNIT

Description

INFOID:000000004278366

Replace the AV control unit if this DTC is displayed. Refer to [AV-485, "Removal and Installation"](#).

Part name	Description
AV CONTROL UNIT	<ul style="list-style-type: none">• Integrates HDD (hard disk drive) allowing map data and music data to be stored.• 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.• The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions.• It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.• It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.• It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:000000004278367

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. Refer to AV-485, "Removal and Installation" .

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:000000004278368

1. CHECK FUSES

Check that the following AV control unit fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
AV control unit	19, 66, 68	Battery power	31
	7, 69	Ignition switch ACC or ON	4
	79	Ignition switch ON or START	12

Are the fuses OK?

YES >> GO TO 2.

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect AV control unit connectors M131 and M139.
2. Check voltage between the AV control unit connectors M131 and M139 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M131	7	Ground	0V	Battery voltage	Battery voltage
	19	Ground	Battery voltage	Battery voltage	Battery voltage
M139	66	Ground	Battery voltage	Battery voltage	Battery voltage
	68	Ground	Battery voltage	Battery voltage	Battery voltage
	69	Ground	0V	Battery voltage	Battery voltage
	79	Ground	0V	0V	Battery voltage

Are the voltage results as specified?

YES >> GO TO 3.

- NO >>
- Check connector housings for disconnected or loose terminals.
 - Repair harness or connector.

3. GROUND CIRCUIT CHECK

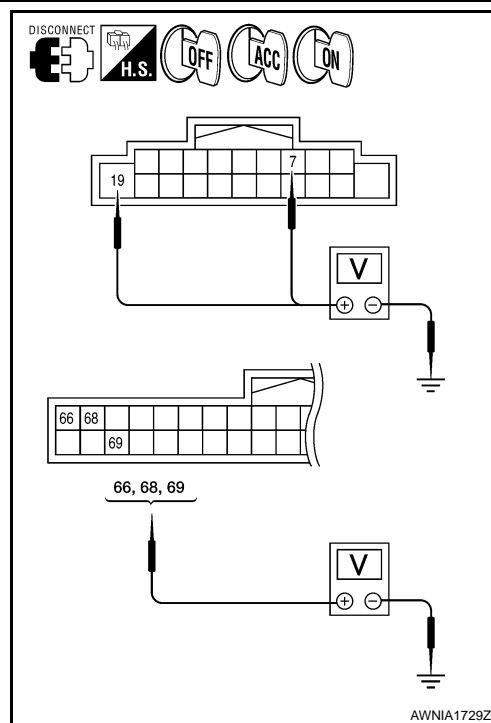
1. Ignition OFF.
2. Check continuity between AV control unit harness connectors M131 and M139 and ground.

(+)		(-)	Continuity
Connector	Terminal		
M139	65	Ground	Yes
	67		

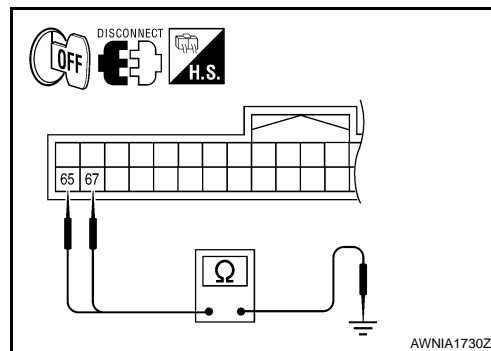
Are the continuity results as specified?

YES >> Inspection End.

NO >> Repair AV control unit ground.



AWNIA1729ZZ



AWNIA1730ZZ

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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:000000004278369

1.CHECK FUSES

Check that the following display unit fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Display Unit	2	Battery power	24
	3	Ignition switch ACC or ON	17

Are the fuses OK?

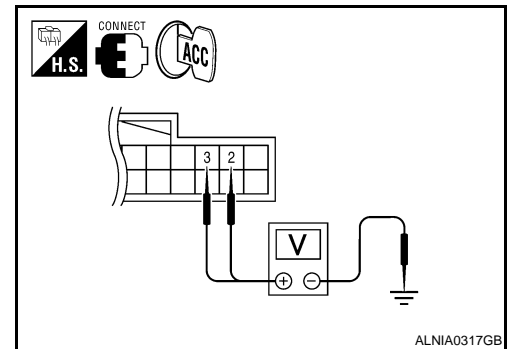
YES >> GO TO 2.

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch to ACC.
- Check voltage between display unit harness connector M142 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M142	2	Ground	Battery voltage	Battery voltage	Battery voltage
	3		0V	Battery voltage	Battery voltage



Does specified voltage exist?

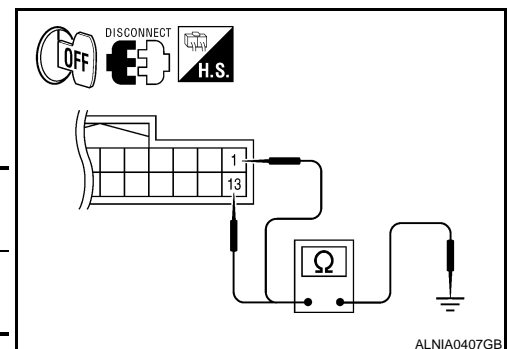
YES >> GO TO 3.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect display unit connector.
- Check continuity between display unit harness connector M142 and ground.

(+)		(-)	Continuity
Connector	Terminal		
M142	1	Ground	Yes
	13		



Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure

INFOID:000000004278370

1.CHECK FUSE

Check that the A/C and AV switch assembly fuse is not blown.

Unit	Terminal	Signal name	Fuse No.
A/C and AV switch assembly	3	Ignition switch ACC or ON	17

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Is the fuse OK?

YES >> GO TO 2.

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. POWER SUPPLY CIRCUIT CHECK

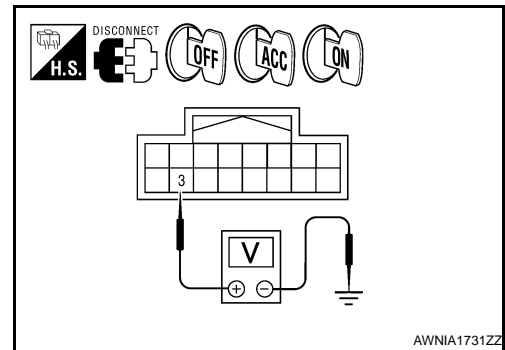
1. Disconnect A/C and AV switch assembly connector M98.
2. Check voltage between the A/C and AV switch assembly connector M98 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M98	3	Ground	0V	Battery voltage	Battery voltage

Are the voltage results as specified?

YES >> GO TO 3.

- NO >>
- Check connector housings for disconnected or loose terminals.
 - Repair harness or connector.



3. GROUND CIRCUIT CHECK

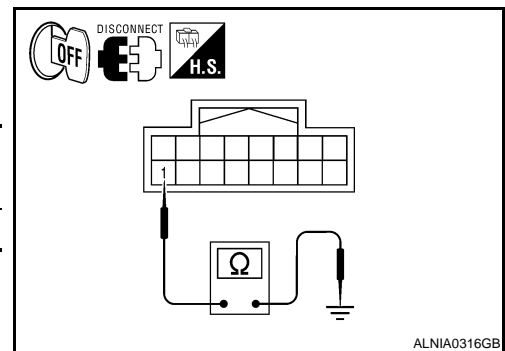
1. Ignition OFF.
2. Check continuity between A/C and AV switch assembly harness connector M98 and ground.

(+)		(-)	Continuity
Connector	Terminal		
M98	1	Ground	Yes

Are the continuity results as specified?

YES >> Inspection End.

NO >> Repair A/C and AV switch assembly ground.



BOSE SPEAKER AMP

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:000000004375798

1. CHECK FUSE

Check that the BOSE speaker amp. fuse is not blown.

Unit	Terminal	Signal name	Fuse No.
BOSE speaker amp.	11	Battery power	26
	10		25

Are the fuses OK?

YES >> GO TO 2.

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

2. CHECK POWER SUPPLY CIRCUIT

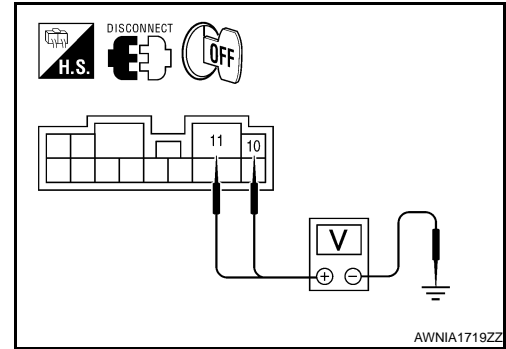
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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

1. Turn ignition switch OFF.
2. Disconnect BOSE speaker amp. connector.
3. Check voltage between BOSE speaker amp. harness connector B110 terminal 10, 11 and ground.



(+)		(-)	Voltage (approx.)
Connector	Terminal		
B110	10	Ground	Battery voltage
	11		

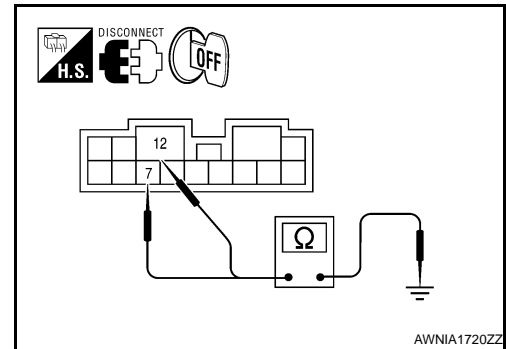
Is battery voltage present?

YES >> GO TO 3.

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BOSE speaker amp. connector.
3. Check continuity between BOSE speaker amp. harness connector B110 terminal 7,12 and ground.



(+)		(-)	Continuity
Connector	Terminal		
B110	7	Ground	Yes
	12		

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

REAR VIEW CAMERA CONTROL UNIT

REAR VIEW CAMERA CONTROL UNIT : Diagnosis Procedure

INFOID:000000004375809

1.CHECK FUSE

Check that the following fuses of the rear view camera control unit are not blown.

Unit	Terminals	Signal name	Fuse No.
Rear view camera control unit	32	Battery power	24
	30	Ignition switch ACC or ON	17

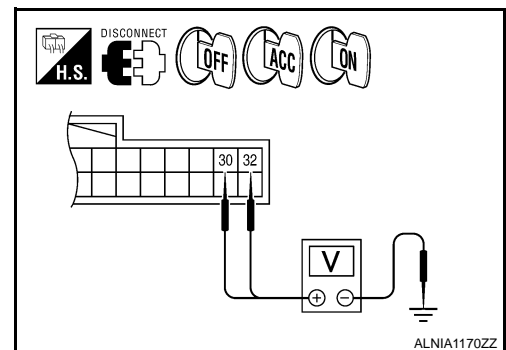
Are the fuses OK?

YES >> GO TO 2.

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera control unit connector B119.
3. Check voltage between rear view camera control unit harness connector B119 and ground.



(+)		(-)	OFF	ACC	ON
Connector	Terminal		OFF	ACC	ON
B119	32	Ground	Battery voltage	Battery voltage	Battery voltage
	30		0V	Battery voltage	Battery voltage

Are the voltage readings as specified?

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

< COMPONENT DIAGNOSIS >

- YES >> GO TO 3.
- NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera control unit connector.
3. Check continuity between rear view camera control unit harness connector B119 terminal 31 and ground.

Connector	Terminal	—	Continuity
B119	31	Ground	Yes

Does continuity exist?

- YES >> Inspection End.
- NO >> Repair harness or connector.

REAR VIEW CAMERA

REAR VIEW CAMERA : Diagnosis Procedure

INFOID:000000004375810

1.CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA SIDE)

1. Turn ignition switch ON.
2. Shift transmission into Reverse.
3. Check voltage between rear view camera harness connector T101 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
T101	1	Ground	Reverse	6V

Is voltage reading approximately 6 volts?

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

2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect rear view camera and rear view camera control unit connectors.
3. Check continuity between rear view camera harness connector T101 (A) terminal 1 and rear view camera control unit harness connector B119 (B) terminal 8.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
T101	1	B119	8	Yes

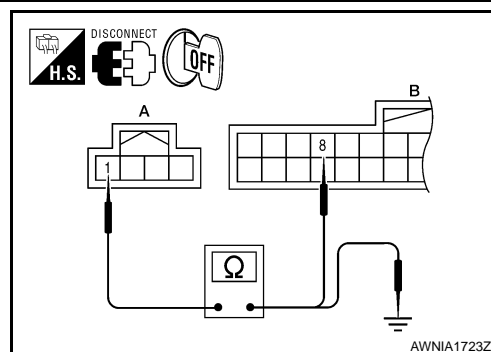
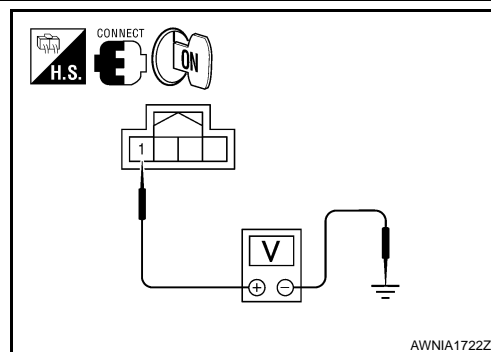
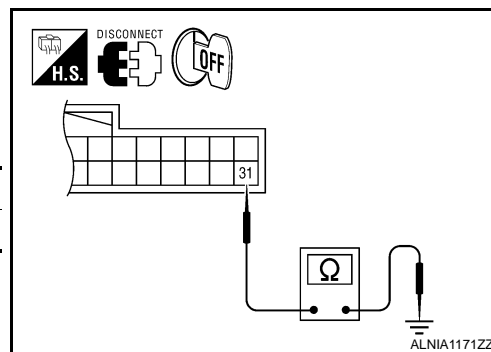
4. Check continuity between rear view camera harness connector T101 (A) terminal 1 and ground.

A		—	Continuity
Connector	Terminal		
T101	1	Ground	No

Are continuity test results as specified?

- YES >> GO TO 3.
- NO >> Repair harness or connector.

3.CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA CONTROL UNIT SIDE)



POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

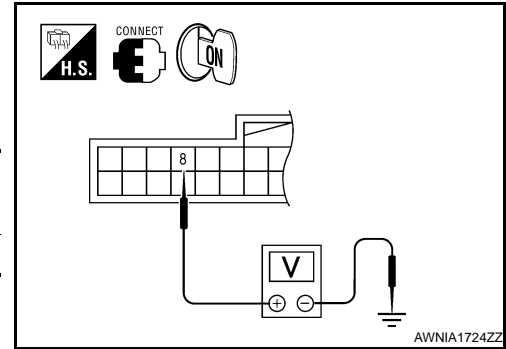
[BOSE W/ COLOR DISPLAY W/ NAVI]

1. Connect rear view camera control unit harness connector.
2. Turn ignition switch ON.
3. Check voltage between rear view camera control unit harness connector B119 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
B119	8	Ground	Reverse	6V

Is voltage reading approximately 6 volts?

- YES >> Inspection End.
 NO >> Replace rear view camera control unit. Refer to [AV-506](#).
["Removal and Installation"](#).



AWNIA1724ZZ

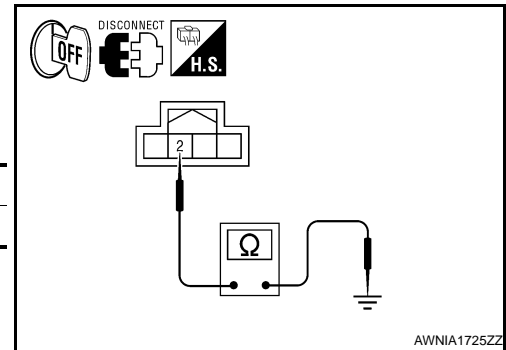
4.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera harness connector.
3. Check continuity between rear view camera harness connector T101 terminal 2 and ground.

Connector	Terminal	—	Continuity
T101	2	Ground	Yes

Does continuity exist?

- YES >> Inspection End.
 NO >> Repair harness or connector.



AWNIA1725ZZ

REAR CONTROL SWITCH

REAR CONTROL SWITCH : Diagnosis Procedure

INFOID:000000004292750

1.CHECK FUSE

Check that the rear audio remote control unit fuse is not blown.

Unit	Terminal	Signal name	Fuse No.
Rear audio remote control unit	1	ACC or ON	17

Is the fuse OK?

- YES >> GO TO 2.
 NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

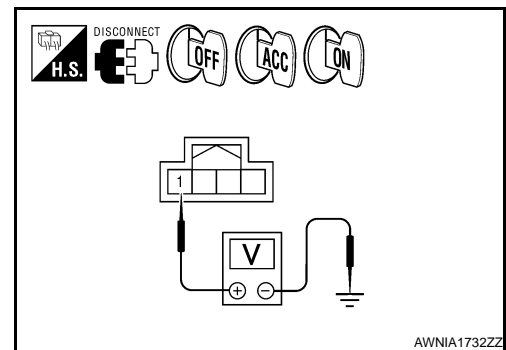
2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect rear audio remote control unit connector B402.
2. Check voltage between the rear audio remote control unit connector B402 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
B402	1	Ground	Battery voltage

Are the voltage results as specified?

- YES >> GO TO 3.
 NO >> • Check connector housings for disconnected or loose terminals.
 • Repair harness or connector.



AWNIA1732ZZ

3.GROUND CIRCUIT CHECK

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

< COMPONENT DIAGNOSIS >

1. Ignition OFF.
2. Check continuity between rear audio remote control unit harness connector B402 and ground.

(+)		(-)	Continuity
Connector	Terminal		
B402	4	Ground	Yes

Are the continuity results as specified?

- YES >> Inspection End.
 NO >> Repair harness or connector.

MICROPHONE

MICROPHONE : Diagnosis Procedure

INFOID:000000004278377

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between microphone harness connector R7 terminal 4 and ground.

(+)		(-)	Value (Approx.)
Connector	Terminal		
R7	4	Ground	5V

Is approximately 5V present?

- YES >> GO TO 3.
 NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect microphone and AV control unit harness connectors.
3. Check continuity between microphone harness connector R7 (A) terminal 4 and AV control unit harness connector M139 (B) terminal 70.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	4	M139	70	Yes

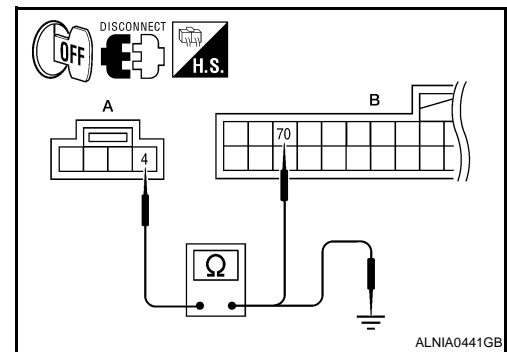
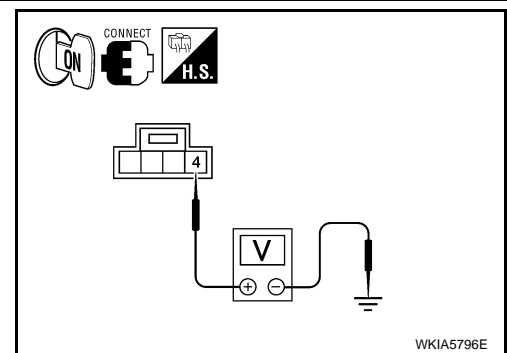
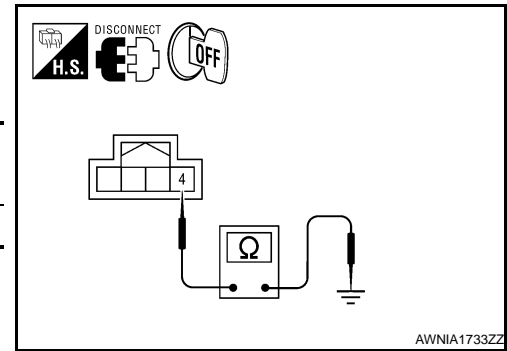
4. Check continuity between microphone harness connector R7 (A) terminal 4 and ground.

A		—	Continuity
Connector	Terminal		
R7	4	Ground	No

Are the continuity test results as specified?

- YES >> Replace the AV control unit. Refer to [AV-485. "Removal and Installation"](#).
 NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT



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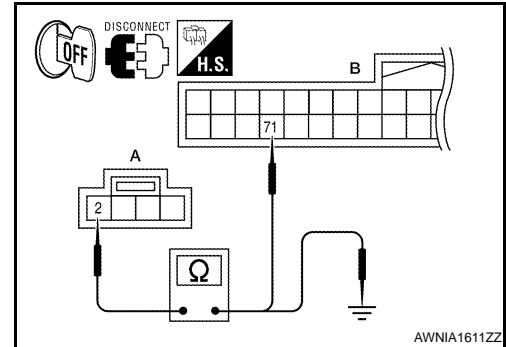
POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

1. Turn ignition switch OFF.
2. Disconnect microphone harness connector R7 and AV control unit harness connector M139.
3. Check continuity between microphone harness connector R7 (A) terminal 2 and AV control unit harness connector M139 (B) terminal 71.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	2	M139	71	Yes



Does continuity exist?

- YES >> Inspection End.
NO >> Repair harness or connector.

RGB (R: RED) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

RGB (R: RED) SIGNAL CIRCUIT

Description

INFOID:000000004278378

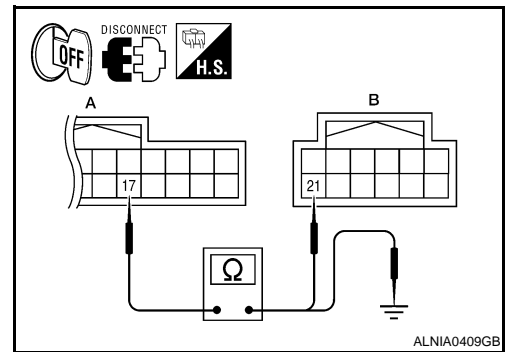
Transmit the image displayed with audio control unit with RGB signal to the display unit.

Diagnosis Procedure

INFOID:000000004278379

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M142 and AV control unit connector M134.
3. Check continuity between display unit harness connector M142 (A) terminal 17 and AV control unit harness connector M134 (B) terminal 21.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M142	17	M134	21	Yes

4. Check continuity between display unit harness connector M142 (A) terminal 17 and ground.

A		—	Continuity
Connector	Terminal		
M142	17	Ground	No

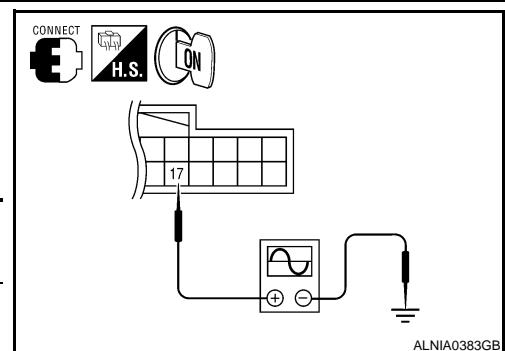
Are the continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB (R: RED) SIGNAL

1. Connect display unit connector M142 and AV control unit connector M134.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M142 terminal 17 and ground.



(+) Connector		(-) Terminal	Condition	Reference signal
Connector	Terminal			
M142	17	Ground	Receive audio signal	<p>SKIB2238J</p>

Are the voltage readings as specified?

YES >> Replace display unit. Refer to [AV-487, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-485, "Removal and Installation"](#).

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RGB (G: GREEN) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

RGB (G: GREEN) SIGNAL CIRCUIT

Description

INFOID:000000004278380

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

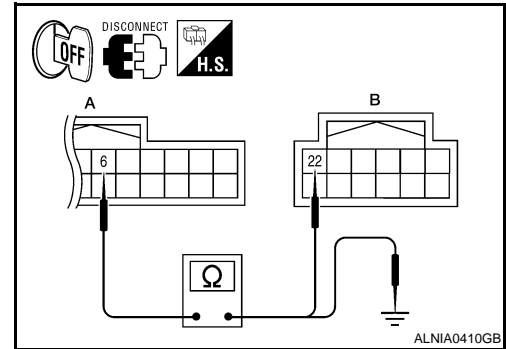
Diagnosis Procedure

INFOID:000000004278381

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M142 and AV control unit connector M134.
3. Check continuity between display unit harness connector M142 (A) terminal 6 and AV control unit harness connector M134 (B) terminal 22.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M142	6	M134	22	Yes



4. Check continuity between display unit harness connector M142 (A) terminal 6 and ground.

A		—	Continuity
Connector	Terminal		
M142	6	Ground	No

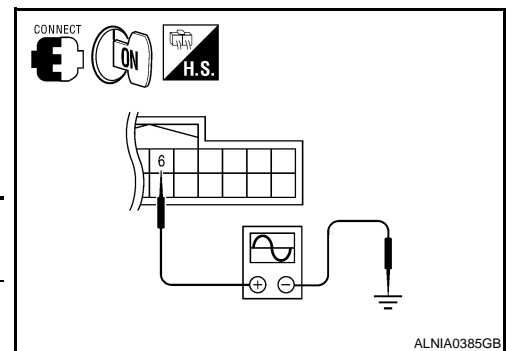
Are the continuity results as specified?

- YES >> GO TO 2.
 NO >> Repair harness or connector.

2. CHECK RGB (G: GREEN) SIGNAL

1. Connect display unit connector M142 and AV control unit connector M134.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M142 terminal 6 and ground.

(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M142	6	Ground	Receive audio signal	<p>SKIB2236J</p>



Are voltage readings as specified?

- YES >> Replace display unit. Refer to [AV-487, "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-485, "Removal and Installation"](#).

