

SECTION **AV**

AUDIO, VISUAL & NAVIGATION SYSTEM

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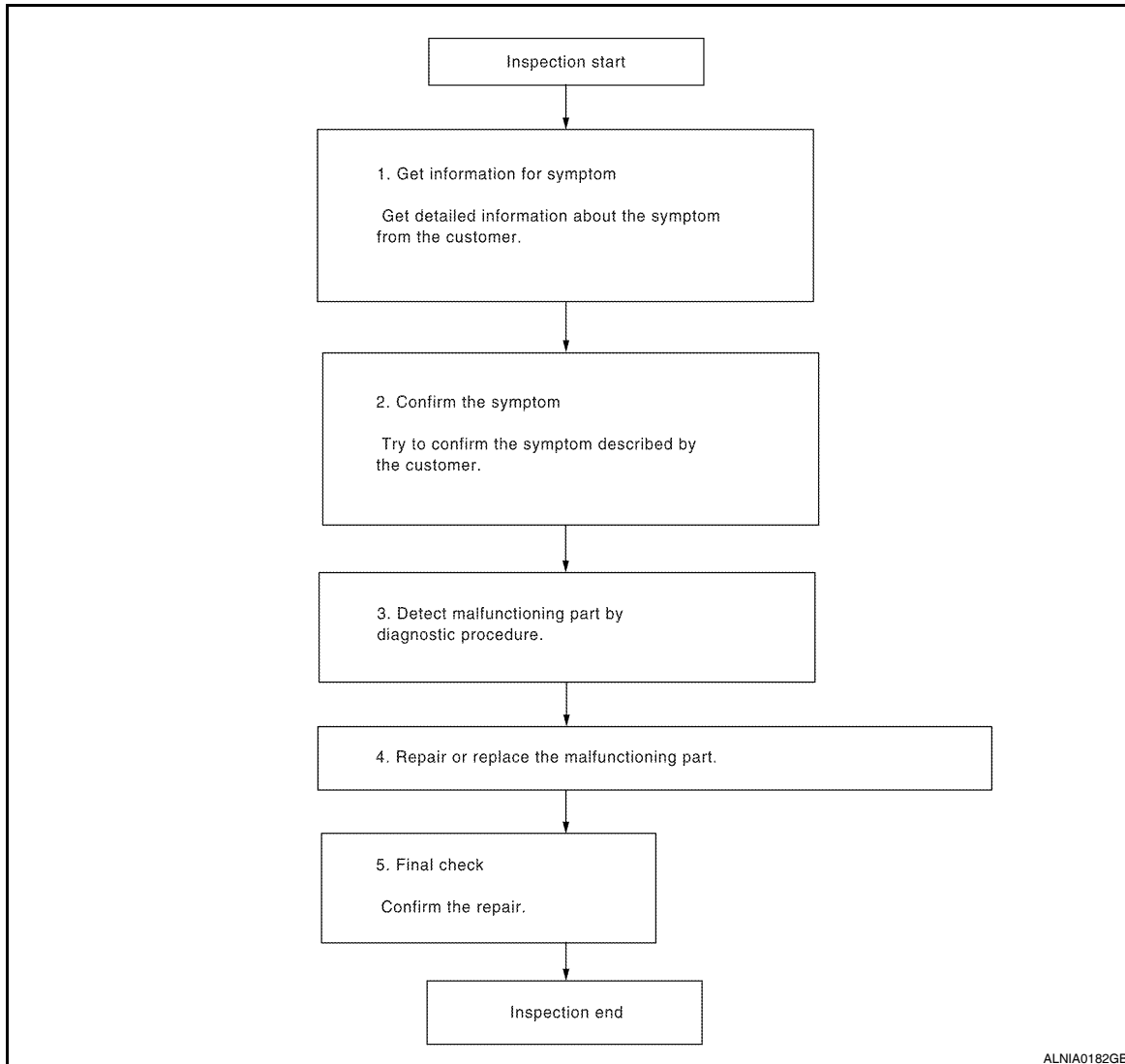
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000005459983

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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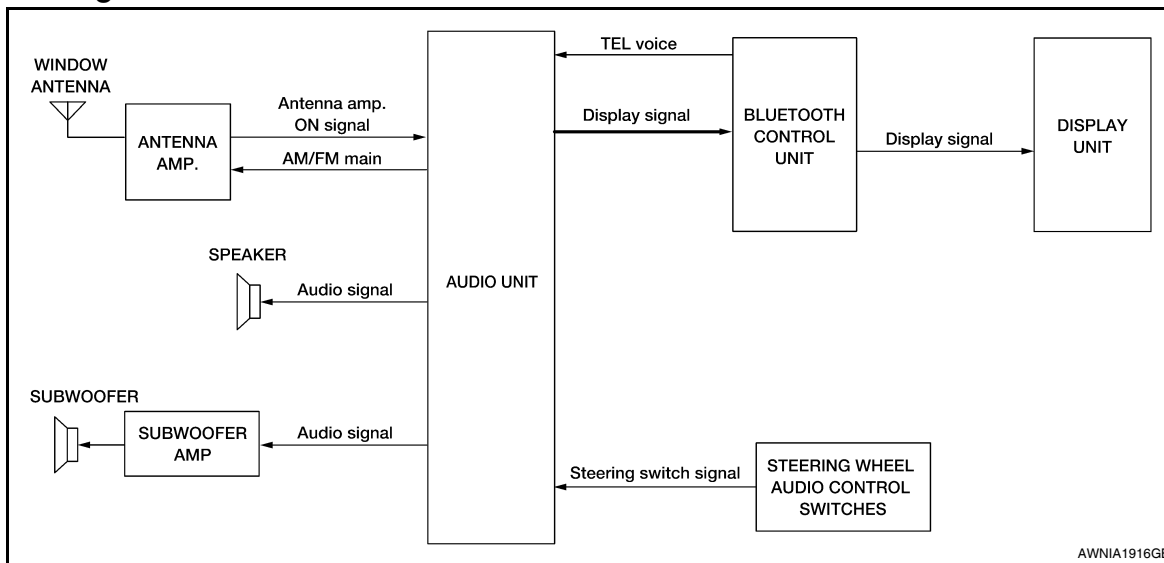
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FUNCTION DIAGNOSIS

AUDIO SYSTEM

System Diagram



System Description

INFOID:000000005459985

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.

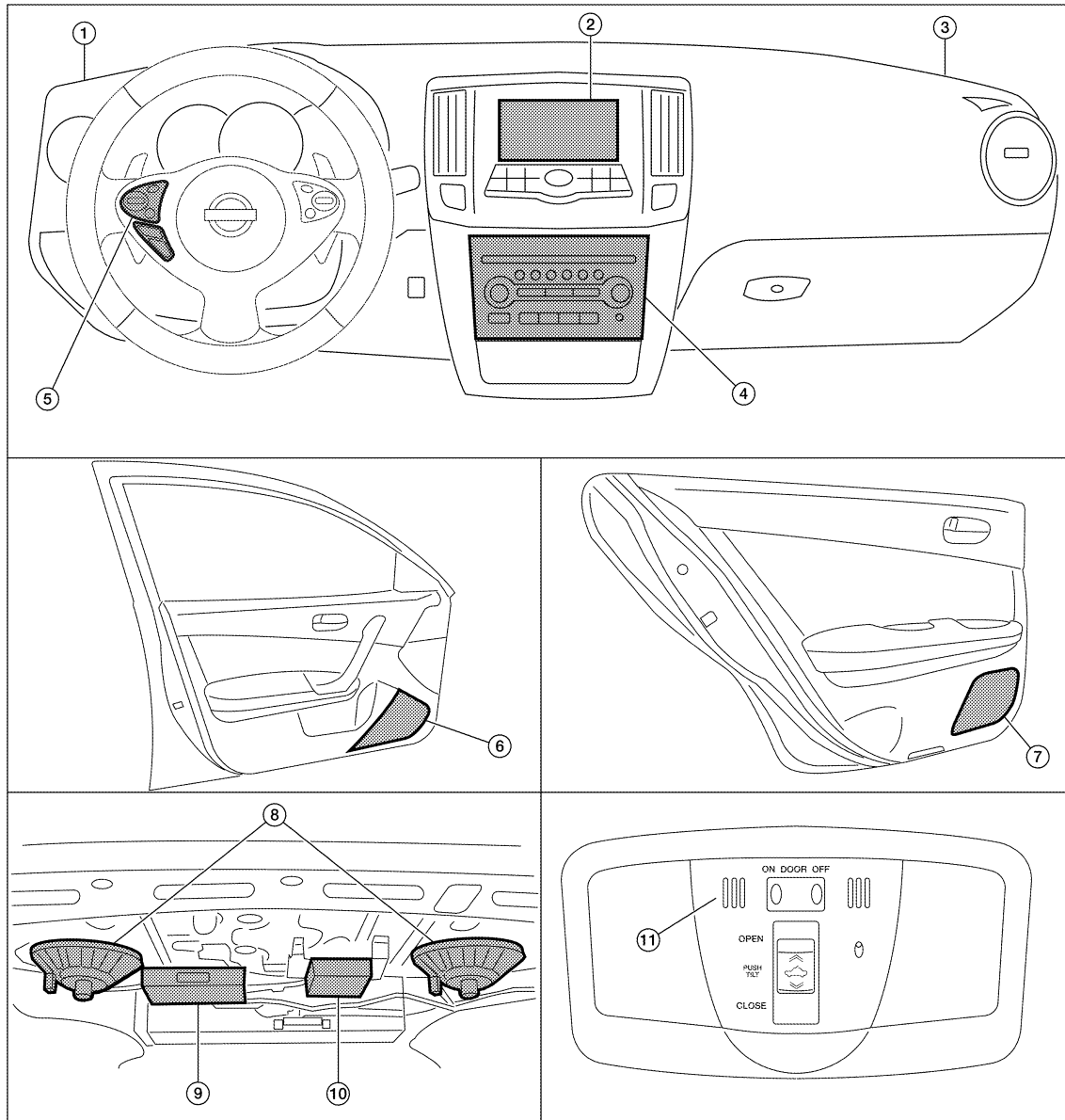
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

Component Parts Location

INFOID:000000005459986



ALNIA1160ZZ

- | | | |
|--|---|--|
| 1. Tweeter LH M143 | 2. Display unit M109 | 3. Tweeter RH M144 |
| 4. Audio unit M133, M147 | 5. Steering wheel audio control switches | 6. Front door speaker
LH D3
RH D103 |
| 7. Rear door speaker
LH D209
RH D309 | 8. Subwoofers (view of underside of parcel shelf)
LH B16
RH B17 | 9. Bluetooth control unit B125, B126, B130 |
| 10. Subwoofer amp. B21 | 11. Microphone R7 | |

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AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

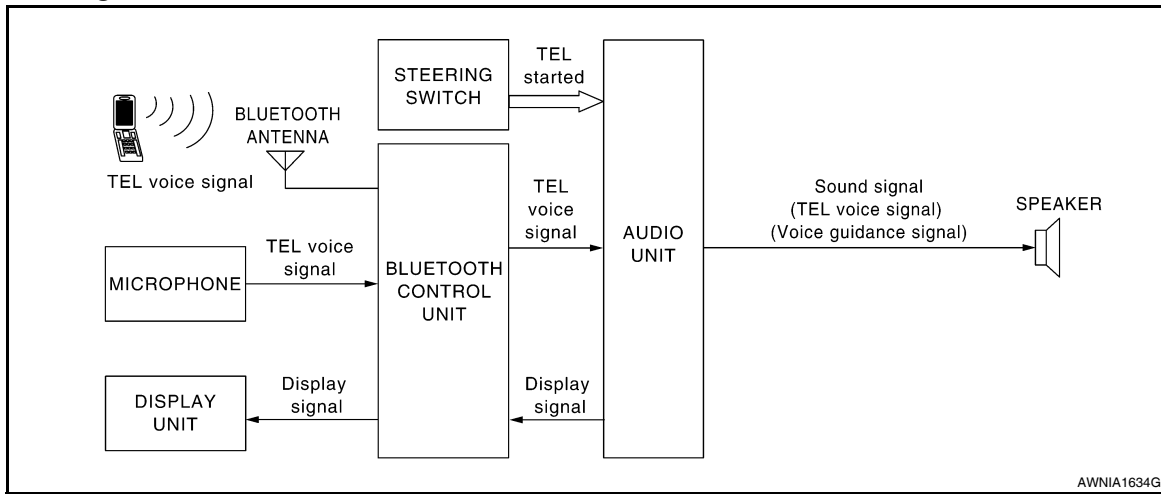
Component Description

INFOID:000000005459987

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.• 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:000000005459989

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. 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 20 seconds. If a phone is present in the vehicle and paired with the Bluetooth control unit, Nissan Voice Recognition will then become active. Bluetooth telephone functions can be turned off using the Nissan Voice Recognition system.

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

MICROPHONE

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

AUDIO UNIT

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

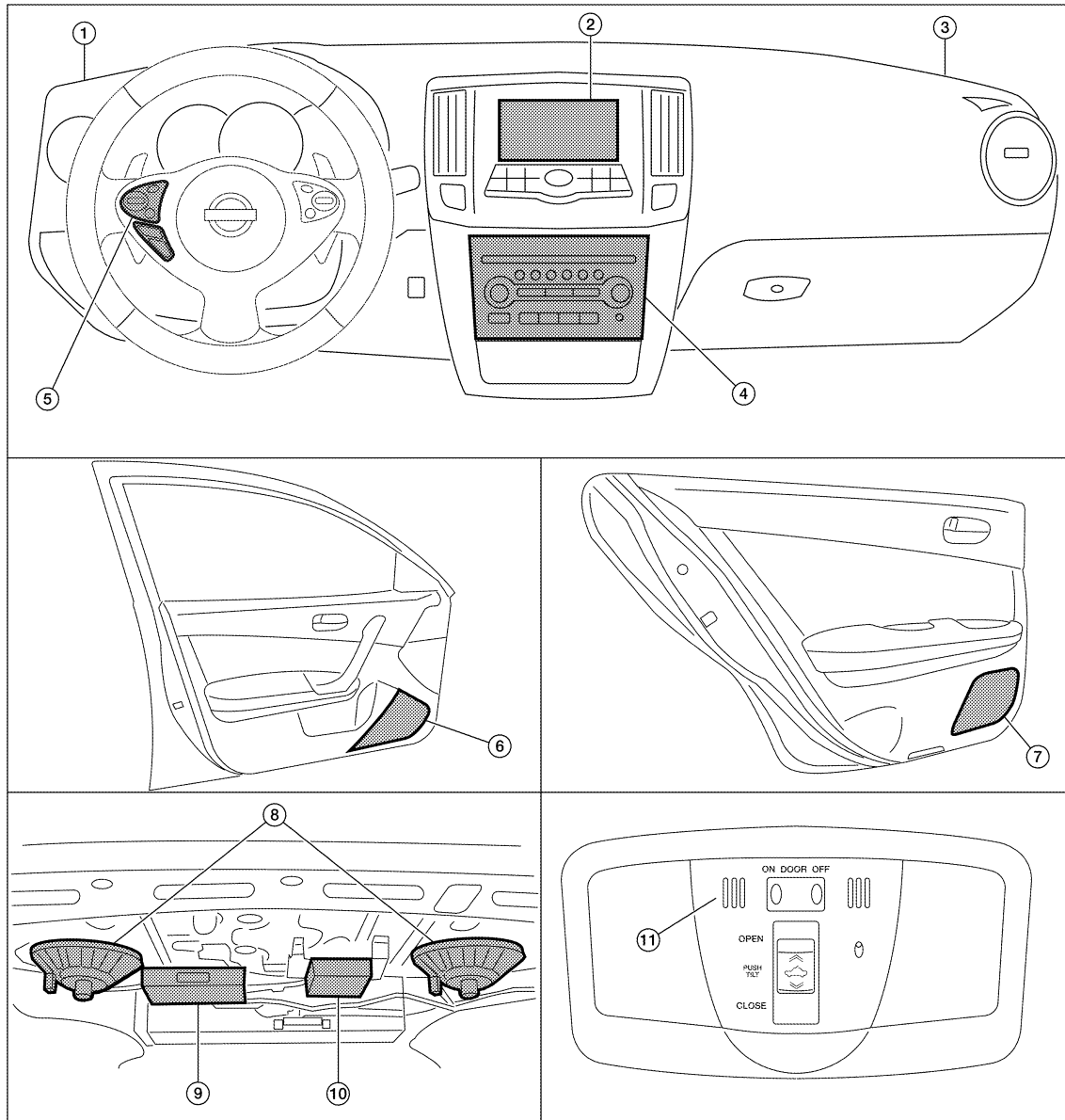
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

Component Parts Location

INFOID:000000005459990



ALNIA1160ZZ

- | | | |
|--|---|--|
| 1. Tweeter LH M143 | 2. Display unit M109 | 3. Tweeter RH M144 |
| 4. Audio unit M133, M147 | 5. Steering wheel audio control switches | 6. Front door speaker
LH D3
RH D103 |
| 7. Rear door speaker
LH D209
RH D309 | 8. Subwoofers (view of underside of parcel shelf)
LH B16
RH B17 | 9. Bluetooth control unit B125, B126, B130 |
| 10. Subwoofer amp. B21 | 11. Microphone R7 | |

HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

Component Description

INFOID:000000005459991

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

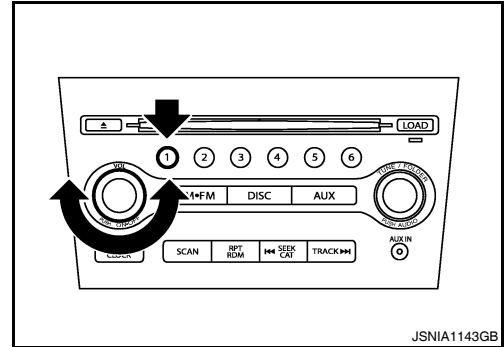
INFOID:000000005459992

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

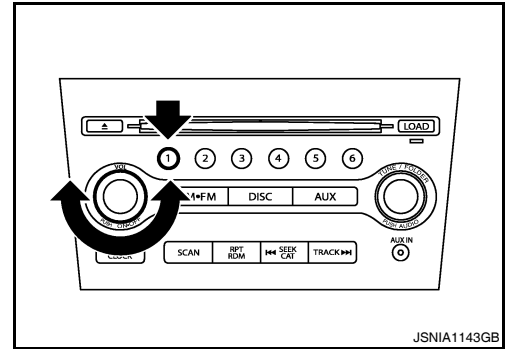
1. Turn ignition switch ON.
2. Turn the audio unit off.

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.

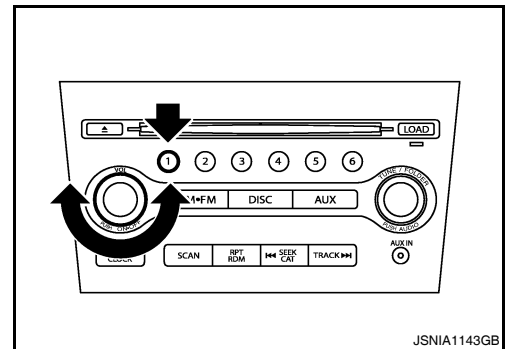
Channel check item

	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)

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

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	

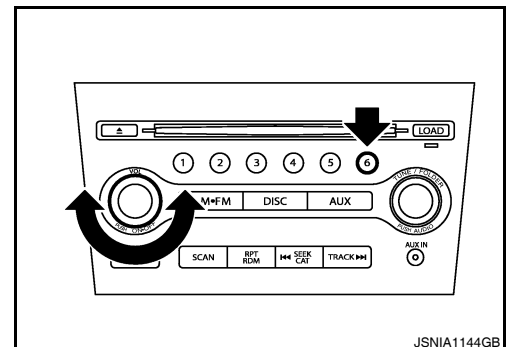
Key check item (steering switch)

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

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.
3. While pressing the "6" button, turn the volume control dial clockwise or counterclockwise for 30 clicks or more.



DIAGNOSIS SYSTEM (AUDIO UNIT)

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

4. Returns to diagnosis default screen and displays "AV DIAGNOSIS".
5. 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.

6. 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.

7. 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:000000005459993

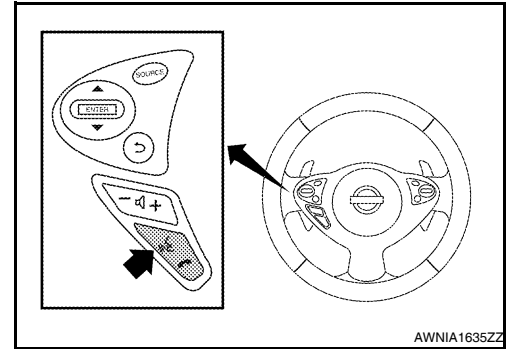
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

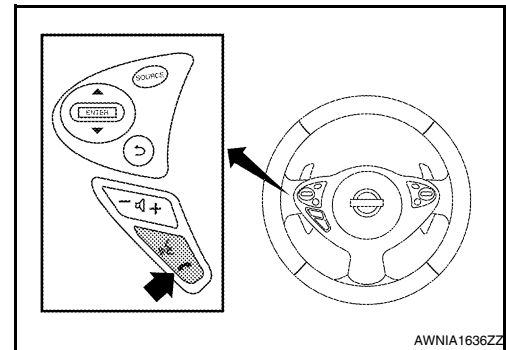
- Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

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-28, "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-28, "Work Flow"](#).
8. Self-diagnosis mode is complete when the voice prompt says “All diagnostic functions completed”.



Work Flow

INFOID:000000005459994

Failure Message	Action
“Internal failure”	Replace Bluetooth control unit. Refer to AV-85, "Removal and Installation" .
“Bluetooth antenna open”	1. Inspect harness connection.
“Bluetooth antenna shorted”	2. Replace Bluetooth antenna. Refer to AV-84, "Removal and Installation" .
“Phone/Send for Hands Free System is stuck”	Check steering wheel audio control switches. Refer to AV-78, "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-83, "Removal and Installation" .

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT
AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:000000005459995

Regarding Wiring Diagram information, refer to [AV-49, "Wiring Diagram"](#).

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?

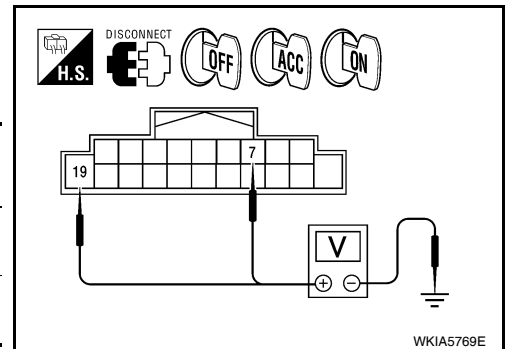
YES >> GO TO 2.

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:000000005459996

Regarding Wiring Diagram information, refer to [AV-49, "Wiring Diagram"](#).

1.CHECK FUSE

Check for blown fuses.

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AV

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

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

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

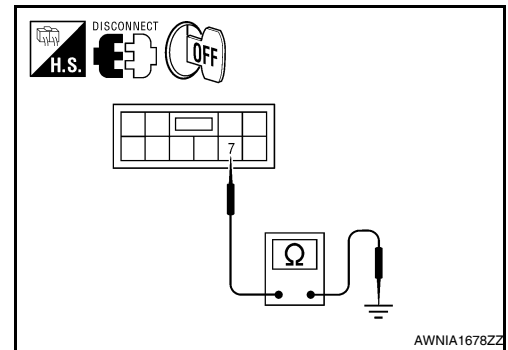
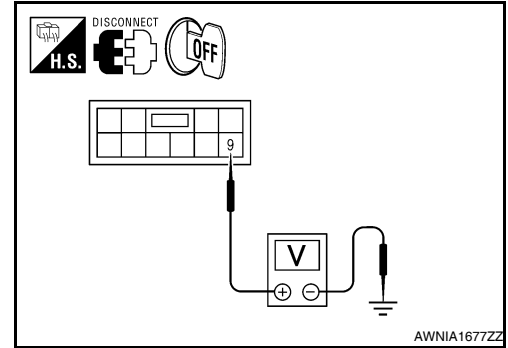
Check continuity between subwoofer amp harness connector and ground.

(+)		(-)	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:000000005459997

Regarding Wiring Diagram information, refer to [AV-49. "Wiring Diagram"](#).

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

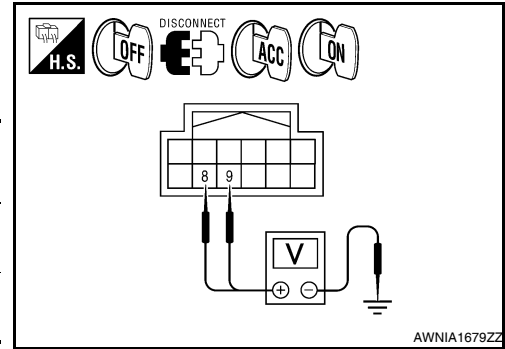
POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

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

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M109	9	Ground	Battery voltage	Battery voltage	Battery voltage
	8	Ground	0V	Battery voltage	Battery voltage



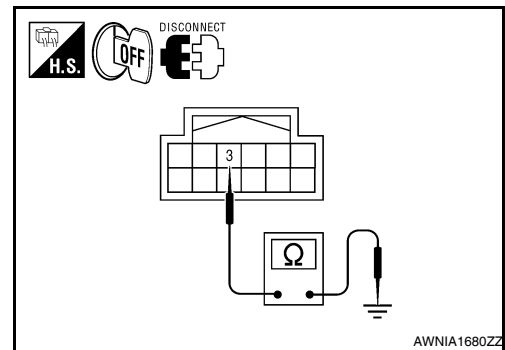
Are the voltage results as specified?

- 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
M109	3	Ground	Yes



Is the inspection result normal?

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

BLUETOOTH CONTROL UNIT

BLUETOOTH CONTROL UNIT : Diagnosis Procedure

INFOID:000000005459998

Regarding Wiring Diagram information, refer to [AV-49, "Wiring Diagram"](#).

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

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

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:000000005459999

Regarding Wiring Diagram information, refer to [AV-49. "Wiring Diagram"](#).

1.CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

Check voltage between microphone harness connector and ground.

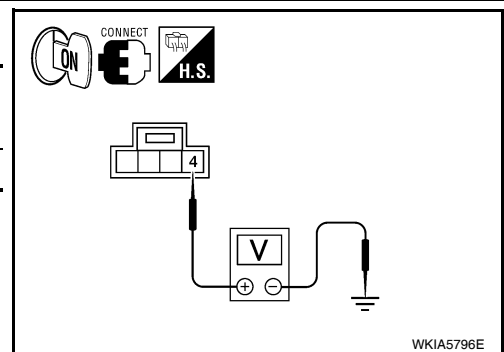
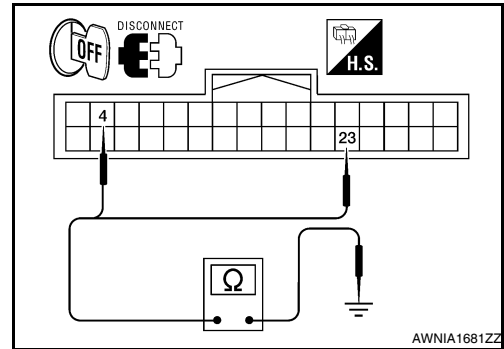
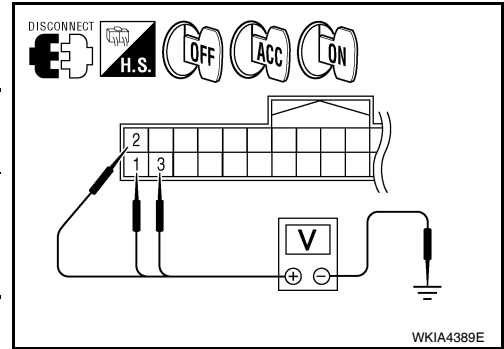
(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
R7	4	Ground	ON	5V

Is proper voltage present?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)



POWER SUPPLY AND GROUND CIRCUIT

[BASE AUDIO]

< COMPONENT DIAGNOSIS >

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-85, "Removal and Installation"](#).
 NO >> Repair harness or connector.

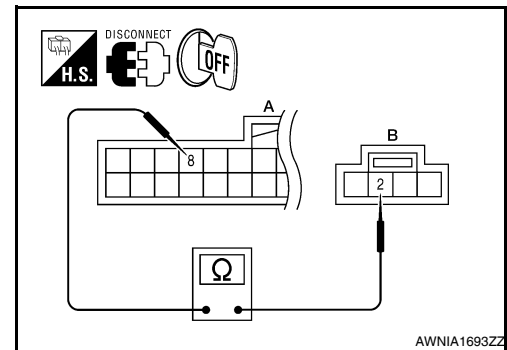
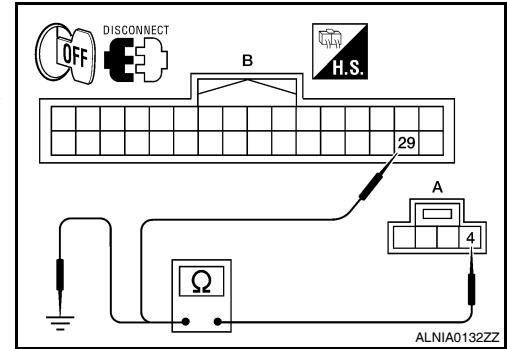
3.CHECK GROUND CIRCUIT

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.



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FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

FRONT DOOR SPEAKER

Description

INFOID:000000005460000

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

Diagnosis Procedure

INFOID:000000005460001

Regarding Wiring Diagram information, refer to [AV-49, "Wiring Diagram"](#).

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		

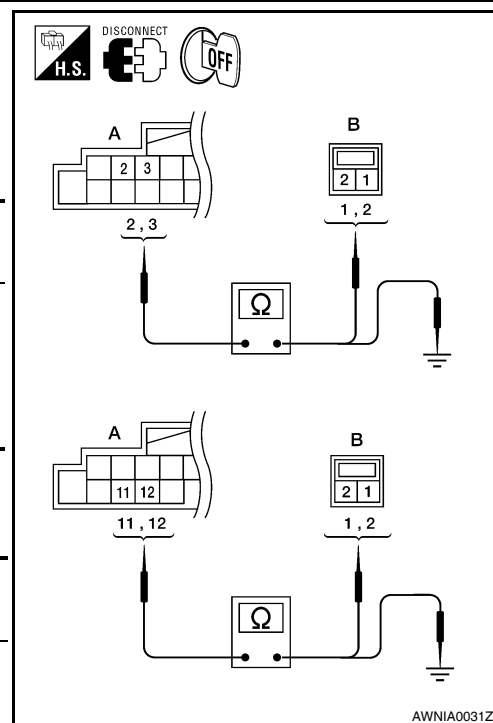
Are continuity results as specified?

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.

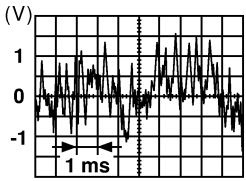


FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

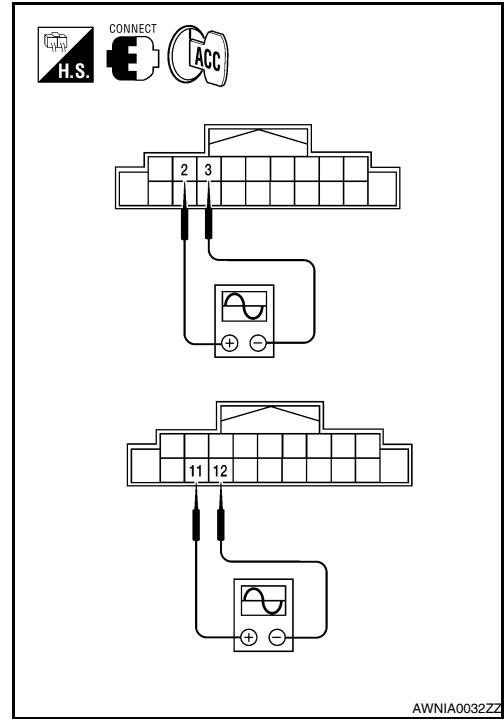
[BASE AUDIO]

- 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	12	<p>Receive audio signal</p>  <p>SKIA0177E</p>

Is the inspection result normal?

- YES >> Replace speaker. Refer to [AV-74. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-70. "Removal and Installation"](#).



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TWEETER

Description

INFOID:000000005460002

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

Diagnosis Procedure

INFOID:000000005460003

Regarding Wiring Diagram information, refer to [AV-49, "Wiring Diagram"](#).

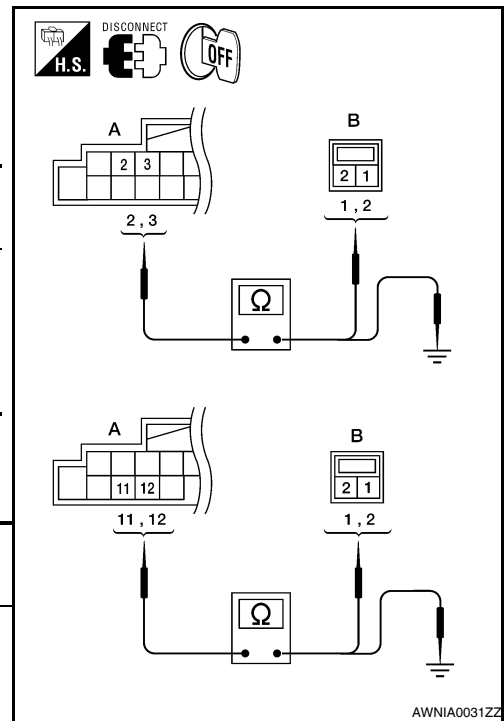
1. HARNESS CHECK

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		



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Are the continuity results as specified?

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

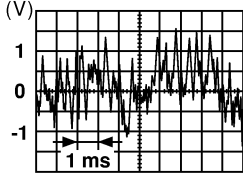
2. TWEETER SIGNAL CHECK

TWEETER

[BASE AUDIO]

< COMPONENT DIAGNOSIS >

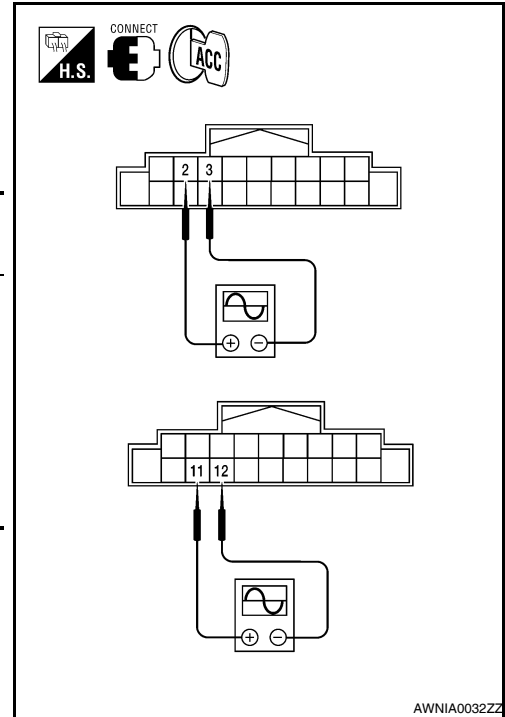
1. Connect audio unit connector and tweeter connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

(+)		(-)		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-73. "Removal and Installation"](#).

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



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REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

REAR DOOR SPEAKER

Description

INFOID:000000005460004

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

Diagnosis Procedure

INFOID:000000005460005

Regarding Wiring Diagram information, refer to [AV-49, "Wiring Diagram"](#).

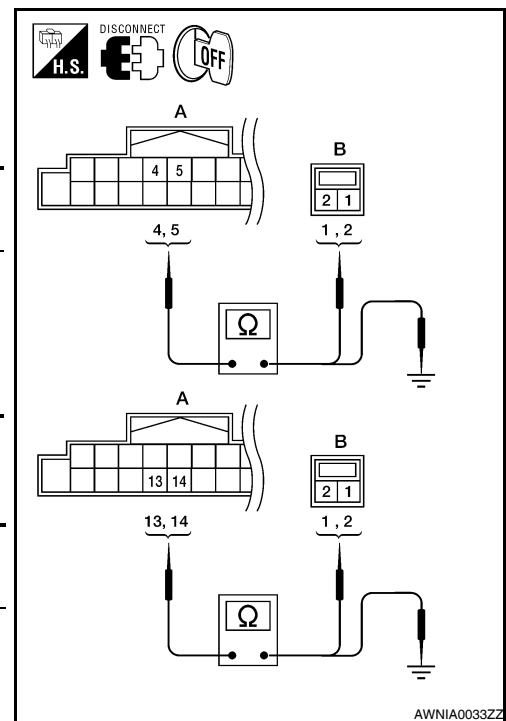
1. HARNESS CHECK

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	D209	1	Yes
	5		2	
	13	D309	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		



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Are the continuity results as specified?

YES >> GO TO 2.

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

• Repair harness or connector.

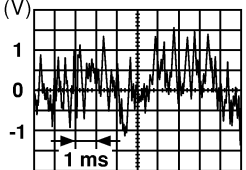
2. REAR DOOR SPEAKER SIGNAL CHECK

REAR DOOR SPEAKER

[BASE AUDIO]

< COMPONENT DIAGNOSIS >

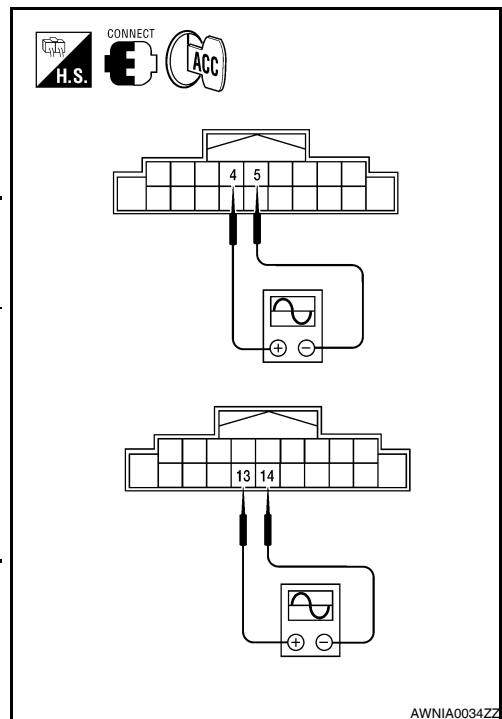
1. Connect audio unit connector and rear door speaker connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

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

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Is the audio signal voltage as specified?

- YES >> Replace rear door speaker. Refer to [AV-75, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-70, "Removal and Installation"](#).



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SUBWOOFER

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

SUBWOOFER

Description

INFOID:000000005460006

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:000000005460007

Regarding Wiring Diagram information, refer to [AV-49, "Wiring Diagram"](#).

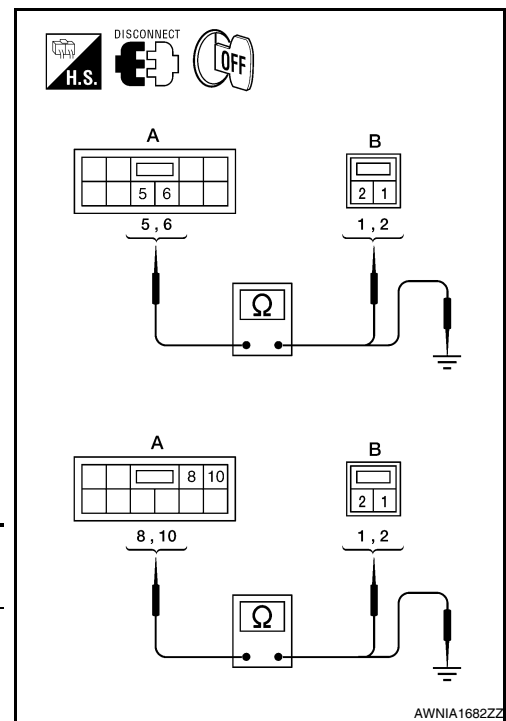
1. HARNESS CHECK

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		



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 >

[BASE AUDIO]

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		

Is the audio signal voltage as specified?

YES >> Replace suspect subwoofer. Refer to [AV-76. "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.

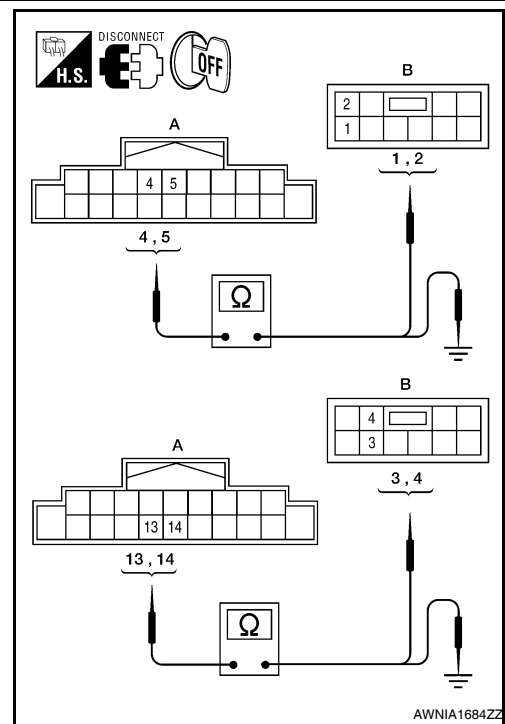
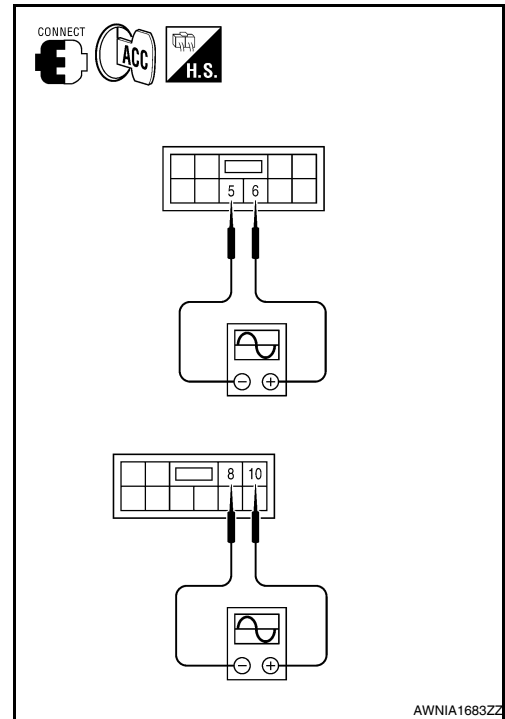
A		—	Continuity
Connector	Terminal		
M133	4	Ground	No
	5		
	13		
	14		

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

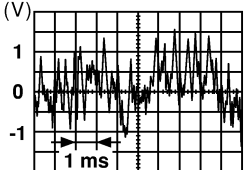


SUBWOOFER

[BASE AUDIO]

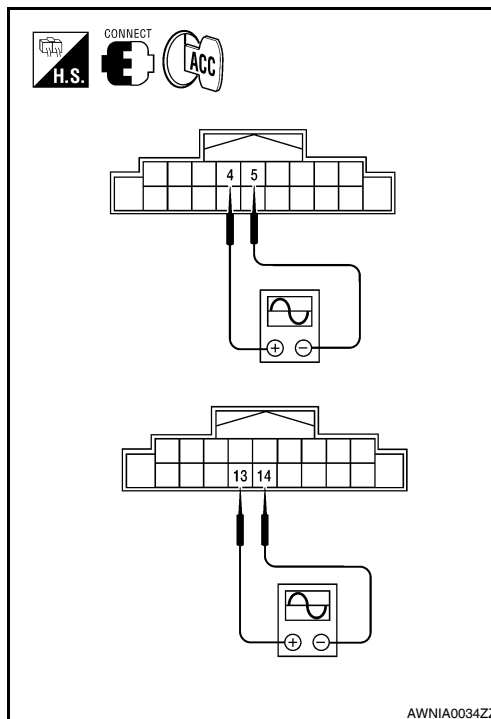
< COMPONENT DIAGNOSIS >

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-76, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-70, "Removal and Installation"](#).



STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

STEERING SWITCH

Description

INFOID:000000005460008

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

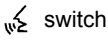



Diagnosis Procedure

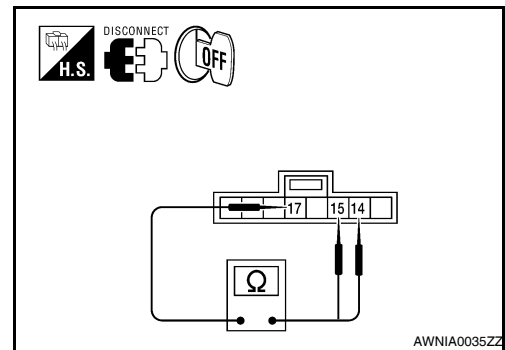
INFOID:000000005460009

Regarding Wiring Diagram information, refer to [AV-49, "Wiring Diagram"](#).

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	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	Seek (down)	Depress  switch.	220
	Seek (up)	Depress  switch.	110
	Phone/End	Depress  switch.	0



Do the steering switches check OK?

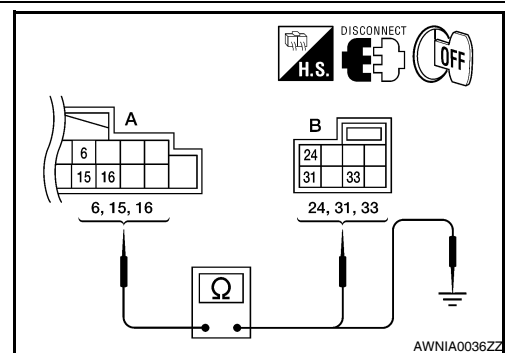
YES >> GO TO 2.

NO >> Replace steering switch. Refer to [AV-78, "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?

STEERING SWITCH

[BASE AUDIO]

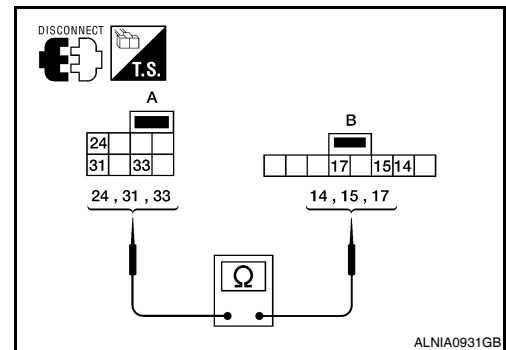
< COMPONENT DIAGNOSIS >

- 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 [SR-8. "Removal and Installation"](#).

MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000005460010

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

Diagnosis Procedure

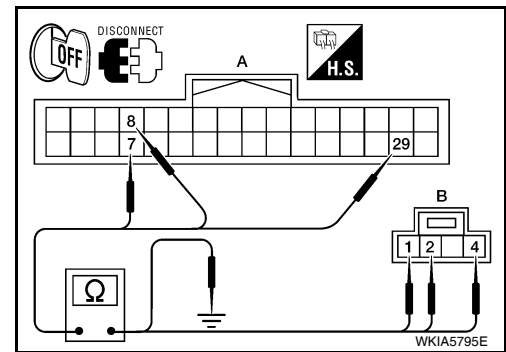
INFOID:000000005460011

Regarding Wiring Diagram information, refer to [AV-49, "Wiring Diagram"](#).

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.

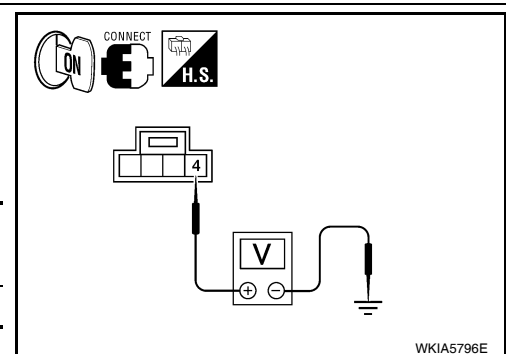
(+)		(-)	Voltage (approx.)
Connector	Terminal		
R7	4	Ground	5V

Is voltage reading approx. 5 volts?

YES >> GO TO 3.

NO >> Replace Bluetooth control unit. Refer to [AV-85, "Removal and Installation"](#).

3. CHECK MICROPHONE SIGNAL

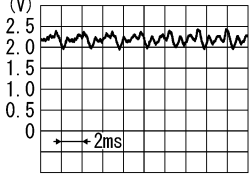


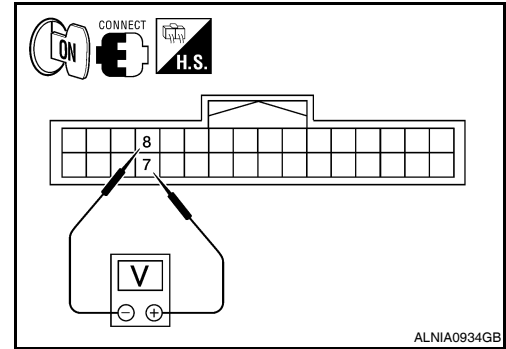
MICROPHONE SIGNAL CIRCUIT

< 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-85. "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-83. "Removal and Installation"](#).

AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

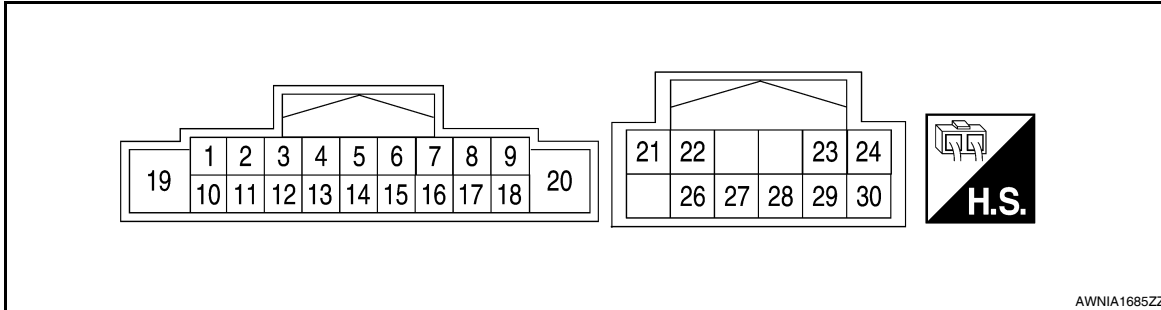
ECU DIAGNOSIS

AUDIO UNIT

Reference Value

INFOID:000000005460012

TERMINAL LAYOUT



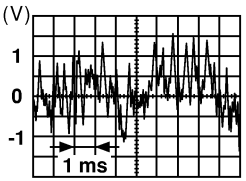
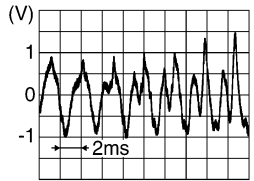
PHYSICAL VALUES

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

AUDIO UNIT

< ECU DIAGNOSIS >

[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 (LG/B)	-	Shield	-	-	-	-

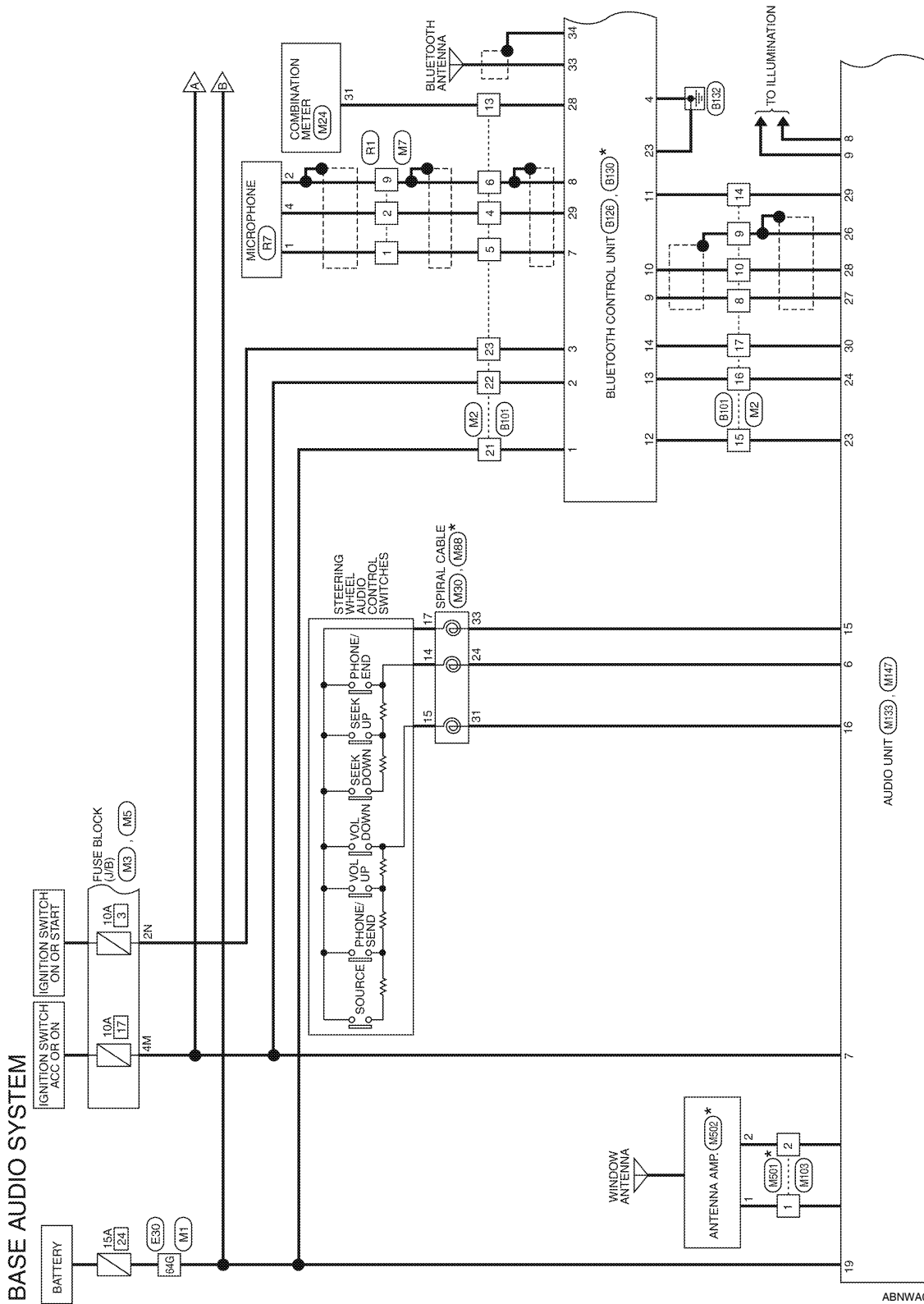
AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

Wiring Diagram

INFOID:000000005460013



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

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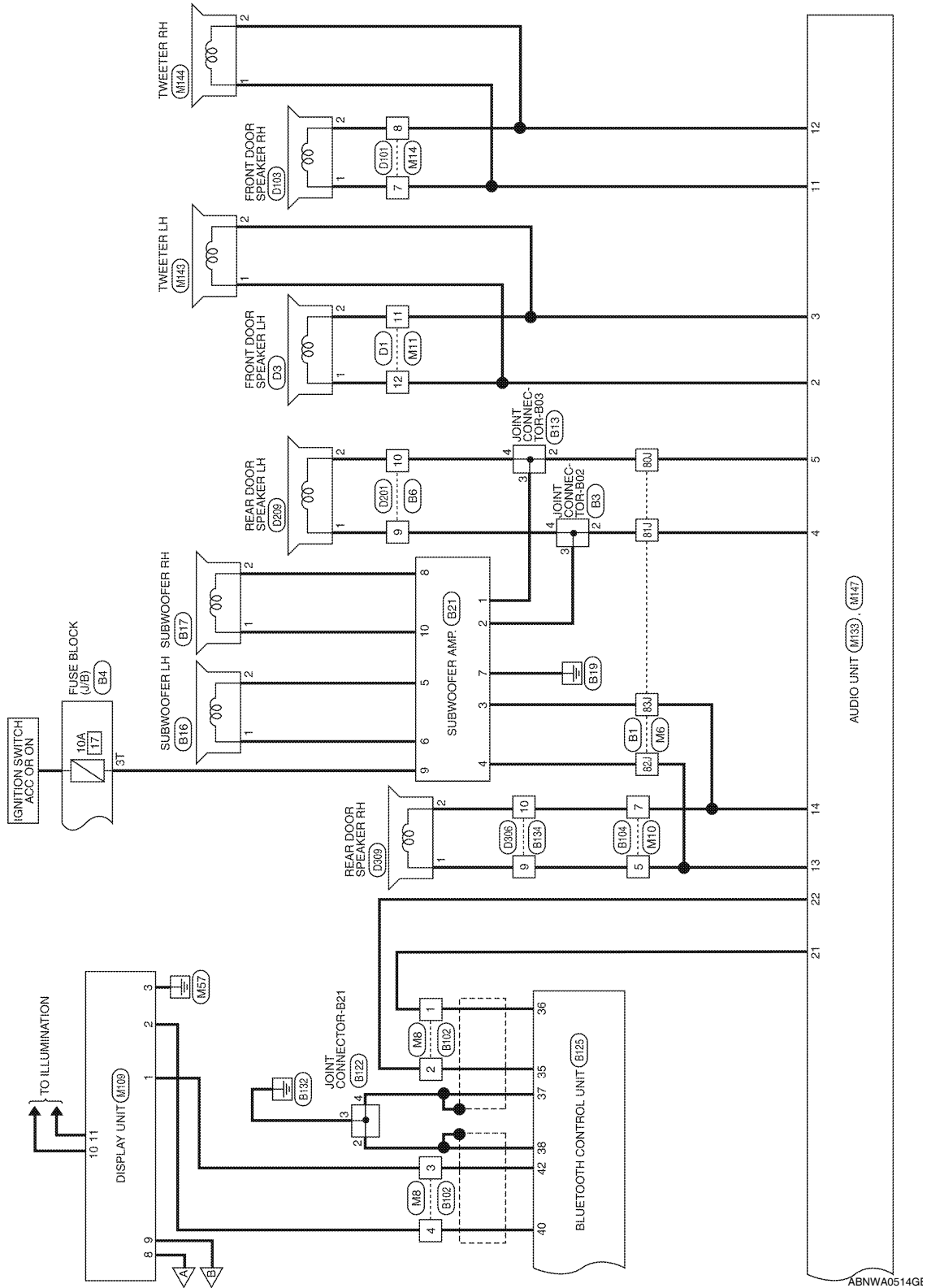
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AUDIO UNIT

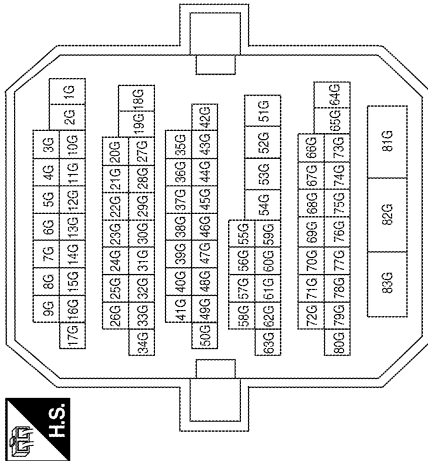
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[BASE AUDIO]

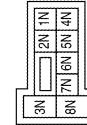


BASE AUDIO SYSTEM CONNECTORS

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



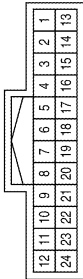
Terminal No.	Color of Wire	Signal Name
64G	Y/R	--



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

Terminal No.	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	G/O	--
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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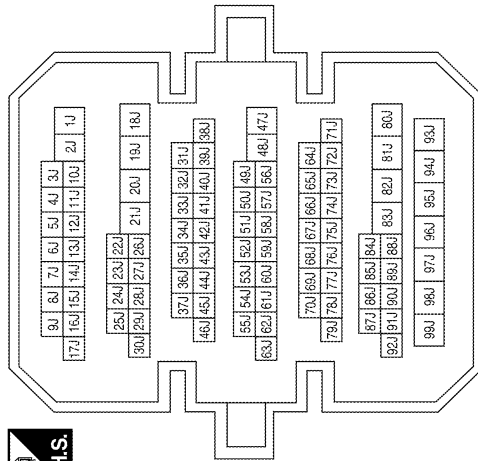
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AUDIO UNIT

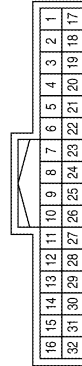
< ECU DIAGNOSIS >

[BASE AUDIO]

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



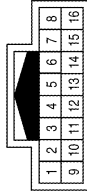
Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

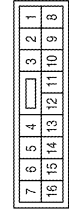
Terminal No.	Color of Wire	Signal Name
80J	B/Y	--
81J	LG	--
82J	O	--
83J	B/P	--

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



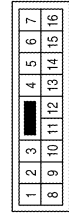
Terminal No.	Color of Wire	Signal Name
1	L	--
2	R	--
9	SHIELD	--

Connector No.	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



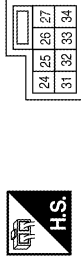
Terminal No.	Color of Wire	Signal Name
11	B/W	--
12	L	--

AUDIO UNIT

< ECU DIAGNOSIS >

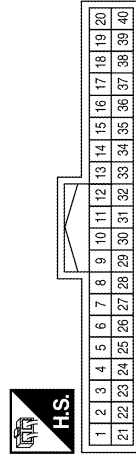
[BASE AUDIO]

Connector No.	M30
Connector Name	SPIRAL CABLE
Connector Color	GRAY



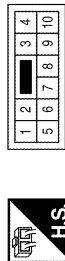
Terminal No.	Color of Wire	Signal Name
24	W/G	AUDIO STRG SW REMOTE A
31	GR/L	AUDIO STRG SW REMOTE B
33	L/B	AUDIO STRG SW GND

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



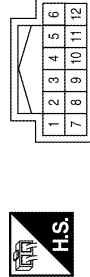
Terminal No.	Color of Wire	Signal Name
31	V/W	8P/R OUT

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



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

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



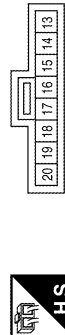
Terminal No.	Color of Wire	Signal Name
1	G	M-CAN L
2	R	M-CAN H
3	B	GND
4	-	-
5	-	-
6	-	-
7	-	-
8	V/Y	ACC
9	Y/R	+B
10	R/L	ILL+
11	R/Y	ILL-
12	-	-

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



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

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

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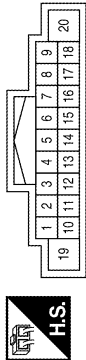
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AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

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



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

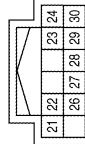


Terminal No.	Color of Wire	Signal Name
1	BR	--
2	B/R	--

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.	M147
Connector Name	AUDIO UNIT (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE



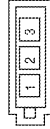
Terminal No.	Color of Wire	Signal Name
21	G	MULTIMEDIA CAN L
22	R	MULTIMEDIA CAN H
23	W/B	LADDER OUT 1
24	GR/R	LADDER OUT 2
25	--	--
26	SHIELD	TEL SHIELD
27	BR	TEL I/F+
28	Y	TEL I/F-
29	G/O	TEL ON
30	LG/B	LADDER SHIELD

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



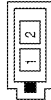
Terminal No.	Color of Wire	Signal Name
1	B	--
2	B	--

AUDIO UNIT

< ECU DIAGNOSIS >

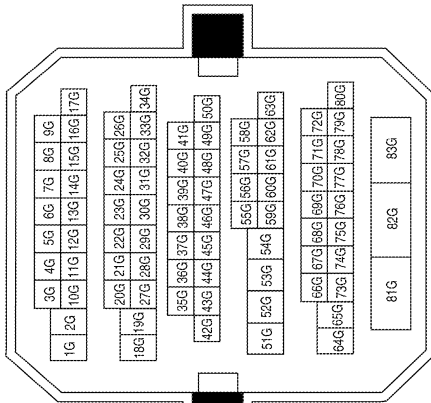
[BASE AUDIO]

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



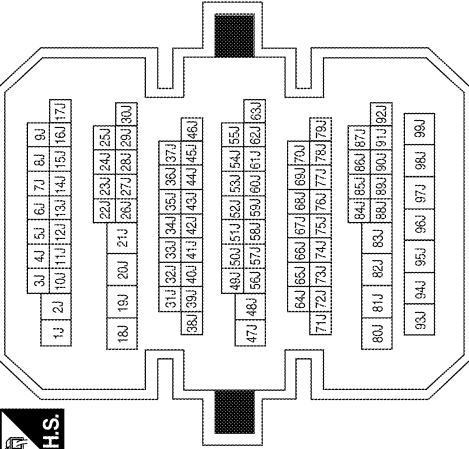
Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

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



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

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	-

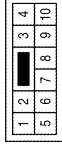
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AUDIO UNIT

< ECU DIAGNOSIS >

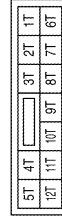
[BASE AUDIO]

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



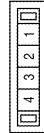
Terminal No.	Color of Wire	Signal Name
9	LG	--
10	O	--

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-B02
Connector Color	WHITE



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

Connector No.	B17
Connector Name	SUBWOOFER RH
Connector Color	WHITE



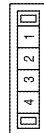
Terminal No.	Color of Wire	Signal Name
1	W	--
2	BR	--

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-B03
Connector Color	WHITE



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

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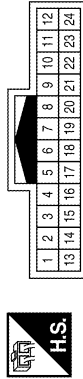
AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

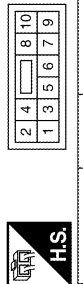
Terminal No.	Color of Wire	Signal Name
16	P	--
17	R	--
21	V	--
22	GR	--
23	O	--

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



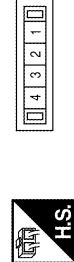
Terminal No.	Color of Wire	Signal Name
4	R	--
5	L	--
6	SHIELD	--
8	BR	--
9	SHIELD	--
10	Y	--
13	BR	--
14	SB	--
15	L	--

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



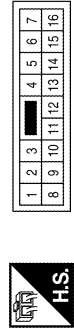
Terminal No.	Color of Wire	Signal Name
1	O	SP LH (-) IN
2	LG	SP LH (+) IN
3	P	SP RH (-) IN
4	L	SP RH (+) IN
5	V	WOOFER LH (-)
6	Y	WOOFER LH (+)
7	B	GND
8	BR	WOOFER RH (-)
9	G	ACC
10	W	WOOFER RH (+)

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.	B104
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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	--

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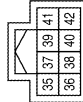
AV

AUDIO UNIT

< ECU DIAGNOSIS >

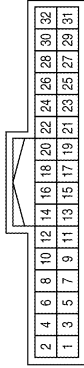
[BASE AUDIO]

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	G	CAN H2
41	-	-
42	R	CAN L2

Connector No.	B126
Connector Name	BLUETOOTH CONTROL UNIT (WITH BASE AUDIO SYSTEM)
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
12	L	LADDER IN1

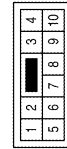
Terminal No.	Color of Wire	Signal Name
13	P	LADDER IN2
14	R	LADDER GND
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	B	CONT4
24	-	-
25	-	-
26	-	-
27	-	-
28	BR	SPEED
29	R	MIC POWER
30	-	-
31	-	-
32	-	-

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



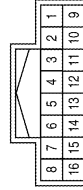
Terminal No.	Color of Wire	Signal Name
33	B	-
34	B	-

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	-

AUDIO UNIT

< ECU DIAGNOSIS >

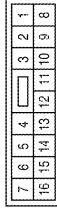
[BASE AUDIO]

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



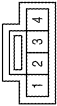
Terminal No.	Color of Wire	Signal Name
1	LG	-
2	O	-

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



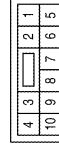
Terminal No.	Color of Wire	Signal Name
11	O	-
12	LG	-

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



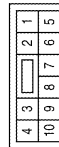
Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

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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
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AUDIO UNIT

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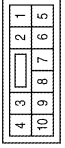
[BASE AUDIO]

Connector No.	D309
Connector Name	REAR DOOR SPEAKER RH (WITH BASE AUDIO SYSTEM)
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.	D209
Connector Name	REAR DOOR SPEAKER LH (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE

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

ABNIA1568GB

DISPLAY UNIT

< ECU DIAGNOSIS >

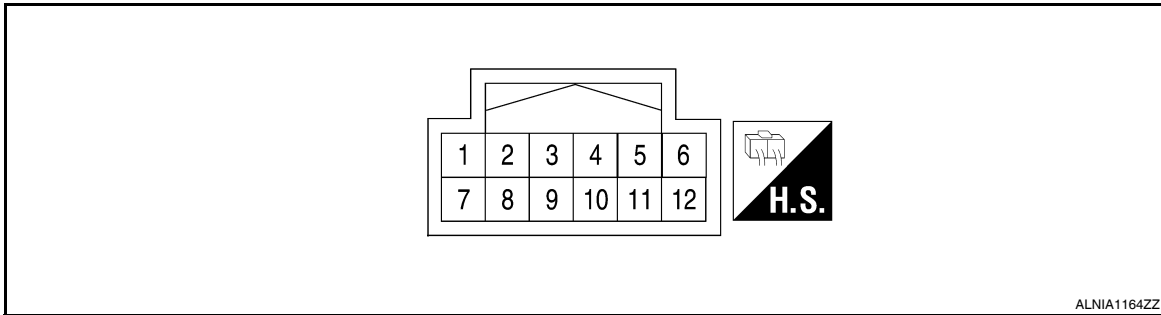
[BASE AUDIO]

DISPLAY UNIT

Reference Values

INFOID:000000005460014

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/Y)	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

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AV

SUBWOOFER AMP

< ECU DIAGNOSIS >

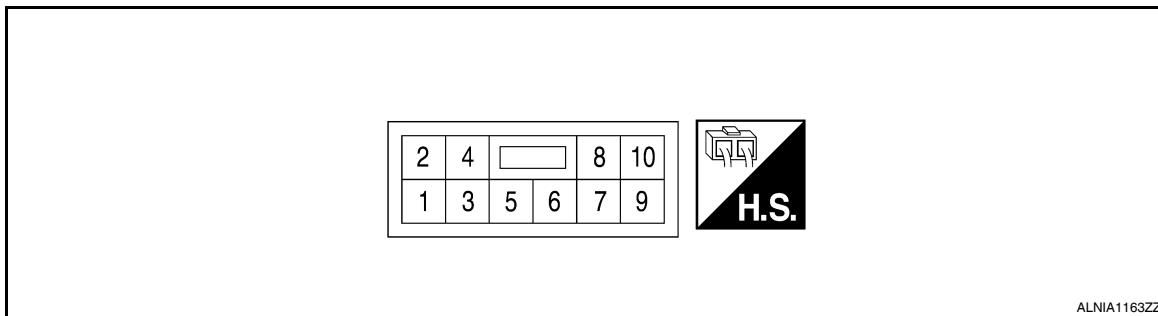
[BASE AUDIO]

SUBWOOFER AMP

Reference Value

INFOID:000000005460015

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 style="text-align: right;">SKIB3609E</p>
4 (L)	3 (P)	Audio signal RH	Input	ON	Receive audio signal.	<p style="text-align: right;">SKIB3609E</p>
5 (V)	6 (Y)	Subwoofer audio signal LH	Output	ON	Receive audio signal.	<p style="text-align: right;">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 style="text-align: right;">SKIB3609E</p>

BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS >

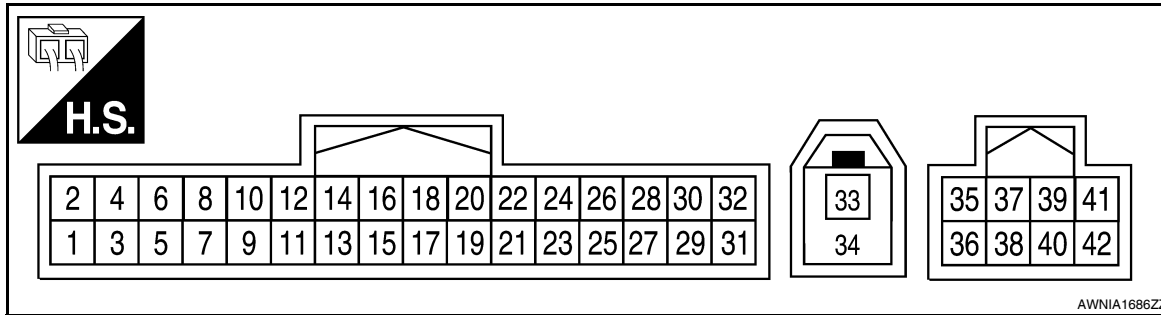
[BASE AUDIO]

BLUETOOTH CONTROL UNIT

Reference Value

INFOID:000000005460016

TERMINAL LAYOUT



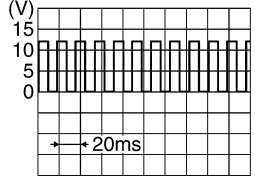
PHYSICAL VALUES

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	<p style="text-align: right; font-size: small;">SKIB3609E</p>
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 $\Psi\Sigma$ 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	ON	-	5V
33 (B)	-	Antenna	-	-		-
34 (B)	-	Antenna	-	-		-
35 (L)	-	M-CAN H1	-	-		-
36 (P)	-	M-CAN L1	-	-		-
37	-	Shield	-	-		-
38	-	Shield	-	-		-
40 (G)	-	M-CAN H2	-	-		-
42 (R)	-	M-CAN L2	-	-		-

AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[BASE AUDIO]

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:000000005460017

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-29 AV-70
Steering wheel audio control switches do not operate	<ul style="list-style-type: none"> Steering wheel audio control switches Audio unit 	<ul style="list-style-type: none"> AV-43 AV-70
All speakers do not sound	<ul style="list-style-type: none"> Audio unit Audio unit power circuit 	<ul style="list-style-type: none"> AV-70 AV-29
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-34 AV-36 AV-38 AV-40

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	Audio unit	AV-70
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-31 AV-85
Steering wheel audio control switches do not operate	<ul style="list-style-type: none"> Steering wheel audio control switches Audio unit Bluetooth control unit 	<ul style="list-style-type: none"> AV-43 AV-70 AV-85
Voice activated control does not operate	<ul style="list-style-type: none"> Microphone Steering wheel audio control switches Bluetooth control unit 	<ul style="list-style-type: none"> AV-45 AV-43 AV-85

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AV

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BASE AUDIO]

NORMAL OPERATING CONDITION

Description

INFOID:000000005460018

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

PRECAUTION

PRECAUTIONS

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

INFOID:000000005460019

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 WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

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

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect (Early Production, With Electronic Steering Column Lock)

INFOID:000000005885976

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.

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PRECAUTIONS

< PRECAUTION >

[BASE AUDIO]

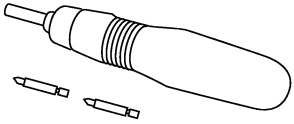
-
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
 6. Perform self-diagnosis check of all control units using CONSULT-III.

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000005460021

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

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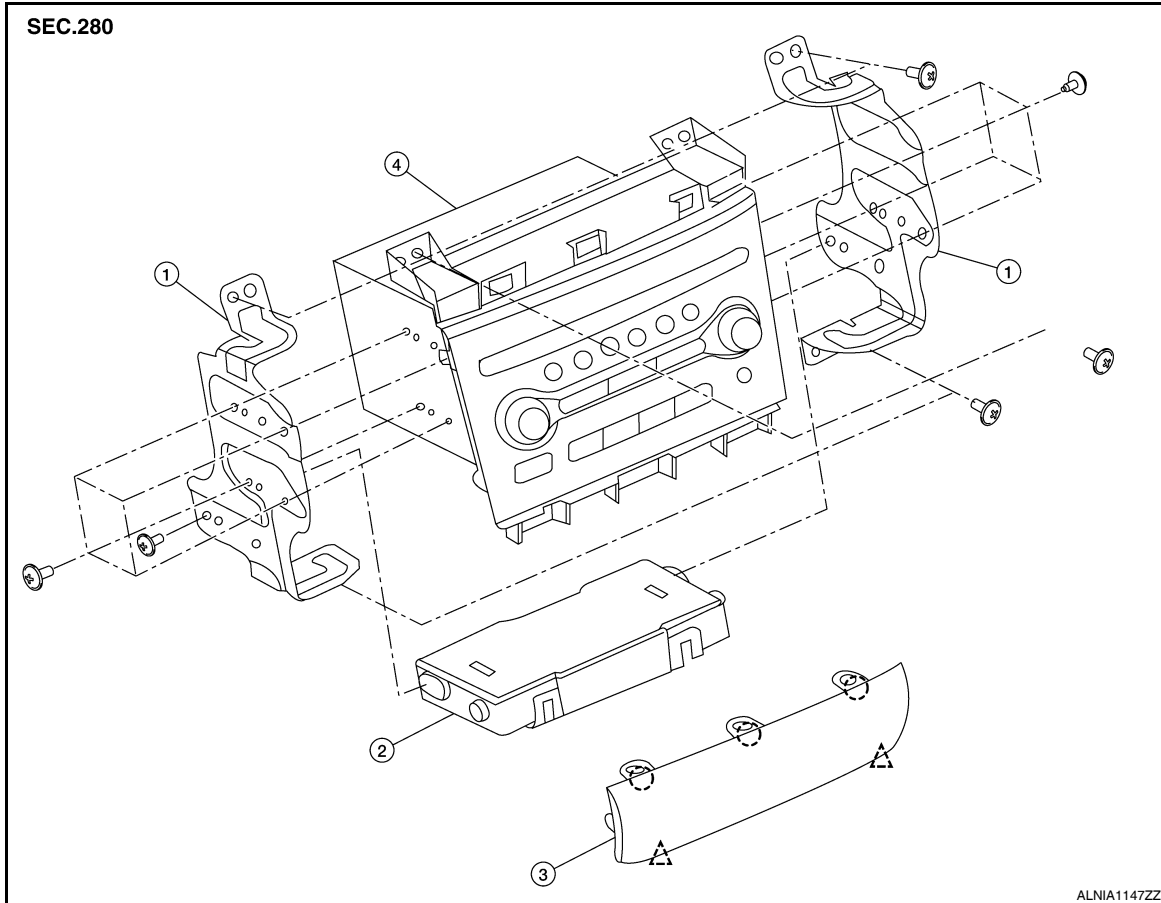
ON-VEHICLE REPAIR

AUDIO UNIT

Removal and Installation

INFOID:000000005460022

Base Audio

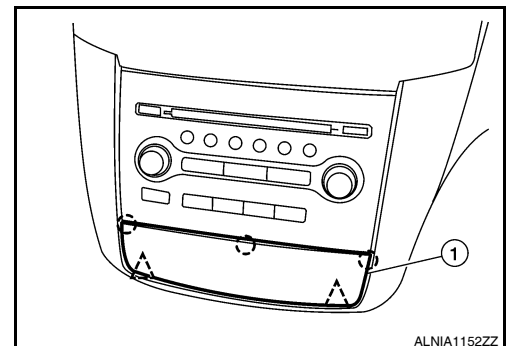


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|------------------------------|------------------|------------------------|
| 1. Audio unit brackets LH/RH | 2. A/C auto amp. | 3. Cluster lid C lower |
| 4. Audio unit | △ Clip | ○ Pawl |

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the cluster lid D. Refer to [JP-12. "Removal and Installation"](#).
3. Remove the cluster lid C lower finisher (1).

- ○: Pawl
- △: Clip

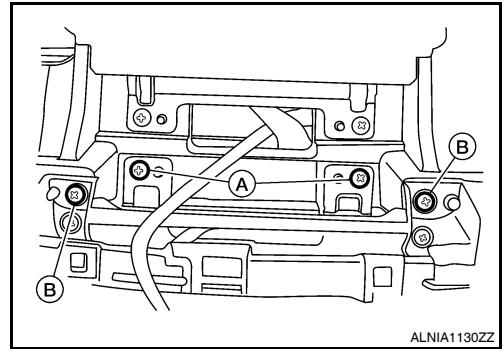


AUDIO UNIT

< ON-VEHICLE REPAIR >

[BASE AUDIO]

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



5. 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

< ON-VEHICLE REPAIR >

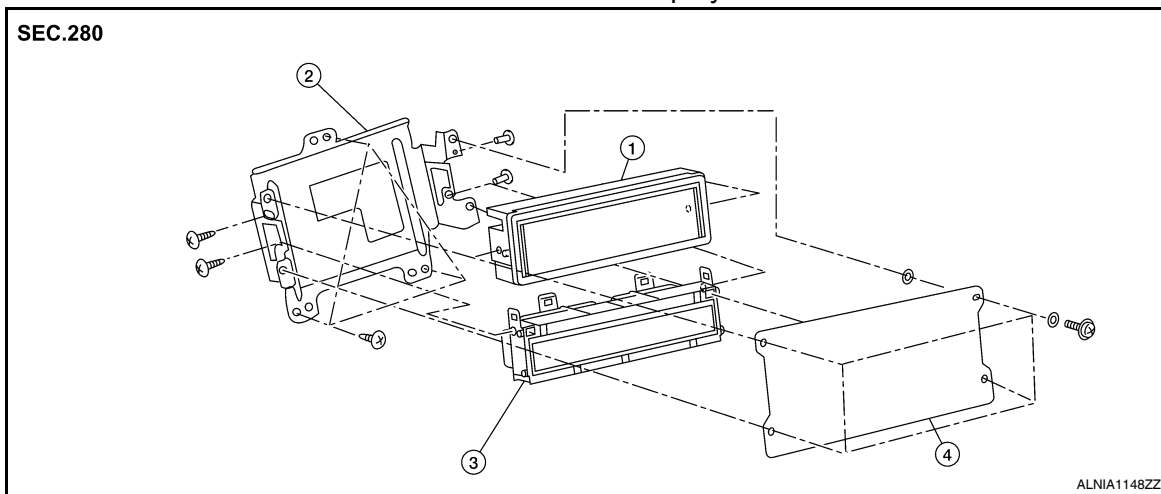
[BASE AUDIO]

AUDIO DISPLAY UNIT

Removal and Installation

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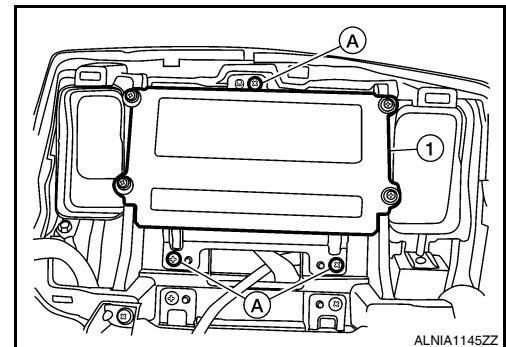
Monochrome Display



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

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the cluster lid D. Refer to [IP-12, "Removal and Installation"](#).
3. Remove the audio/A/C display unit bracket screws (A), then pull out the audio/A/C display unit assembly (1). Disconnect the audio display unit connectors and remove the audio display unit (1).



4. Remove the front cover, then disconnect the audio display unit connectors and remove the audio display unit from the audio/A/C display unit brackets.

INSTALLATION

Installation is in the reverse order of removal.

FRONT TWEETER

< ON-VEHICLE REPAIR >

[BASE AUDIO]

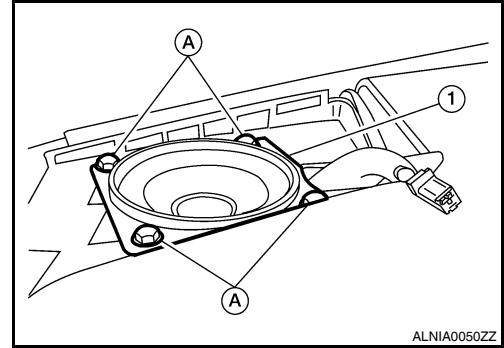
FRONT TWEETER

Removal and Installation

INFOID:000000005460024

REMOVAL

1. Remove front tweeter speaker grille. Refer to [IP-12. "Removal and Installation"](#).
2. 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]

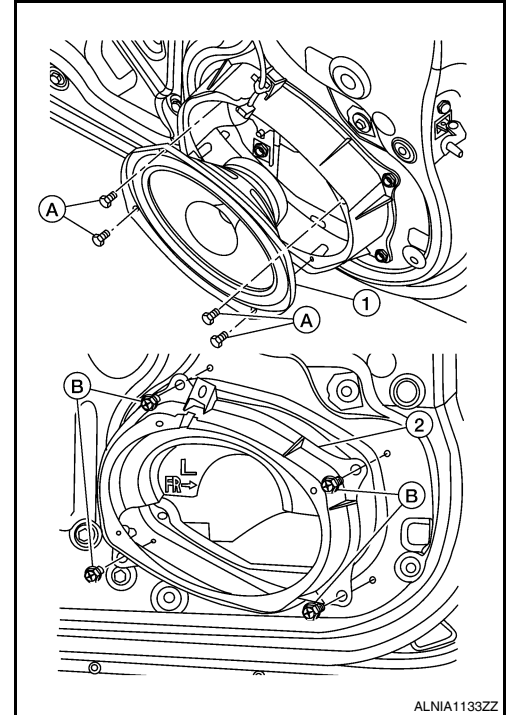
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000005460025

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.

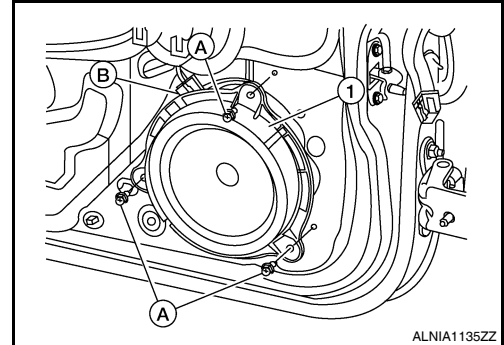
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000005460026

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

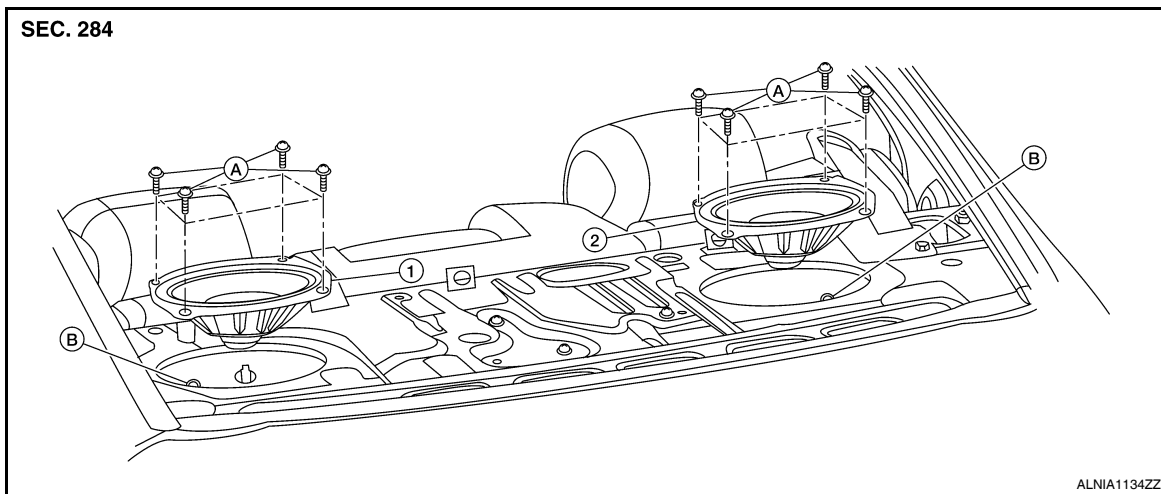
< ON-VEHICLE REPAIR >

[BASE AUDIO]

SUBWOOFER

Removal and Installation

INFOID:000000005460027



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.

SUBWOOFER AMP

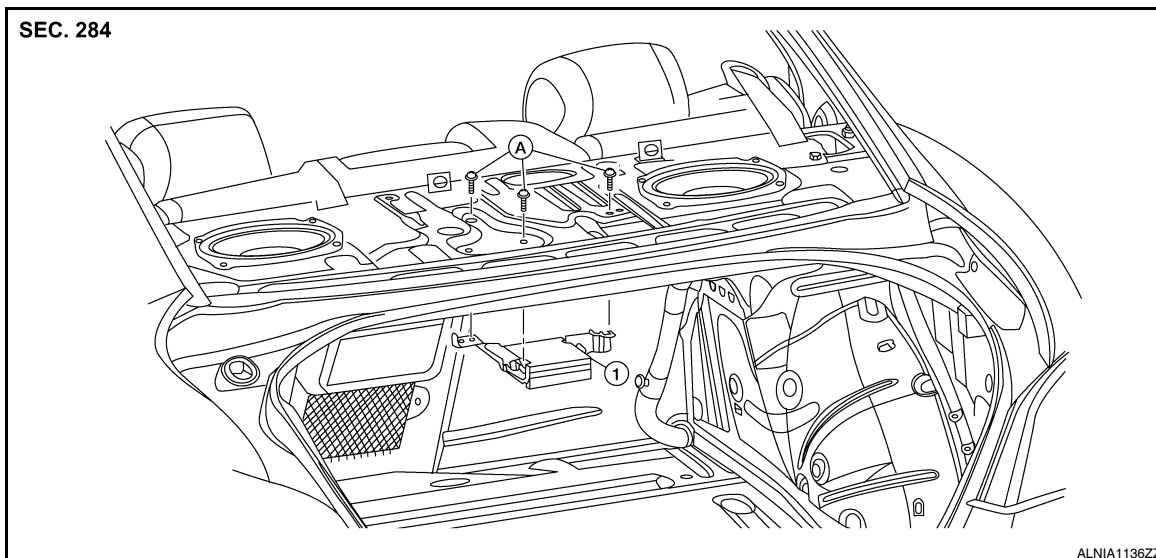
< ON-VEHICLE REPAIR >

[BASE AUDIO]

SUBWOOFER AMP

Removal and Installation

INFOID:000000005460028



1. Subwoofer amp. and bracket

A. Subwoofer amp. bracket screws

NOTE:

If removing the subwoofer amp. bracket, it is necessary to remove the parcel shelf finisher. The subwoofer amp. can be removed without removing the subwoofer amp. bracket.

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
3. Remove the subwoofer amp. screws, then disconnect the subwoofer amp. connectors and remove the subwoofer amp.

INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

< ON-VEHICLE REPAIR >

[BASE AUDIO]

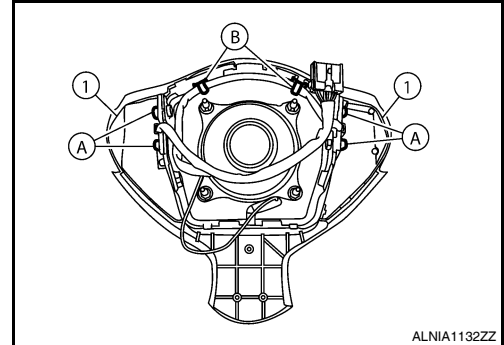
STEERING SWITCH

Removal and Installation

INFOID:000000005460029

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).



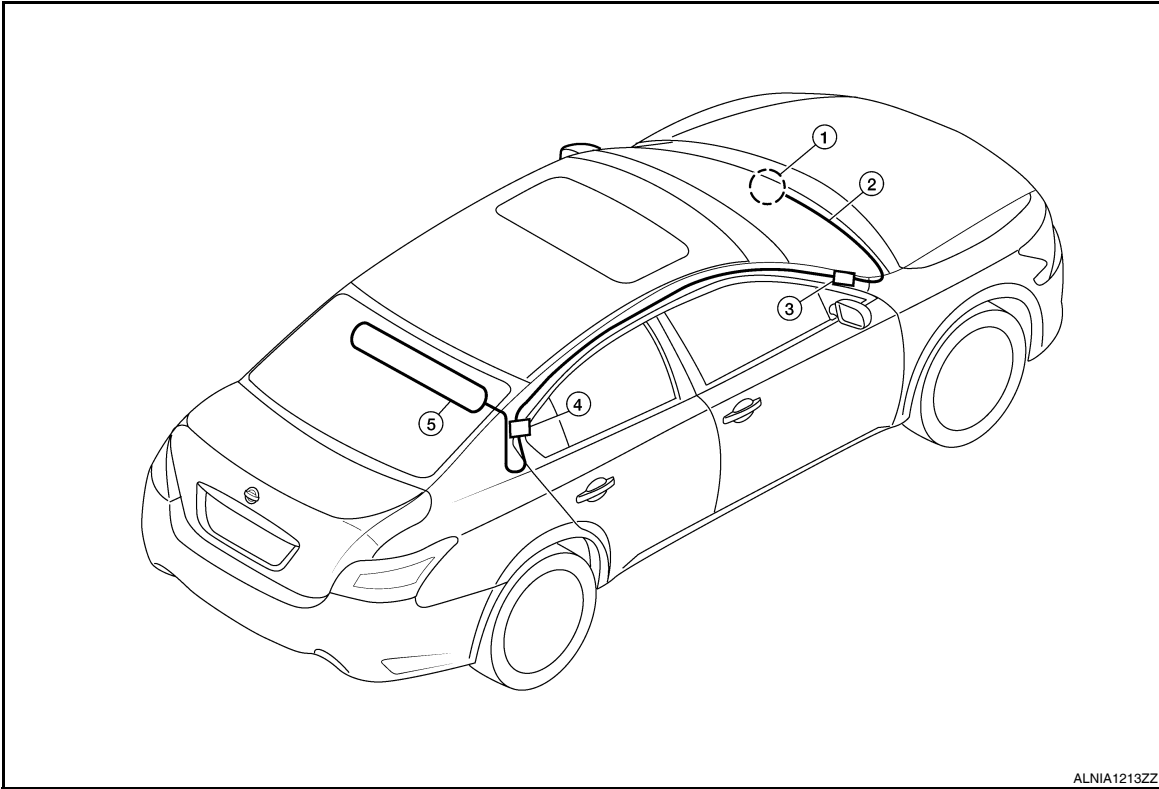
INSTALLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

Location of Antenna

INFOID:000000005460030



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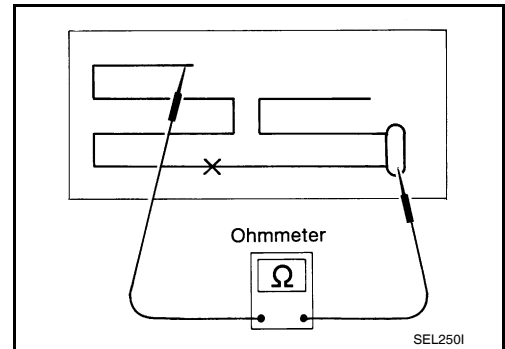
- | | | |
|-----------------|------------------------------|----------------------------------|
| 1. Audio unit | 2. Audio unit antenna feeder | 3. In-line connectors M103, M501 |
| 4. Antenna amp. | 5. Window antenna | |

Window Antenna Repair

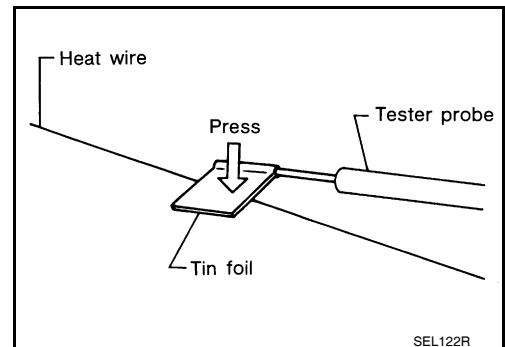
INFOID:000000005460031

ELEMENT CHECK

- 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.



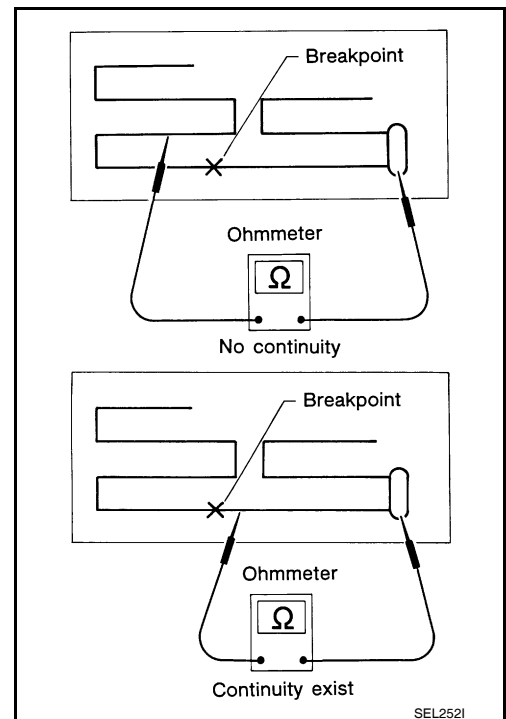
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AUDIO ANTENNA

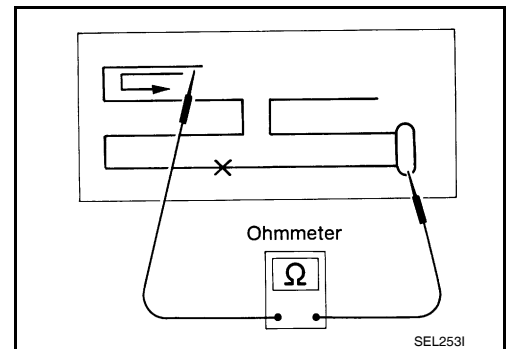
< ON-VEHICLE REPAIR >

[BASE AUDIO]

- 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

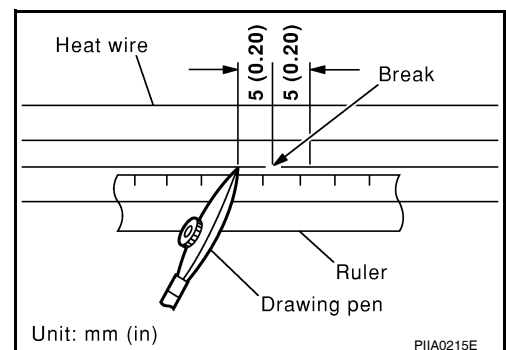
REPAIRING PROCEDURE

- 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.

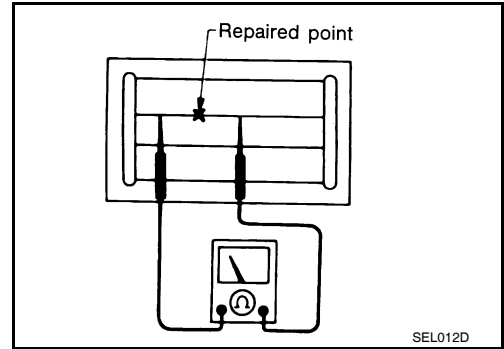


AUDIO ANTENNA

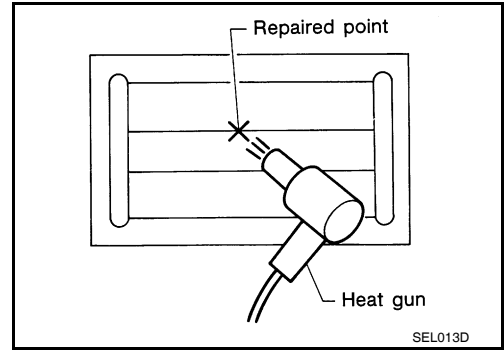
< ON-VEHICLE REPAIR >

[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]

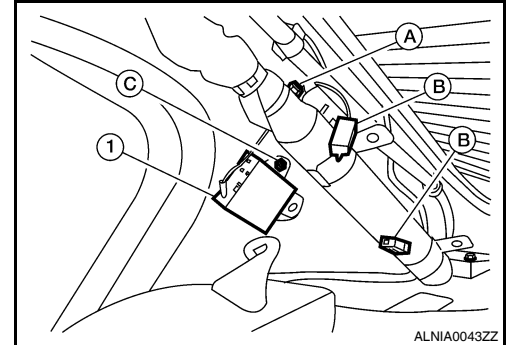
ANTENNA AMP.

Removal and Installation

INFOID:000000005460032

REMOVAL

1. Remove the rear pillar finisher RH. Refer to [INT-23. "Exploded View"](#).
2. 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.

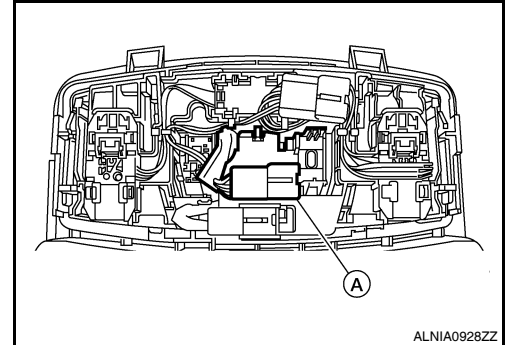
MICROPHONE

Removal and Installation

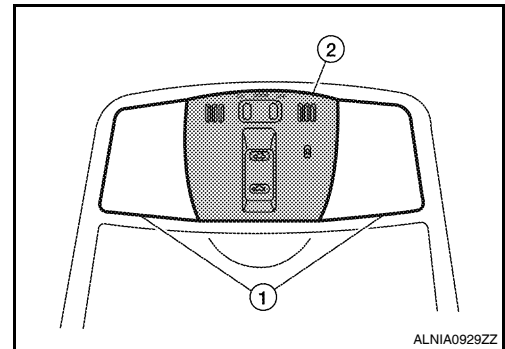
INFOID:000000005460033

REMOVAL

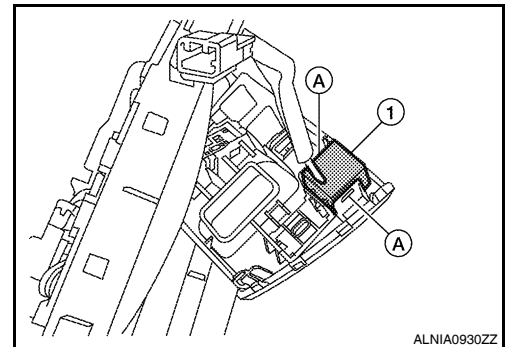
1. Remove the map lamp assembly. Refer to [INL-97, "Removal and Installation"](#).
2. Detach the microphone connector (A).



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.

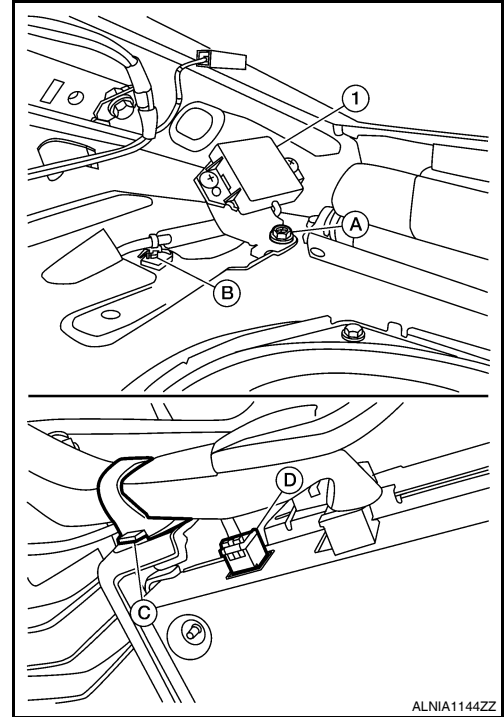
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TEL ANTENNA**Removal and Installation**

INFOID:000000005460034

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 antenna harness clip (C), disconnect the Bluetooth antenna harness connector (D) and remove the Bluetooth antenna (1).



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INSTALLATION

Installation is in the reverse order of removal.

BLUETOOTH CONTROL UNIT

< ON-VEHICLE REPAIR >

[BASE AUDIO]

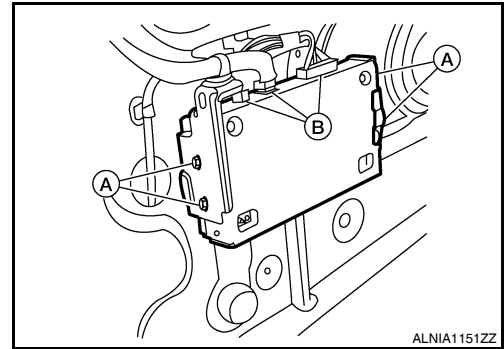
BLUETOOTH CONTROL UNIT

Removal and Installation

INFOID:000000005460035

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
3. Remove the parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
4. From inside the passenger compartment, remove the Bluetooth control unit bracket screws.
5. From inside the trunk, disconnect the Bluetooth control unit connectors (B) and remove the Bluetooth control unit and bracket assembly.
6. Remove the Bluetooth control unit bracket screws (A) to remove the Bluetooth control unit from the Bluetooth control unit brackets.



INSTALLATION

Installation is in the reverse order of removal.

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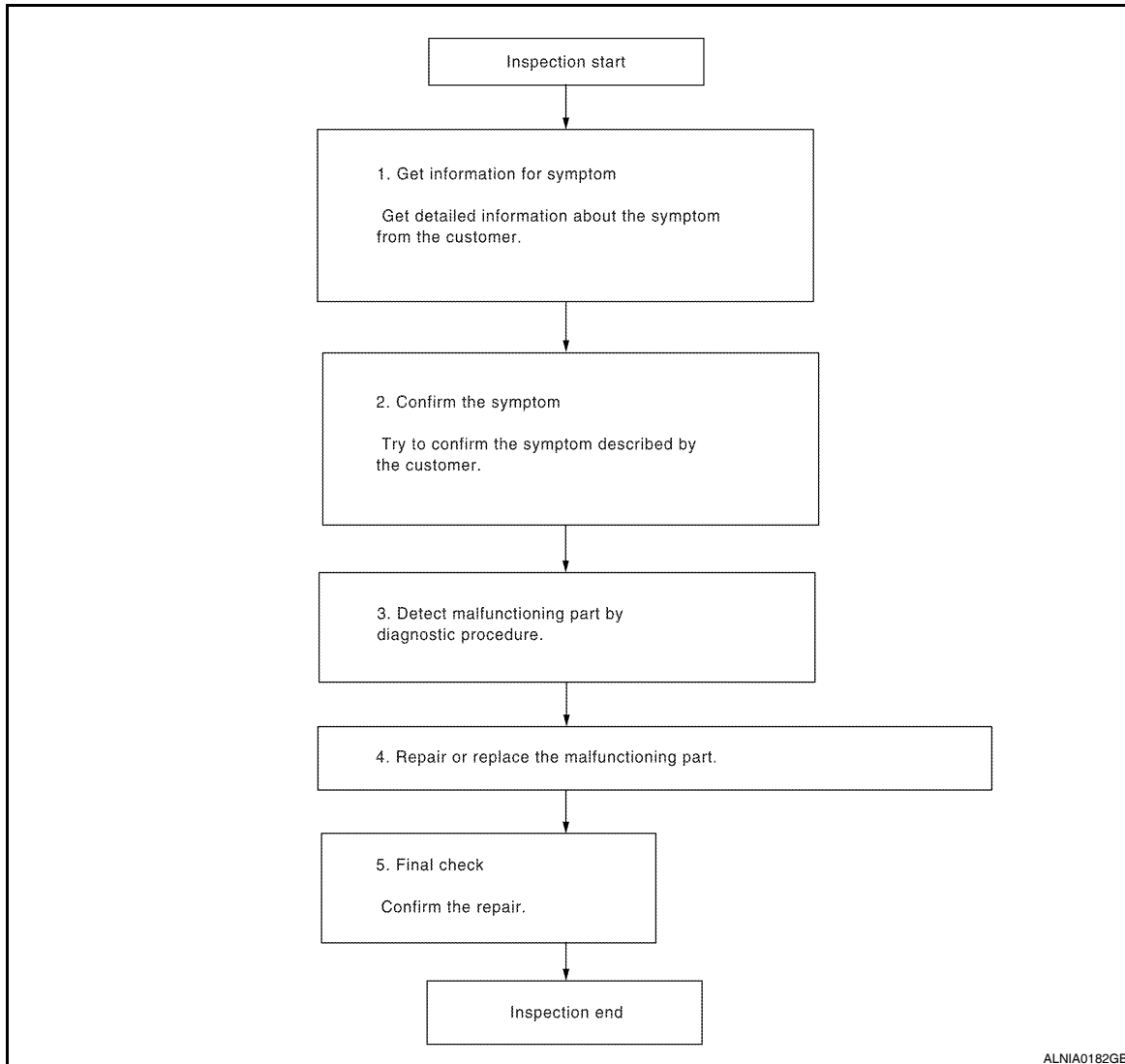
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000005460036

OVERALL SEQUENCE



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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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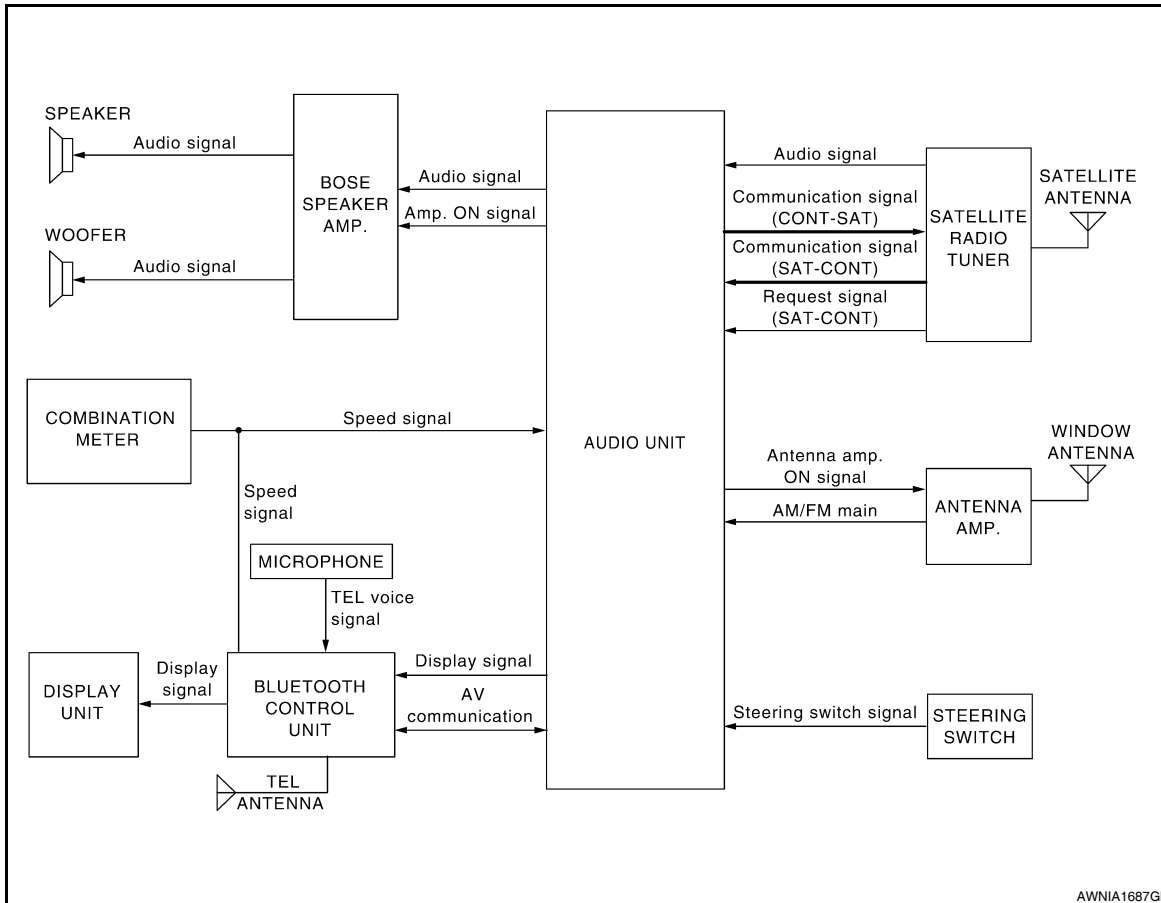
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FUNCTION DIAGNOSIS

AUDIO SYSTEM

System Diagram

INFOID:000000005460037



System Description

INFOID:000000005460038

AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Display unit
- Bluetooth control unit
- 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 the 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)

AUDIO SYSTEM

[BOSE W/ MONOCHROME DISPLAY]

< FUNCTION DIAGNOSIS >

• Satellite radio tuner

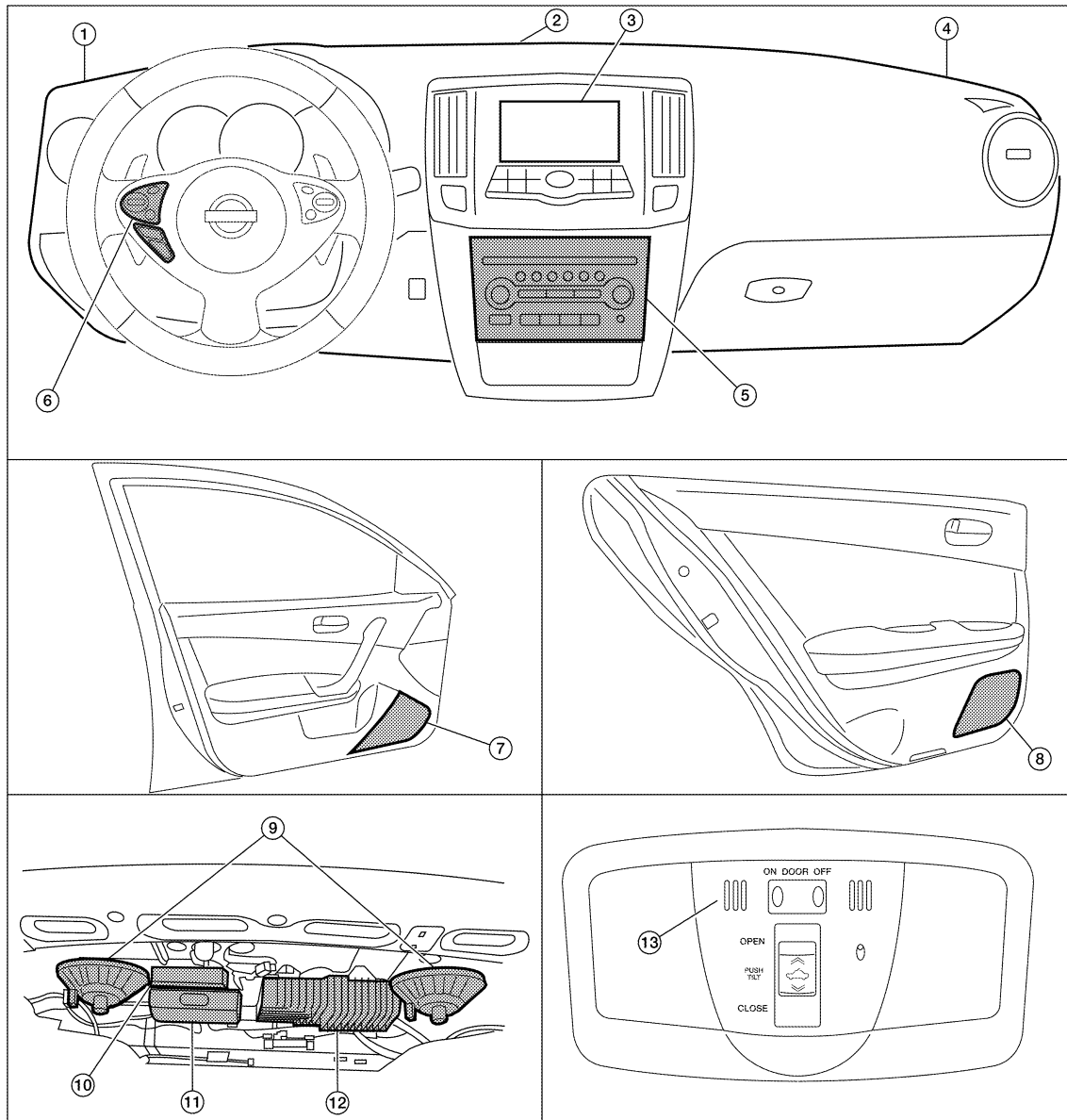
When the satellite radio system is on, radio signals are supplied to the satellite radio tuner from the satellite antenna. The satellite radio tuner then sends audio signals to the audio unit. Refer to Owner's Manual for satellite radio system operating instructions.

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.

Component Parts Location

INFOID:000000005460039



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- | | | |
|--|--|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Display unit M109 |
| 4. Tweeter RH M52 | 5. Audio unit M132, M135, 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
B125, B130, B131 | 11. Satellite radio tuner (if equipped) B111 | 12. BOSE speaker amp. B109, B110 |
| 13. Microphone R7 | | |

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AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Component Description

INFOID:000000005460040

Part name	Description
Audio unit	Controls audio system and satellite radio system functions
Bluetooth control unit	<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.

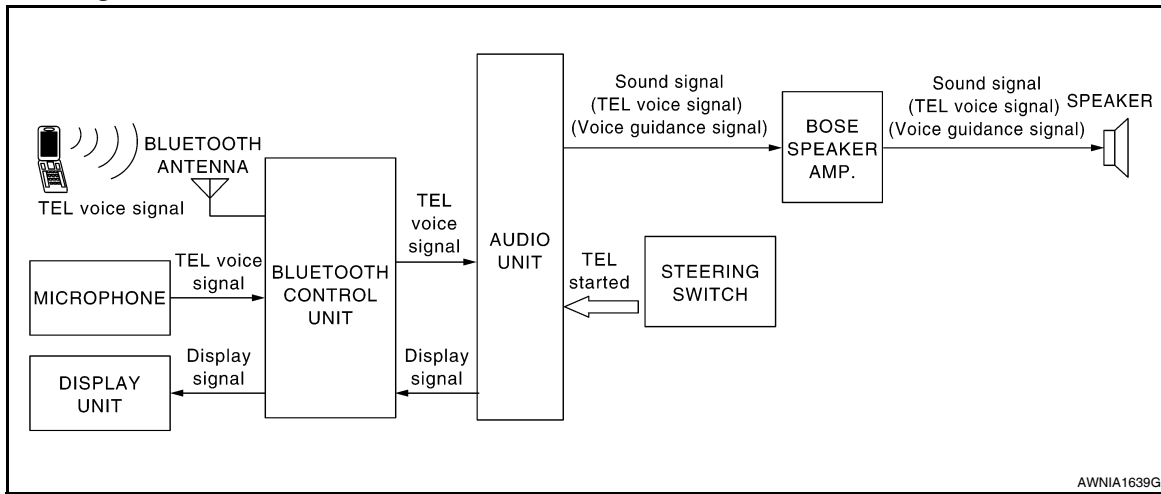
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

HANDS-FREE PHONE SYSTEM

System Diagram



System Description

INFOID:000000005460042

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. 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 20 seconds. If a phone is present in the vehicle and paired with the Bluetooth control unit, Nissan Voice Recognition will then become active. Bluetooth telephone functions can be turned off using the Nissan Voice Recognition system.

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

MICROPHONE

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

AUDIO UNIT

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

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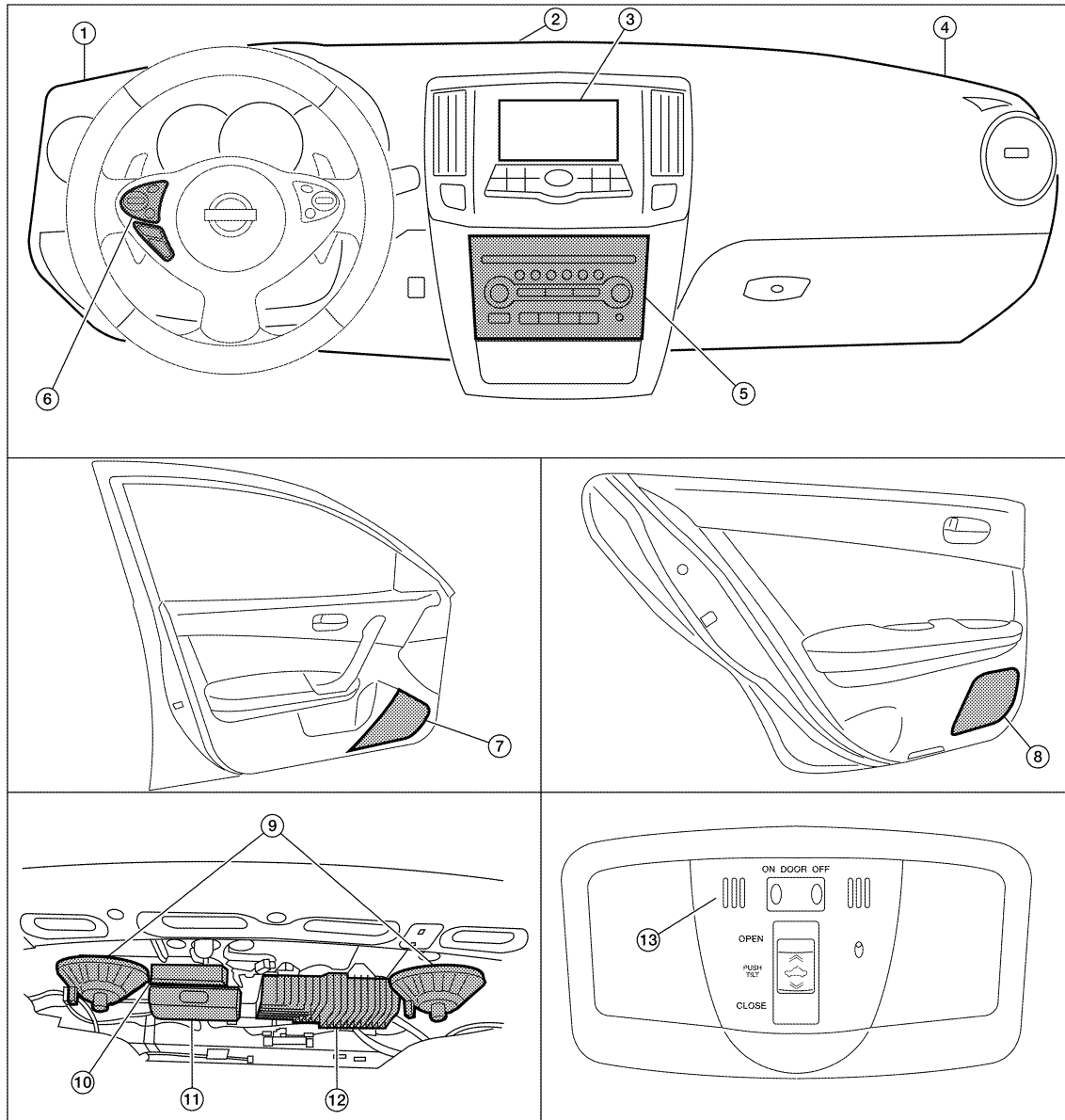
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Component Parts Location

INFOID:000000005460043



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- | | | |
|--|--|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Display unit M109 |
| 4. Tweeter RH M52 | 5. Audio unit M132, M135, 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
B125, B130, B131 | 11. Satellite radio tuner (if equipped) B111 | 12. BOSE speaker amp. B109, B110 |
| 13. Microphone R7 | | |

HANDS-FREE PHONE SYSTEM

[BOSE W/ MONOCHROME DISPLAY]

< FUNCTION DIAGNOSIS >

INFOID:000000005460044

Component Description

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

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DIAGNOSIS SYSTEM (AUDIO UNIT)

[BOSE W/ MONOCHROME DISPLAY]

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (AUDIO UNIT)

Diagnosis Description

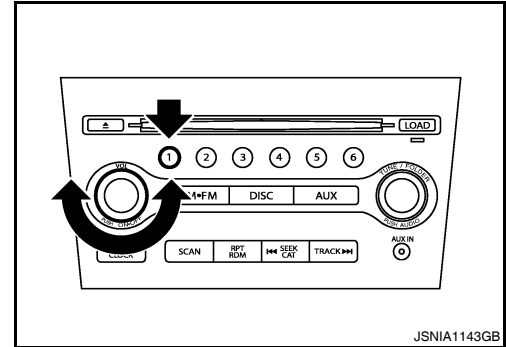
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Self-diagnosis mode can perform the following items.

- 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.



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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

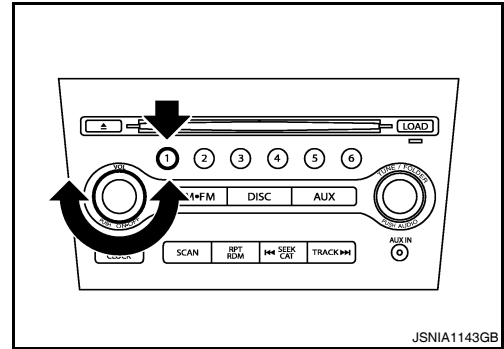
1. Turn ignition switch ON.
2. Turn the audio unit off.

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.

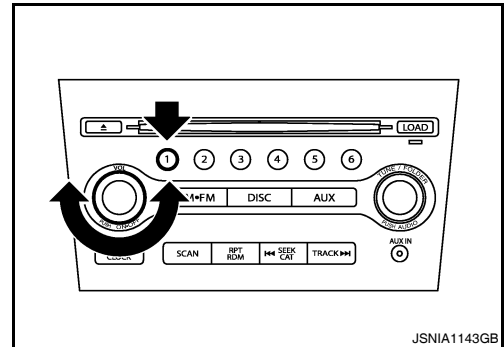
Channel check item

	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
	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	

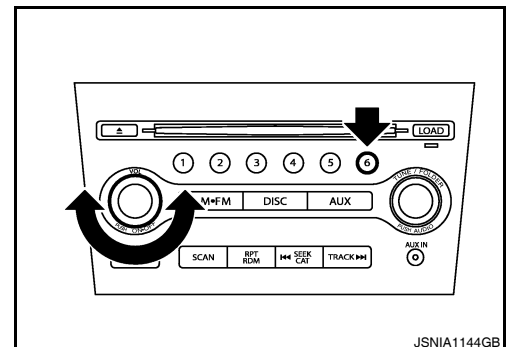
Key check item (steering switch)

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

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.
3. While pressing the "6" button, turn the volume control dial clockwise or counterclockwise for 30 clicks or more.



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DIAGNOSIS SYSTEM (AUDIO UNIT)

[BOSE W/ MONOCHROME DISPLAY]

< FUNCTION DIAGNOSIS >

4. Returns to diagnosis default screen and displays "AV DIAGNOSIS".
5. 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.

6. 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.

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

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AV

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

Diagnosis Description

INFOID:000000005460046

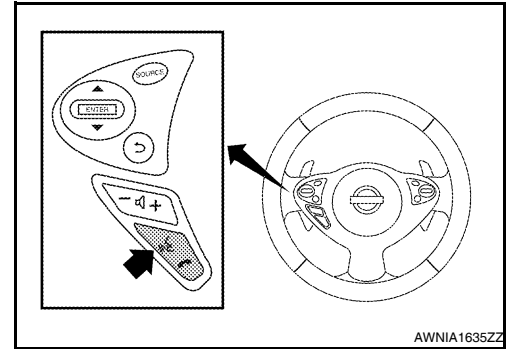
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

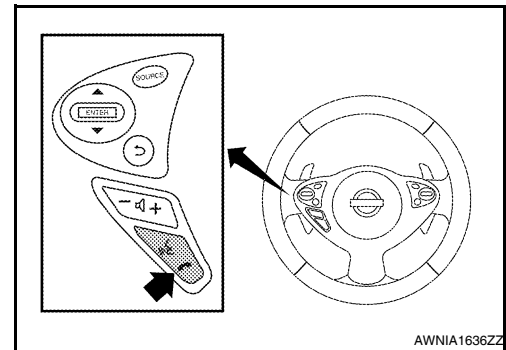
- Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

OPERATION PROCEDURE

1. Turn ignition switch to ACC or ON.
2. Wait for the Bluetooth system to complete initialization. This may take up to 20 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-98, "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-98, "Work Flow"](#).



Work Flow

INFOID:000000005460047

Failure Message	Action
"Internal failure"	Replace Bluetooth control unit. Refer to AV-85, "Removal and Installation" .
"Bluetooth antenna open"	1. Inspect harness connection.
"Bluetooth antenna shorted"	2. Replace Bluetooth antenna. Refer to AV-84, "Removal and Installation" .
"Phone/Send for Hands Free System is stuck"	Check steering wheel audio control switches. Refer to AV-78, "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-83, "Removal and Installation" .

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:000000005460048

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

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?

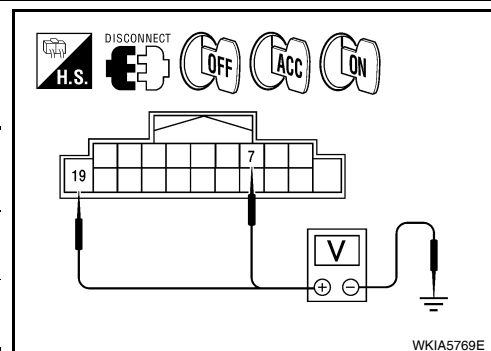
YES >> GO TO 2.

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.

(+)		(-)	OFF	ACC	ON
Connector	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:000000005460049

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

1.CHECK FUSES

Check that the following fuses are not blown.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

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

Are the fuses OK?

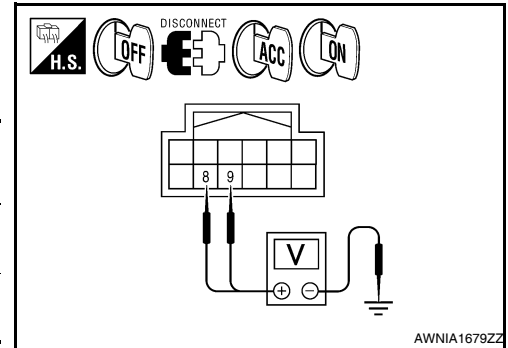
YES >> GO TO 2.

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				
M109	9	Ground	Battery voltage	Battery voltage	Battery voltage
	8	Ground	0V	Battery voltage	Battery voltage



Are the voltage results as specified?

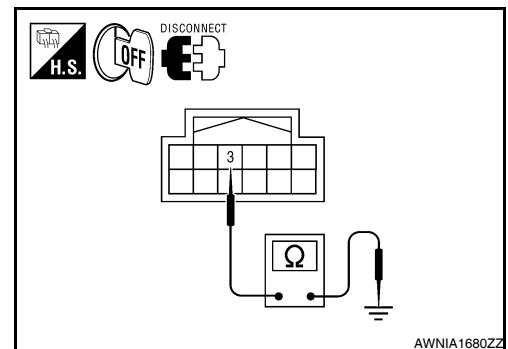
YES >> GO TO 3.

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
M109	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:000000005460050

Regarding Wiring Diagram information, refer to [AV-133. "Wiring Diagram"](#).

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.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

2.CHECK POWER SUPPLY CIRCUIT

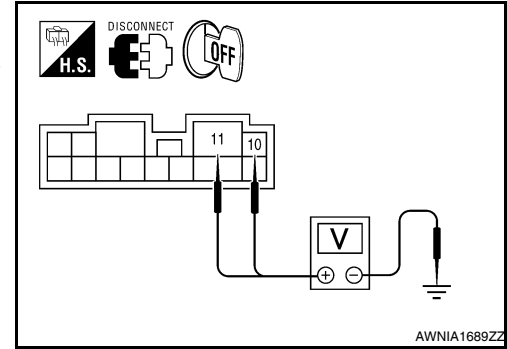
1. Turn ignition switch OFF.
2. Disconnect BOSE speaker amp connector.
3. Check voltage between BOSE speaker amp harness connector and ground.

(+)		(-)	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.



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3.CHECK GROUND CIRCUIT

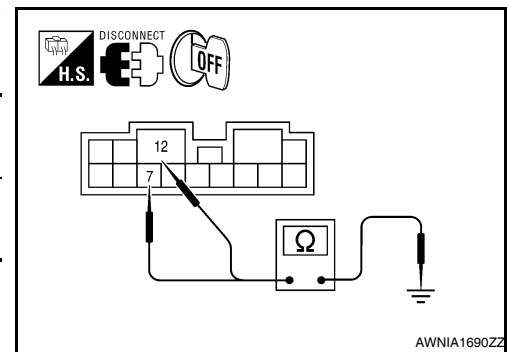
Check continuity between BOSE speaker amp harness connector and ground.

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

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.



AWNIA1690ZZ

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000005460051

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

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

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

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

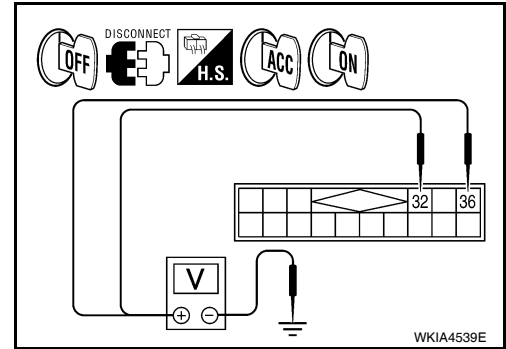
[BOSE W/ MONOCHROME DISPLAY]

(+)		(-)	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.



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3. GROUND CIRCUIT CHECK

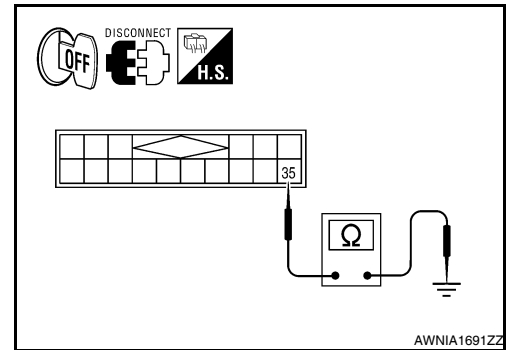
1. Turn ignition switch OFF.
2. Check continuity between satellite radio tuner (factory installed) connector and ground.

Connector	Terminal	—	Continuity
B111	35	Ground	Yes

Is inspection result OK?

YES >> Inspection End.

NO >> Repair harness or connector.



AWNIA1691ZZ

BLUETOOTH CONTROL UNIT

BLUETOOTH CONTROL UNIT : Diagnosis Procedure

INFOID:000000005460052

Regarding Wiring Diagram information, refer to [AV-133. "Wiring Diagram"](#).

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.

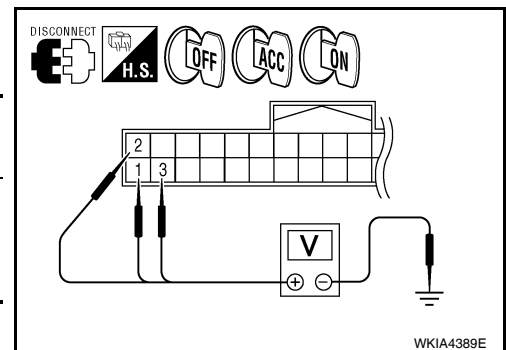
NO >> Be sure to eliminate cause of malfunction before installing new fuse.

2. CHECK POWER SUPPLY CIRCUIT

Check voltage between Bluetooth control unit harness connector and ground.

(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
B131	1	Ground	OFF	Battery voltage
	2		ACC	
	3		ON	

Are the voltage results as specified?



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POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

- 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 B131.
3. Check continuity between Bluetooth control unit harness connector and ground.

(+)		(-)	Continuity
Connector	Terminal		
B131	4	Ground	Yes
	23		

Does continuity exist?

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

MICROPHONE

MICROPHONE : Diagnosis Procedure

INFOID:000000005460053

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

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 B131 (B) terminal 29.

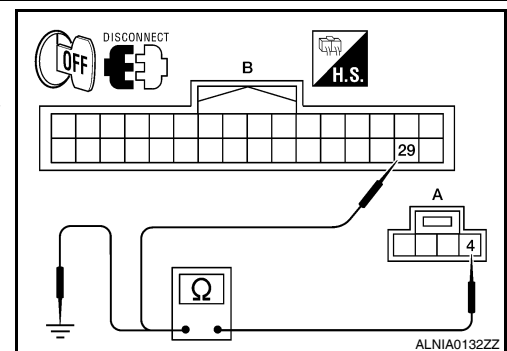
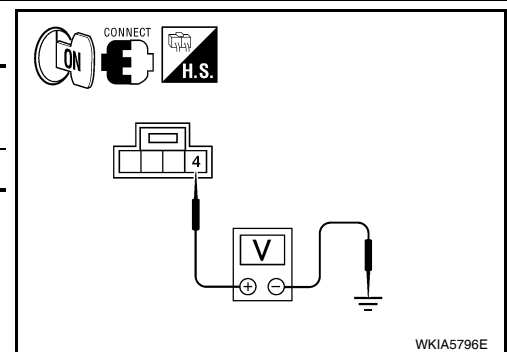
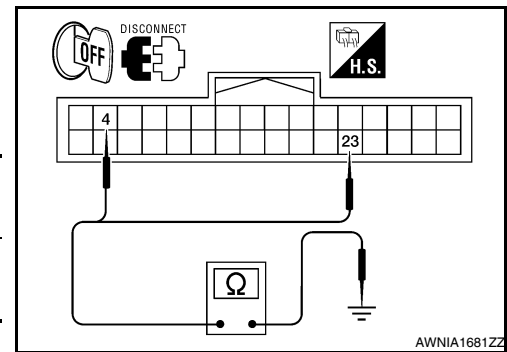
A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	4	B131	29	Yes

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-85, "Removal and Installation"](#).



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POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

NO >> Repair harness or connector.

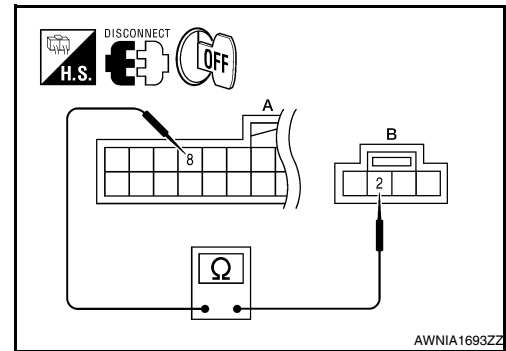
3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit and microphone connectors.
3. Check continuity between Bluetooth control unit harness connector B131 (A) terminal 8 and microphone harness connector R7 (B) terminal 2.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B131	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:000000005460054

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:000000005460055

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

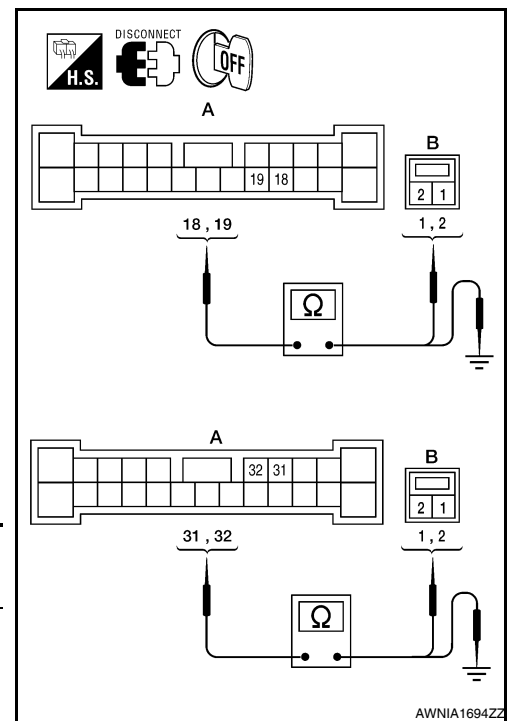
1. HARNESS CHECK

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

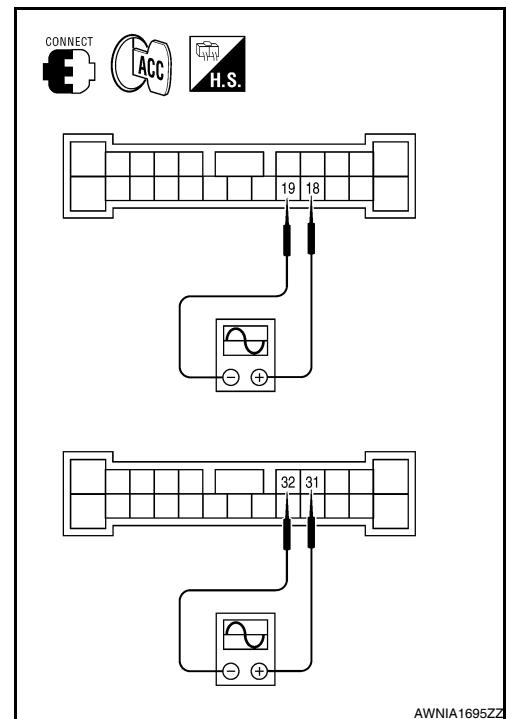
FRONT DOOR SPEAKER

[BOSE W/ 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-166. "Removal and Installation"](#).

NO >> GO TO 3.

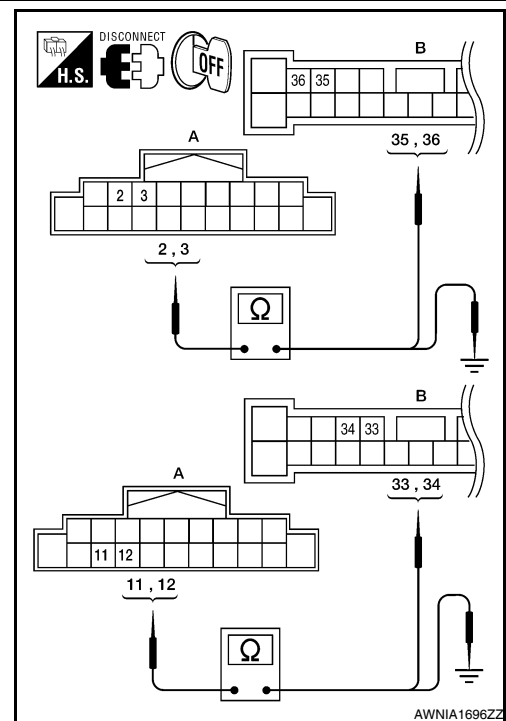
3. HARNESS CHECK

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.

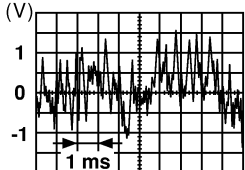
4. FRONT DOOR SPEAKER SIGNAL CHECK

FRONT DOOR SPEAKER

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

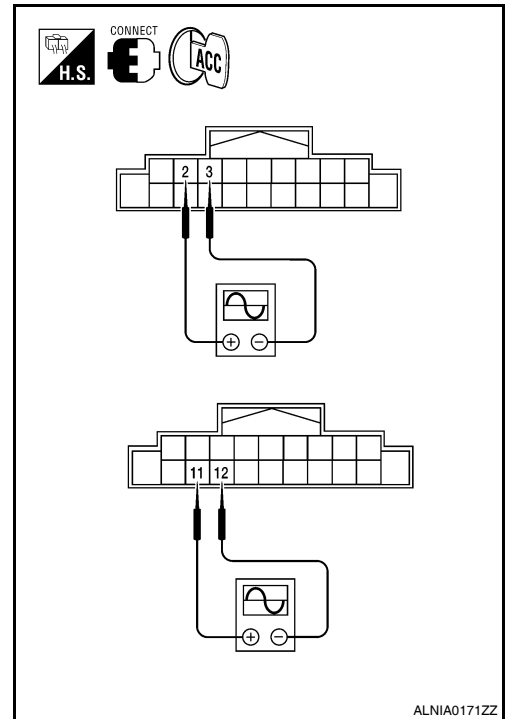
1. Connect audio unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

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-169, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-161, "Removal and Installation"](#).



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TWEETER

Description

INFOID:000000005460056

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:000000005460057

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

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.

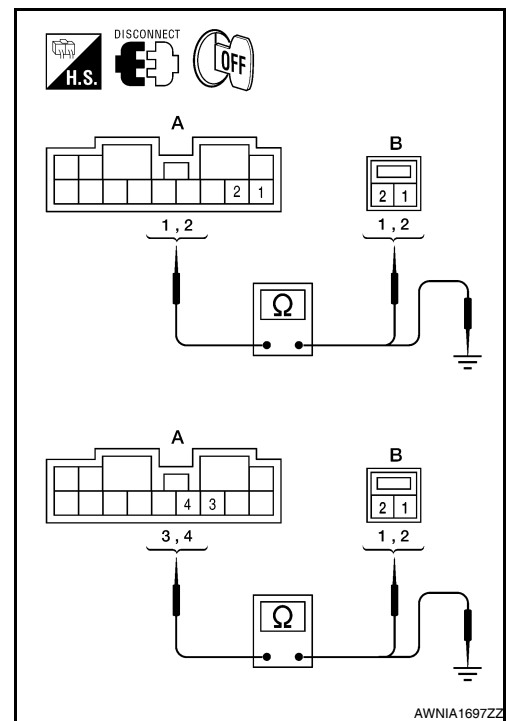
A		—	Continuity
Connector	Terminal		
B110	1	Ground	No
	2		
	4		
	3		

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-164, "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.

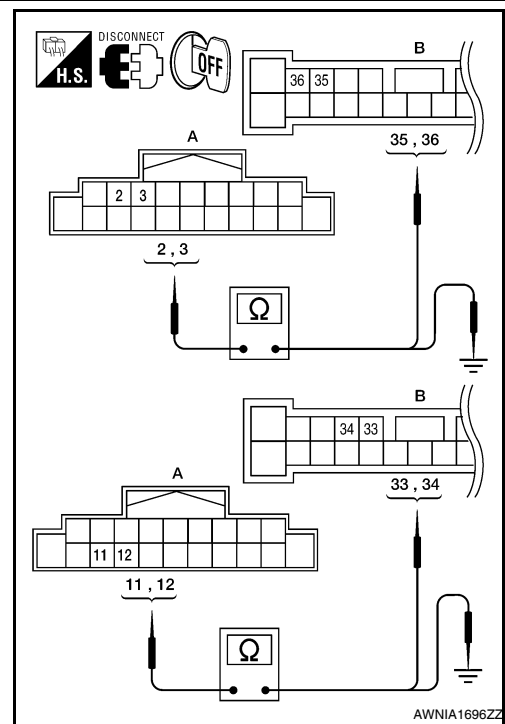
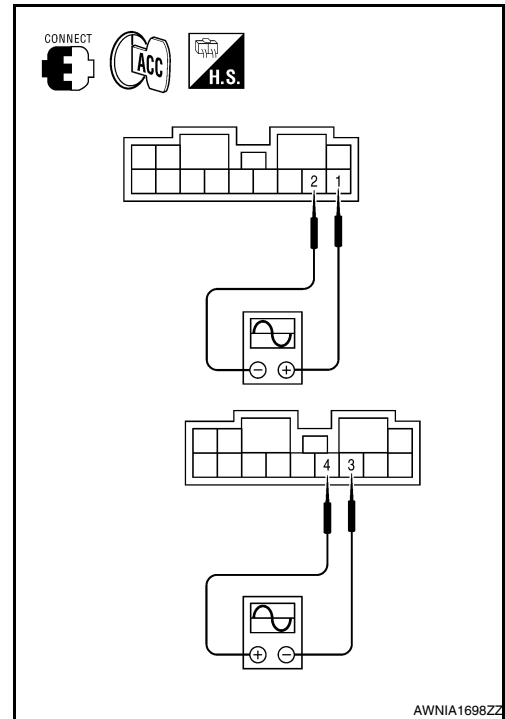
A		—	Continuity
Connector	Terminal		
M132	2	Ground	No
	3		
	11		
	12		

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

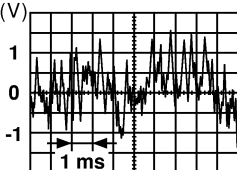


TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

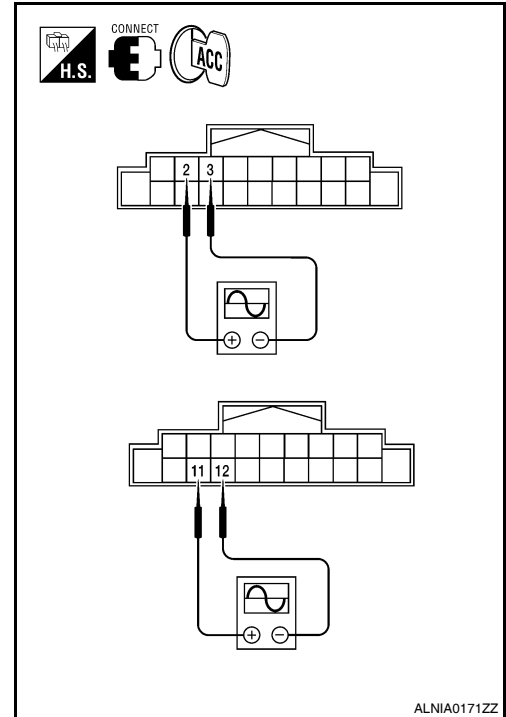
1. Connect audio unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

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-169, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-161, "Removal and Installation"](#).



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CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

CENTER SPEAKER

Description

INFOID:000000005460058

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

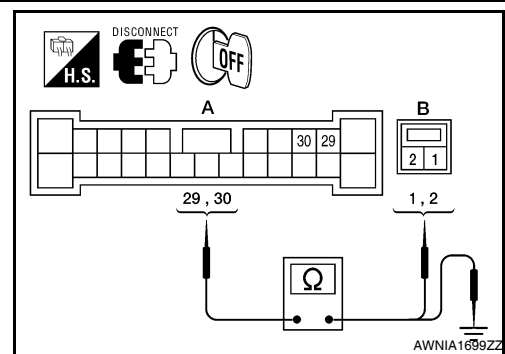
INFOID:000000005460059

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

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?

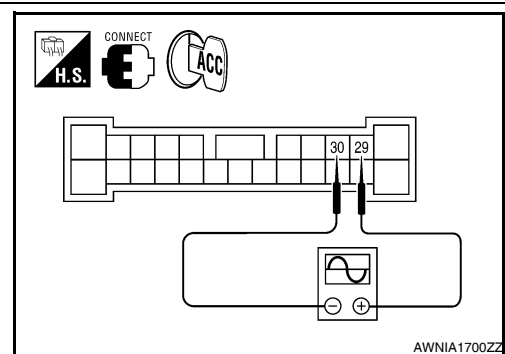
YES >> GO TO 2.

- 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	



Is the audio signal voltage reading as specified?

CENTER SPEAKER

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

- YES >> Replace center speaker. Refer to [AV-165, "Removal and Installation"](#).
 NO >> GO TO 3.

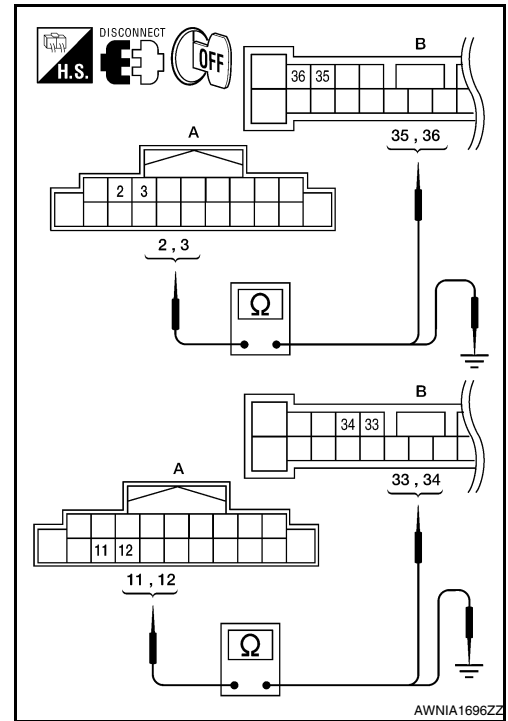
3. HARNESS CHECK

- Disconnect audio unit connector M132 and BOSE speaker amp. connector B109.
- 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	

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

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



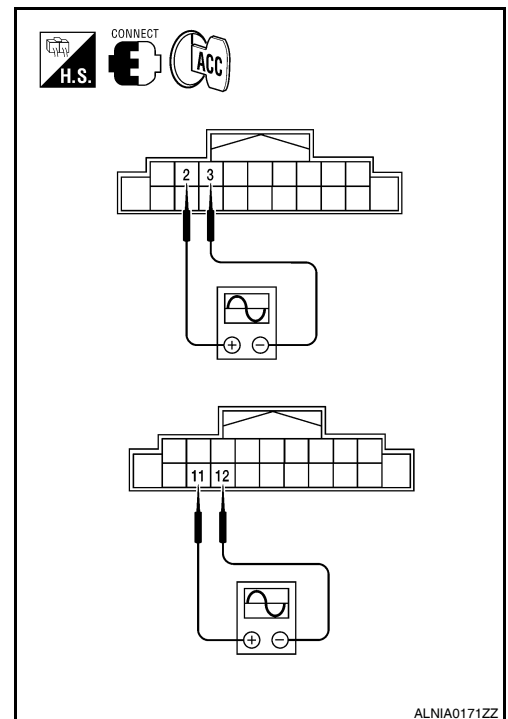
Are continuity test results as specified?

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

4. CENTER SPEAKER SIGNAL CHECK

- Connect audio unit connector and BOSE speaker amp. connector.
- Turn ignition switch ACC.
- Push POWER switch.
- 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-169, "Removal and Installation"](#).
 NO >> Replace audio unit. Refer to [AV-161, "Removal and Installation"](#).

REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

REAR DOOR SPEAKER

Description

INFOID:000000005460060

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:000000005460061

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

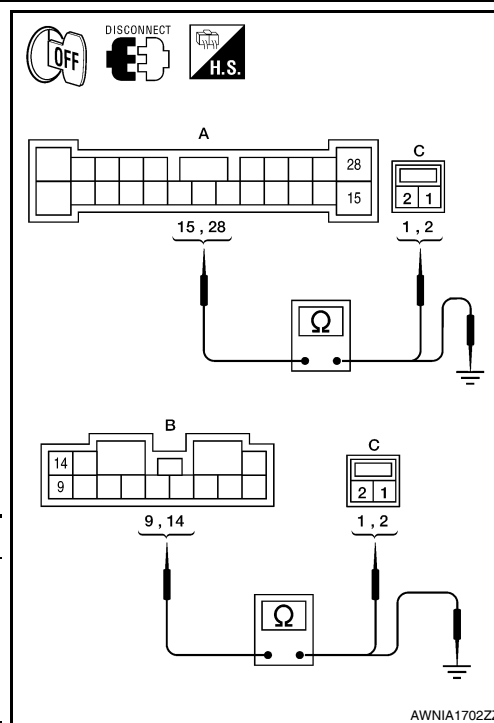
1. HARNESS CHECK

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		



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

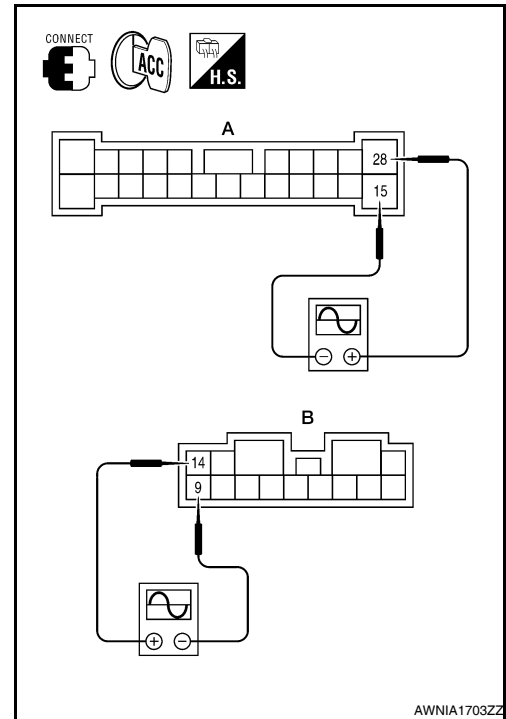
[BOSE W/ MONOCHROME DISPLAY]

< 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-167. "Removal and Installation"](#).
- NO >> GO TO 3.

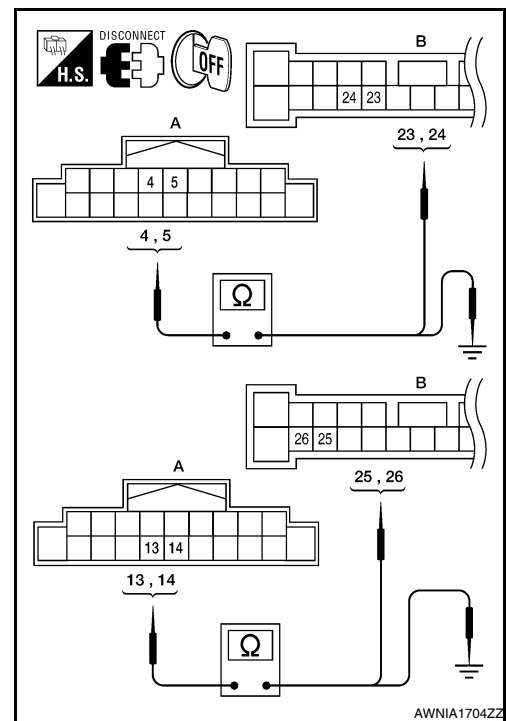
3. HARNESS CHECK

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.

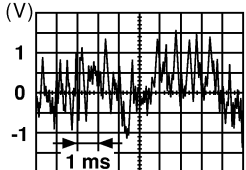
4. REAR DOOR SPEAKER SIGNAL CHECK

REAR DOOR SPEAKER

[BOSE W/ MONOCHROME DISPLAY]

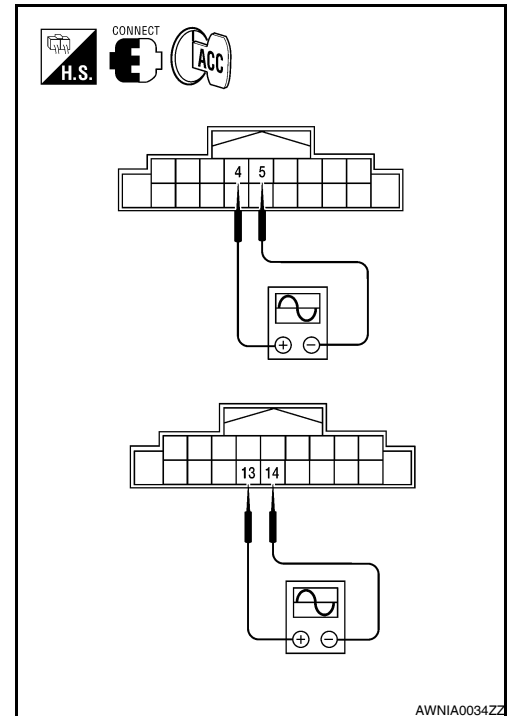
< COMPONENT DIAGNOSIS >

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	 <p>SKIA0177E</p>
	13	14		

Is the audio signal voltage reading as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-169, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-161, "Removal and Installation"](#).



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SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

SUBWOOFER

Description

INFOID:000000005460062

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:000000005460063

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

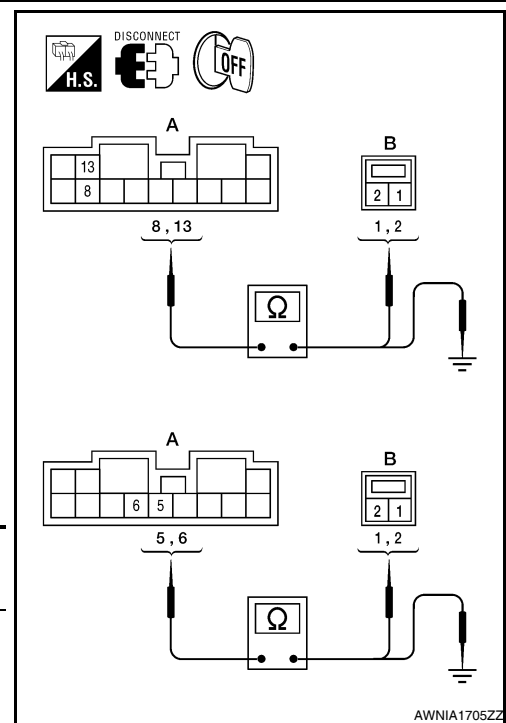
1. HARNESS CHECK

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

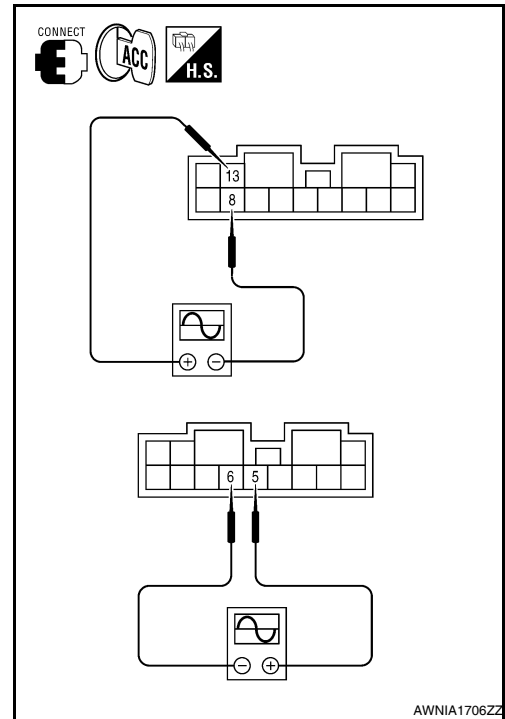
SUBWOOFER

< 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-168](#), "[Removal and Installation](#)".

NO >> GO TO 3.

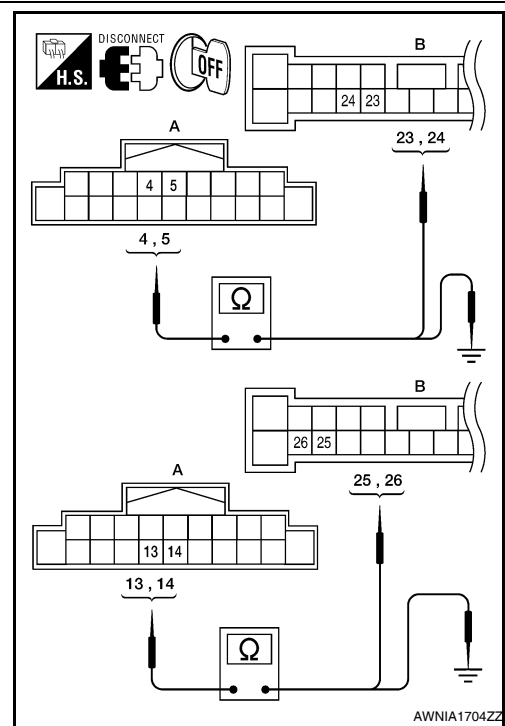
3. HARNESS CHECK

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

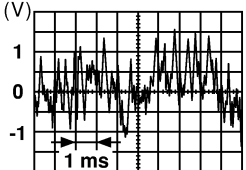
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SUBWOOFER

[BOSE W/ MONOCHROME DISPLAY]

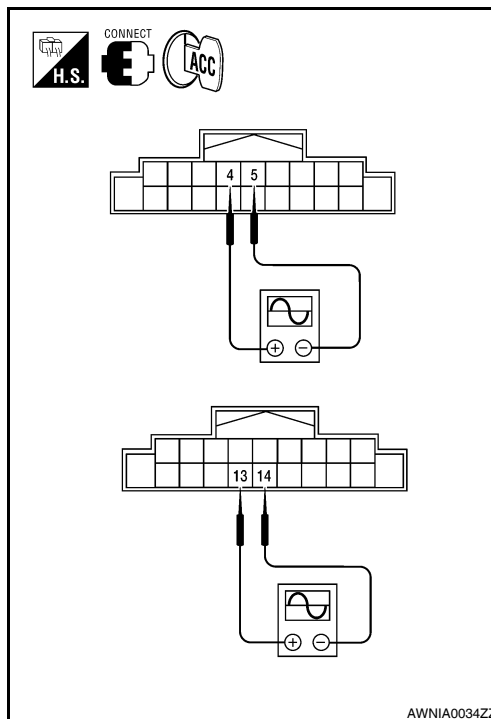
< COMPONENT DIAGNOSIS >

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-169, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-161, "Removal and Installation"](#).



AMP ON SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

AMP ON SIGNAL CIRCUIT

Description

INFOID:000000005460064

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:000000005460065

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

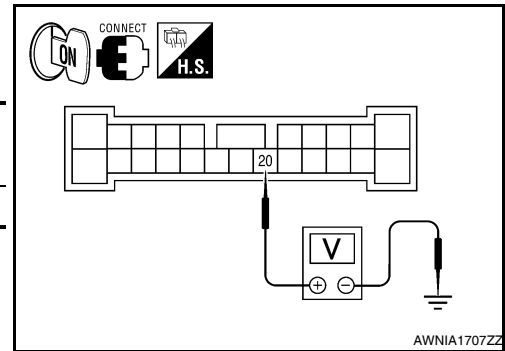
1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

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.



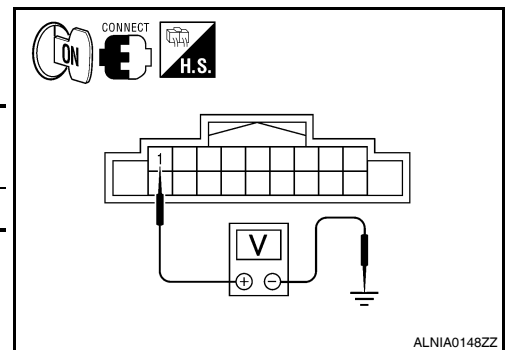
2. CHECK AMP ON SIGNAL (AUDIO UNIT)

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-161, "Removal and Installation"](#).



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STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

STEERING SWITCH

Description

INFOID:000000005460066

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

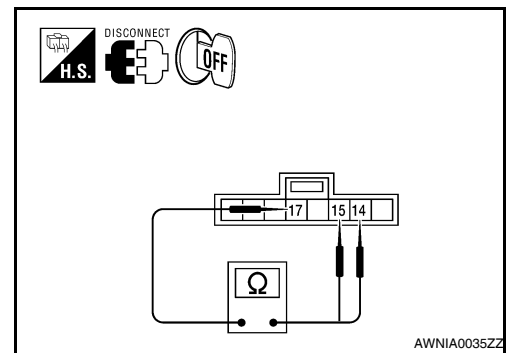
INFOID:000000005460067

Regarding Wiring Diagram information, refer to [AV-49, "Wiring Diagram"](#).

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?

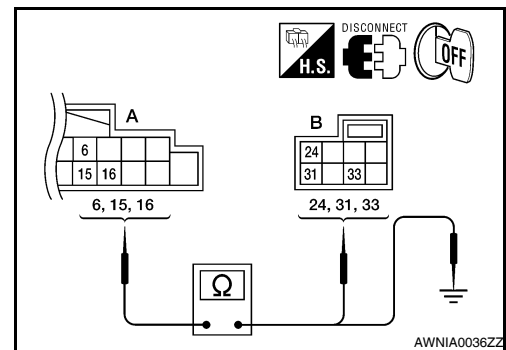
YES >> GO TO 2.

NO >> Replace steering switch. Refer to [AV-78, "Removal and Installation"](#).

2. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M132 and spiral cable connector M30.
3. Check continuity between audio unit harness connector M132 (A) and spiral cable harness connector M30 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M132	6	M30	24	Yes
	16		31	
	15		33	



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

A		—	Continuity
Connector	Terminal		
M132	6	Ground	No
	15		
	16		

STEERING SWITCH

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

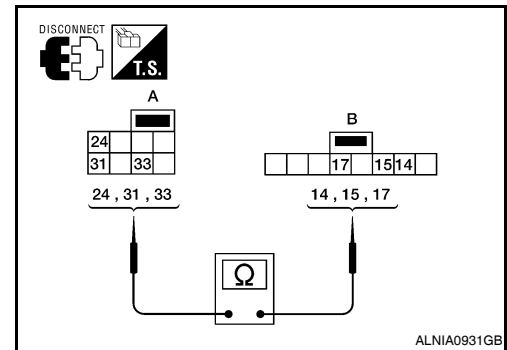
Are the continuity results as specified?

- 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"](#).

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COMMUNICATION SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

COMMUNICATION SIGNAL CIRCUIT

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000005460068

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

SATELLITE RADIO TUNER : Diagnosis Procedure

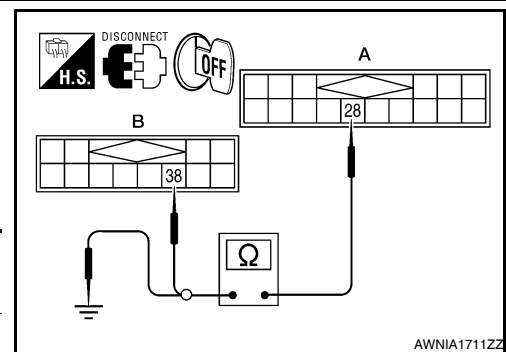
INFOID:000000005460069

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

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?

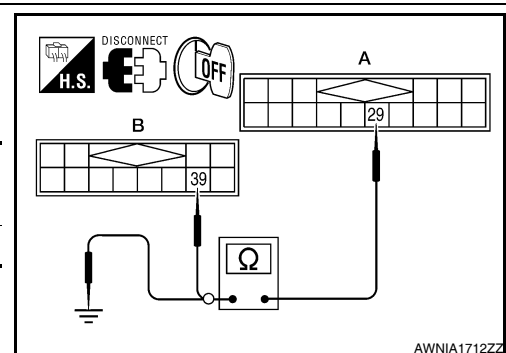
YES >> GO TO 2.

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.

COMMUNICATION SIGNAL CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

3. CHECK HARNESS - 3

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

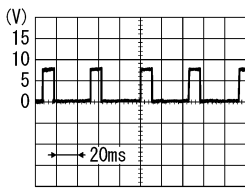
Are continuity results as specified?

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>

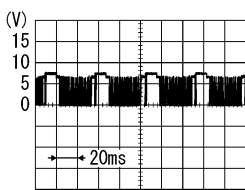
Are voltage readings as specified?

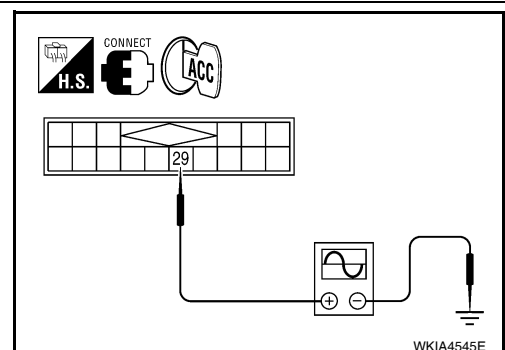
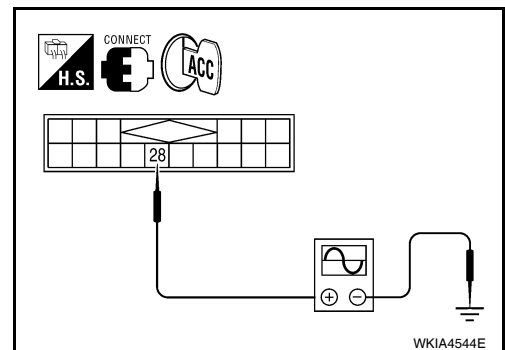
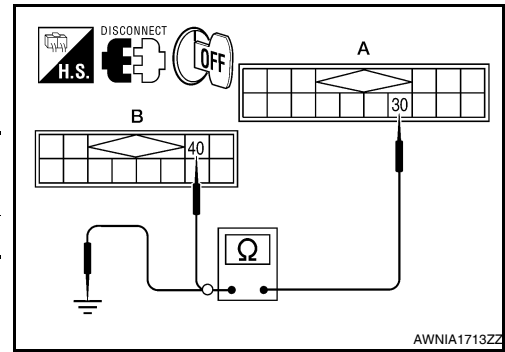
YES >> GO TO 5.

NO >> Replace audio unit. Refer to [AV-161. "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>



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COMMUNICATION SIGNAL CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

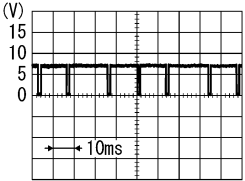
Are the voltage readings as specified?

YES >> GO TO 6.

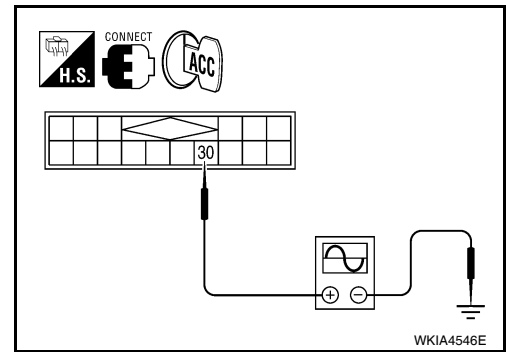
NO >> Replace satellite radio tuner. Refer to [AV-170. "Removal and Installation"](#).

6. CHECK RXD SIGNAL

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

(+) Connector		Terminal	(-)	Reference signal
Terminal				
B111	30	Ground		

SKIB3826E



Are the voltage readings as specified?

YES >> Replace satellite radio tuner. Refer to [AV-170. "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-161. "Removal and Installation"](#).

SOUND SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

SOUND SIGNAL CIRCUIT SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000005460070

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:000000005460071

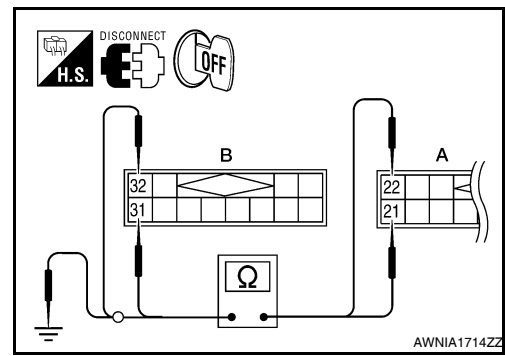
Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

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?

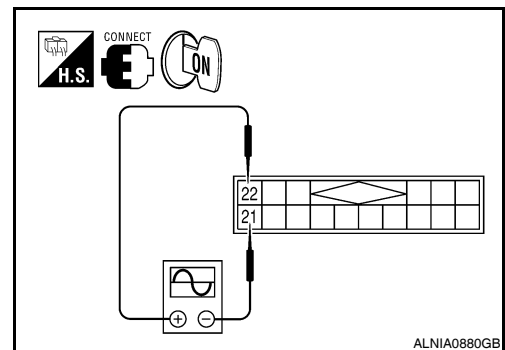
YES >> GO TO 2.

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.

(+)		(-)		Reference signal
Connector	Terminal	Terminal	Terminal	
B111	22	21		



SOUND SIGNAL CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

Are voltage readings as specified?

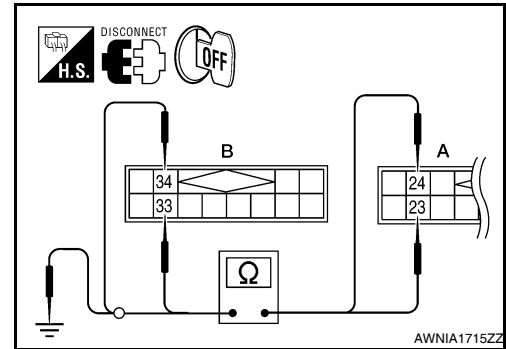
- YES >> Replace audio unit. Refer to [AV-161, "Removal and Installation"](#).
 NO >> Replace satellite radio tuner. Refer to [AV-170, "Removal and Installation"](#).

RIGHT CHANNEL

1. CHECK HARNESS

- Turn ignition switch OFF.
- Disconnect satellite radio tuner (factory installed) connector B111 and audio unit connector M138.
- 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	



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

A		—	Continuity
Connector	Terminal		
B111	23	Ground	No
	24		

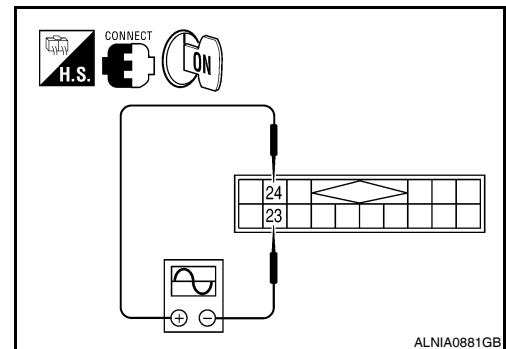
Are continuity results as specified?

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

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

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

(+) Terminal		(-) Terminal	Reference signal
Connector	Terminal	Terminal	
B111	24	23	<p>SKIB3609E</p>



Are voltage readings as specified?

- YES >> Replace audio unit. Refer to [AV-161, "Removal and Installation"](#).
 NO >> Replace satellite radio tuner. Refer to [AV-170, "Removal and Installation"](#).

MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000005460072

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

Diagnosis Procedure

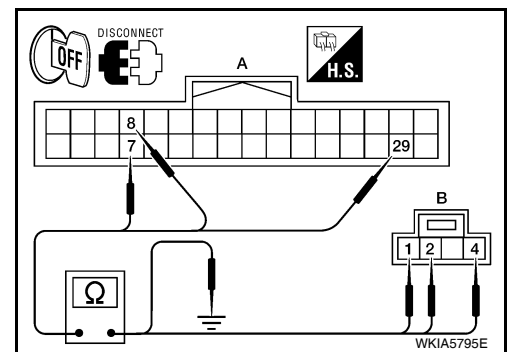
INFOID:000000005460073

Regarding Wiring Diagram information, refer to [AV-133, "Wiring Diagram"](#).

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 B131 (A) and microphone harness connector R7 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B131	7	R7	1	Yes
	8		2	
	29		4	



4. Check continuity between Bluetooth control unit harness connector B131 (A) and ground.

A		—	Continuity
Connector	Terminal		
B131	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.

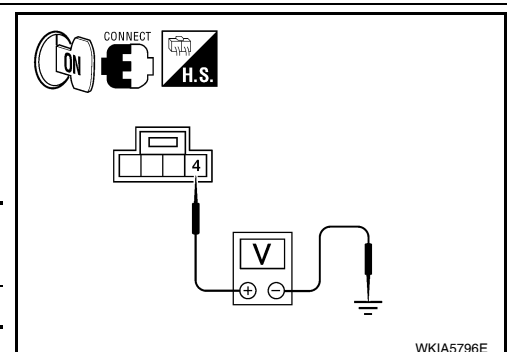
(+)		(-)	Voltage (Approx.)
Connector	Terminal		
R7	4	Ground	5V

Is voltage reading approx. 5 volts?

YES >> GO TO 3.

NO >> Replace Bluetooth control unit. Refer to [AV-179, "Removal and Installation"](#).

3. CHECK MICROPHONE SIGNAL

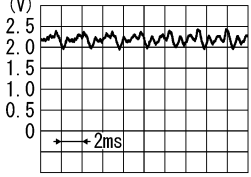


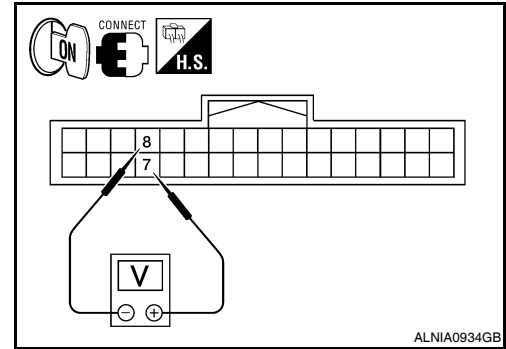
MICROPHONE SIGNAL CIRCUIT

[BOSE W/ MONOCHROME DISPLAY]

< COMPONENT DIAGNOSIS >

Check signal between Bluetooth control unit harness connector B131 terminals 7 and 8.

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
B131	7	8	While talking into microphone  <small>PKIB5037J</small>



Are voltage readings as specified?

- YES >> Replace Bluetooth control unit. Refer to [AV-179, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-177, "Removal and Installation"](#).

AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

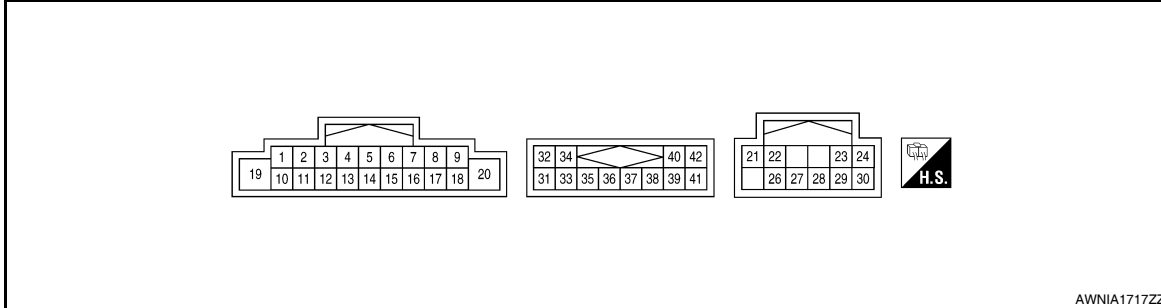
ECU DIAGNOSIS

AUDIO UNIT

Reference Value

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TERMINAL LAYOUT



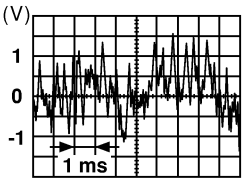
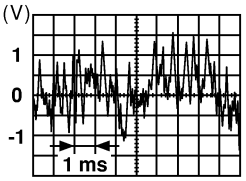

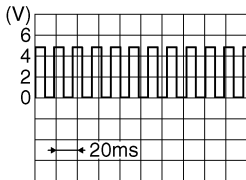



PHYSICAL VALUES

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	
4 (W/R)	5 (B/R)	Audio signal rear LH	Output	ON	Receive audio sig- nal	
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 (B)	—	Shield	—	—	—	—

AUDIO UNIT

< ECU DIAGNOSIS >


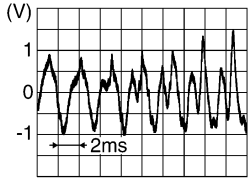
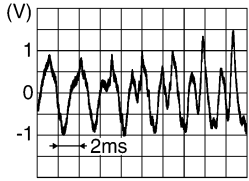
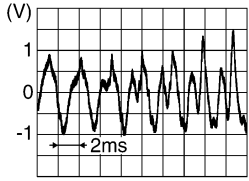
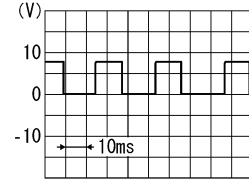
[BOSE W/ MONOCHROME DISPLAY]

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 (P)	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 (B)	-	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

AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

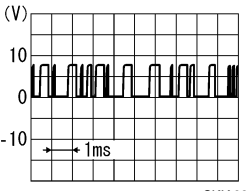
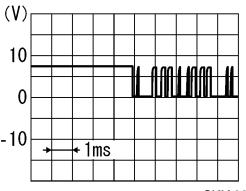
Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
24 (GR/R)	Ground	Steering switch signal B	Output	ON	Depress SOURCE switch.	680Ω
					Depress  switch.	220Ω
					Depress volume UP switch.	110Ω
					Depress volume DOWN switch.	0Ω
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>

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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	
39 (B)	Ground	Communica- tion signal (SAT-CONT)	Input	ON	When satellite mode is selected	 <p style="text-align: right; font-size: small;">SKIA9300J</p>
40 (G)	Ground	Communica- tion signal (CONT-SAT)	Input	ON	When satellite mode is selected	 <p style="text-align: right; font-size: small;">SKIA9301J</p>

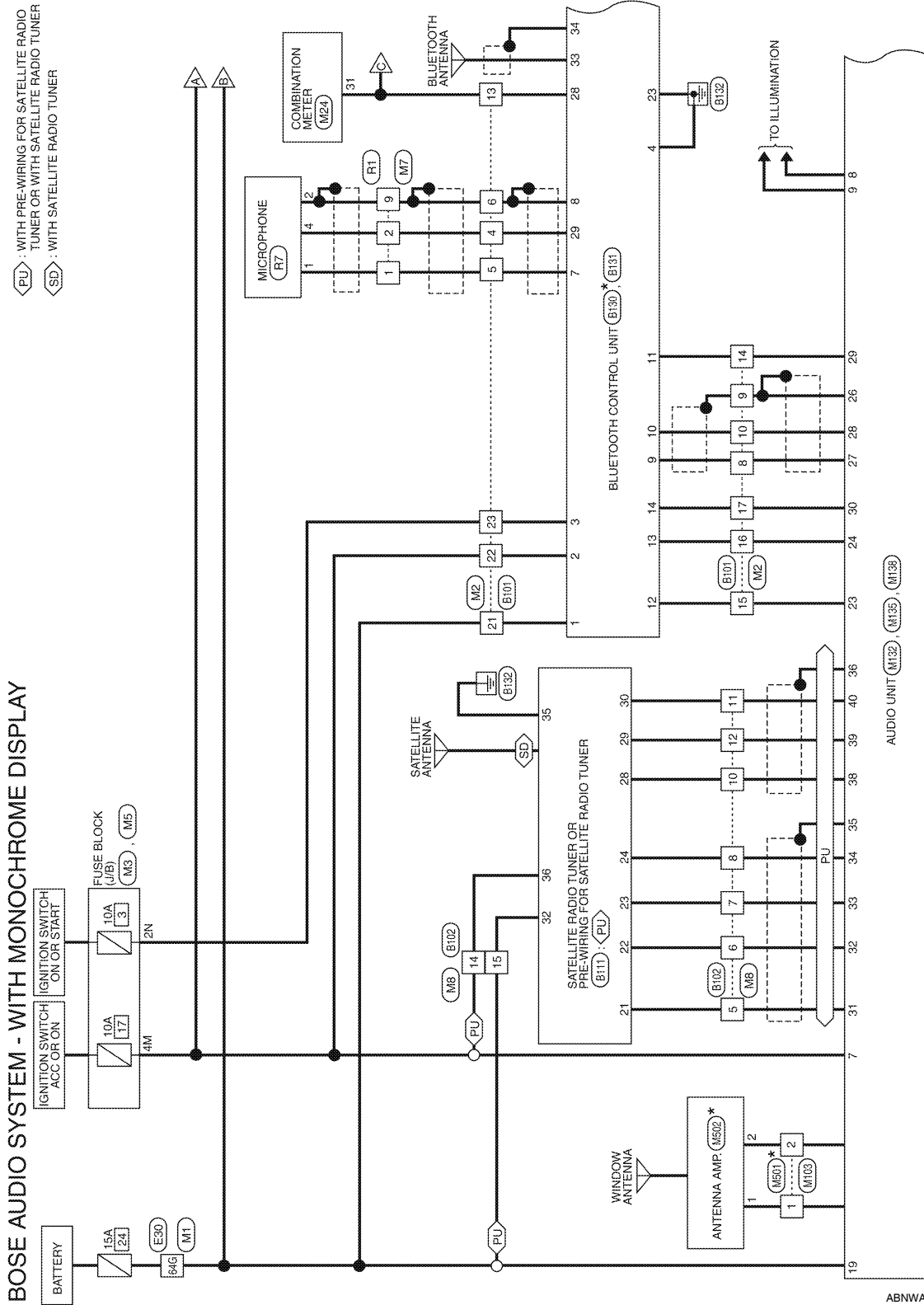
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[BOSE W/ MONOCHROME DISPLAY]

Wiring Diagram

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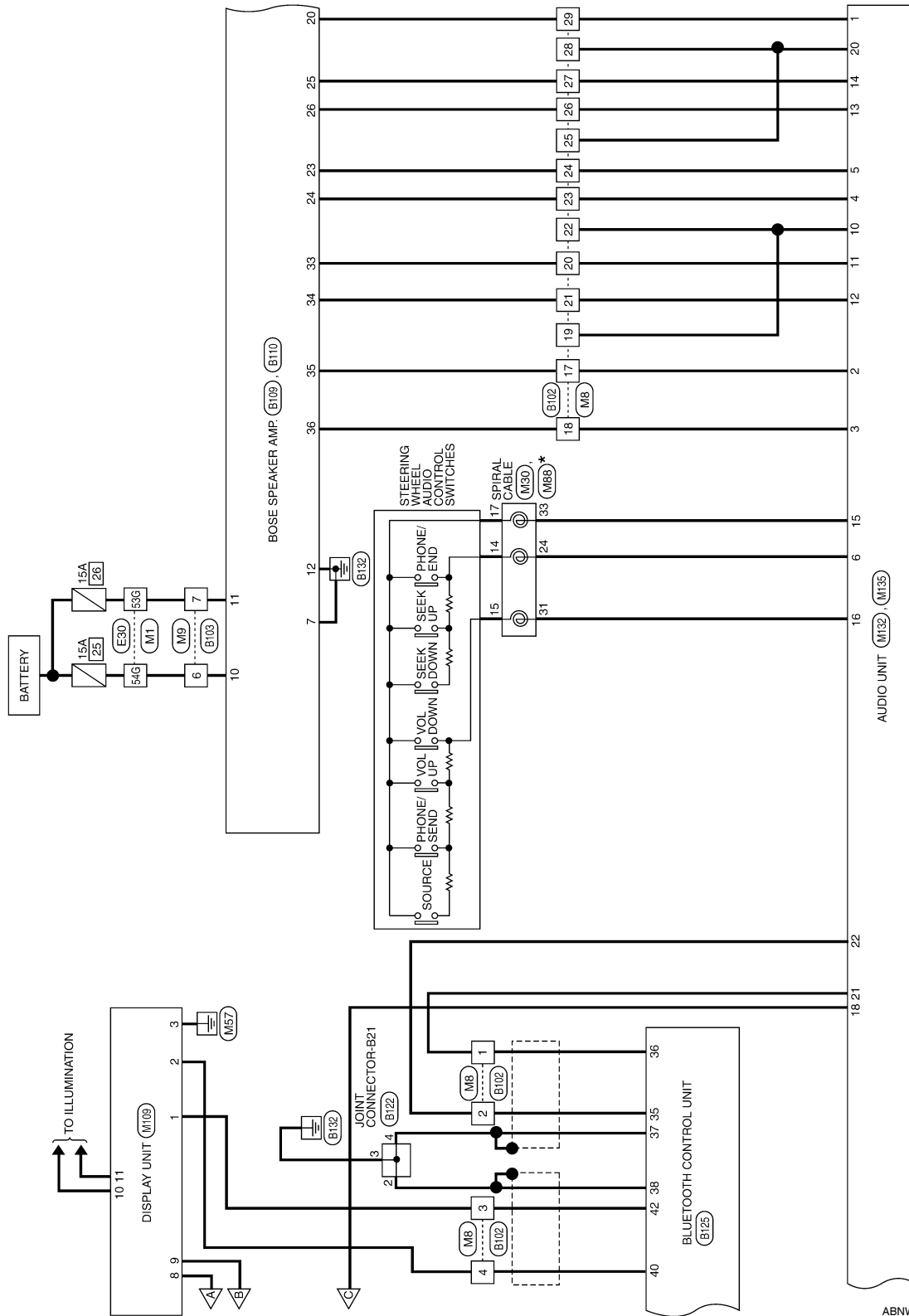
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[BOSE W/ MONOCHROME DISPLAY]



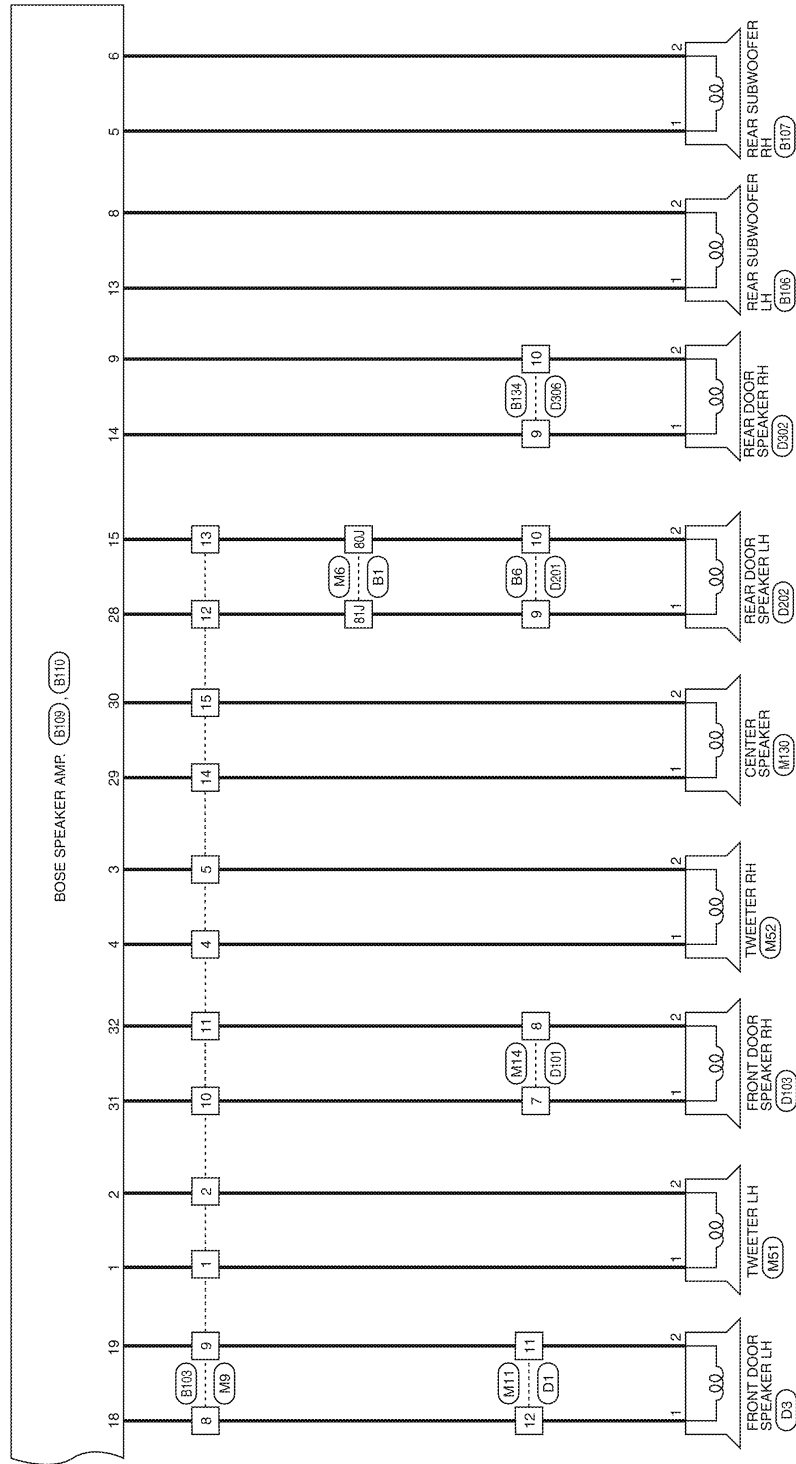
* : THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT" OF PG SECTION.

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AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

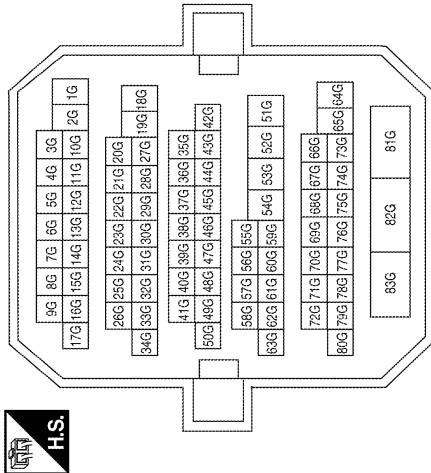


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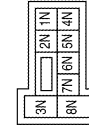
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BOSE AUDIO SYSTEM CONNECTORS - WITH MONOCHROME DISPLAY

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



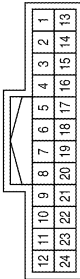
Terminal No.	Color of Wire	Signal Name
53G	B/R	--
54G	BR	--
64G	Y/R	--



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

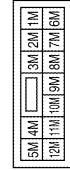
Terminal No.	2N	Color of Wire	G	Signal Name	--
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Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	R	--
5	L	--
6	SHIELD	--
8	BR	--
9	SHIELD	--
10	Y	--
13	V/W	--
14	G/O	--
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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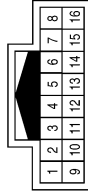
Terminal No.	Color of Wire	Signal Name
22	V/Y	--
23	G	--

AUDIO UNIT

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[BOSE W/ MONOCHROME DISPLAY]

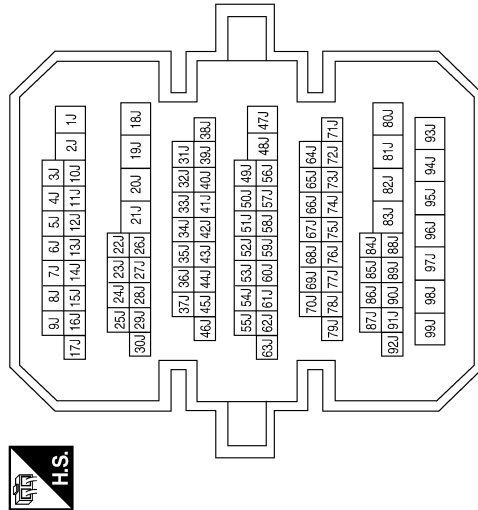
Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
80J	L	-
81J	G	-

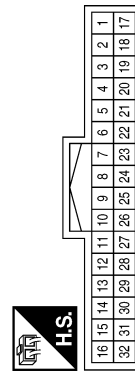
Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
6	P	-
7	W/R	-
8	B/R	-
10	R	-
11	W	-
12	B	-
14	V/Y	-
15	Y/R	-
17	G	-
18	R	-
19	B	-
20	B	-

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	V	-

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AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

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	-
12	W	-

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


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



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	W	-


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
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	-

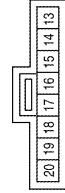
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AUDIO UNIT

< ECU DIAGNOSIS >

[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



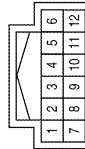
Terminal No.	Color of Wire	Signal Name
1	L/G	--
2	B/Y	--

Connector No.	M130
Connector Name	CENTER SPEAKER
Connector Color	BROWN



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

Connector No.	M109
Connector Name	DISPLAY UNIT (WITH MONOCHROME DISPLAY)
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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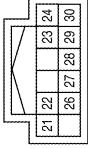
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AUDIO UNIT

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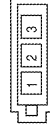
[BOSE W/ MONOCHROME DISPLAY]

Connector No.	M135
Connector Name	AUDIO UNIT (WITH BOSE AUDIO SYSTEM)
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.	M501
Connector Name	WIRE TO WIRE
Connector Color	GRAY

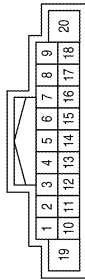


Terminal No.	Color of Wire	Signal Name
1	B	--
2	B	--

Terminal No.	Color of Wire	Signal Name
8	R/Y	ILL(-)
9	R/L	ILL(+), LIGHT SW
10	B	GND, SHIELD1
11	B	FR SP RH(+)
12	W	FR SP RH(-)
13	V	RR SP RH(+)
14	P	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	B	SHIELD2

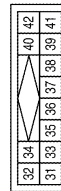
Terminal No.	Color of Wire	Signal Name
37	--	--
38	R	REQ(SAT-COMBI)
39	B	RX(SAT-COMBI)
40	G	TX(COMBI-SAT)
41	--	--
42	--	--

Connector No.	M132
Connector Name	AUDIO UNIT (WITH BOSE AUDIO SYSTEM)
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	B/R	RR SP LH(-)
6	W/G	STRG SW A
7	V/Y	ACC

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



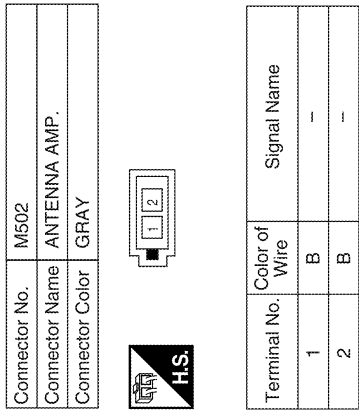
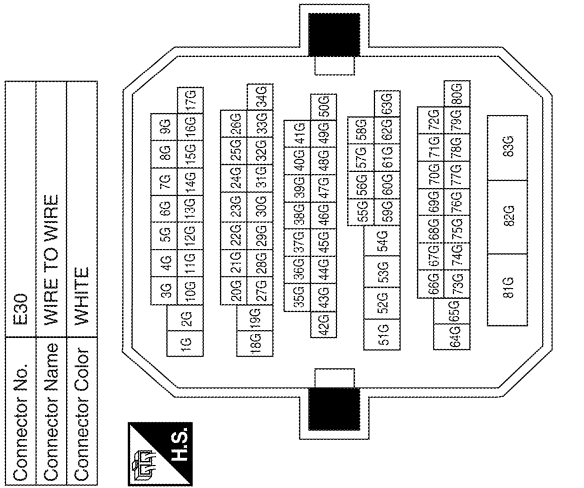
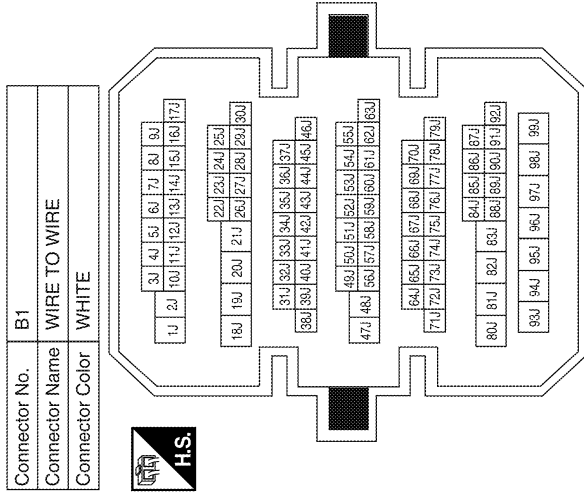
Terminal No.	Color of Wire	Signal Name
31	W/L	SAT LH INPUT(-)
32	Y/L	SAT LH INPUT(+)
33	Y/G	SAT RH INPUT(-)
34	BR/L	SAT RH INPUT(+)
35	SHIELD	EARTH
36	SHIELD	DATA SHIELD

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AUDIO UNIT

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[BOSE W/ MONOCHROME DISPLAY]



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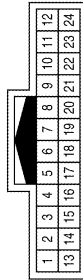
AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

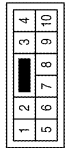
Terminal No.	Color of Wire	Signal Name
6	SHIELD	--
8	BR	--
9	SHIELD	--
10	Y	--
13	BR	--
14	SB	--
15	L	--
16	P	--
17	R	--
21	V	--
22	GR	--
23	O	--

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



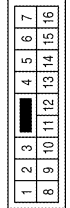
Terminal No.	Color of Wire	Signal Name
4	R	--
5	L	--

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



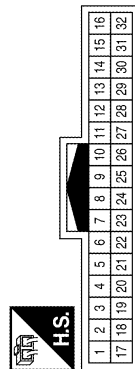
Terminal No.	Color of Wire	Signal Name
9	LG	--
10	O	--

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



Terminal No.	Color of Wire	Signal Name
7	Y	--
8	B	--
10	R	--
11	L	--
12	V	--
14	GR	--
15	P	--
17	W	--
18	B	--
20	LG	--
21	V	--
23	GR	--
24	L	--
26	BR	--
27	Y	--
29	SB	--

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	BR	--
6	W	--

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

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AUDIO UNIT

[BOSE W/ MONOCHROME DISPLAY]

< ECU DIAGNOSIS >

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



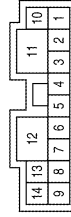
Terminal No.	Color of Wire	Signal Name
1	R	-
2	BR	-

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



Terminal No.	Color of Wire	Signal Name
1	L	-
2	P	-

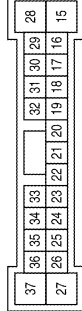
Connector No.	B110
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	FR TWDR LH+ OUT
2	V	FR TWDR LH- OUT
3	W	FR TWDR RH- OUT
4	G	FR TWDR RH+ OUT
5	R	RH WOOFER+ OUT
6	BR	RH WOOFER- OUT
7	B	GND
8	P	LH WOOFER- OUT
9	O	RR DOOR RH- OUT
10	SB	BAT
11	GR	BAT
12	B	GND
13	L	LH WOOFER+ OUT
14	LG	RR DOOR RH+ OUT

Terminal No.	Color of Wire	Signal Name
28	G	RR DOOR LH+ OUT
29	V	INST CTR TWDR+ OUT
30	P	INST CTR TWDR- OUT
31	R	FR DOOR RH+ OUT
32	BR	FR DOOR RH- OUT
33	LG	FR RH-IN (WITH MONOCHROME DISPLAY)
34	V	FR RH-IN (WITH MONOCHROME DISPLAY)
35	W	FR LH-IN (WITH MONOCHROME DISPLAY)
36	B	FR LH-IN (WITH MONOCHROME DISPLAY)

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



Terminal No.	Color of Wire	Signal Name
15	L	RR DOOR LH- OUT
18	W	FR DOOR LH+ OUT
19	B	FR DOOR LH- OUT
20	SB	AMP ON
23	L	RR LH-IN (WITH MONOCHROME DISPLAY)
24	GR	RR LH-IN (WITH MONOCHROME DISPLAY)
25	Y	RR RH-IN (WITH MONOCHROME DISPLAY)
26	BR	RR RH-IN (WITH MONOCHROME DISPLAY)

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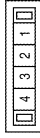
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AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

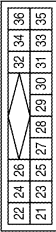
Connector No.	B122
Connector Name	JOINT CONNECTOR-B21
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
21	BR	SAT LCH (-)
22	W	SAT LCH (+)
23	Y	SAT RCH (-)
24	B	SAT RCH (+)
28	R	REQ1 (SAT->COMB)
29	V	TXD (SAT->COMB)
30	L	RXD (COMB->SAT)
32	P	BAT
35	B	HARN EARTH
36	GR	ACC

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

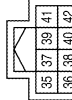


Connector No.	B130
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	BLACK



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

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	G	CAN H2
41	-	-
42	R	CAN L2

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AUDIO UNIT

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[BOSE W/ MONOCHROME DISPLAY]

Connector No.	B131
Connector Name	BLUETOOTH CONTROL UNIT (WITH BOSE AUDIO SYSTEM)
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
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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)



8	7	6	5	4	3	2	1
16	15	14	13	12	11	10	9

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

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	CONT4 (WITH MONOCHROME DISPLAY)
24	--	--
25	--	--
26	--	--
27	--	--
28	BR	SPEED
29	R	MIC POWER
30	--	--
31	--	--
32	--	--



1	2	3	4
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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.	B134
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
9	LG	--
10	O	--



7	6	5	4	3	2	1
16	15	14	13	12	11	10
9						

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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
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AUDIO UNIT

< ECU DIAGNOSIS >


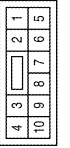
[BOSE W/ MONOCHROME DISPLAY]

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	--

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.	D302
Connector Name	REAR DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN


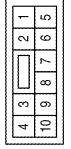
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	O	--

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
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	--

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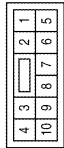
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[BOSE W/ MONOCHROME DISPLAY]

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



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

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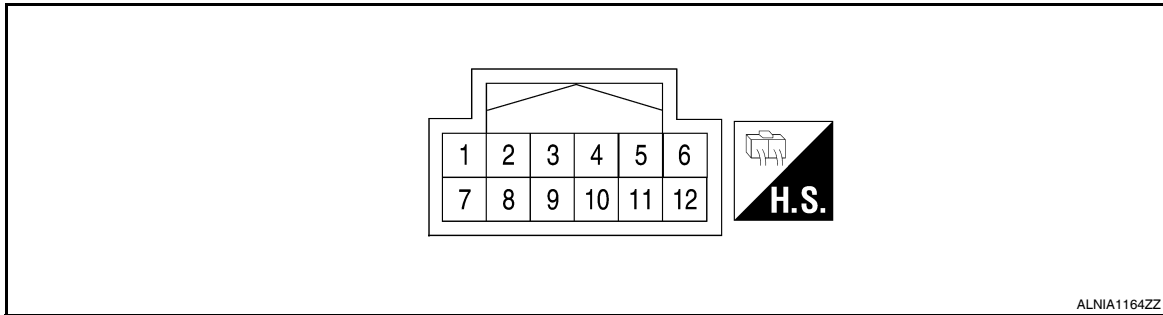
[BOSE W/ MONOCHROME DISPLAY]

DISPLAY UNIT

Reference Values

INFOID:000000005460076

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/Y)	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

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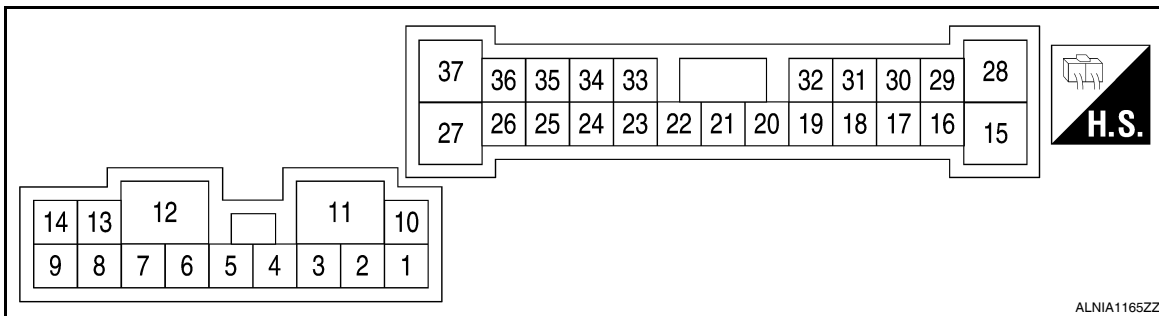
[BOSE W/ MONOCHROME DISPLAY]

BOSE SPEAKER AMP

Reference Values

INFOID:000000005460077

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.	 <small>SKIB3609E</small>
4 (G)	3 (W)	Sound signal front tweeter RH	Output	Ignition switch ON	Sound output.	 <small>SKIB3609E</small>
5 (R)	6 (BR)	Sound signal rear subwoof- er RH	Output	Ignition switch ON	Sound output.	 <small>SKIB3609E</small>
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

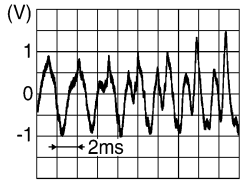
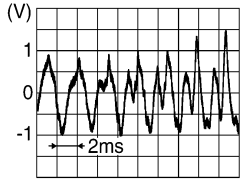
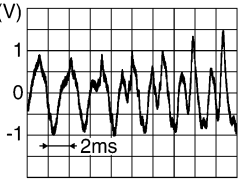
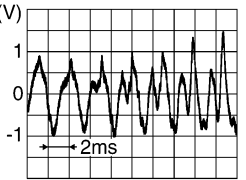
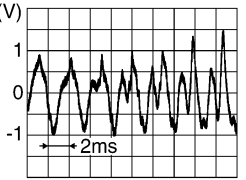
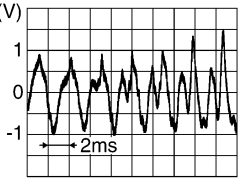
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BOSE SPEAKER AMP

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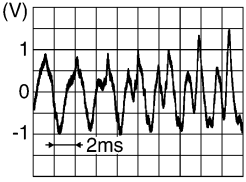
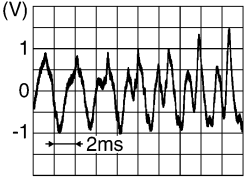
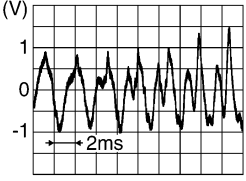
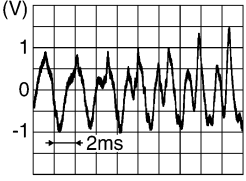
[BOSE W/ MONOCHROME DISPLAY]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
13 (L)	8 (P)	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
24 (GR)	23 (L)	Sound signal rear LH	Input	Ignition switch ON	Sound output.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
26 (BR)	25 (Y)	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>

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
29 (V)	30 (P)	Sound signal center speaker	Output	Ignition switch ON	Sound output.	
31 (R)	32 (BR)	Sound signal front door speaker RH	Output	Ignition switch ON	Sound output.	
33 (LG)	34 (V)	Sound signal front RH	Input	Ignition switch ON	Sound output.	
35 (W)	36 (B)	Sound signal front LH	Input	Ignition switch ON	Sound output.	

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SATELLITE RADIO TUNER

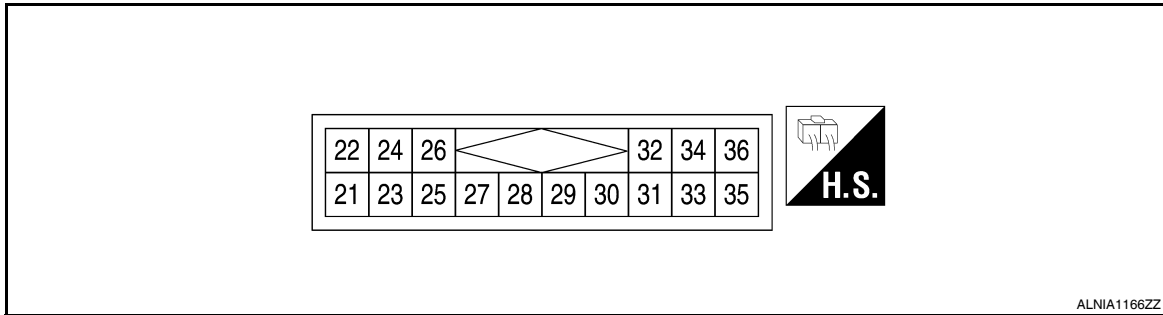
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[BOSE W/ MONOCHROME DISPLAY]

SATELLITE RADIO TUNER

Reference Values

INFOID:000000005460078



PHYSICAL VALUES

Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/Output			
22 (W)	21 (BR)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIB3609E</p>
24 (B)	23 (Y)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIB3609E</p>
28 (R)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIA9299J</p>
29 (V)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIA9300J</p>

SATELLITE RADIO TUNER

< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
30 (L)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	<p style="text-align: right; font-size: small;">SKIA9301J</p>
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

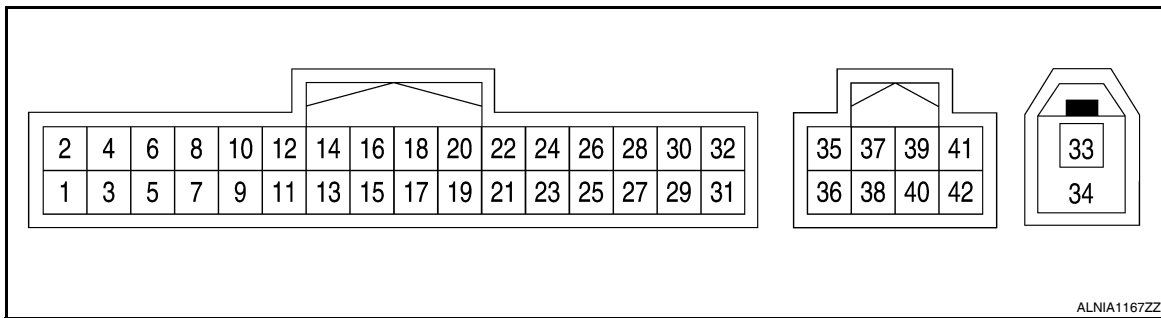
< ECU DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

BLUETOOTH CONTROL UNIT

Reference Values

INFOID:000000005460079



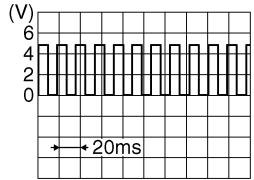
PHYSICAL VALUES

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)	
29 (R)	Ground	Microphone power	Output	Ignition switch ON	—	5.0V
33 (B)	—	TEL antenna	Input	—	—	—
34 (B)	—	Shield	—	—	—	—
35 (L)	—	AV communication signal (H)	Input/ Output	—	—	—
36 (P)	—	AV communication signal (L)	Input/ Output	—	—	—
37	—	Shield	—	—	—	—
38	—	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

< SYMPTOM DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:000000005460080

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-99 AV-161, "Removal and Installation"
Steering wheel audio control switches do not operate	<ul style="list-style-type: none"> Steering wheel audio control switches Audio unit 	<ul style="list-style-type: none"> AV-120 AV-161, "Removal and Installation"
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-161, "Removal and Installation" AV-99 AV-119 AV-169
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-105 AV-108 AV-111 AV-113 AV-116

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	Audio unit	AV-161, "Removal and Installation"
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-101 AV-122 AV-170
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-125 AV-125 AV-170

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-102 AV-179
Steering wheel audio control switches do not operate	<ul style="list-style-type: none"> Steering wheel audio control switches audio unit Bluetooth control unit 	<ul style="list-style-type: none"> AV-120 AV-161, "Removal and Installation" AV-179
Voice activated control does not operate	<ul style="list-style-type: none"> Microphone Steering wheel audio control switches Bluetooth control unit 	<ul style="list-style-type: none"> AV-127 AV-120 AV-179

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

NORMAL OPERATING CONDITION

Description

INFOID:000000005460081

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

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

INFOID:000000005460082

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 WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

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

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect (Early Production, With Electronic Steering Column Lock)

INFOID:000000005885977

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.

PRECAUTIONS

< PRECAUTION >

[BOSE W/ MONOCHROME DISPLAY]

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.

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PREPARATION

< PREPARATION >

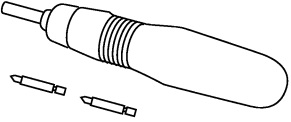
[BOSE W/ MONOCHROME DISPLAY]

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000005460084

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

AUDIO UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

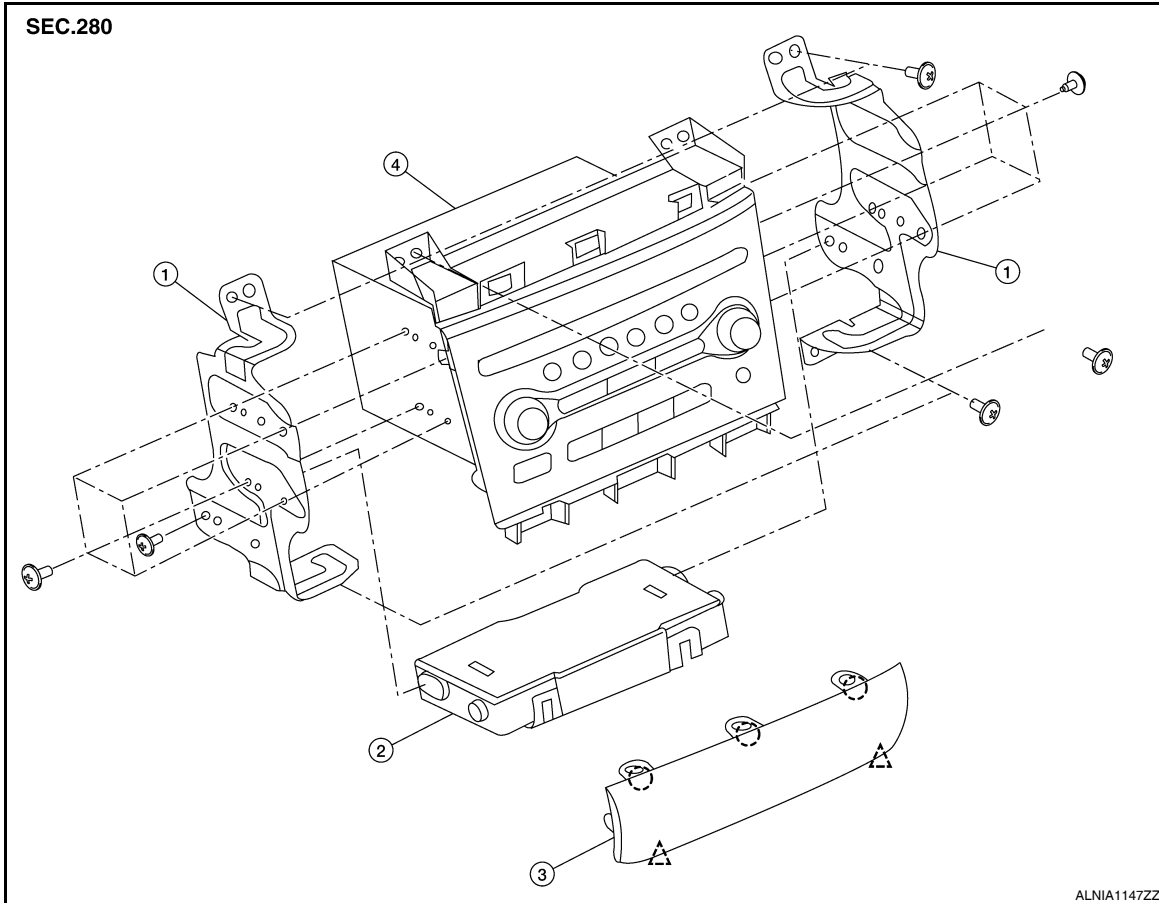
ON-VEHICLE REPAIR

AUDIO UNIT

Removal and Installation

INFOID:000000005528983

Bose Audio

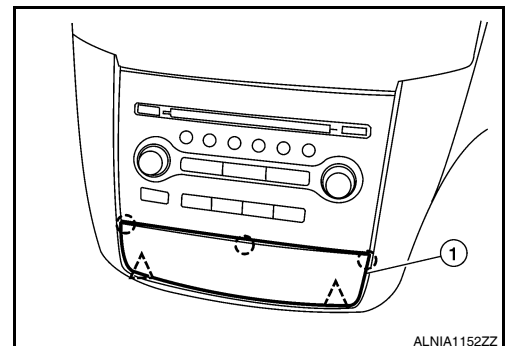


- | | | |
|------------------------------|------------------|------------------------|
| 1. Audio unit brackets LH/RH | 2. A/C auto amp. | 3. Cluster lid C lower |
| 4. Audio unit | △ Clip | ○ Pawl |

REMOVAL

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

- ○: Pawl
- △: Clip



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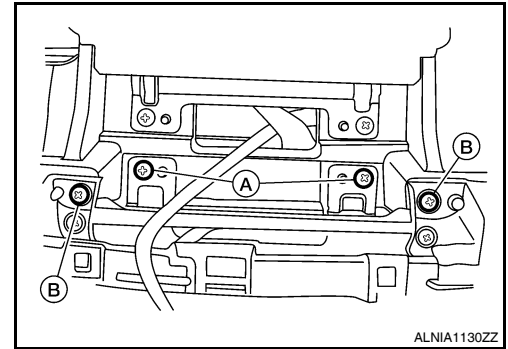
AV

AUDIO UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

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



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

INSTALLATION

Installation is in the reverse order of removal.

AUDIO DISPLAY UNIT

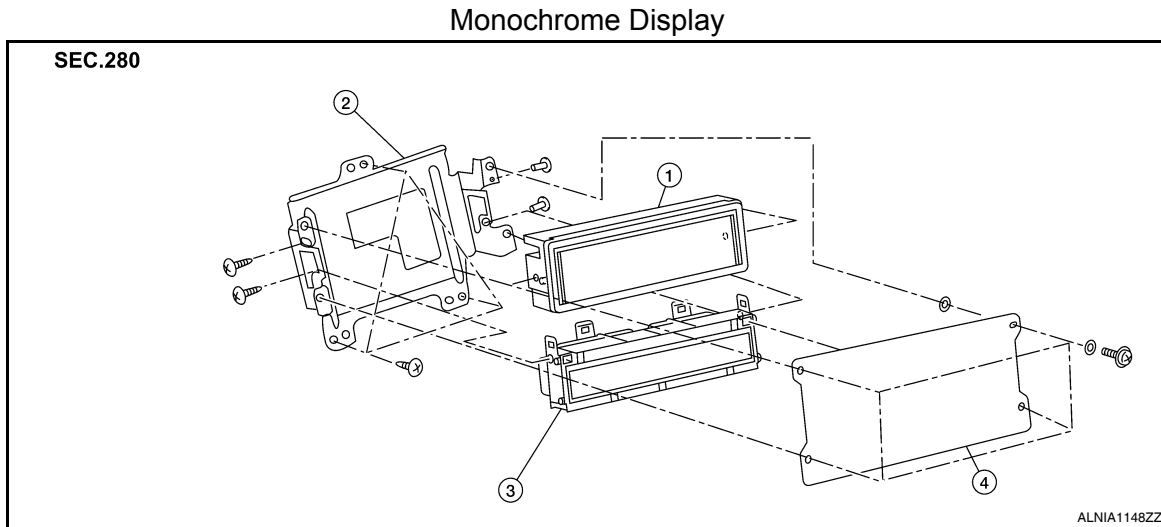
< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

AUDIO DISPLAY UNIT

Removal and Installation

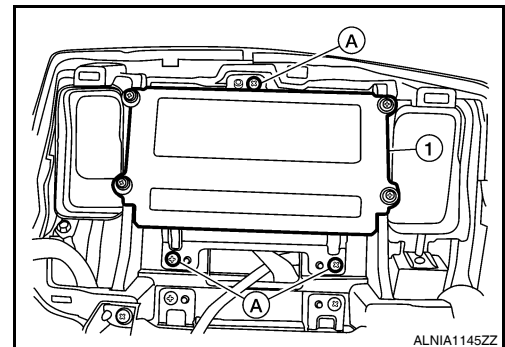
INFOID:000000005460086



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

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the cluster lid D. Refer to [IP-12, "Removal and Installation"](#).
3. Remove the audio/A/C display unit bracket screws (A), then pull out the audio/A/C display unit assembly (1). Disconnect the audio display unit connectors and remove the audio display unit (1).



4. Remove the front cover, then disconnect the audio display unit connectors and remove the audio display unit from the audio/A/C display unit brackets.

INSTALLATION

Installation is in the reverse order of removal.

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FRONT TWEETER

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

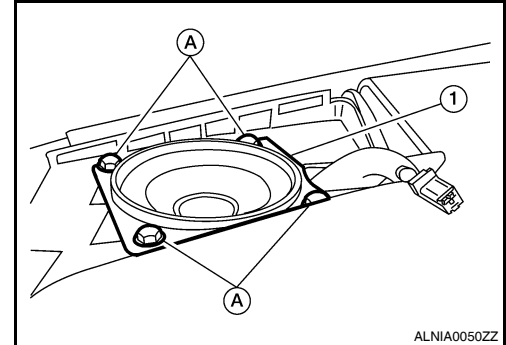
FRONT TWEETER

Removal and Installation

INFOID:000000005460087

REMOVAL

1. Remove the front tweeter speaker grille. Refer to [IP-12, "Removal and Installation"](#).
2. 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.