RGB (B: BLUE) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

RGB (B: BLUE) SIGNAL CIRCUIT

Description

INFOID:000000004278382

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

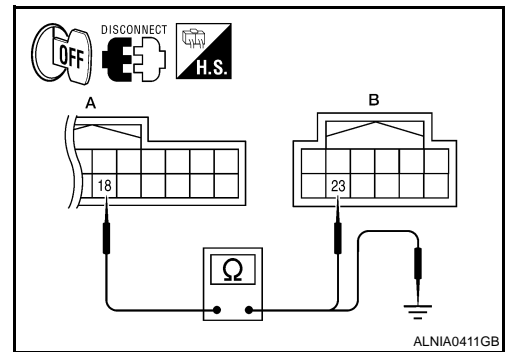
Diagnosis Procedure

INFOID:000000004278383

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M142 and AV control unit connector M134.
3. Check continuity between display unit harness connector M142 (A) terminal 18 and AV control unit harness connector M134 (B) terminal 23.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M142	18	M134	23	Yes



4. Check continuity between display unit harness connector M142 (A) terminal 18 and ground.

A		—	Continuity
Connector	Terminal		
M142	18	Ground	No

Are continuity results as specified?

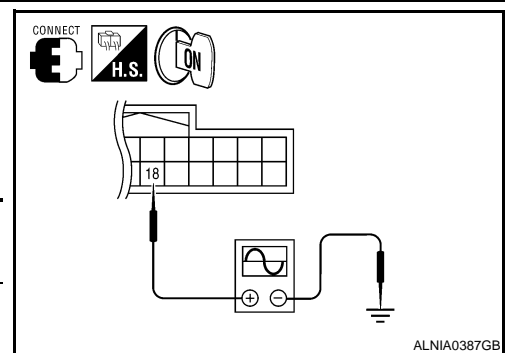
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB (B: BLUE) SIGNAL

1. Connect display unit connector M142 and AV control unit connector M134.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M142 terminal 18 and ground.

(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M142	18	Ground	Receive audio signal	<p>Reference signal graph showing a square wave signal between 0.4V and -0.4V with a 40µs scale bar.</p>



Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-487, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-485, "Removal and Installation"](#).

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RGB SYNCHRONIZING SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

RGB SYNCHRONIZING SIGNAL CIRCUIT

Description

INFOID:000000004278384

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

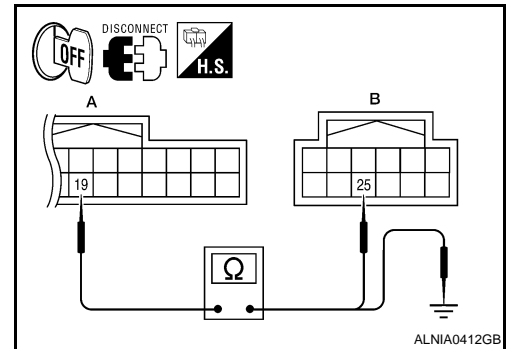
Diagnosis Procedure

INFOID:000000004278385

1. CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M142 and AV control unit connector M134.
3. Check continuity between display unit harness connector M142 (A) terminal 19 and AV control unit harness connector M134 (B) terminal 25.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M142	19	M134	25	Yes



4. Check continuity between display unit harness connector M142 (A) terminal 19 and ground.

A		—	Continuity
Connector	Terminal		
M142	19	Ground	No

Are continuity results as specified?

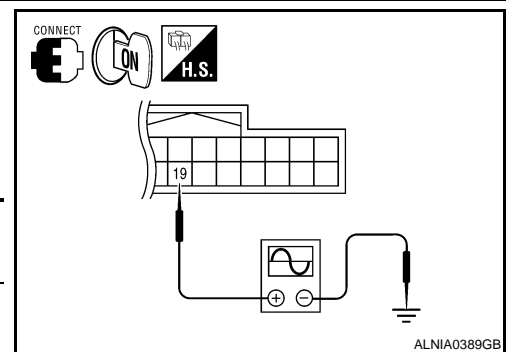
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB SYNCHRONIZING SIGNAL

1. Connect display unit connector M142 and AV control unit connector M134.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M142 terminal 19 and ground.

(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M142	19	Ground	Receive audio signal	<p>SKIB3603E</p>



Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-487, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-485, "Removal and Installation"](#).

RGB AREA (YS) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

RGB AREA (YS) SIGNAL CIRCUIT

Description

INFOID:000000004278386

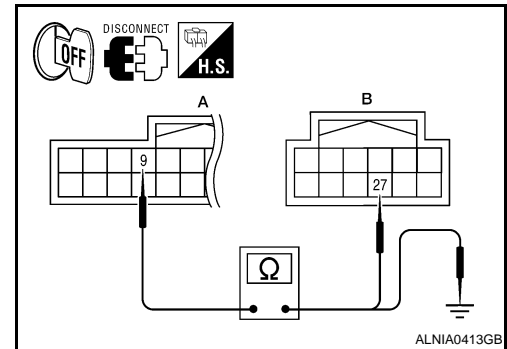
Transmits the display area of RGB image displayed by AV control unit with RGB area (YS) signal to display unit.

Diagnosis Procedure

INFOID:000000004278387

1. CHECK CONTINUITY RGB AREA (YS) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M142 and AV control unit connector M134.
3. Check continuity between display unit harness connector M142 (A) terminal 9 and AV control unit harness connector M134 (B) terminal 27.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M142	9	M134	27	Yes

4. Check continuity between display unit harness connector M142 (A) terminal 9 and ground.

A		—	Continuity
Connector	Terminal		
M142	9	Ground	No

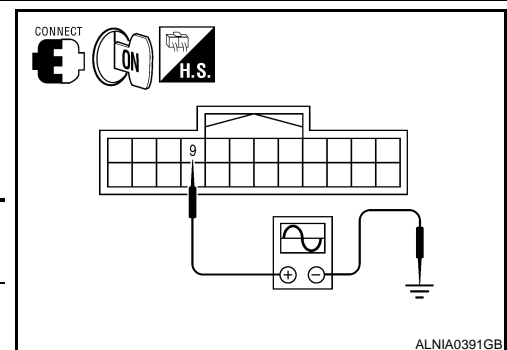
Are continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB SYNCHRONIZING SIGNAL

1. Connect display unit connector M142 and AV control unit connector M134.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M142 terminal 9 and ground.



(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M142	9	Ground	Receive audio signal	<p>PKIB4948J</p>

Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-487, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-485, "Removal and Installation"](#).

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Description

INFOID:000000004278388

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.

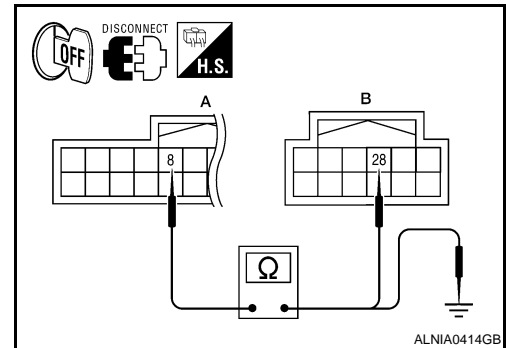
Diagnosis Procedure

INFOID:000000004278389

1. CHECK CONTINUITY HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M142 and AV control unit connector M134.
3. Check continuity between display unit harness connector M142 (A) terminal 8 and AV control unit harness connector M134 (B) terminal 28.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M142	8	M134	28	Yes



4. Check continuity between display unit harness connector M142 (A) terminal 8 and ground.

A		—	Continuity
Connector	Terminal		
M142	8	Ground	No

Are continuity results as specified?

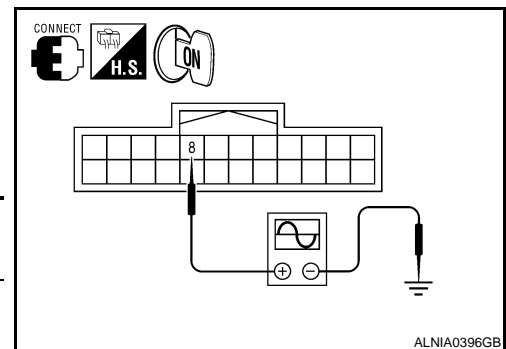
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

1. Connect display unit connector M142 and AV control unit connector M134.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M142 terminal 8 and ground.

(+)		(-)	Condition	Reference signal
Connector	Terminal			
M142	8	Ground	Receive audio signal	<p>SKIB3601E</p>



Are voltage readings as specified?

YES >> Replace AV control unit. Refer to [AV-485. "Removal and Installation"](#).

NO >> Replace display unit. Refer to [AV-487. "Removal and Installation"](#).

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description

INFOID:000000004278390

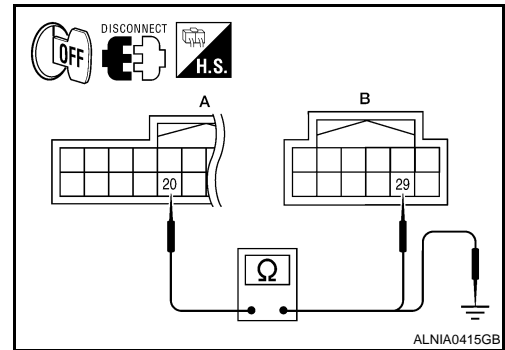
In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit, such as the image quality adjusting menu, etc.

Diagnosis Procedure

INFOID:000000004278391

1. CHECK CONTINUITY VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M142 and AV control unit connector M134.
3. Check continuity between display unit harness connector M142 (A) terminal 20 and AV control unit harness connector M134 (B) terminal 29.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M142	20	M134	29	Yes

4. Check continuity between display unit harness connector M142 (A) terminal 20 and ground.

A		—	Continuity
Connector	Terminal		
M142	20	Ground	No

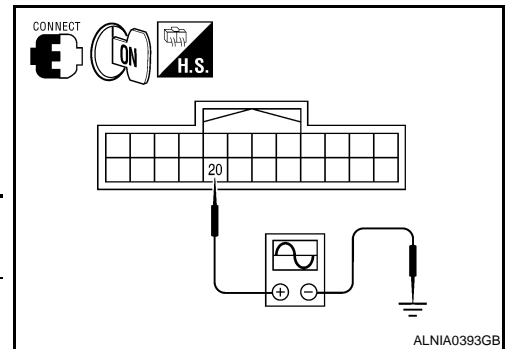
Are continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

1. Connect display unit connector M142 and AV control unit connector M134.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M142 terminal 20 and ground.



(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M142	20	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to [AV-485. "Removal and Installation"](#).

NO >> Replace display unit. Refer to [AV-487. "Removal and Installation"](#).

FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

FRONT DOOR SPEAKER

Description

INFOID:000000004375799

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the front door speakers using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004375800

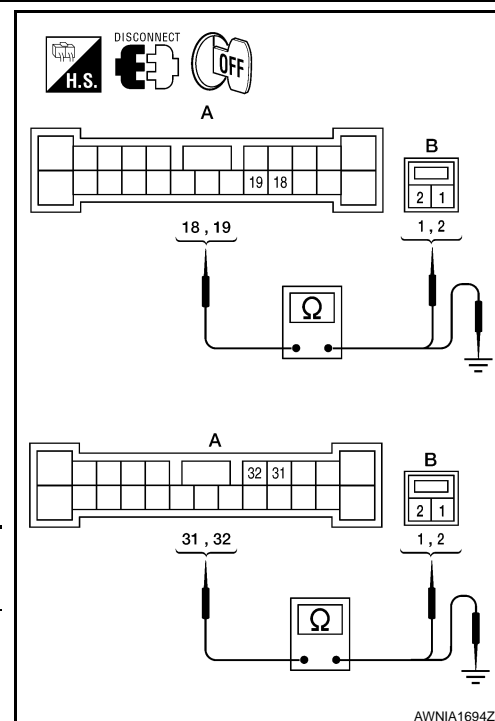
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B109 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connector B109 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B109	18	D3	1	Yes
	19		2	
	31	D103	1	
	32		2	

3. Check continuity between BOSE speaker amp. harness connector B109 (A) and ground.

A		B	Continuity
Connector	Terminal		
B109	18	Ground	No
	19		
	31		
	32		



Are continuity test results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
 • Repair harness or connector.

2. FRONT DOOR SPEAKER SIGNAL CHECK

FRONT DOOR SPEAKER

[BOSE W/ COLOR DISPLAY W/ NAVI]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connector B109 and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B109 terminals with CONSULT-III or oscilloscope.

Connector	Terminal		Condition	Reference signal
	(+)	(-)		
B109	18	19	Receive audio signal	
	31	32		

Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to [AV-493. "Removal and Installation"](#).

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M131 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M131 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M131	2	B109	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between AV control unit harness connector M131 (A) and ground.

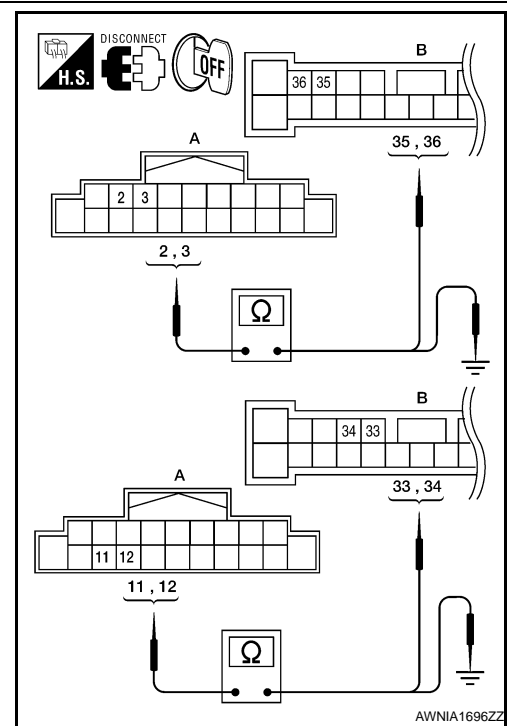
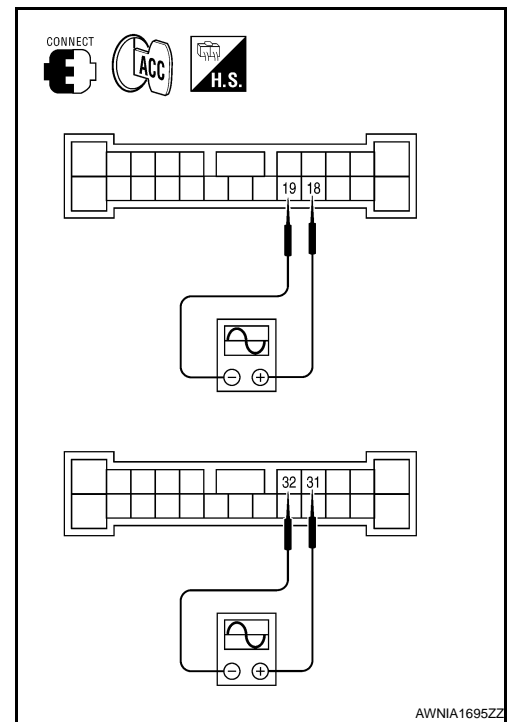
A		—	Continuity
Connector	Terminal		
M131	2	Ground	No
	3		
	11		
	12		

Are continuity test results as specified?

YES >> GO TO 4.

- NO >>
- Check connector housings for disconnected or loose terminals.
 - Repair harness or connector.

4. FRONT DOOR SPEAKER SIGNAL CHECK



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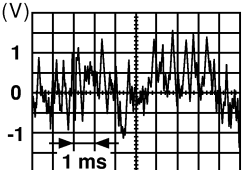
AV

FRONT DOOR SPEAKER

[BOSE W/ COLOR DISPLAY W/ NAVI]

< COMPONENT DIAGNOSIS >

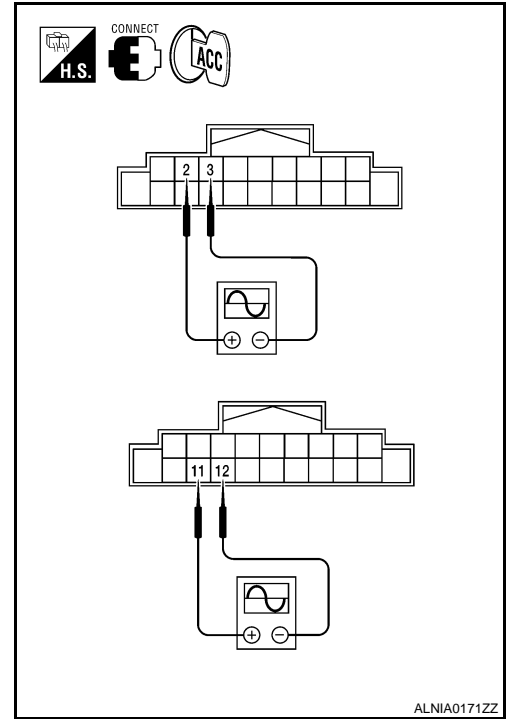
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M131	2	3	Receive audio signal	
	11	12		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-496, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-485, "Removal and Installation"](#).



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TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

TWEETER

Description

INFOID:000000004375801

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the tweeters using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004375802

1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B110 and suspect tweeter connector.
2. Check continuity between BOSE speaker amp. harness connector B110 (A) and suspect tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B110	1	M51	1	Yes
	2		2	
	4	M52	1	
	3		2	

3. Check continuity between BOSE speaker amp. harness connector B110 (A) and ground.

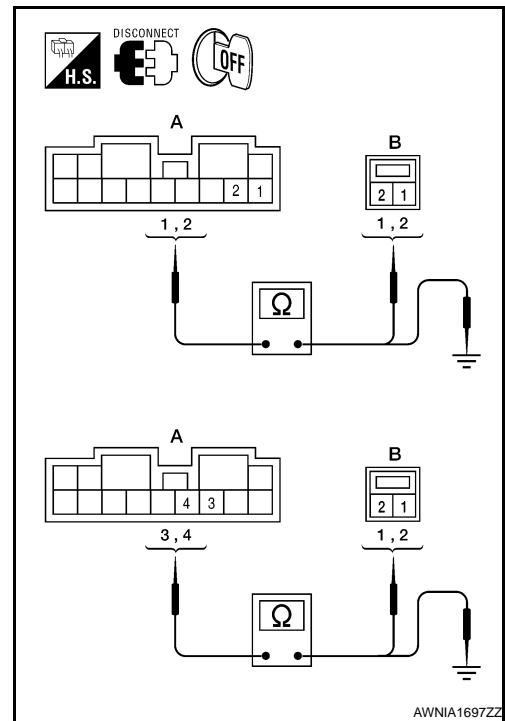
A		—	Continuity
Connector	Terminal		
B110	1	Ground	No
	2		
	4		
	3		

Are continuity test results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2. TWEETER SIGNAL CHECK



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AV

TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

1. Connect BOSE speaker amp. connector B110 and suspect tweeter connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B110 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B110	1	2	Receive audio signal	
	4	3		

SKIA0177E

Are the audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to [AV-159, "Removal and Installation"](#).

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M131 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M131 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M131	2	B109	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between AV control unit harness connector M131 (A) and ground.

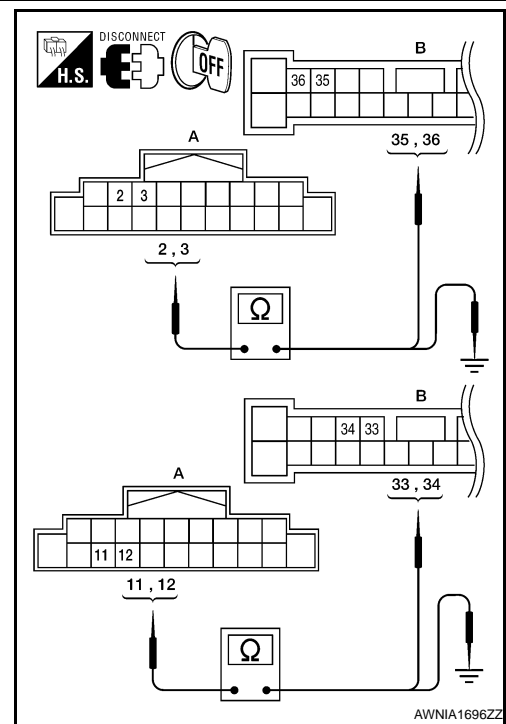
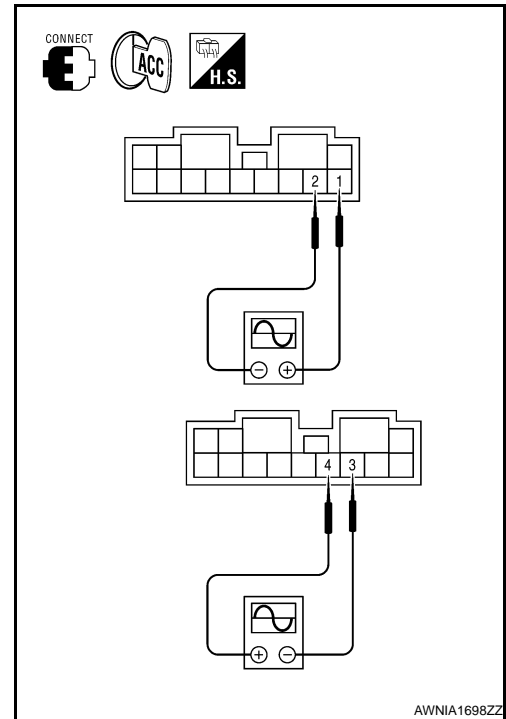
A		—	Continuity
Connector	Terminal		
M131	2	Ground	No
	3		
	11		
	12		

Are continuity test results as specified?

YES >> GO TO 4.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. TWEETER SIGNAL CHECK

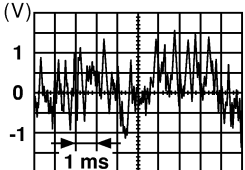


TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

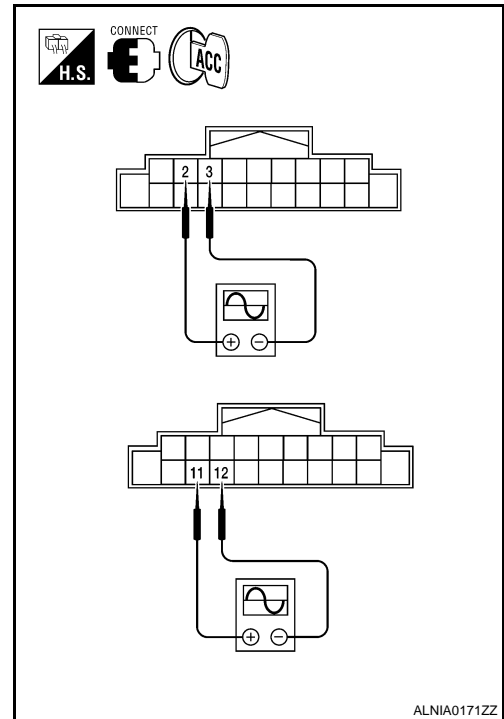
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M131	2	3	Receive audio signal	
	11	12		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-164, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-156, "Removal and Installation"](#).



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CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

CENTER SPEAKER

Description

INFOID:000000004375803

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the center speaker using the audio signal circuits.

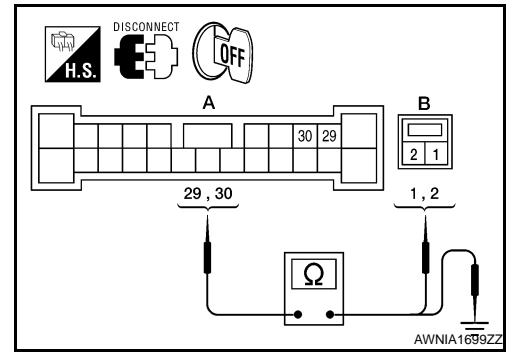
Diagnosis Procedure

INFOID:000000004375804

1.HARNES CHECK

1. Disconnect BOSE speaker amp. connector B109 and center speaker connector M130.
2. Check continuity between BOSE speaker amp. harness connector B109 (A) and center speaker harness connector M130 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B109	29	M130	1	Yes
	30		2	



3. Check continuity between BOSE speaker amp. harness connector B109 (A) and ground.

A		—	Continuity
Connector	Terminal		
B109	29	Ground	No
	30		

Are continuity test results as specified?

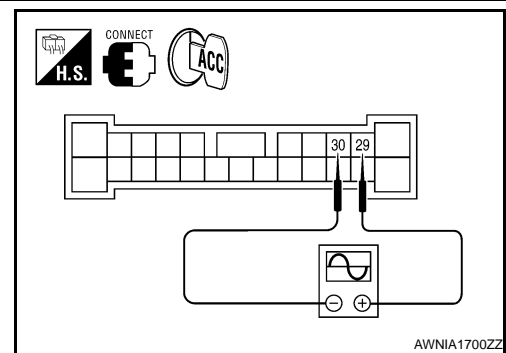
YES >> GO TO 2.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2.CENTER SPEAKER SIGNAL CHECK

1. Connect BOSE speaker amp. connector B109 and center speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B109 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B109	29	30	Receive audio signal	



Is the audio signal voltage reading as specified?

YES >> Replace center speaker. Refer to [AV-160. "Removal and Installation"](#).

NO >> GO TO 3.

3.HARNES CHECK

CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

1. Disconnect AV control unit connector M131 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M131 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M131	2	B109	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between AV control unit harness connector M131 (A) and ground.

A		—	Continuity
Connector	Terminal		
M131	2	Ground	No
	3		
	11		
	12		

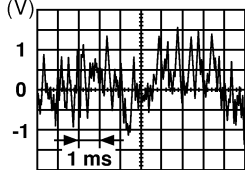
Are continuity test results as specified?