CENTER SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

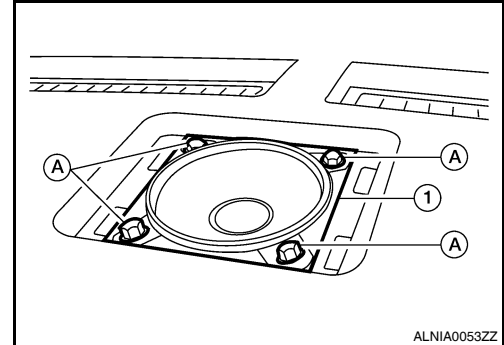
CENTER SPEAKER

Removal and Installation

INFOID:000000005460088

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/ MONOCHROME DISPLAY]

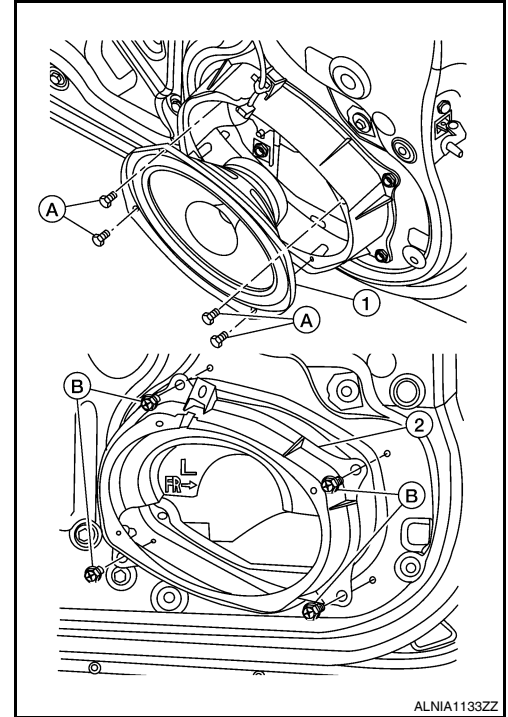
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000005460089

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

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

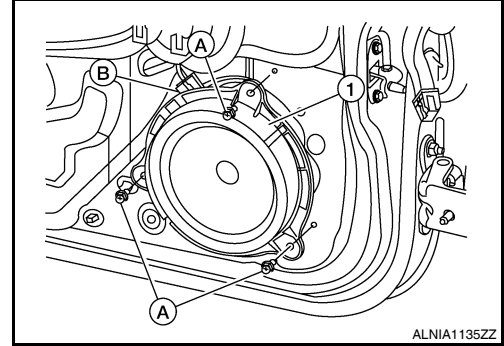
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000005460090

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

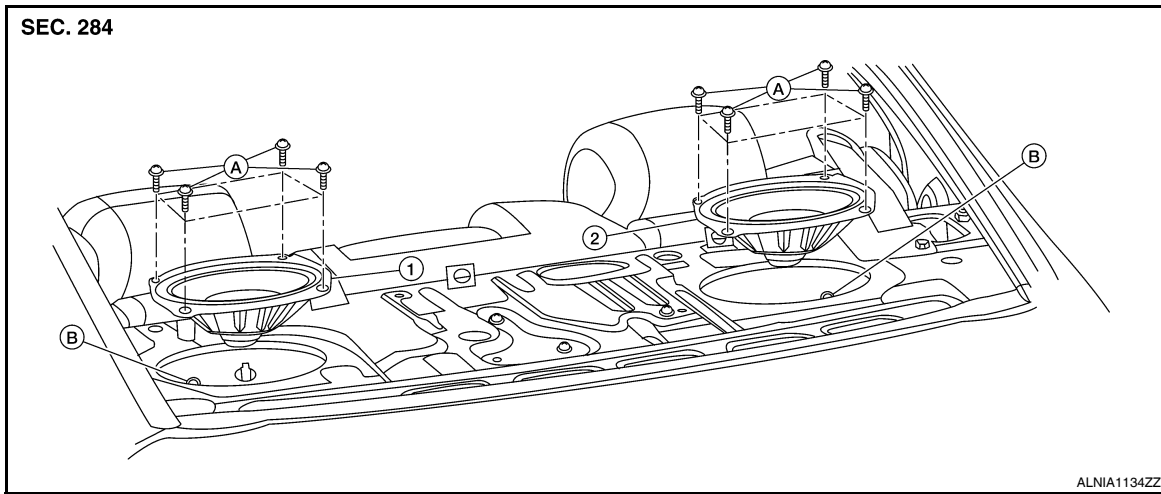
< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

SUBWOOFER

Removal and Installation

INFOID:000000005460091



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

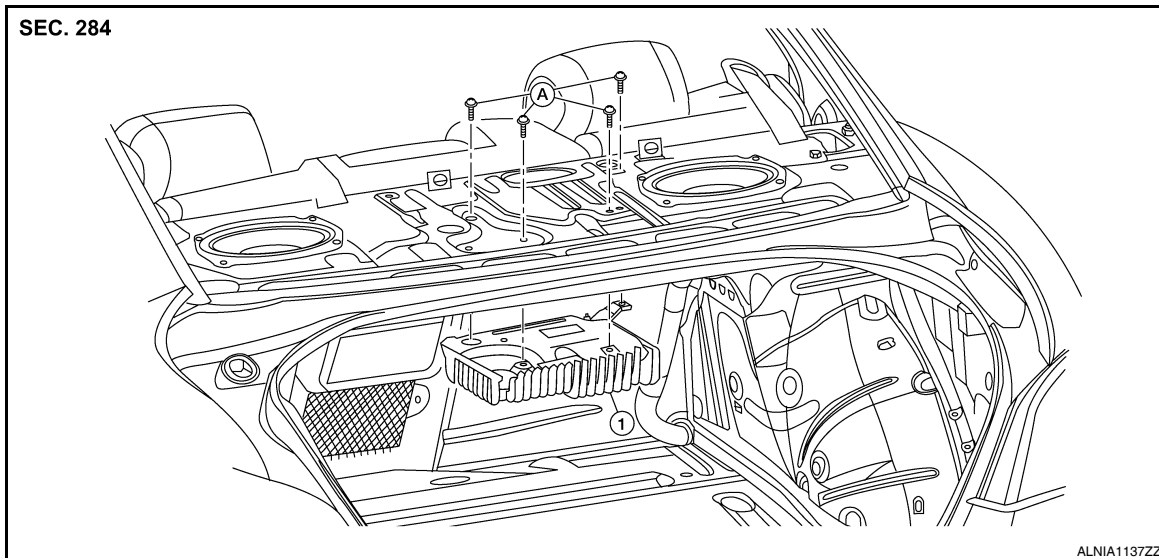
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[BOSE W/ MONOCHROME DISPLAY]

BOSE SPEAKER AMP

Removal and Installation

INFOID:000000005460092



1. Bose speaker amp.

A. Bose speaker amp. 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.
4. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
5. 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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SATELLITE RADIO TUNER

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

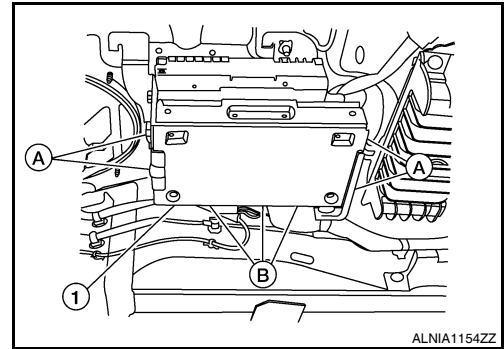
SATELLITE RADIO TUNER

Removal and Installation

INFOID:000000005460093

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
3. Remove the parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
4. From inside the passenger compartment, remove the bracket screws and lower the assembly for access.
5. 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/ MONOCHROME DISPLAY]

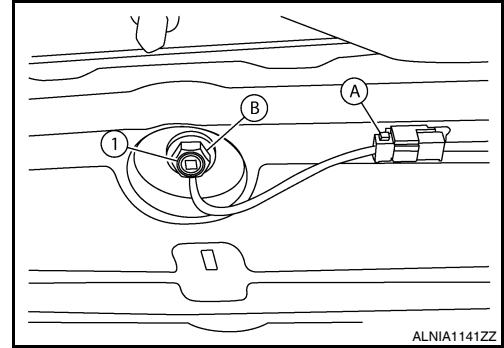
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:000000005460094

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/ MONOCHROME DISPLAY]

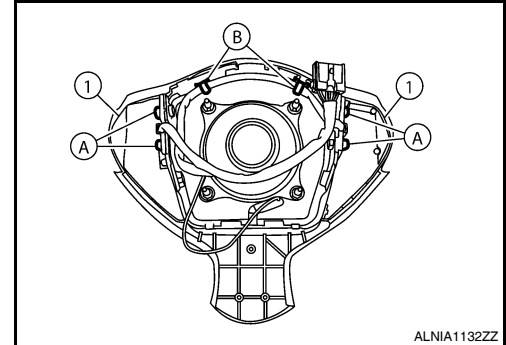
STEERING SWITCH

Removal and Installation

INFOID:000000005460095

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

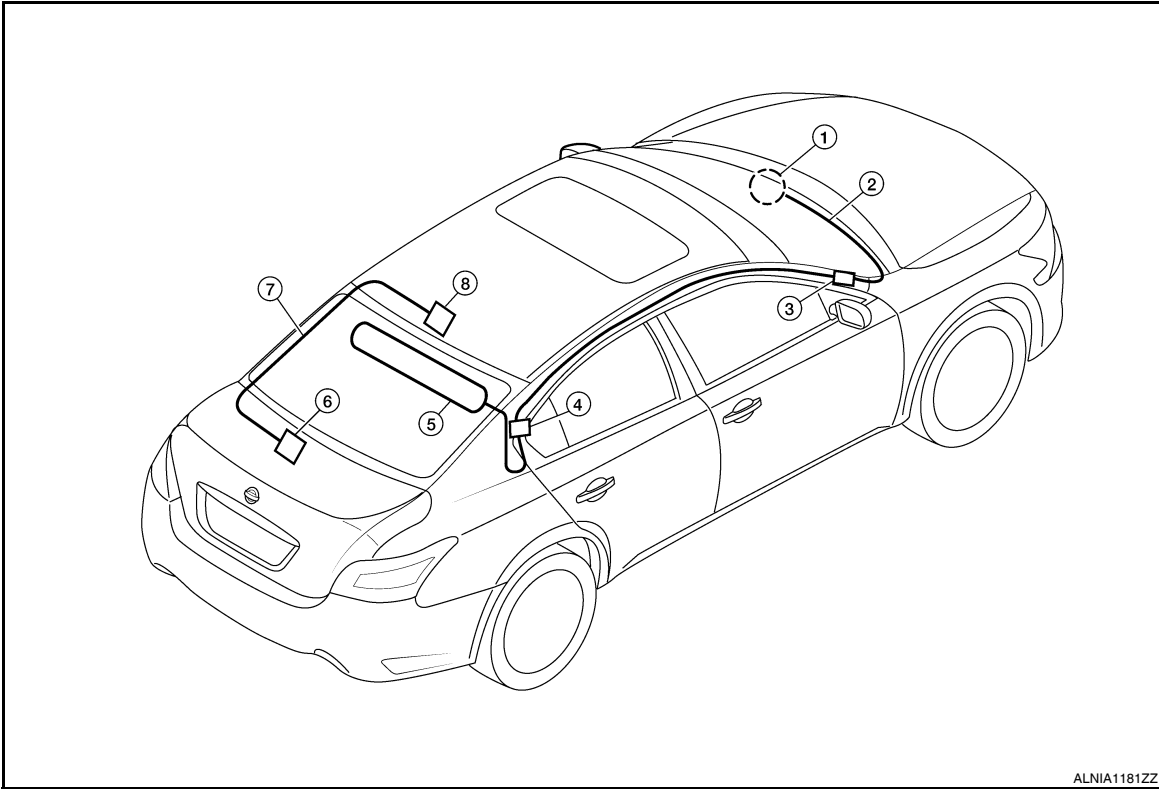
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[BOSE W/ MONOCHROME DISPLAY]

AUDIO ANTENNA

Location of Antenna

INFOID:000000005460096



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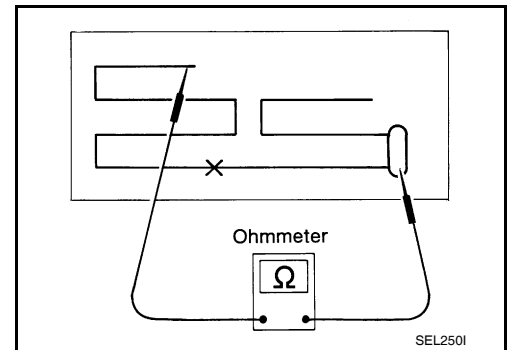
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| 1. Audio unit | 2. Audio unit antenna feeder | 3. In-line connectors M103, M501 |
| 4. Antenna amp. | 5. Window antenna | 6. Satellite radio tuner |
| 7. Satellite radio antenna feeder | 8. Satellite radio antenna | |

Window Antenna Repair

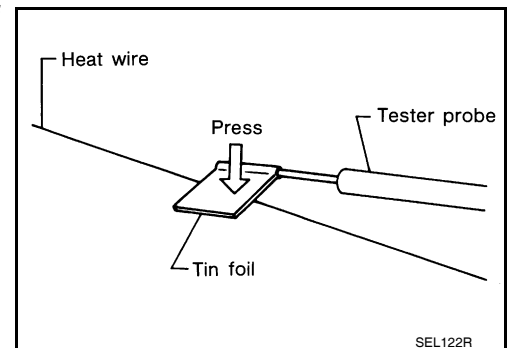
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ELEMENT CHECK

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.



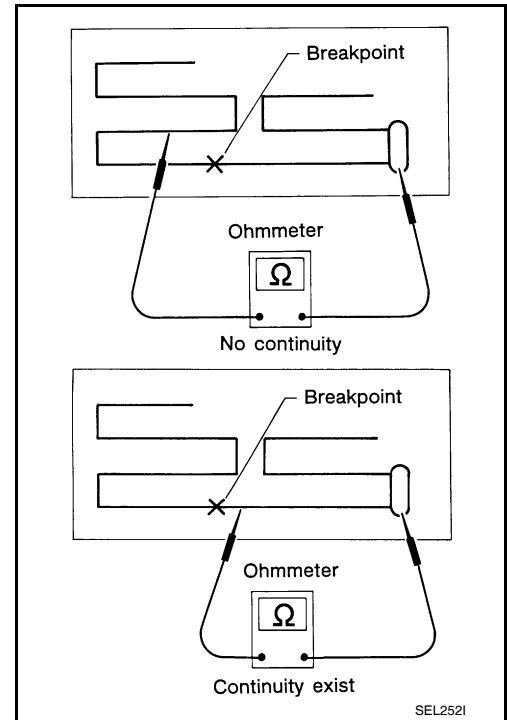
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AUDIO ANTENNA

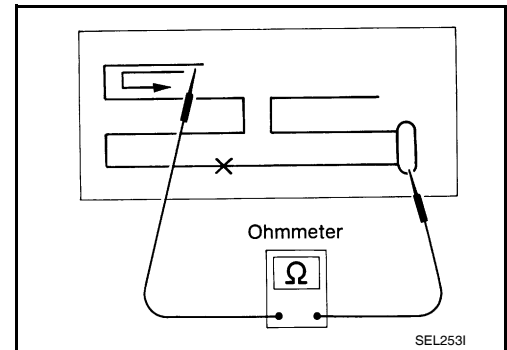
< ON-VEHICLE REPAIR >

[BOSE W/ 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.

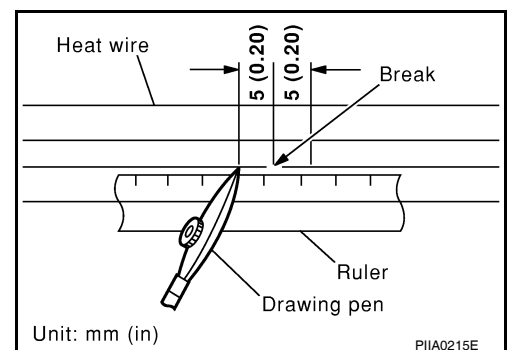


REPAIR EQUIPMENT

- 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.

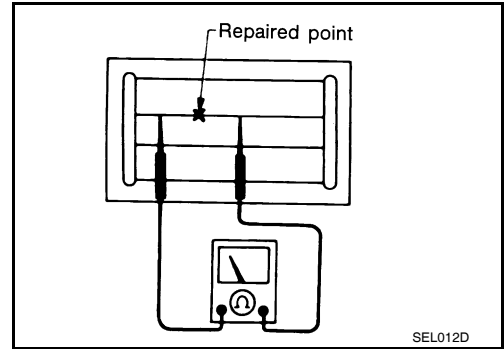


AUDIO ANTENNA

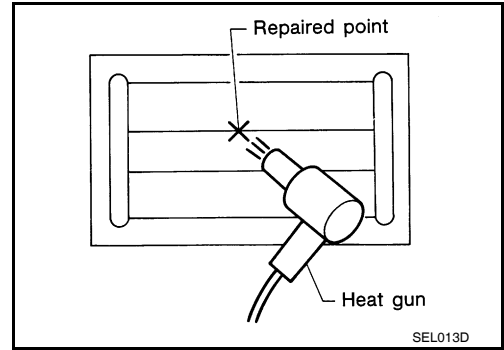
< ON-VEHICLE REPAIR >

[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.



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AV

ANTENNA AMP.

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

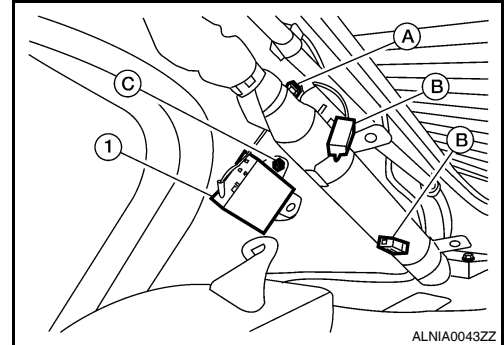
ANTENNA AMP.

Removal and Installation

INFOID:000000005460098

REMOVAL

1. Remove the rear pillar finisher RH. Refer to [INT-23. "Exploded View"](#).
2. 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/ MONOCHROME DISPLAY]

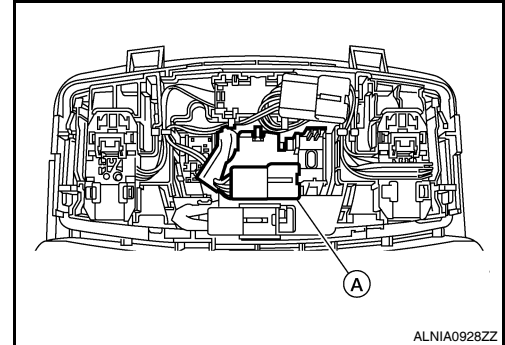
MICROPHONE

Removal and Installation

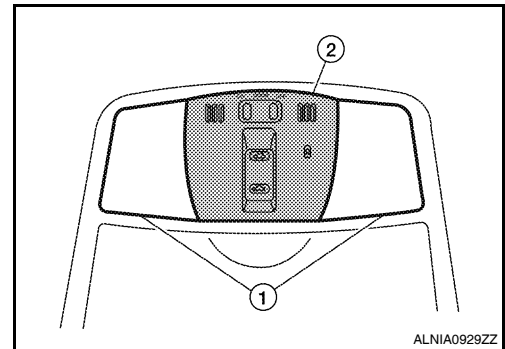
INFOID:000000005460099

REMOVAL

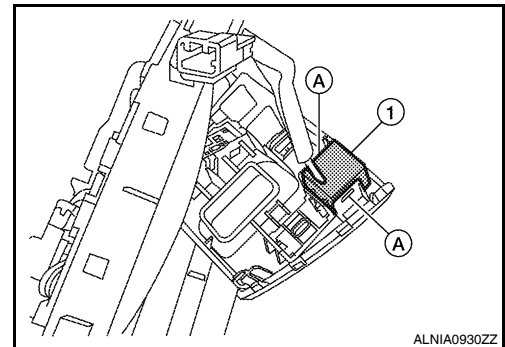
1. Remove the map lamp assembly. Refer to [INL-97, "Removal and Installation"](#).
2. Detach the microphone connector (A).



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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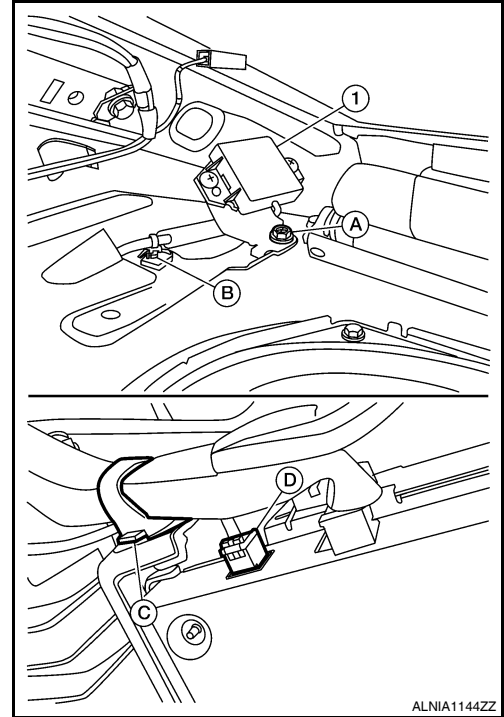
TEL ANTENNA

Removal and Installation

INFOID:000000005460100

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 antenna harness clip (C), disconnect the Bluetooth antenna harness connector (D) and remove the Bluetooth antenna (1).



INSTALLATION

Installation is in the reverse order of removal.

BLUETOOTH CONTROL UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

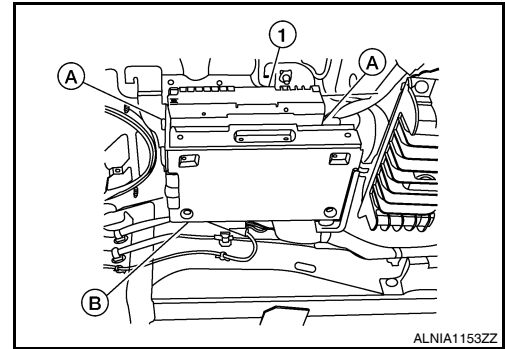
BLUETOOTH CONTROL UNIT

Removal and Installation

INFOID:000000005460101

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
3. Remove the parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
4. From inside the passenger compartment, remove the bracket screws and lower the assembly for access.
5. 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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AV

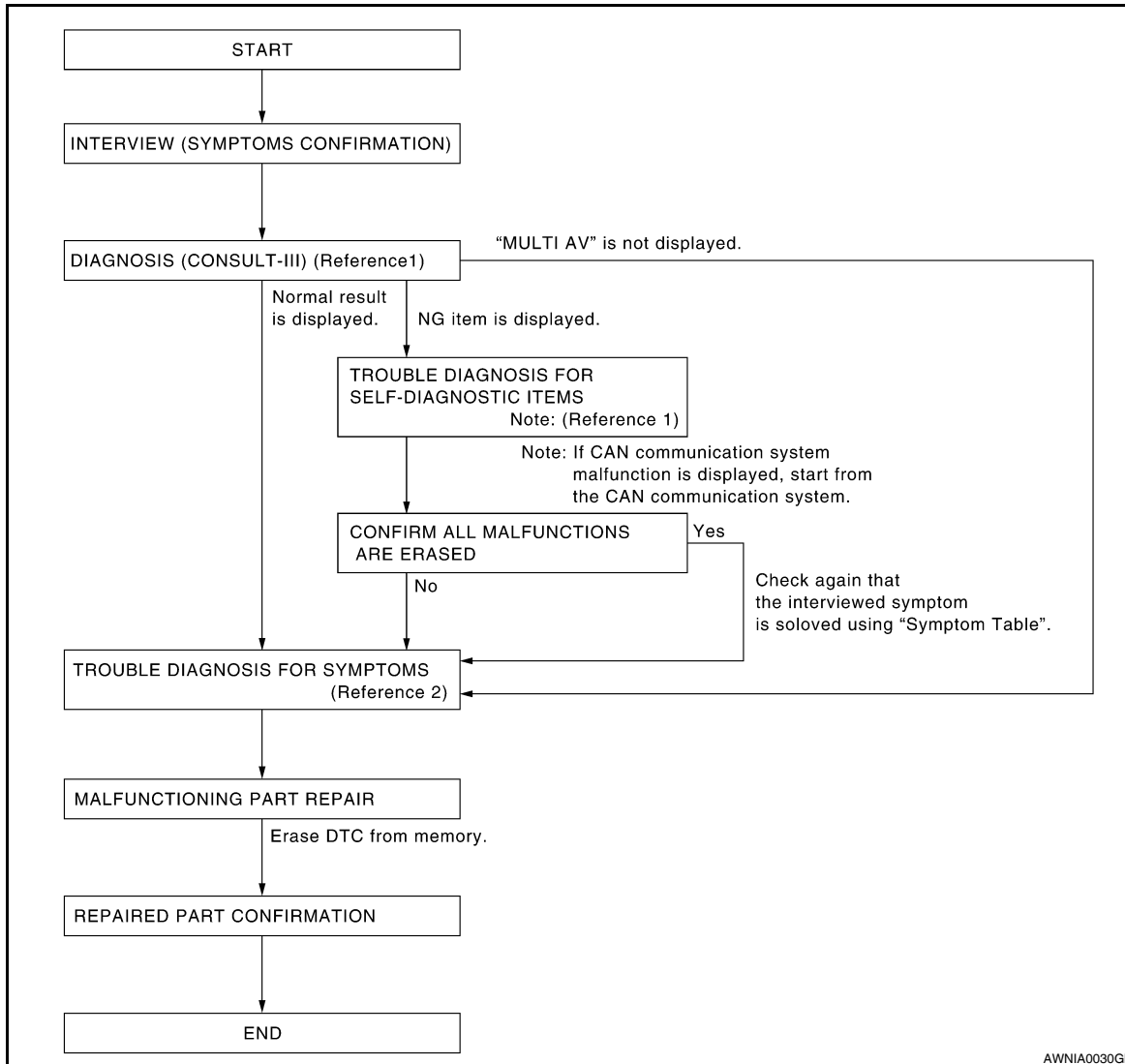
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000005460102

OVERALL SEQUENCE



- Reference 1... Refer to [AV-205, "CONSULT-III Function \(MULTI AV\)"](#).
- Reference 2... Refer to [AV-316, "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]

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-304, "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-316, "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 POSSIBLE ROUTE LINE CENTER POSITION ADJUSTMENT****REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUSTMENT : Description**

INFOID:000000005460103

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:000000005460104

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT**ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description**

INFOID:000000005589322

BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT-III configuration before replacement.

AFTER REPLACEMENT**CAUTION:**

When replacing AV control unit, you must perform "WRITE CONFIGURATION" with CONSULT-III.

- Complete the procedure of "WRITE CONFIGURATION" in order.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:000000005589323

1. SAVING VEHICLE SPECIFICATION**Ⓜ-CONSULT-III Configuration**

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [AV-183. "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection".

>> GO TO 2.

2. REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to [AV-322. "Removal and Installation"](#).

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION**Ⓜ-CONSULT-III Configuration**

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR DISPLAY]

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to [AV-183, "CONFIGURATION \(AV CONTROL UNIT\) : Special Repair Requirement"](#).

>> GO TO 4.

4. OPERATION CHECK

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

>> WORK END

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:000000005589324

- Since vehicle specifications are not included in the AV control unit after replacement, it is required to write vehicle specifications with CONSULT-III.
- Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	<ul style="list-style-type: none">• Reads the vehicle configuration of current AV control unit.• Saves the read vehicle configuration.
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.

CONFIGURATION (AV CONTROL UNIT) : Special Repair Requirement

INFOID:000000005589325

1. WRITING MODE SELECTION

 CONSULT-III Configuration
Select "CONFIGURATION" of AV control unit.


When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2. PERFORM "WRITE CONFIGURATION-CONFIG FILE"

 CONSULT-III Configuration
Perform "WRITE CONFIGURATION-Config file".

>> WORK END

3. PERFORM "WRITE CONFIGURATION-MANUAL SELECTION"

 CONSULT-III Configuration
Select "WRITE CONFIGURATION-Manual selection" to write vehicle specifications into the AV control unit. For data to write, refer to [AV-183, "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).

>> GO TO 4.

4. OPERATION CHECK

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

>> WORK END

CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:000000005589326

CAUTION:

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR DISPLAY]

Check vehicle specifications before servicing.

MANUAL SETTING ITEM		Note
Items	Setting value	
STEERING	LHD	—
	RHD	—
GRADE	MODE 1	BASE
	MODE 2	OTHER
ENGINE TYPE	NORMAL	—
	HYBRID	—
BODY TYPE	NORMAL	NORMAL
	CONV	CONVERTIBLE
CAMERA SYSTEM	NONE/AVM	NONE or AVM
	REAR	REAR CAMERA
	REAR + SIDE	REAR + SIDE CAMERA
4WAS	WITHOUT	—
	WITH	—
SOUND SYSTEM	BASE	—
	BOSE	—
ANTENNA TYPE	ROD TYPE	—
	LONG TYPE	—
DUAL-ZONE AUTO TEMP	WITHOUT	—
	WITH	—
DVD PLAY FUNCTION	WITHOUT	—
	WITH	—

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR DISPLAY]

MANUAL SETTING ITEM		Note
Items	Setting value	
BODY TYPE	SED 2DR	SEDAN 2 DOOR
	SED 4DR 1	SEDAN 4 DOOR
	SED 4DR 2	SEDAN 4 DOOR (WIDE)
	H/B 2DR	H/B 2 DOOR
	H/B 4DR	H/B 4 DOOR
	COUPE 2DR	COUPE 2 DOOR
	COUPE T	COUPE T BAR
	WGN 4DR 2	49H WAGON 4 DOOR (WIDE)
	H/T 2DR 1	H/T 2 DOOR
	H/T 2DR 2	H/T 2 DOOR (HIGH-ROOF)
	H/T 4DR 1	H/T 4 DOOR
	H/T 4DR 2	H/T 4 DOOR (WIDE)
	WGN 2DR	WAGON 2 DOOR
	WGN 4DR 1	WAGON 4 DOOR
	WGN 4DR 3	WAGON 4 DOOR (HIGH-ROOF)
	WGN 4DR 4	56H WAGON 4 DOOR (WIDE)
	VAN 2DR	VAN 2 DOOR
	VAN 4DR 1	VAN 4 DOOR
VAN 4DR 2	VAN 4 DOOR (HIGH-ROOF)	
CONV	CONVERTIBLE	

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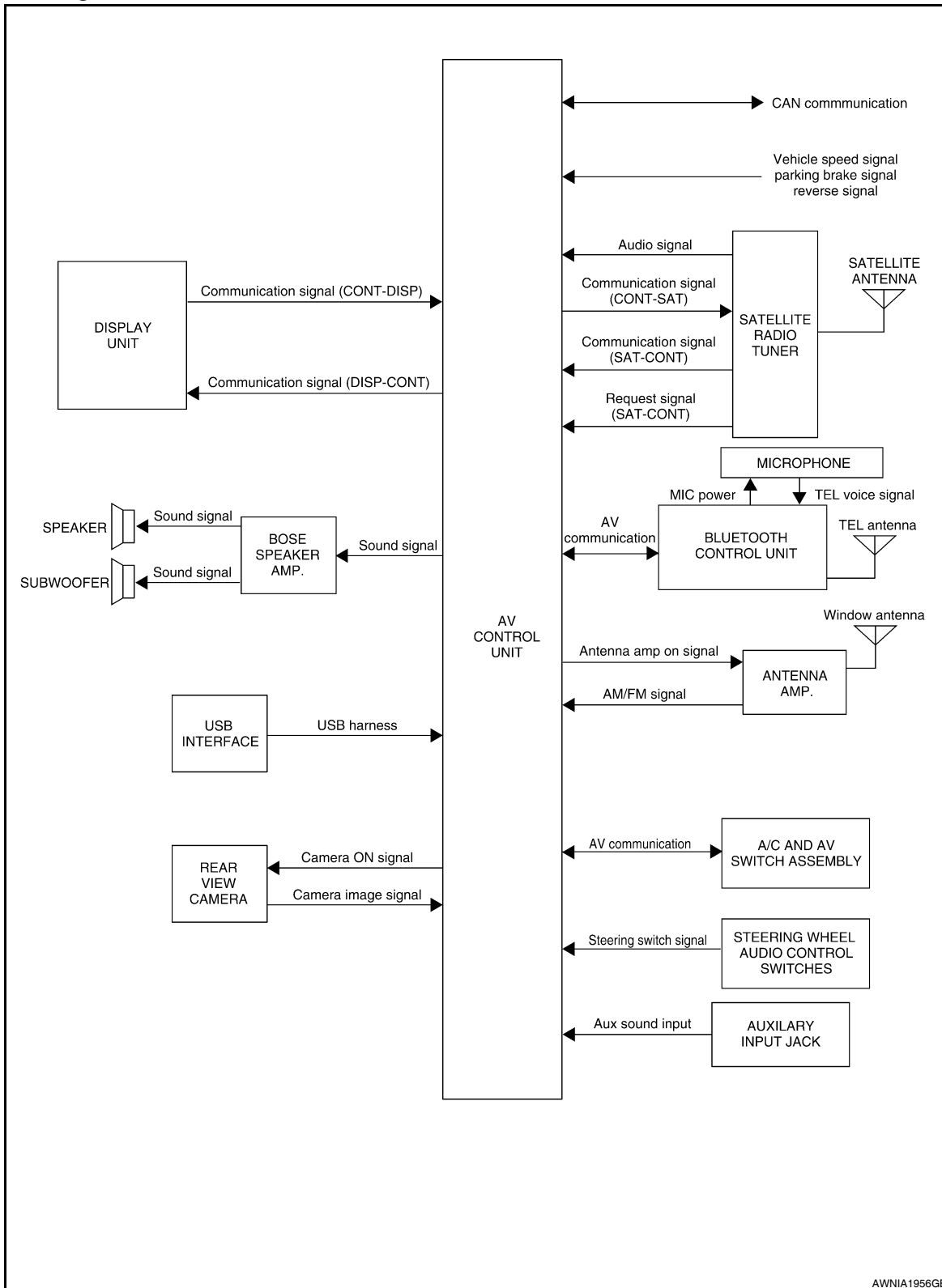
AV

FUNCTION DIAGNOSIS

AUDIO SYSTEM

System Diagram

INFOID:000000005460105



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System Description

INFOID:000000005460106

AUDIO SYSTEM

AUDIO SYSTEM

[BOSE W/ COLOR DISPLAY]

< FUNCTION DIAGNOSIS >

The audio system consists of the following components

- AV control unit
- Display unit
- BOSE speaker amp.
- Window antenna
- Steering wheel audio control switches
- A/C and AV switch assembly
- 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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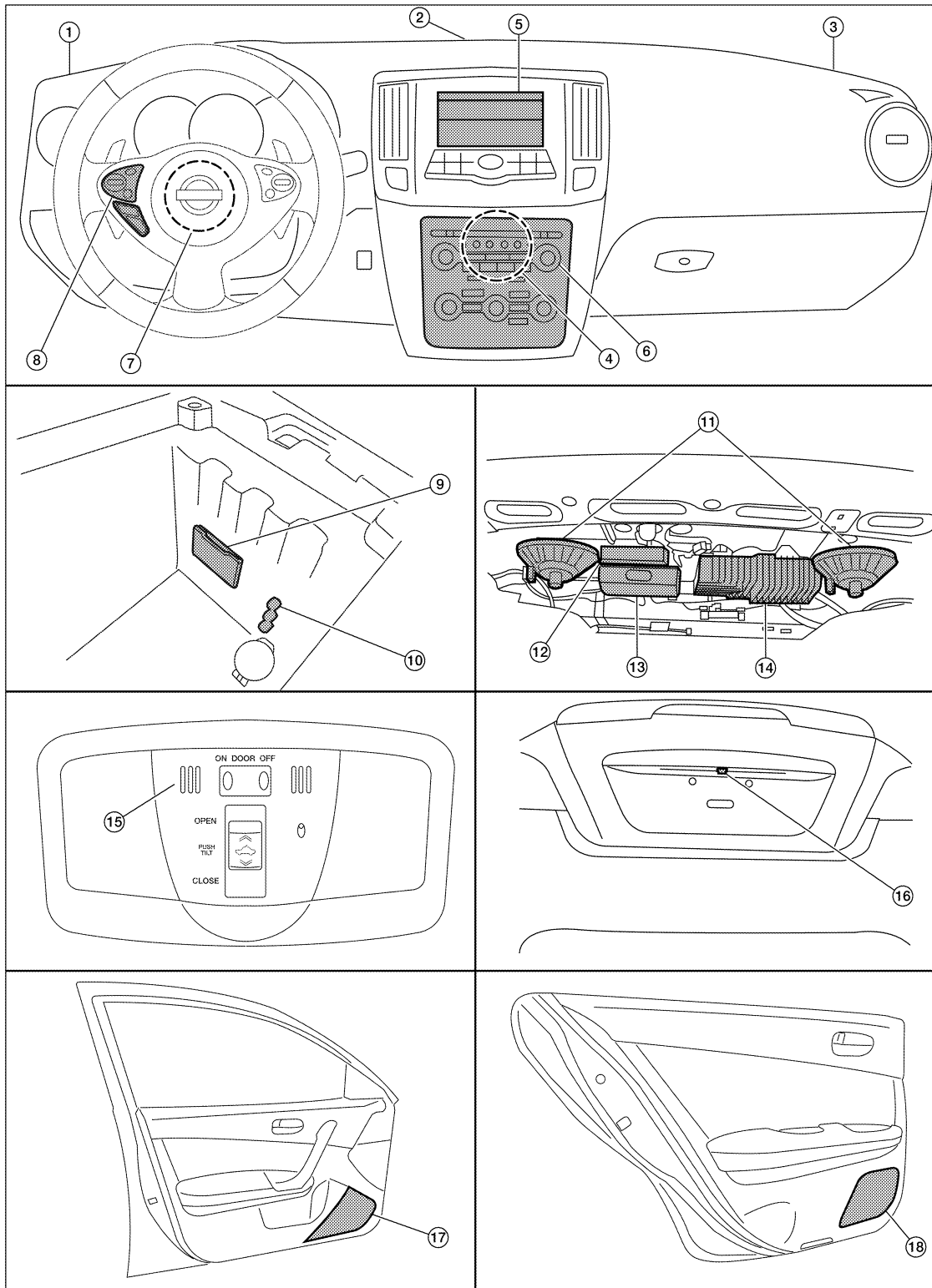
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

Component Parts Location

INFOID:000000005528984



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- | | | |
|---|------------------------|-----------------------------------|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M152, M153, M154, M155, M156, M157, M158, M159 (located behind A/C and AV switch assembly) | 5. Display unit M141 | 6. A/C and AV switch assembly M98 |

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

- | | | |
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| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. USB interface M211 (view in center console) |
| 10. Aux jack M209 | 11. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | 12. Satellite radio tuner B111 |
| 13. Bluetooth control unit B128, B130, B131 | 14. BOSE speaker amp B109, B110 | 15. Microphone R7 |
| 16. Rear view camera T101 | 17. Front door speaker
LH D3
RH D103 | 18. Rear door speaker
LH D202
RH D302 |

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Component Description

INFOID:000000005460108

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 wheel audio control 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 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.

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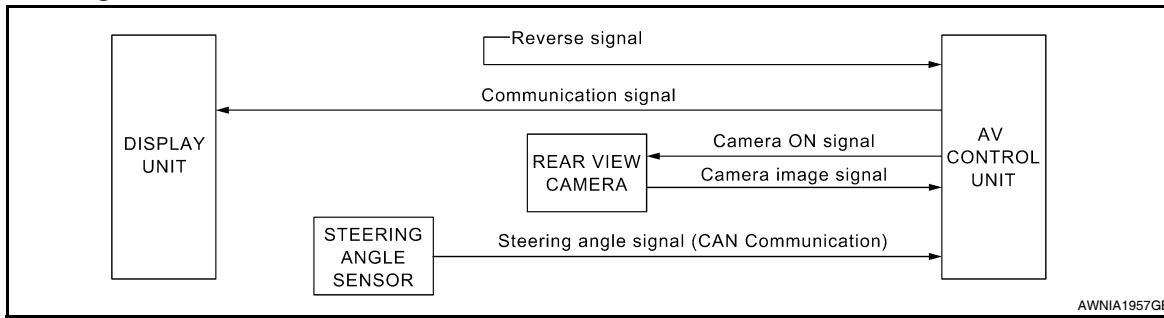
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

REAR VIEW MONITOR SYSTEM

System Diagram



System Description

INFOID:000000005530144

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.

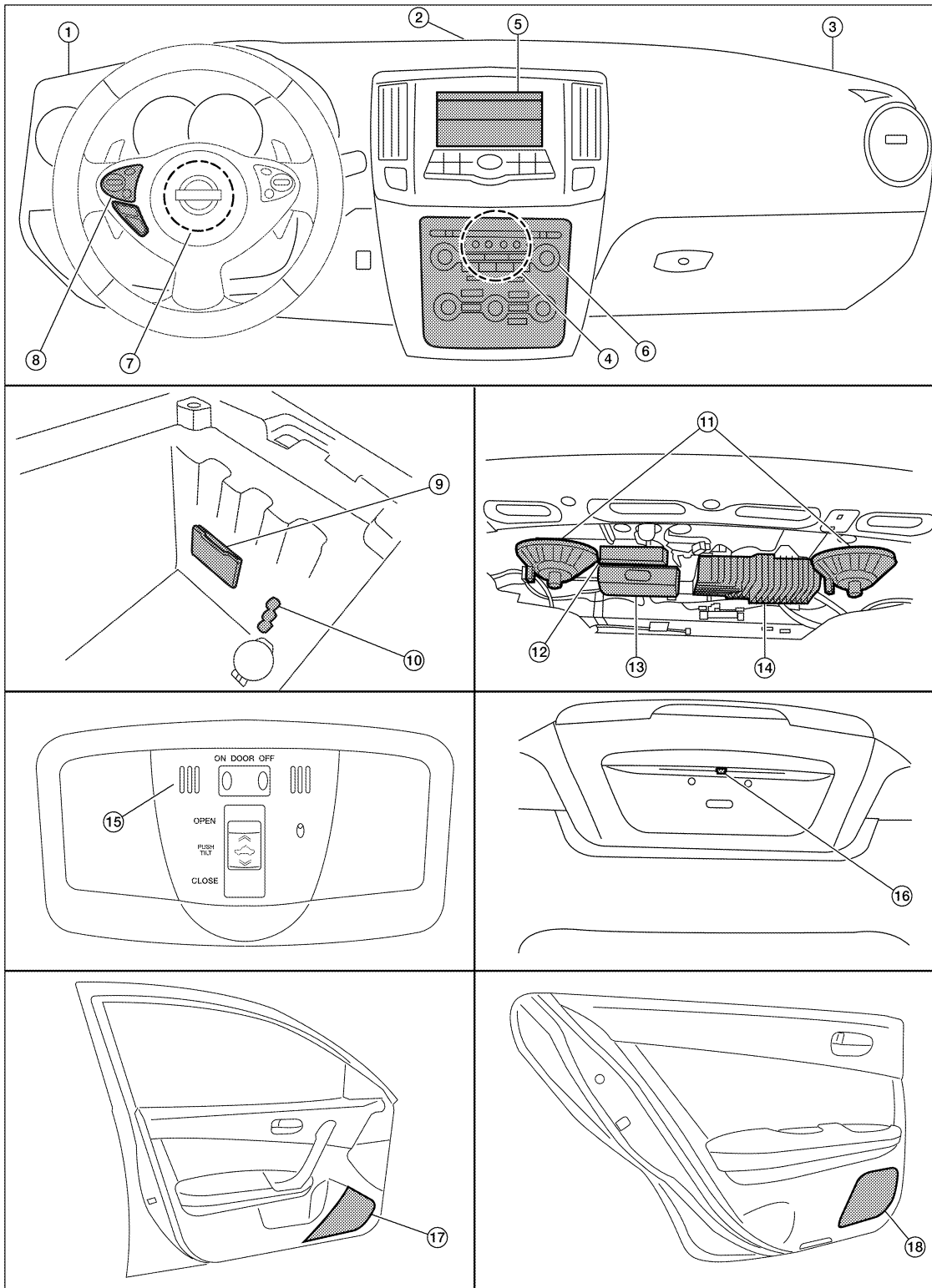
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

Component Parts Location

INFOID:000000005460111



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|---|------------------------|-----------------------------------|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M152, M153, M154, M155, M156, M157, M158, M159 (located behind A/C and AV switch assembly) | 5. Display unit M141 | 6. A/C and AV switch assembly M98 |

REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

- | | | |
|---|--|--|
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. USB interface M211 (view in center console) |
| 10. Aux jack M209 | 11. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | 12. Satellite radio tuner B111 |
| 13. Bluetooth control unit B128, B130, B131 | 14. BOSE speaker amp B109, B110 | 15. Microphone R7 |
| 16. Rear view camera T101 | 17. Front door speaker
LH D3
RH D103 | 18. Rear door speaker
LH D202
RH D302 |

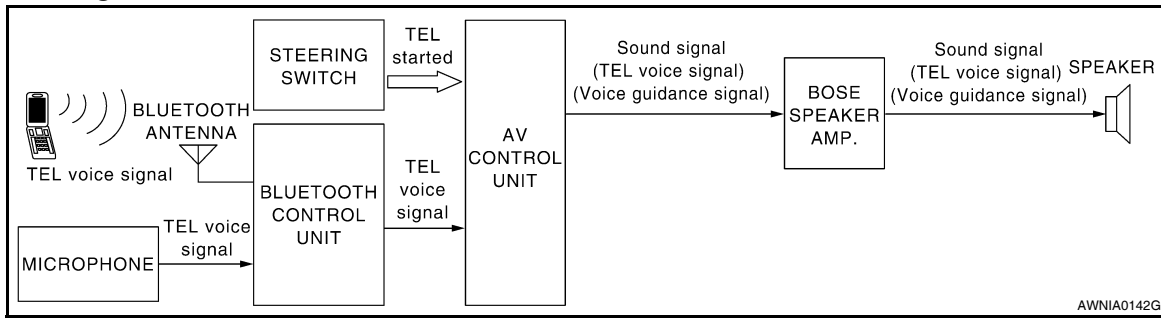
Component Description

INFOID:000000005530145

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

HANDS-FREE PHONE SYSTEM

System Diagram



System Description

INFOID:000000005460114

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. 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 20 seconds. If a phone is present in the vehicle and paired with the Bluetooth control unit, Nissan Voice Recognition will then become active. Bluetooth telephone functions can be turned off using the Nissan Voice Recognition system.

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

MICROPHONE

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

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.

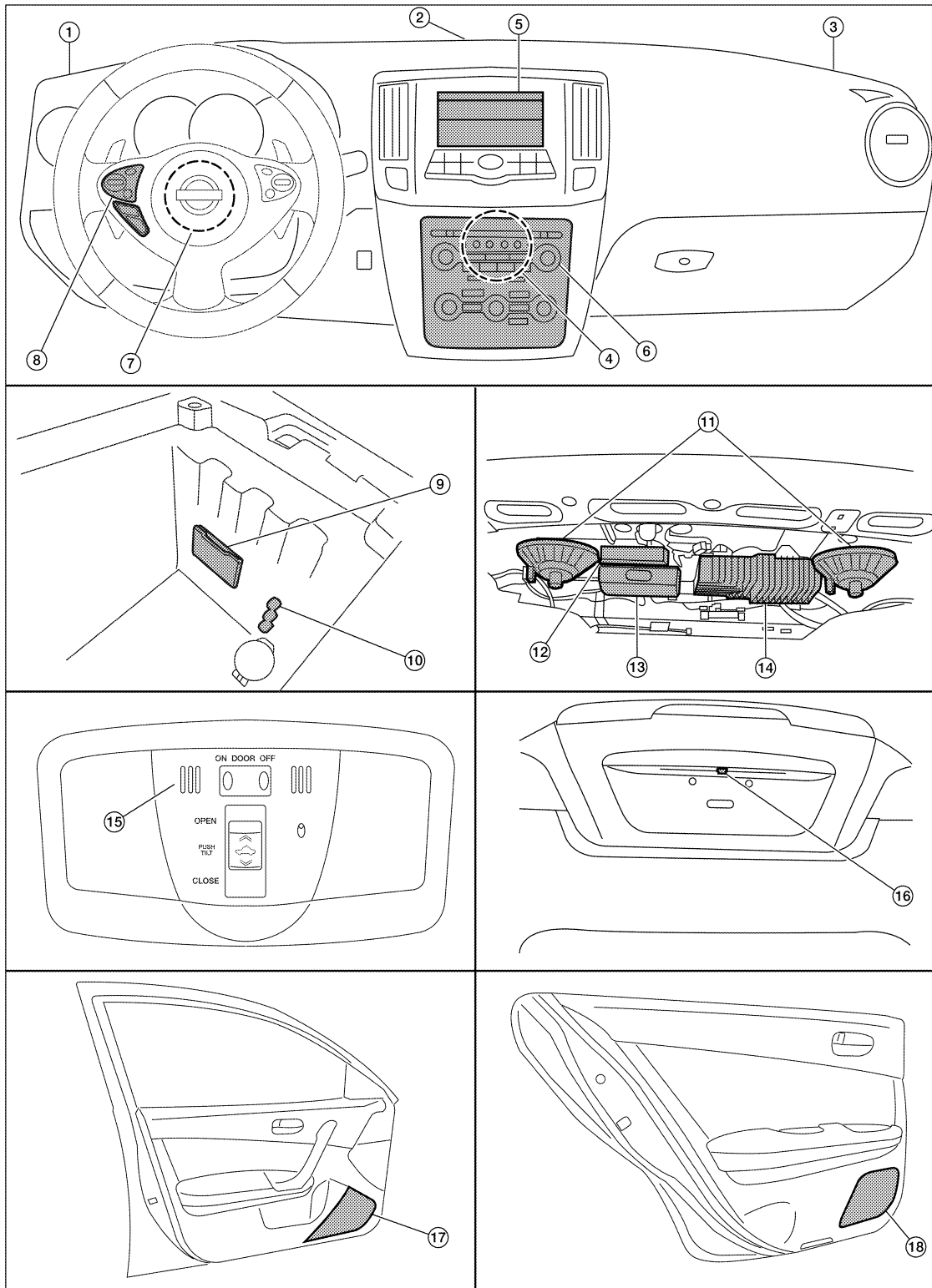
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

Component Parts Location

INFOID:000000005460115



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|---|------------------------|-----------------------------------|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M152, M153, M154, M155, M156, M157, M158, M159 (located behind A/C and AV switch assembly) | 5. Display unit M141 | 6. A/C and AV switch assembly M98 |

HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

- | | | |
|---|--|--|
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. USB interface M211 (view in center console) |
| 10. Aux jack M209 | 11. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | 12. Satellite radio tuner B111 |
| 13. Bluetooth control unit B128, B130, B131 | 14. BOSE speaker amp B109, B110 | 15. Microphone R7 |
| 16. Rear view camera T101 | 17. Front door speaker
LH D3
RH D103 | 18. Rear door speaker
LH D202
RH D302 |

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Component Description

INFOID:000000005530153

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	
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

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)


Diagnosis Description

INFOID:000000005530154

MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

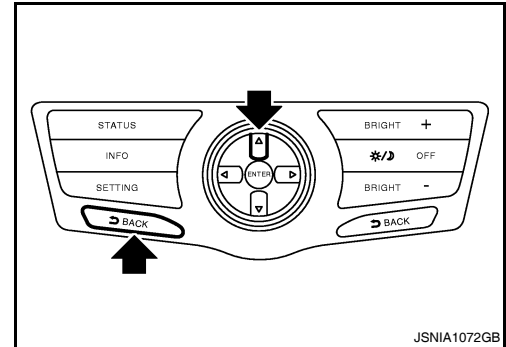
The ON/OFF operation (continuity) of each switch in the multifunction switch and preset switch can be checked.

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.



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.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

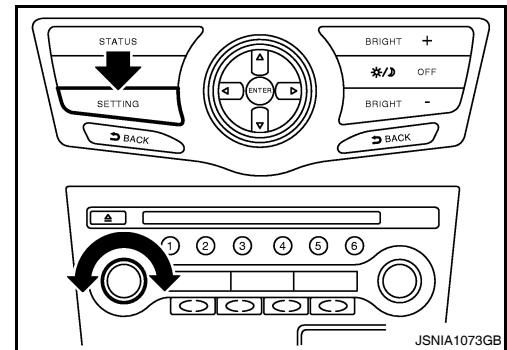
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

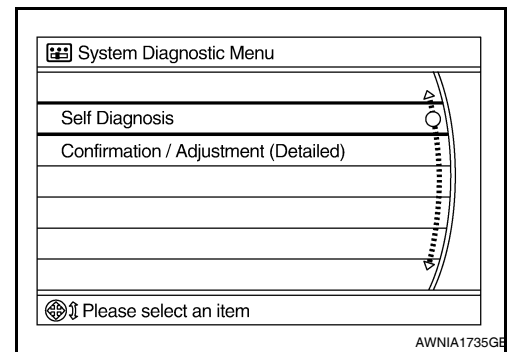
Mode	Description
Display Diagnosis	The confirmation of the tint with the color spectrum bar display and shading of color with the gradation bar display can be performed.
Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse.
Speaker Test	The connection of a speaker can be confirmed by test tone.
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.

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.



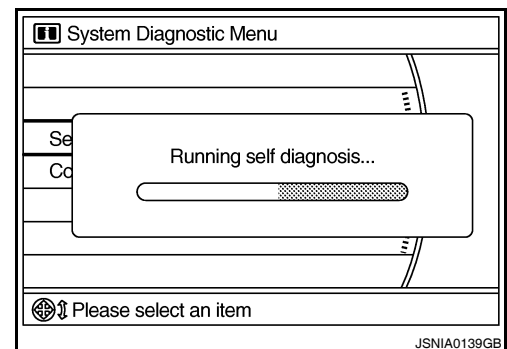
SELF-DIAGNOSIS MODE

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.



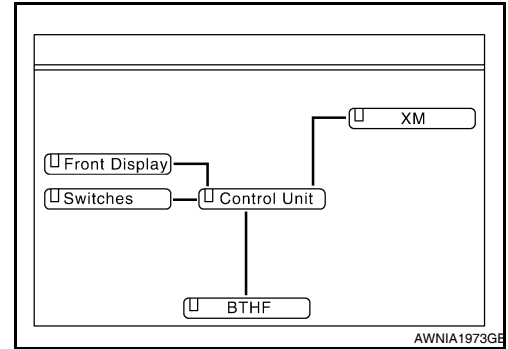
DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

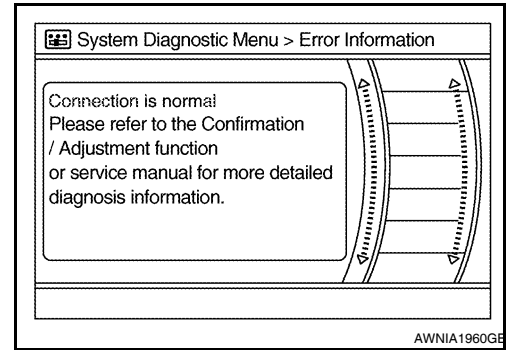
2. Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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 multi-function switch.

Self-diagnosis Result Chart

Diagnosis results	Detection logic	Possible malfunction location / Action to take
<p>The diagram is identical to the one above, but the 'Control Unit' box is highlighted in red, indicating a unit malfunction.</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>

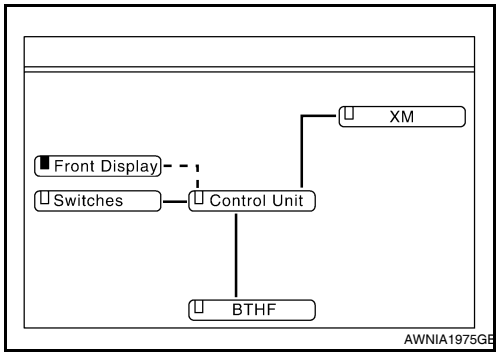
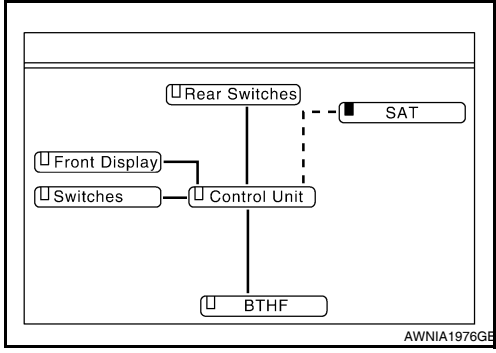
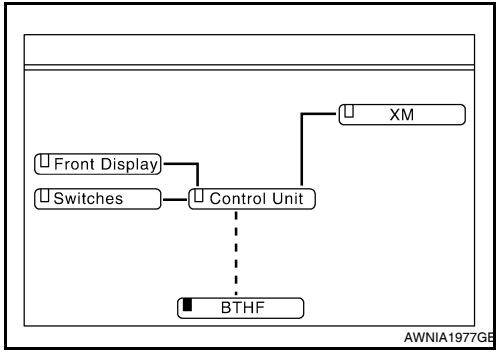
NOTE:

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”

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

Diagnosis results	Detection logic	Possible malfunction location / Action to take
 <p style="text-align: right; font-size: small;">AWNIA1975GE</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;">AWNIA1976GE</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.
 <p style="text-align: right; font-size: small;">AWNIA1977GE</p>	<p>When any one of the following items is detected:</p> <ul style="list-style-type: none"> • Bluetooth control unit power supply and ground circuits are malfunctioning. • AV communication circuits between camera control unit and Bluetooth control 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 Bluetooth control unit is malfunctioning. 	<ul style="list-style-type: none"> • Bluetooth control unit power supply and ground circuits. • AV communication circuits between camera control unit and Bluetooth control 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 Bluetooth control unit. (without rear view camera)

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.

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

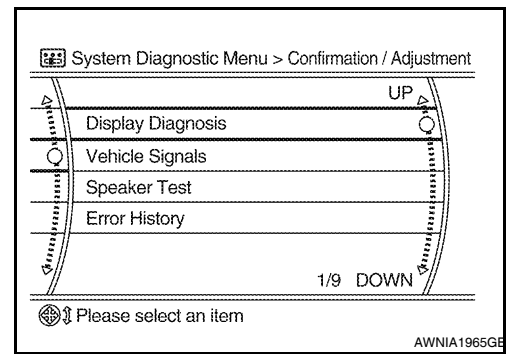
AV

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

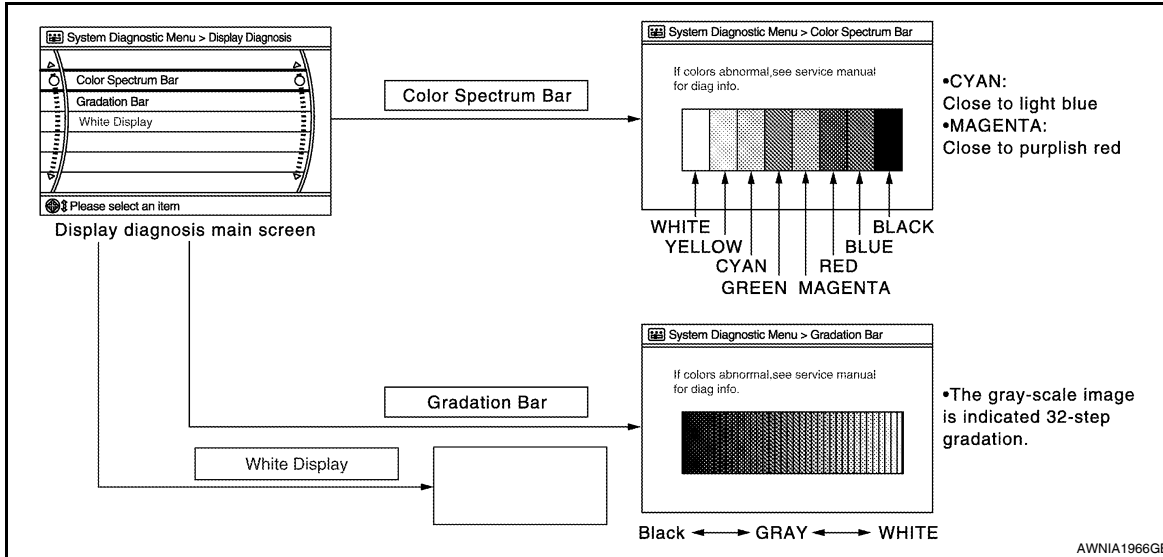
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

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.



Display Diagnosis

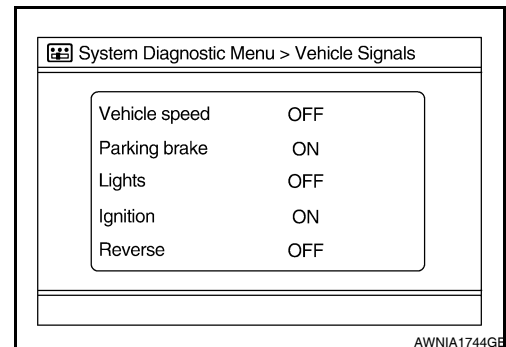


The tint of the color bar indication is as per the following list if RGB image signal error is detected.

- 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.	

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

Diagnosis item	Display	Vehicle status	Remarks
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	

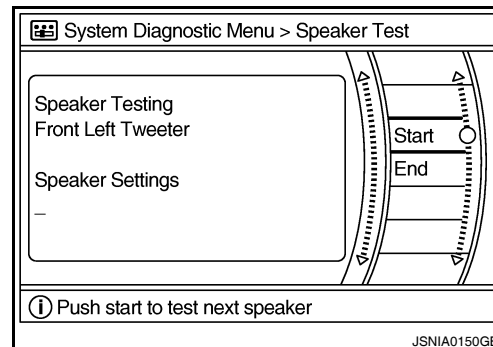
Speaker Test

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.

Refer to [AV-205, "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

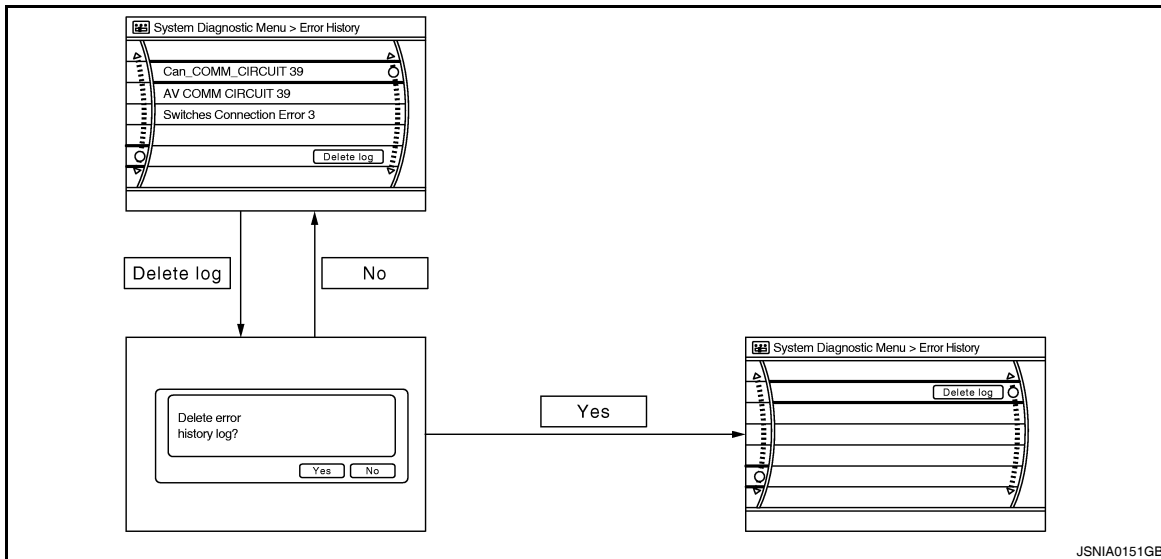
- The counter increases by 1 if an error occurs when IGN switch is ON. The counter will not decrease even if the condition is normal at the next IGN ON cycle.
- The counter upper limit is 50. Any counts exceeding 50 are ignored. The counter can be reset (no error record display) with the "Delete log"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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]



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-205. "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.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

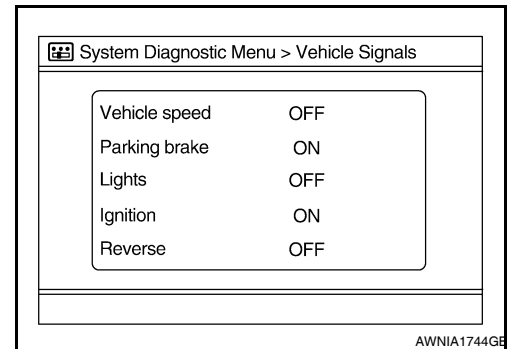
Error item	Description	Possible malfunction factor/Action to take
SAT Connection Error	When any one of the following items is detected: <ul style="list-style-type: none"> • satellite radio tuner power supply and ground circuits are malfunctioning. • serial communication circuits between AV control unit 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.

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.

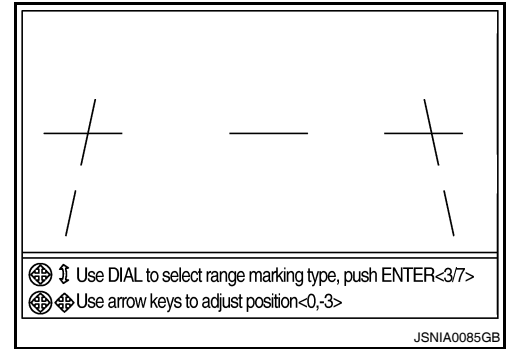
ADJUST OFFSET OF REAR VIEW CAMERA

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[BOSE W/ COLOR DISPLAY]

< FUNCTION DIAGNOSIS >

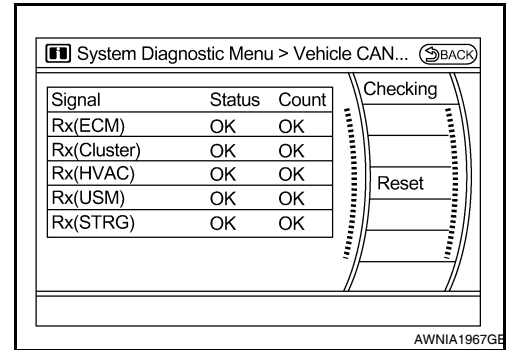
Use this mode to adjust the guide line display position of the rear-view monitor if necessary after removing the rear view monitor camera.



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.

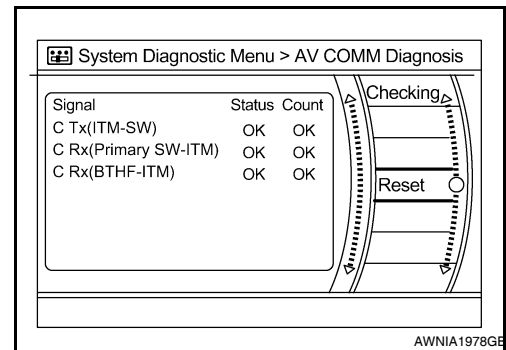
Items	Display (Current)	Malfunction counter (Past)
Tx (HVAC)	OK / UNKWN	OK / 0 - 39
Rx (ECM)	OK / UNKWN	OK / 0 - 39
Rx (Cluster)	OK / UNKWN	OK / 0 - 39
Rx (HVAC)	OK / UNKWN	OK / 0 - 39
Rx (USM)	OK / UNKWN	OK / 0 - 39
Rx (STRG)	OK / UNKWN	OK / 0 - 39



AV COMM Diagnosis

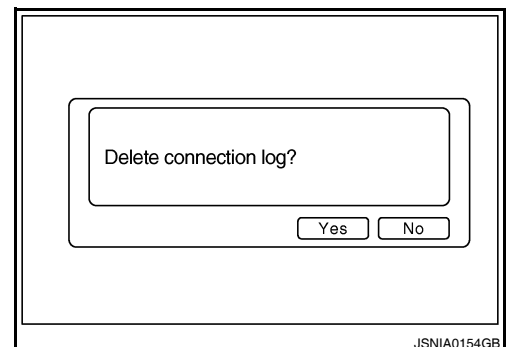
- Displays the communication status between AV control unit (master unit) and each unit.
- The error counter displays “OK” if any malfunction was not detected in the past and displays “0” if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle.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

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



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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

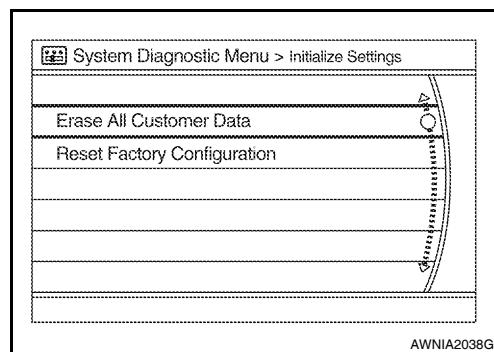
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

“Erase All Customer Data” and “Reset Factory Configuration” are possible.

CAUTION:

- **Never perform Reset Factory Configuration except when configuration is unsuccessful.**
- **Factory Configuration Initialize requires configuration. For details, refer to [AV-365, "Description"](#).**



CONSULT-III Function (MULTI AV)

INFOID:00000000531993

APPLICATION ITEMS

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.
Configuration	<ul style="list-style-type: none"> • Read and save the vehicle specification. • Write the vehicle specification when replacing AV control unit.

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-540, "Diagnosis Procedure" .
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	
Cont Unit [U1200]	AV control unit malfunction is detected.	
CAN CONT [U1216]		
SUB CPU CONN [U1228]		
iPod CERTIFICATION [U1229]		
Built-in AUDIO CONN [U122E]		

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

Error item	Description	Possible malfunction factor/Action to take
HDD CONN [U1218]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
HDD READ [U1219]		
HDD WRITE [U121A]		
HDD COMM [U121B]		
HDD ACCESS [U121C]		
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DSP CONN [U121D]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If a disc can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
DSP COMM [U121E]		
DVD COMM [U1227]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If DVD can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.
FRONT DISP CONN [U1243]	When either one of the following items are detected: <ul style="list-style-type: none"> • Display unit power supply and ground circuits malfunction is detected. • Communication circuits between AV control unit and display unit. 	<ul style="list-style-type: none"> • Display unit power supply and ground circuits. • Communication circuits between AV control unit and AV display unit.
SAT CONN [U1255]	Satellite radio tuner malfunction is detected.	Replace the satellite radio tuner if the malfunction occurs constantly.
USB OVERCURRENT [U1263]	Detection of over current in USB connector.	Check USB harness between the AV control unit and USB connector.
<ul style="list-style-type: none"> • AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] 	When either one of the following items are 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. 	<ul style="list-style-type: none"> • Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch.

DATA MONITOR

ALL SIGNALS

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

Display Item	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.	

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

Display Item	Display	Vehicle status	Remarks
ILLUM SIG	On	Block the light beam from the auto light optical sensor when the light SW is ON.	—
	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	

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	

CONFIGURATION

Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	<ul style="list-style-type: none"> • Reads the vehicle configuration of current AV control unit. • Saves the read vehicle configuration.
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.

AV

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

Diagnosis Description

INFOID:000000005530161

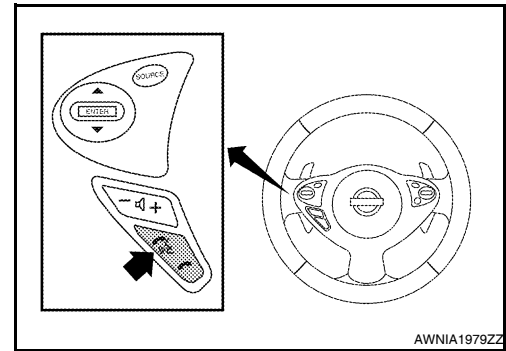
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

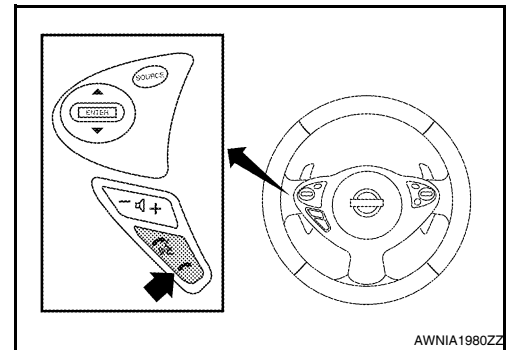
- Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

OPERATION PROCEDURE

1. Turn ignition switch to ACC or ON.
2. Wait for the Bluetooth system to complete initialization. This may take up to 20 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-208, "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-208, "Work Flow"](#).



Work Flow

INFOID:000000005460120

Failure Message	Action
“Internal failure”	Replace Bluetooth control unit. Refer to AV-85, "Removal and Installation" .
“Bluetooth antenna open”	1. Inspect harness connection.
“Bluetooth antenna shorted”	2. Replace Bluetooth antenna. Refer to AV-84, "Removal and Installation" .
“Phone/Send for Hands Free System is stuck”	Check steering wheel audio control switches. Refer to AV-78, "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-83, "Removal and Installation" .

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:000000005530164

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:000000005530165

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:000000005530166

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-16, "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]

U1010 CONTROL UNIT (CAN)

Description

INFOID:000000005530167

Initial diagnosis of AV control unit.

DTC Logic

INFOID:000000005530168

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:000000005530169

1. REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit. Refer to [AV-322. "Removal and Installation"](#).

>> Inspection End.

U1200 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1200 AV CONTROL UNIT

Description

INFOID:000000005530170

Replace the AV control unit if this DTC is displayed. Refer to [AV-322. "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:000000005530171

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-322. "Removal and Installation" .

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U1216 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1216 AV CONTROL UNIT

Description

INFOID:000000005530172

Replace the AV control unit if this DTC is displayed. Refer to [AV-322. "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:000000005530173

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-322. "Removal and Installation" .

U1218 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1218 AV CONTROL UNIT

DTC Logic

INFOID:000000005531994

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005531995

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

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U1219 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1219 AV CONTROL UNIT

DTC Logic

INFOID:000000005531996

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322. "Removal and Installation".

Diagnosis Procedure

INFOID:000000005531997

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-322. "Removal and Installation"](#).

U121A AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U121A AV CONTROL UNIT

DTC Logic

INFOID:000000005531998

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322. "Removal and Installation".

Diagnosis Procedure

INFOID:000000005531999

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-824. "Removal and Installation"](#).

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AV

U121B AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U121B AV CONTROL UNIT

DTC Logic

INFOID:000000005532000

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005532001

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

U121C AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U121C AV CONTROL UNIT

DTC Logic

INFOID:000000005532002

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005532003

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

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U121D AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U121D AV CONTROL UNIT

DTC Logic

INFOID:000000005532004

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121D	DSP CONN [U121D]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If a disc can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322. "Removal and Installation".

Diagnosis Procedure

INFOID:000000005532005

1. CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-322. "Removal and Installation"](#).

U121E AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U121E AV CONTROL UNIT

DTC Logic

INFOID:000000005532006

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If a disc can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005532007

1. CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

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U1225 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1225 AV CONTROL UNIT

DTC Logic

INFOID:000000005530188

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1225	USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.

U1227 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1227 AV CONTROL UNIT

DTC Logic

INFOID:000000005532008

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1227	DVD COMM [U1227]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If DVD can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005532009

1. CHECK PLAYBACK OF A DISK (DVD)

Can a disc (DVD) be played?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

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AV

U1228 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1228 AV CONTROL UNIT

DTC Logic

INFOID:000000005530191

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1228	SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation" .

U1229 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1229 AV CONTROL UNIT

DTC Logic

INFOID:000000005530192

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1229	iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation" .

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U122A AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U122A AV CONTROL UNIT

DTC Logic

INFOID:000000005530193

DTC	Display contents of CONSULT-III	DTC detection condition	Action to take
U122A	CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with "MULTI AV" of CONSULT-III.

Diagnosis Procedure

INFOID:000000005530194

1.PERFORM THE SELF-DIAGNOSIS

When U122A is detected, write configuration data with "MULTI AV" of CONSULT-III.

>> Write configuration data with "MULTI AV" of CONSULT-III. Refer to [AV-681, "CONFIGURATION \(AV CONTROL UNIT\) : Special Repair Requirement"](#).

U122E AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U122E AV CONTROL UNIT

DTC Logic

INFOID:000000005530195

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U122E	Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation" .

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U1232 STEERING ANGLE SENSOR

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1232 STEERING ANGLE SENSOR

DTC Logic

INFOID:000000005530196

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1232	ST ANGLE SEN CALIB [1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.

Diagnosis Procedure

INFOID:000000005530197

1. ADJUST THE PREDICTIVE COURSE LINE CENTER POSITION OF THE STEERING ANGLE SENSOR

When U1232 is detected, adjust the predictive course line center position of the steering angle sensor.

>> Adjusts the steering angle sensor neutral position on ABS actuator and electrical unit (control unit) side. Refer to [BRC-8. "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement"](#).

U1243 DISPLAY UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1243 DISPLAY UNIT

Description

INFOID:000000005530198

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:000000005530199

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:000000005530200

Regarding Wiring Diagram information, refer to [AV-281. "Wiring Diagram"](#).

1. CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuit. Refer to [AV-235. "DISPLAY UNIT : Diagnosis Procedure"](#).

Is inspection result OK?

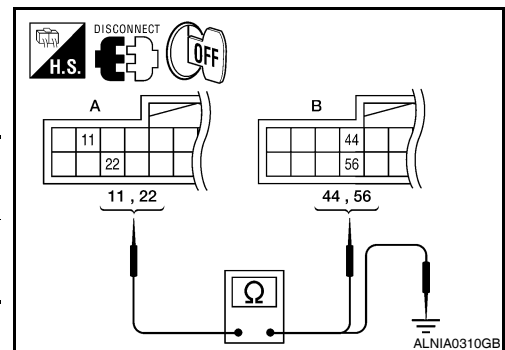
YES >> GO TO 2.

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 M154 (B) terminals 56, 44.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	11	M154	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.

U1243 DISPLAY UNIT

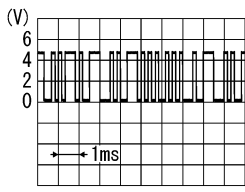
[BOSE W/ COLOR DISPLAY]

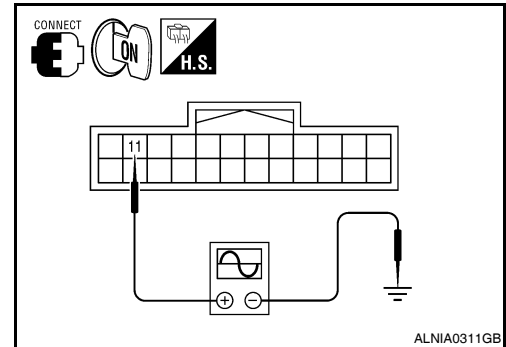
< COMPONENT DIAGNOSIS >

NO >> Repair harness or connector.

3. CHECK COMMUNICATION SIGNAL

1. Connect display unit connector and AV control unit connector.
2. Turn ignition switch ON.
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	 <p style="text-align: right; font-size: small;">PKIB5039J</p>



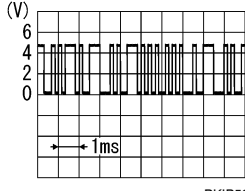
Are voltage readings as specified?