YES >> GO TO 4.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. CENTER SPEAKER SIGNAL CHECK

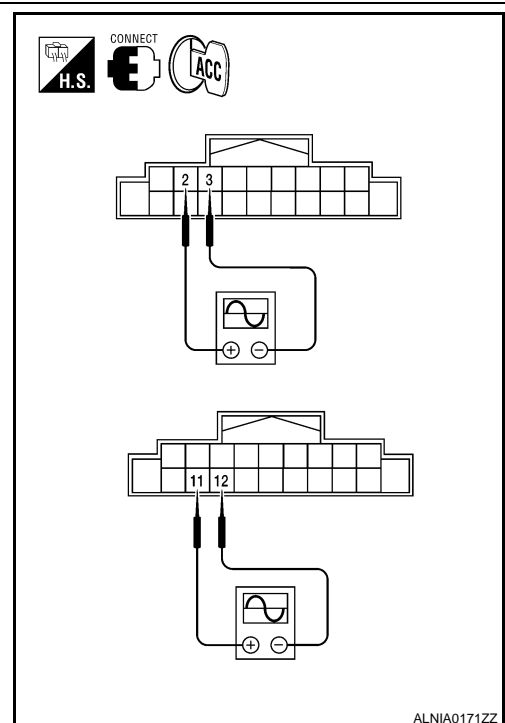
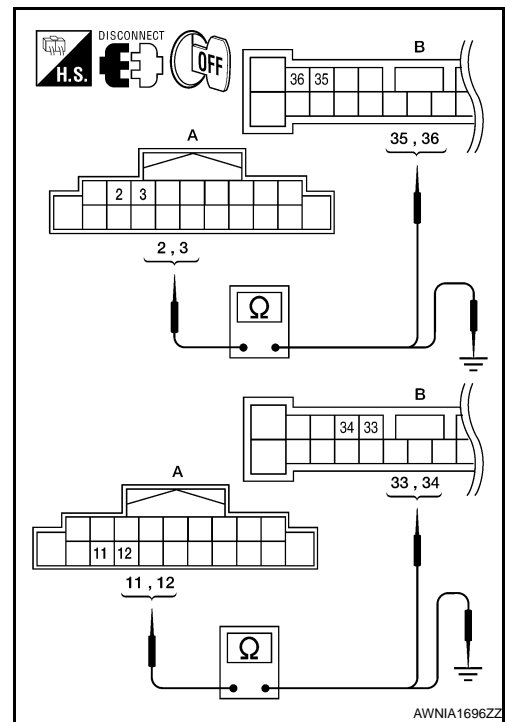
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M131	2	3	Receive audio signal	
	11	12		

Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to [AV-164, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-156, "Removal and Installation"](#).



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REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

REAR DOOR SPEAKER

Description

INFOID:000000004375805

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the rear door speakers using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004375806

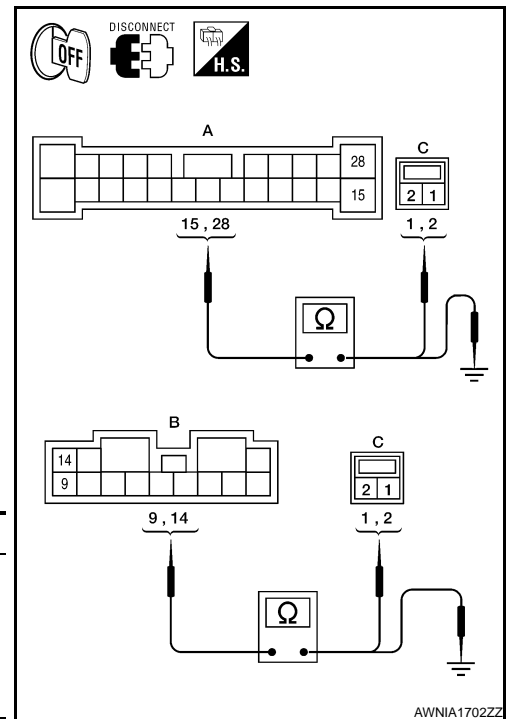
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connectors B109, B110 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connectors B109 (A) and B110 (B) and suspect speaker harness connector (C).

Connector	Terminal	Connector	Terminal	Continuity
A: B109	15	C: D202	2	Yes
	28		1	
B: B110	9	C: D302	2	
	14		1	

3. Check continuity between BOSE speaker amp. harness connectors B109 (A) and B110 (B) and ground.

Connector	Terminal	-	Continuity
A: B109	15	Ground	No
	28		
B: B110	9		
	14		



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Are the continuity test results as specified?

YES >> GO TO 2.

NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2. REAR DOOR SPEAKER SIGNAL CHECK

REAR DOOR SPEAKER

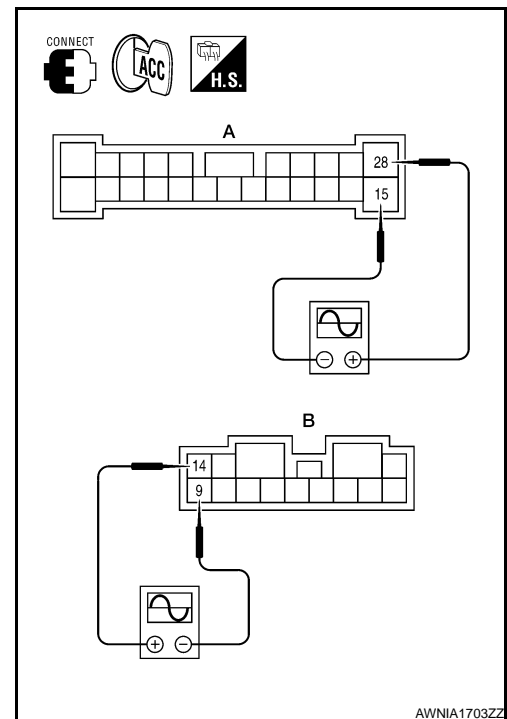
[BOSE W/ COLOR DISPLAY W/ NAVI]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connectors and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connectors B109 (A) and B110 (B) terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
A: B109	28	15	Receive audio signal	
B: B110	14	9		

SKIA0177E



Are audio signal voltage readings as specified?

- YES >> Replace suspect speaker. Refer to [AV-494, "Removal and Installation"](#).
- NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M131 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M131 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M131	4	B109	24	Yes
	5		23	
	13		26	
	14		25	

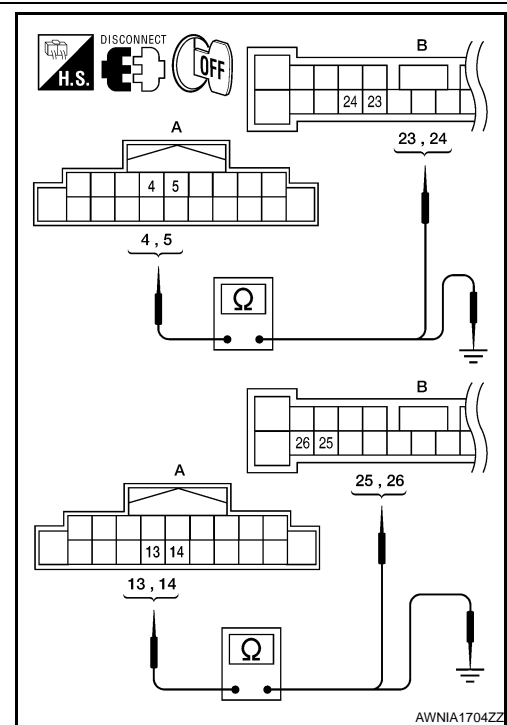
3. Check continuity between AV control unit harness connector M131 (A) and ground.

A		—	Continuity
Connector	Terminal		
M131	4	Ground	No
	5		
	13		
	14		

Are the continuity test results as specified?

- YES >> GO TO 4.
- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. REAR DOOR SPEAKER SIGNAL CHECK



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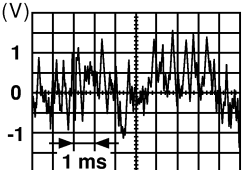
AV

REAR DOOR SPEAKER

[BOSE W/ COLOR DISPLAY W/ NAVI]

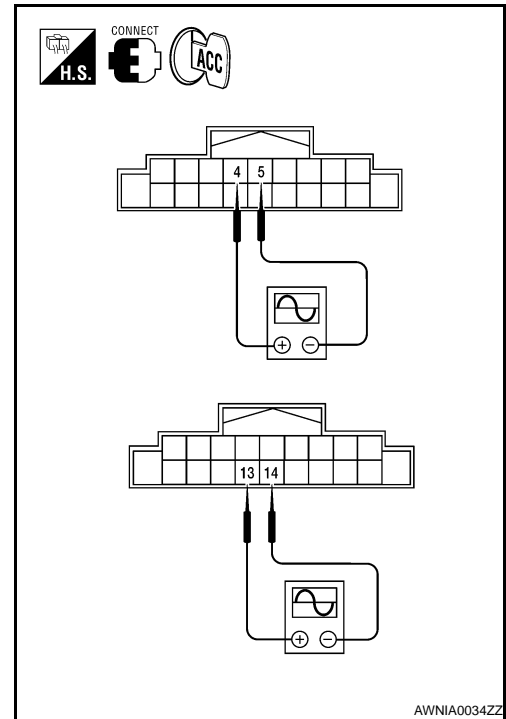
< COMPONENT DIAGNOSIS >

1. Connect AV control unit connector M131 and BOSE speaker amp. connector B109.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M131	4	5	Receive audio signal	 <p>SKIA0177E</p>
	13	14		

Is the audio signal voltage reading as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-496, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-485, "Removal and Installation"](#).



SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

SUBWOOFER

Description

INFOID:000000004375807

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the subwoofers using the audio signal circuits.

Diagnosis Procedure

INFOID:000000004375808

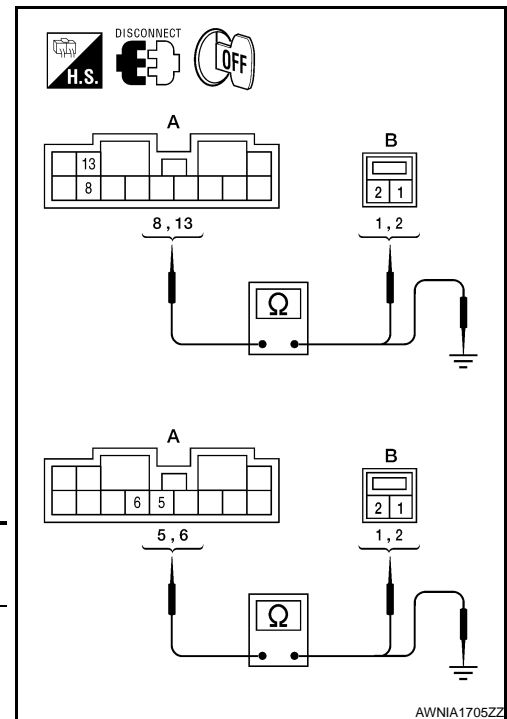
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B110 and suspect rear subwoofer connector.
2. Check continuity between BOSE speaker amp. harness connector B110 (A) and suspect rear subwoofer harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B110	13	B106	1	Yes
	8		2	
	5	B107	1	
	6		2	

3. Check continuity between BOSE speaker amp. harness connector B110 (A) and ground.

A		—	Continuity
Connector	Terminal		
B110	13	Ground	No
	8		
	5		
	6		



Are the continuity test results as specified?

YES >> GO TO 2.

- NO >> • Check connector housings for disconnected or loose terminals.
 • Repair harness or connector.

2. REAR SUBWOOFER SIGNAL CHECK

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SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

1. Connect BOSE speaker amp. connector B110 and suspect rear subwoofer connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between BOSE speaker amp. harness connector B110 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B110	13	8	Receive audio signal	
	5	6		

SKIA0177E

Is the audio signal voltage as specified?

YES >> Replace suspect rear subwoofer. Refer to [AV-163](#), "[Removal and Installation](#)".

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M131 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M131 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M131	4	B109	24	Yes
	5		23	
	13		26	
	14		25	

3. Check continuity between AV control unit harness connector M131 (A) terminal and ground.

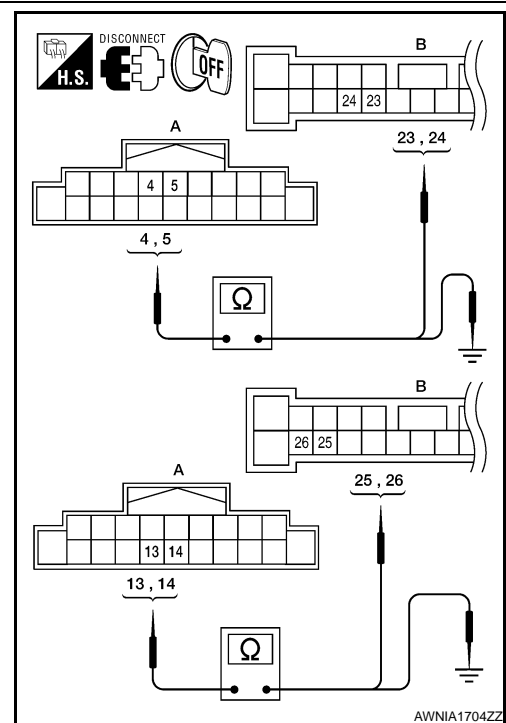
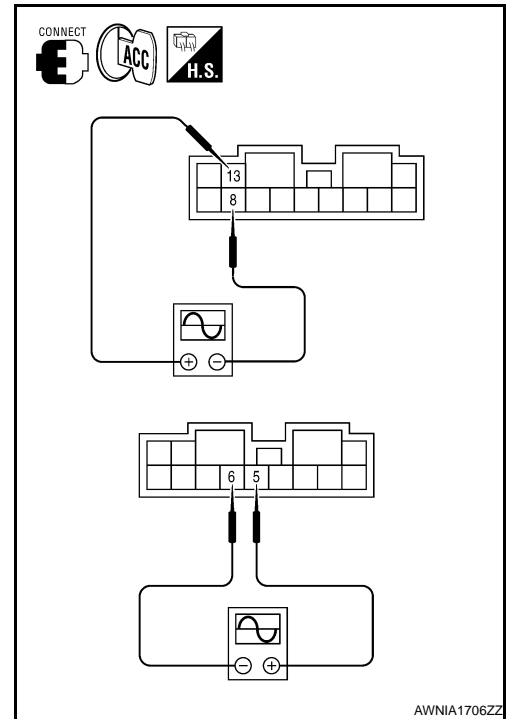
A		—	Continuity
Connector	Terminal		
M131	4	Ground	No
	5		
	13		
	14		

Are continuity test results as specified?

YES >> GO TO 4.

- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

4. REAR SUBWOOFER SIGNAL CHECK

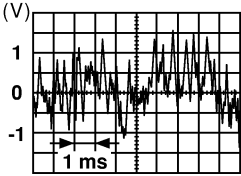


SUBWOOFER

< COMPONENT DIAGNOSIS >

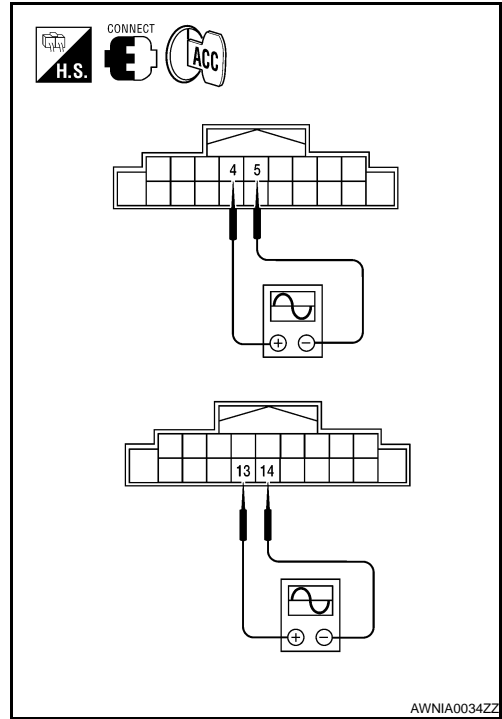
[BOSE W/ COLOR DISPLAY W/ NAVI]

1. Connect AV control unit connector M131 and BOSE speaker amp. connector B109.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M131	4	5	Receive audio signal	 <p>SKIA0177E</p>
	13	14		

Is the audio signal voltage as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-164, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-156, "Removal and Installation"](#).



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AV

AMP ON SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

AMP ON SIGNAL CIRCUIT

Description

INFOID:000000004278406

When the audio system is turned on, a voltage signal is supplied from the AV control unit to the BOSE speaker amp. When this signal is received, the BOSE speaker amp. will turn on.

Diagnosis Procedure

INFOID:000000004278407

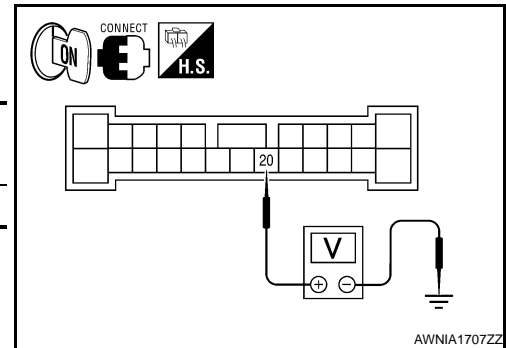
1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

1. Turn audio system ON.
2. Check voltage between BOSE speaker amp. harness connector B109 terminal 20 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
B109	20	Ground	Battery voltage

Is inspection result normal?

- YES >> Inspection End.
NO >> GO TO 2.



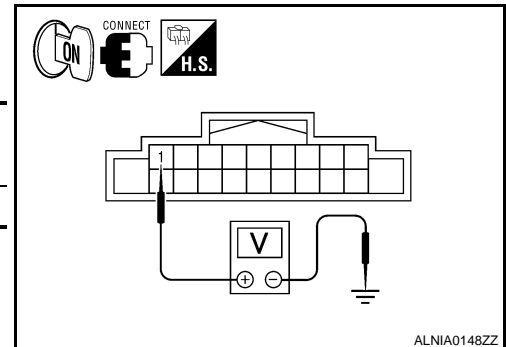
2. CHECK AMP ON SIGNAL (AV CONTROL UNIT)

Check voltage between AV control unit harness connector M131 terminal 1 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
M131	1	Ground	Battery voltage

Is inspection result normal?

- YES >> Repair harness or connector.
NO >> Replace AV control unit. Refer to XX-XX, "*****".



STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

STEERING SWITCH

Description

INFOID:000000004278408

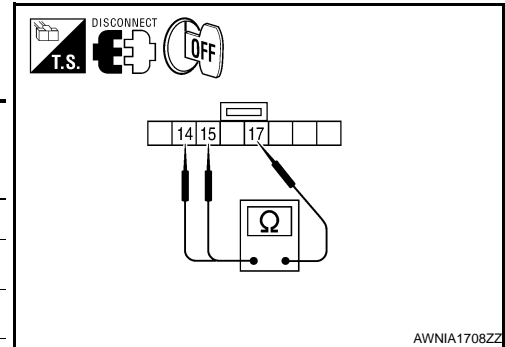
When one of the steering wheel audio control switches is pushed, the resistance in the steering wheel audio control switch circuit changes, depending on which button is pushed.

Diagnosis Procedure

INFOID:000000004278409

1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect steering wheel audio control switch connector M88.
3. Check resistance between steering switch connector terminals.



Terminal	Signal name	Condition	Resistance (Ω) (Approx.)	
14	17	Enter	Depress ENTER switch.	2023
		Voice recognition	Depress switch.	723
		Menu (down)	Depress switch.	321
		Menu (up)	Depress switch.	121
		Source	Depress SOURCE switch.	0
15	17	Menu back	Depress the back switch.	723
		Phone	Depress switch.	321
		Volume (up)	Depress VOL up switch.	121
		Volume (down)	Depress VOL down switch.	0

Do the steering wheel audio control switches check OK?

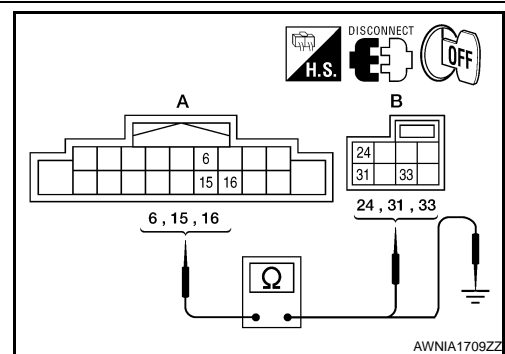
YES >> GO TO 2.

NO >> Replace steering wheel audio control switch. Refer to XX-XX, "*****".

2. CHECK HARNESS

1. Disconnect AV control unit connector M131 and spiral cable connector M30.
2. Check continuity between AV control unit harness connector M131 (A) and spiral cable harness connector M30 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M131	6	M30	24	Yes
	15		33	
	16		31	



3. Check continuity between AV switch connector M131 (A) and ground.

A		—	Continuity
Connector	Terminal		
M131	6	Ground	No
	15		
	16		

Are the continuity results as specified?

STEERING SWITCH

[BOSE W/ COLOR DISPLAY W/ NAVI]

< COMPONENT DIAGNOSIS >

- YES >> GO TO 3.
- NO >> Repair harness.

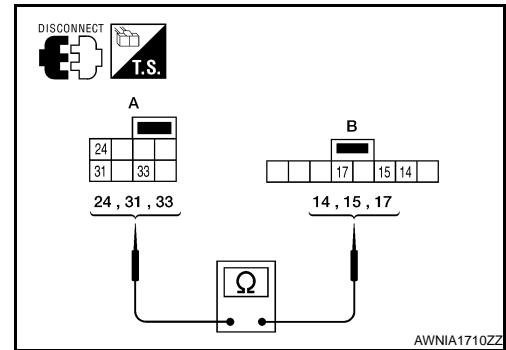
3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M88.
2. Check continuity between spiral cable harness connector M30 (A) and M88 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M88	14	Yes
	31		15	
	33		17	

Does the spiral cable check OK?

- YES >> Inspection End.
- NO >> Replace spiral cable. Refer to XX-XX, "*****".



MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000004278410

Voice signals are transmitted from the microphone to the AV control unit using the microphone signal circuits.

Diagnosis Procedure

INFOID:000000004278411

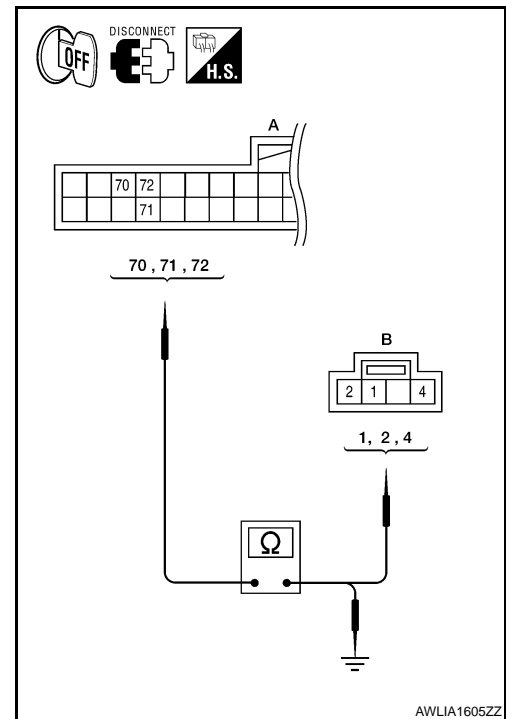
1. CHECK HARNESS BETWEEN AV CONTROL UNIT AND MICROPHONE

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector and microphone connector.
3. Check continuity between AV control unit harness connector M139 (A) and microphone harness connector R7 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M139	72	R7	1	Yes
	71		2	
	70		4	

4. Check continuity between AV control unit harness connector M139 (A) and ground.

A		—	Continuity
Connector	Terminal		
M139	70	Ground	No
	71		
	72		



Are the continuity test results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK MICROPHONE POWER SUPPLY

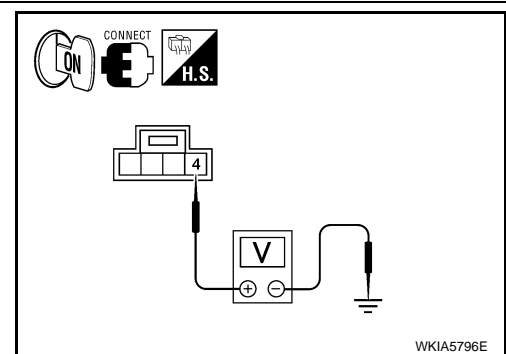
1. Connect AV control unit connector and microphone connector.
2. Turn ignition switch ON.
3. Check voltage between microphone harness connector R7 terminal 4 and ground.

(+)		(-)	Voltage (approx)
Connector	Terminal		
R7	4	Ground	5V

Is voltage reading approx. 5 volts?

YES >> GO TO 3.

NO >> Replace AV control unit. Refer to [AV-485. "Removal and Installation"](#).



3. CHECK MICROPHONE SIGNAL

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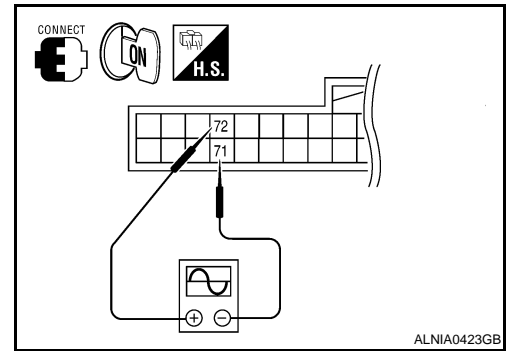
MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Check signal between AV control unit harness connector M139 terminals 71 and 72.

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
M139	72	71	<p>While speaking into MIC</p> <p>PKIB5037J</p>



Are voltage readings as specified?

- YES >> Replace AV control unit. Refer to [AV-485. "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-504. "Removal and Installation"](#).