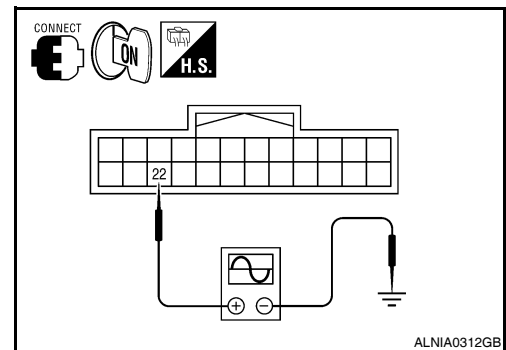
YES >> GO TO 4.

NO >> Replace AV control unit. Refer to [AV-322. "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	 <p style="text-align: right; font-size: small;">PKIB5039J</p>



Are voltage readings as specified?

YES >> Inspection End.

NO >> Replace display unit. Refer to [AV-325. "Removal and Installation"](#).

U1263 USB

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1263 USB

DTC Logic

INFOID:000000005532010

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1263	USB OVERCURRENT [U1263]	Detection of over current in USB interface.	Check USB harness between the AV control unit and USB interface.

Diagnosis Procedure

INFOID:000000005532011

1.CHECK USB HARNESS

Visually check USB harness.

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).
- NO >> Replace USB harness.

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U1255 SATELLITE RADIO TUNER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1255 SATELLITE RADIO TUNER

Description

INFOID:000000005530203

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:000000005530204

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:000000005530205

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

1. CHECK SATELLITE RADIO TUNER POWER SUPPLY AND GROUND CIRCUIT

Check satellite radio tuner power supply and ground circuit. Refer to [AV-238, "SATELLITE RADIO TUNER : Diagnosis Procedure"](#).

Is the inspection result normal?

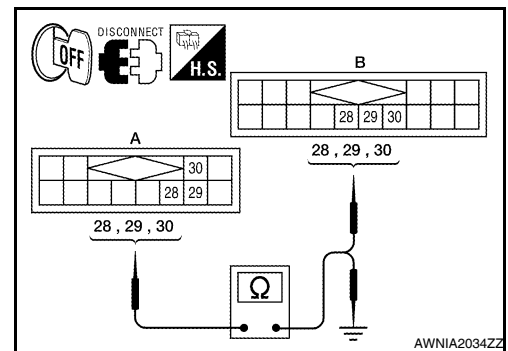
YES >> GO TO 2.

NO >> Repair malfunctioning parts.

2. CHECK CONTINUITY COMMUNICATION CIRCUIT AND REQUEST SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect AV control unit connector M153 and satellite radio tuner connector B111.
- Check continuity between AV control unit harness connector M153 (A) and satellite radio tuner harness connector B111 (B).

A		B		Continuity
Connector	Terminals	Connector	Terminals	
M153	28	B111	28	Yes
	29		29	
	30		30	



- Check continuity between AV control unit harness connector M153 (A) and ground.

A		—	Continuity
Connector	Terminals		

U1255 SATELLITE RADIO TUNER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

M153	28	Ground	No
	29		
	30		

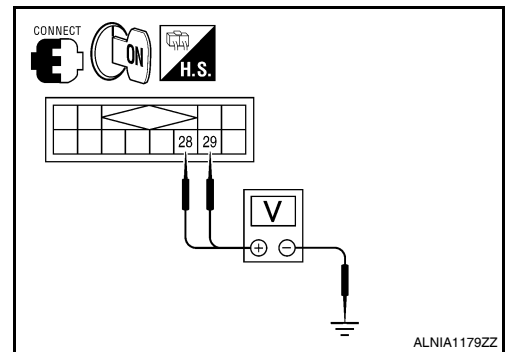
Is the inspection result normal?

- 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 M153 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminals		
M153	28	Ground	7.0V
	29		



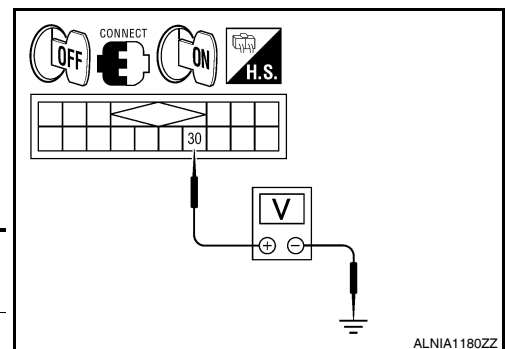
Is the inspection result normal?

- YES >> GO TO 4.
- NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

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-335, "Removal and Installation"](#).

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AV

U1300 AV COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1300 AV COMM CIRCUIT

Description

INFOID:000000005532015

U1300 is indicated when a communication signal malfunction occurs. U1300 is indicated along with DTCs that identify components connected to the AV control unit through communication lines. Determine the possible malfunction cause from the table below.

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1300 U1240	<ul style="list-style-type: none">• AV COMM CIRCUIT [U1300]• SWITCH CONN [U1240]	When either one of the following items are detected: <ul style="list-style-type: none">• A/C and AV switch assembly power supply and ground circuits are malfunctioning.• AV communication circuits between AV control unit and A/C and AV switch assembly are malfunctioning.• AV communication signal between AV control unit and A/C and AV switch assembly is malfunctioning.	<ul style="list-style-type: none">• A/C and AV switch assembly power supply and ground circuits.• AV communication circuits between AV control unit and A/C and AV switch assembly.

U1310 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

U1310 AV CONTROL UNIT

Description

INFOID:000000005530207

Replace the AV control unit if this DTC is displayed. Refer to [AV-234. "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:000000005530208

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-322. "Removal and Installation" .

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AV

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:000000005530209

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

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

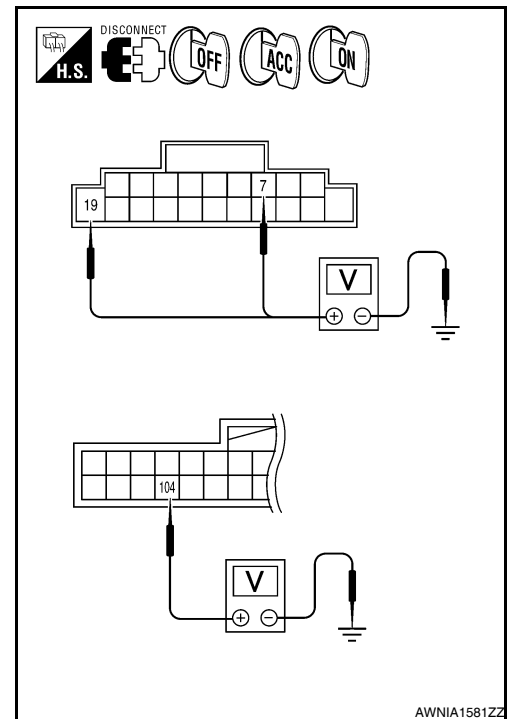
1. Disconnect AV control unit connectors M152 and M156.
2. Check voltage between the AV control unit connectors M152 and M156 and ground.

Connector	(+) Terminal		(-)	OFF	ACC	ON
	Terminal	Terminal				
M152	7		Ground	0V	Battery voltage	Battery voltage
	19		Ground	Battery voltage	Battery voltage	Battery voltage
M156		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.



3. GROUND CIRCUIT CHECK

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR DISPLAY]

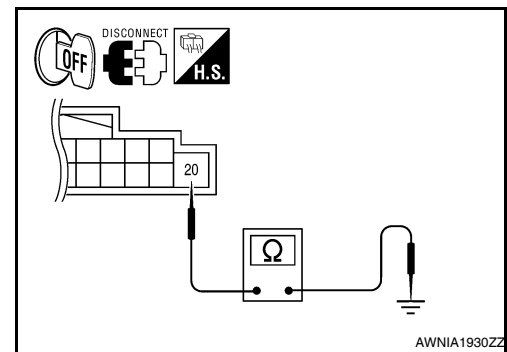
< COMPONENT DIAGNOSIS >

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

Connector	Terminal	—	Continuity
M152	20	Ground	Yes

Are the inspection results OK?

- YES >> Inspection End.
 NO >> Repair AV control unit ground.



DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:000000005530210

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

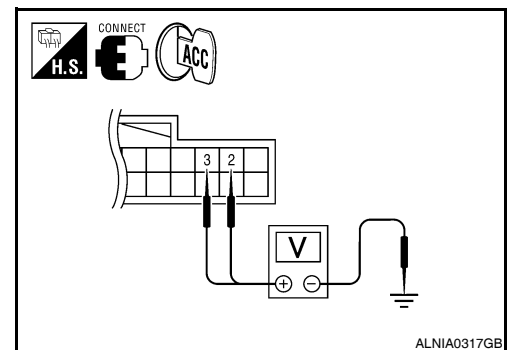
1.CHECK POWER SUPPLY CIRCUIT

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?

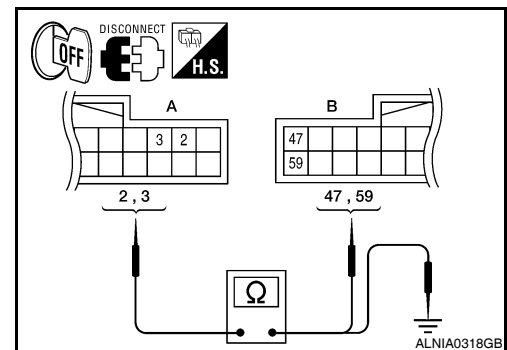
- YES >> GO TO 3.
 NO >> GO TO 2.



2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the display unit connector M141 and the AV control unit connector M154.
3. Check continuity between the display unit harness connector M141 (A) and the AV control unit connector M154 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	2	M154	59	Yes
	3		47	



4. Check continuity between the display unit harness connector M141 (A) and ground.

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-234, "AV CONTROL UNIT : Diagnosis Procedure"](#).
 NO >> Repair harness or connector.

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AV

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR DISPLAY]

< COMPONENT DIAGNOSIS >

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:000000005530211

Regarding Wiring Diagram information, refer to [AV-613. "Wiring Diagram"](#).

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

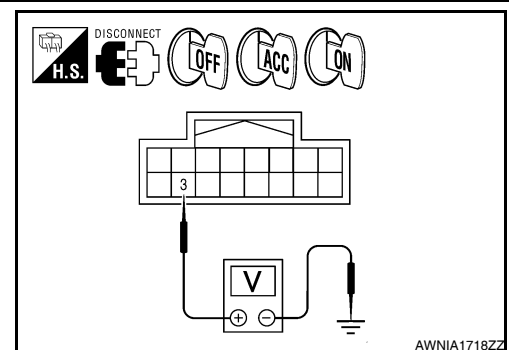
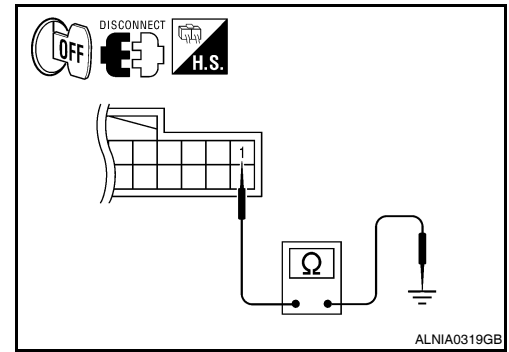
1. Disconnect A/C and AV switch assembly connector M98.
2. Check voltage between the A/C and AV switch assembly connector M98 and ground.

(+)		(-)	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]

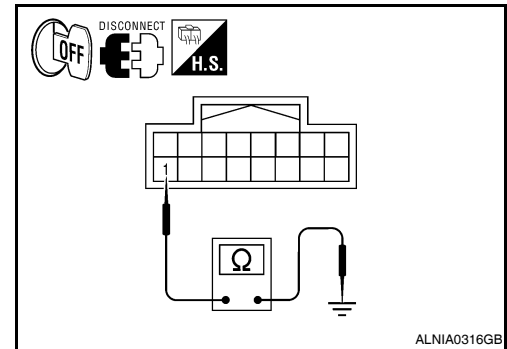
< COMPONENT DIAGNOSIS >

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:000000005530212

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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.

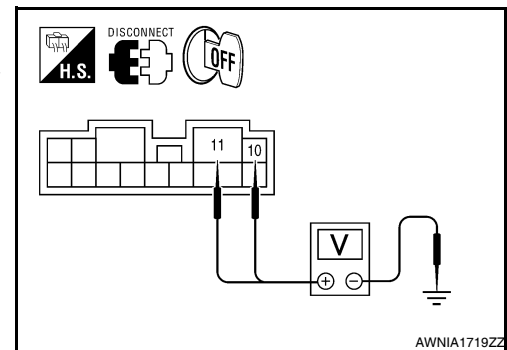
2.CHECK POWER SUPPLY CIRCUIT

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.

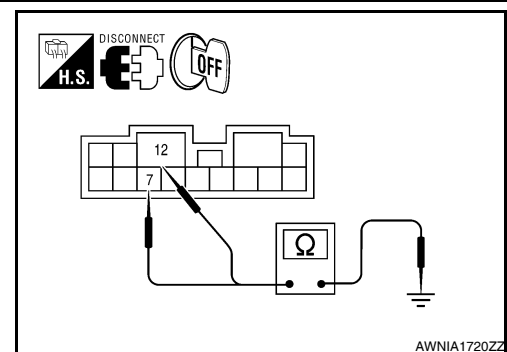


3.CHECK GROUND CIRCUIT

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?



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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

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

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000005530213

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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

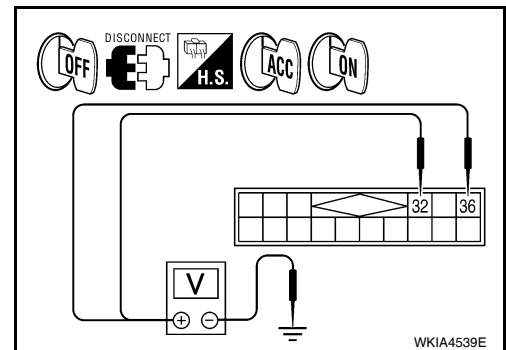
Are the fuses OK?

- 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

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B111.
3. 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.

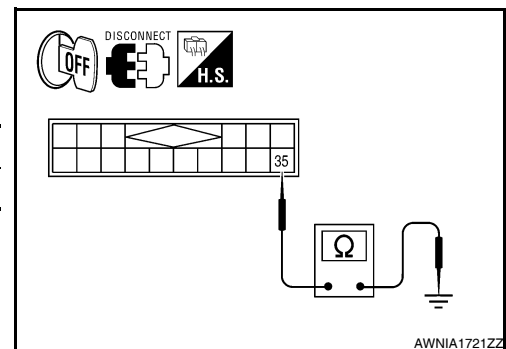
3. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. 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

REAR VIEW CAMERA : Diagnosis Procedure

INFOID:000000005530214

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

Regarding Wiring Diagram information, refer to [AV-281. "Wiring Diagram"](#).

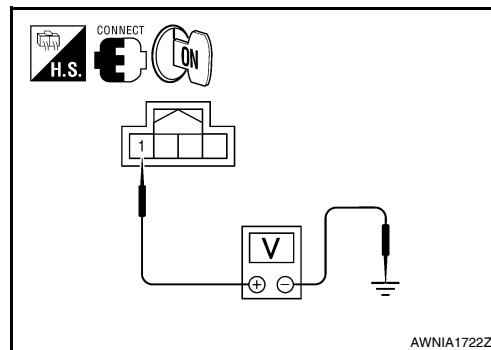
1. CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA SIDE)

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 AV control unit connectors.
3. Check continuity between rear view camera harness connector T101 (A) terminal 1 and AV control unit harness connector M155 (B) terminal 70.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
T101	1	M155	70	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.

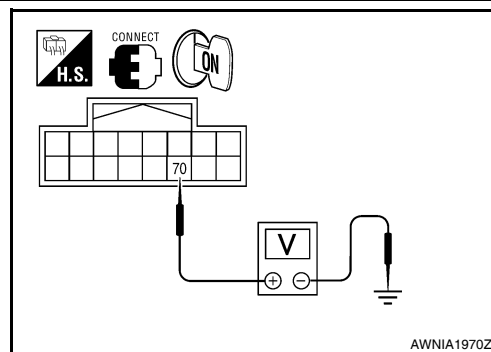
3. CHECK POWER SUPPLY CIRCUIT (AV CONTROL UNIT SIDE)

1. Connect rear view camera harness connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit harness connector M155 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
M155	70	Ground	Reverse	6V

Is voltage reading approximately 6 volts?

- YES >> Inspection End.
NO >> Replace AV control unit. Refer to [AV-322. "Removal and Installation"](#).



4. CHECK GROUND CIRCUIT

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POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR DISPLAY]

< COMPONENT DIAGNOSIS >

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:000000005530215

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

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

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 B131 and ground.

(+) Connector		Terminal	(-)	Ignition switch position	Value (Approx.)
B131	1				
	2	ACC			
	3	ON			

Is battery voltage present as specified?

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

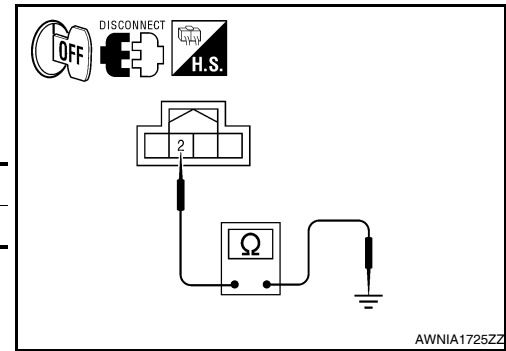
3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit connector.
3. Check continuity between Bluetooth control unit harness connector B131 and ground.

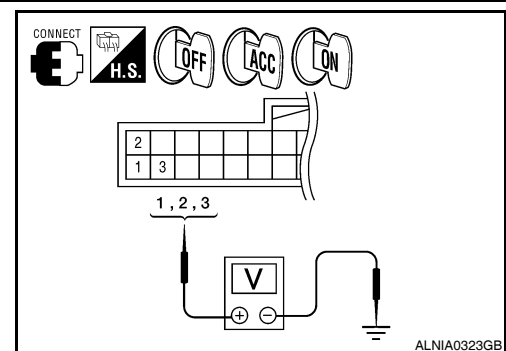
Connector.	Terminal	—	Continuity
B131	4	Ground	Yes

Are continuity results as sepcified?

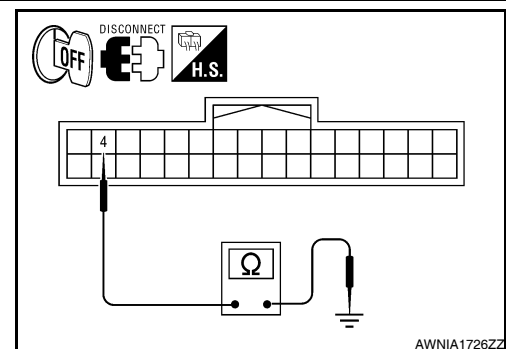
- YES >> Inspection End.
 NO >> Repair harness or connector.



AWNIA1725ZZ



ALNIA0323GB



AWNIA1726ZZ

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

MICROPHONE

MICROPHONE : Diagnosis Procedure

INFOID:000000005530216

Regarding Wiring Diagram information, refer to [AV-613. "Wiring Diagram"](#).

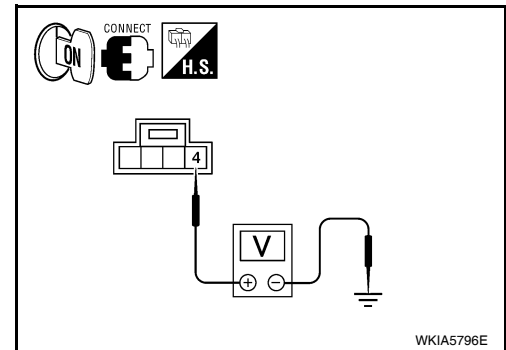
1. CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

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?

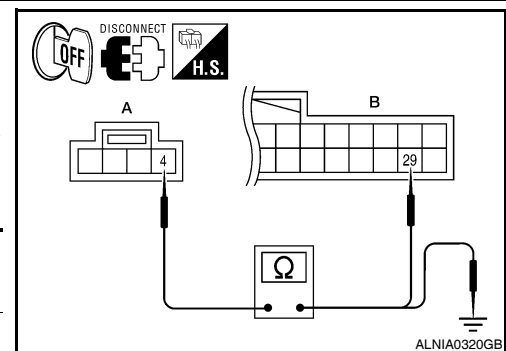
- YES >> GO TO 4.
NO >> GO TO 2.



2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

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 B131 (B) terminal 29.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	4	B131	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.

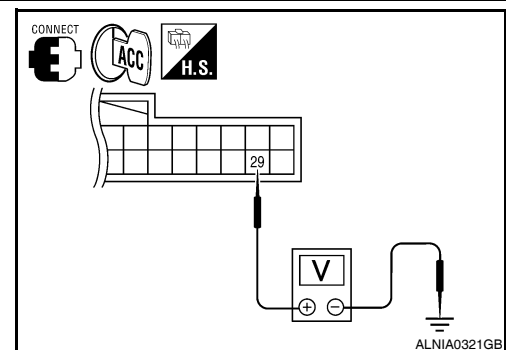
3. CHECK POWER SUPPLY CIRCUIT (BLUETOOTH CONTROL UNIT SIDE)

1. Connect Bluetooth control unit harness connector.
2. Turn ignition switch to ACC.
3. Check voltage between Bluetooth control unit harness connector B131 terminal 29 and ground.

(+)		(-)	Value (Approx.)
Connector	Terminal		
B131	29	Ground	5V

Is approximately 5V present?

- YES >> Go to 4.



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AV

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR DISPLAY]

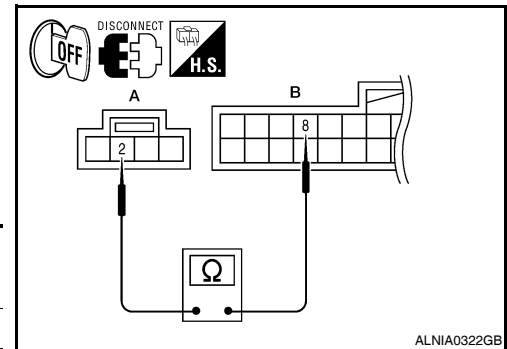
< COMPONENT DIAGNOSIS >

NO >> Replace Bluetooth control unit. Refer to [AV-677, "Removal and Installation"](#).

4. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect microphone harness connector R7 and Bluetooth control unit harness connector B131.
3. Check continuity between microphone harness connector R7 (A) terminal 2 and Bluetooth control unit harness connector B131 (B) terminal 8.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	2	B131	8	Yes



ALNIA0322GB

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

RGB (R: RED) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

RGB (R: RED) SIGNAL CIRCUIT

Description

INFOID:000000005530217

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

Diagnosis Procedure

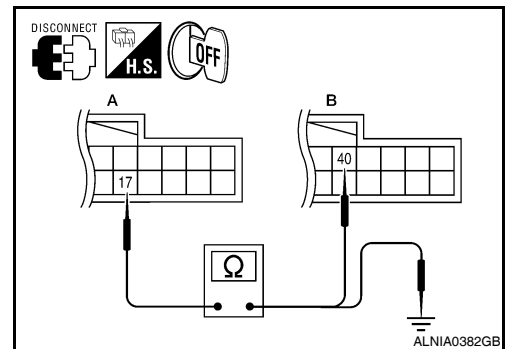
INFOID:000000005530218

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M154.
3. Check continuity between display unit harness connector M141 (A) terminal 17 and AV control unit harness connector M154 (B) terminal 40.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	17	M154	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?

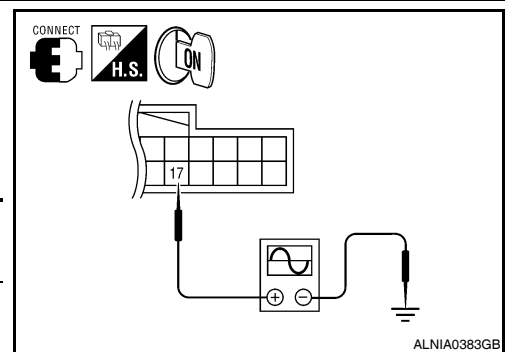
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB (R: RED) SIGNAL

1. Connect display unit connector M141 and AV control unit connector M154.
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	



Are the voltage readings as specified?

YES >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

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RGB (G: GREEN) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

RGB (G: GREEN) SIGNAL CIRCUIT

Description

INFOID:000000005530219

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

Diagnosis Procedure

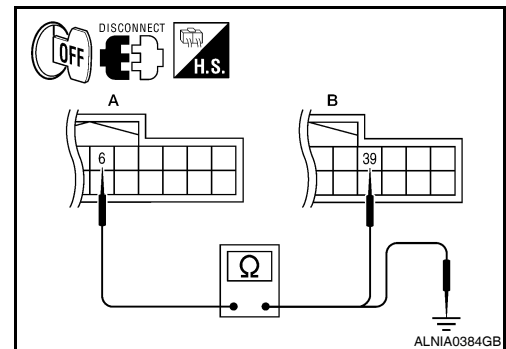
INFOID:000000005530220

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M154.
3. Check continuity between display unit harness connector M141 (A) terminal 6 and AV control unit harness connector M154 (B) terminal 39.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	6	M154	39	Yes



4. Check continuity between display unit harness connector M141 (A) terminal 6 and ground.

A		—	Continuity
Connector	Terminal		
M141	6	Ground	No

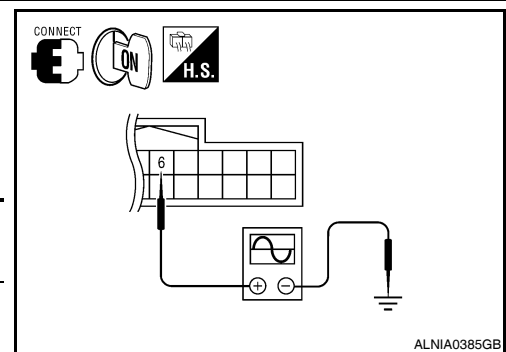
Are the continuity results as specified?

- 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 M154.
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	<p>SKIB2236J</p>



Are voltage readings as specified?

- YES >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

RGB (B: BLUE) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

RGB (B: BLUE) SIGNAL CIRCUIT

Description

INFOID:000000005530221

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

Diagnosis Procedure

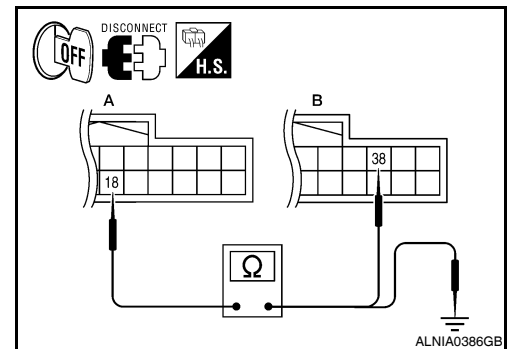
INFOID:000000005530222

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M154.
3. Check continuity between display unit harness connector M141 (A) terminal 18 and AV control unit harness connector M154 (B) terminal 38.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	18	M154	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?

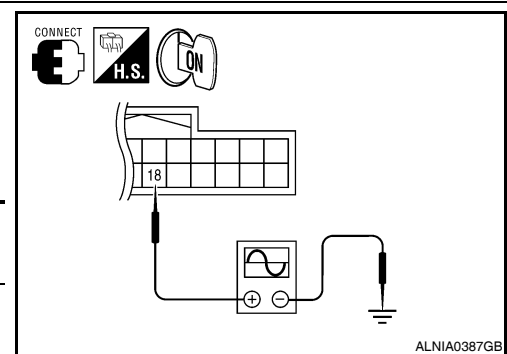
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB (B: BLUE) SIGNAL

1. Connect display unit connector M141 and AV control unit connector M154.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M141 terminal 18 and ground.

(+)		(-)	Condition	Reference signal
Connector	Terminal			
M141	18	Ground	Receive audio signal	<p>(V) 0.4 0 -0.4 40µs</p> <p>SKIB2237J</p>



Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

RGB SYNCHRONIZING SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

RGB SYNCHRONIZING SIGNAL CIRCUIT

Description

INFOID:000000005530223

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

Diagnosis Procedure

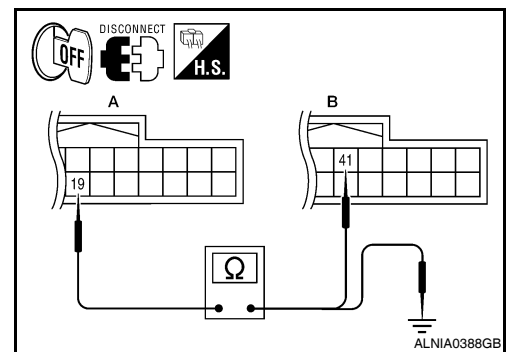
INFOID:000000005530224

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

1. CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M154.
3. Check continuity between display unit harness connector M141 (A) terminal 19 and AV control unit harness connector M154 (B) terminal 41.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	19	M154	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?

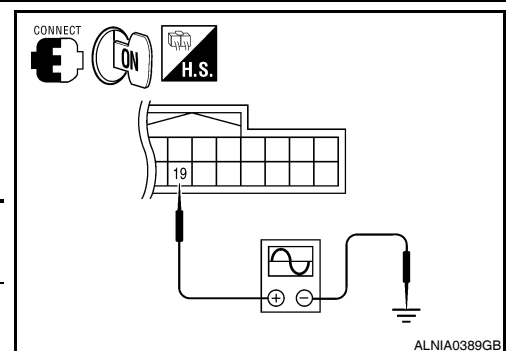
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB SYNCHRONIZING SIGNAL

1. Connect display unit connector M141 and AV control unit connector M154.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M141 terminal 19 and ground.

(+)		(-)	Condition	Reference signal
Connector	Terminal			
M141	19	Ground	Receive audio signal	



Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

RGB AREA (YS) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

RGB AREA (YS) SIGNAL CIRCUIT

Description

INFOID:000000005530225

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

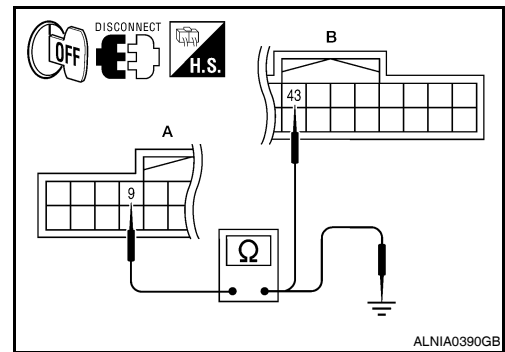
Diagnosis Procedure

INFOID:000000005530226

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

1. CHECK CONTINUITY RGB AREA (YS) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M154.
3. Check continuity between display unit harness connector M141 (A) terminal 9 and AV control unit harness connector M154 (B) terminal 43.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	9	M154	43	Yes

4. Check continuity between display unit harness connector M141 (A) terminal 9 and ground.

A		—	Continuity
Connector	Terminal		
M141	9	Ground	No

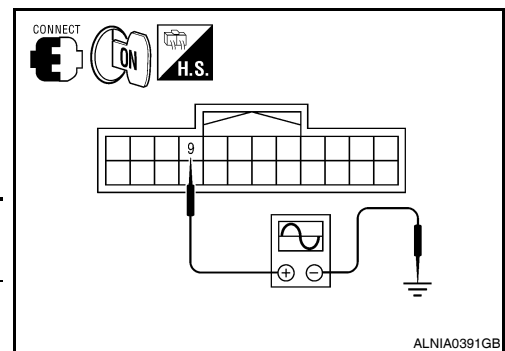
Are continuity results as specified?

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 M154.
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-325, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Description

INFOID:000000005530227

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.

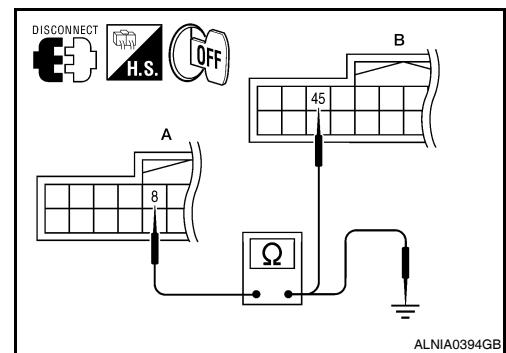
Diagnosis Procedure

INFOID:000000005530228

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

1. CHECK CONTINUITY HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M154.
3. Check continuity between display unit harness connector M141 (A) terminal 8 and AV control unit harness connector M154 (B) terminal 45.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	8	M154	45	Yes

4. Check continuity between display unit harness connector M141 (A) terminal 8 and ground.

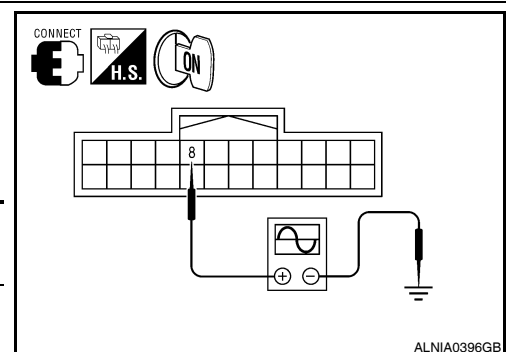
A		—	Continuity
Connector	Terminal		
M141	8	Ground	No

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 M154.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M141 terminal 8 and ground.



(+) Connector		(-) Terminal	Condition	Reference signal
M141	8	Ground	Receive audio signal	

SKIB3601E

Are voltage readings as specified?

- YES >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).
NO >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description

INFOID:000000005530229

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.

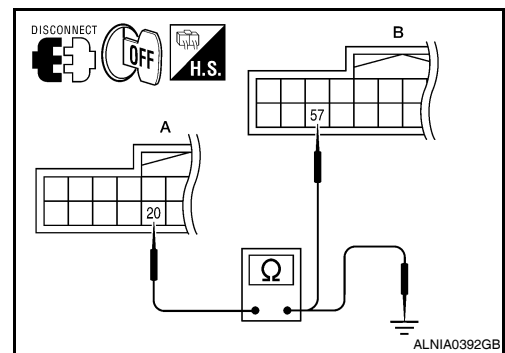
Diagnosis Procedure

INFOID:000000005530230

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

1. CHECK CONTINUITY VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M141 and AV control unit connector M154.
3. Check continuity between display unit harness connector M141 (A) terminal 20 and AV control unit harness connector M154 (B) terminal 57.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M141	20	M154	57	Yes

4. Check continuity between display unit harness connector M141 (A) terminal 20 and ground.

A		—	Continuity
Connector	Terminal		
M141	20	Ground	No

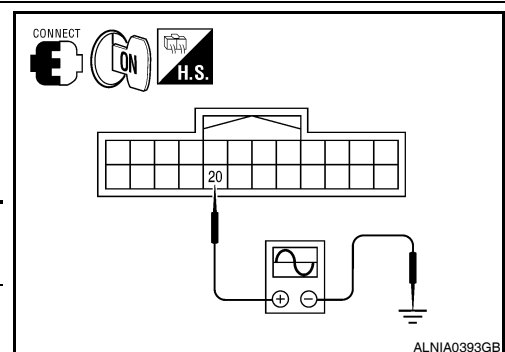
Are continuity results as specified?

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 M154.
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	<p style="text-align: right;">SKIB3598E</p>

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

NO >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).

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FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

FRONT DOOR SPEAKER

Description

INFOID:000000005530231

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:000000005530232

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

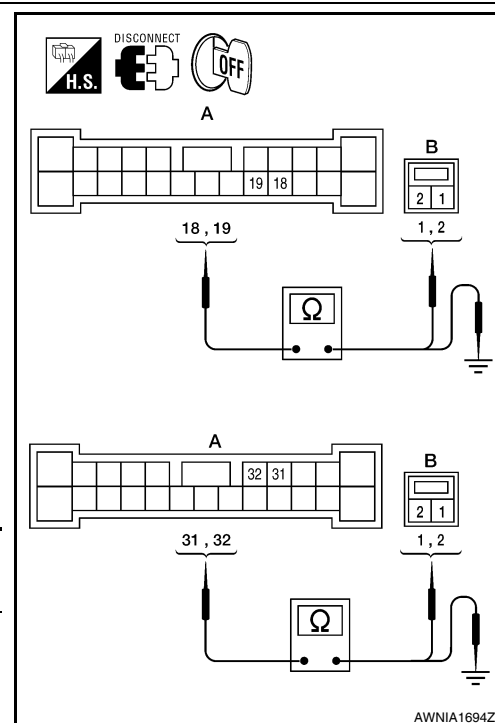
1. HARNESS CHECK

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]

< 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-331. "Removal and Installation"](#).

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M157 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M157 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M157	113	B109	35	Yes
	119		36	
	109		33	
	115		34	

3. Check continuity between AV control unit harness connector M157 (A) and ground.

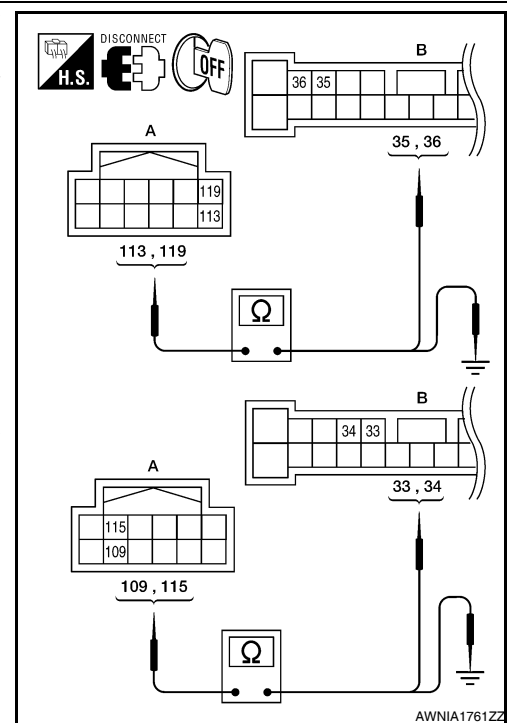
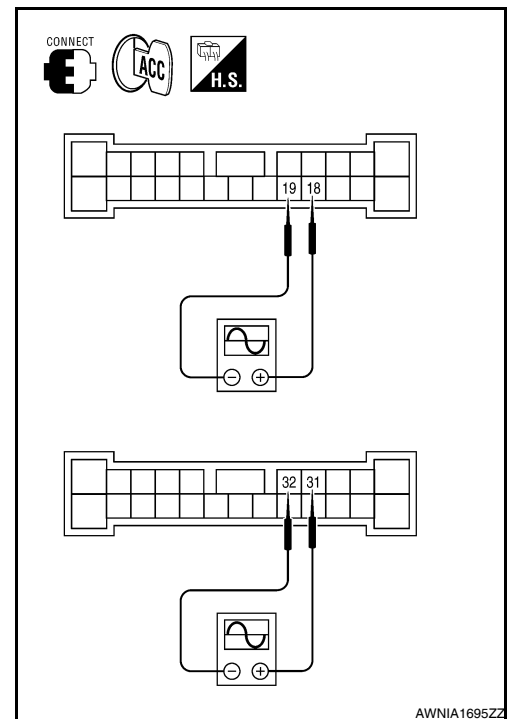
A		—	Continuity
Connector	Terminal		
M157	113	Ground	No
	119		
	109		
	115		

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

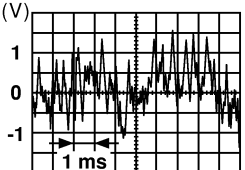


FRONT DOOR SPEAKER

[BOSE W/ COLOR DISPLAY]

< COMPONENT DIAGNOSIS >

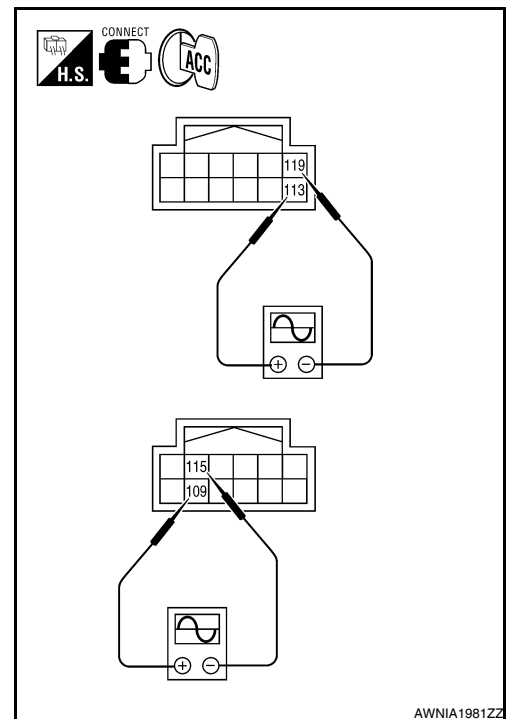
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M157	113	119	Receive audio signal	
	109	115		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-334, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).



AWNIA1981ZZ

TWEETER

Description

INFOID:000000005530233

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:000000005530234

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

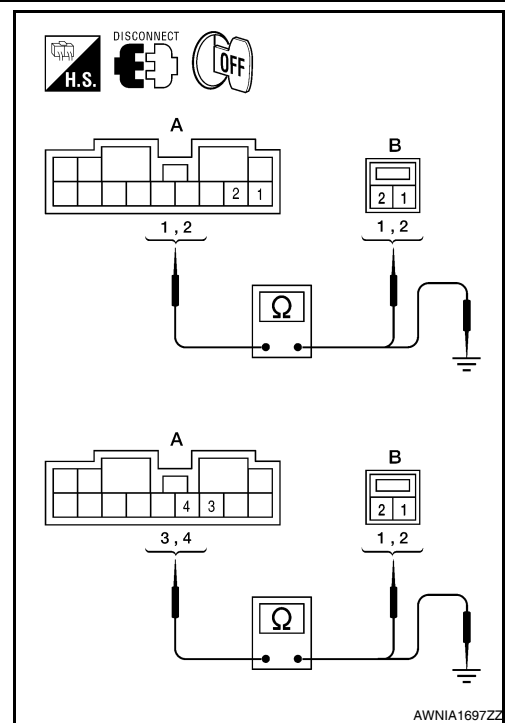
1. HARNESS CHECK

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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TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR 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-164, "Removal and Installation"](#).

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M157 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M157 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M157	113	B109	35	Yes
	119		36	
	109		33	
	115		34	

3. Check continuity between AV control unit harness connector M157 (A) and ground.

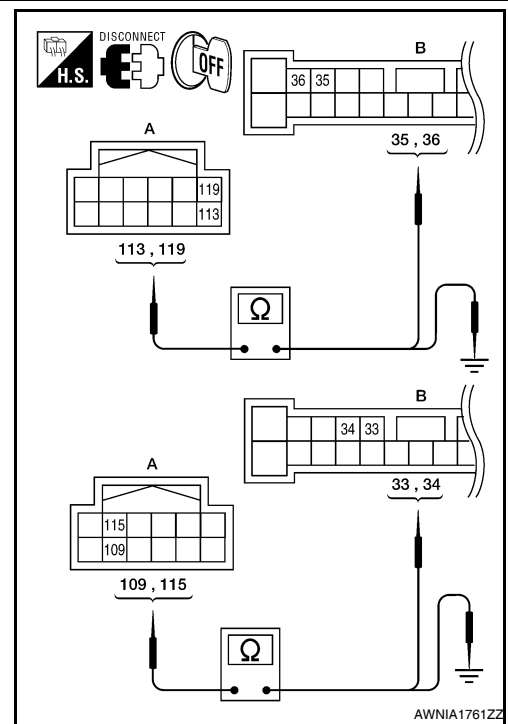
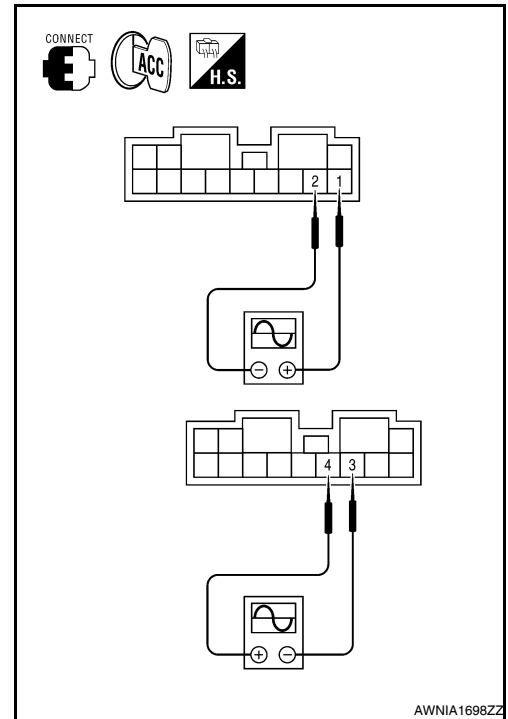
A		—	Continuity
Connector	Terminal		
M157	113	Ground	No
	119		
	109		
	115		

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

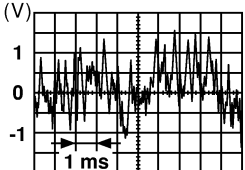


TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

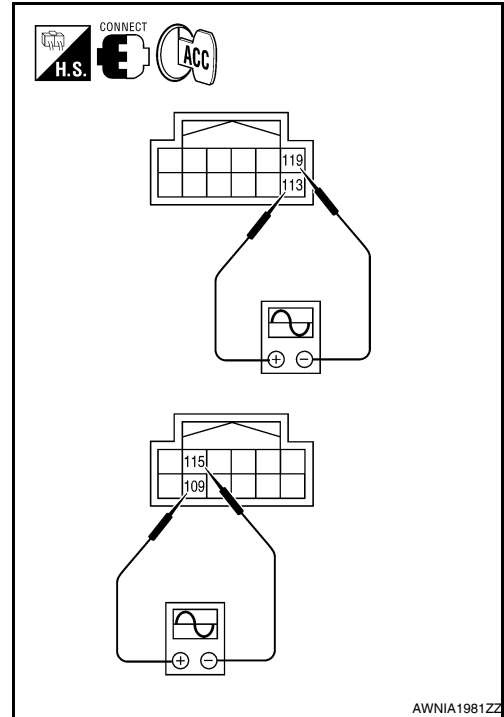
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M157	113	119	Receive audio signal	
	109	115		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-169, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).



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AV

CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

CENTER SPEAKER

Description

INFOID:000000005530235

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

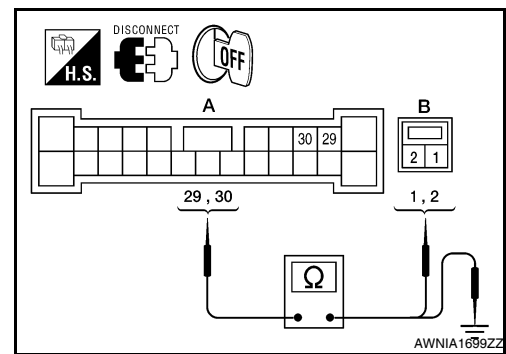
INFOID:000000005530236

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

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.

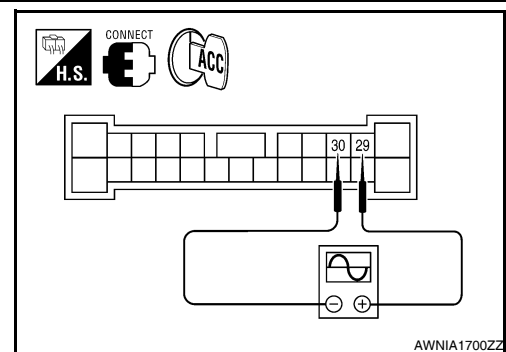
- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

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	

SKIA0177E



AWNIA1700ZZ

Is the audio signal voltage reading as specified?

CENTER SPEAKER

[BOSE W/ COLOR DISPLAY]

< COMPONENT DIAGNOSIS >

- YES >> Replace center speaker. Refer to [AV-165. "Removal and Installation"](#).
 NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M157 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M157 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M157	113	B109	35	Yes
	119		36	
	109		33	
	115		34	

3. Check continuity between AV control unit harness connector M157 (A) and ground.

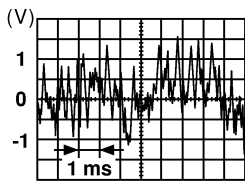
A		—	Continuity
Connector	Terminal		
M157	113	Ground	No
	119		
	109		
	115		

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

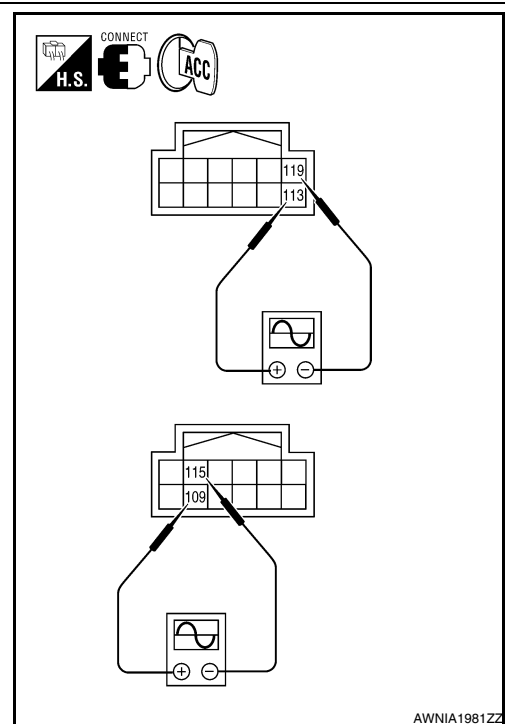
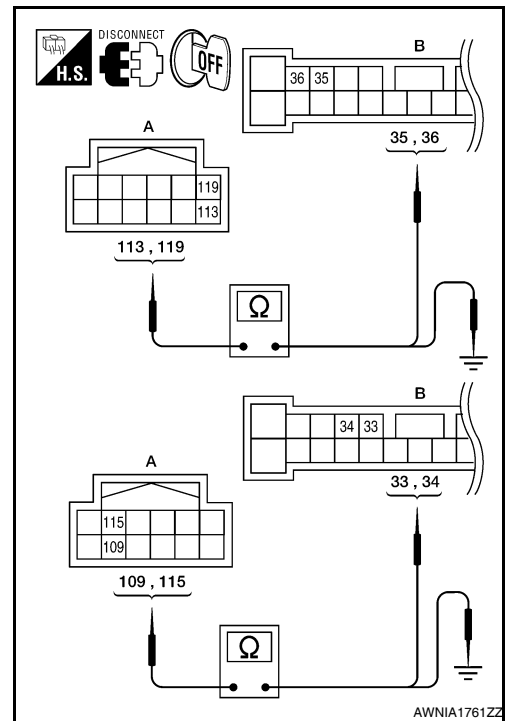
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M157	113	119	Receive audio signal	
	109	115		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-169. "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-322. "Removal and Installation"](#).



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AV

REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

REAR DOOR SPEAKER

Description

INFOID:000000005530237

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:000000005530238

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

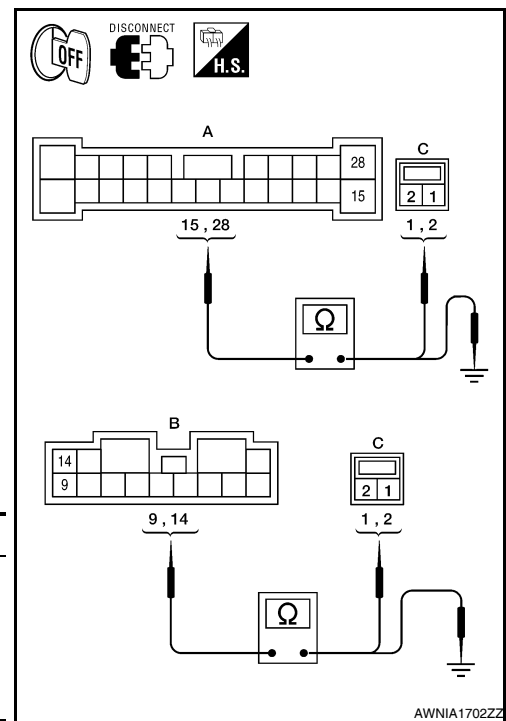
1. HARNESS CHECK

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		



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

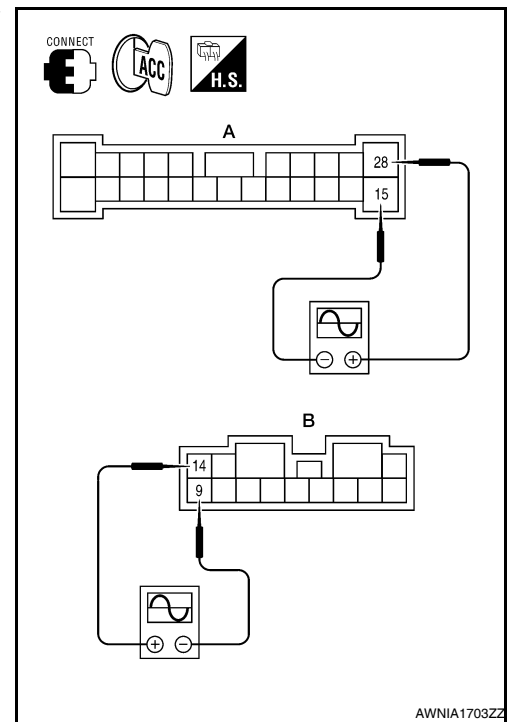
[BOSE W/ COLOR DISPLAY]

< 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-332, "Removal and Installation"](#).
- NO >> GO TO 3.

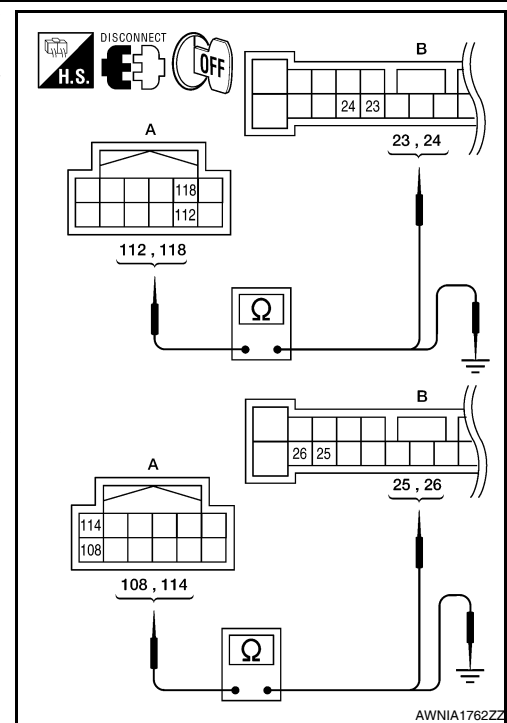
3. HARNESS CHECK

1. Disconnect AV control unit connector M157 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M157 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M157	112	B109	24	Yes
	118		23	
	108		26	
	114		25	

3. Check continuity between AV control unit harness connector M157 (A) and ground.

A		—	Continuity
Connector	Terminal		
M157	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.

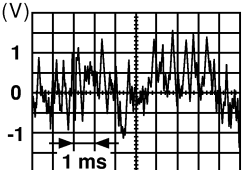
4. REAR DOOR SPEAKER SIGNAL CHECK

REAR DOOR SPEAKER

[BOSE W/ COLOR DISPLAY]

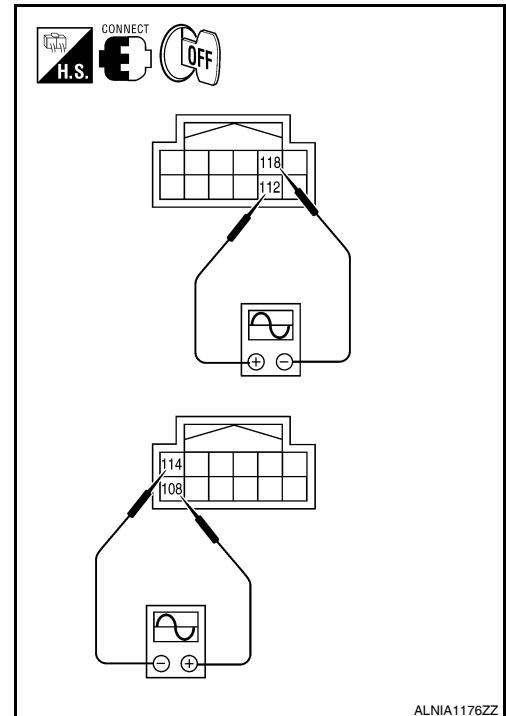
< COMPONENT DIAGNOSIS >

1. Connect AV control unit connector M157 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
	(+)	(-)		
M157	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-334, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).



SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

SUBWOOFER

Description

INFOID:000000005530239

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:000000005530240

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

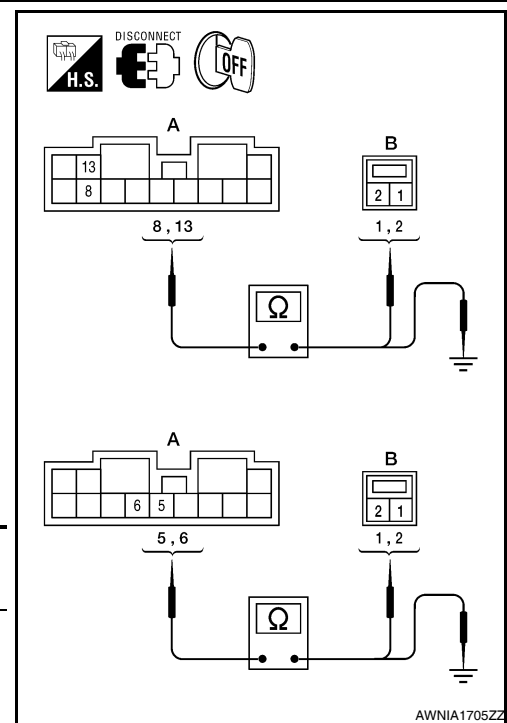
1. HARNESS CHECK

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]

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-168](#), "[Removal and Installation](#)".

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M157 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M157 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M157	112	B109	24	Yes
	118		23	
	108		26	
	114		25	

3. Check continuity between AV control unit harness connector M157 (A) terminal and ground.

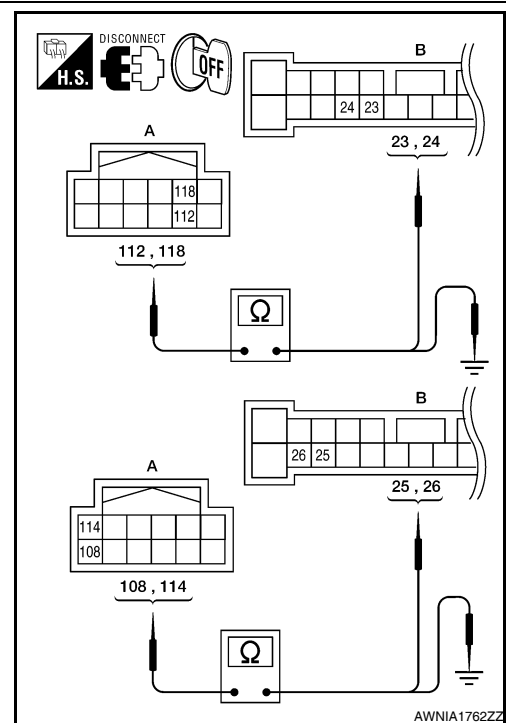
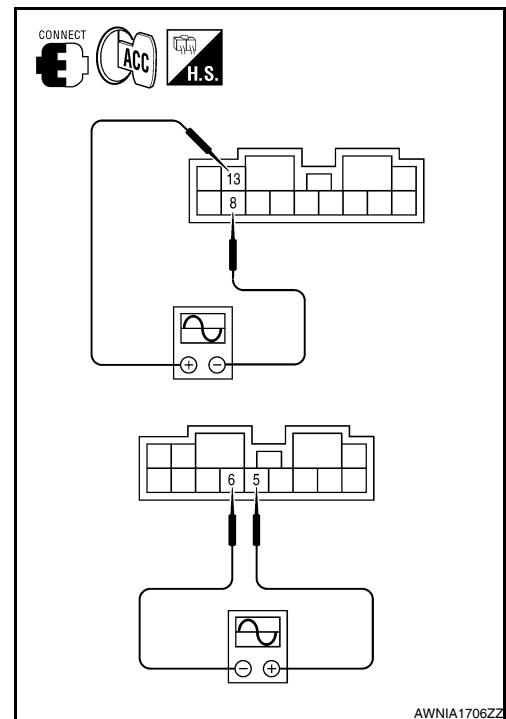
A		—	Continuity
Connector	Terminal		
M157	112	Ground	No
	118		
	108		
	114		

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

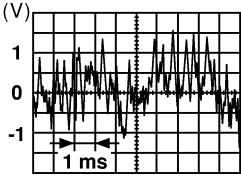


SUBWOOFER

< COMPONENT DIAGNOSIS >

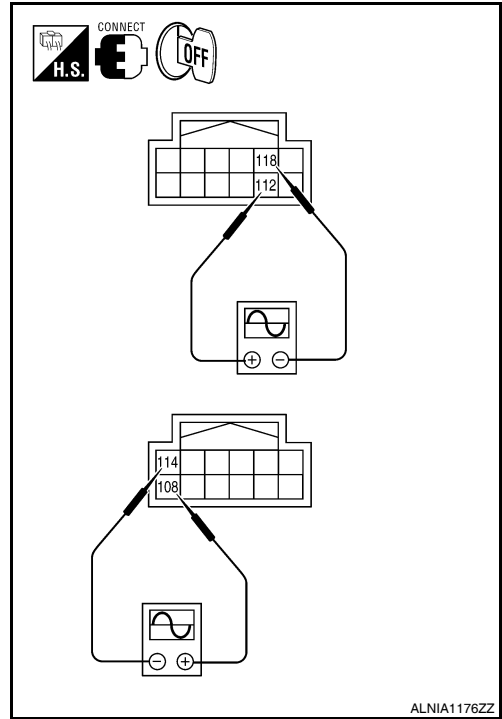
[BOSE W/ COLOR DISPLAY]

1. Connect AV control unit connector M157 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
	(+)	(-)		
M157	112	118	Receive audio signal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
	108	114		

Is the audio signal voltage as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-169, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).



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AMP ON SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

AMP ON SIGNAL CIRCUIT

Description

INFOID:000000005530241

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:000000005530242

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

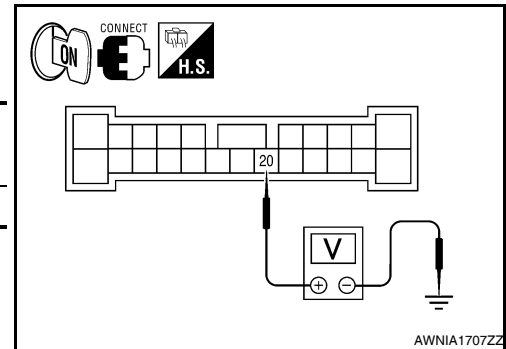
1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

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.



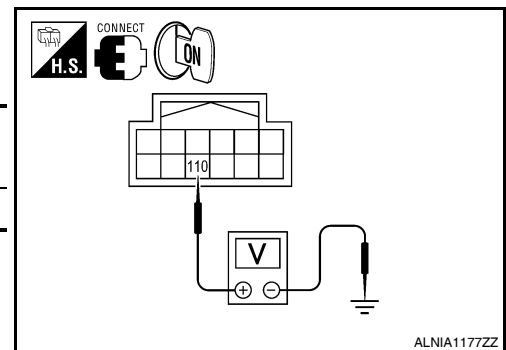
2. CHECK AMP ON SIGNAL (AV CONTROL UNIT)

Check voltage between AV control unit harness connector M157 terminal 110 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
M157	110	Ground	Battery voltage

Is inspection result normal?

- YES >> Repair harness or connector.
NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).



STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

STEERING SWITCH

Description

INFOID:000000005530243

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.

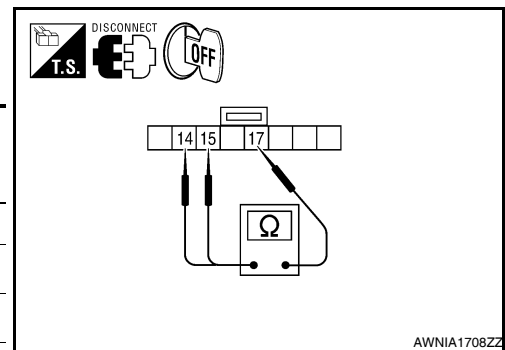
Diagnosis Procedure

INFOID:000000005530244

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

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	Enter	Depress ENTER switch.	2023
	Voice recognition	Depress switch.	723
	Menu (down)	Depress switch.	321
	Menu (up)	Depress switch.	121
15	Source	Depress SOURCE switch.	0
	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?

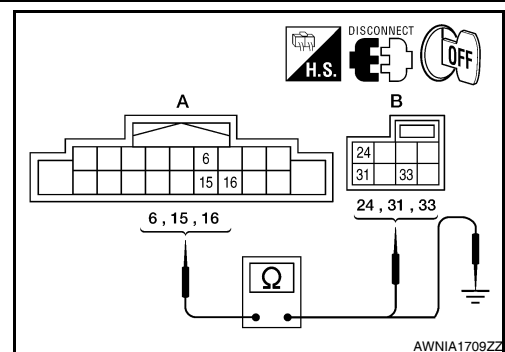
YES >> GO TO 2.

NO >> Replace steering wheel audio control switch. Refer to [AV-337, "Removal and Installation"](#).

2. CHECK HARNESS

1. Disconnect AV control unit connector M152 and spiral cable connector M30.
2. Check continuity between AV control unit harness connector M152 (A) and spiral cable harness connector M30 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M152	6	M30	24	Yes
	15		33	
	16		31	



3. Check continuity between AV control unit connector M152 (A) and ground.

STEERING SWITCH

[BOSE W/ COLOR DISPLAY]

< COMPONENT DIAGNOSIS >

A		—	Continuity
Connector	Terminal		
M152	6	Ground	No
	15		
	16		

Are the continuity results as specified?

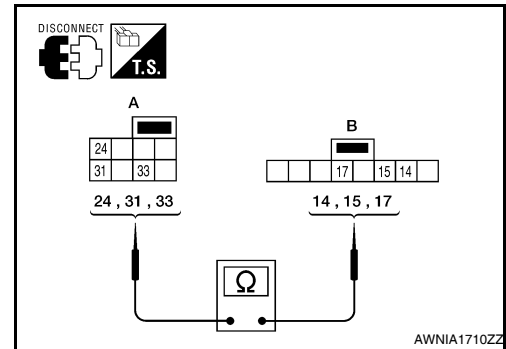
YES >> GO TO 3.

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

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

COMMUNICATION SIGNAL CIRCUIT SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000005530245

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

SATELLITE RADIO TUNER : Diagnosis Procedure

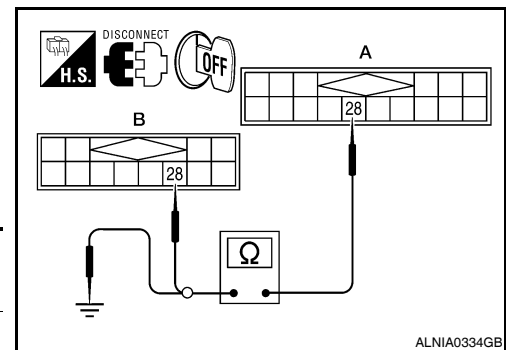
INFOID:000000005530246

Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

1.CHECK HARNESS - 1

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B111 and AV control unit connector M153.
3. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 28 and AV control unit harness connector M153 (B) terminal 28.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	28	M153	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?

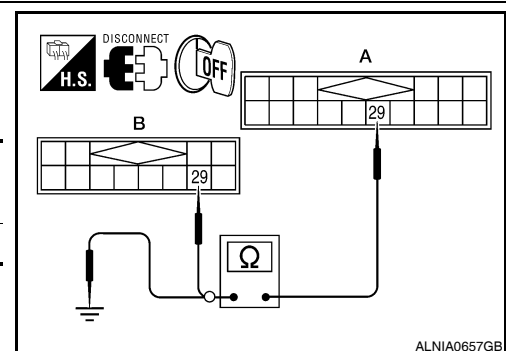
YES >> GO TO 2.

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 M153 (B) terminal 29.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	29	M153	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.

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COMMUNICATION SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

3. CHECK HARNESS - 3

1. Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 30 and AV control unit harness connector M153 (B) terminal 30.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	30	M153	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

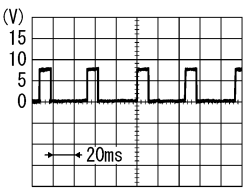
Are continuity results as specified?

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.

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

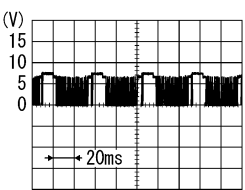
Are voltage readings as specified?

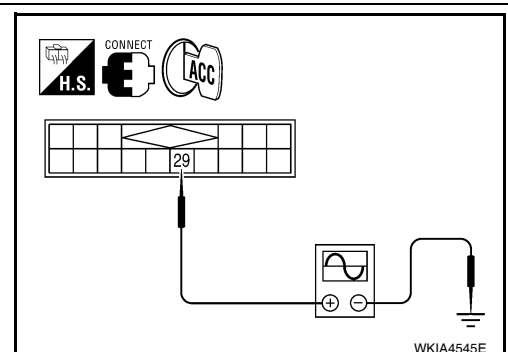
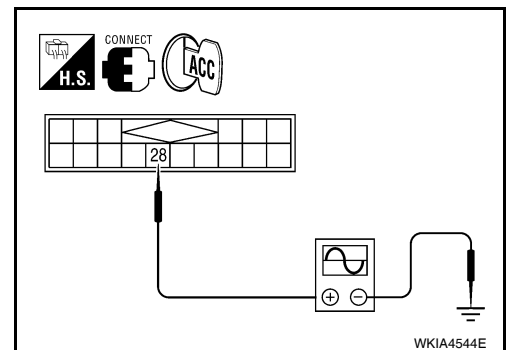
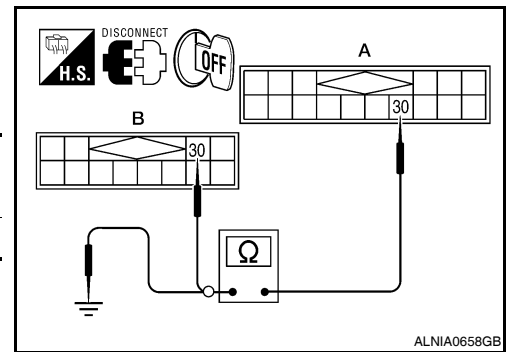
YES >> GO TO 5.

NO >> Replace AV control unit. Refer to [AV-322. "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>



COMMUNICATION SIGNAL CIRCUIT

[BOSE W/ COLOR DISPLAY]

< COMPONENT DIAGNOSIS >

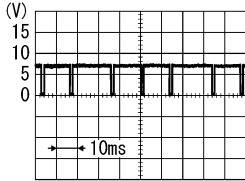
Are the voltage readings as specified?

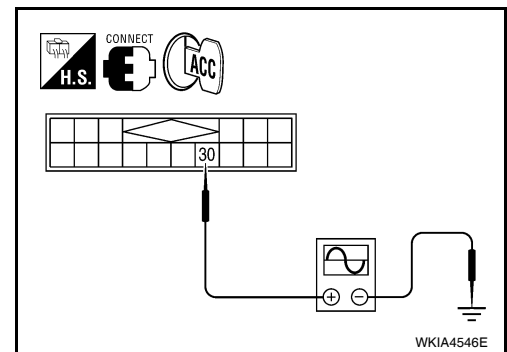
YES >> GO TO 6.

NO >> Replace satellite radio tuner. Refer to [AV-335. "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;">SKIB3826E</p>



Are the voltage readings as specified?

YES >> Replace satellite radio tuner. Refer to [AV-335. "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-322. "Removal and Installation"](#).

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SOUND SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

SOUND SIGNAL CIRCUIT SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000005530247

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:000000005530248

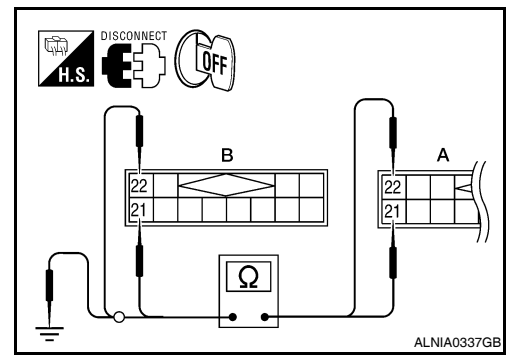
Regarding Wiring Diagram information, refer to [AV-281, "Wiring Diagram"](#).

LEFT CHANNEL

1. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B111 and AV control unit connector M153.
3. Check continuity between satellite radio tuner (factory installed) connector B111 (A) and AV control unit connector M153 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	21	M153	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		

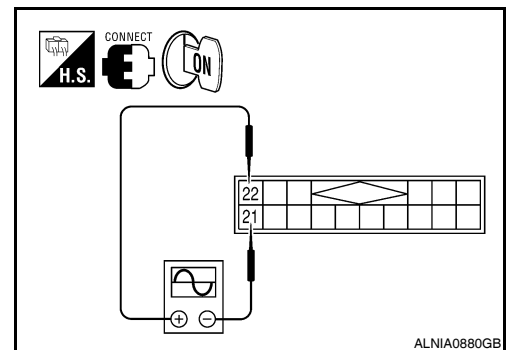
Are continuity results as specified?

- 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.

Connector	Terminal		Reference signal
	(+)	(-)	
B111	22	21	



Are voltage readings as specified?

- YES >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

SOUND SIGNAL CIRCUIT

[BOSE W/ COLOR DISPLAY]

< COMPONENT DIAGNOSIS >

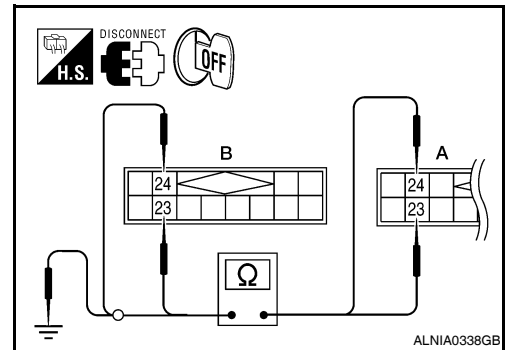
NO >> Replace satellite radio tuner. Refer to [AV-335, "Removal and Installation"](#).

RIGHT CHANNEL

1. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B111 and AV control unit connector M153.
3. Check continuity between satellite radio tuner (factory installed) B111 (A) and AV control unit M153 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B111	23	M153	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?

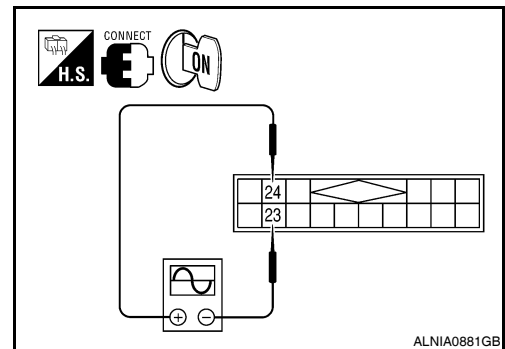
YES >> GO TO 2.

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		<p>SKIB3609E</p>



Are voltage readings as specified?

YES >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

NO >> Replace satellite radio tuner. Refer to [AV-335, "Removal and Installation"](#).

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MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000005530249

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

Diagnosis Procedure

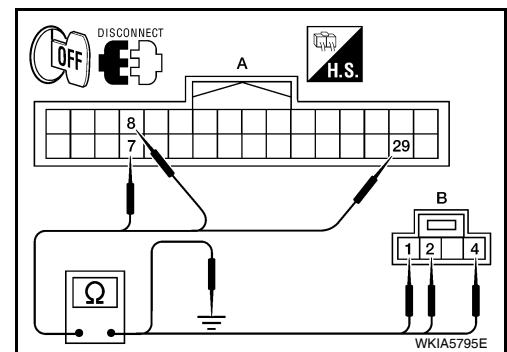
INFOID:000000005530250

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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 B131 (A) and microphone harness connector R7 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B131	7	R7	1	Yes
	8		2	
	29		4	



4. Check continuity between Bluetooth control unit harness connector B131 (A) and ground.

A		—	Continuity
Connector	Terminal		
B131	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

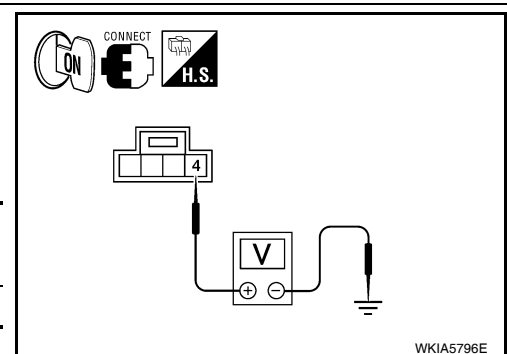
1. Connect Bluetooth control unit connector and microphone connector.
2. Turn ignition switch ON.
3. Check voltage between microphone harness connector R7 terminal 4 and ground.

(+)		(-)	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-677, "Removal and Installation"](#).

3. CHECK MICROPHONE SIGNAL

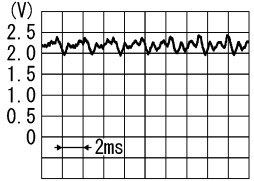


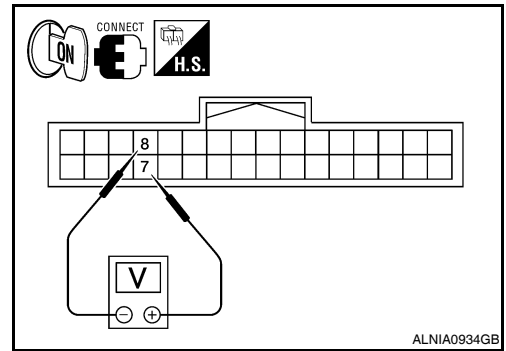
MICROPHONE SIGNAL CIRCUIT

[BOSE W/ COLOR DISPLAY]

< COMPONENT DIAGNOSIS >

Check signal between Bluetooth control unit harness connector B131 terminals 7 and 8.

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
B131	7	8	While talking into microphone  <small>PKIB5037J</small>



Are voltage readings as specified?

- YES >> Replace Bluetooth control unit. Refer to [AV-677, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-675, "Removal and Installation"](#).

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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

ECU DIAGNOSIS

AV CONTROL UNIT

Reference Value

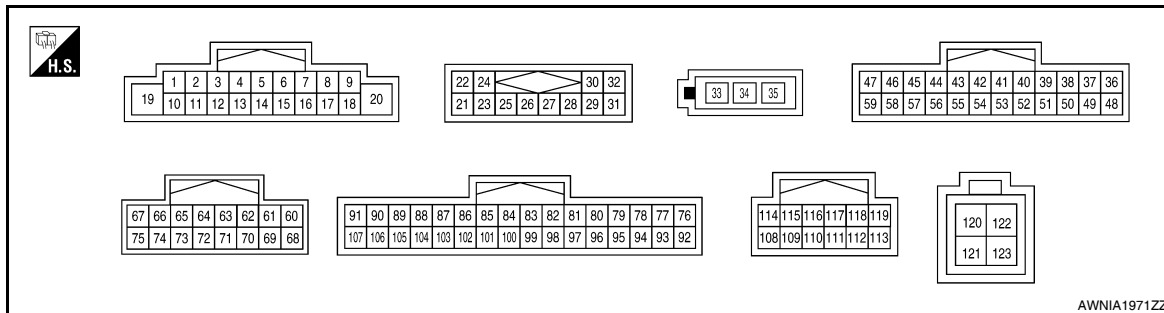
INFOID:000000005530274

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



AWNIA1971ZZ


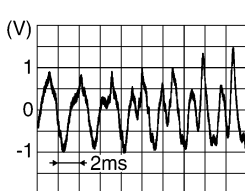
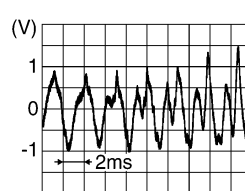
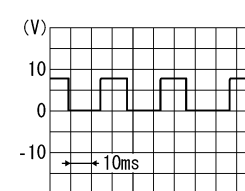
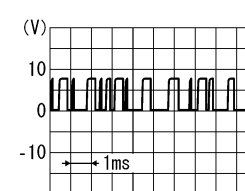
PHYSICAL VALUES

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 \llcorner switch.	723Ω	
				Depress ∇ switch.	321Ω	
				Depress \triangle 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]

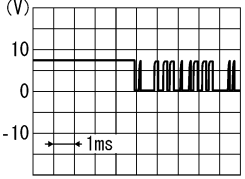
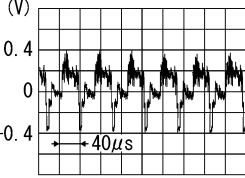
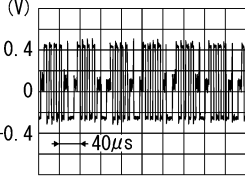
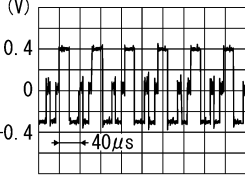
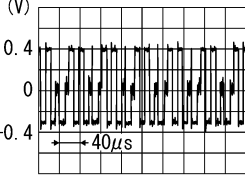
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
9 (R/L)	Ground	Illumination signal	Input	OFF	Lighting switch is OFF.	0V
					Lighting switch is ON.	Battery voltage
16 (GR/L)	15 (L/B)	Steering switch signal B	Input	Ignition switch ON	Depress the 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

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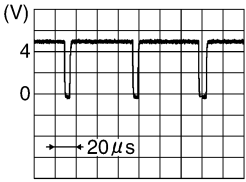
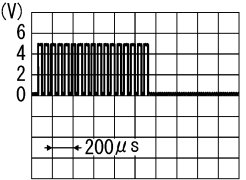
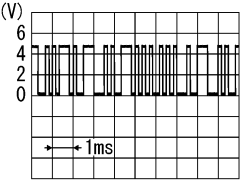
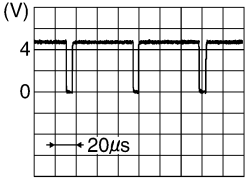
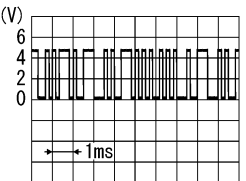
[BOSE W/ COLOR DISPLAY]

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 (W)	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]

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
49	—	Shield	—	—	—	—
50	—	Shield	—	—	—	—
55	—	Shield	—	—	—	—
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>

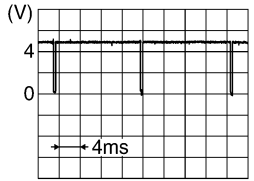
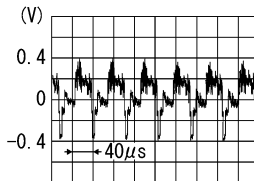
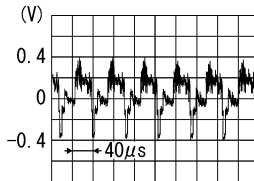
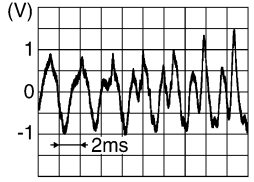
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AV CONTROL UNIT

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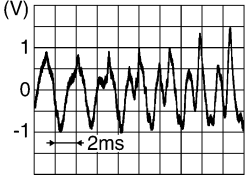
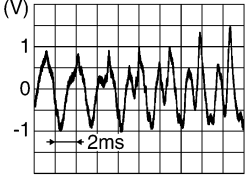
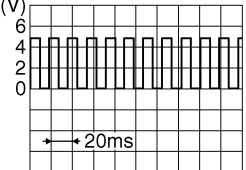
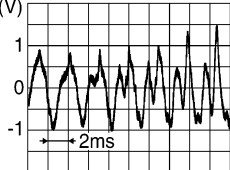
[BOSE W/ COLOR DISPLAY]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
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
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>
70 (L)	Ground	RV_CAM_SIG	Output	Ignition switch ACC	Shift selector is in R position	6V
71 (V/G)	Ground	RV_CAM_GND	—	—	—	—
72	—	Shield	—	—	—	—
73	—	Shield	—	—	—	—
80 (BR)	79 (Y)	TEL voice audio signal	Input	Ignition switch ON	Start confirmation/adjustment mode, and then Voice Microphone Test by selecting "Voice Microphone Test" on Handsfree Microphone screen.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
81	—	Shield	—	—	—	—
85 (BR)	Ground	Ground	—	Ignition switch ON	—	0V
86 (L)	—	CAN-H	Input/ Output	—	—	—
87 (P)	—	CAN-L	Input/ Output	—	—	—

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
88 (L)	—	AV communication signal 1 (H)	Input/ Output	—	—	—
89 (P)	—	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	 <small>SKIB3609E</small>
96 (W)	97 (R)	AUX audio signal LH	Input	Ignition switch ON	When AUX mode is select- ed	 <small>SKIB3609E</small>
103 (SB)	Ground	CD eject signal	Input	—	Pressing the eject switch Except for above	0V 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 Other than R position	Battery voltage 0V
106 (G/R)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake ON Parking brake OFF	0V 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)	 <small>SKIA6649J</small>
108 (V)	114 (LG)	Rear RH pre-amp. sound signal	Output	Ignition switch ON	Audio output	 <small>SKIB3609E</small>

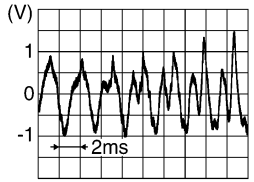
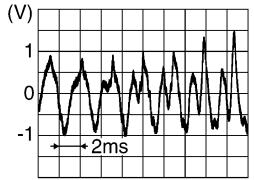
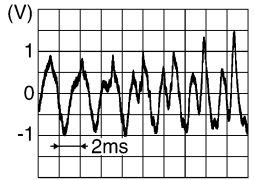
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[BOSE W/ COLOR DISPLAY]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
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	—	—	—	—
112 (W/R)	118 (W/L)	Rear LH pre-amp. sound signal	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
113 (G)	119 (R)	Front LH pre-amp. sound signal	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
120 (B)	—	USB ground	—	—	—	—
121 (W)	—	USB D-	—	—	—	—
122 (R)	—	V BUS signal	—	—	—	—
123 (G)	—	USB D+	—	—	—	—

AV CONTROL UNIT

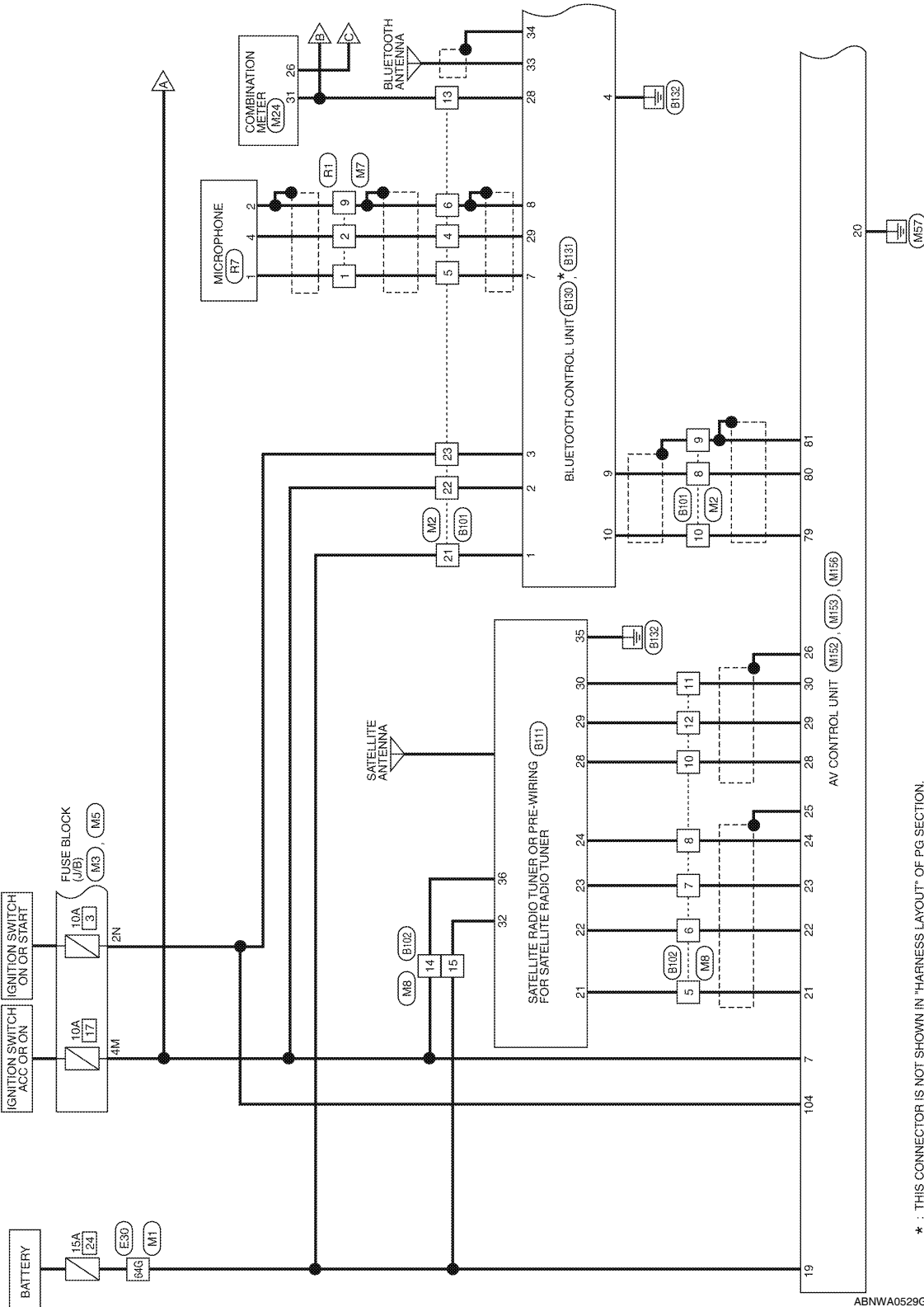
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[BOSE W/ COLOR DISPLAY]

Wiring Diagram

INFOID:000000005460187

BOSE AUDIO SYSTEM - WITH COLOR DISPLAY WITHOUT NAVI WITHOUT REAR CONTROLS



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

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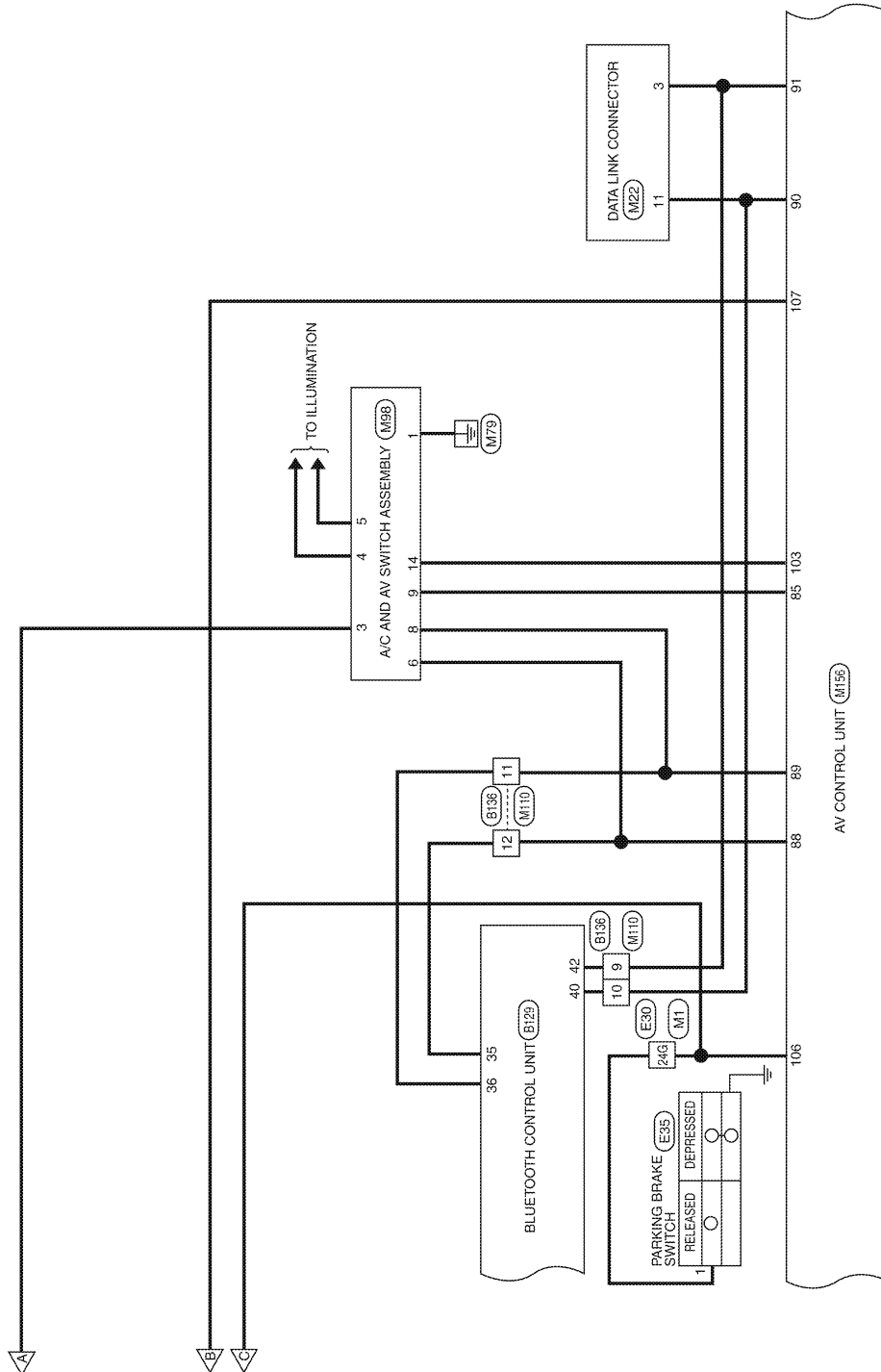
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[BOSE W/ COLOR DISPLAY]

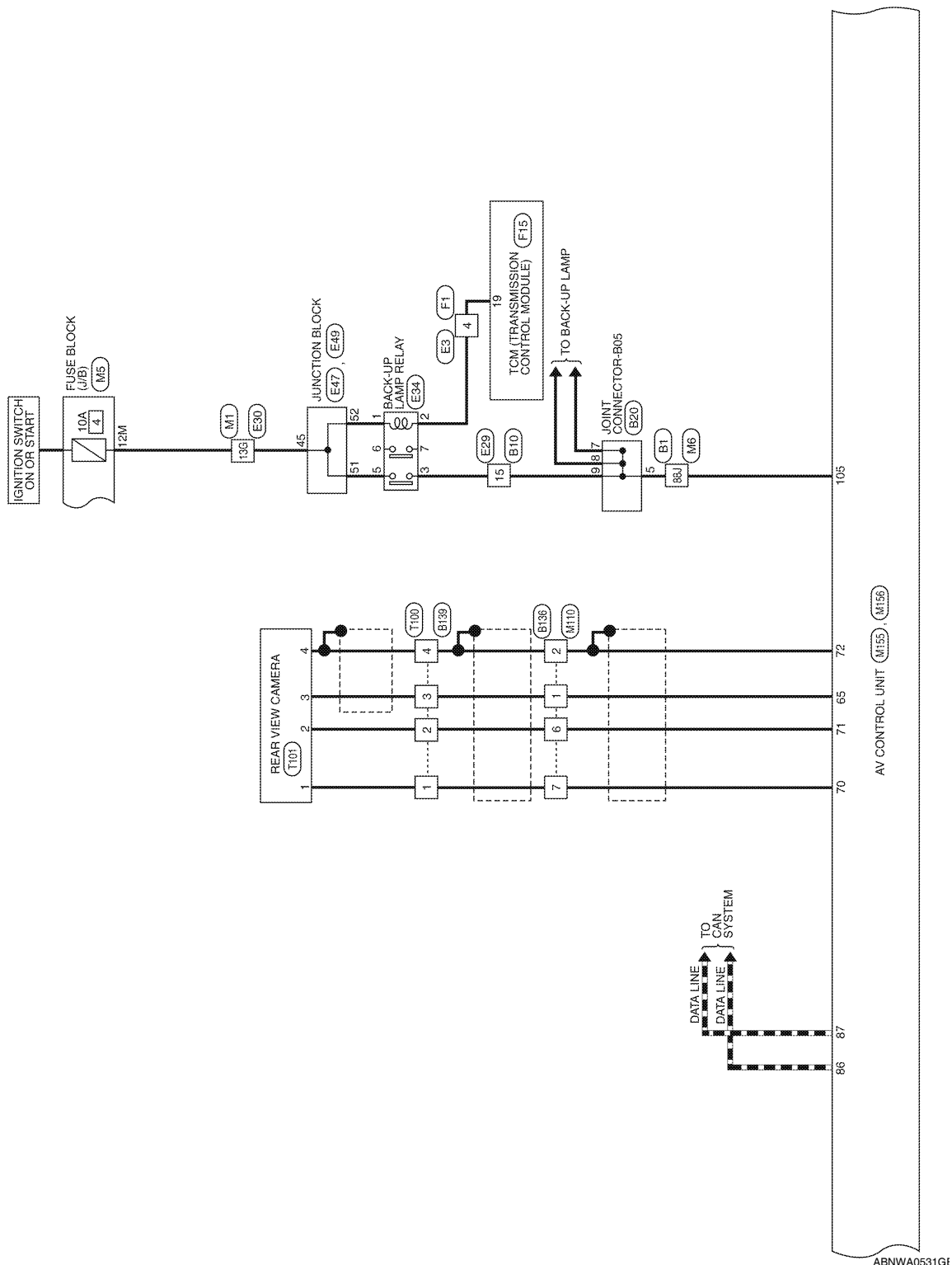


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AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY]



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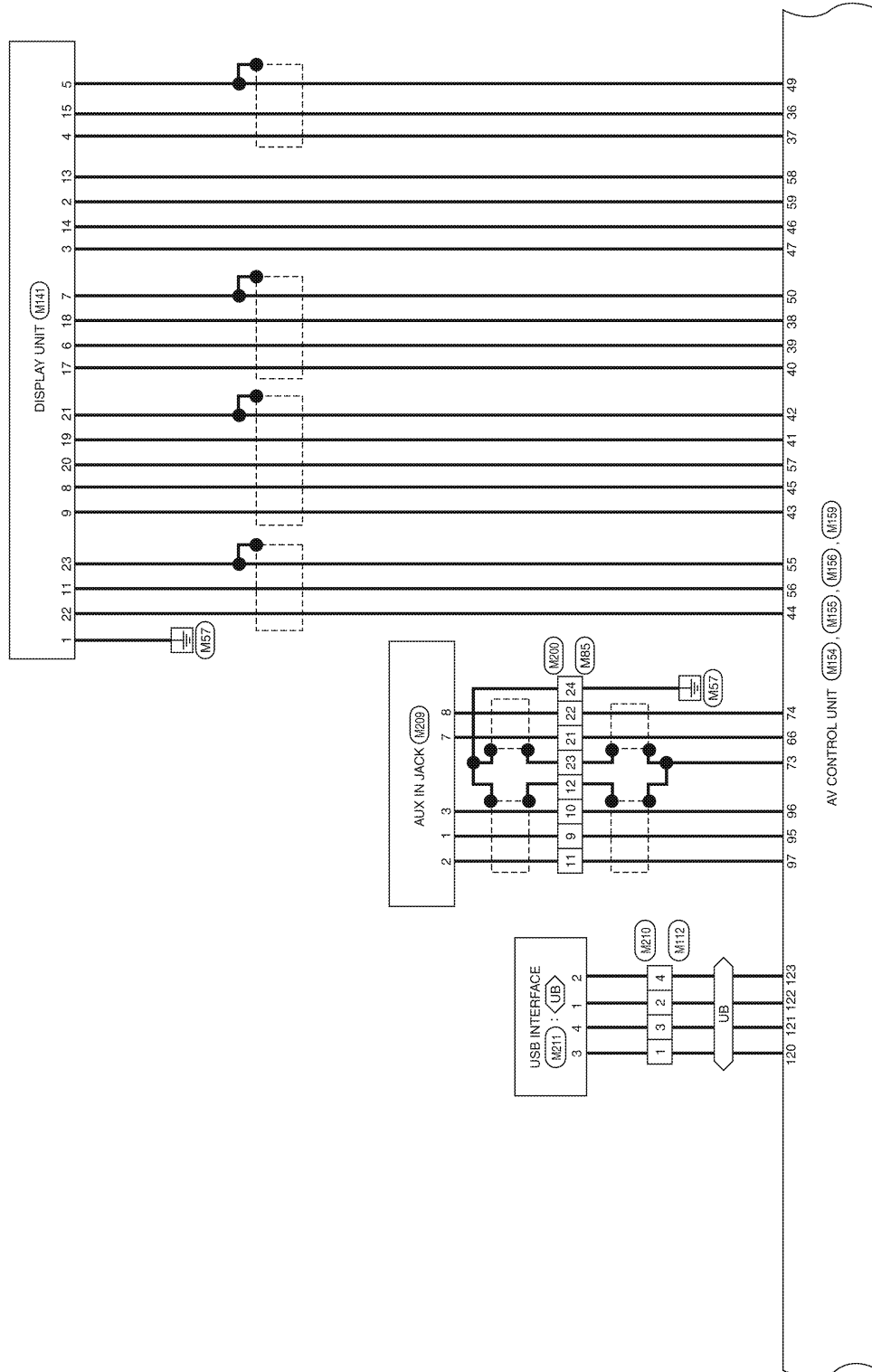
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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

UB : WITH USB INTERFACE

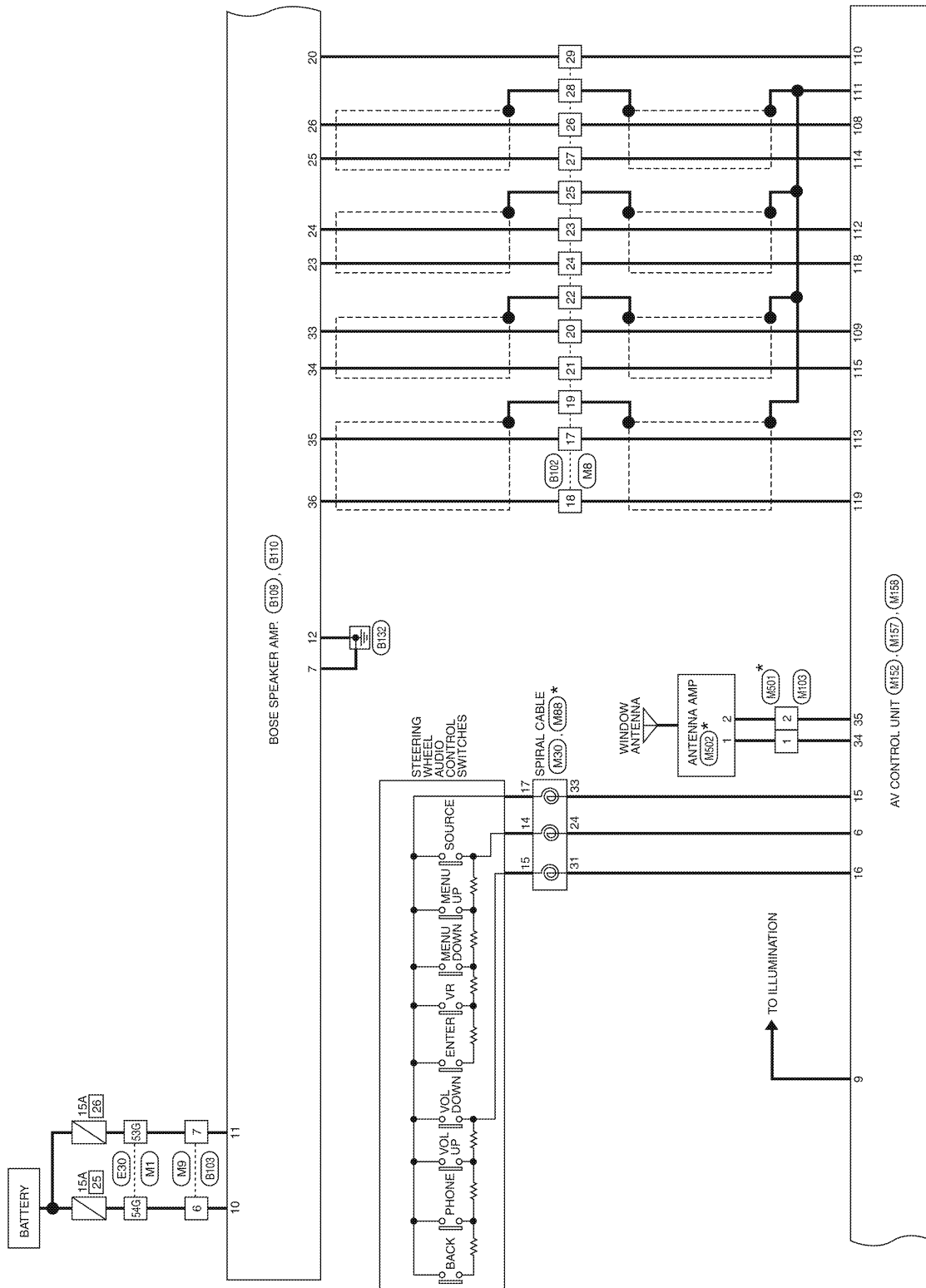


ABNWA0532G1

AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY]



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

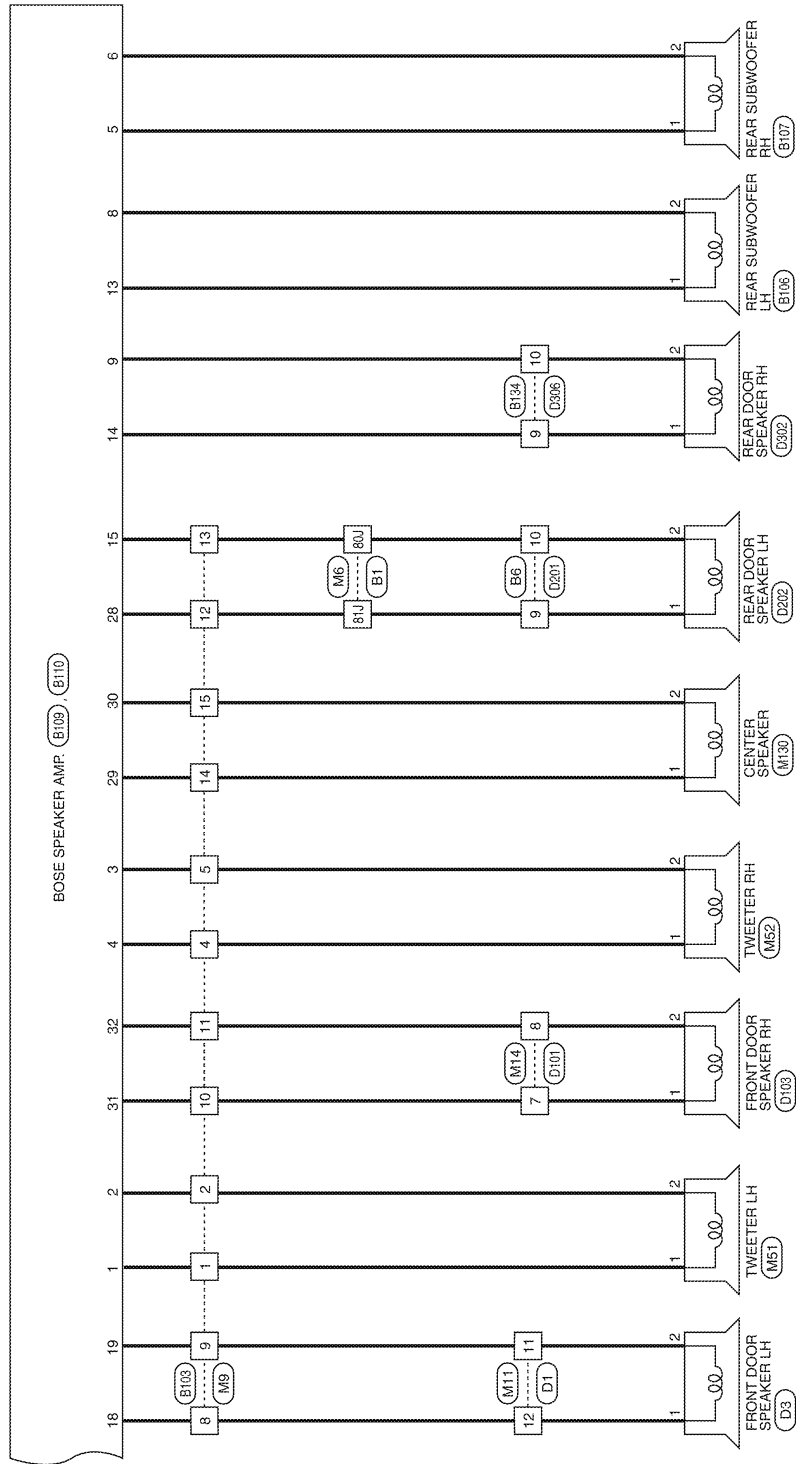
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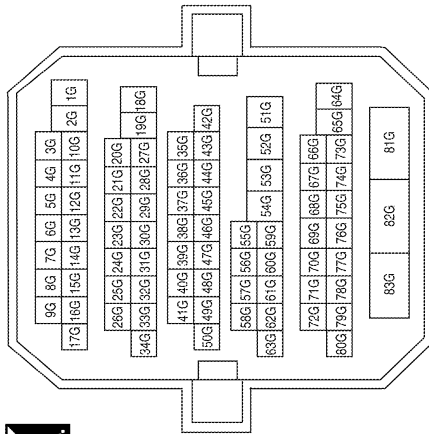
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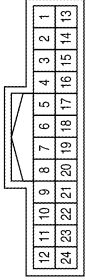
BOSE AUDIO SYSTEM CONNECTORS - WITH COLOR DISPLAY WITHOUT NAVI WITHOUT REAR CONTROLS

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



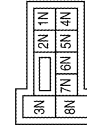
Terminal No.	Color of Wire	Signal Name
13G	O	--
24G	G/R	--
53G	B/R	--
54G	BR	--
64G	Y/R	--

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



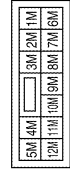
Terminal No.	Color of Wire	Signal Name
4	R	--
5	L	--
6	SHIELD	--
8	BR	--
9	SHIELD	--
10	Y	--
13	V/W	--
21	Y/R	--
22	V/Y	--
23	G	--

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	--

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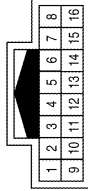
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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

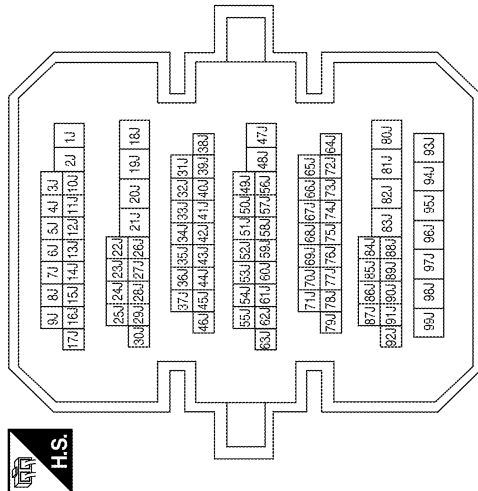
Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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	--
88J	P/B	--

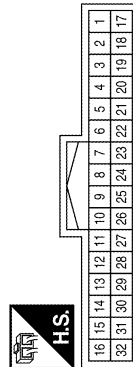
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Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
10	R	--
11	G	--
12	B	--
14	V/Y	--
15	Y/R	--
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	--

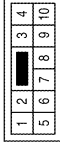
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AV CONTROL UNIT

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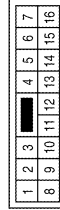
[BOSE W/ COLOR DISPLAY]

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



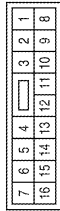
Terminal No.	Color of Wire	Signal Name
7	BR	--
8	B/R	--

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



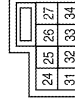
Terminal No.	Color of Wire	Signal Name
11	B/W	--
12	L	--

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



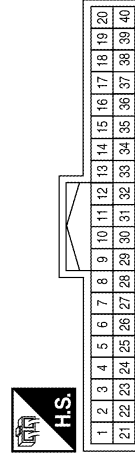
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	B/Y	--
4	L/O	--
5	GR/L	--
6	BR	--
7	B/R	--
8	L	--
9	B/W	--
10	BR	--
11	B/R	--
12	LG	--
13	B/Y	--
14	B/P	--
15	O/B	--

Connector No.	M30
Connector Name	SPIRAL CABLE
Connector Color	GRAY



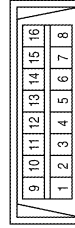
Terminal No.	Color of Wire	Signal Name
24	W/G	AUDIO STRG SW REMOTE A
31	GR/L	AUDIO STRG SW REMOTE B
33	L/B	AUDIO STRG SW GND

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.	M22
Connector Name	DATA LINK CONNECTOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	G	M CAN L
11	R	M CAN H

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A B C D E F G H I J K L M N O P

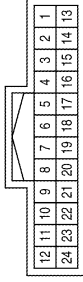


AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY]

Connector No.	M85
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	B	-
10	W	-
11	R	-
12	SHIELD	-
21	LG	-
22	V	-
23	SHIELD	-
24	B	-

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



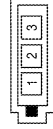
Terminal No.	Color of Wire	Signal Name
1	L/O	-
2	GR/L	-

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



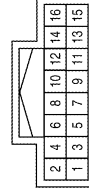
Terminal No.	Color of Wire	Signal Name
1	LG	-
2	B/Y	-

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



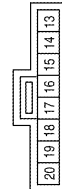
Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

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	L	CAN-H
8	P	CAN-L
9	BR	SW GND
14	SB	CD (DVD) EJECT

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

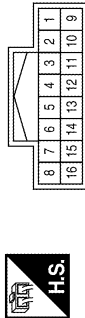
ABNIA1629GB

AV CONTROL UNIT

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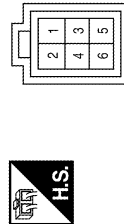
[BOSE W/ COLOR DISPLAY]

Connector No.	M110
Connector Name	WIRE TO WIRE
Connector Color	WHITE



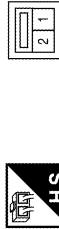
Terminal No.	Color of Wire	Signal Name
1	W	--
2	SHIELD	--
6	V/G	--
7	L	--
9	G	--
10	R	--
11	P	--
12	L	--

Connector No.	M112
Connector Name	WIRE TO WIRE
Connector Color	GRAY



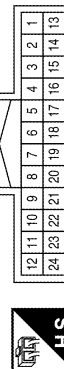
Terminal No.	Color of Wire	Signal Name
1	B	--
2	R	--
3	W	--
4	G	--

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.	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-

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	W	COMP IN+
16	--	--
17	B	R

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	--	--

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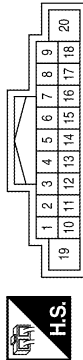
AV

AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY]

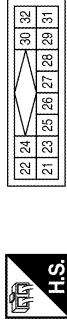
Connector No.	M152
Connector Name	AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)
Connector Color	WHITE



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.	M153
Connector Name	AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)
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.	M154
Connector Name	AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
36	W	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	--	--
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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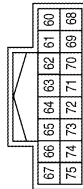
AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

Terminal No.	Color of Wire	Signal Name
69	-	-
70	L	RV CAM SIG
71	V/G	CAM GND
72	SHIELD	COMP2 GND
73	SHIELD	COMP1 IN SHIELD
74	V	COMP1 IN-
75	-	-

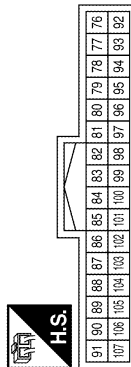
Connector No.	M155
Connector Name	AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
60	-	-
61	-	-
62	-	-
63	-	-
64	-	-
65	W	COMP2 IN+
66	LG	COMP1 IN+
67	-	-
68	-	-

Terminal No.	Color of Wire	Signal Name
81	SHIELD	VOICE SHIELD
82	-	-
83	-	-
84	-	-
85	BR	SW GND
86	L	CAN-H
87	P	CAN-L
88	L	M-CAN H
89	P	M-CAN L
90	R	M-CAN2 L
91	G	M-CAN2 H
92	-	-
93	-	-

Connector No.	M156
Connector Name	AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
76	-	-
77	-	-
78	-	-
79	Y	TEL VOICE(TO IT)-
80	BR	TEL VOICE(TO IT)+

Terminal No.	Color of Wire	Signal Name
94	-	-
95	B	AUX AUDIO RH+
96	W	AUX AUDIO LH+
97	R	AUX GND
98	-	-
99	-	-
100	-	-
101	-	-
102	-	-
103	SB	CN(DVD) EJECT
104	G	IGN
105	P/B	REVERSE SIG
106	G/R	PKB SIG
107	V/W	SPEED 8P

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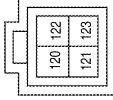
AV

AV CONTROL UNIT

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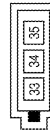
[BOSE W/ COLOR DISPLAY]

Connector No.	M159
Connector Name	AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)
Connector Color	GREEN



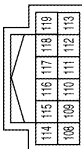
Terminal No.	Color of Wire	Signal Name
120	B	USB GND
121	W	USB D-
122	R	VBUS
123	G	USB D+

Connector No.	M158
Connector Name	AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)
Connector Color	GRAY



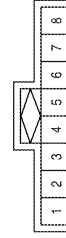
Terminal No.	Color of Wire	Signal Name
34	B	ANT MAIN
35	B	ANT +B

Connector No.	M157
Connector Name	AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)
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	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-

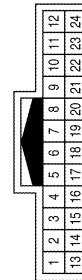
Connector No.	M209
Connector Name	AUX IN JACK
Connector Color	WHITE



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
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
9	B	-
10	W	-
11	R	-
12	SHIELD	-

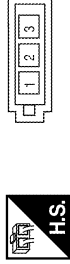
ABNIA1633GB

AV CONTROL UNIT

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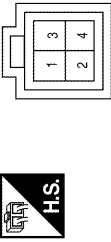
[BOSE W/ COLOR DISPLAY]

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



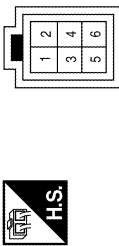
Terminal No.	Color of Wire	Signal Name
1	B	--
2	B	--

Connector No.	M211
Connector Name	USB INTERFACE
Connector Color	GREEN



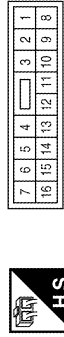
Terminal No.	Color of Wire	Signal Name
1	R	VBUS
2	G	USB D+
3	B	USB GND
4	W	USB D-

Connector No.	M210
Connector Name	WIRE TO WIRE
Connector Color	GRAY



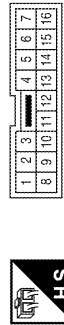
Terminal No.	Color of Wire	Signal Name
1	B	--
2	R	--
3	W	--
4	G	--

Connector No.	E29
Connector Name	WIRE TO WIRE
Connector Color	WHITE



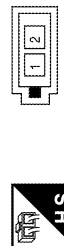
Terminal No.	Color of Wire	Signal Name
15	W	--

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	--

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[BOSE W/ COLOR DISPLAY]

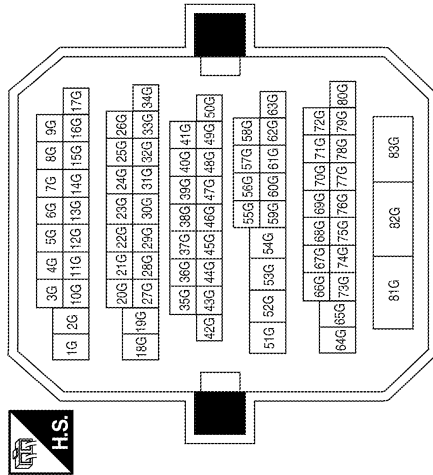
Connector No.	E34
Connector Name	BACK-UP LAMP RELAY
Connector Color	BLUE



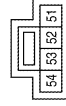
Terminal No.	Color of Wire	Signal Name
1	O	--
2	R	--
3	W	--
5	LG	--

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

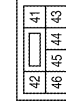


Connector No.	E49
Connector Name	JUNCTION BLOCK
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
51	LG	--
52	O	--

Connector No.	E47
Connector Name	JUNCTION BLOCK
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
45	BR	--

Connector No.	E35
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	P	--

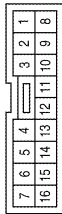
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AV CONTROL UNIT

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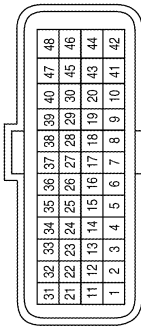
[BOSE W/ COLOR DISPLAY]

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



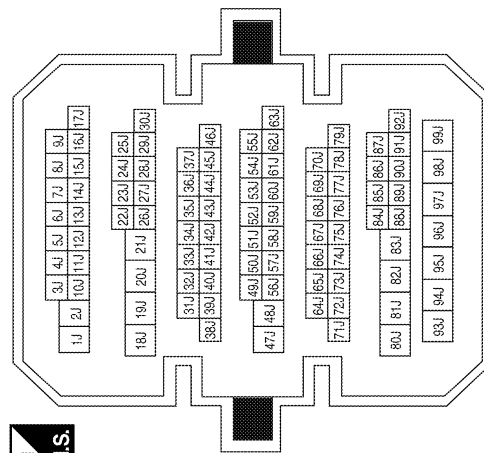
Terminal No.	4	Color of Wire	G/B	Signal Name	--
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Connector No.	F15
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	BLACK



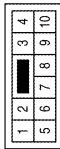
Terminal No.	19	Color of Wire	G/B	Signal Name	REV LAMP RLY
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Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	80J	Color of Wire	O	Signal Name	--
	81J	Color of Wire	LG	Signal Name	--
	88J	Color of Wire	V	Signal Name	--

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



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

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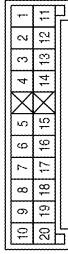
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

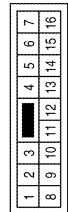
[BOSE W/ COLOR DISPLAY]

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	V	--

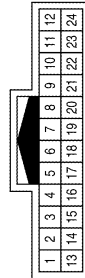
Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15	V	--

Terminal No.	Color of Wire	Signal Name
21	V	--
22	GR	--
23	O	--

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	--

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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

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

1	2	3	4	5	6	7		
8	9	10	11	12	13	14	15	16



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

Terminal No.	Color of Wire	Signal Name
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.	B102
Connector Name	WIRE TO WIRE
Connector Color	WHITE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32



Terminal No.	Color of Wire	Signal Name
5	BR	--
6	W	--
7	Y	--
8	B	--
10	R	--
11	L	--
12	V	--

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

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

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

2	1
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Terminal No.	Color of Wire	Signal Name
1	L	--
2	P	--

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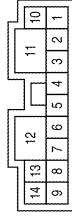
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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

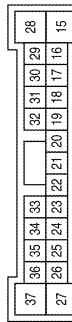
Connector No.	B110
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	FR TWDR LH+ OUT
2	V	FR TWDR LH- OUT
3	W	FR TWDR RH- OUT
4	G	FR TWDR RH+ OUT
5	R	RH WOOFER+ OUT
6	BR	RH WOOFER- OUT
7	B	GND
8	P	LH WOOFER- OUT
9	O	RR DOOR RH- OUT
10	SB	BAT
11	GR	BAT
12	B	GND
13	L	LH WOOFER+ OUT
14	LG	RR DOOR RH+ OUT

Terminal No.	Color of Wire	Signal Name
25	LG	RR RH-IN (WITH COLOR DISPLAY)
26	V	RR RH+IN (WITH COLOR DISPLAY)
28	G	RR DOOR LH+ OUT
29	V	INST CTR TWDR+ OUT
30	P	INST CTR TWDR- OUT
31	R	FR DOOR RH+ OUT
32	BR	FR DOOR RH- OUT
33	W/L	FR RH+IN (WITH COLOR DISPLAY)
34	GRV	FR RH-IN (WITH COLOR DISPLAY)
35	W/R	FR LH+IN (WITH COLOR DISPLAY)
36	B/R	FR LH-IN (WITH COLOR DISPLAY)

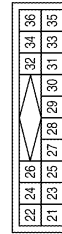
Connector No.	B109
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
15	L	RR DOOR LH- OUT
18	W	FR DOOR LH+ OUT
19	B	FR DOOR LH- OUT
20	SB	AMP ON
23	Y	RR LH-IN (WITH COLOR DISPLAY)
24	BR	RR LH+IN (WITH COLOR DISPLAY)

Terminal No.	Color of Wire	Signal Name
21	BR	SAT LCH (-)
22	W	SAT LCH (+)
23	Y	SAT RCH (-)
24	B	SAT RCH(+)
28	R	REQ1 (SAT->COMB)
29	V	TXD (SAT->COMB)
30	L	RXD (COMB->SAT)
32	P	BAT
35	B	HARN EARTH
36	GR	ACC

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



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AV CONTROL UNIT

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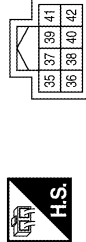
[BOSE W/ COLOR DISPLAY]

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



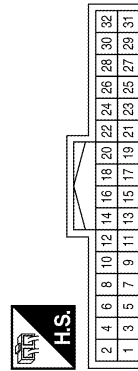
Terminal No.	Color of Wire	Signal Name
33	B	--
34	B	--

Connector No.	B129
Connector Name	BLUETOOTH CONTROL UNIT (WITH COLOR DISPLAY, WITHOUT REAR CONTROLS)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
35	L	CAN H1
36	P	CAN L1
37	--	--
38	--	--
39	--	--
40	R	CAN H2
41	--	--
42	G	CAN L2

Connector No.	B131
Connector Name	BLUETOOTH CONTROL UNIT (WITH BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	V	(+B)
2	GR	ACC
3	O	IGN
4	B	GND
5	--	--

Terminal No.	Color of Wire	Signal Name
6	--	--
7	L	MIC IN +
8	SHIELD	MIC IN -
9	BR	AUDIO OUT (+)
10	Y	AUDIO OUT (-)
11	--	--
12	--	--
13	--	--
14	--	--
15	--	--
16	--	--
17	--	--
18	--	--
19	--	--
20	--	--

Terminal No.	Color of Wire	Signal Name
21	--	AUDIO OUT (+)
22	--	AUDIO OUT (-)
23	--	--
24	--	--
25	--	--
26	--	--
27	--	--
28	BR	SPEED
29	R	MIC POWER

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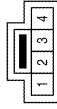
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AV CONTROL UNIT

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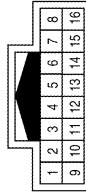
[BOSE W/ COLOR DISPLAY]

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



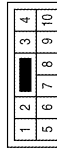
Terminal No.	Color of Wire	Signal Name
1	R	--
2	W	--
3	B	--
4	SHIELD	--

Connector No.	B136
Connector Name	WIRE TO WIRE
Connector Color	WHITE



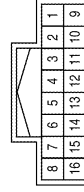
Terminal No.	Color of Wire	Signal Name
1	B	--
2	SHIELD	--
6	W	--
7	R	--
9	G	--
10	R	--
11	P	--
12	L	--

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



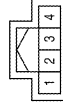
Terminal No.	Color of Wire	Signal Name
9	LG	--
10	O	--

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



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

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.	T100
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 CONTROL UNIT

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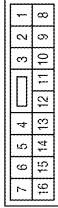
[BOSE W/ COLOR DISPLAY]

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



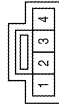
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	O	--

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



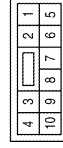
Terminal No.	Color of Wire	Signal Name
11	O	--
12	LG	--

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



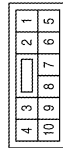
Terminal No.	Color of Wire	Signal Name
9	LG	--
10	O	--

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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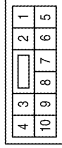
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AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY]

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 (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



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

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



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

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INFOID:000000005530275

DTC Index

Self-diagnosis results display item

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-209, "Diagnosis Procedure"
U1010	CONTROL UNIT (CAN) [1010]	AV-210, "DTC Logic"
U1200	Cont Unit [U1200]	AV-211, "DTC Logic"
U1216	CAN CONT [U1216]	AV-212, "DTC Logic"
U1218	HDD CONN [U1218]	AV-213, "Diagnosis Procedure"
U1219	HDD READ [U1219]	AV-214, "Diagnosis Procedure"
U121A	HDD WRITE [U121A]	AV-215, "Diagnosis Procedure"
U121B	HDD COMM [U121B]	AV-216, "Diagnosis Procedure"
U121C	HDD ACCESS [U121C]	AV-217, "Diagnosis Procedure"
U121D	DSP CONN [U121D]	AV-218, "Diagnosis Procedure"
U121E	DSP COMM [U121E]	AV-219, "Diagnosis Procedure"
U1225	USB CONTROLLER [U1225]	AV-220, "DTC Logic"
U1227	DVD COMM [U1227]	AV-221, "Diagnosis Procedure"
U1228	SUB CPU CONN [U1228]	AV-222, "DTC Logic"
U1229	iPod CERTIFICATION [U1229]	AV-223, "DTC Logic"
U122A	CONFIG UNFINISH [U122A]	AV-224, "Diagnosis Procedure"
U122E	Built-in AUDIO CONN [U122E]	AV-225, "DTC Logic"
U1232	ST ANGLE SEN CALIB [1232]	AV-226, "Diagnosis Procedure"
U1243	FRONT DISP CONN [U1243]	AV-227, "Diagnosis Procedure"
U1255	SATELLITE TUNER [U1255]	AV-230, "Description"
U1263	USB OVERCURRENT [U1263]	AV-229, "Diagnosis Procedure"
U1310	CONTROL UNIT (AV) [U1310]	AV-233, "DTC Logic"
U1300 U1240	<ul style="list-style-type: none"> • AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] 	AV-232, "Description"

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DISPLAY UNIT

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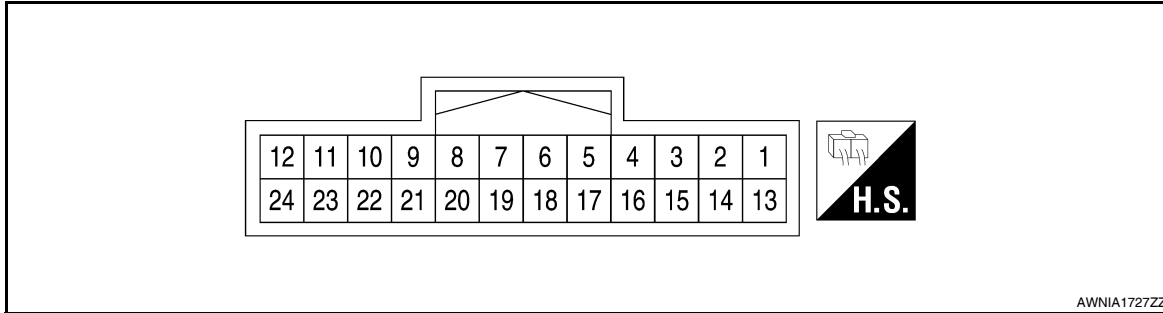
[BOSE W/ COLOR DISPLAY]

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Reference Value

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TERMINAL LAYOUT



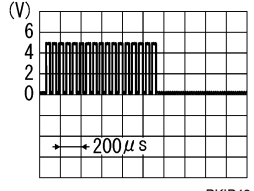
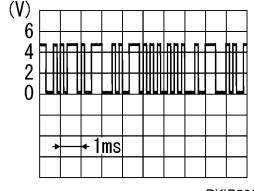
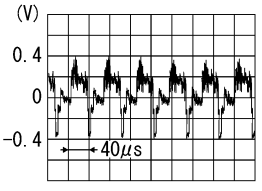
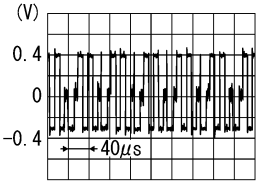
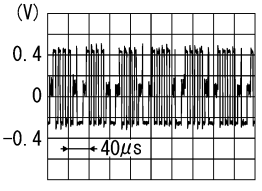
PHYSICAL VALUES

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 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]

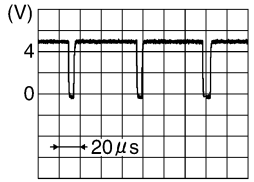
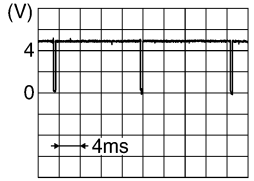
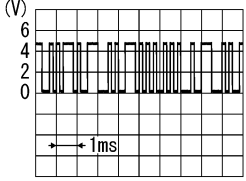
Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	-	Signal name	Input/ Output		
9 (B)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At RGB image displayed 5V
				Ignition switch ON	At rear view camera image displayed  PKIB4948J
11 (Y)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display-brightness  PKIB5039J
13 (BR)	Ground	Inverter ground	—	Ignition switch ON	— 0V
14 (LG)	Ground	Signal ground	—	Ignition switch ON	— 0V
15 (W)	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

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[BOSE W/ COLOR DISPLAY]

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;">SKIB3603E</p>
20 (W)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch On	—	 <p style="text-align: right;">SKIB3598E</p>
21	—	Shield	—	—	—	—
22 (BR)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display- brightness	 <p style="text-align: right;">PKIB5039J</p>
23	—	Shield	—	—	—	—

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

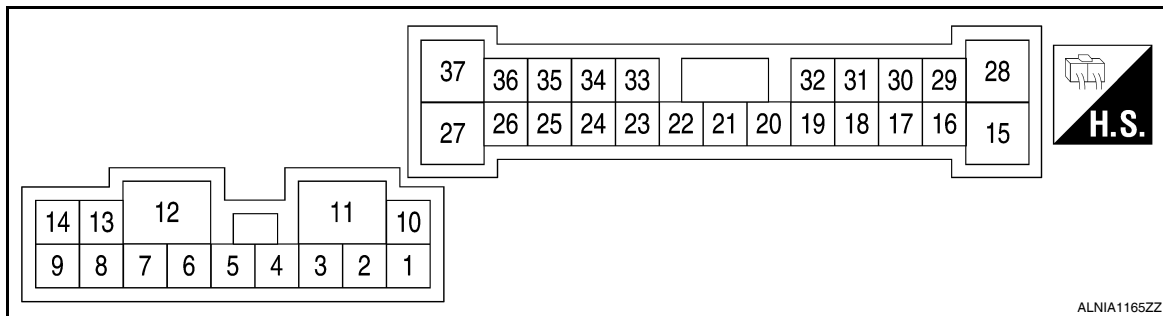
[BOSE W/ COLOR DISPLAY]

BOSE SPEAKER AMP

Reference Value

INFOID:000000005532018

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 (G)	3 (W)	Audio signal tweeter RH	Output	Ignition switch ON	Audio output	<p>SKIB3609E</p>
5 (R)	6 (BR)	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

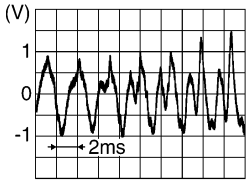
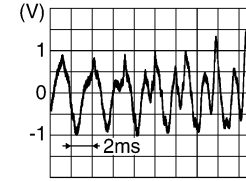
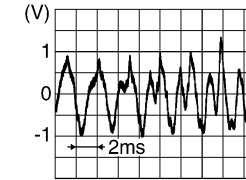
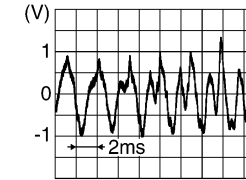
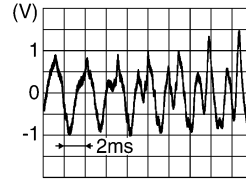
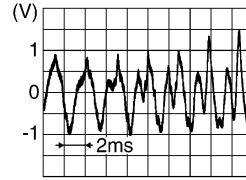
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BOSE SPEAKER AMP

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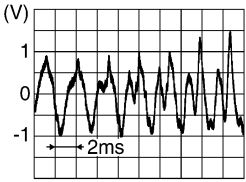
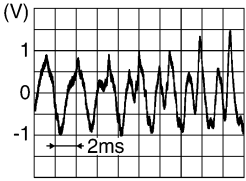
[BOSE W/ COLOR DISPLAY]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
13 (L)	8 (P)	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]

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	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
35 (W/R)	36 (B/R)	Audio signal front LH	Input	Ignition switch ON	Audio input	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

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SATELLITE RADIO TUNER

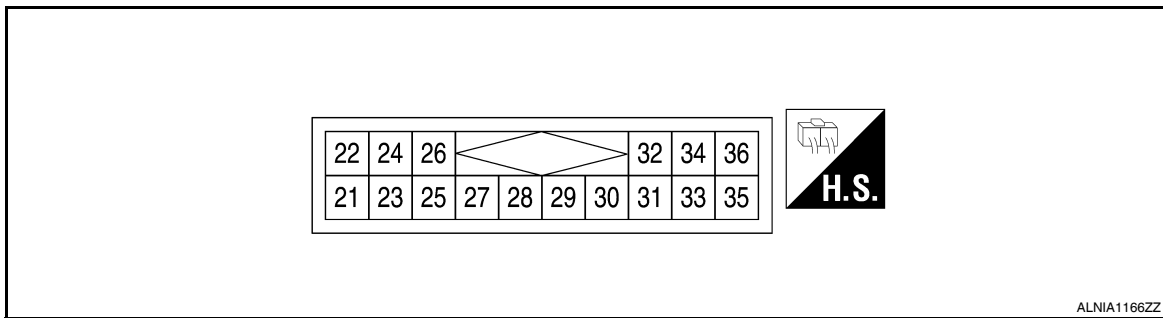
< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

SATELLITE RADIO TUNER

Reference Value

INFOID:000000005532019



ALNIA1166ZZ

PHYSICAL VALUES

Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/Output			
22 (W)	21 (BR)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIB3609E</p>
24 (B)	23 (Y)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIB3609E</p>
28 (R)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIA9299J</p>
29 (V)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIA9300J</p>

SATELLITE RADIO TUNER

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
30 (L)	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)	—	Shield	—	—	—	—
36 (GR)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

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BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS >

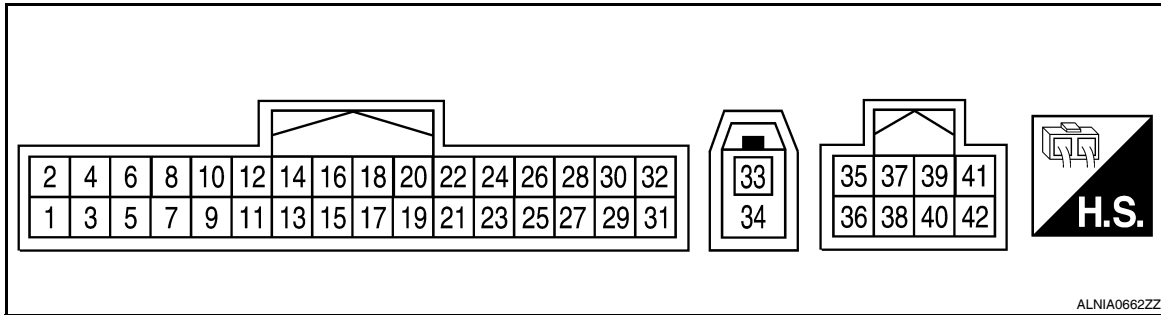
[BOSE W/ COLOR DISPLAY]

BLUETOOTH CONTROL UNIT

Reference Value

INFOID:000000005532020

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]

Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ output			
34 (B)	-	Bluetooth antenna	-	-	-	—
35 (L)	-	M-CAN1 (+)	-	-	-	—
36 (P)	-	M-CAN1 (-)	-	-	-	—
37	-	Shield	-	-	-	—
40 (R)	-	M-CAN2 (-)	-	-	-	—
42 (G)	-	M-CAN2 (-)	-	-	-	—

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AV

AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:000000005460195

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> AV control unit power circuit AV control unit 	<ul style="list-style-type: none"> AV-234, "AV CONTROL UNIT : Diagnosis Procedure" AV-322
Steering switch does not operate	<ul style="list-style-type: none"> Steering switch AV control unit 	<ul style="list-style-type: none"> AV-265, "Diagnosis Procedure" AV-322
All speakers do not sound	<ul style="list-style-type: none"> AV control unit AV control unit power circuit BOSE speaker amp. ON signal BOSE speaker amp. power/ground circuit BOSE speaker amp. 	<ul style="list-style-type: none"> AV-322 AV-234, "AV CONTROL UNIT : Diagnosis Procedure" AV-264, "Diagnosis Procedure" AV-237, "BOSE SPEAKER AMP : Diagnosis Procedure" AV-334, "Removal and Installation"
One or several speakers do not sound	<ul style="list-style-type: none"> Front door speaker Tweeter Center speaker Rear door speaker Subwoofer 	<ul style="list-style-type: none"> AV-250, "Diagnosis Procedure" AV-253, "Diagnosis Procedure" AV-256, "Diagnosis Procedure" AV-258, "Diagnosis Procedure" AV-261, "Diagnosis Procedure"

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	AV control unit	AV-322
CD cannot be ejected.		
The CD cannot be played.		
The sound skips, stops suddenly, or is distorted.		

SATELLITE RADIO

AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

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-238. "SATELLITE RADIO TUNER : Diagnosis Procedure" AV-267. "SATELLITE RADIO TUNER : Diagnosis Procedure" AV-335. "Removal and Installation"
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-270. "SATELLITE RADIO TUNER : Diagnosis Procedure" AV-270. "SATELLITE RADIO TUNER : Diagnosis Procedure" AV-335. "Removal and Installation"

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-240. "BLUETOOTH CONTROL UNIT : Diagnosis Procedure" AV-344
Steering switch does not operate	<ul style="list-style-type: none"> Steering switch Bluetooth control unit 	<ul style="list-style-type: none"> AV-337 AV-344
Voice activated control does not operate	<ul style="list-style-type: none"> Microphone Steering switch Bluetooth control unit 	<ul style="list-style-type: none"> AV-342 AV-337 AV-344

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

NORMAL OPERATING CONDITION

Description

INFOID:000000005460196

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

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

INFOID:000000005460197

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 WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

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

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect (Early Production, With Electronic Steering Column Lock)

INFOID:000000005885978

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.

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PRECAUTIONS

< PRECAUTION >

[BOSE W/ COLOR DISPLAY]

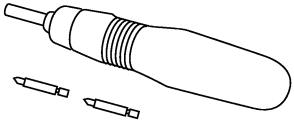
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000005460199

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

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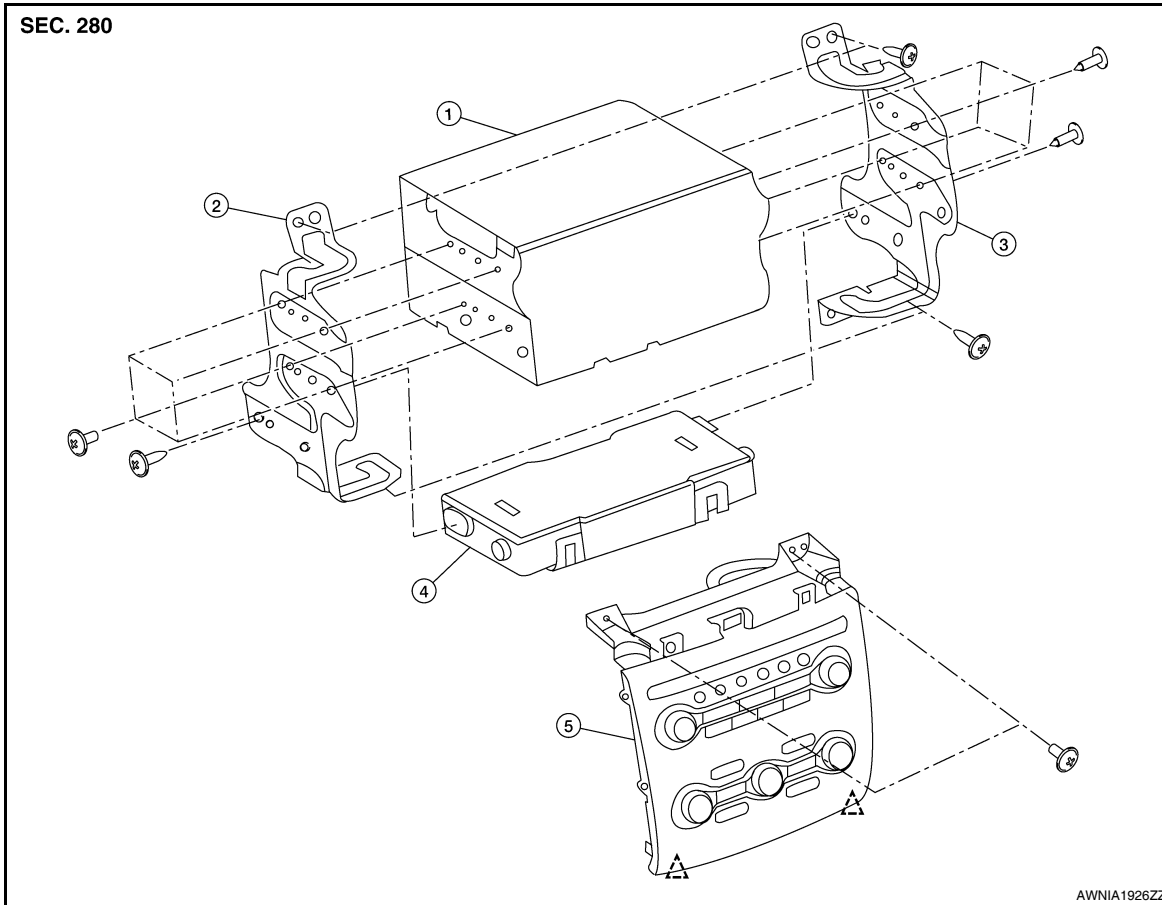
AV

ON-VEHICLE REPAIR

AV CONTROL UNIT

Removal and Installation

INFOID:000000005460200

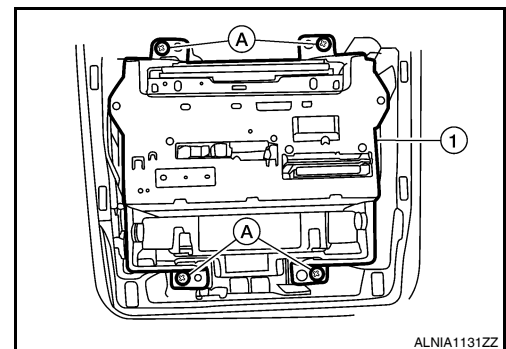


- | | | |
|------------------|---|--------------------------|
| 1. Audio unit | 2. Audio unit bracket LH | 3. Audio unit bracket RH |
| 4. A/C auto amp. | 5. Cluster lid C (with A/C and AV switch assembly attached) | △ Clips |

AUDIO UNIT

Removal

1. Disconnect the battery negative terminal.
2. Remove the cluster lid D. Refer to [IP-12, "Removal and Installation"](#).
3. Remove the cluster lid C. Refer to [IP-11, "Exploded View"](#).
4. 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

AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY]

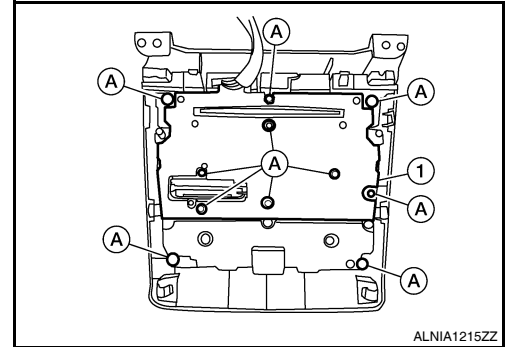
< ON-VEHICLE REPAIR >

Installation is in the reverse order of removal.

A/C AND AV SWITCH ASSEMBLY

Removal

1. Disconnect the battery negative terminal.
2. Remove the cluster lid D. Refer to [IP-12. "Removal and Installation"](#).
3. Remove the cluster lid C. Refer to [IP-11. "Exploded View"](#).
4. Remove the A/C and AV switch assembly screws (A), then pull out the A/C and AV switch assembly (1) from cluster lid C.



Installation

Installation is in the reverse order of removal.

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AV

MULTIFUNCTION SWITCH

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
[BOSE W/ COLOR DISPLAY]

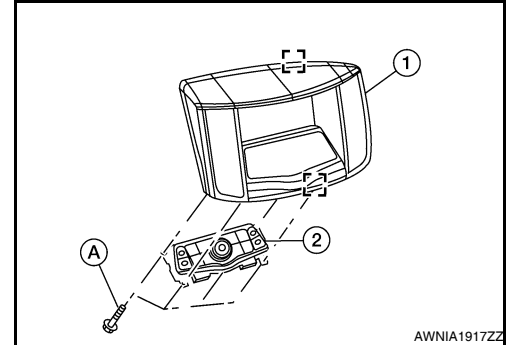
MULTIFUNCTION SWITCH

Removal and Installation

INFOID:000000005522943

REMOVAL

1. Remove cluster lid D. Refer to [IP-11. "Exploded View"](#).
2. Remove the four multifunction switch screws (A) and remove the multifunction switch (2) from cluster lid D (1).
 -  metal clip



INSTALLATION

Installation is in the reverse order of removal.

AUDIO DISPLAY UNIT

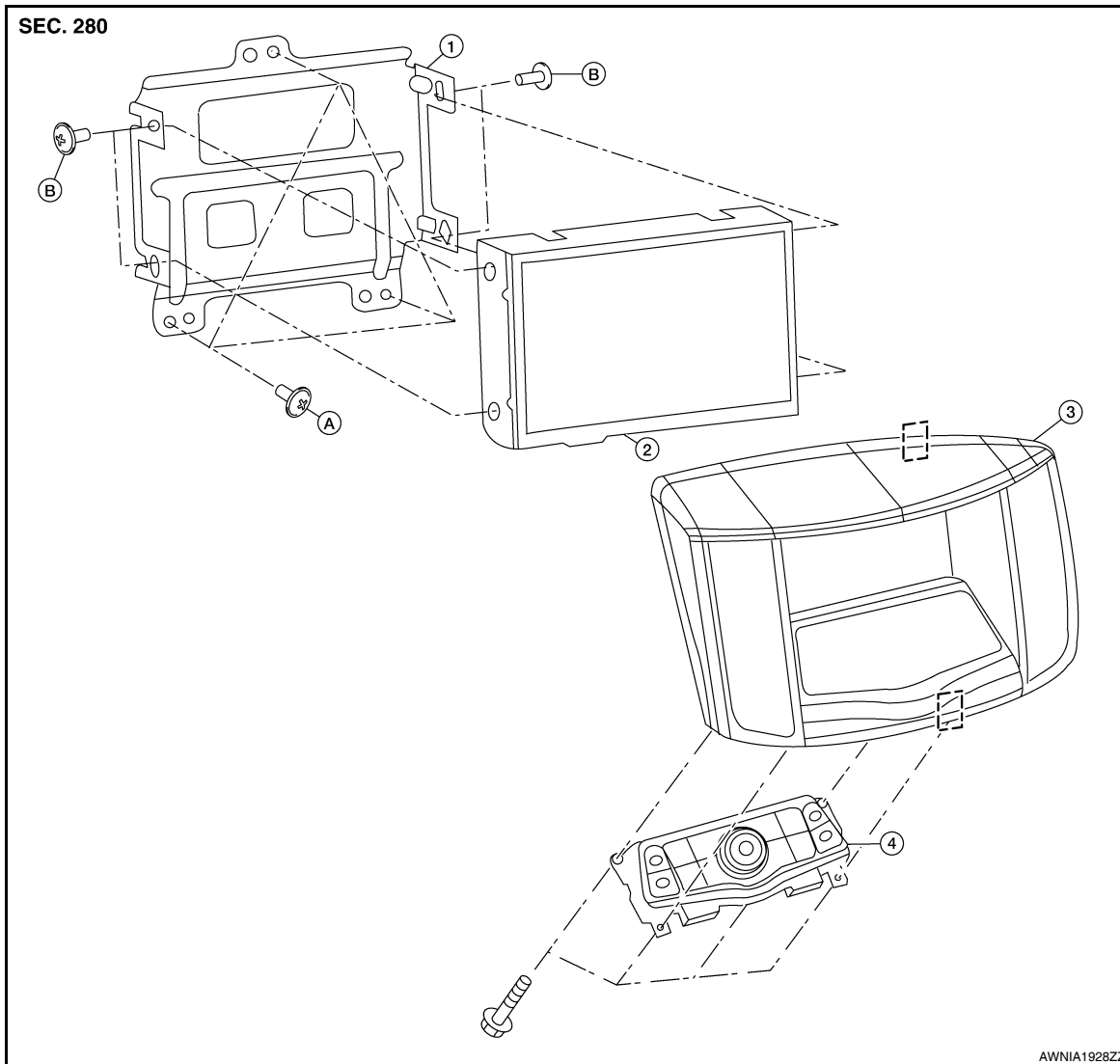
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[BOSE W/ COLOR DISPLAY]

AUDIO DISPLAY UNIT

Removal and Installation

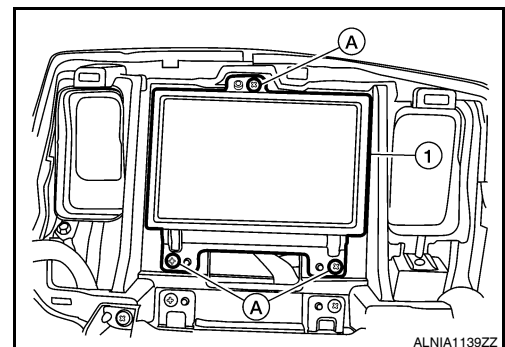
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|-------------------------------|--------------------------------------|------------------------------|
| 1. Audio display unit bracket | 2. Audio display unit | 3. Cluster lid D |
| 4. Multifunction switch | A. Audio display unit bracket screws | B. Audio display unit screws |
| □ Metal Clip | | |

REMOVAL

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



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AUDIO DISPLAY UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY]

3. Remove the audio display unit screws on the sides and remove the audio display unit from the audio display unit brackets.