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

ECU DIAGNOSIS

AV CONTROL UNIT

Reference Value

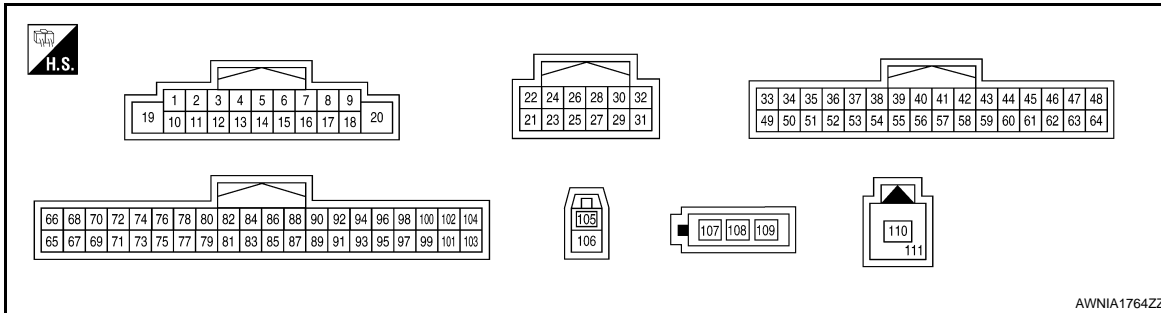
INFOID:000000004278412

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III data monitor item

Display Item	Display	Vehicle status	Remarks
VHCL SPD SIG	ON	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.
	OFF	Vehicle speed =0 km/h (0 MPH)	
PKB SIG	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.
	OFF	Parking brake is released.	
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON.	—
	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.	
IGN SIG	ON	Ignition switch ON	—
	OFF	Ignition switch in ACC position	
REV SIG	ON	Selector lever in R position	Changes in indication may be delayed. This is normal.
	OFF	Selector lever in any position other than R	

TERMINAL LAYOUT



PHYSICAL VALUES

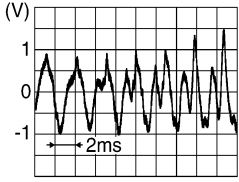



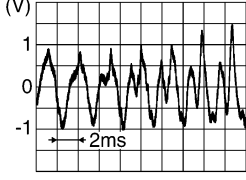
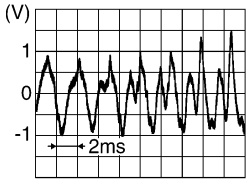

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/Output			
1 (B/P)	Ground	Amp. ON signal	Output	Ignition switch ON	—	Battery voltage
2 (G)	3 (R)	Pre-amp. audio signal front LH	Output	Ignition switch ON	Audio output	

SKIB3609E

AV CONTROL UNIT

< ECU DIAGNOSIS >

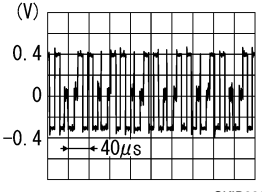
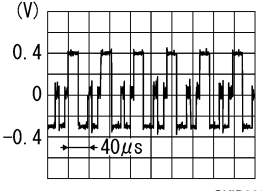
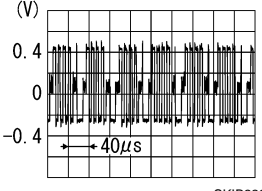
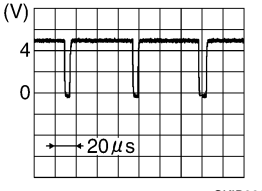
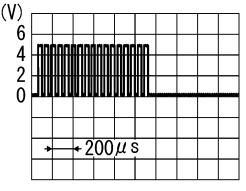
[BOSE W/ COLOR DISPLAY W/ NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
4 (W/R)	5 (W/L)	Pre-amp. audio signal rear LH	Output	Ignition switch ON	Audio output	 SKIB3609E
6 (W/G)	15 (L/B)	Steering switch signal A	Input	Ignition switch OFF	Depress ENTER switch.	2023Ω
					Depress  switch.	723Ω
					Depress  switch.	321Ω
					Depress  switch.	121Ω
					Depress SOURCE switch.	0Ω
7 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	-	Battery voltage
9 (R/L)	Ground	Illumination signal	Input	OFF	Lighting switch is OFF	0V
					Lighting switch is ON	Battery voltage
10	—	Shield	—	—	—	—
11 (B)	12 (W)	Pre-amp. audio signal front RH	Output	Ignition switch ON	Audio output	 SKIB3609E
13 (V)	14 (LG)	Audio signal rear RH	Output	Ignition switch ON	Audio output	 SKIB3609E
15 (LB)	Ground	Steering switch signal ground	—	Ignition switch ON	—	0V
16 (GR/L)	15 (L/B)	Steering switch signal B	Input	Ignition switch ON	Depress the back switch.	723Ω
					Depress  switch.	321Ω
					Depress VOL up switch.	121Ω
					Depress VOL down switch.	0Ω
19 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0V

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

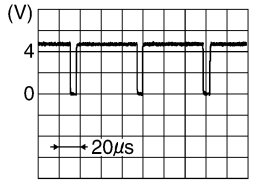
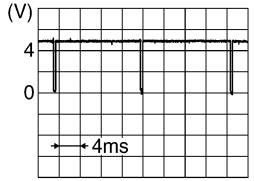
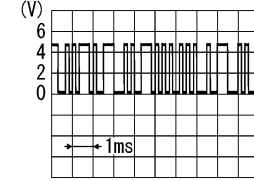
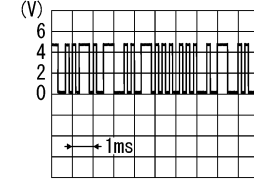
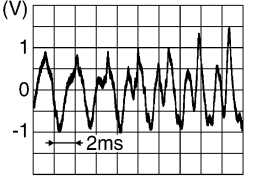
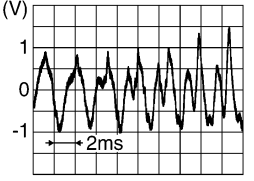
Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	-	Signal name	Input/ Output		
21 (B)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.  SKIB2238J
22 (R)	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.  SKIB2236J
23 (W)	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.  SKIB2237J
24	Ground	RGB signal ground	—	Ignition switch OFF	— 0V
25 (G)	Ground	RGB synchronizing signal	Output	Ignition switch ON	—  SKIB3603E
26	Ground	RGB synchronizing signal ground	—	Ignition switch ON	— 0V
27 (B)	Ground	RGB area (YS) signal	Output	Ignition switch ON	At RGB image displayed 5V
				Ignition switch ON	At rear view camera image displayed  PKIB4948J

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AV CONTROL UNIT

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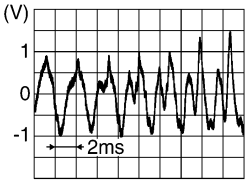
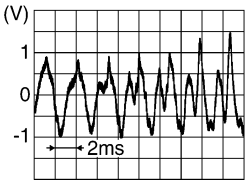
[BOSE W/ COLOR DISPLAY W/ NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
28 (R)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON	—	 <p style="text-align: right; font-size: small;">SKIB3601E</p>
29 (W)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch On	—	 <p style="text-align: right; font-size: small;">SKIB3598E</p>
30 (Y)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display- brightness	 <p style="text-align: right; font-size: small;">PKIB5039J</p>
31 (BR)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display- brightness	 <p style="text-align: right; font-size: small;">PKIB5039J</p>
32	—	Shield	—	—	—	—
39 (G)	55 (W)	DVD audio signal LH	Input	Ignition switch ON	When DVD player is oper- ating	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
40 (B)	56 (R)	DVD audio signal RH	Input	Ignition switch ON	When DVD player is oper- ating	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
45 (SB)	Ground	CD/DVD eject signal	Input	—	Pressing the eject switch	0V
					Except for above	3.3V
46	—	Shield	—	—	—	—

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

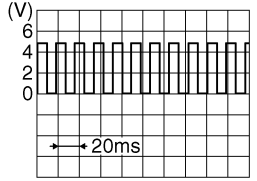
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
47 (W)	48 (R)	AUX jack audio signal LH	Input	Ignition switch ON	When AUX mode is select- ed	
62 (BR)	Ground	A/C and AV switch assem- bly ground	—	Ignition switch ON	—	0V
63 (B)	48 (R)	AUX jack audio signal RH	Input	Ignition switch ON	When AUX mode is select- ed	
65 (B)	Ground	Ground	Input	Ignition switch ON	—	0V
66 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
67 (B)	Ground	Ground	Input	Ignition switch ON	—	0V
68 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
69 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
70 (R)	Ground	MIC power	Output	Ignition switch ON	—	5V
71	—	Shield	—	—	—	—
72 (L)	Ground	MIC signal	Input	Ignition switch ON	—	—
79 (G)	Ground	IGN ON or START power supply	Input	Ignition switch ON or START	—	Battery voltage
80 (G/R)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake ON	0V
					Parking brake OFF	Battery voltage
81 (P/B)	Ground	Reverse signal	Input	Ignition switch ON	R position	Battery voltage
					Other than R position	0V

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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
82 (V/W)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	
84 (V/G)	—	Rear view camera control signal	Input	—	—	—
92 (R)	—	AV communication signal 2 (H)	Input/ Output	—	—	—
93 (G)	—	AV communication signal 2 (L)	Input/ Output	—	—	—
94 (R)	—	AV communication signal 1 (H)	Input/ Output	—	—	—
95 (G)	—	AV communication signal 1 (L)	Input/ Output	—	—	—
96 (L)	—	CAN-H	Input/ Output	—	—	—
97 (P)	—	CAN-L	Input/ Output	—	—	—
105 (B)	—	GPS antenna signal	—	—	—	—
106	—	Shield	—	—	—	—
108 (B)	—	Amplified window antenna signal	Input	—	—	—
109 (B)	Ground	Antenna amp. ON signal	Output	Ignition switch ACC	—	Battery voltage
110 (B)	—	Satellite antenna signal	—	—	—	—
111 (B)	—	Shield	—	—	—	—

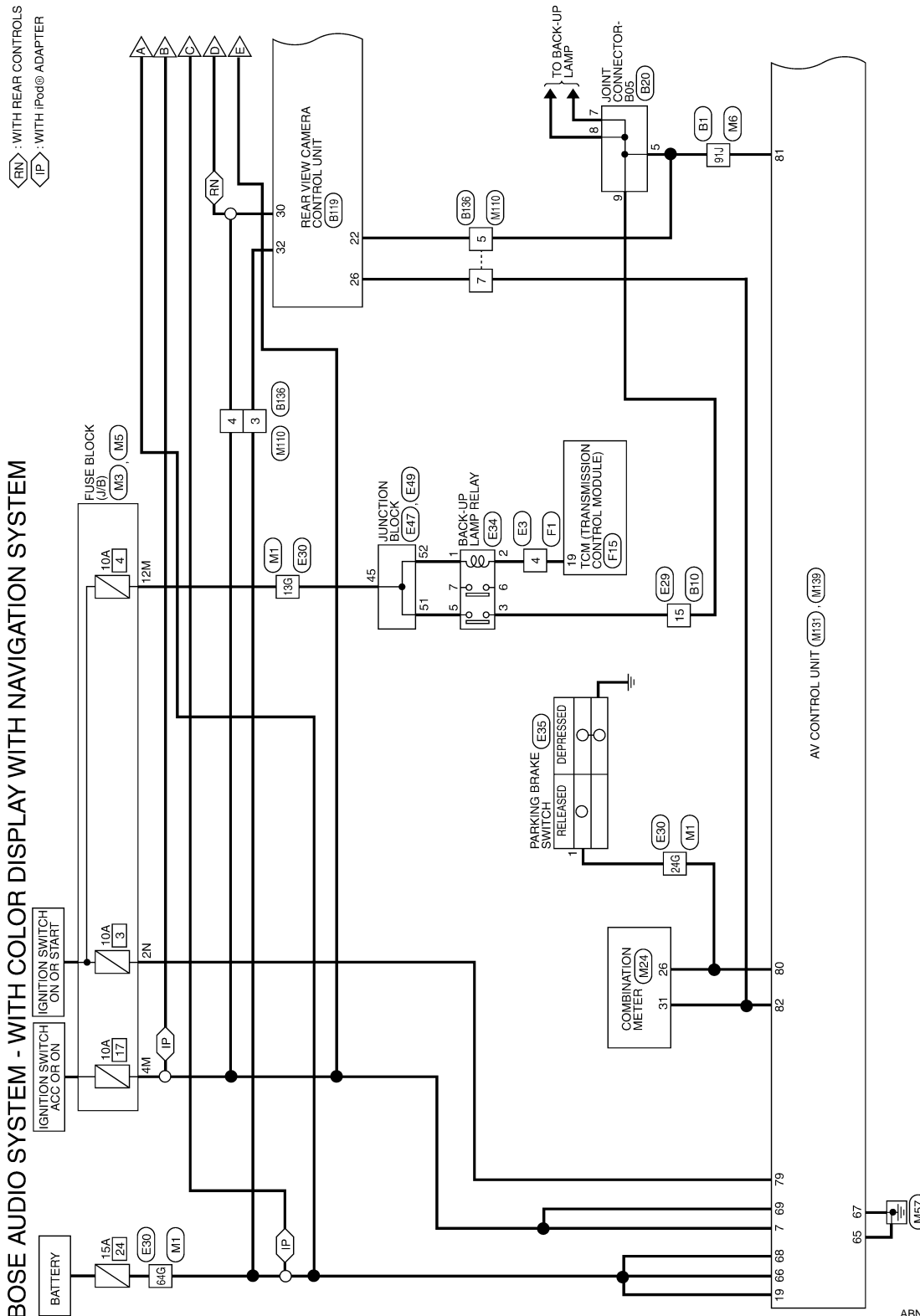
AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Wiring Diagram

INFOID:000000004278413



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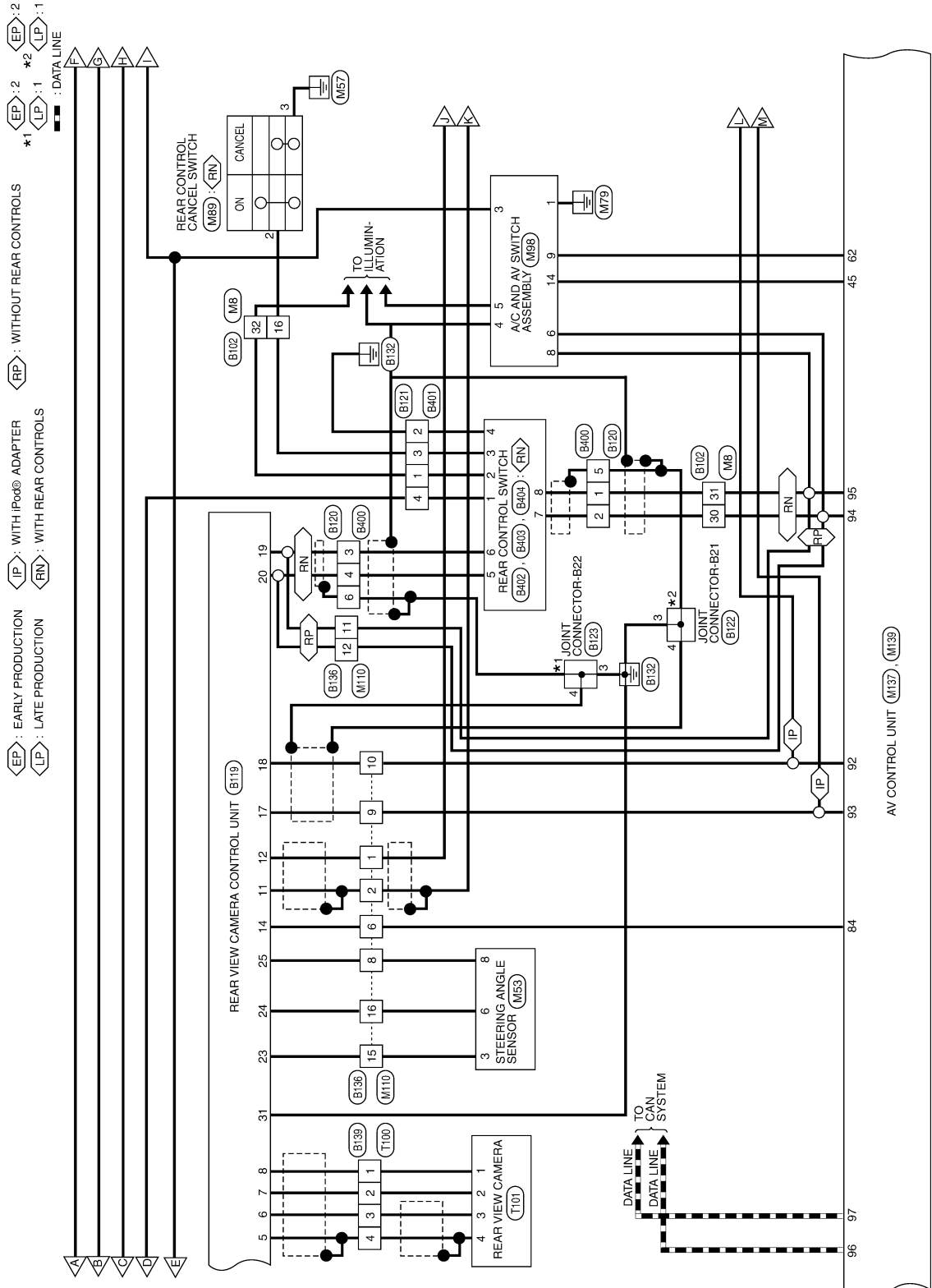
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AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY W/ NAVI]



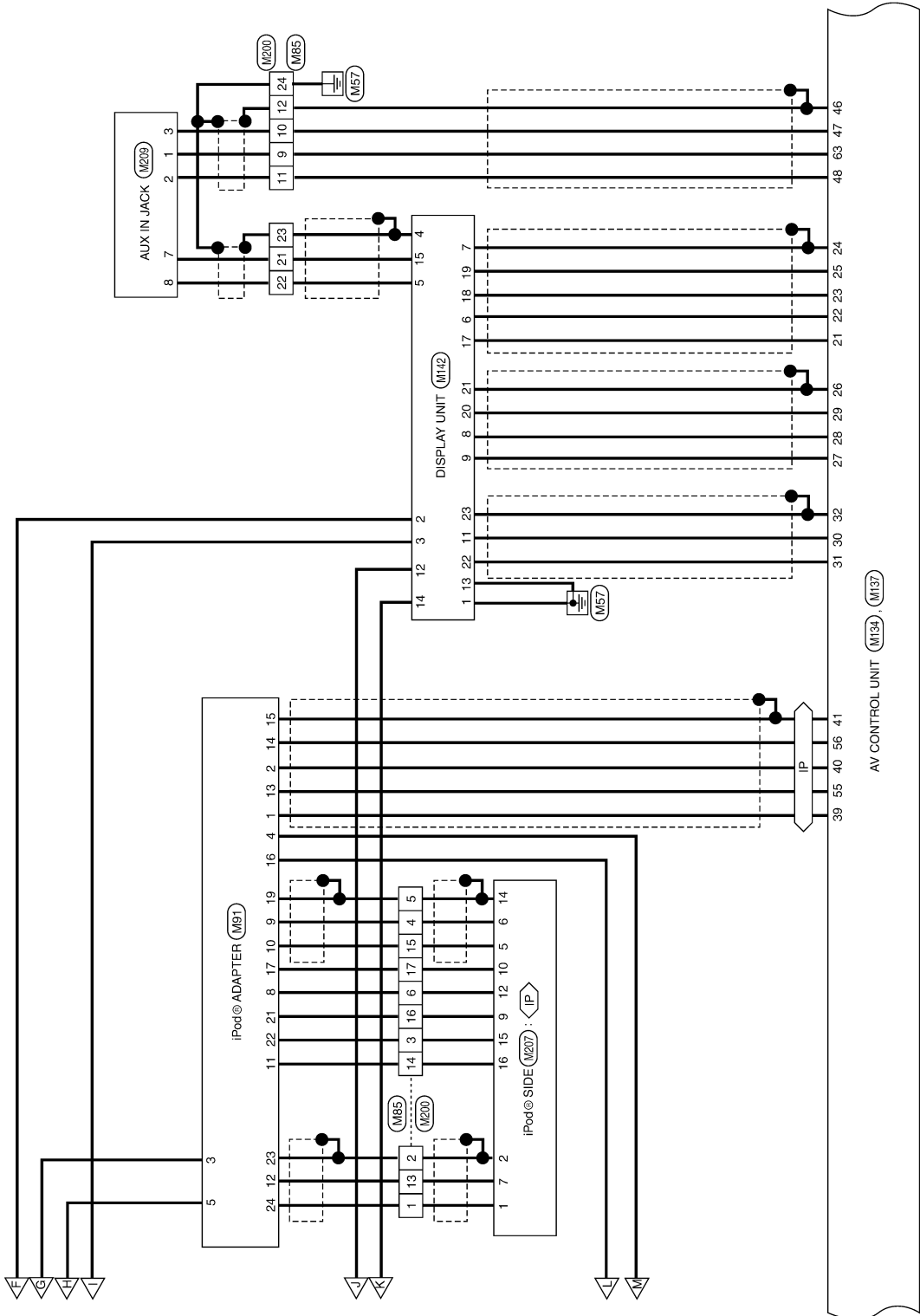
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AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

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◊ IP ◊ : WITH IPOD® ADAPTER



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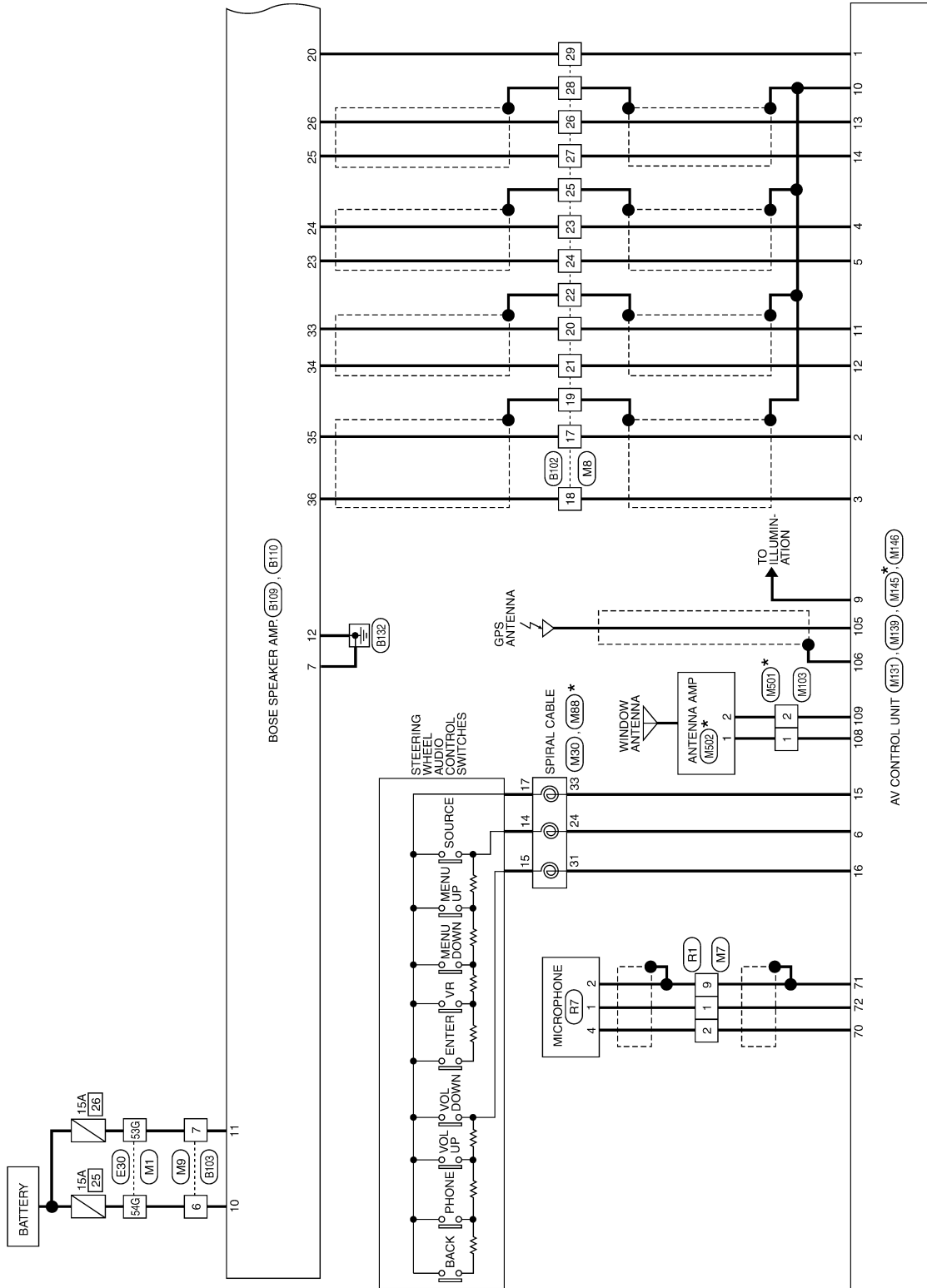
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AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

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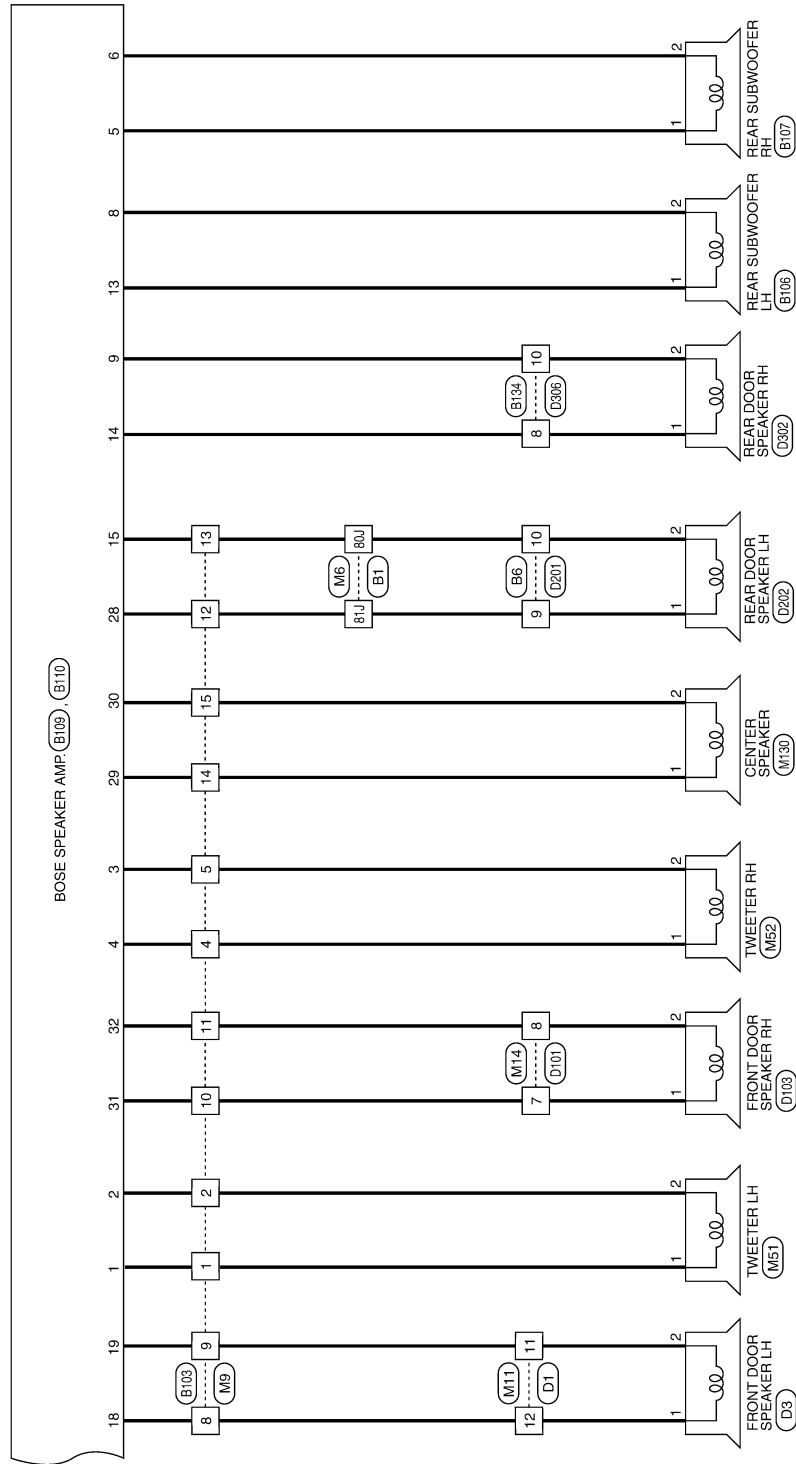
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* : THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT" OF PG SECTION.

AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

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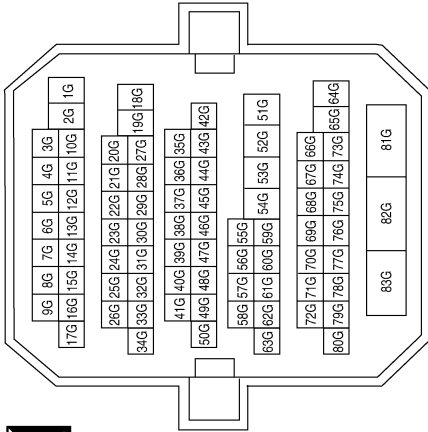
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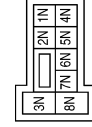
BOSE AUDIO SYSTEM CONNECTORS - WITH COLOR DISPLAY WITH NAVIGATION SYSTEM

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
13G	O	-
24G	G/R	-
53G	B/R	-
54G	BR	-
64G	Y/R	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2N	G	-

Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



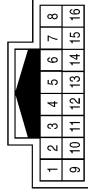
Terminal No.	Color of Wire	Signal Name
4M	V/Y	-
12M	O	-

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

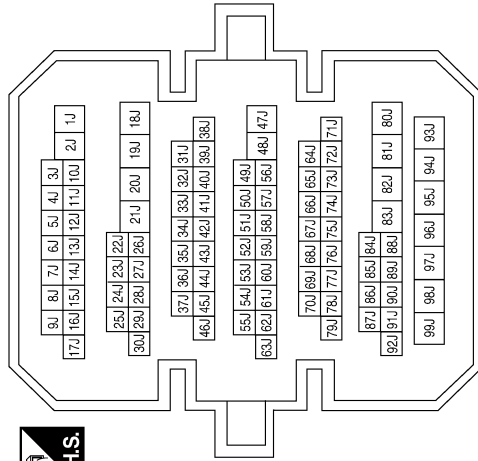
Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	R	-
9	SHIELD	-

Terminal No.	Color of Wire	Signal Name
80J	B/Y	-
81J	LG	-
90J	P	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
16	BR	-
17	G	-
18	R	-
19	SHIELD	-
20	B	-
21	W	-

Terminal No.	Color of Wire	Signal Name
22	SHIELD	-
23	W/R	-
24	W/L	-
25	SHIELD	-
26	V	-
27	LG	-
28	SHIELD	-
29	B/P	-
30	R	-(EARLY PRODUCTION)
30	L	-(LATE PRODUCTION)
31	G	-(EARLY PRODUCTION)
31	P	-(LATE PRODUCTION)
32	R/L	-

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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE




1	2	3	4	5	6	7		
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
11	B/W	-
12	L	-

Terminal No.	Color of Wire	Signal Name
9	B/W	-
10	BR	-
11	B/R	-
12	LG	-
13	B/Y	-
14	B/P	-
15	O/B	-


Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE



7	6	5	4	3	2	1		
16	15	14	13	12	11	10	9	8

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	B/Y	-
4	L/O	-
5	GR/L	-
6	BR	-
7	B/R	-
8	L	-


Connector No.	M30
Connector Name	SPIRAL CABLE
Connector Color	GRAY



24	25	26	27
31	32	33	34

Terminal No.	Color of Wire	Signal Name
24	W/G	AUDIO STRG SW REMOTE A
31	GR/L	AUDIO STRG SW REMOTE B
33	L/B	AUDIO STRG SW GND


Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
26	G/R	PKB
31	V/W	8P/R OUT

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4		
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
7	BR	-
8	B/R	-

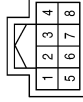
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AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	M53
Connector Name	STEERING ANGLE SENSOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	R	SEN STEERING 1
6	G	SEN STEERING 2
8	W	SEN STEERING 3

Connector No.	M52
Connector Name	TWEETER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L/O	-
2	GR/L	-

Connector No.	M51
Connector Name	TWEETER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	B/Y	-

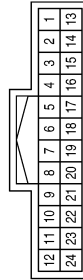
Connector No.	M88
Connector Name	SPIRAL CABLE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14	W	REMOTE A
15	L	REMOTE B
17	BR	GND

Terminal No.	Color of Wire	Signal Name
9	B	-
10	W	-
11	R	-
12	SHIELD	-
13	BR	-
14	B/R	-
15	V	-
16	L/B	-
17	P	-
21	LG	-
22	V	-
23	SHIELD	-
24	B	-

Connector No.	M85
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	SHIELD	-
3	R/B	-
4	LG	-
5	SHIELD	-
6	W/G	-

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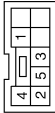
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AV CONTROL UNIT

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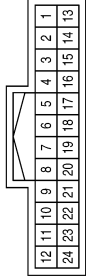
[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	M89
Connector Name	REAR CONTROL CANCEL SWITCH
Connector Color	WHITE



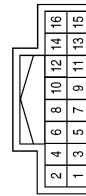
Terminal No.	Color of Wire	Signal Name
2	BR	-
3	B	-

Connector No.	M91
Connector Name	iPod®ADAPTER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	L-CH (+)
2	B	R-CH (+)
3	V/Y	ACC
4	G	CAN-L
5	Y/R	BAT
6	-	-
7	-	-
8	W/G	CHARGE POWER
9	LG	TX (iPod®-IN)
10	V	RX (iPod®-OUT)

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



Terminal No.	Color of Wire	Signal Name
1	B	GND
3	V/Y	ACC
4	R/L	ILL+
5	R/Y	ILL CONT GND
6	R	CAN H
8	G	CAN L
9	BR	SW GND
14	SB	CD (DVD) EJECT

Terminal No.	Color of Wire	Signal Name
11	B/R	ACCESSORY IDENTIFY
12	BR	AUDIO R+
13	W	L-CH (-)
14	R	R-CH (-)
15	SHIELD	AUDIO-GND
16	R	CAN-H
17	P	EARTH
18	-	-
19	SHIELD	DIGITAL GND
20	-	-
21	L/B	ACCESSORY 3.3V
22	R/B	ACCESSORY DETECT
23	SHIELD	SHIELD
24	Y	AUDIO L+

Connector No.	M103
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

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AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY W/ NAVI]

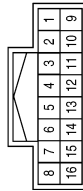
Connector No.	M130
Connector Name	CENTER SPEAKER
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B/P	-
2	O/B	-

Terminal No.	Color of Wire	Signal Name
8	W	-
9	G	-
10	R	-
11	G	-(EARLY PRODUCTION)
11	P	-(LATE PRODUCTION)
12	R	-(EARLY PRODUCTION)
12	L	-(LATE PRODUCTION)
15	R	-
16	G	-

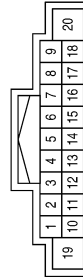
Connector No.	M110
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	SHIELD	-
3	Y/R	-
4	V/Y	-
5	P/B	-
6	V/G	-
7	V/W	-

Terminal No.	Color of Wire	Signal Name
9	R/L	ILL
10	SHIELD	SHIELD
11	B	FR RH PRE+
12	W	FR RH PRE-
13	V	RR RH PRE+
14	LG	RR RH PRE-
15	L/B	STRG SW GND
16	GR/L	STRG SW B
17	-	-
18	-	-
19	Y/R	BAT
20	B	GND

Connector No.	M131
Connector Name	AV CONTROL UNIT (WITH NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B/P	AMP ON
2	G	FR LH PRE+
3	R	FR LH PRE-
4	W/R	RR LH PRE+
5	W/L	RR LH PRE-
6	W/G	STRG SW A
7	V/Y	ACC
8	-	-

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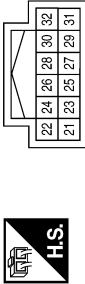
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AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY W/ NAVI]

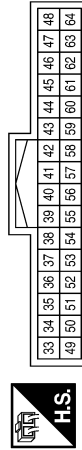
Connector No.	M134
Connector Name	AV CONTROL UNIT (WITH NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	B	R
22	R	G
23	W	B
24	SHIELD	RGB GND
25	G	RGB SYNC
26	SHIELD	RGB SYNC GND
27	B	YS

Terminal No.	Color of Wire	Signal Name
28	R	HP
29	W	VP
30	Y	IT DISP
31	BR	DISP IT
32	SHIELD	SHIELD

Connector No.	M137
Connector Name	AV CONTROL UNIT (WITH NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-

Terminal No.	Color of Wire	Signal Name
39	G	AUDIO BUS LH+
40	B	AUDIO BUS RH+
41	SHIELD	AUDIO BUS SHIELD
42	-	-
43	-	-
44	-	-
45	SB	CD(DVD) EJECT
46	SHIELD	AUX SHIELD
47	W	AUX AUDIO LH+
48	R	AUX GND
49	-	-
50	-	-
51	-	-

Terminal No.	Color of Wire	Signal Name
52	-	-
53	-	-
54	-	-
55	W	AUDIO BUS LH-
56	R	AUDIO BUS RH-
57	-	-
58	-	-
59	-	-
60	-	-
61	-	-
62	BR	SW GND
63	B	AUX AUDIO RH+
64	-	-

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AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	M139
Connector Name	AV CONTROL UNIT (WITH NAVI)
Connector Color	WHITE



66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104
65	67	69	71	73	75	77	79	81	83	85	87	89	91	93	95	97	99	101	103

Terminal No.	Color of Wire	Signal Name
65	B	GND
66	Y/R	+B
67	B	GND
68	Y/R	+B
69	V/Y	ACC
70	R	MIC VCC
71	SHIELD	MIC GND
72	L	MIC SIG
73	-	-
74	-	-
75	-	-
76	-	-



12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	Y/R	+B
3	V/Y	ACC

Terminal No.	Color of Wire	Signal Name
77	-	-
78	-	-
79	G	IGN
80	G/R	PKB SIG
81	P/B	REVERSE SIG
82	V/W	SPEED 8P
83	-	-
84	V/G	RV CAM SIG
85	-	-
86	-	-
87	-	-
88	-	-
89	-	-
90	-	-
91	-	-
92	R	M-CAN H TRM
93	G	M-CAN L TRM
94	R	M-CAN H (EARLY PRODUCTION)
94	L	M-CAN H (LATE PRODUCTION)

Terminal No.	Color of Wire	Signal Name
95	G	M-CAN L (EARLY PRODUCTION)
95	P	M-CAN L (LATE PRODUCTION)
96	L	V-CAN H
97	P	V-CAN L
98	-	-
99	-	-
100	-	-
101	-	-
102	-	-
103	-	-
104	-	-

Connector No.	M142
Connector Name	DISPLAY UNIT (WITH COLOR DISPLAY, WITH NAVI)
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
4	SHIELD	COMP1 IN SHIELD
5	V	COMP1 IN-
6	R	G
7	SHIELD	RGB GND
8	R	HP
9	B	YS
10	-	-
11	Y	IT DISP
12	W	COMP2 IN+
13	B	GND

Terminal No.	Color of Wire	Signal Name
14	SHIELD	COMP2 IN-
15	LG	COMP1 IN+
16	-	-
17	B	R
18	W	B
19	G	RGB SYNC
20	W	VP
21	SHIELD	RGB SYNC GND
22	BR	DISP IT
23	SHIELD	SHIELD
24	-	-

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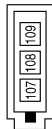
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AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

< ECU DIAGNOSIS >

Connector No.	M146
Connector Name	AV CONTROL UNIT (WITH NAVI)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
108	B	ANT MAIN
109	B	ANT +B

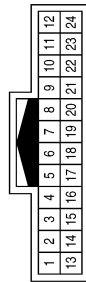
Connector No.	M145
Connector Name	AV CONTROL UNIT (WITH NAVI)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
105	B	GPS ANT
106	SHIELD	SHIELD

Terminal No.	Color of Wire	Signal Name
13	BR	-
14	B/R	-
15	V	-
16	L/B	-
17	P	-
21	LG	-
22	V	-
23	SHIELD	-
24	GR	-

Connector No.	M200
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	SHIELD	-
3	R/B	-
4	LG	-
5	SHIELD	-
6	W/G	-
9	B	-
10	W	-
11	R	-
12	SHIELD	-

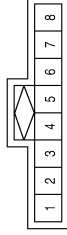
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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

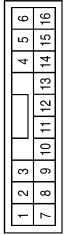
Connector No.	M209
Connector Name	AUX IN JACK
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	AUX AUDIO RH+
2	R	AUX GND
3	W	AUX AUDIO LH+
7	LG	COMP OUT+
8	V	COMP OUT-

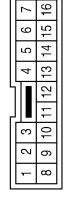
Terminal No.	Color of Wire	Signal Name
12	W/G	CHARGE POWER
14	SHIELD	DIGITAL GND
15	R/B	ACCESSORY DETECT
16	B/R	ACCESSORY IDENTIFY

Connector No.	M207
Connector Name	iPod@SIDE
Connector Color	GRAY



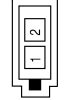
Terminal No.	Color of Wire	Signal Name
1	Y	AUDIO L+
2	SHIELD	SHIELD
5	V	RX (iPod@-OUT)
6	LG	TX (iPod@-IN)
7	BR	AUDIO R+
9	L/B	ACCESSORY 3.3V
10	P	EARTH

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



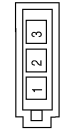
Terminal No.	Color of Wire	Signal Name
4	R	-

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



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

Connector No.	M501
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

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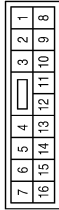
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

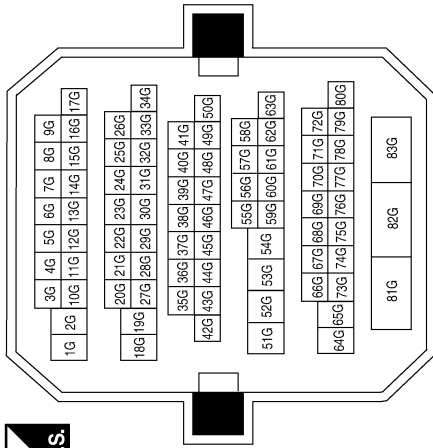
[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	E29
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15	W	-

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
13G	BR	-
24G	P	-
53G	GR	-
54G	BR	-
64G	V	-

Connector No.	E34
Connector Name	BACK-UP LAMP RELAY
Connector Color	BLUE



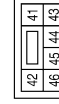
Terminal No.	Color of Wire	Signal Name
1	O	-
2	R	-
3	W	-
5	LG	-

Connector No.	E35
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	P	-

Connector No.	E47
Connector Name	JUNCTION BLOCK
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
45	BR	-

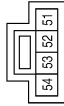
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AV CONTROL UNIT

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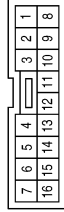
[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	E49
Connector Name	JUNCTION BLOCK
Connector Color	BROWN



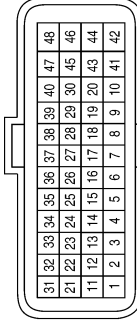
Terminal No.	Color of Wire	Signal Name
51	LG	-
52	O	-

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



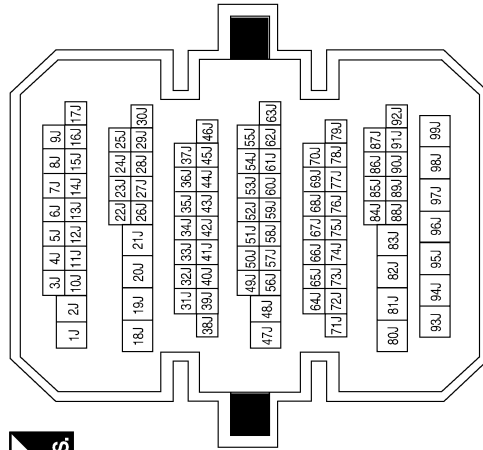
Terminal No.	Color of Wire	Signal Name
4	G/B	-

Connector No.	F15
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	BLACK



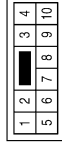
Terminal No.	Color of Wire	Signal Name
19	G/B	REV LAMP RLY

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
80J	O	-
81J	LG	-
91J	V	-

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

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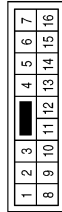
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AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

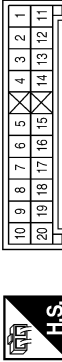
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Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



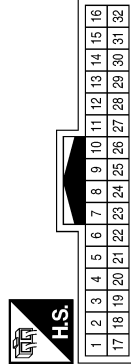
Terminal No.	Color of Wire	Signal Name
15	W	-

Connector No.	B20
Connector Name	JOINT CONNECTOR-B05
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
5	V	-
7	V	-
8	V	-
9	W	-

Connector No.	B102
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
16	O	-
17	W/R	-
18	B/R	-
19	SHIELD	-
20	W/L	-
21	GR/V	-
22	SHIELD	-
23	BR	-

Terminal No.	Color of Wire	Signal Name
24	Y	-
25	SHIELD	-
26	V	-
27	LG	-
28	SHIELD	-
29	SB	-
30	R	-
31	G	-
32	P	-

Connector No.	B103
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	V	-
4	P	-
5	R	-
6	SB	-
7	GR	-
8	W	-
9	B	-
10	GR	-
11	O	-
12	G	-
13	L	-
14	V	-
15	P	-

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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	B106
Connector Name	REAR SUBWOOFER LH
Connector Color	WHITE



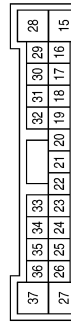
Terminal No.	Color of Wire	Signal Name
1	W	-
2	BR	-

Connector No.	B107
Connector Name	REAR SUBWOOFER RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	G	-

Connector No.	B109
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
15	L	RR DOOR LH- OUT
20	SB	AMP ON
23	Y	RR LH-IN
24	BR	RR LH+IN
25	LG	RR RH-IN
26	V	RR RH+IN
28	G	RR DOOR LH+ OUT
29	V	INST CTR TWDR+ OUT
30	P	INST CTR TWDR- OUT

Terminal No.	Color of Wire	Signal Name
31	GR	FR DOOR RH+ OUT
32	O	FR DOOR RH- OUT
33	W/L	FR RH+IN
34	GR/V	FR RH-IN
35	W/R	FR LH+IN
36	B/R	FR LH-IN

Connector No.	B110
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	FR TWDR LH+ OUT
2	V	FR TWDR LH- OUT
3	R	FR TWDR RH- OUT
4	P	FR TWDR RH+ OUT
5	Y	RH WOOFER+ OUT
7	G	RH WOOFER- OUT
8	B	GND
9	BR	LH BWOOFER- OUT
10	O	RR DOOR RH+ OUT
11	GR	BAT
12	B	GND
13	W	LH WOOFER+ OUT
14	LG	RR DOOR RH+ OUT

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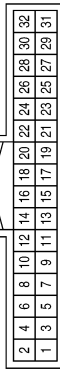
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

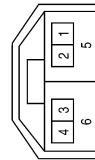
Connector No.	B119
Connector Name	REAR VIEW CAMERA CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	SHIELD	REAR CAMERA VIDEO SIGNAL INPUT-
6	B	REAR CAMERA VIDEO SIGNAL INPUT+
7	W	GND
8	R	REAR CAMERA POWER
9	-	-
10	-	-
11	SHIELD	COMP OUT-
12	W	COMP OUT+
13	-	-
14	L	CONTROL1
15	-	-
16	-	-

Terminal No.	Color of Wire	Signal Name
17	G	M CAN-
18	R	M CAN+
19	P	M CAN-
20	LG	M CAN+
21	-	-
22	GR	REVERSE GEAR
23	V	STEERING SEN1
24	SB	STEERING SEN2
25	LG	STEERING SEN3
26	BR	SPEED SENSOR
27	-	-
28	-	-
29	-	-
30	Y	ACC
31	B	GND
32	V	+B

Connector No.	B120
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Connector No.	B121
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	B122
Connector Name	JOINT CONNECTOR-B21
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-
3	P	-
4	L	-
5	SHIELD	-
6	SHIELD	-

Terminal No.	Color of Wire	Signal Name
1	P	-
2	B	-
3	O	-
4	Y	-

Terminal No.	Color of Wire	Signal Name
1	SHIELD	-(LATE PRODUCTION)
2	SHIELD	-(EARLY PRODUCTION)
3	B	-
4	SHIELD	-

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AV CONTROL UNIT

< ECU DIAGNOSIS >

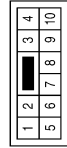
[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	B123
Connector Name	JOINT CONNECTOR-B22
Connector Color	WHITE



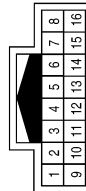
Terminal No.	Color of Wire	Signal Name
1	SHIELD	-(LATE PRODUCTION)
2	SHIELD	-(EARLY PRODUCTION)
3	B	-
4	SHIELD	-

Connector No.	B134
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

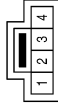
Connector No.	B136
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	SHIELD	-
3	V	-
4	Y	-
5	GR	-
6	L	-
7	BR	-
8	LG	-

Terminal No.	Color of Wire	Signal Name
9	G	-
10	R	-
11	G	-(EARLY PRODUCTION)
11	P	-(LATE PRODUCTION)
12	R	-(EARLY PRODUCTION)
12	L	-(LATE PRODUCTION)
15	V	-
16	SB	-

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	-
2	W	-
3	B	-
4	SHIELD	-

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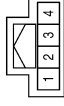
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	B402
Connector Name	REAR CONTROL SWITCH
Connector Color	WHITE



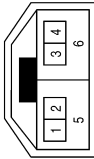
Terminal No.	Color of Wire	Signal Name
1	V/Y	-
2	R/L	-
3	BR	-
4	B	-

Connector No.	B401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



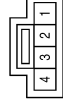
Terminal No.	Color of Wire	Signal Name
1	R/L	-
2	B	-
3	BR	-
4	V/Y	-

Connector No.	B400
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-
3	P	-
4	L	-
5	SHIELD	-
6	SHIELD	-

Connector No.	T100
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	-
2	W	-
3	B	-
4	SHIELD	-

Connector No.	B404
Connector Name	REAR CONTROL SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
7	R	-
8	G	-

Connector No.	B403
Connector Name	REAR CONTROL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	-
6	P	-

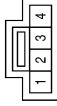
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AV CONTROL UNIT

< ECU DIAGNOSIS >

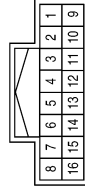
[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	R7
Connector Name	MICROPHONE
Connector Color	WHITE



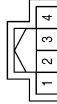
Terminal No.	Color of Wire	Signal Name
1	L	MIC SIG
2	SHIELD	MIC GEN
4	R	MIC VCC

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	R	-
9	SHIELD	-

Connector No.	T101
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	CAMERA ON
2	W	GND
3	B	COMP+
4	GR	COMP-

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	LG	-
8	O	-

Connector No.	D3
Connector Name	FRONT DOOR SPEAKER LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	O	-
12	LG	-

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AV

AV CONTROL UNIT

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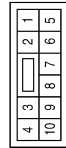
[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



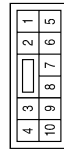
Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	D103
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

Connector No.	D306
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Connector No.	D302
Connector Name	REAR DOOR SPEAKER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

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INFOID:000000004278414

DTC Index

Self-diagnosis results display item

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Error item	Refer to
CAN COMM CIRCUIT [U1000]	AV-372
CONTROL UNIT (CAN) [U1010]	AV-373
CONTROL UNIT (AV) [U1310]	AV-398
Control Unit FLASH-ROM [U1200]	AV-374
Gyro NO CONN [U1201]	AV-375
CAN CONT [U1216]	AV-380
BLUETOOTH CONN [U1217]	AV-381
HDD CONN [U1218]	AV-382
HDD READ [U1219]	AV-383
XM SERIAL COMM [U1220]	AV-390
HDD WRITE [U121A]	AV-384
HDD COMM [U121B]	AV-385
HDD ACCESS [U121C]	AV-386
DSP CONN [U121D]	AV-387
DSP COMM [U121E]	AV-388
INTERNAL COMM [U121F]	AV-389
GPS COMM [U1204]	AV-376
GPS ROM [U1205]	AV-377
GPS RAM [U1206]	AV-378
GPS RTC [U1207]	AV-379
FRONT DISP CONN [U1243]	AV-391
GPS ANTENNA CONN [U1244]	AV-393
CAMERA CONT. CONN [U1250]	AV-394
XM ANTENNA CONN [U1258]	AV-396
<ul style="list-style-type: none"> • AV COMM CIRCUIT [U1300] • SWITCHE CONN [U1240] 	AV-397
<ul style="list-style-type: none"> • AV COMM CIRCUIT [U1300] • REAR CAMERA LAN CONN [U1252] 	AV-397

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DISPLAY UNIT

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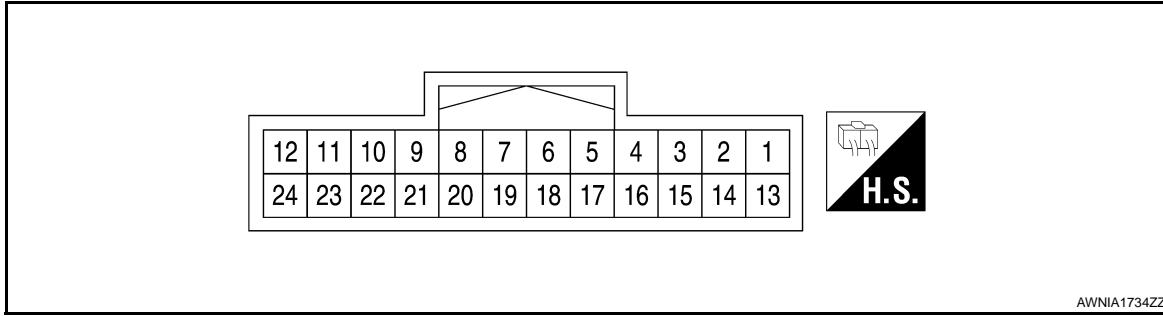
[BOSE W/ COLOR DISPLAY W/ NAVI]

DISPLAY UNIT

Reference Value

INFOID:000000004278415

TERMINAL LAYOUT



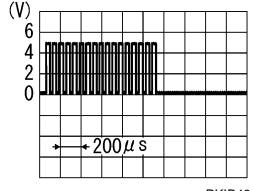
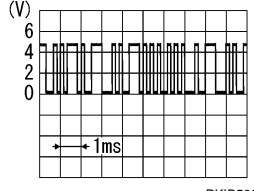
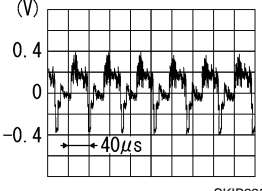
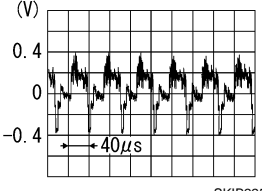
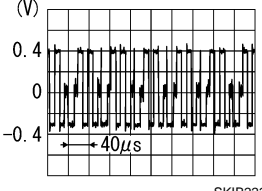
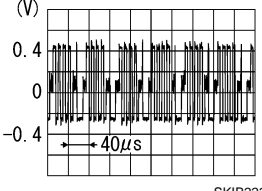
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	Ignition switch ON	—	0V
2 (Y/R)	Ground	Inverter VCC	Input	Ignition switch ACC	—	9V
3 (V/Y)	Ground	Signal VCC	Input	Ignition switch ACC	—	9V
4	—	Shield	—	—	—	—
5 (V)	Ground	AUX image ground	—	Ignition switch ON	—	0V
6 (R)	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.	<p style="text-align: right;">SKIB2236J</p>
7	—	Shield	—	—	—	—
8 (R)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	—	<p style="text-align: right;">SKIB3601E</p>

DISPLAY UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

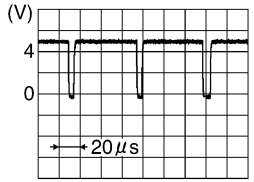
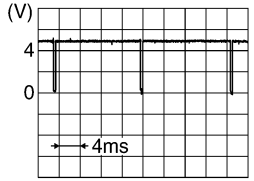
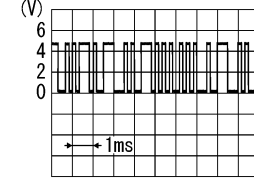
Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	-	Signal name	Input/ Output		
9 (B)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At RGB image displayed 5V
				Ignition switch ON	At rear view camera image displayed  PKIB4948J
11 (Y)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display-brightness  PKIB5039J
12 (W)	Ground	Rear view camera image signal	Input	Ignition switch ON	With transmission position in Reverse.  SKIB2251J
13 (B)	Ground	Inverter ground	—	Ignition switch ON	— 0V
14	—	Shield	—	—	—
15 (LG)	Ground	AUX image signal	Input	Ignition switch ON	When AUX mode is selected  SKIB2251J
17 (B)	Ground	RGB signal (R: red)	Input	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.  SKIB2238J
18 (W)	Ground	RGB signal (B: blue)	Input	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.  SKIB2237J

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DISPLAY UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
19 (G)	Ground	RGB synchronizing signal	Input	Ignition switch ON	—	 <p style="text-align: right; font-size: small;">SKIB3603E</p>
20 (W)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch On	—	 <p style="text-align: right; font-size: small;">SKIB3598E</p>
21	—	Shield	—	—	—	—
22 (BR)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display- brightness	 <p style="text-align: right; font-size: small;">PKIB5039J</p>
23	—	Shield	—	—	—	—

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

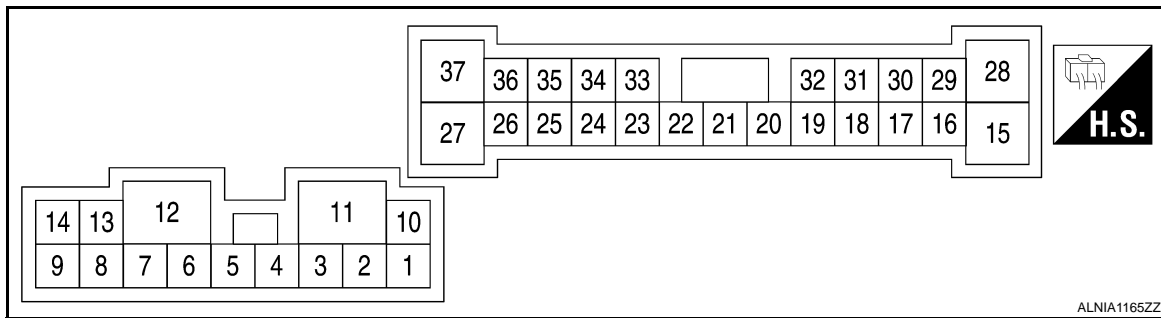
[BOSE W/ COLOR DISPLAY W/ NAVI]

BOSE SPEAKER AMP

Reference Value

INFOID:000000004278416

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
1 (LG)	2 (V)	Audio signal tweeter LH	Output	Ignition switch ON	Audio output	
4 (P)	3 (R)	Audio signal tweeter RH	Output	Ignition switch ON	Audio output	
5 (Y)	6 (G)	Audio signal subwoofer LH	Output	Ignition switch ON	Audio output	
7 (B)	Ground	Ground	—	Ignition switch ON	—	0V
10 (SB)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
11 (GR)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0V

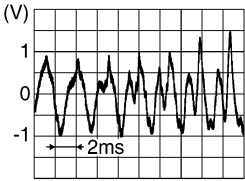
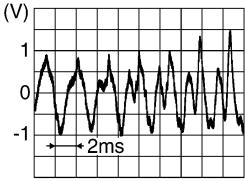
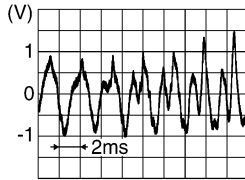
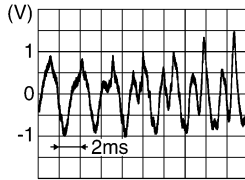
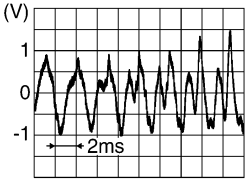
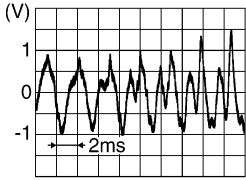
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BOSE SPEAKER AMP

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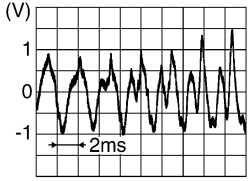
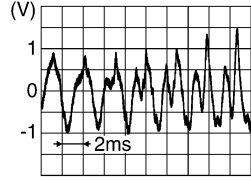
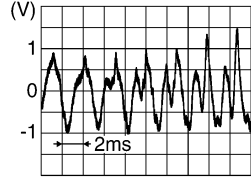
[BOSE W/ COLOR DISPLAY W/ NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
13 (W)	8 (BR)	Audio signal subwoofer LH	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
14 (LG)	9 (O)	Audio signal rear door speaker RH	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
20 (SB)	Ground	Amp. ON signal	Input	Ignition switch ACC	—	Battery voltage
24 (BR)	23 (Y)	Audio signal rear LH	Input	Ignition switch ON	Audio input	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
26 (V)	25 (LG)	Audio signal rear RH	Input	Ignition switch ON	Audio input	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
28 (G)	15 (L)	Audio signal rear door speaker LH	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
29 (V)	30 (P)	Audio signal center speak- er	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
31 (GR)	32 (O)	Audio signal front door speaker RH	Output	Ignition switch ON	Audio output	
33 (W/L)	34 (GR/V)	Audio signal front RH	Input	Ignition switch ON	Audio input	
35 (W/R)	36 (B/R)	Audio signal rear LH	Input	Ignition switch ON	Audio input	

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REAR VIEW CAMERA CONTROL UNIT

< ECU DIAGNOSIS >

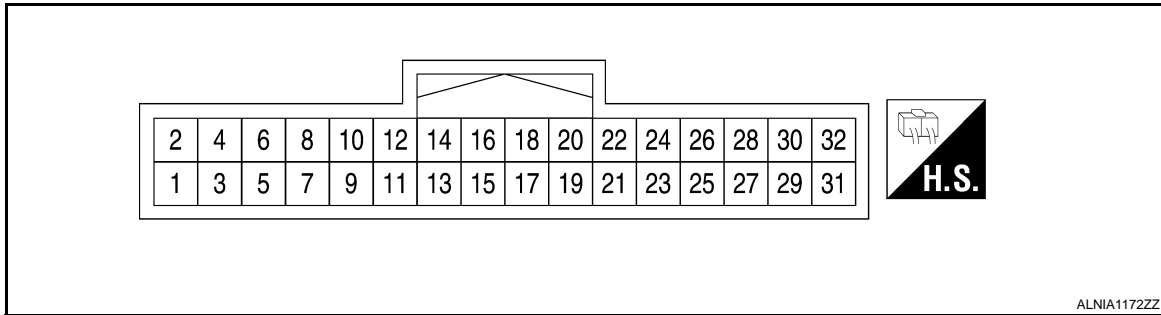
[BOSE W/ COLOR DISPLAY W/ NAVI]

REAR VIEW CAMERA CONTROL UNIT

Reference Values

INFOID:000000004391459

TERMINAL LAYOUT



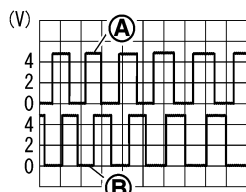
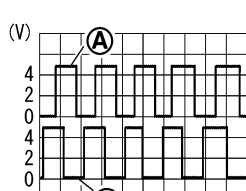
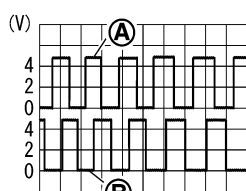
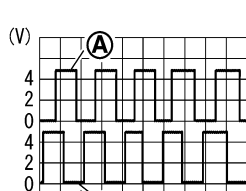
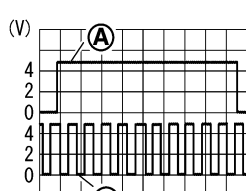
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
5	—	Shield	—	—	—	—
6 (B)	Ground	Camera image signal	Input	Ignition switch ON	When rear view camera im- age is displayed.	 SKIB2251J
7 (W)	Ground	Rear view camera ground	—	Ignition switch ON	—	0V
8 (R)	Ground	Camera ON signal	Output	Ignition switch ON	R position.	6.0V
					Other than R position.	0V
11	—	Shield	—	—	—	—
12 (W)	Ground	Camera image signal	Output	Ignition switch ON	When rear view camera im- age is displayed.	 SKIB2251J
14 (L)	Ground	Camera-connection recog- nition signal	Output	Ignition switch ON	Connected to camera con- trol unit connector.	0V
					Not connected to camera control unit connector.	5.0V
17 (G)	—	AV communication signal (L)	Input/ Output	—	—	—
18 (R)	—	AV communication signal (H)	Input/ Output	—	—	—
19 (P)	—	AV communication signal (L)	Input/ Output	—	—	—

REAR VIEW CAMERA CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

< ECU DIAGNOSIS >

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
20 (LG)	—	AV communication signal (H)	Input/ Output	—	—	—
22 (GR)	Ground	Reverse signal	Input	Ignition switch ON	R position.	Battery voltage
					Other than R position.	0V
23 (V)	Ground	Sensor signal 1	Input	Ignition switch ON	Turn the steering to the right.	 <p style="text-align: right;">SKIB3827E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p>
					Turn the steering to the left.	 <p style="text-align: right;">SKIB3828E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p>
24 (SB)	Ground	Sensor signal 2	Input	Ignition switch ON	Turn the steering to the right.	 <p style="text-align: right;">SKIB3827E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p>
					Turn the steering to the left.	 <p style="text-align: right;">SKIB3828E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p>
25 (LG)	Ground	Sensor signal 3	Input	Ignition switch ON	Turn the steering around the neutral position.	 <p style="text-align: right;">SKIB3829E</p> <p>A: Sensor signal 3 B: Sensor signal 1</p>

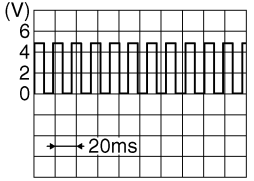
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REAR VIEW CAMERA CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

< ECU DIAGNOSIS >

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	-	Signal name	Input/ Output		
26 (BR)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is ap- prox. 40 km/h (25 MPH).
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 60%;"> <p>NOTE: Maximum voltage may be 12V due to specifications (connected units).</p> </div> <div style="width: 35%; text-align: center;">  <p style="font-size: small;">SKIA6649J</p> </div> </div>					
30 (Y)	Ground	ACC power supply	Input	Ignition switch ACC	—
31 (B)	Ground	Ground	—	Ignition switch ON	—
32 (V)	Ground	Battery power supply	Input	Ignition switch OFF	—

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM

Symptom Table

INFOID:000000004278419

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">• AV control unit power and ground circuit• AV control unit	<ul style="list-style-type: none">• AV-399• AV-485
Steering switch does not operate	<ul style="list-style-type: none">• Steering switch• AV control unit	<ul style="list-style-type: none">• AV-429• AV-485
All speakers do not sound	<ul style="list-style-type: none">• AV control unit power and ground circuit• BOSE speaker amp. ON signal• BOSE speaker amp. power and ground circuit• BOSE speaker amp.• AV control unit	<ul style="list-style-type: none">• AV-399• AV-428• AV-401• AV-496• AV-485
One or several speakers do not sound	<ul style="list-style-type: none">• Front door speaker• Front tweeter• Center speaker• Rear door speaker• Subwoofer	<ul style="list-style-type: none">• AV-414• AV-417• AV-420• AV-422• AV-425

NAVIGATION SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">• AV control unit power and ground circuit• AV control unit	<ul style="list-style-type: none">• AV-399• AV-485
Steering switch does not operate	<ul style="list-style-type: none">• Steering switch• AV control unit	<ul style="list-style-type: none">• AV-429• AV-485
Voice activated control does not operate	<ul style="list-style-type: none">• Microphone• Steering switch• AV control unit	<ul style="list-style-type: none">• AV-431• AV-429• AV-485

HANDS-FREE PHONE SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">• AV control unit power and ground circuit• AV control unit	<ul style="list-style-type: none">• AV-399• AV-485
Steering switch does not operate	<ul style="list-style-type: none">• Steering switch• AV control unit	<ul style="list-style-type: none">• AV-429• AV-485
Voice activated control does not operate	<ul style="list-style-type: none">• Microphone• Steering switch• AV control unit	<ul style="list-style-type: none">• AV-431• AV-429• AV-485

REAR VIEW MONITOR

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">• Rear view camera control unit power and ground circuit• Rear view camera control unit	<ul style="list-style-type: none">• AV-402• AV-506

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

NORMAL OPERATING CONDITION

Description

INFOID:000000004278420

AUDIO SYSTEM

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

Noise

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

- Fading noise: This noise occurs because of variations in the field strength in a narrow range due to mountains or buildings blocking the signal.
- Multi-path noise: This noise results from the waves sent directly from the broadcast station arriving at the antenna at a different time from the waves which reflect off mountains or buildings.

The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning. Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and determine the cause.

NOTE:

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

Type of Noise and Possible Cause

Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	<ul style="list-style-type: none">• Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		<ul style="list-style-type: none">• Fuel pump condenser
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	<ul style="list-style-type: none">• Relay malfunction, audio unit malfunction
	The noise occurs when various motors are operating.	<ul style="list-style-type: none">• Motor case ground• Motor
The noise occurs constantly, not just under certain conditions.		<ul style="list-style-type: none">• Rear defogger coil malfunction• Open circuit in printed heater• Poor ground of antenna feeder line
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		<ul style="list-style-type: none">• Ground wire of body parts• Ground due to improper part installation• Wiring connections or a short circuit

NAVIGATION SYSTEM

Basic Operation

Symptom	Cause	Remedy
No image is shown.	Display brightness adjustment is set fully to DARK side.	Adjust the display brightness.
No guide sound is heard. Audio guide volume is too low or too high.	Volume control is set to OFF, MIN or MAX.	Adjust the audio guide volume.
	Audio guidance is not available while the vehicle is driving on a dark pink route.	System is not malfunctioning.
Screen is too dark. Motion of the image is too slow.	Temperature inside the vehicle is low.	Wait until the temperature inside the vehicle reaches the proper temperature.
Small black or bright spots appear on the screen.	Symptom peculiar to a liquid crystal display (display unit).	System is not malfunctioning.

Vehicle Mark

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Symptom	Cause	Remedy	A
Map screen and BIRDVIEW™ Name of the place vary with the screen.	Some thinning of the character data is done to prevent the display becoming to complex. In some cases and in some locations, the display contents may differ. The same place name, street name, etc. may not be displayed every time on account of the data processing.	System is not malfunctioning.	B
Vehicle mark is not positioned correctly.	Vehicle is transferred by ferry or by towing after its ignition switch is turned to OFF.	Drive the vehicle for a while in the GPS satellite signal receiving condition.	C
Screen will not switch to nighttime mode after the lighting switch is turned ON.	The daytime screen is selected by the "SWITCH SCREENS" when the last time the screen dimming setting is done. Switching between daytime/nighttime screen may be inhibited by the automatic illumination adjustment function.	Perform screen dimming and select the nighttime screen by "SWITCH SCREENS".	D
Map screen will not scroll in accordance with the vehicle travel.	Current location is not displayed.	Press "MAP" button to display the current location.	E
Vehicle mark will not be shown.	Current location is not displayed.	Press "MAP" button to display the current location.	F
Accuracy indicator (GPS satellite mark) on the map screen stays gray.	GPS satellite signal is intercepted because the vehicle is in or behind a building.	Move the vehicle out to an open space.	G
	GPS satellite signal cannot be received because an obstacle is placed on top of the instrument panel.	Do not place anything on top of the meter display (instrument panel).	H
	GPS satellites are not visible from current location.	Wait until GPS satellites are visible by moving the vehicle.	I
Vehicle location accuracy is low.	Accuracy indicator (GPS satellite mark) on the map screen stays gray.	Current location is not determined.	J
	Vehicle speed setting by the vehicle speed pulse has been deviated (advanced or retarded) from the actual vehicle speed because tire chain is fitted or the system has been used on another vehicle.	Drive the vehicle for a while [for approx. 30 minutes at approx. 30 km/h (19 MPH)] and the deviation will be automatically adjusted. If advancement or retard still occur, perform the distance adjustment by CONFIRMATION/ADJUSTMENT mode of diagnosis function.	K
	Map data has error or omission. (Vehicle mark is always deviated to the same position.)	As a rule, an updated map DVD-ROM will be released once a year.	L

Destination, Passing Points and Menu Items Cannot be Selected/Set

Symptom	Cause	Remedy	M
Destination cannot be set.	Destination to be set is on an expressway.	Set the destination on an ordinary road.	AV
Passing point is not searched when re-searching the route.	The vehicle has already passed the passing point, or the system judged so.	To include the passing points that have been passed into the route again, set the route again.	O
Route information will not be displayed.	Route searching has not been done.	Set the destination and perform route searching.	P
	Vehicle mark is not on the recommended route.	Drive on the recommended route.	
	Route guide is turned OFF.	Turn route guide ON.	
	Route information is not available on the dark pink route.	System is not malfunctioning.	
After the route searching, no guide sign will appear as the vehicle goes near the entrance/exit to the toll road.	Vehicle mark is not on the recommended route. (On the display, only guide signs related to the recommended route will be shown.)	Drive on the recommended route.	

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Symptom	Cause	Remedy
Automatic route searching is not possible.	Vehicle is driving on a highway (gray route), or no recommended route is available.	Drive on a road to be searched. Or re-search the route manually. In this case, however, the whole route will be searched.
Performed automatic detour search (or detour search). However, the result is the same as that of the previous search.	Performed search with every conditions considered. However, the result is the same as that of the previous search.	System is not malfunctioning.
Passing points cannot be set.	More than five passing points were set.	Passing points can be set up to five. To stop at more than five points, perform sharing in several steps.
When setting the route, the starting point cannot be selected.	The current vehicle location is always set as the starting point of a route.	System is not malfunctioning.
Some menu items cannot be selected.	The vehicle is being driven.	Stop the vehicle at a safe place and then operate the system.

Voice Guide

Symptom	Cause	Remedy
Voice guide will not operate.	Note: Voice guide is only available at intersections that satisfy certain conditions (indicated by ● on the map). Therefore, guidance may not be given even when the route on the map changes direction.	System is not malfunctioning.
	The vehicle is not on the recommended route.	Return to the recommended route or re-search the route.
	Voice guide is turned OFF.	Turn voice guide ON.
	Route guide is turned OFF.	Turn route guide ON.
Voice guide does not match the actual road pattern.	Voice guide may vary with the direction to which the vehicle is turn and the connection of the road to other roads.	Drive in conformity to the actual traffic rules.

Route Search

Symptom	Cause	Remedy
No route is shown.	No road to be searched is found around the destination.	Find wider road (orange road or wider) nearby and reset the destination and passing points onto it. Take care of the traveling direction when there are separate up and down roads.
	Starting point and the destination are too close.	Set the destination at more distant point.
	Conditional traffic regulation (day of the week/ time of the day) is set at the area around the current location or the destination.	Turn the time-regulating search conditions OFF. Turn "Avoid regulation time" in the search conditions OFF.
Indicated route is intermittent.	In some areas, highways (gray routes) are not used for the search ^(Note) Therefore, the route to the current location or the passing points may be intermittent.	System is not malfunctioning.
When the vehicle has passed the recommended route, it is deleted from the screen.	A recommended route is controlled by each section. When the vehicle has passed the passing point 1, then the map data from the starting point up to the passing point 1 will be deleted. (The data may remain undeleted in some area.)	System is not malfunctioning.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

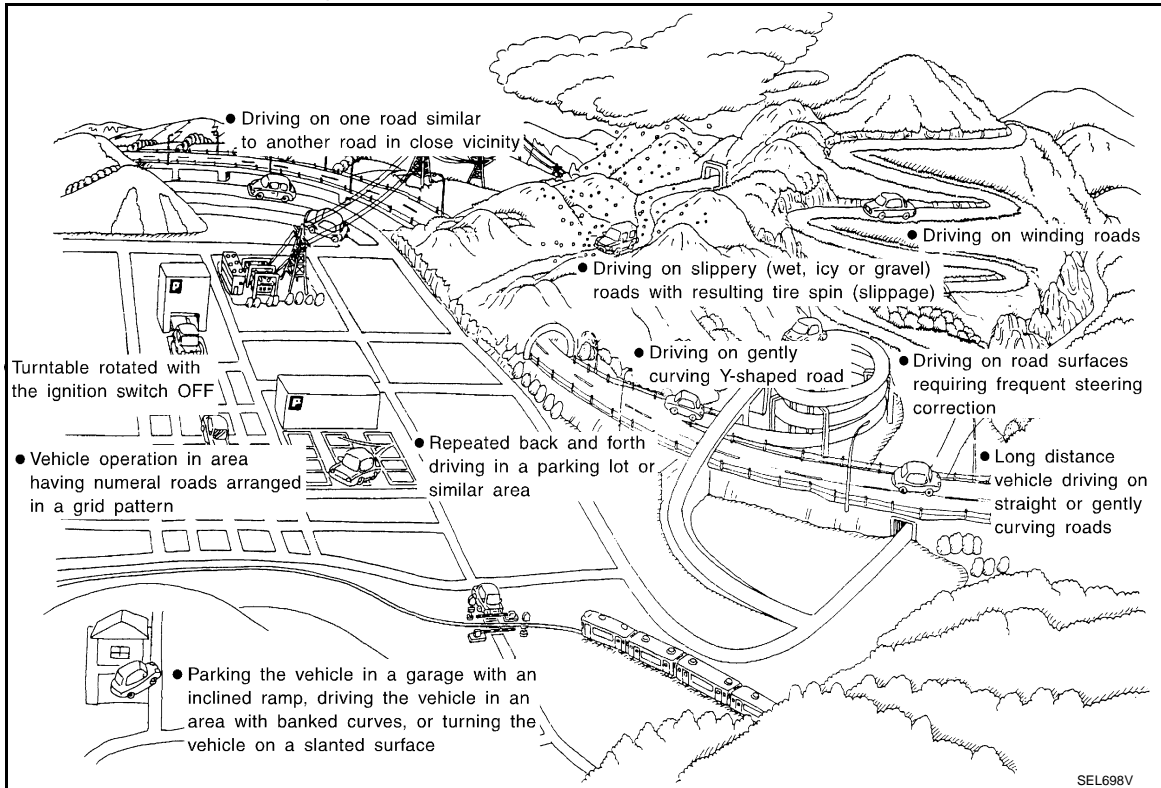
Symptom	Cause	Remedy
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, etc.) is set at the area around the starting point or the destination.	Slightly move the starting point or the destination, or set the passing point on the route of your choice.
	In the area where highways (gray routes) are used for the search, left turn has priority around the current location and the destination (passing points). For this reason, the recommended route may be detouring.	System is not malfunctioning.
Landmarks on the map do not match the actual ones.	This can be happen due to omission or error in the map data.	As a rule, an updated map DVD-ROM will be released once a year. Wait until the latest map has become available.
Recommended route is far from the starting point, passing points, and destination.	Starting point, passing points, and destination of the route guide were set far from the desired points because route searching data around these area were not stored.	Reset the destination onto the road nearby. If this road is one of the highways (gray routes), an ordinary road nearby may be displayed as the recommended route.