INSTALLATION

Installation is in the reverse order of removal.

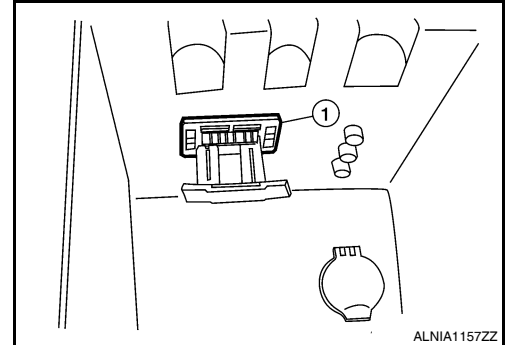
USB CONNECTOR

Removal and Installation

INFOID:000000005460203

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 USB 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]

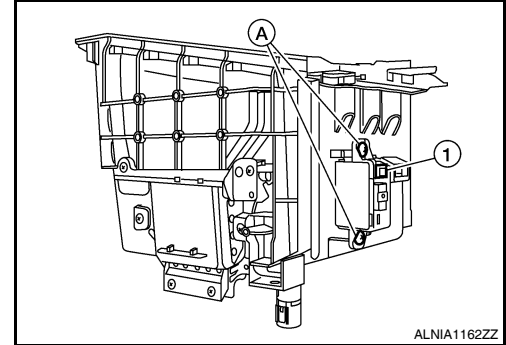
AUXILIARY INPUT JACKS

Removal and Installation

INFOID:000000005460204

REMOVAL

1. Remove the center console. Refer to [IP-16. "Removal and Installation"](#).
2. Remove 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]

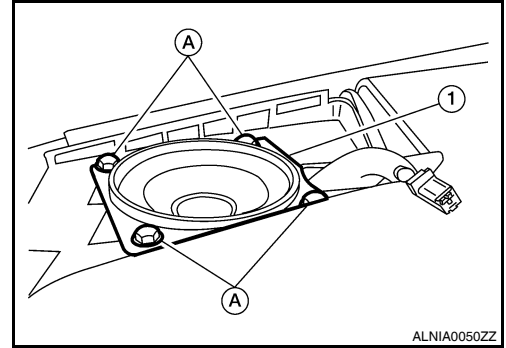
FRONT TWEETER

Removal and Installation

INFOID:000000005460205

REMOVAL

1. Remove front tweeter speaker grille. Refer to [IP-12. "Removal and Installation"](#).
2. 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]

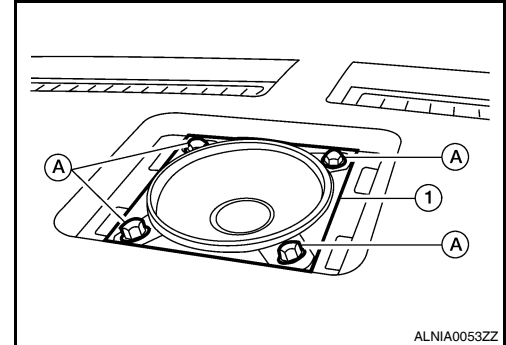
CENTER SPEAKER

Removal and Installation

INFOID:000000005460206

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]

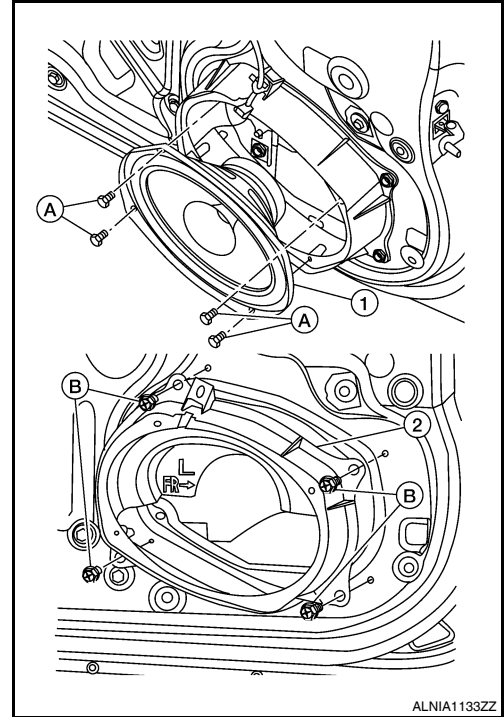
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000005460207

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]

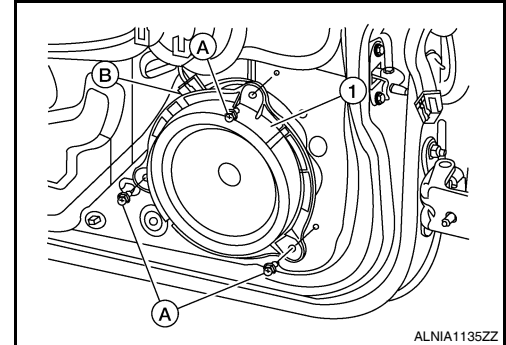
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000005460208

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

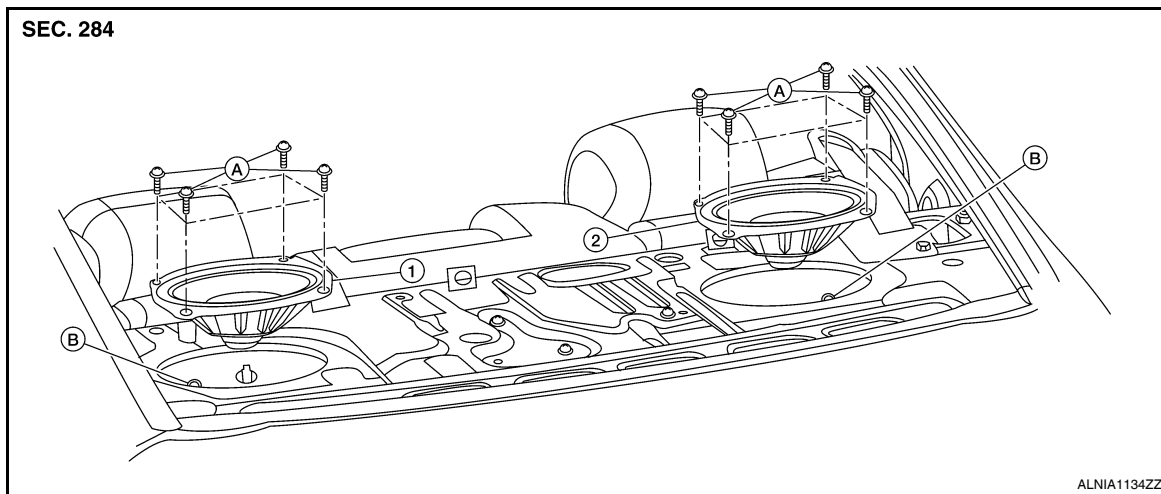
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[BOSE W/ COLOR DISPLAY]

SUBWOOFER

Removal and Installation

INFOID:000000005460209



- 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

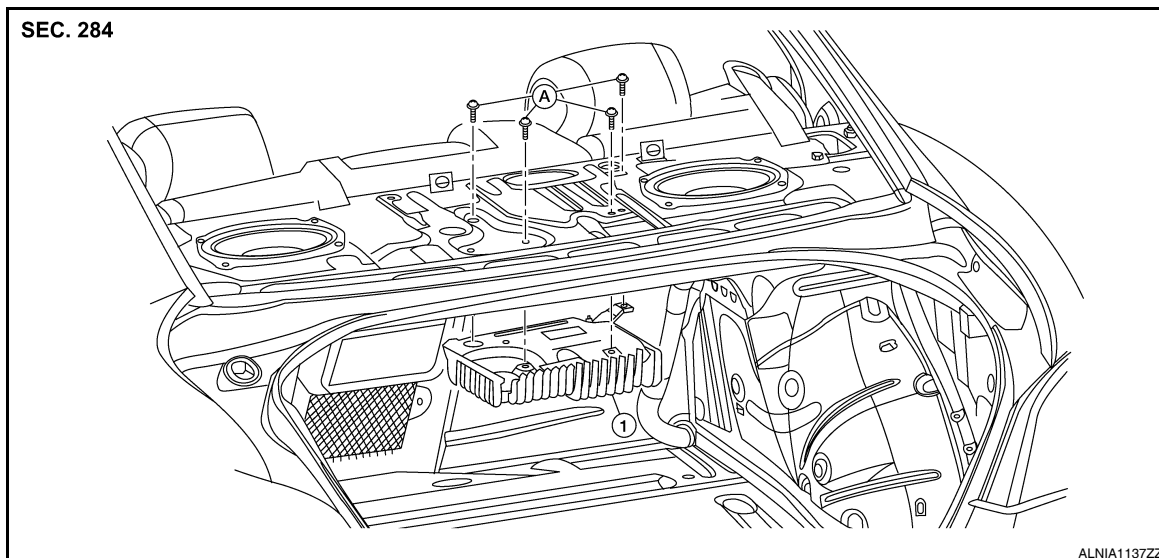
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[BOSE W/ COLOR DISPLAY]

BOSE SPEAKER AMP

Removal and Installation

INFOID:000000005460210



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.
4. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
5. Disconnect the Bose speaker amp. connectors and remove the Bose speaker amp.

INSTALLATION

Installation is in the reverse order of removal.

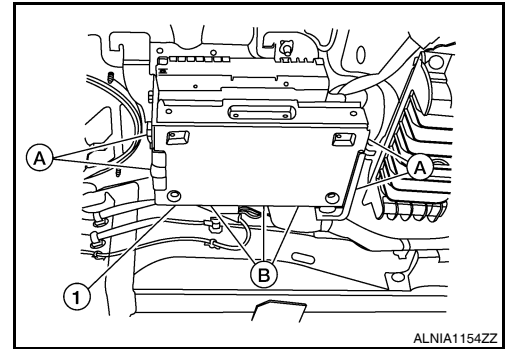
SATELLITE RADIO TUNER

Removal and Installation

INFOID:000000005460211

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
3. Remove the parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
4. From inside the passenger compartment, remove the bracket screws and lower the assembly for access.
5. 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/ COLOR DISPLAY]

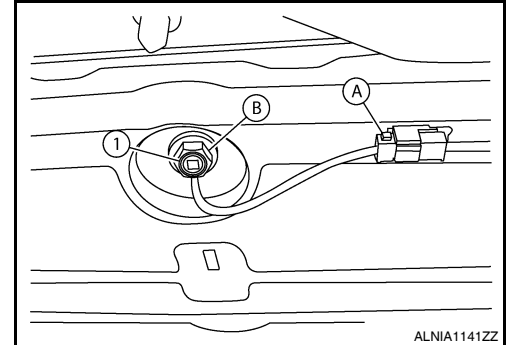
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:000000005460212

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/ COLOR DISPLAY]

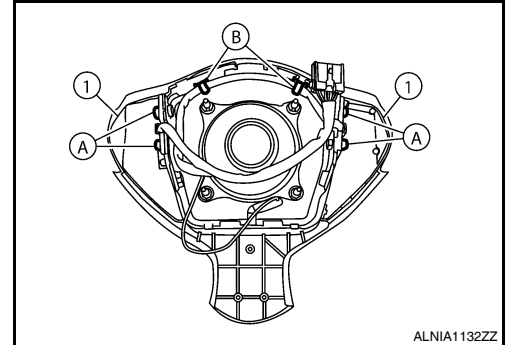
STEERING SWITCH

Removal and Installation

INFOID:000000005460213

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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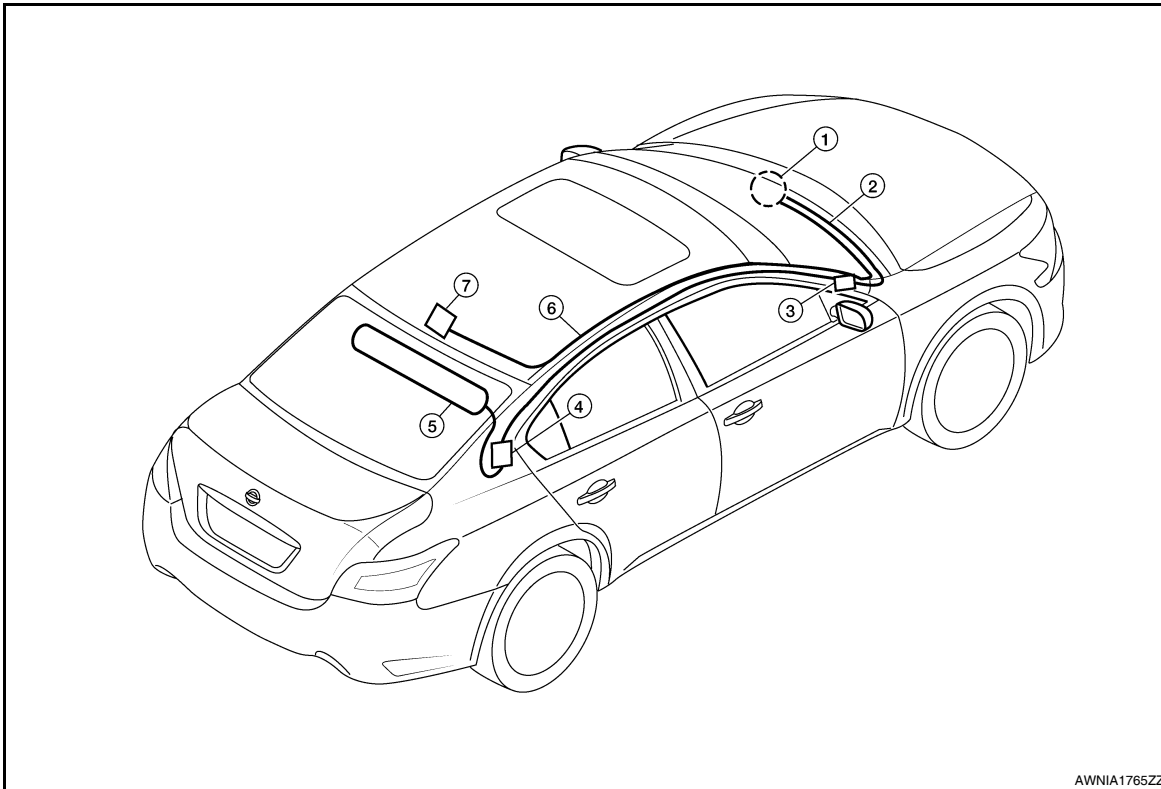
AV

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AUDIO ANTENNA

Location of Antenna

INFOID:000000005530278



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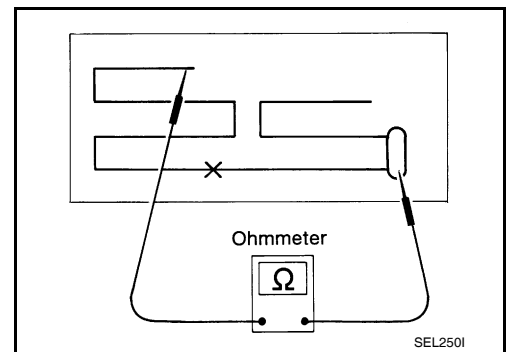
- | | | |
|----------------------------|-----------------------------------|-----------------------------------|
| 1. AV control unit | 2. AV control unit antenna feeder | 3. In-line connectors M103, M501 |
| 4. Antenna amp. | 5. Window antenna | 6. Satellite radio antenna feeder |
| 7. Satellite radio antenna | | |

Window Antenna Repair

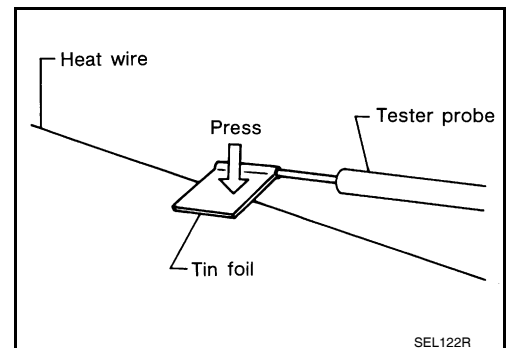
INFOID:000000005460215

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.

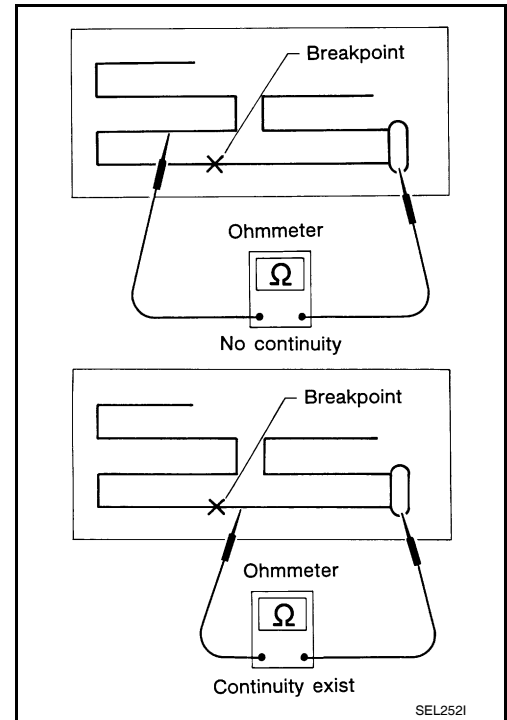


AUDIO ANTENNA

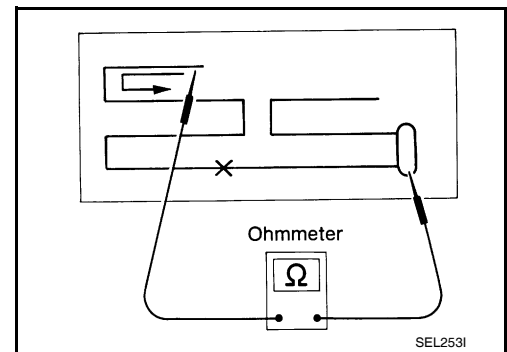
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR 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

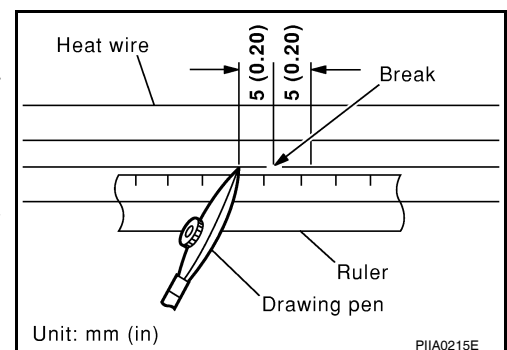
REPAIRING PROCEDURE

- 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.

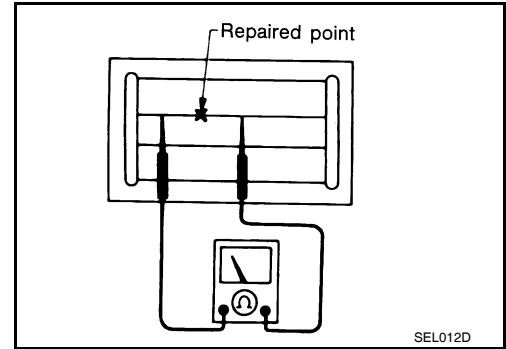


AUDIO ANTENNA

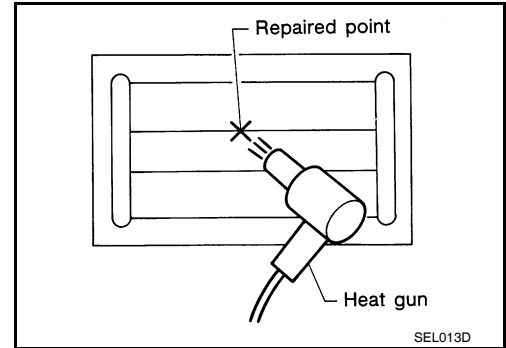
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR 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/ COLOR DISPLAY]

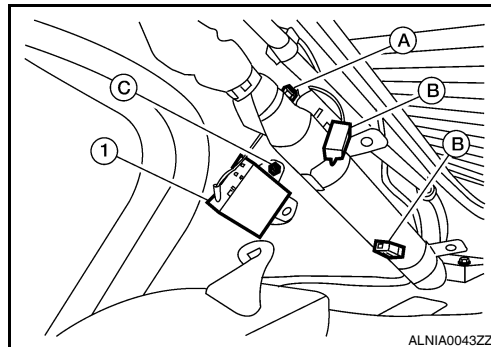
ANTENNA AMP.

Removal and Installation

INFOID:000000005460216

REMOVAL

1. Remove the rear pillar finisher RH. Refer to [INT-23, "Exploded View"](#).
2. 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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AV

MICROPHONE

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY]

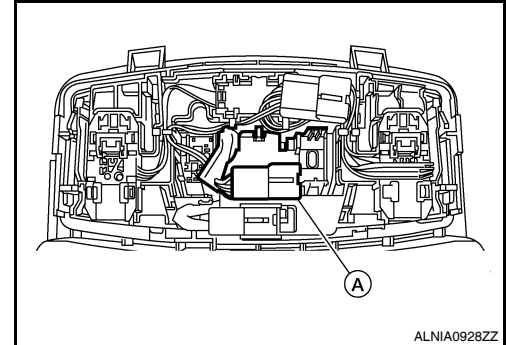
MICROPHONE

Removal and Installation

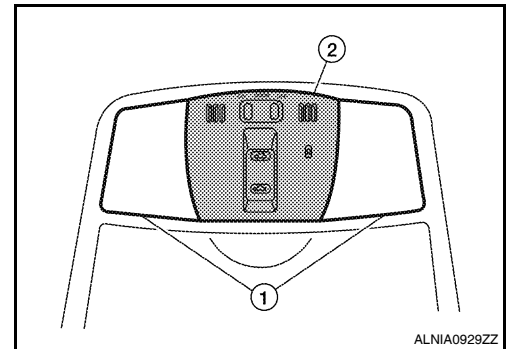
INFOID:000000005460218

REMOVAL

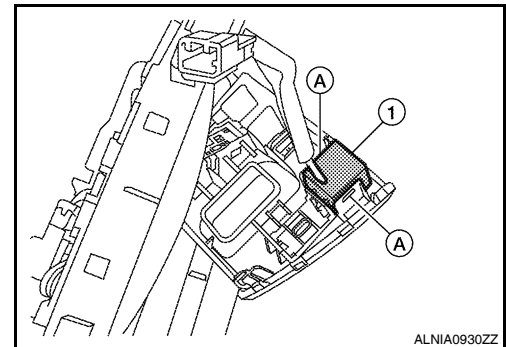
1. Remove the map lamp assembly. Refer to [INL-97. "Removal and Installation"](#).
2. Detach the microphone connector (A).



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.

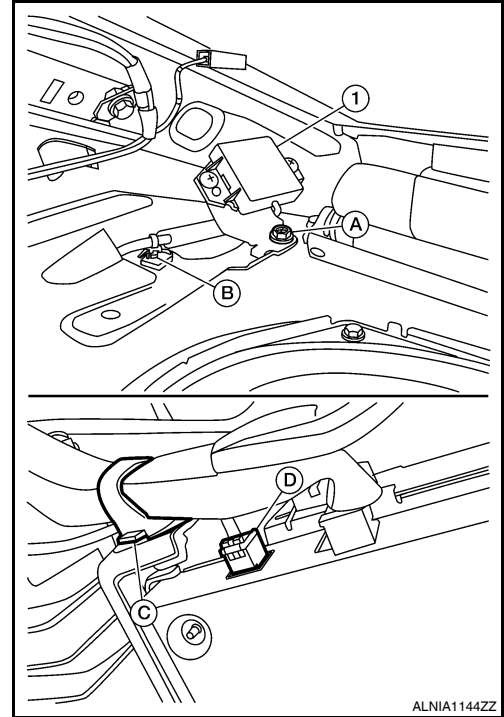
TEL ANTENNA

Removal and Installation

INFOID:000000005460219

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 antenna harness clip (C), disconnect the Bluetooth antenna harness connector (D) and remove the Bluetooth antenna (1).



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INSTALLATION

Installation is in the reverse order of removal.

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BLUETOOTH CONTROL UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY]

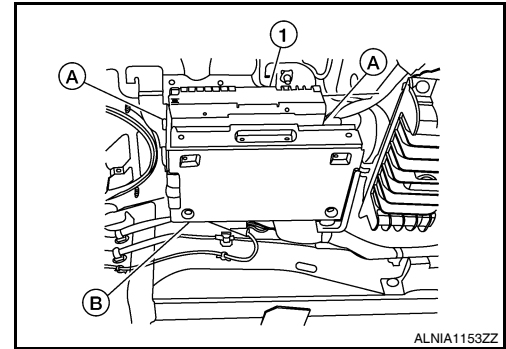
BLUETOOTH CONTROL UNIT

Removal and Installation

INFOID:000000005460220

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
3. Remove the parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
4. From inside the passenger compartment, remove the bracket screws and lower the assembly for access.
5. 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.

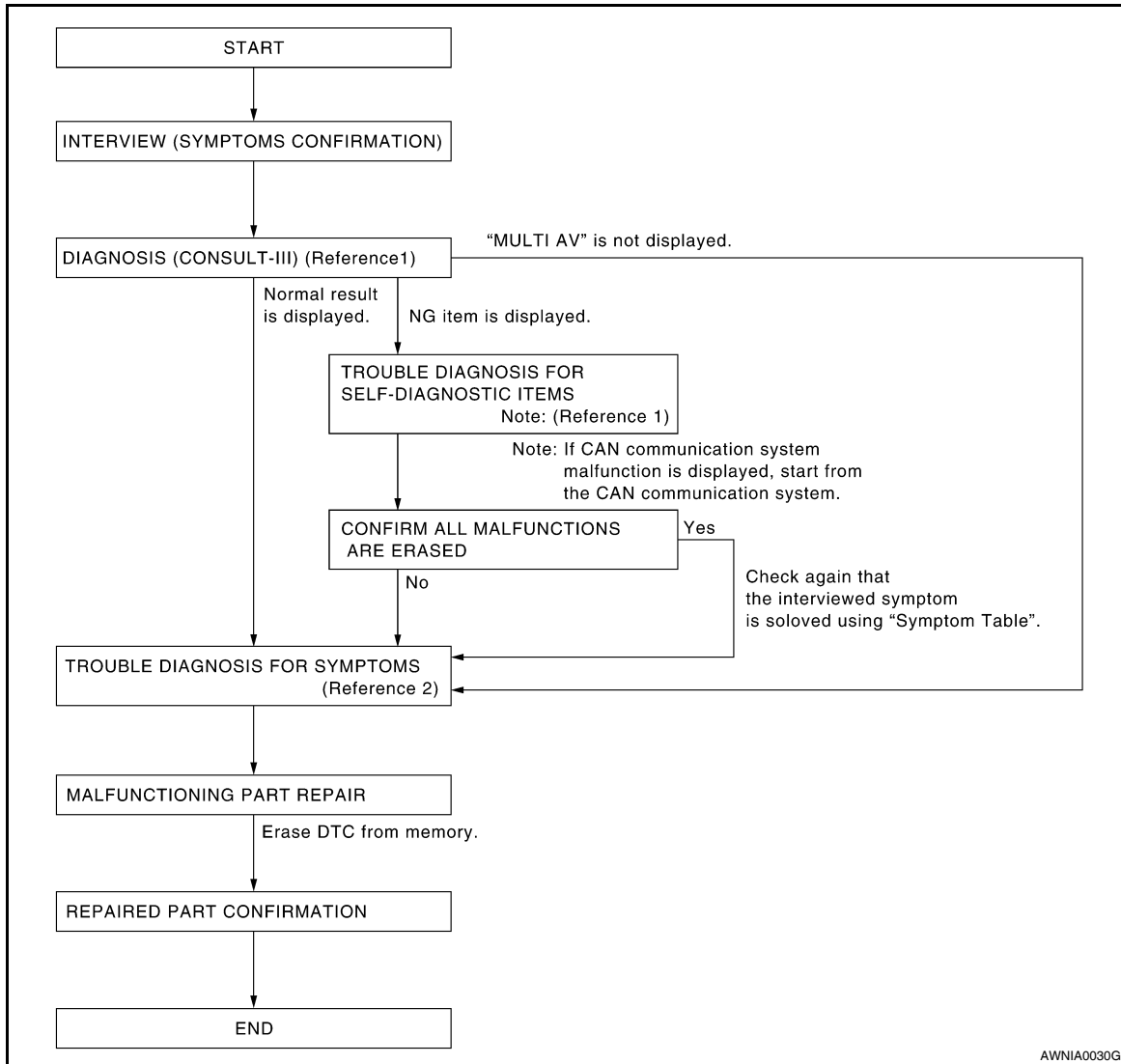
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000005522975

OVERALL SEQUENCE



- Reference 1… Refer to [AV-376, "CONSULT - III Function \(MULTI AV\)".](#)
- Reference 2… Refer to [AV-474, "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

< 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-467, "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-474, "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/ NAVI]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000005522978

BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT-III configuration before replacement.

AFTER REPLACEMENT

CAUTION:

When replacing AV control unit, you must perform "WRITE CONFIGURATION" with CONSULT-III.

- Complete the procedure of "WRITE CONFIGURATION" in order.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:000000005522979

1.SAVING VEHICLE SPECIFICATION

④-CONSULT-III Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [AV-347, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection".

>> GO TO 2.

2.REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

④-CONSULT-III Configuration

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to [AV-348, "CONFIGURATION \(AV CONTROL UNIT\) : Special Repair Requirement"](#).

>> GO TO 4.

4.OPERATION CHECK

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

>> WORK END

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:000000005522980

- Since vehicle specifications are not included in the AV control unit after replacement, it is required to write vehicle specifications with CONSULT-III.
- Configuration has three functions as follows.

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AV

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Function	Description
READ CONFIGURATION	<ul style="list-style-type: none"> • Reads the vehicle configuration of current AV control unit. • Saves the read vehicle configuration.
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.

CONFIGURATION (AV CONTROL UNIT) : Special Repair Requirement

INFOID:000000005522981

1. WRITING MODE SELECTION

ⓅCONSULT-III Configuration
Select "CONFIGURATION" of AV control unit.

When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2. PERFORM "WRITE CONFIGURATION-CONFIG FILE"

ⓅCONSULT-III Configuration
Perform "WRITE CONFIGURATION-Config file".

>> WORK END

3. PERFORM "WRITE CONFIGURATION-MANUAL SELECTION"

ⓅCONSULT-III Configuration
Select "WRITE CONFIGURATION-Manual selection" to write vehicle specifications into the AV control unit.
For data to write, refer to [AV-348. "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).

>> GO TO 4.

4. OPERATION CHECK

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

>> WORK END

CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:000000005522982

CAUTION:
Check vehicle specifications before servicing.

MANUAL SETTING ITEM		Note
Items	Setting value	
STEERING	LHD	—
	RHD	—
GRADE	MODE 1	BASE
	MODE 2	OTHER
ENGINE TYPE	NORMAL	—
	HYBRID	—
BODY TYPE	NORMAL	NORMAL
	CONV	CONVERTIBLE
CAMERA SYSTEM	NONE/AVM	NONE or AVM
	REAR	REAR CAMERA
	REAR + SIDE	REAR + SIDE CAMERA

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR DISPLAY W/ NAVI]

MANUAL SETTING ITEM		Note	
Items	Setting value		
4WAS	WITHOUT	—	A
	WITH	—	B
SOUND SYSTEM	BASE	—	C
	BOSE	—	D
ANTENNA TYPE	ROD TYPE	—	E
	LONG TYPE	—	F
DUAL-ZONE AUTO TEMP	WITHOUT	—	G
	WITH	—	H
DVD PLAY FUNCTION	WITHOUT	—	I
	WITH	—	J
BODY TYPE	SED 2DR	SEDAN 2 DOOR	K
	SED 4DR 1	SEDAN 4 DOOR	L
	SED 4DR 2	SEDAN 4 DOOR (WIDE)	M
	H/B 2DR	H/B 2 DOOR	N
	H/B 4DR	H/B 4 DOOR	O
	COUPE 2DR	COUPE 2 DOOR	P
	COUPE T	COUPE T BAR	Q
	WGN 4DR 2	49H WAGON 4 DOOR (WIDE)	R
	H/T 2DR 1	H/T 2 DOOR	S
	H/T 2DR 2	H/T 2 DOOR (HIGH-ROOF)	T
	H/T 4DR 1	H/T 4 DOOR	U
	H/T 4DR 2	H/T 4 DOOR (WIDE)	V
	WGN 2DR	WAGON 2 DOOR	W
	WGN 4DR 1	WAGON 4 DOOR	X
	WGN 4DR 3	WAGON 4 DOOR (HIGH-ROOF)	Y
	WGN 4DR 4	56H WAGON 4 DOOR (WIDE)	Z
	VAN 2DR	VAN 2 DOOR	AA
	VAN 4DR 1	VAN 4 DOOR	AB
	VAN 4DR 2	VAN 4 DOOR (HIGH-ROOF)	AC
	CONV	CONVERTIBLE	AD

AV

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

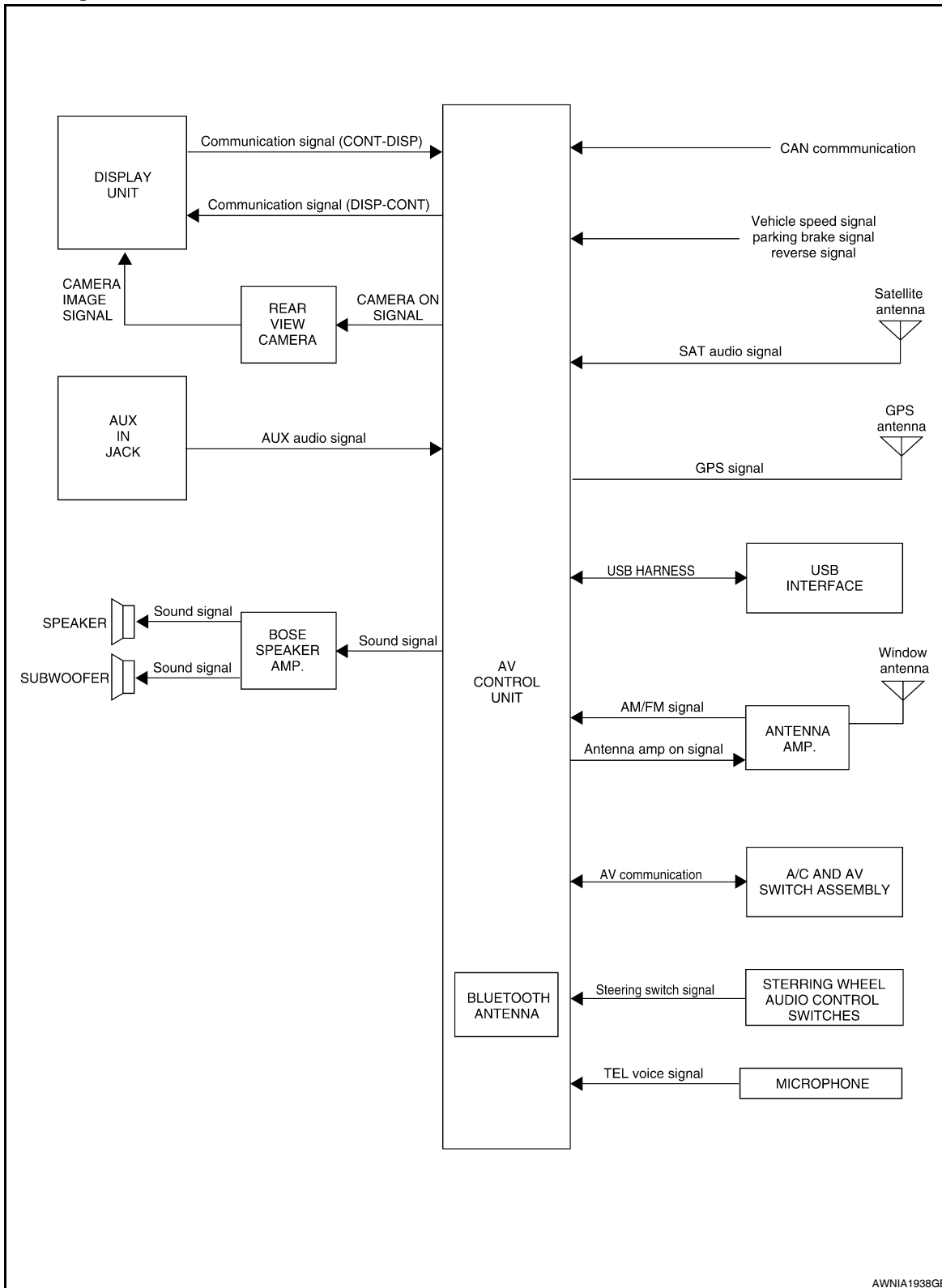
[BOSE W/ COLOR DISPLAY W/ NAVI]

FUNCTION DIAGNOSIS

AUDIO SYSTEM

System Diagram

INFOID:000000005522983



System Description

INFOID:000000005522984

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
- BOSE speaker amp.
- Window antenna
- Steering wheel audio control switches
- A/C and AV switch assembly
- 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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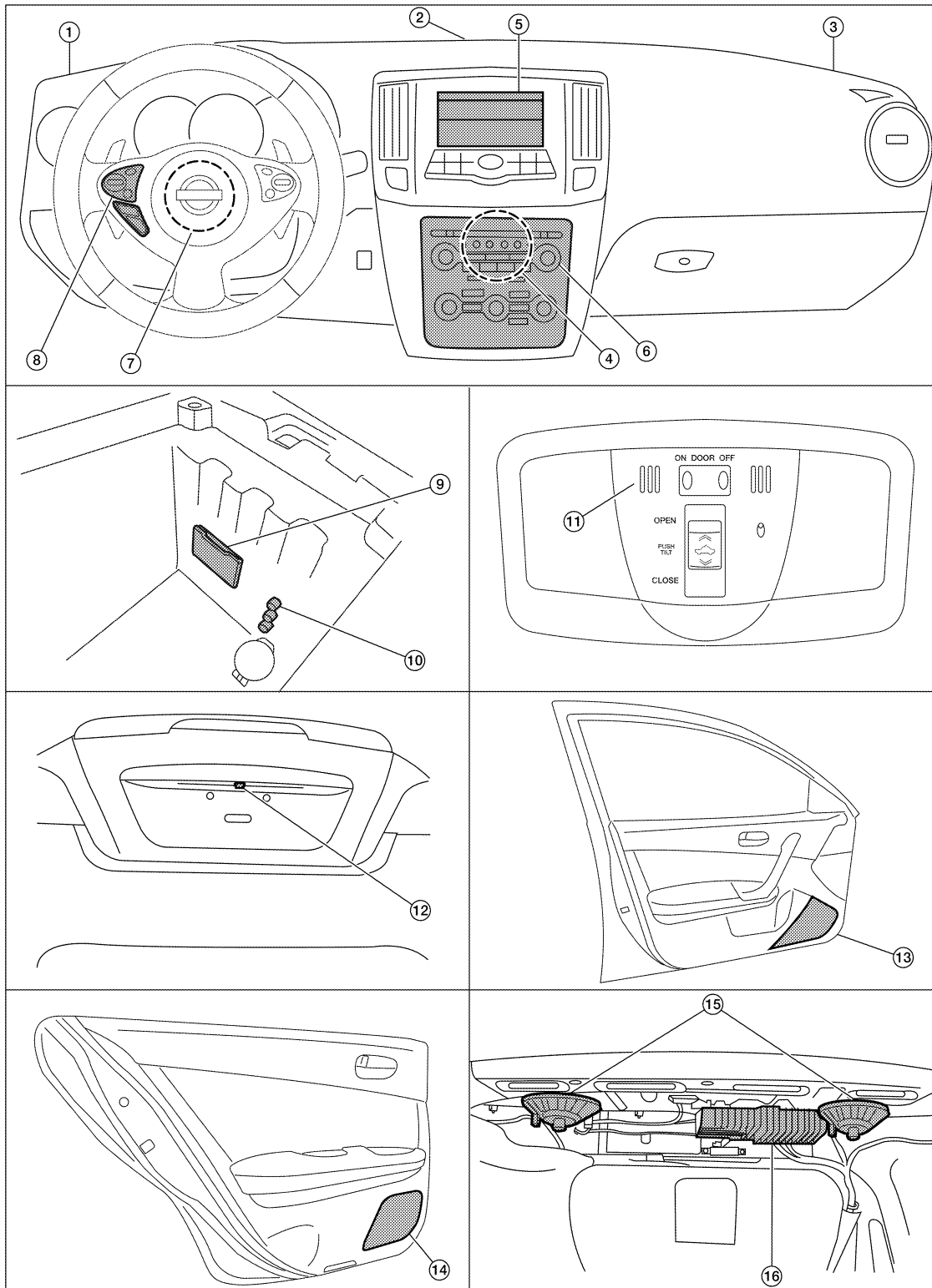
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Component Parts Location

INFOID:000000005522985



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- | | | |
|---|----------------------------|-----------------------------------|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M160, M161, M162, M163, M164, M165, M166, M167, M168 (located behind A/C and AV switch assembly) | 5. Display unit M142, M151 | 6. A/C and AV switch assembly M98 |

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

- | | | | |
|---|---|--|---|
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. USB interface M211(view in center console) | A |
| 10. Aux in jack M209 | 11. Microphone R7 | 12. Rear view camera T101 | B |
| 13. Front door speaker
LH D3
RH D103 | 14. Rear door speaker
LH D202
RH D302 | 15. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | C |
| 16. BOSE speaker amp B109, B110 | | | D |

Component Description

INFOID:000000005522986

Part name	Description	
AV control unit	Controls audio system, NAVI functions and satellite radio system functions.	E
Display unit	Displays all audio and climate control related information.	F
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit and outputs audio signals to each speaker.	G
Steering wheel audio control switches	<ul style="list-style-type: none"> • Audio operation can be operated. • Steering switch signal is output to AV control unit. 	H
Front door speakers	<ul style="list-style-type: none"> • Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds. 	I
Tweeters	<ul style="list-style-type: none"> • Outputs audio signal from BOSE speaker amp. • Outputs high range sounds. 	J
Center speaker	<ul style="list-style-type: none"> • Outputs audio signal from BOSE speaker amp. • Outputs high range sounds. 	K
Rear door speakers	<ul style="list-style-type: none"> • Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds. 	L
Rear subwoofers	<ul style="list-style-type: none"> • Outputs audio signal from BOSE speaker amp. • Outputs low range sounds. 	M
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.	

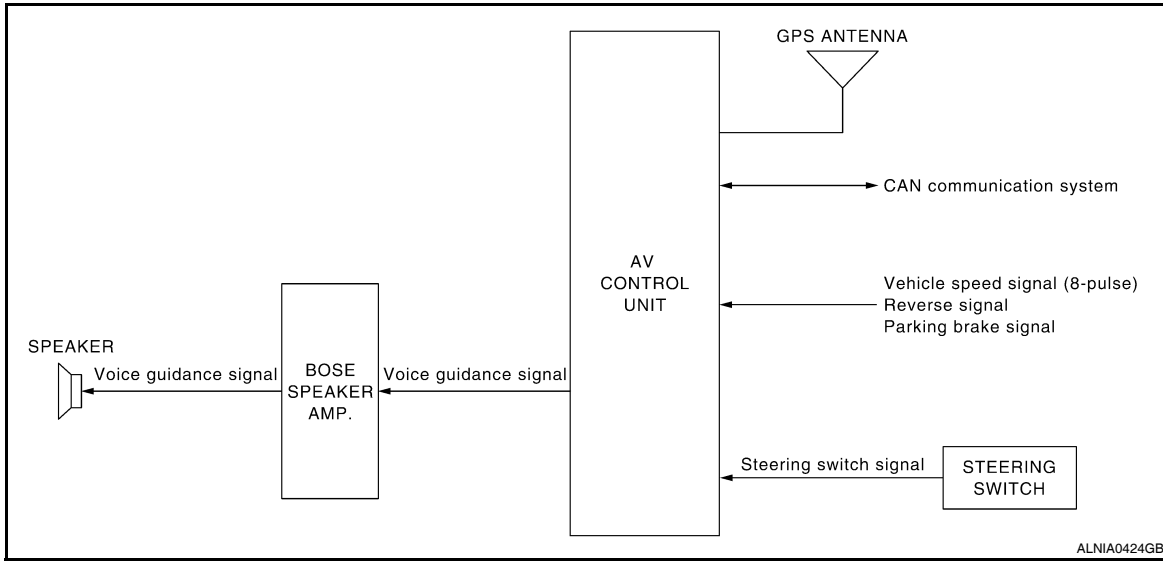
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NAVIGATION SYSTEM

System Diagram



System Description

INFOID:000000005522988

NOTE:

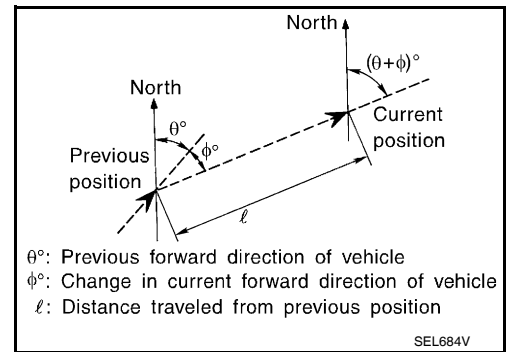
Refer to NAVI System Owner's Manual for system operation.

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.

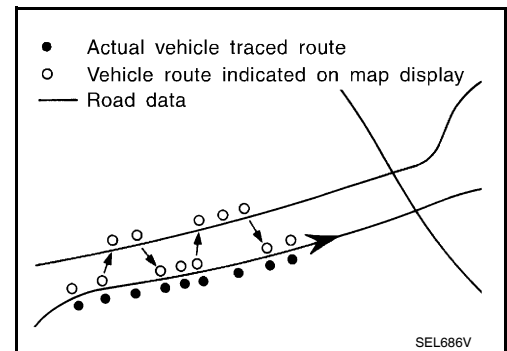
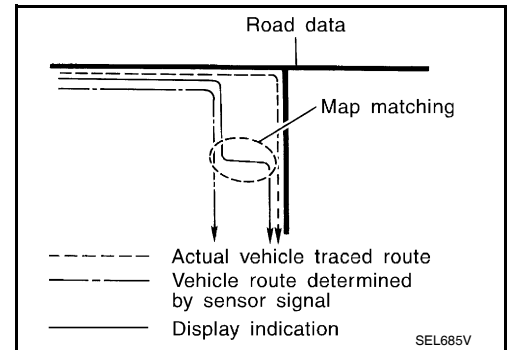
CAUTION:

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.

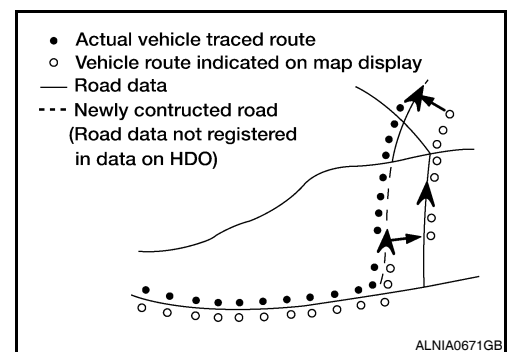
If two roads are running in parallel, they are of the same priority. Therefore, the current-location mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.



- 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.

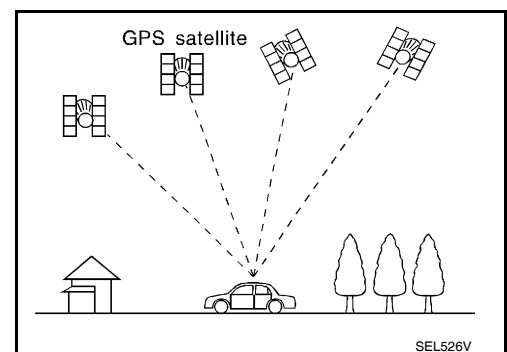
- Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the HDD is limited. Therefore, when there is an excessive gap between the current vehicle position and the position on the map, correction by map-matching is 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.

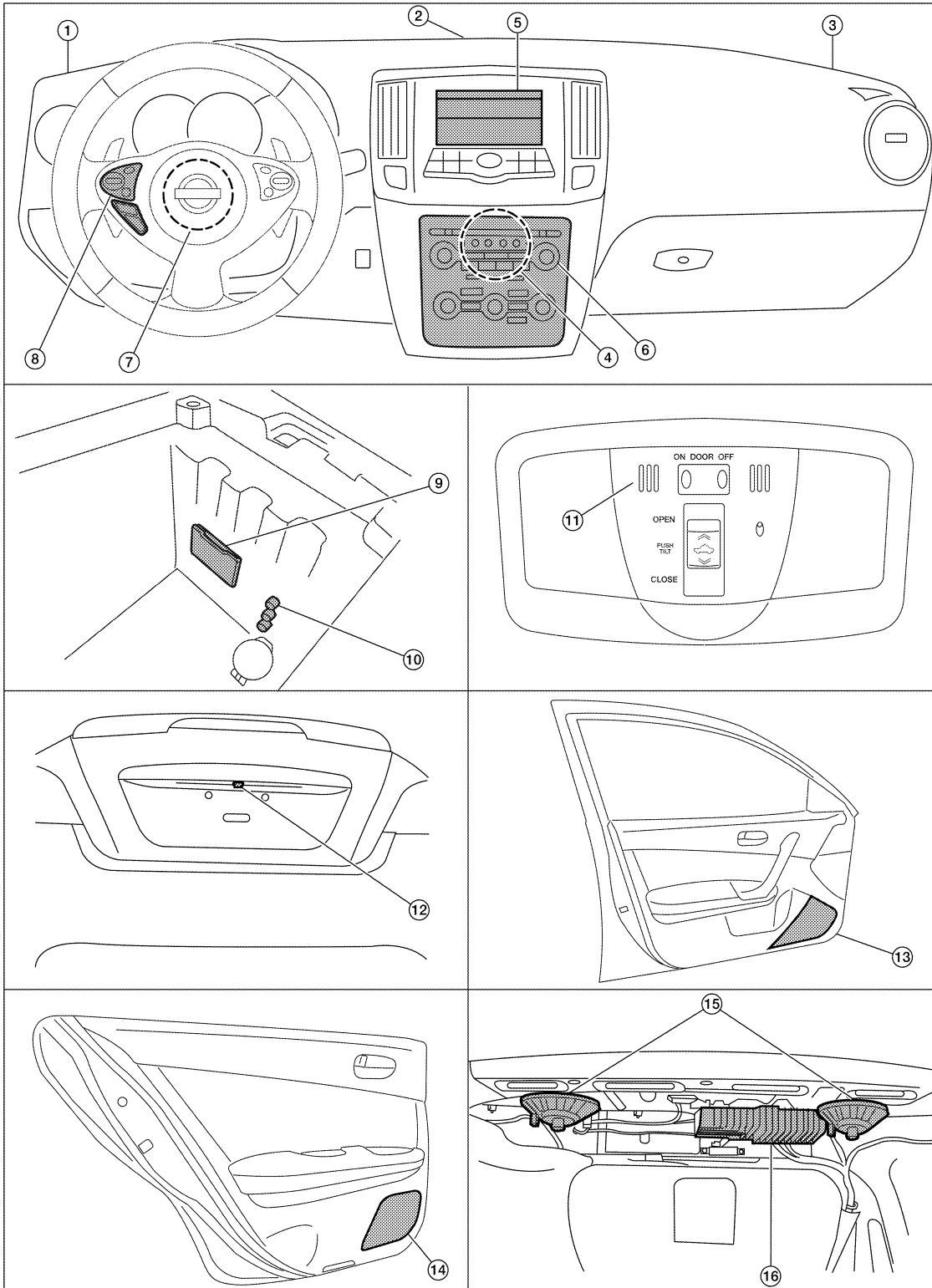
NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Component Parts Location

INFOID:00000000528985



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AV

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|---|----------------------------|-----------------------------------|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M160, M161, M162, M163, M164, M165, M166, M167, M168 (located behind A/C and AV switch assembly) | 5. Display unit M142, M151 | 6. A/C and AV switch assembly M98 |

AWNIA1939ZZ

NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

- | | | |
|---|---|---|
| <p>7. Steering angle sensor M53 (located in steering column behind spiral cable)</p> <p>10. Aux in jack M209</p> <p>13. Front door speaker
LH D3
RH D103</p> <p>16. BOSE speaker amp B109, B110</p> | <p>8. Steering wheel audio control switches</p> <p>11. Microphone R7</p> <p>14. Rear door speaker
LH D202
RH D302</p> | <p>9. USB interface M211(view in center console)</p> <p>12. Rear view camera T101</p> <p>15. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107</p> |
|---|---|---|

Component Description

INFOID:000000005522990

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 wheel audio control switches	<ul style="list-style-type: none"> Each operation of navigation system can be performed Switch operating signal is output to AV control unit
Microphone	Sends voice signals to AV control unit
GPS antenna	GPS signal is received and is output to AV control unit.

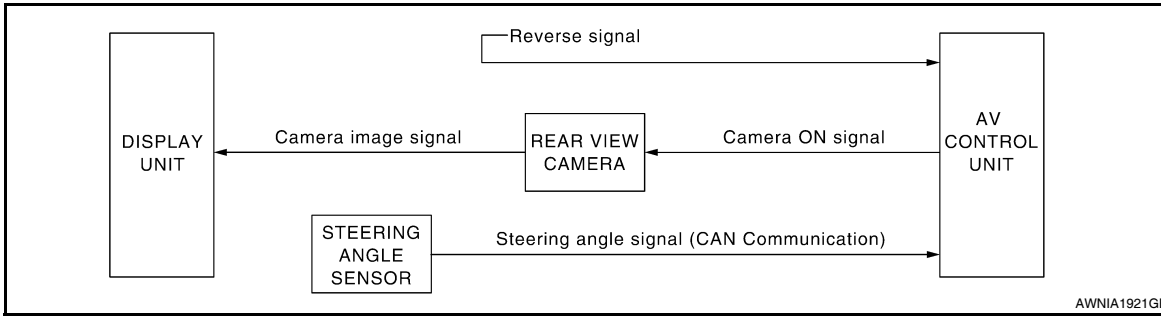
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

REAR VIEW MONITOR SYSTEM

System Diagram



System Description

INFOID:000000005522992

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

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AV

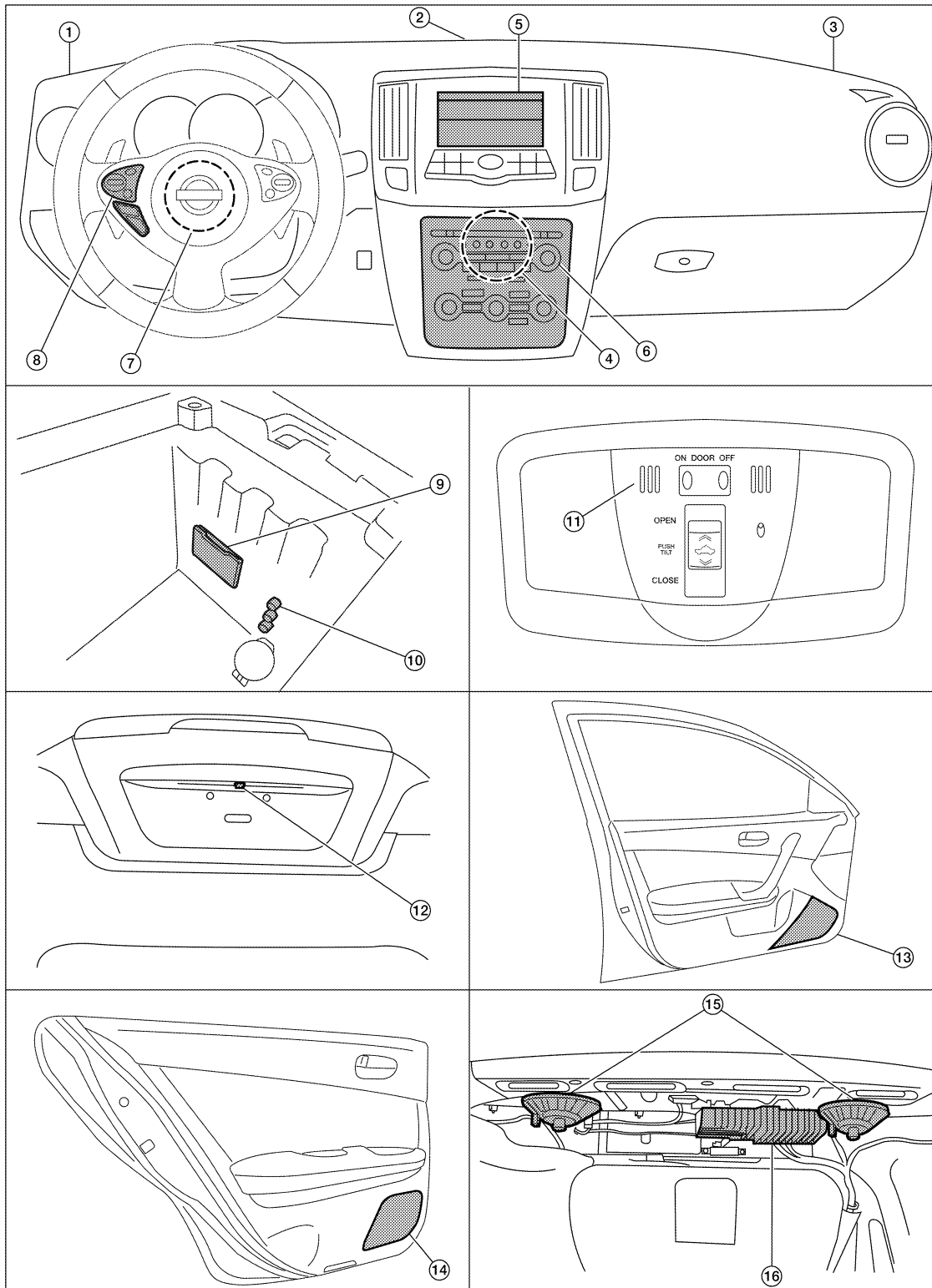
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Component Parts Location

INFOID:000000005528986



AWNIA1939ZZ

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|---|----------------------------|-----------------------------------|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M160, M161, M162, M163, M164, M165, M166, M167, M168 (located behind A/C and AV switch assembly) | 5. Display unit M142, M151 | 6. A/C and AV switch assembly M98 |

REAR VIEW MONITOR SYSTEM

[BOSE W/ COLOR DISPLAY W/ NAVI]

< FUNCTION DIAGNOSIS >

- | | | | |
|---|---|--|---|
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. USB interface M211 (view in center console) | A |
| 10. Aux in jack M209 | 11. Microphone R7 | 12. Rear view camera T101 | |
| 13. Front door speaker
LH D3
RH D103 | 14. Rear door speaker
LH D202
RH D302 | 15. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 | B |
| 16. BOSE speaker amp B109, B110 | | | C |

Component Description

INFOID:000000005522994

Part name	Description	
AV control unit	<ul style="list-style-type: none"> Receives reverse signal from back-up lamp relay Receives steering angle sensor signal Sends camera ON signal to rear view camera 	E
Rear view camera	<ul style="list-style-type: none"> Receives camera ON signal from the AV control unit Sends image signal to the display unit 	F
Steering angle sensor	Sends steering angle information to the AV control unit via CAN communication	

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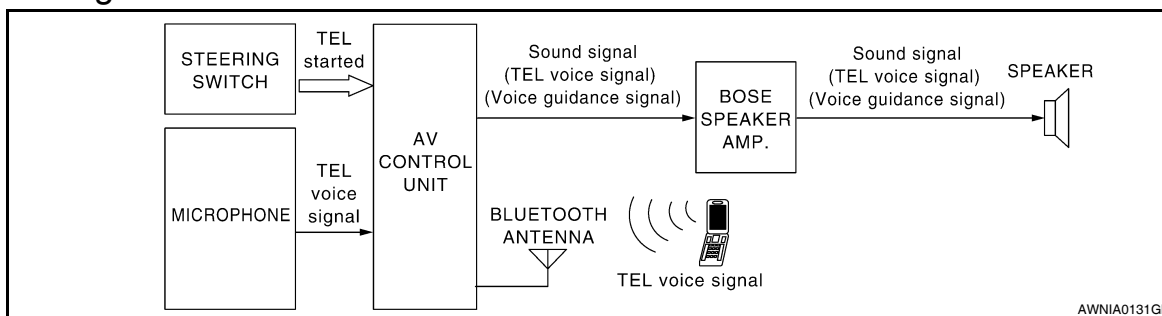
AV

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P

HANDS-FREE PHONE SYSTEM

System Diagram



System Description

INFOID:000000005522996

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.

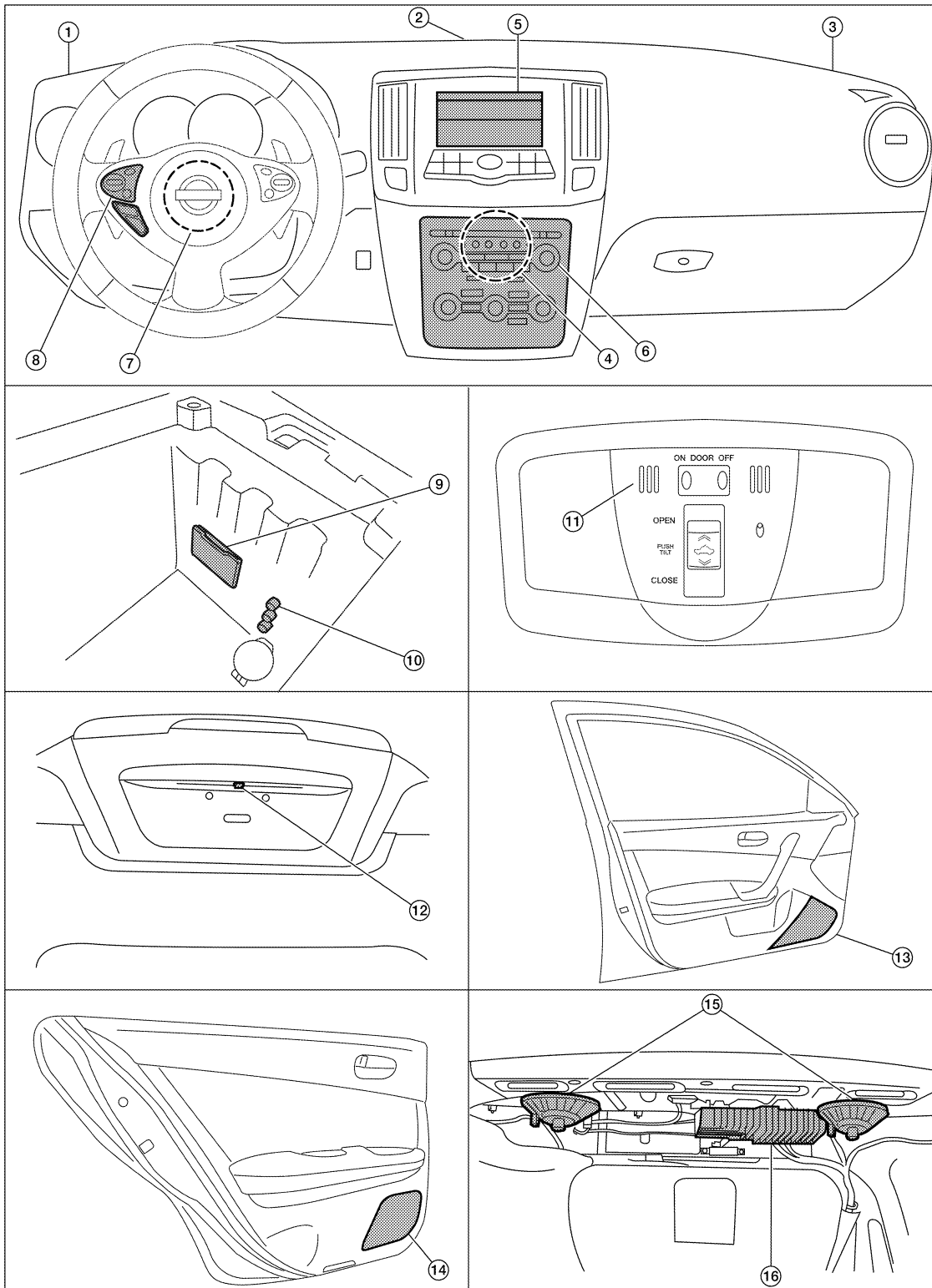
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Component Parts Location

INFOID:000000005528987



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|---|----------------------------|-----------------------------------|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M160, M161, M162, M163, M164, M165, M166, M167, M168 (located behind A/C and AV switch assembly) | 5. Display unit M142, M151 | 6. A/C and AV switch assembly M98 |

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HANDS-FREE PHONE SYSTEM

[BOSE W/ COLOR DISPLAY W/ NAVI]

< FUNCTION DIAGNOSIS >

- | | | |
|---|---|--|
| 7. Steering angle sensor M53 (located in steering column behind spiral cable) | 8. Steering wheel audio control switches | 9. USB interface M211 (view in center console) |
| 10. Aux in jack M209 | 11. Microphone R7 | 12. Rear view camera T101 |
| 13. Front door speaker
LH D3
RH D103 | 14. Rear door speaker
LH D202
RH D302 | 15. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 |
| 16. BOSE speaker amp B109, B110 | | |

Component Description

INFOID:000000005522998

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	
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 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)

Description

INFOID:000000005522999

- 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 Function

INFOID:000000005523000

MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

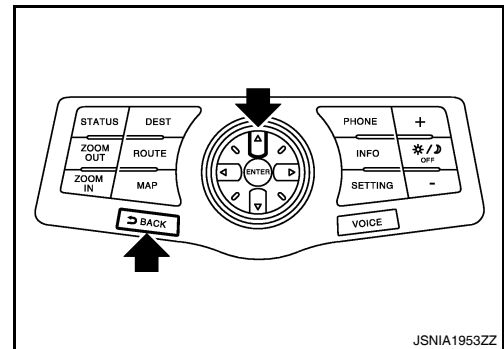
The ON/OFF operation (continuity) of each switch in the multifunction switch and preset switch can be checked.

Self-diagnosis Mode

- Press the “BACK” switch and the “UP” switch of the 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.



Finishing Self-diagnosis Mode

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

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. 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 make judgment 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.

AV

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

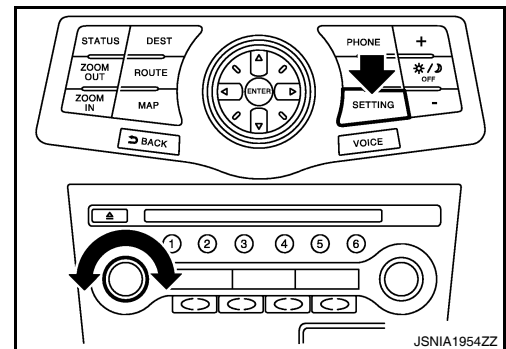
< FUNCTION DIAGNOSIS >

[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, touch panel calibration and response check, and color tone check by white display.	
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition, reverse, side view switch and room lamp.	
	Speaker Test	The connection of a speaker can be confirmed by test tone.	
	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 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.	
	Synchronize FES Clock	-	
	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.	
	Hands-free Phone	The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.	
	Camera	The four functions of "Correct Draw Line", "Alter/Confirm Configuration", "Reset Configuration" and "Camera Syst Type" are available.	
	XM	XM NavTraffic	Change Channel • Any necessary channels required to receive traffic information from the satellite radio system can be set.
		XM NavWeather	
		XM CGS	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.		
Version Information	Version information of the AV control unit is displayed.		

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 "BACK" button.

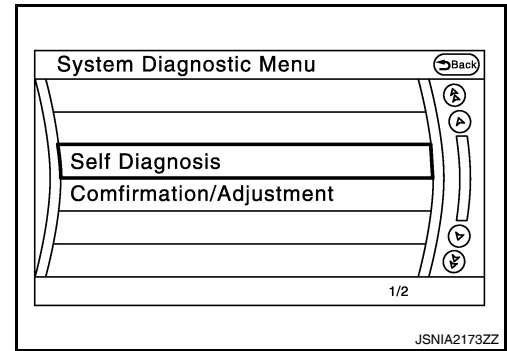


DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

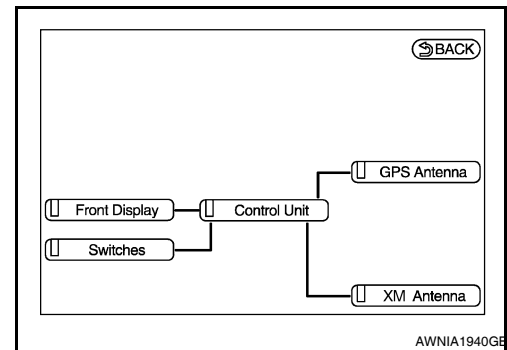
- The trouble diagnosis initial screen is displayed, and then the items of "Self Diagnosis" and "Confirmation/Adjustment" can be selected.



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	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction ^{Note}	Red	Green

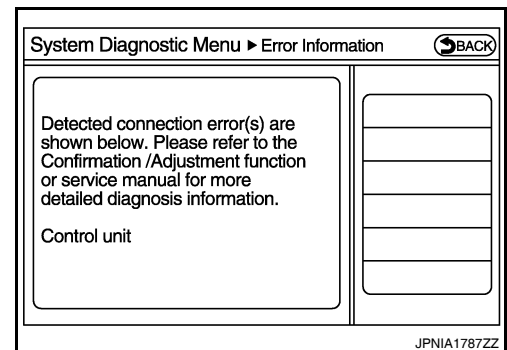


NOTE:

Control unit (AV control unit) and amplifier (BOSE amp.) are 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.



Detection Range of Self-diagnosis Mode

- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between AV control unit and each unit and the internal operation of 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.

SELF-DIAGNOSIS RESULTS

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

Only Unit Part Is Displayed In Red.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

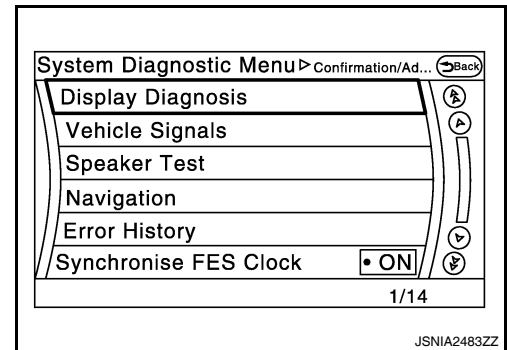
Screen switch	Description	Possible malfunction location / Action to take
Control unit	Malfunction is detected in AV control unit power supply and ground circuits.	Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.

A Connecting Cable Between Units Is Displayed In Yellow.

Area with yellow connection lines	Description	Possible malfunction location / Action to take
Control unit ↔ Front Display	Malfunction is detected in serial communication circuits between AV control unit and front display unit.	Serial communication circuits between AV control unit and front display unit.
Control unit ↔ GPS Antenna	GPS antenna connection malfunctions detected.	GPS antenna

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.

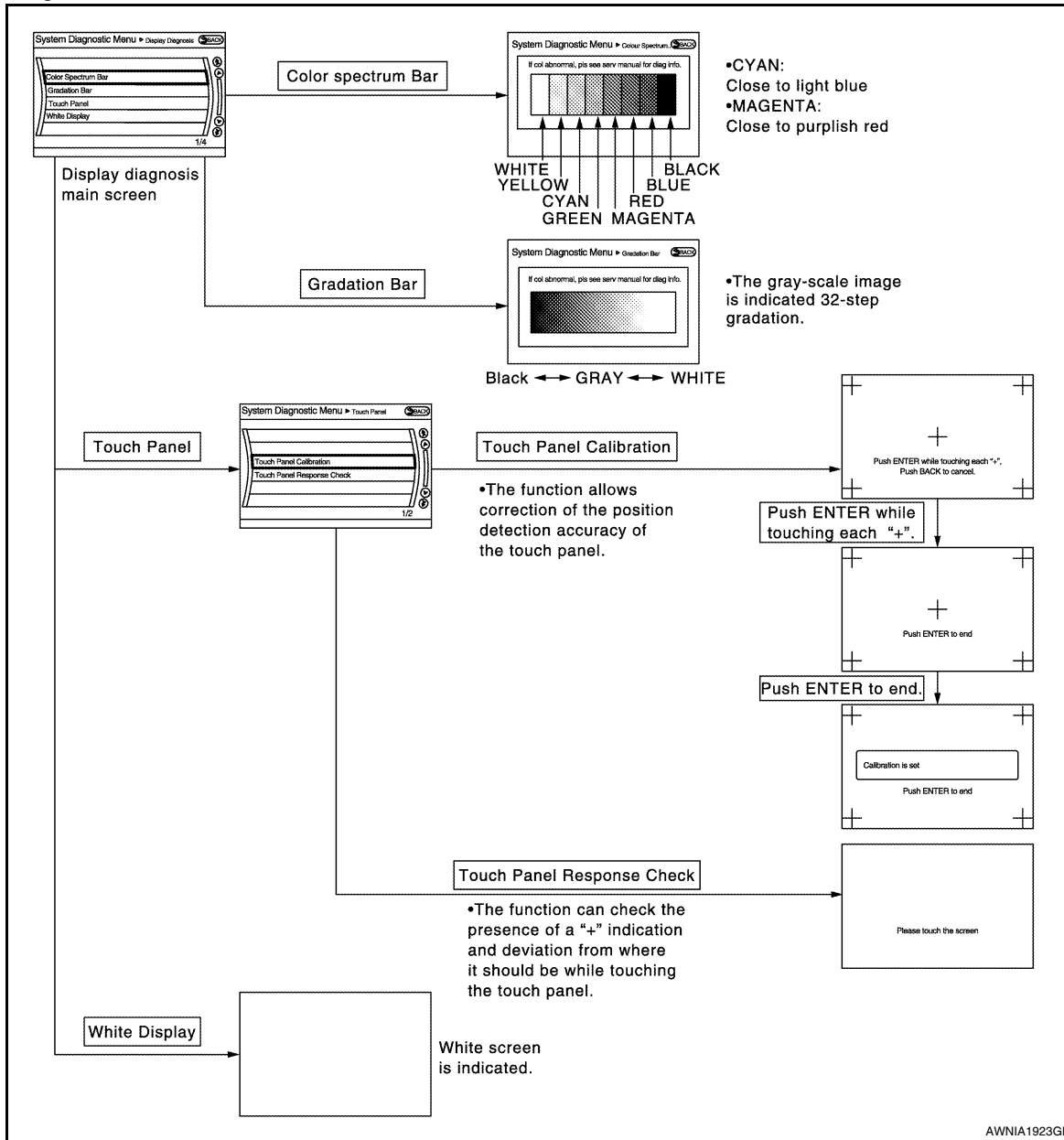


DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

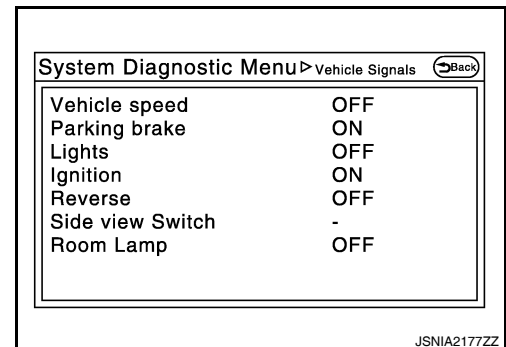
[BOSE W/ COLOR DISPLAY W/ NAVI]

Display Diagnosis



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)

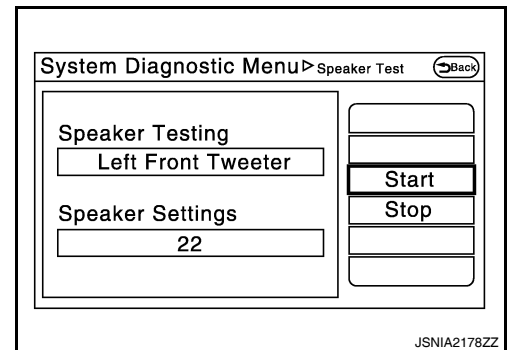
< FUNCTION DIAGNOSIS >

[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 ACC position	—
Reverse	ON	Shift the selector lever to "R" position	Changes in indication may be delayed. This is normal.
	OFF	Shift the selector lever other than "R" position	
Side view Switch	—	—	This item is displayed, but cannot be monitored.
Room Lamp	OFF	—	This item is displayed, but not used.