NOTE:

Except for the ordinance-designated cities. (Malfunctioning areas may be changed in the updated map disc.)

Examples of Current-Location Mark Displacement

Vehicle's travel amount is calculated by reading its travel distance and turning angle. Therefore, if the vehicle is driven in the following manner, an error will occur in the vehicle's current location display. If correct location has not been restored after driving the vehicle for a while, perform location correction.

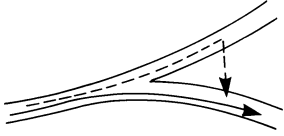
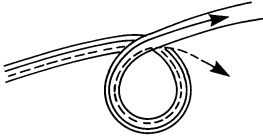
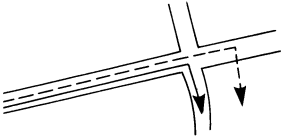
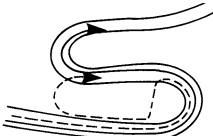
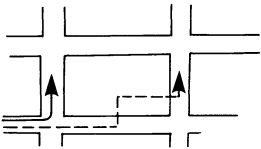
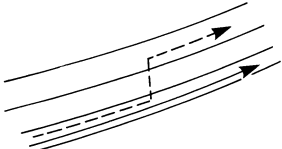


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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

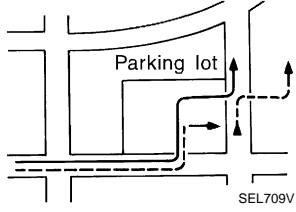
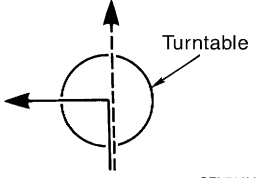
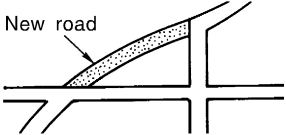
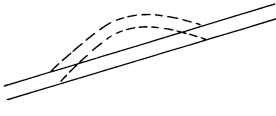
[BOSE W/ COLOR DISPLAY W/ NAVI]

Cause (condition)	-: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
Road configuration	<p>Y-intersections</p>  <p style="text-align: center;">ELK0192D</p>	<p>At a Y intersection or similar gradual division of roads, an error in the direction of travel deduced by the sensor may result in the current-location mark appearing on the wrong road.</p>	<p>If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.</p>
	<p>Spiral roads</p>  <p style="text-align: center;">ELK0193D</p>	<p>When driving on a large, continuous spiral road (such as loop bridge), turning angle error is accumulated and the vehicle mark may deviate from the correct location.</p>	
	<p>Straight roads</p>  <p style="text-align: center;">ELK0194D</p>	<p>When driving on a long, straight road and slow curve without stopping, map-matching does not work effectively enough and distance errors may accumulate. As a result, the vehicle mark may deviate from the correct location when the vehicle is turned at a corner.</p>	
	<p>Zigzag roads</p>  <p style="text-align: center;">ELK0195D</p>	<p>When driving on a zigzag road, the map may be matched to other roads in the similar direction nearby at every turn, and the vehicle mark may deviate from the correct location.</p>	
	<p>Roads laid out in a grid pattern</p>  <p style="text-align: center;">ELK0196D</p>	<p>When driving where roads are laid out in a grid pattern, or where many roads are running in the similar direction nearby, the map may be matched to them by mistake and the vehicle mark may deviate from the correct location.</p>	
	<p>Parallel roads</p>  <p style="text-align: center;">ELK0197D</p>	<p>When two roads are running in parallel (such as highway and sideways), the map may be matched to the other road by mistake and the vehicle mark may deviate from the correct location.</p>	

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

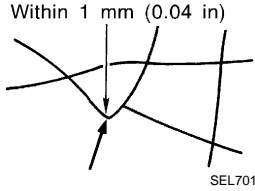
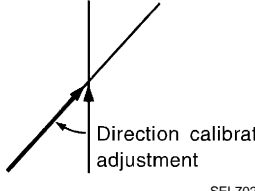
[BOSE W/ COLOR DISPLAY W/ NAVI]

	Cause (condition) -: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
Place	In a parking lot  <small>SEL709V</small>	When driving in a parking lot, or other location where there are no roads on the map, matching may place the vehicle mark on a nearby road. When the vehicle returns to the road, the vehicle mark may have deviated from the correct location. When driving in circle or turning the steering wheel repeatedly, direction errors accumulate, and the vehicle mark may deviate from the correct location.	A B C D E F G H I J K L M AV O P
	Turntable  <small>SEL710V</small>	When the ignition switch is OFF, the navigation system cannot get the signal from the gyroscope (angular speed sensor). Therefore, the displayed direction may be wrong and the correct road may not be easily returned to after rotating the vehicle on a turntable with the ignition OFF.	
	Slippery roads	On snow, wet roads, gravel, or other roads where tires may slip easily, accumulated mileage errors may cause the vehicle mark to deviate from the correct road.	
	Slopes	When parking in sloped garages, when travelling on banked roads, or in other cases where the vehicle turns when tilted, an error in the turning angle will occur, and the vehicle mark may deviate from the road.	
Map data	Road not displayed on the map screen  <small>SEL699V</small>	When driving on new roads or other roads not displayed on the map screen, map matching does not function correctly and matches the location to a nearby road. When the vehicle returns to a road which is on the map, the vehicle mark may deviate from the correct road.	
	Different road pattern (Changed due to repair)  <small>ELK0201D</small>	If the road pattern stored in the map data and the actual road pattern are different, map matching does not function correctly and matches the location to a nearby road. The vehicle mark may deviate from the correct road.	
Vehicle	Use of tire chains	When tire chains are used, the mileage is not correctly detected, and the vehicle mark may deviate from the correct road.	Drive the vehicle for a while. If the distance still deviates, adjust it by using the distance adjustment function. (If the tire chain is removed, recover the original value.)

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Cause (condition)	-: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
Precautions for driving	Just after the engine is started	If the vehicle is driven just after the engine is started when the gyroscope (angular speed sensor) correction is not completed, the vehicle can lose its direction and may have deviated from the correct location.	Wait for a short while before driving after starting the engine.
	Continuous driving without stopping	When driving long distances without stopping, direction errors may accumulate, and the current-location mark may deviate from the correct road.	Stop and adjust the orientation.
	Abusive driving	Spinning the wheels or engaging in other kinds of abusive driving may result in the system being unable to perform correct detection, and may cause the vehicle mark to deviate from the correct road.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
How to correct location	Position correction accuracy 	If the accuracy of location settings is poor, accuracy may be reduced when the correct road cannot be found, particularly in places where there are many roads.	Enter in the road displayed on the screen with an accuracy of approx. 1mm. Caution: Whenever possible, use detailed map for the correction.
	Direction when location is corrected 	If the accuracy of location settings during correction is poor, accuracy may be reduced afterwards.	Perform direction correction.

Location Correction by Map-Matching is Slow

- The map-matching function needs to refer to the data of the surrounding area. It is necessary to drive some distance for the function to work.
- Because map-matching operates on this principle, when there are many roads running in similar directions in the surrounding area, no matching determination may be made. The location may not be corrected until some special feature is found.

Name of Road is Not Displayed

The current road name may not be displayed if there are no road names displayed on the map screen.

Contents of Display Differ for Birdview™ and the (Flat) Map Screen

Difference of the BIRDVIEW™ screen from the flat map screen are as follows.

- The current place name displays names which are primarily in the direction of vehicle travel.
- The amount of time before the vehicle travel or turn angle is updated on the screen is longer than for the (flat) map display.
- The conditions for display of place names, roads, and other data are different for nearby areas and for more distant areas.
- Some thinning of the character data is done to prevent the display becoming too complex. In some cases and in some locations, the display contents may differ.
- The same place name, street name, etc. may be displayed multiple times.

Vehicle Mark Shows a Position Which is Completely Wrong

In the following cases, the vehicle mark may appear on completely different position in the map depending on the GPS satellite signal receiving conditions. In this case, perform location correction and direction correction.

- When location correction has not been done
- If the receiving conditions of the GPS satellite signal is poor, if the vehicle mark becomes out of place, it may move to a completely different location and not come back if location correction is not done. The position will be corrected if the GPS signal can be received.
- When the vehicle has traveled by ferry, or when the vehicle has been being towed

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

- Because calculation of the current location cannot be done when traveling with the ignition off, for example when traveling by ferry or when being towed, the location before travel is displayed. If the precise location can be detected with GPS, the location will be corrected.

A

Vehicle Mark Jumps

In the following cases, the vehicle mark may appear to jump as a result of automatic correction of the current location.

B

- When map matching has been done
- If the current location and the vehicle mark are different when map matching is done, the vehicle mark may seem to jump. At this time, the location may be "corrected" to the wrong road or to a location which is not on a road.
- When GPS location correction has been done
- If the current location and the vehicle mark are different when the location is corrected using GPS measurements, the vehicle mark may seem to jump. At this time, the location may be "corrected" to a location which is not on a road.

C

D

Vehicle Mark is in a River or Sea

The navigation system moves the vehicle mark with no distinction between land and rivers or sea. If the vehicle mark is somehow out of place, it may appear that the vehicle is driving in a river or the sea.

E

Vehicle Mark Automatically Rotates

The system wrongly memorizes the rotating status as stopping when the ignition switch is turned ON with the turntable rotating. That causes the vehicle mark to rotate when the vehicle is stopped.

F

When Driving on Same Road, Sometimes Vehicle Mark is in Right Place and Sometimes it is in Wrong Place

The conditions of the GPS antenna (GPS data) and gyroscope (angular speed sensor) change gradually. Depending on the road traveled and the operation of the steering wheel, the location detection results will be different. Therefore, even on a road on which the location has never been wrong, conditions may cause the vehicle mark to deviate.

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PRECAUTION

PRECAUTIONS

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

INFOID:000000003899929

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 SR and SB section of this Service Manual.

WARNING:

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

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:000000004399692

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

Precaution for Trouble Diagnosis

INFOID:000000003899930

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.

PRECAUTIONS

[BOSE W/ COLOR DISPLAY W/ NAVI]

< PRECAUTION >

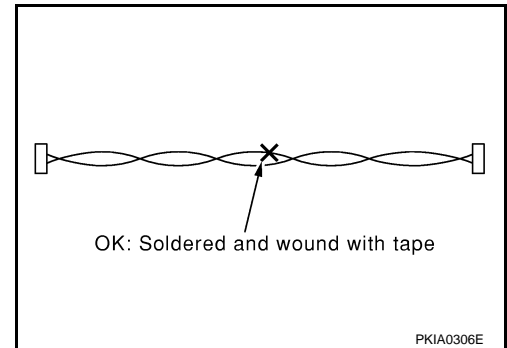
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

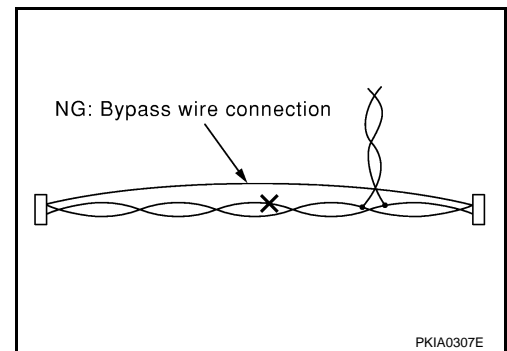
INFOID:000000003899931

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 >

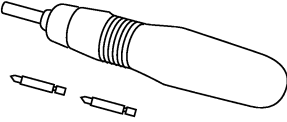
[BOSE W/ COLOR DISPLAY W/ NAVI]

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:00000000389932

Tool name	Description
<p>Power tool</p>  <p>PBIC0191E</p>	<p>Loosening bolts and nuts</p>

AUDIO UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

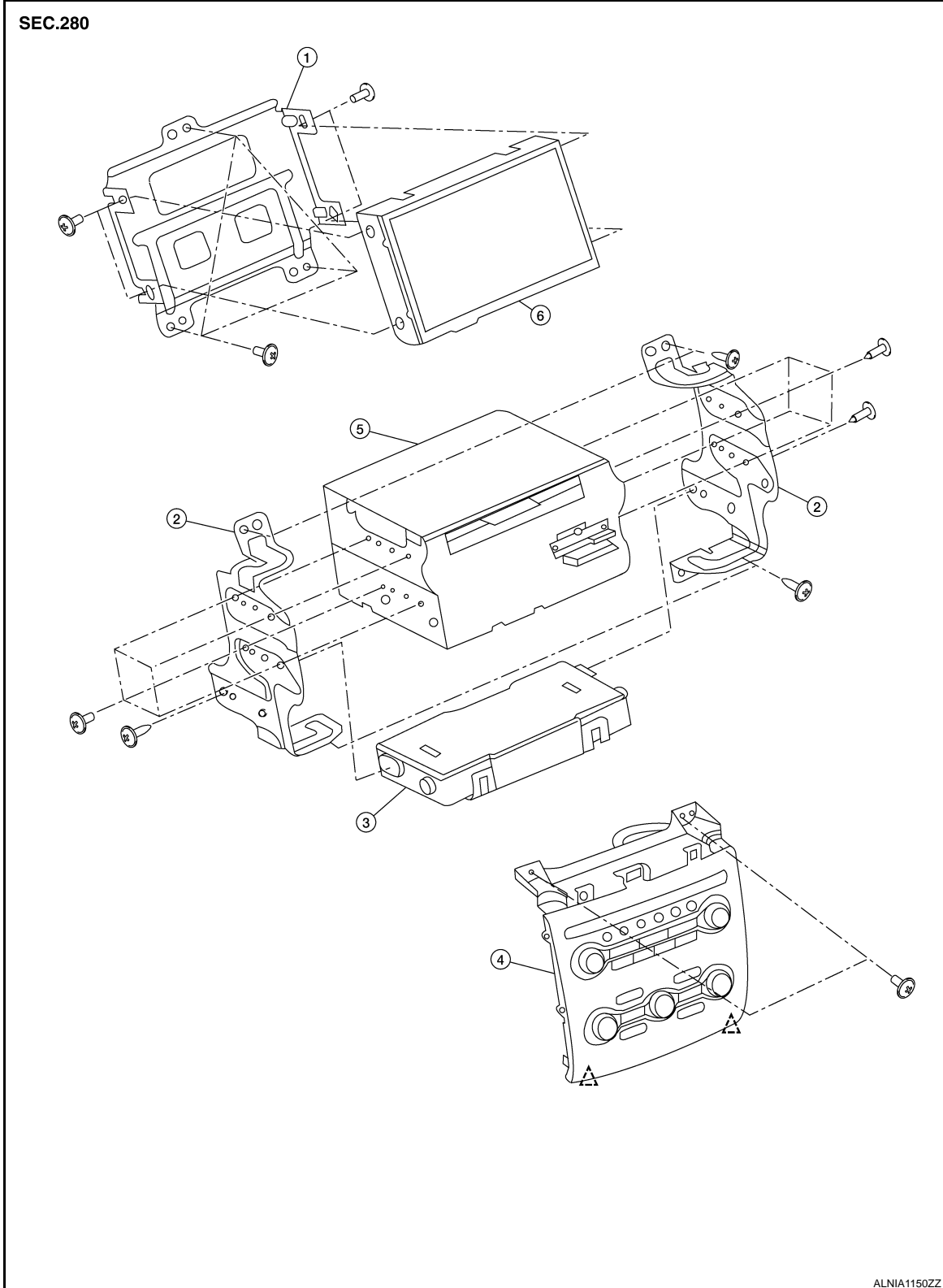
ON-VEHICLE REPAIR

AUDIO UNIT

Removal and Installation

INFOID:000000003899933

Bose Audio




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AUDIO UNIT

< ON-VEHICLE REPAIR >

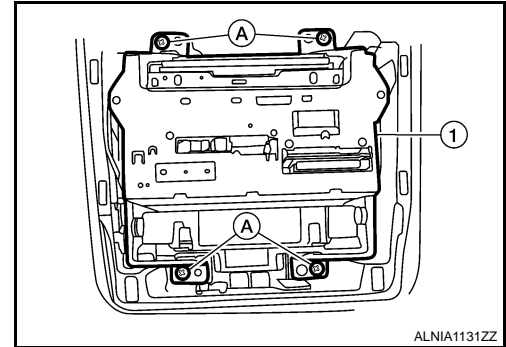
[BOSE W/ COLOR DISPLAY W/ NAVI]

- | | | |
|-------------------------------|------------------------------|-----------------------|
| 1. Audio display unit bracket | 2. Audio unit brackets LH/RH | 3. A/C auto amp. |
| 4. Cluster lid C | 5. Audio unit | 6. Audio display unit |

 Clip

REMOVAL

1. Remove the cluster lid D. Refer to [IP-12, "Removal and Installation"](#).
2. Remove the cluster lid C. Refer to [IP-12, "Removal and Installation"](#).
3. Remove audio unit screws (A), then pull out the audio unit (1), disconnect the connectors and remove the audio unit (1).



INSTALLATION

Installation is in the reverse order of removal.

AUDIO DISPLAY UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

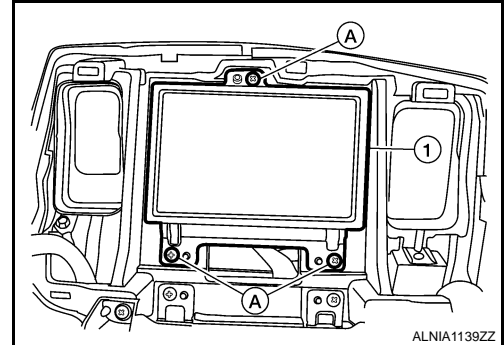
AUDIO DISPLAY UNIT

Removal and Installation

INFOID:000000004292741

REMOVAL

1. Remove the cluster lid D. Refer to [IP-12. "Removal and Installation"](#).
2. Remove the audio display unit screws (A), then pull out the audio display unit (1), disconnect the audio display unit (1) connectors and remove the audio display unit (1).



INSTALLATION

Installation is in the reverse order of removal.

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IPOD ADAPTER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

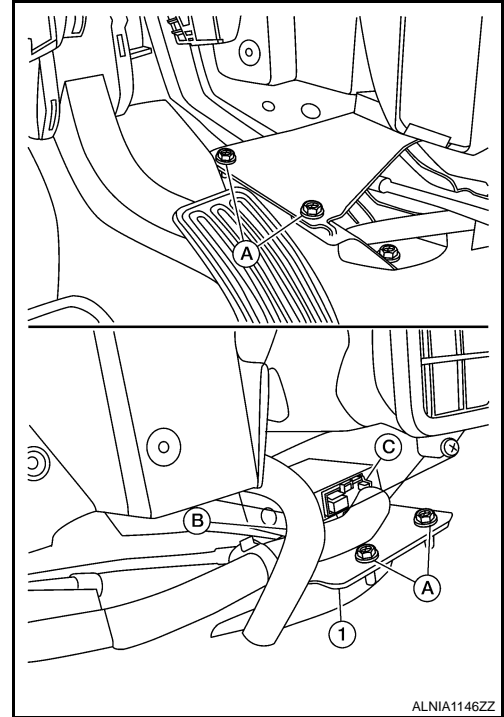
IPOD ADAPTER

Removal and Installation

INFOID:000000004269465

REMOVAL

1. Remove the console side finishers LH/RH. Refer to [IP-16. "Removal and Installation"](#).
2. Remove the iPod adapter screws (A) on the LH/RH sides of the center console, then disconnect the drain hose (B) and position drain hose (B) aside.
3. Pull out the iPod adapter (1), then disconnect the iPod adapter connector (C) and remove the iPod adapter (1).



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INSTALLATION

Installation is in the reverse order of removal.

IPOD CONNECTOR

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

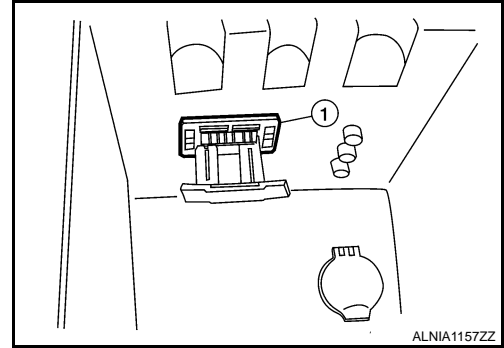
IPOD CONNECTOR

Removal and Installation

INFOID:000000004269466

REMOVAL

1. Remove the center console assembly. Refer to [IP-16. "Removal and Installation"](#).
2. Push the pawl from the back of the center console to remove the iPod connector (1).



INSTALLATION

Installation is in the reverse order of removal.

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AUXILIARY INPUT JACKS

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

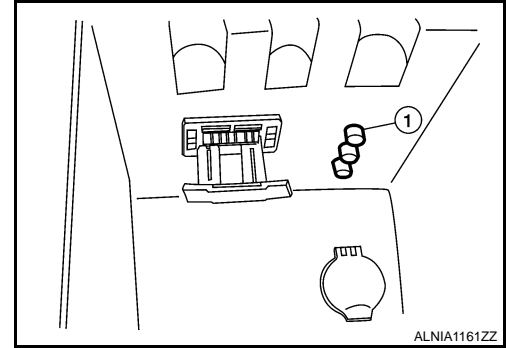
AUXILIARY INPUT JACKS

Removal and Installation

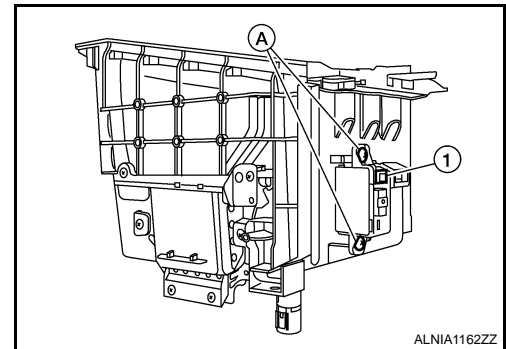
INFOID:000000004364419

REMOVAL

1. Remove the center console. Refer to [IP-16. "Removal and Installation"](#).
2. Remove the auxiliary input jacks (1) from the center console bin box.



3. Remove the auxiliary input jacks screws (A), then remove the auxiliary input jacks (1).



INSTALLATION

Installation is in the reverse order of removal.

FRONT TWEETER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

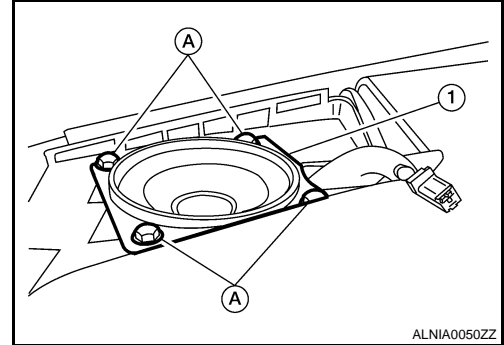
FRONT TWEETER

Removal and Installation

INFOID:000000003899937

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-24, "Removal and Installation"](#).
2. Remove front tweeter speaker grille. Refer to [IP-12, "Removal and Installation"](#).
3. Remove the front tweeter speaker screws (A), then pull out the front tweeter speaker (1), disconnect the front tweeter speaker connector and remove the front tweeter speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

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CENTER SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

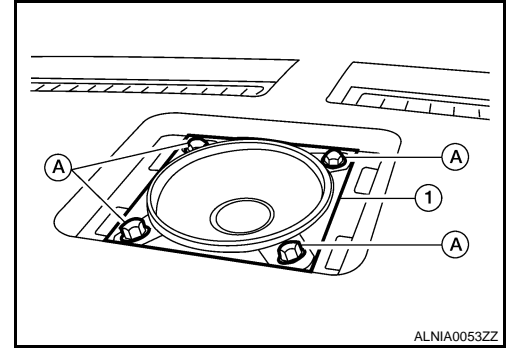
CENTER SPEAKER

Removal and Installation

INFOID:000000003899938

REMOVAL

1. Remove the center speaker grille. Refer to [IP-12. "Removal and Installation"](#).
2. Remove the center speaker screws (A), then pull out the center speaker (1), then disconnect the center speaker connector and remove the center speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

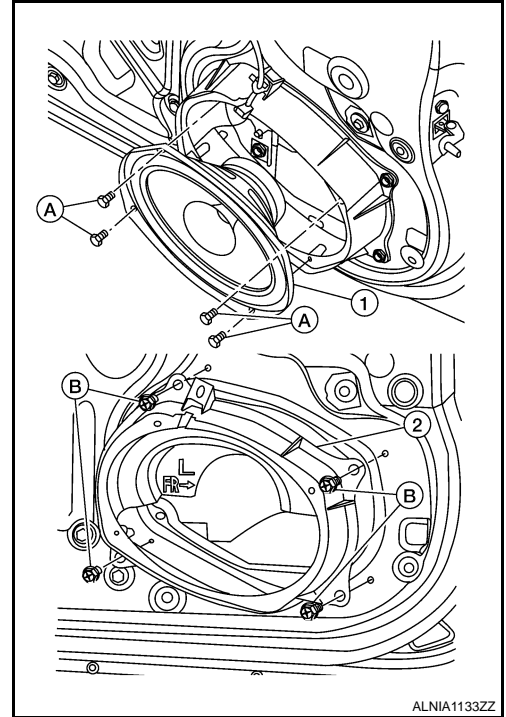
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000004292745

REMOVAL

1. Remove the front door finisher. Refer to [INT-18. "Removal and Installation"](#).
2. Remove the front door speaker screws (A), then disconnect the front door speaker connector and remove the front door speaker (1).
3. Remove the front door speaker spacer screws (B) and remove the front door speaker spacer (2).



INSTALLATION

Installation is in the reverse order of removal.

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REAR DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

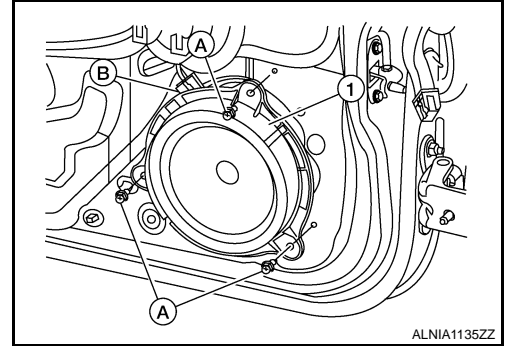
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000004292742

REMOVAL

1. Remove the rear door finisher. Refer to [INT-21. "Removal and Installation"](#).
2. Remove the rear door speaker screws (A), then disconnect the rear door speaker connector (B) and remove the rear door speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

SUBWOOFER

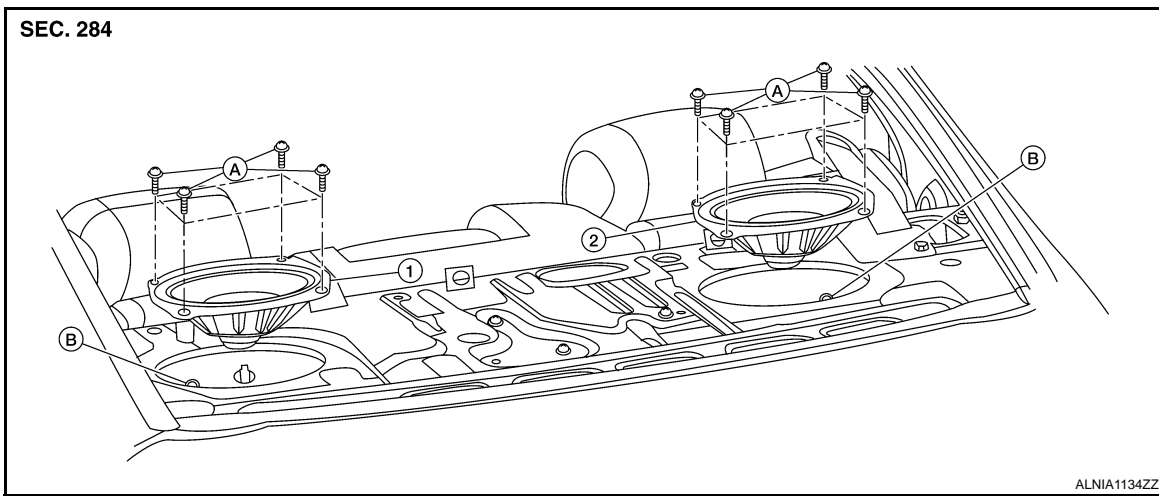
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

SUBWOOFER

Removal and Installation

INFOID:000000004292746



- 1. Subwoofer LH
- 2. Subwoofer RH
- A. Subwoofer screws
- B. Subwoofer connectors

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-26. "Removal and Installation"](#).
2. Remove the subwoofer screws, then pull out the subwoofer, disconnect the subwoofer connector and remove the subwoofer.

INSTALLATION

Installation is in the reverse order of removal.

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BOSE SPEAKER AMP

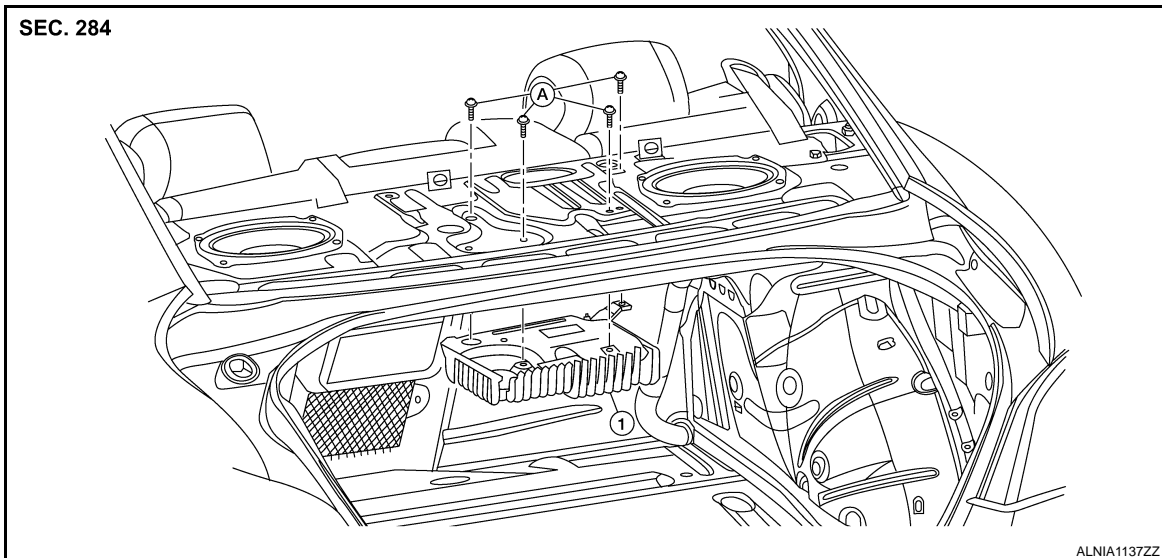
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

BOSE SPEAKER AMP

Removal and Installation

INFOID:000000004292744



1. Bose speaker amp.

A. Screws

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the rear parcel shelf. Refer to [INT-26, "Removal and Installation"](#).
3. Remove the Bose speaker amp. screws, then disconnect the Bose speaker amp. connectors and remove the Bose speaker amp.

INSTALLATION

Installation is in the reverse order of removal.

GPS ANTENNA

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

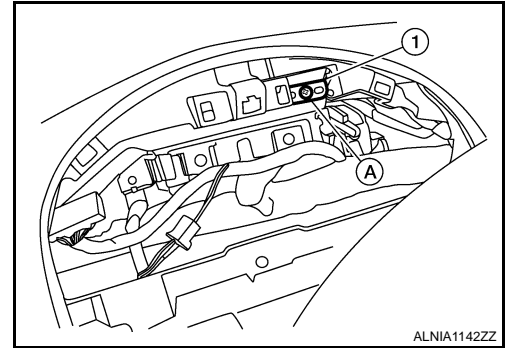
GPS ANTENNA

Removal and Installation

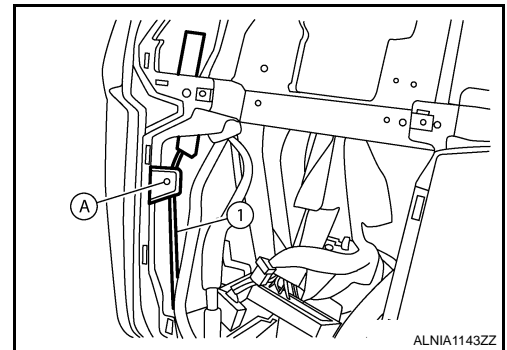
INFOID:000000003899947

REMOVAL

1. Remove the combination meter. Refer to [MWI-144](#), "Removal and Installation".
2. Remove the audio unit. Refer to [AV-485](#), "Removal and Installation".
3. Remove the GPS navigation antenna screw (A).
 - GPS navigation antenna (1)



4. Detach the GPS navigation antenna cable clip (A), then fish the GPS navigation antenna connector and harness (1), through the combination meter instrument panel opening and remove the GPS navigation antenna.



INSTALLATION

Installation is in the reverse order of removal.

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STEERING SWITCH

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

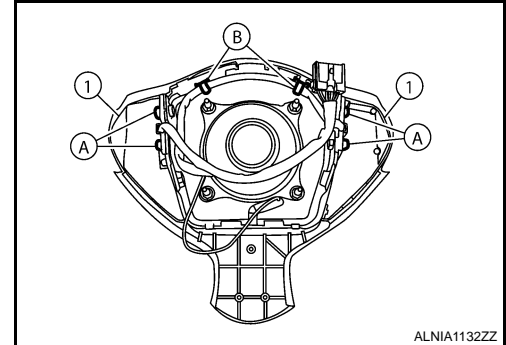
STEERING SWITCH

Removal and Installation

INFOID:000000004292747

REMOVAL

1. Remove the driver airbag module. Refer to [SR-5. "Removal and Installation"](#).
2. Remove the steering wheel switch assembly screws (A), then detach the steering wheel switch harness clips (B) and remove the steering wheel switches (1).



INSTALLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

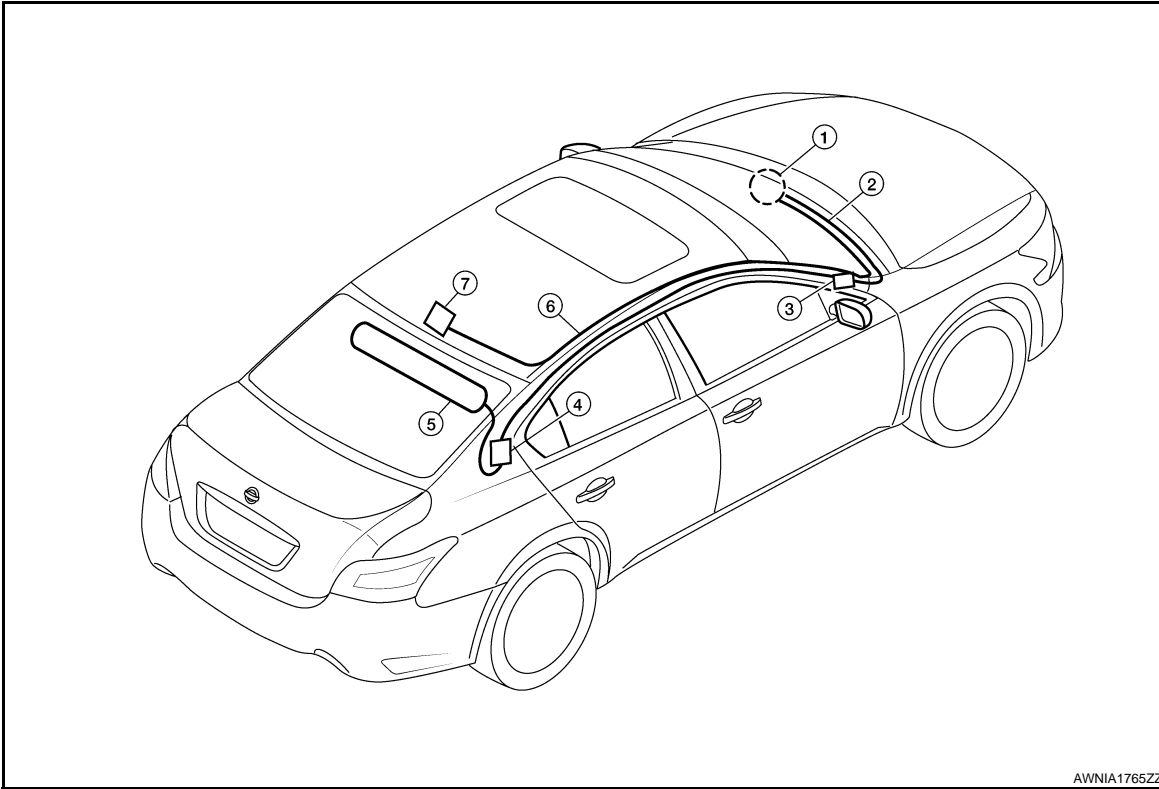
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

AUDIO ANTENNA

Location of Antenna

INFOID:000000004399703



AWNIA1765ZZ

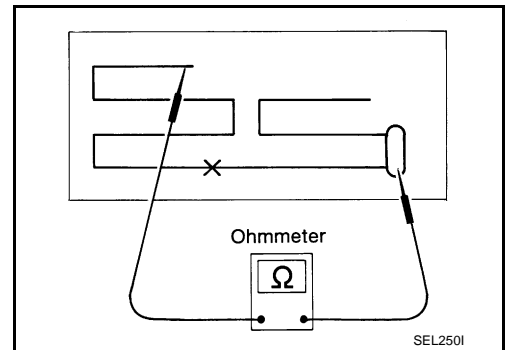
- | | | |
|----------------------------|------------------------------|-----------------------------------|
| 1. Audio unit | 2. Audio unit antenna feeder | 3. In-line connectors M103, M105 |
| 4. Antenna amp. | 5. Window antenna | 6. Satellite radio antenna feeder |
| 7. Satellite radio antenna | | |

Window Antenna Repair

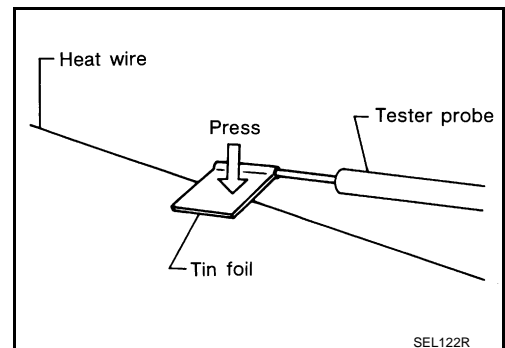
INFOID:000000003899952

ELEMENT CHECK

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



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



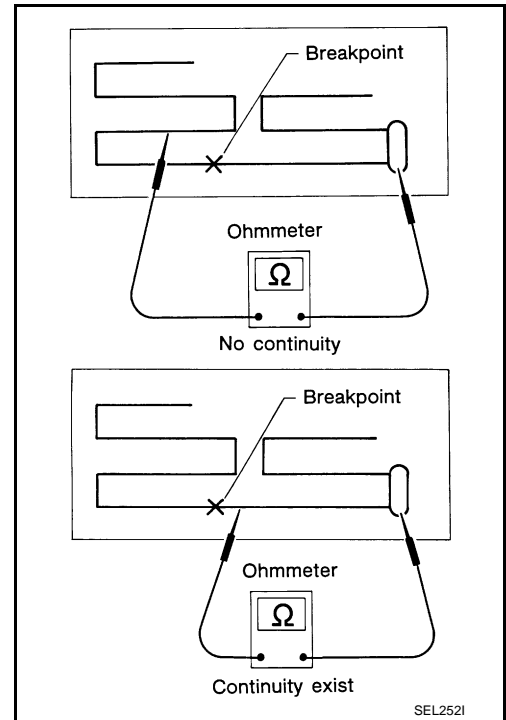
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AUDIO ANTENNA

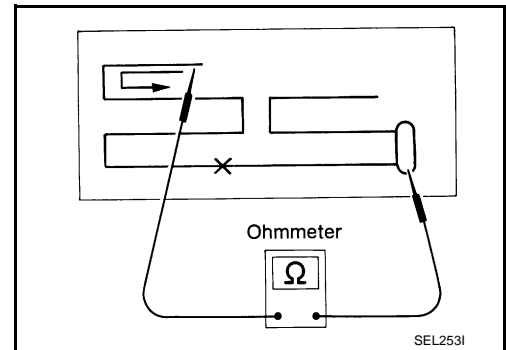
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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



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



REPAIR EQUIPMENT

- Conductive silver composition (DuPont No. 4817 or equivalent)
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

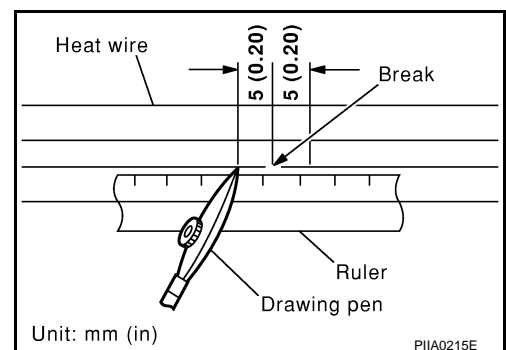
REPAIRING PROCEDURE

1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen.

NOTE:

Shake silver composition container before use.

3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.

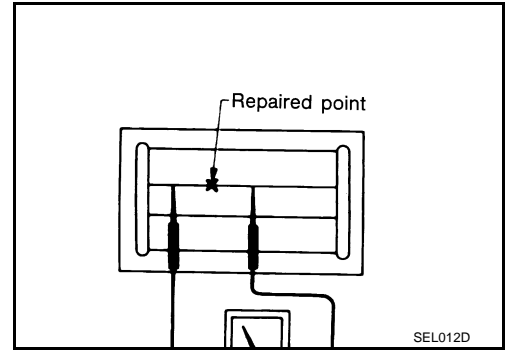


AUDIO ANTENNA

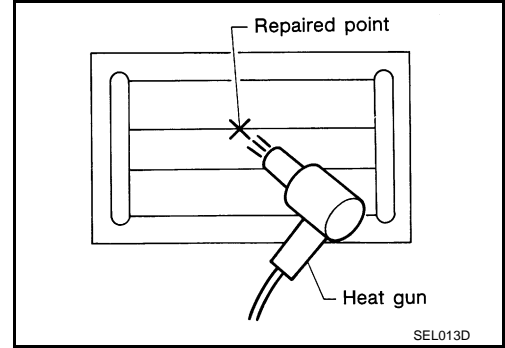
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited. Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.



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ANTENNA AMP.

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

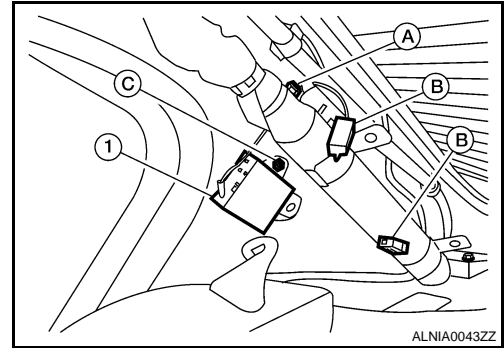
ANTENNA AMP.

Removal and Installation

INFOID:000000004292748

REMOVAL

1. Remove the rear pillar finisher RH. Refer to [INT-23. "Exploded View"](#).
2. Partially remove the side curtain air bag module RH to gain access to the antenna amp. Refer to [SR-12. "Removal and Installation"](#).
3. Detach the antenna amp. harness clip (A), disconnect the antenna amp. connectors (B), remove the antenna amp. screw (C) and remove the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

REAR AUDIO REMOTE CONTROL UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

REAR AUDIO REMOTE CONTROL UNIT

Removal and Installation

INFOID:000000004279307

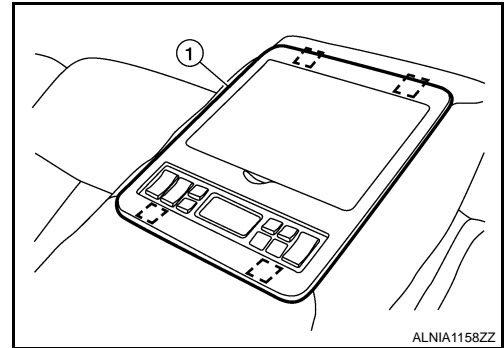
REAR AUDIO REMOTE CONTROL UNIT

Removal

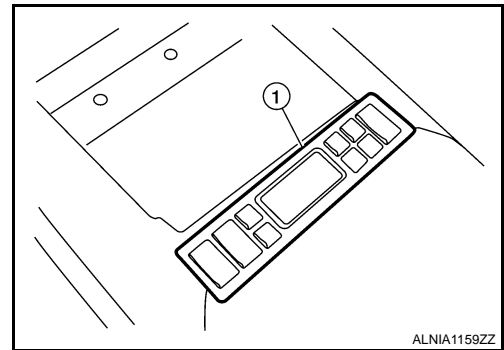
CAUTION:

Wrap removal tool with clean shop cloth to prevent damage to the rear audio remote control finisher.

1. Carefully remove the rear audio remote control unit finisher (1) from the rear center arm rest.



2. Detach the rear audio remote control unit (1), then disconnect the rear audio remote control unit (1) connector and remove the rear audio remote control unit (1).



Installation

Installation is in the reverse order of removal.

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MICROPHONE

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

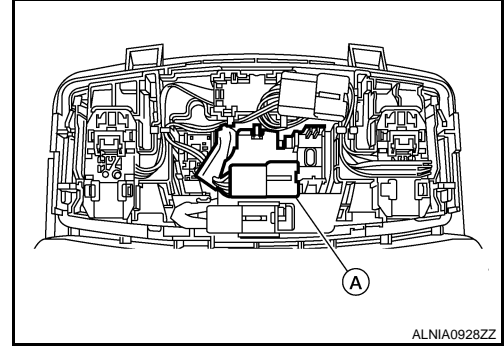
MICROPHONE

Removal and Installation

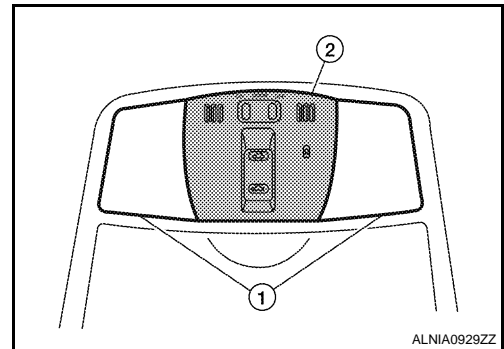
INFOID:000000004292749

REMOVAL

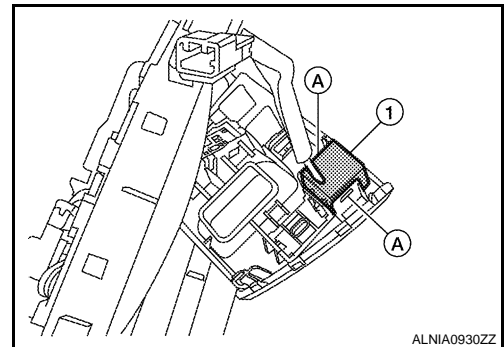
1. Remove the map lamp assembly. Refer to [INL-96. "Removal and Installation"](#).
2. Detach the microphone connector (A).



3. Remove the map lamp covers (1), then remove the map lamp assembly cover (2).



4. Release the microphone tabs (A), then remove the microphone (1).



INSTALLATION

Installation is in the reverse order of removal.

REAR VIEW MONITOR

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

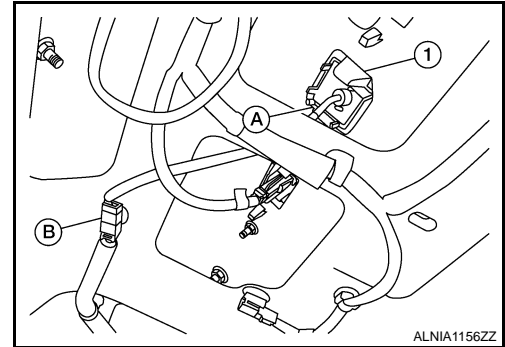
REAR VIEW MONITOR

Removal and Installation

INFOID:000000003899961

REMOVAL

1. Remove the license plate finisher. Refer to [EXL-176, "Removal and Installation"](#).
2. Remove trunk lid finisher. Refer to [INT-35, "Exploded View"](#).
3. Disconnect the rear view monitor connector (B), press the rear view monitor tab (A) and remove the rear view monitor (1).



INSTALLATION

Installation is in the reverse order of removal.

Adjustment

INFOID:000000003899962

REAR VIEW MONITOR

For adjustment on the rear view monitor, refer to [DLK-8, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

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CAMERA CONTROL UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

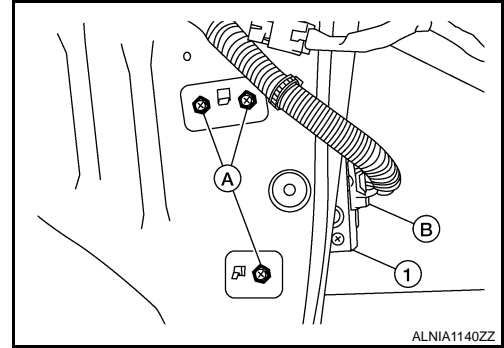
CAMERA CONTROL UNIT

Removal and Installation

INFOID:000000003899964

REMOVAL

1. Remove the trunk side finisher RH. Refer to [INT-35. "Removal and Installation"](#).
2. Disconnect the rear view monitor control unit connector (B), then remove the rear view monitor screws (A) and remove the rear view monitor control unit (1).



INSTALLATION

Installation is in the reverse order of removal.