Speaker Test

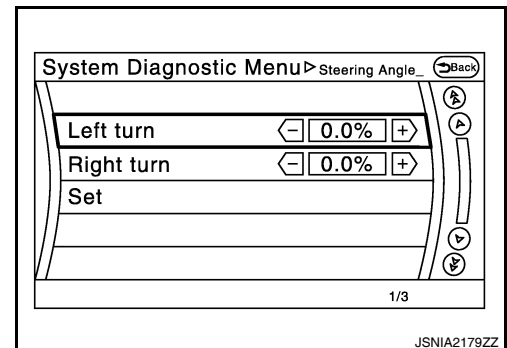
Select "SPEAKER DIAGNOSIS" to display the Speaker Diagnosis screen. Press "Start" to generate a test tone in a speaker. Press "Start" to generate a test tone in the next speaker. Press "Stop" to stop the test tones.



Navigation

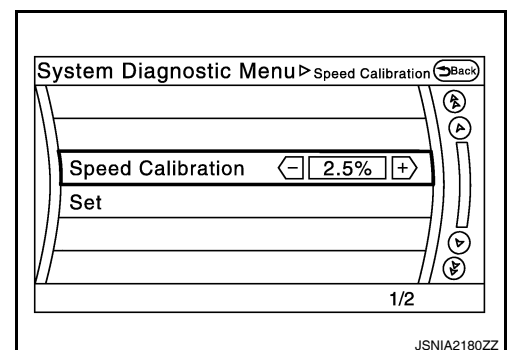
STEERING ANGLE ADJUSTMENT

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



SPEED CALIBRATION

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



DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Error History

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

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

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

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

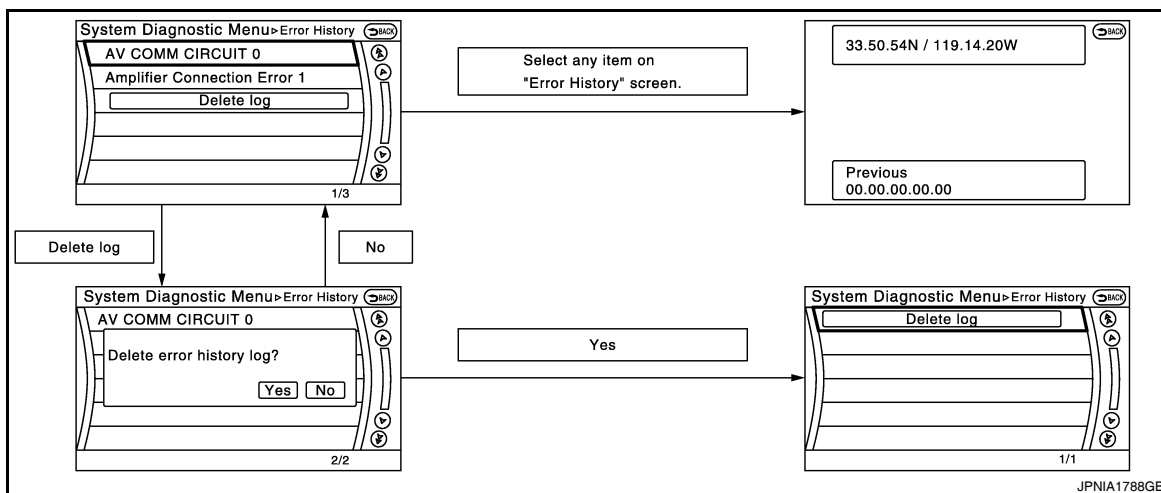
Count up method A

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

Count up method B

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



Error item

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-376, "CONSULT - III Function (MULTI AV)" .

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Error item	Description	Possible malfunction factor/Action to take
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.
Connection Of Gyro		
Connection of G Sensor		
CAN Controller Memory Error		
Bluetooth Module Connection Error		
Sub CPU Connection Error		
iPod authentication chip error		
Audio connection error		
DSP Connection Error		
DSP Communication Error		
HDD Connection Error	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
HDD Read Error		
HDD Write Error		
HDD Communication Error		
HDD Access Error		
GPS Communication Error	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any 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		
Unfinished configuration	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.
USB Controller Communication Error	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DVD Mechanism Communication Error	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If DVD can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
Front Display Connection Error	When either one of the following items is detected: <ul style="list-style-type: none"> • Display unit power supply and ground circuits malfunction is detected. • Malfunction is detected in communication circuits between AV control unit and display unit. • Malfunction is detected in communication signal between AV control unit and display unit. 	<ul style="list-style-type: none"> • Display unit power supply and ground circuits. • Communication circuits between AV control unit and display unit.
USB electric current Error	Detection of over current in USB interface.	Check USB harness between the AV control unit and USB interface.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Error item	Description	Possible malfunction factor/Action to take
GPS Antenna Error	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Switches Connection Error 	When either one of the following items are 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. 	<ul style="list-style-type: none"> • Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch.

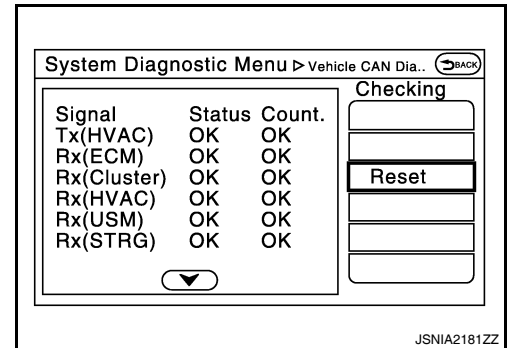
Vehicle CAN Diagnosis

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

Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx(STRG)	OK / ???	OK / 0 – 39

NOTE:

“???” indicates UNKWN



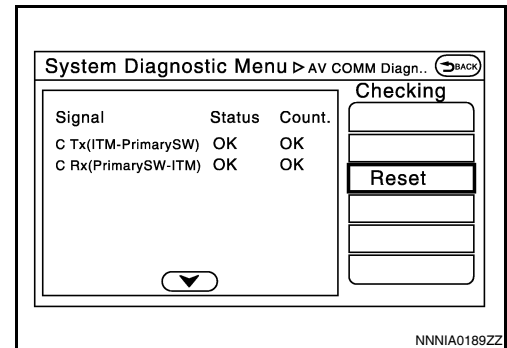
AV COMM Diagnosis

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

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

NOTE:

“???” indicates UNKWN



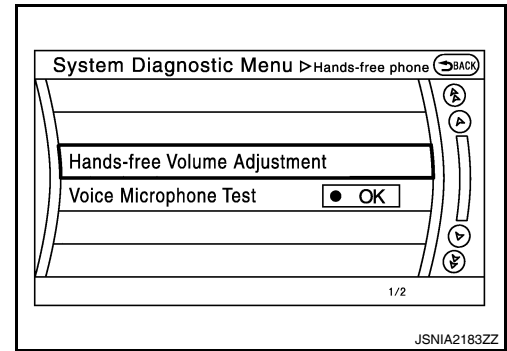
Hands-Free Phone

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

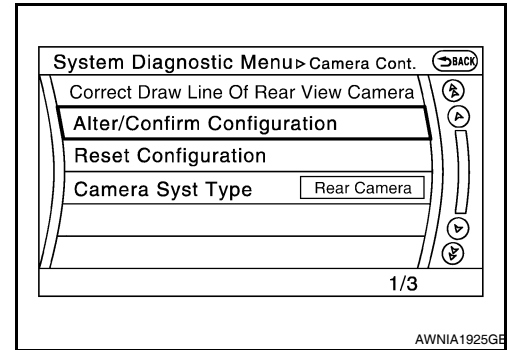
[BOSE W/ COLOR DISPLAY W/ NAVI]

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



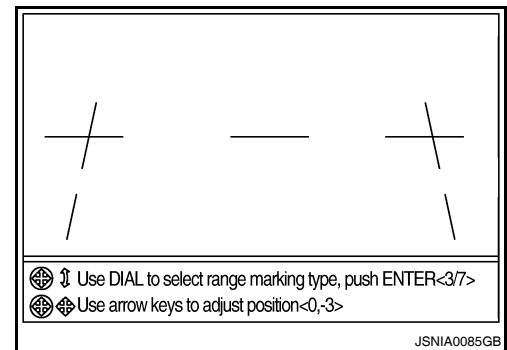
Camera

The four functions of “Correct Draw Line of Rear View Camera”, “Alter/Confirm Configuration”, “Reset Configuration” and “Camera Syst Type” are available.



Correct Draw Line 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.



Alter/Confirm Configuration

- Configuration stored in the AV control unit can be checked and modified.

Configuration list

Setting item	Setting	Setting item	Setting
Predi. Course Lines	Without	Wheelbase	0.0000000
Rear Coeff. K	0.0000000	Total Length	0.0000000
Rear Coeff. F	0.0000000	Steering Gear Ratio	0.0000000
Rear Coeff. P1	0.0000000	Side Coeff. K	0.0000000
Rear Coeff. P2	0.0000000	Side Coeff. F	0.0000000
Rear Coeff. C1	0.0000000	Side Coeff. P1	0.0000000
Rear Coeff. C2	0.0000000	Side Coeff. P2	0.0000000
Rear Coeff. D1	0.0000000	Side Coeff. C1	0.0000000
Rear Coeff. D2	0.0000000	Side Coeff. C2	0.0000000
Car Width	0.0000000	Side Coeff. D1	0.0000000
Rear Offset	0.0000000	Side Coeff. D2	0.0000000
Rear Height	0.0000000	Side Offset	0.0000000

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

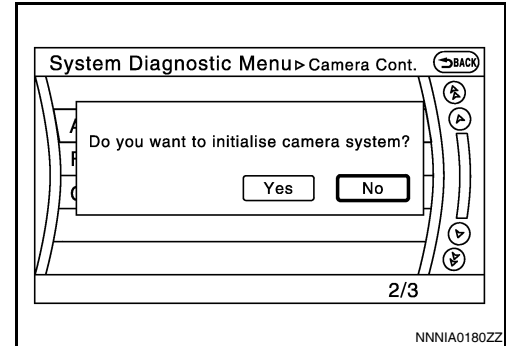
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Setting item	Setting	Setting item	Setting
Rear L/R Angle	0.0000000	Overall Height	0.0000000
Rear Up/Dn Angle	0.0000000	Side L/R Angle	0.0000000
Rear Roll Angle	0.0000000	Side Up/Dn Angle	0.0000000
Bumper Rear Dist.	0.0000000	Side Roll Angle	0.0000000
Bumper Rear Ax Dist	0.0000000	Side Front End Dist	0.0000000
Steer. Max Angle	0.0000000	Total Width	0.0000000
Min. Turning Red.	0.0000000	—	—

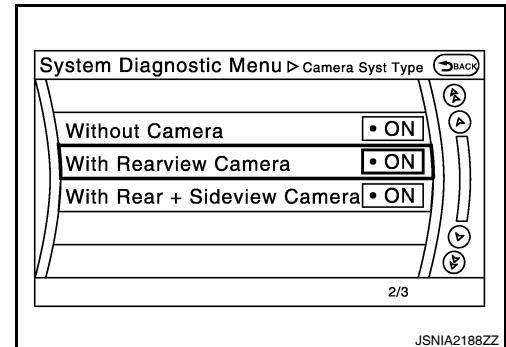
Reset Configuration

- Configuration stored in the AV control unit can be initialized.



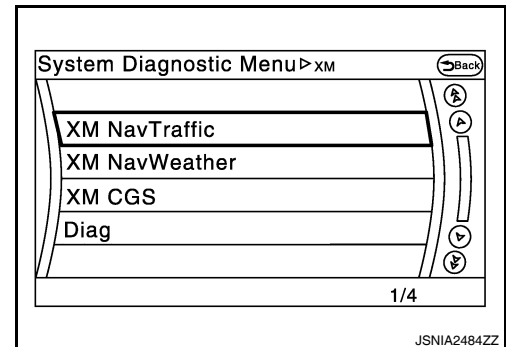
Camera Syst Type

- Type of camera system is selectable.



XM

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



Delete Unit Connection Log

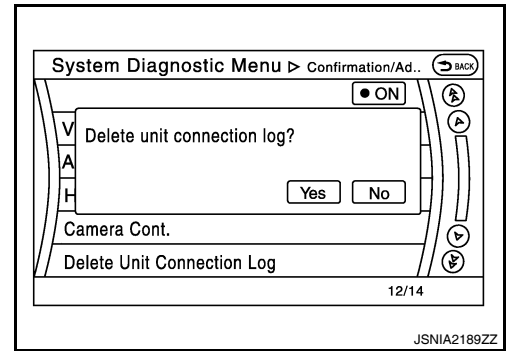
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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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

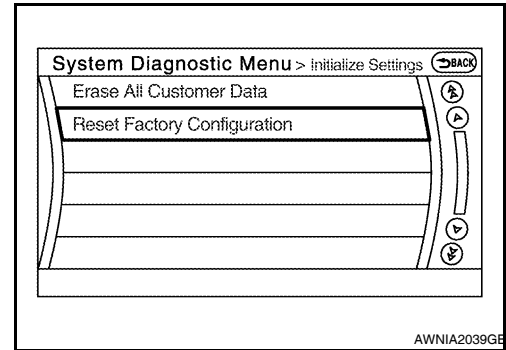


Initialize Settings

“Erase All Customer Data” and “Reset Factory Configuration” are possible.

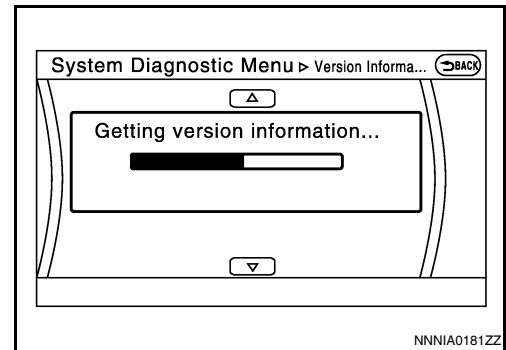
CAUTION:

- **Never perform Reset Factory Configuration except when configuration is unsuccessful.**
- **Factory Configuration Initialize requires configuration. For details, refer to [AV-365, "Description"](#).**



Version Information

Version information of the AV control unit is displayed.



CONSULT - III Function (MULTI AV)

INFOID:000000005523001

APPLICATION ITEMS

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.
Configuration	<ul style="list-style-type: none"> • Read and save the vehicle specification. • Write the vehicle specification when replacing AV control unit.

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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-380 , "Diagnosis Procedure"
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	
Cont Unit [U1200]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.
GYRO NO CONN [U1201]		
G-SENSOR NO CONN [U1202]		
CAN CONT [U1216]		
BLUETOOTH MODULE [U1217]		
SUB CPU CONN [U1228]		
iPod CERTIFICATION [U1229]		
Built-in AUDIO CONN [U122E]		
HDD CONN [U1218]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
HDD READ [U1219]		
HDD WRITE [U121A]		
HDD COMM [U121B]		
HDD ACCESS [U121C]		
GPS COMM [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any 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]		
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DSP CONN [U121D]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If a disc can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
DSP COMM [U121E]		
DVD COMM [U1227]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If DVD can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Error item	Description	Possible malfunction factor/Action to take
FRONT DISP CONN [U1243]	When either one of the following items are detected: <ul style="list-style-type: none"> • Display unit power supply and ground circuits malfunction is detected. • Communication circuits between AV control unit and display unit. 	<ul style="list-style-type: none"> • Display unit power supply and ground circuits. • Communication circuits between AV control unit and AV display unit.
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
USB OVERCURRENT [U1263]	Detection of over current in USB connector.	Check USB harness between the AV control unit and USB connector.
<ul style="list-style-type: none"> • AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] 	When either one of the following items are 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. 	<ul style="list-style-type: none"> • Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch.

DATA MONITOR

ALL SIGNALS

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

Display Item	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 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	
SIDE VIEW SW	Off	This item is displayed, but cannot be monitored.	—
ROOM LAMP	Off	This item is displayed, but not used.	—

SELECTION FROM MENU

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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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

CONFIGURATION

Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	<ul style="list-style-type: none">• Reads the vehicle configuration of current AV control unit.• Saves the read vehicle configuration.
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.

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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:000000005523002

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:000000005523003

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Probable malfunction location
U1000	CAN COMM CIRCUIT [U1000]	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

Diagnosis Procedure

INFOID:000000005523004

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-16, "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)

DTC Logic

INFOID:00000000523005

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Probable malfunction factor
U1010	CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation" .

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U1200 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1200 AV CONTROL UNIT

DTC Logic

INFOID:000000005523006

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1200	Cont Unit [U1200]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487. "Removal and Installation" .

U1201 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1201 AV CONTROL UNIT

DTC Logic

INFOID:000000005523007

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1201	GYRO NO CONN [U1201]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487. "Removal and Installation" .

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AV

U1202 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1202 AV CONTROL UNIT

DTC Logic

INFOID:000000005523008

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1202	G-SENSOR NO CONN [U1202]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487. "Removal and Installation" .

U1204 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1204 AV CONTROL UNIT

DTC Logic

INFOID:000000005523009

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1204	GPS CONN [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation" .

Diagnosis Procedure

INFOID:000000005523010

1. PERFORM THE SELF-DIAGNOSIS

1. Delete the "self-diagnosis" results of "MULTI AV". Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

- YES >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).
- NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

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U1205 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1205 AV CONTROL UNIT

DTC Logic

INFOID:000000005523011

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1205	GPS ROM [U1205]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation" .

Diagnosis Procedure

INFOID:000000005523012

1. PERFORM THE SELF-DIAGNOSIS

1. Delete the "self-diagnosis" results of "MULTI AV". Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

- YES >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).
- NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

U1206 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1206 AV CONTROL UNIT

DTC Logic

INFOID:000000005523013

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1206	GPS RAM [U1206]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation" .

Diagnosis Procedure

INFOID:000000005523014

1. PERFORM THE SELF-DIAGNOSIS

1. Delete the "self-diagnosis" results of "MULTI AV". Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

- YES >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).
- NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

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AV

U1207 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1207 AV CONTROL UNIT

DTC Logic

INFOID:000000005523015

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1207	GPS RTC [U1207]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation" .

Diagnosis Procedure

INFOID:000000005523016

1. PERFORM THE SELF-DIAGNOSIS

1. Delete the "self-diagnosis" results of "MULTI AV". Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

- YES >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).
- NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

U1216 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1216 AV CONTROL UNIT

DTC Logic

INFOID:000000005523017

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1216	CAN CONT [U1216]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487. "Removal and Installation" .

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AV

U1217 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1217 AV CONTROL UNIT

DTC Logic

INFOID:000000005523018

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1217	BLUETOOTH MODULE [U1217]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487. "Removal and Installation" .

U1218 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1218 AV CONTROL UNIT

DTC Logic

INFOID:000000005523019

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005523020

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).

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AV

U1219 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1219 AV CONTROL UNIT

DTC Logic

INFOID:000000005523021

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005523022

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).

U121A AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U121A AV CONTROL UNIT

DTC Logic

INFOID:00000000523023

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".

Diagnosis Procedure

INFOID:00000000523024

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).

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U121B AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U121B AV CONTROL UNIT

DTC Logic

INFOID:000000005523025

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005523026

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).

U121C AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U121C AV CONTROL UNIT

DTC Logic

INFOID:00000000523027

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	<ul style="list-style-type: none">If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".

Diagnosis Procedure

INFOID:00000000523028

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).

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U121D AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U121D AV CONTROL UNIT

DTC Logic

INFOID:000000005523029

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121D	DSP CONN [U121D]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If a disc can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005523030

1. CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).

U121E AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U121E AV CONTROL UNIT

DTC Logic

INFOID:00000000523031

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If a disc can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".

Diagnosis Procedure

INFOID:00000000523032

1. CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).

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U1225 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1225 AV CONTROL UNIT

DTC Logic

INFOID:000000005523033

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1225	USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.

U1227 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1227 AV CONTROL UNIT

DTC Logic

INFOID:000000005523034

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1227	DVD COMM [U1227]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If DVD can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005523035

1. CHECK PLAYBACK OF A DISK (DVD)

Can a disc (DVD) be played?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).

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U1228 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1228 AV CONTROL UNIT

DTC Logic

INFOID:000000005523036

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1228	SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation" .

U1229 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1229 AV CONTROL UNIT

DTC Logic

INFOID:00000000523037

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1229	iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation" .

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U122A AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U122A AV CONTROL UNIT

DTC Logic

INFOID:000000005523038

DTC	Display contents of CONSULT-III	DTC detection condition	Action to take
U122A	CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with "MULTI AV" of CONSULT-III.

Diagnosis Procedure

INFOID:000000005523039

1.PERFORM THE SELF-DIAGNOSIS

When U122A is detected, write configuration data with "MULTI AV" of CONSULT-III.

>> Write configuration data with "MULTI AV" of CONSULT-III. Refer to [AV-348, "CONFIGURATION \(AV CONTROL UNIT\) : Special Repair Requirement"](#).

U122E AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U122E AV CONTROL UNIT

DTC Logic

INFOID:00000000523040

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U122E	Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation" .

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U1232 STEERING ANGLE SENSOR

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1232 STEERING ANGLE SENSOR

DTC Logic

INFOID:000000005523041

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1232	ST ANGLE SEN CALIB [1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.

Diagnosis Procedure

INFOID:000000005523042

1. ADJUST THE PREDICTIVE COURSE LINE CENTER POSITION OF THE STEERING ANGLE SENSOR

When U1232 is detected, adjust the predictive course line center position of the steering angle sensor.

>> Adjusts the steering angle sensor neutral position on ABS actuator and electrical unit (control unit) side. Refer to [BRC-8. "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement"](#).

U1243 DISPLAY UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1243 DISPLAY UNIT

DTC Logic

INFOID:000000005523043

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1243	FRONT DISP CONN [U1243]	When either one of the following items are detected: <ul style="list-style-type: none"> display unit power supply and ground circuit malfunction is detected. communication circuit between AV control unit and display unit. 	<ul style="list-style-type: none"> Display unit power supply and ground circuit. Communication circuit between AV control unit and display unit.

Diagnosis Procedure

INFOID:000000005523044

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

1. CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuit. Refer to [AV-412, "DISPLAY UNIT : Diagnosis Procedure"](#).

Is inspection result OK?

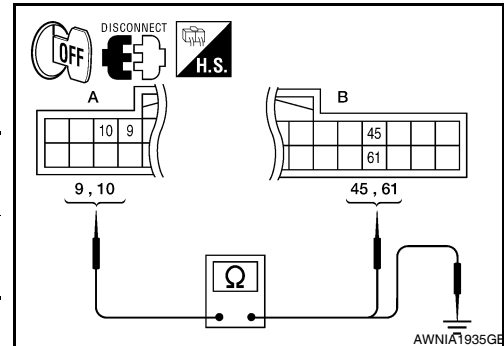
YES >> GO TO 2.

NO >> Repair malfunctioning parts.

2. CHECK CONTINUITY OF COMMUNICATION CIRCUIT

- Turn ignition switch OFF.
- Disconnect display unit connector M142 and AV control unit connector M163.
- Check continuity between display unit harness connector M142 (A) terminals 9, 10 and AV control unit harness connector M163 (B) terminals 45 and 61.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M142	9	M163	61	Yes
	10		45	



- Check continuity between display unit harness connector M142 (A) terminals 9, 10 and ground.

A		—	Continuity
Connector	Terminal		
M142	9	Ground	No
	10		

Are continuity results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK COMMUNICATION SIGNAL

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

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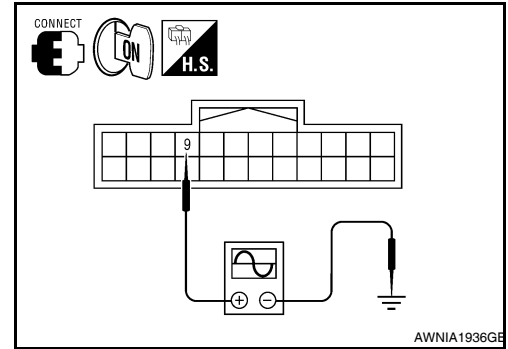
U1243 DISPLAY UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

3. Check signal between display unit harness connector M142 terminal 9 and ground with an oscilloscope or CONSULT-III.

(+)		(-)	Reference signal
Connector	Terminal		
M142	9	Ground	



Are voltage readings as specified?

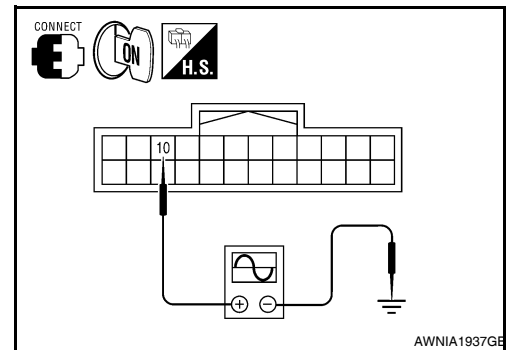
YES >> GO TO 4.

NO >> Replace AV control unit. Refer to [AV-487. "Removal and Installation"](#).

4. CHECK COMMUNICATION SIGNAL

Check signal between display unit harness connector M142 terminal 10 and ground with an oscilloscope or CONSULT-III.

(+)		(-)	Reference signal
Connector	Terminal		
M142	10	Ground	



Are voltage readings as specified?

YES >> Inspection End.

NO >> Replace display unit. Refer to [AV-490. "Removal and Installation"](#).

U1244 GPS ANTENNA

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1244 GPS ANTENNA

DTC Logic

INFOID:000000005523045

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1244	GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.

Diagnosis Procedure

INFOID:000000005523046

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

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

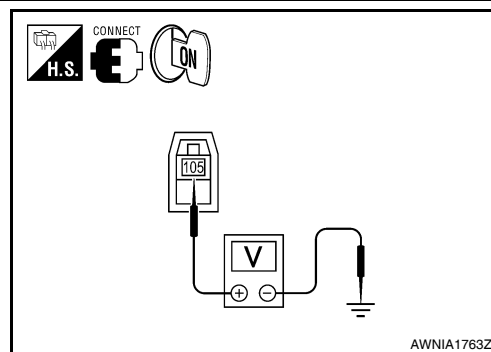
1. Turn ignition switch ON.
2. Check voltage between AV control unit connector M165 terminal 105 and ground.

(+) Connector		(-) Terminal	Voltage (Approx.)
M165	105	Ground	

Is the voltage reading as specified?

YES >> Replace GPS antenna. Refer to [AV-501. "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-487. "Removal and Installation"](#).



U1263 USB

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1263 USB

DTC Logic

INFOID:000000005523047

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1263	USB OVERCURRENT [U1263]	Detection of over current in USB interface.	Check USB harness between the AV control unit and USB interface.

Diagnosis Procedure

INFOID:000000005523048

1. CHECK USB HARNESS

Visually check USB harness.

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).
- NO >> Replace USB harness.

U1300 AV COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1300 AV COMM CIRCUIT

Description

INFOID:000000005523049

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

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1300 U1240	<ul style="list-style-type: none">• AV COMM CIRCUIT [U1300]• SWITCH CONN [U1240]	When either one of the following items are 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.	<ul style="list-style-type: none">• Multifunction switch power supply and ground circuits.• AV communication circuits between AV control unit and multifunction switch.

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U1310 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

U1310 AV CONTROL UNIT

DTC Logic

INFOID:000000005523050

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit. If the malfunction occurs constantly. Refer to AV-487. "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:000000005523051

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

1. CHECK FUSES

Check that the following AV control unit fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
AV control unit	19	Battery power	24
	7	Ignition switch ACC or ON	17
	52	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

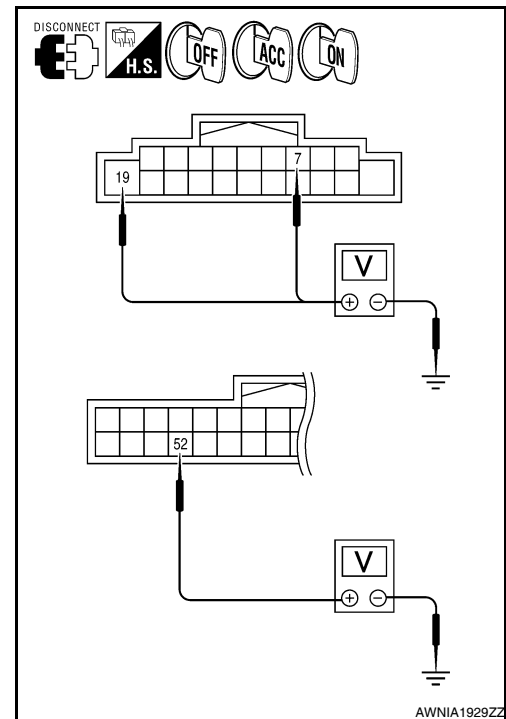
- Disconnect AV control unit connectors M160 and M163.
- Check voltage between the AV control unit connectors M160 and M163 and ground.

Connector	(+)		(-)	OFF	ACC	ON
	Terminal					
M160	7	Ground	0V	Battery voltage	Battery voltage	
	19	Ground	Battery voltage	Battery voltage	Battery voltage	
M163	52	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

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

1. Turn ignition switch OFF.
2. Check continuity between AV control unit harness connector M160 and ground.

(+) Connector		Terminal	(-)	Continuity
M160	20			

Are the continuity results as specified?

- YES >> Inspection End.
 NO >> Repair AV control unit ground.

DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:000000005523052

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

1.CHECK FUSES

Check that the following display unit fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Display Unit	11	Battery power	24
	23	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

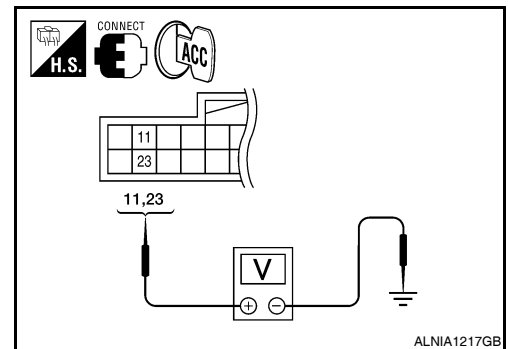
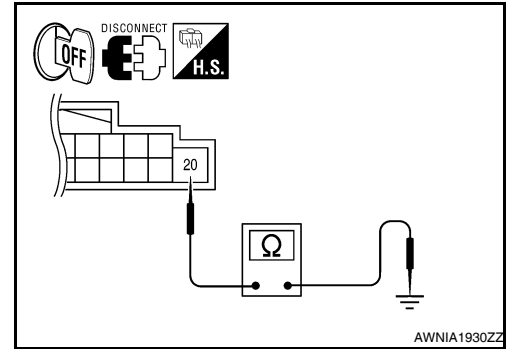
1. Turn ignition switch to ACC.
2. Check voltage between display unit harness connector M142 and ground.

(+) Connector		Terminal	(-)	OFF	ACC	ON
M142	11			Battery voltage	Battery voltage	Battery voltage
	23	Ground	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



POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

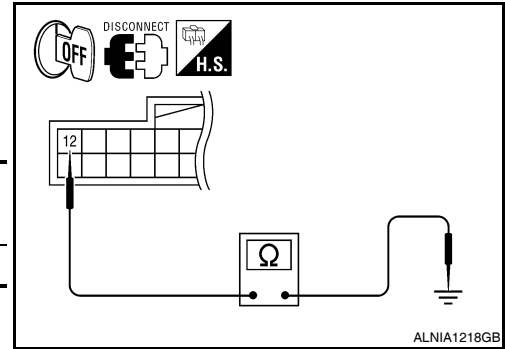
[BOSE W/ COLOR DISPLAY W/ NAVI]

1. Turn ignition switch OFF.
2. Disconnect display unit connector.
3. Check continuity between display unit harness connector M142 and ground.

(+)		(-)	Continuity
Connector	Terminal		
M142	12	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:000000005523053

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

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

Is the fuse OK?

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

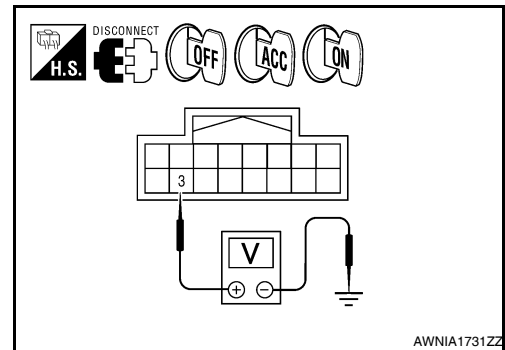
2. POWER SUPPLY CIRCUIT CHECK

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.



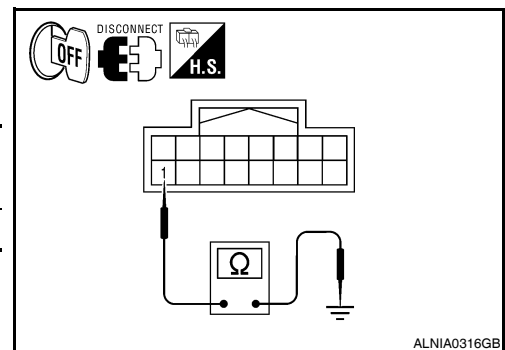
3. GROUND CIRCUIT CHECK

1. Turn ignition switch 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.



POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

BOSE SPEAKER AMP

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:000000005523054

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

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?

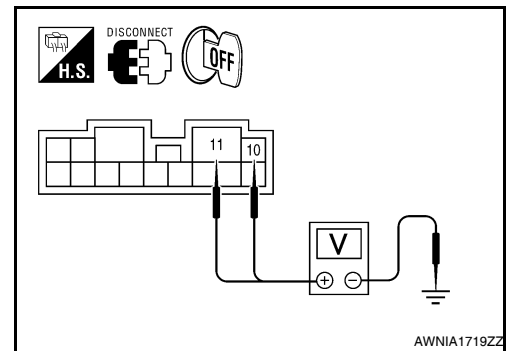
YES >> GO TO 2.

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?

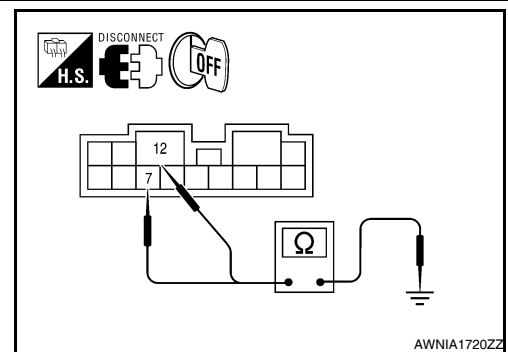
YES >> GO TO 3.

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.

REAR VIEW CAMERA

REAR VIEW CAMERA : Diagnosis Procedure

INFOID:000000005523055

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

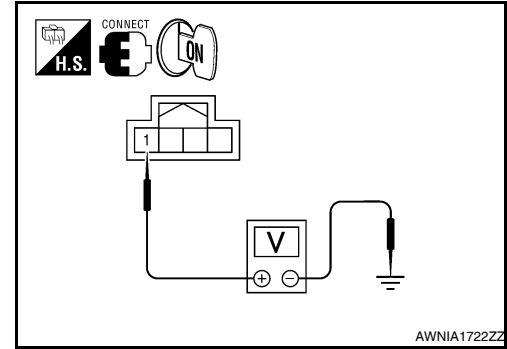
1. CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA SIDE)

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.

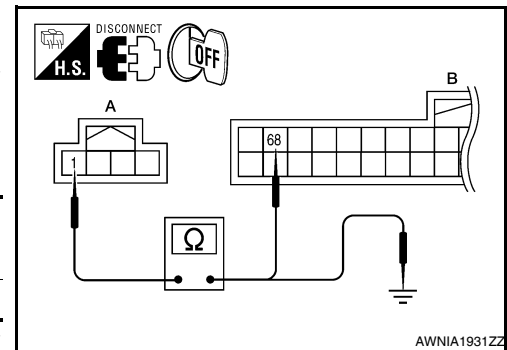


2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect rear view camera and AV control unit connectors.
3. Check continuity between rear view camera harness connector T101 (A) terminal 1 and AV control unit harness connector M164 (B) terminal 68.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
T101	1	M164	68	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.

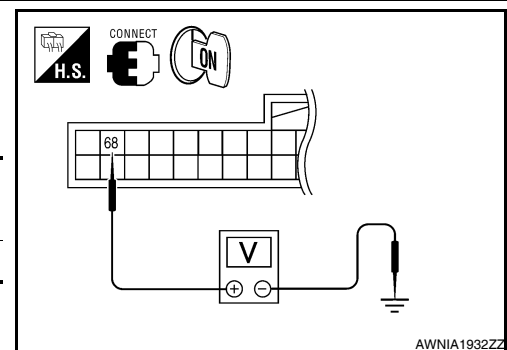
3. CHECK POWER SUPPLY CIRCUIT (AV CONTROL UNIT SIDE)

1. Connect rear view camera control unit harness connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit harness connector M164 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
M164	68	Ground	Reverse	6V

Is voltage reading approximately 6 volts?

- YES >> Inspection End.
NO >> Replace AV control unit. Refer to [AV-487. "Removal and Installation"](#).



4. 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 rear view camera harness connector.
3. Check continuity between rear view camera harness connector T101 terminal 2 and ground.

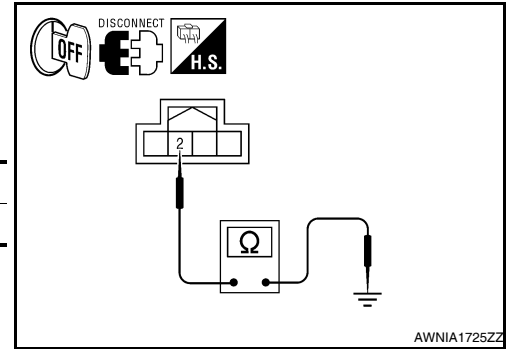
Connector	Terminal	—	Continuity
T101	2	Ground	Yes

Does continuity exist?

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

MICROPHONE

MICROPHONE : Diagnosis Procedure



INFOID:000000005523057

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

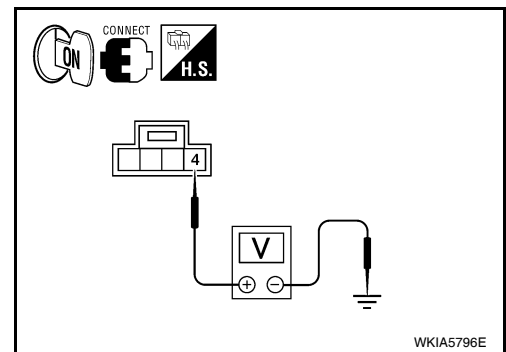
1.CHECK POWER SUPPLY CIRCUIT

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.

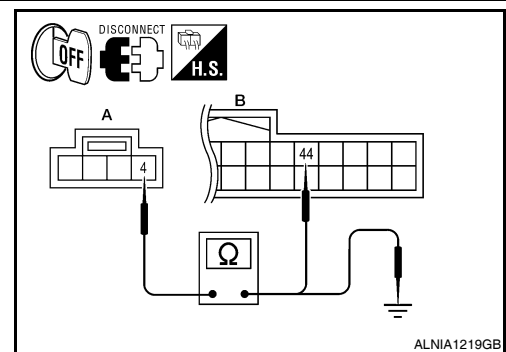


2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

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 M163 (B) terminal 44.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	4	M163	44	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-487, "Removal and Installation"](#).
 NO >> Repair harness or connector.

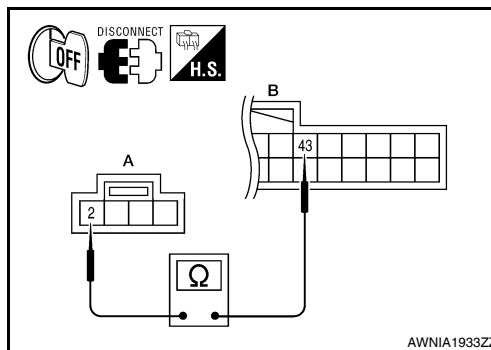
3.CHECK GROUND CIRCUIT

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 M163.
3. Check continuity between microphone harness connector R7 (A) terminal 2 and AV control unit harness connector M163 (B) terminal 43.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	2	M163	43	Yes

Does continuity exist?

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

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RGB DIGITAL IMAGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

RGB DIGITAL IMAGE SIGNAL CIRCUIT

Description

INFOID:000000005523058

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

Diagnosis Procedure

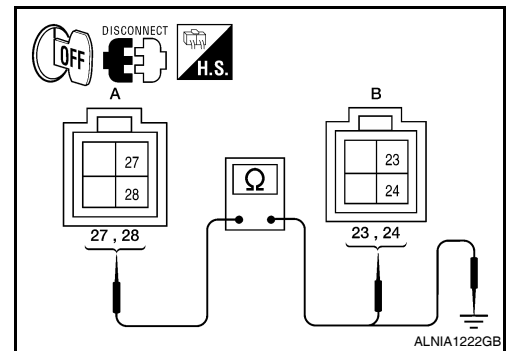
INFOID:000000005523059

Regarding Wiring Diagram information, refer to [AV-487, "Removal and Installation"](#).

1. CHECK CONTINUITY RGB DIGITAL IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M151 and AV control unit connector M161.
3. Check continuity between display unit harness connector M151 (A) terminals 27, 28 and AV control unit harness connector M161 (B) terminals 23 and 24.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M151	27	M161	23	Yes
	28		24	



4. Check continuity between display unit harness connector M151 (A) terminals 27, 28 and ground.

A		—	Continuity
Connector	Terminal		
M151	27	Ground	No
	28		

Are continuity results as specified?

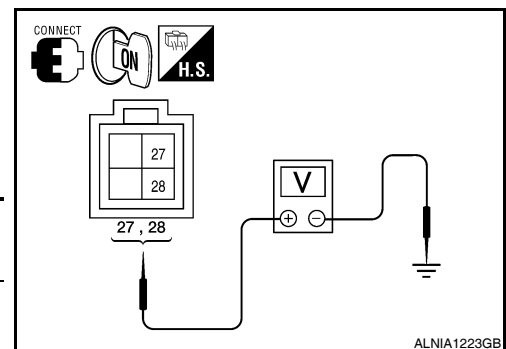
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB DIGITAL IMAGE SIGNAL

1. Connect display unit connector M151 and AV control unit connector M161.
2. Turn ignition switch ON.
3. Check voltage between display unit harness connector M151 terminals 27, 28 and ground.

(+)		(-)	Condition	Voltage (Approx.)
Connector	Terminal			
M151	27	Ground	Not connected connector	1.3 V
	28			



Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-490, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).

COMPOSITE IMAGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

COMPOSITE IMAGE SIGNAL CIRCUIT

Description

INFOID:000000005523060

AV control unit transmits the playback DVD image signal and AUX image signal to the display unit.

Diagnosis Procedure

INFOID:000000005523061

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

1. CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M163 and display unit connector M142.
3. Check continuity between AV control unit connector M163 (A) terminal 40 and display unit connector M142 (B) terminal 18.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M163	40	M142	18	Yes

4. Check continuity between AV control unit connector M163 (A) terminal 40 and ground.

A		—	Continuity
Connector	Terminal		
M163	40	Ground	No

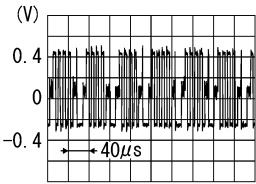
Are continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK AUX COMPOSITE SIGNAL

1. Connect AV control unit connector M163 and display unit connector M142.
2. Turn ignition switch ON.
3. Check signal between AV control unit harness connector M163 terminal 40 and ground.

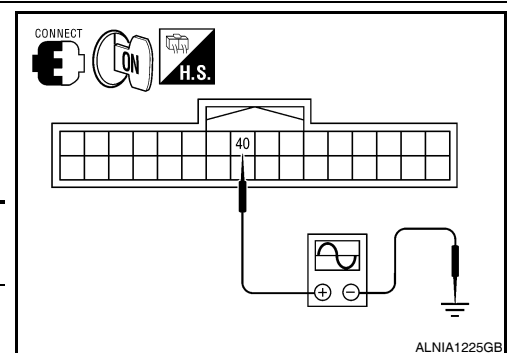
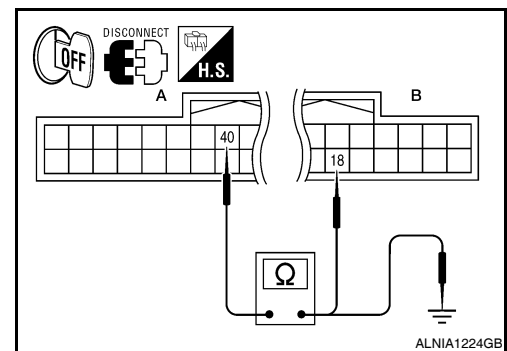
(+) Connector		Terminal	(-)	Condition	Reference signal
Connector	Terminal				
M163	40	Ground	At DVD image is displayed		

SKIB2237J

Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-490, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).



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AV

AUX IMAGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

AUX IMAGE SIGNAL CIRCUIT

Description

INFOID:000000005523062

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

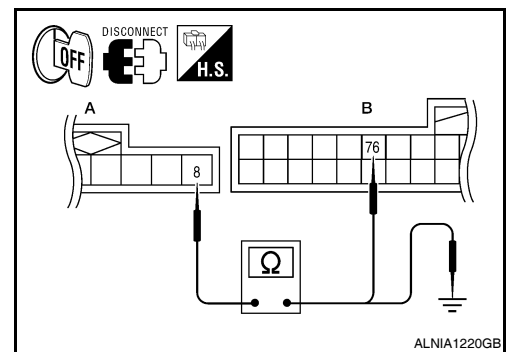
Diagnosis Procedure

INFOID:000000005523063

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

1. CHECK CONTINUITY AUX IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect auxiliary input jack connector M209 and AV control unit connector M164.
3. Check continuity between auxiliary input jack harness connector M209 (A) terminal 8 and AV control unit harness connector M164 (B) terminal 76.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M209	8	M164	76	Yes

4. Check continuity between auxiliary input jack harness connector M209 (A) terminal 8 and ground.

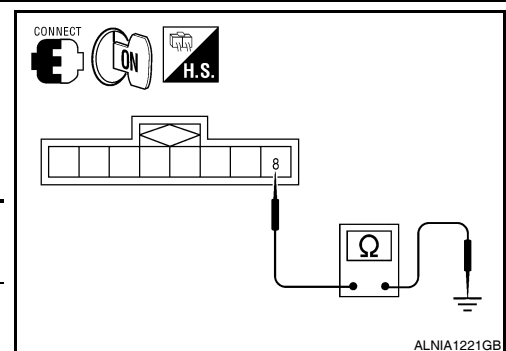
A		—	Continuity
Connector	Terminal		
M209	8	Ground	No

Is the inspection result normal?

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

2. CHECK AUX IMAGE SIGNAL

1. Connect auxiliary input jack connector M209 and AV control unit connector M164.
2. Turn ignition switch ON.
3. Check signal between auxiliary input jack connector M209 terminal 8 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M209	8	Ground	Receive audio signal	

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).
NO >> Check that there is no malfunction in the external device.

DISK EJECT SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

DISK EJECT SIGNAL CIRCUIT

Description

INFOID:000000005523064

The eject signal is output to AV control unit when the eject switch of A/C and AV switch assembly is pressed.

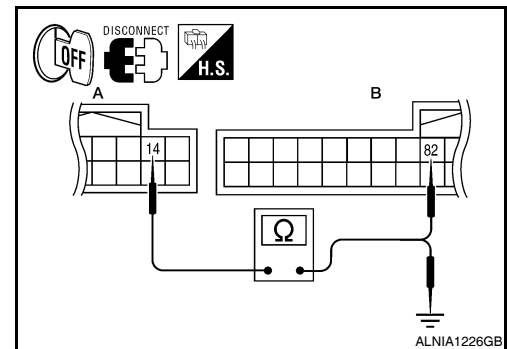
Diagnosis Procedure

INFOID:000000005523065

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

1. CHECK CONTINUITY DISK EJECT SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect A/C and AV switch assembly connector M98 and AV control unit connector M164.
3. Check continuity between A/C and AV switch assembly connector M98 (A) terminal 14 and AV control unit harness connector M164 (B) terminal 82.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M98	14	M164	82	Yes

4. Check continuity between A/C and AV switch assembly connector M98 (A) terminal 14 and ground.

A		—	Continuity
Connector	Terminal		
M98	14	Ground	No

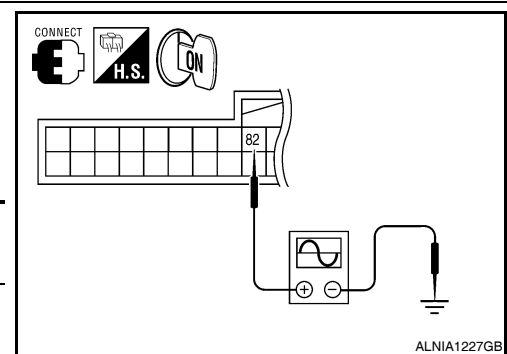
Are continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK AV CONTROL UNIT VOLTAGE

1. Connect A/C and AV switch assembly connector M98 and AV control unit connector M164.
2. Turn ignition switch ON.
3. Check voltage between AV control unit harness connector M164 terminal 82 and ground.



(+)		(-)	Condition	Voltage (Approx.)
Connector	Terminal			
M164	82	Ground	Pressing the eject switch	0 V
			Except for above	5.0 V

Are voltage readings as specified?

YES >> Replace A/C and AV switch assembly. Refer to [AV-489, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).

MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000005523066

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

Diagnosis Procedure

INFOID:000000005523067

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

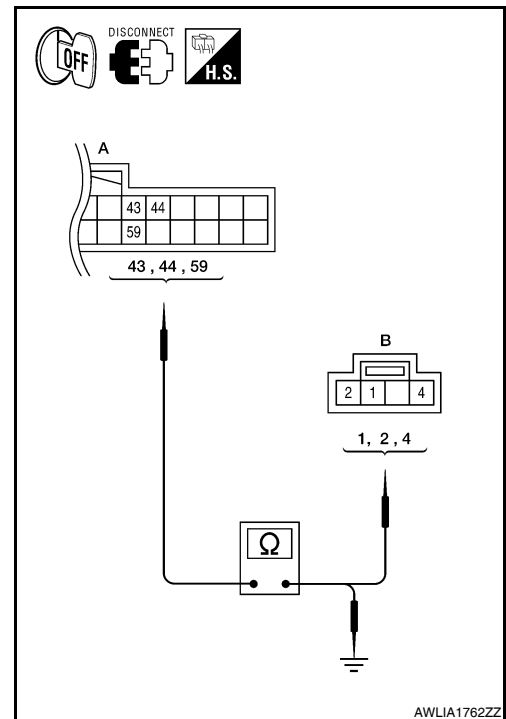
1. CHECK HARNESS BETWEEN AV CONTROL UNIT AND MICROPHONE

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector and microphone connector.
3. Check continuity between AV control unit harness connector M163 (A) and microphone harness connector R7 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M163	59	R7	1	Yes
	43		2	
	44		4	

4. Check continuity between AV control unit harness connector M163 (A) and ground.

A		—	Continuity
Connector	Terminal		
M163	44	Ground	No
	43		
	59		



AWLIA1762ZZ

Are the continuity test results as specified?

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

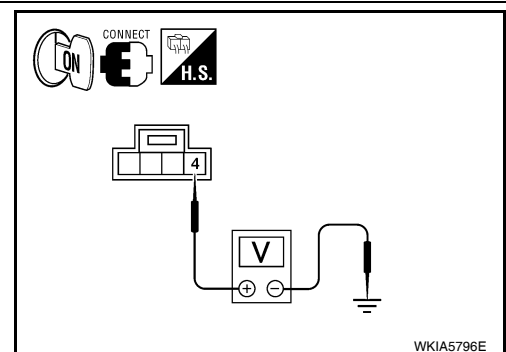
2. CHECK MICROPHONE POWER SUPPLY

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-487, "Removal and Installation"](#).



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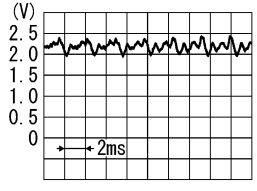
3. CHECK MICROPHONE SIGNAL

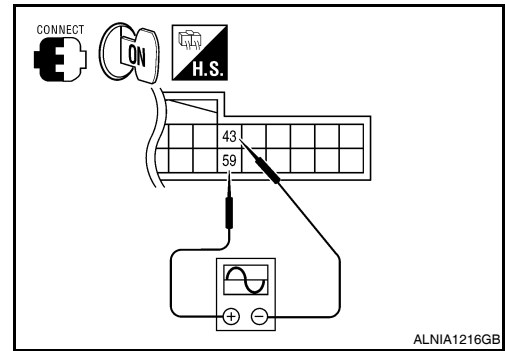
MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Check signal between AV control unit harness connector M163 terminals 43 and 59.

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
M163	59	43	<p>While speaking into MIC</p>  <p>PKIB5037J</p>



Are voltage readings as specified?

- YES >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-507, "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:000000005523068

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:000000005523069

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

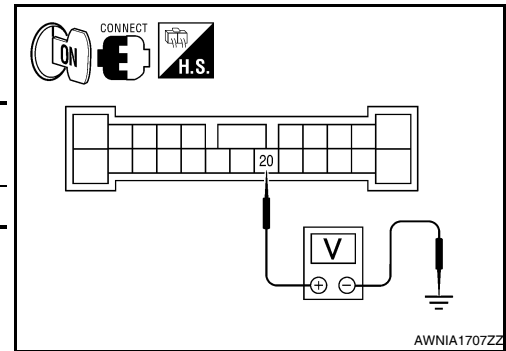
1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

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.



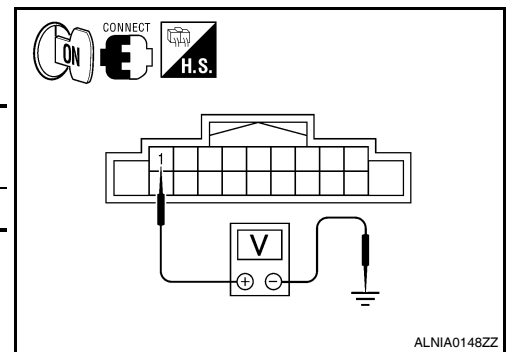
2. CHECK AMP ON SIGNAL (AV CONTROL UNIT)

Check voltage between AV control unit harness connector M160 terminal 1 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
M160	1	Ground	Battery voltage

Is inspection result normal?

- YES >> Repair harness or connector.
NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).



FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

FRONT DOOR SPEAKER

Description

INFOID:00000000523070

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:00000000523071

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

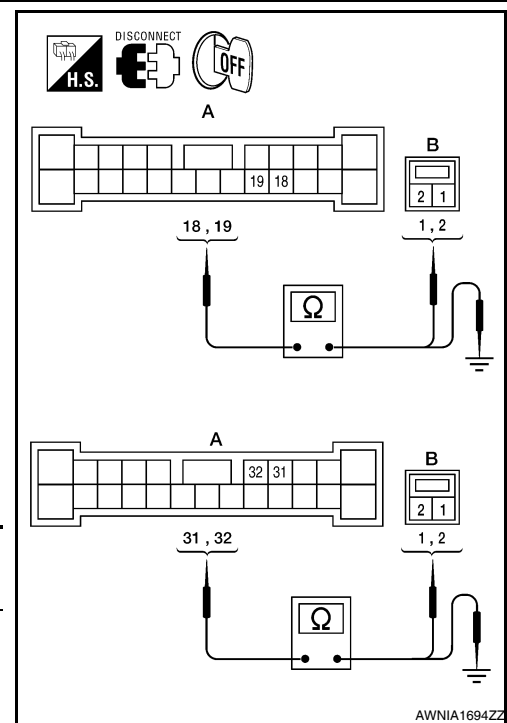
1. HARNESS CHECK

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		-	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

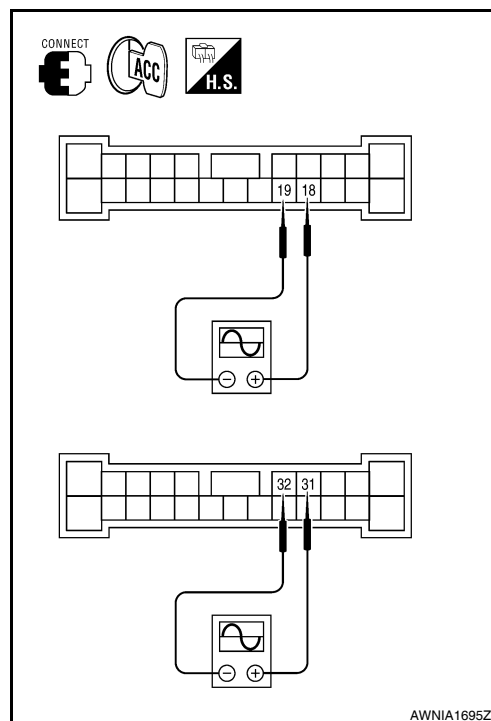
FRONT DOOR SPEAKER

[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-496, "Removal and Installation"](#).

NO >> GO TO 3.

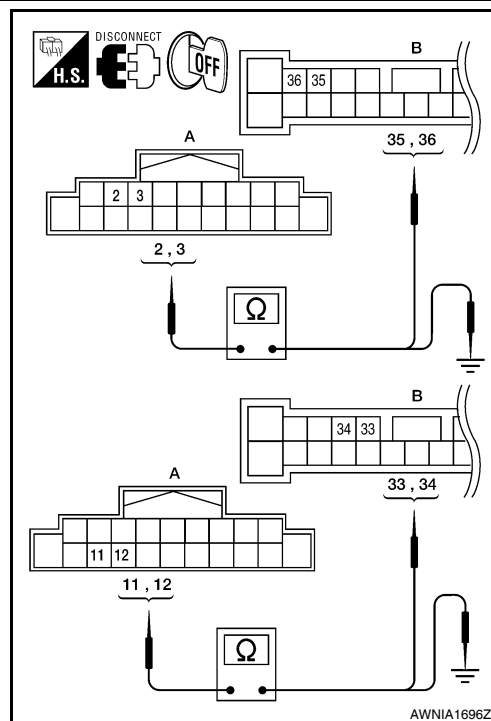
3. HARNESS CHECK

1. Disconnect AV control unit connector M160 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M160 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M160	2	B109	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between AV control unit harness connector M160 (A) and ground.

A		—	Continuity
Connector	Terminal		
M160	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.

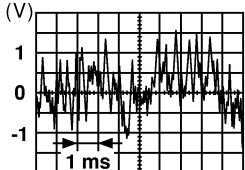
4. FRONT DOOR SPEAKER SIGNAL CHECK

FRONT DOOR SPEAKER

[BOSE W/ COLOR DISPLAY W/ NAVI]

< COMPONENT DIAGNOSIS >

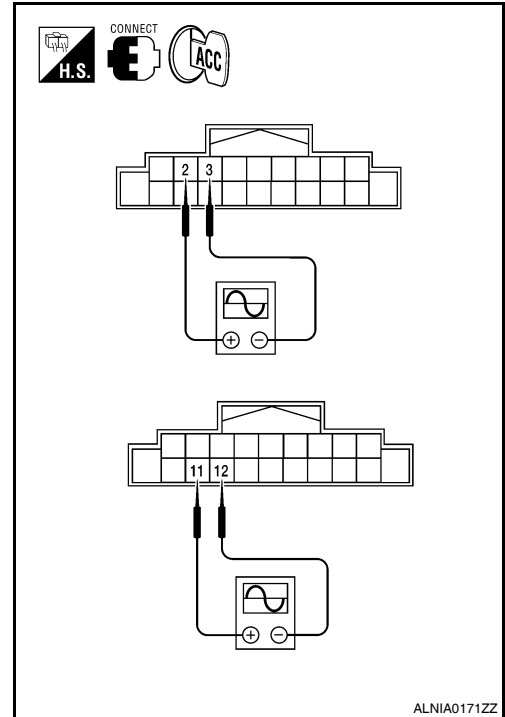
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M160	2	3	Receive audio signal	
	11	12		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-499, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).



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TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

TWEETER

Description

INFOID:000000005523072

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:000000005523073

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

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.

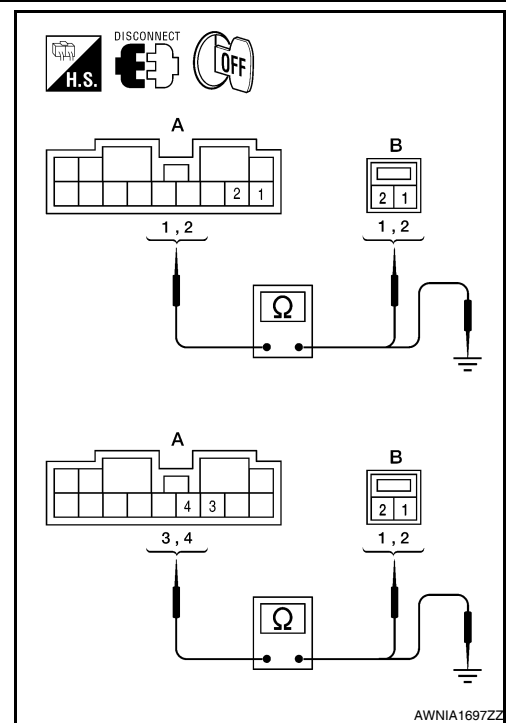
A		—	Continuity
Connector	Terminal		
B110	1	Ground	No
	2		
	4		
	3		

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/ 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-494, "Removal and Installation"](#).

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M160 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M160 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M160	2	B109	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between AV control unit harness connector M160 (A) and ground.

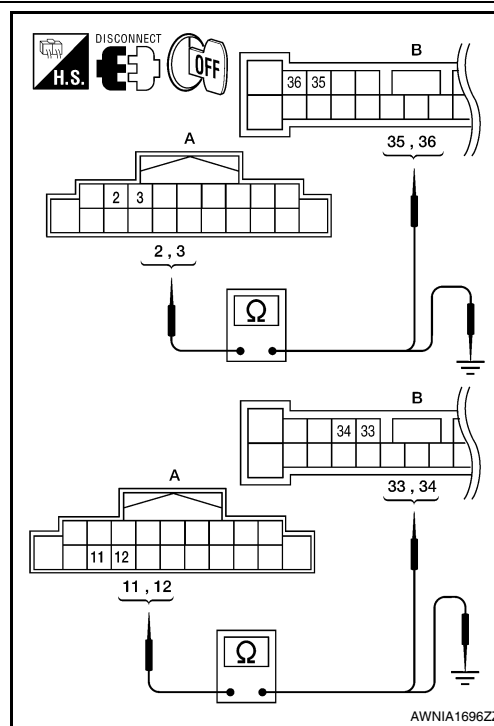
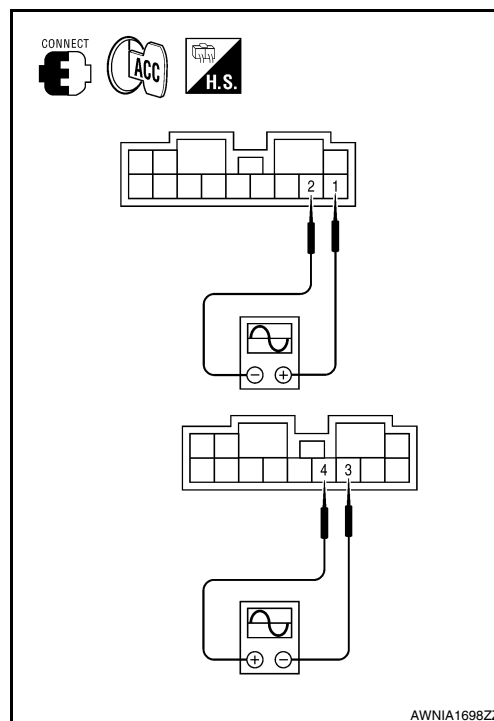
A		—	Continuity
Connector	Terminal		
M160	2	Ground	No
	3		
	11		
	12		

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

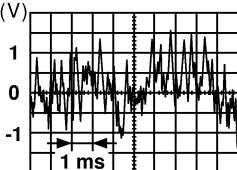


TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

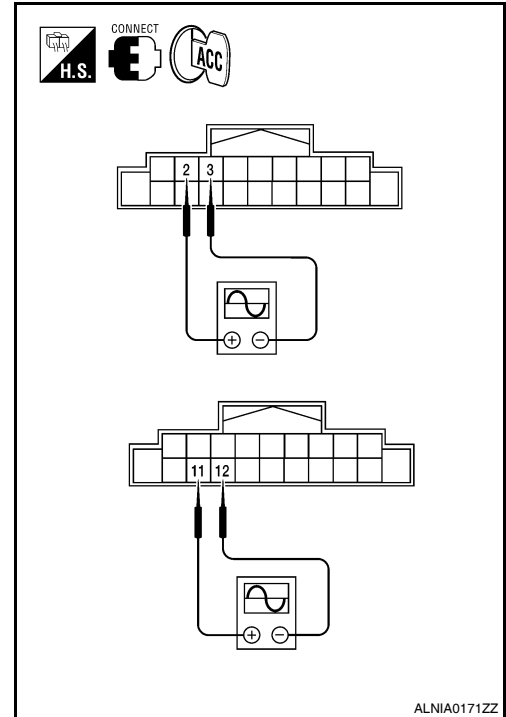
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M160	2	3	Receive audio signal	
	11	12		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-499, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).



ALNIA0171ZZ

CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

CENTER SPEAKER

Description

INFOID:00000000523074

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

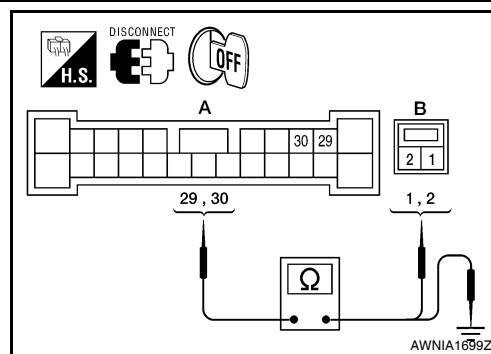
INFOID:00000000523075

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

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?

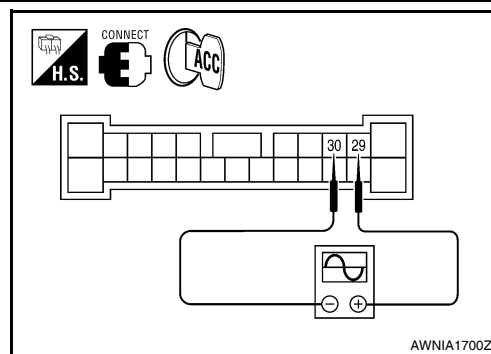
YES >> GO TO 2.

- 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	



Is the audio signal voltage reading as specified?

CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

- YES >> Replace center speaker. Refer to [AV-495, "Removal and Installation"](#).
 NO >> GO TO 3.

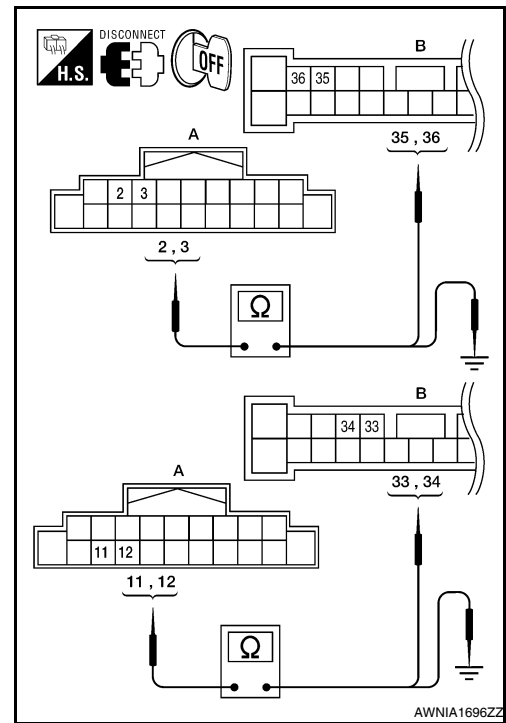
3. HARNESS CHECK

1. Disconnect AV control unit connector M160 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M160 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M160	2	B109	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between AV control unit harness connector M160 (A) and ground.

A		—	Continuity
Connector	Terminal		
M160	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.

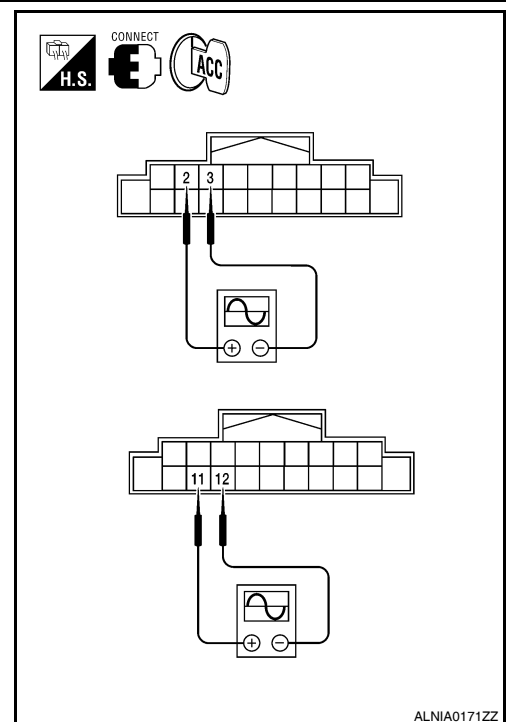
4. CENTER SPEAKER SIGNAL CHECK

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
	(+)	(-)		
M160	2	3	Receive audio signal	
	11	12		

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-499, "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).



REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

REAR DOOR SPEAKER

Description

INFOID:000000005523076

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:000000005523077

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

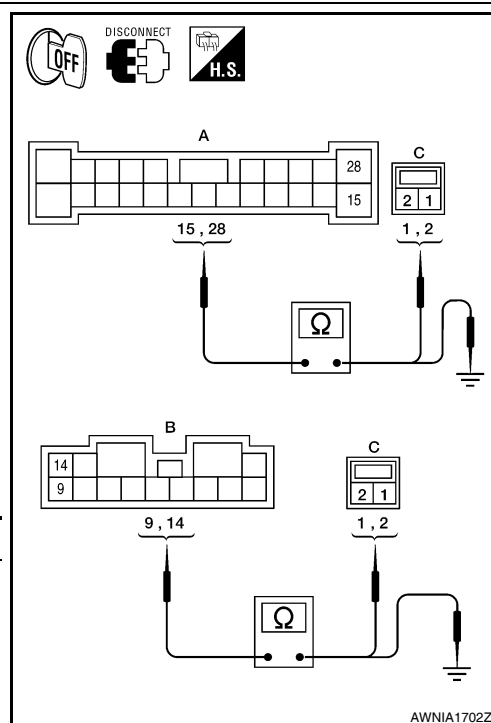
1. HARNESS CHECK

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		



AWNIA1702ZZ

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

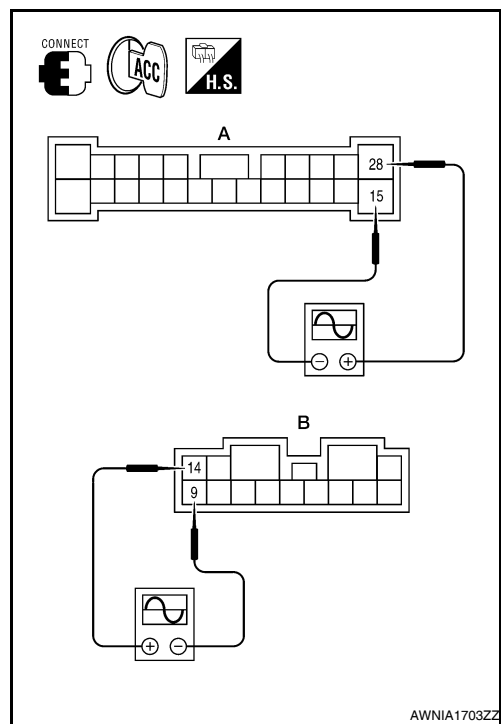
< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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-497. "Removal and Installation"](#).
- NO >> GO TO 3.

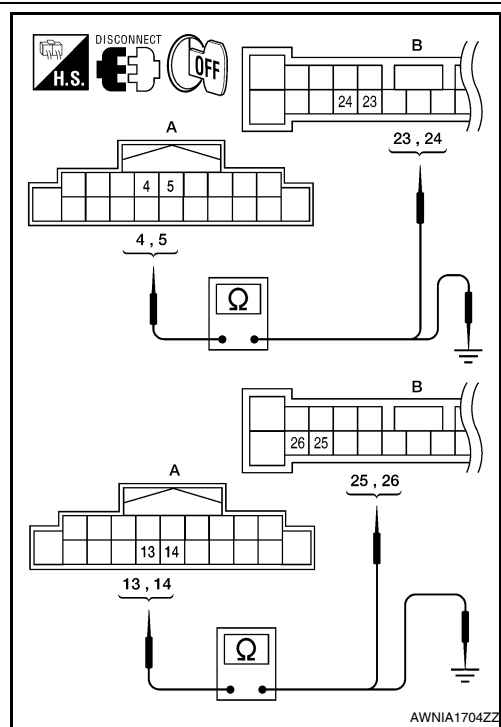
3. HARNESS CHECK

1. Disconnect AV control unit connector M160 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M160 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M160	4	B109	24	Yes
	5		23	
	13		26	
	14		25	

3. Check continuity between AV control unit harness connector M160 (A) and ground.

A		—	Continuity
Connector	Terminal		
M160	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.

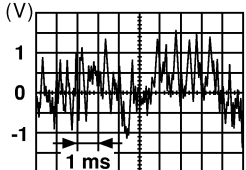
4. REAR DOOR SPEAKER SIGNAL CHECK

REAR DOOR SPEAKER

[BOSE W/ COLOR DISPLAY W/ NAVI]

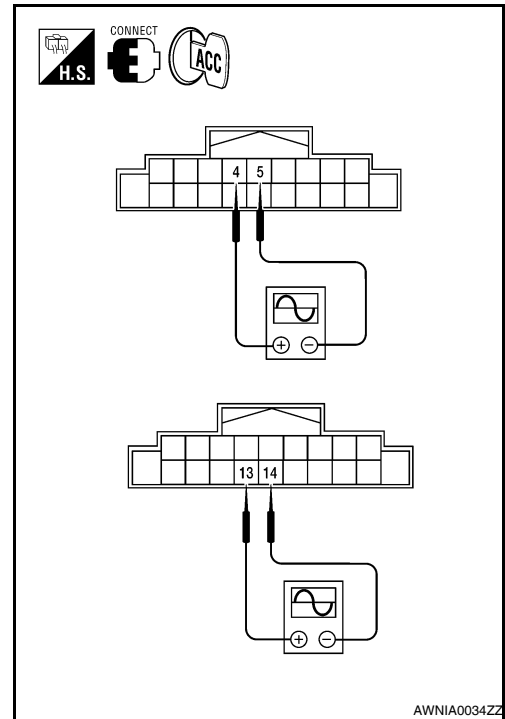
< COMPONENT DIAGNOSIS >

1. Connect AV control unit connector M160 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
	(+)	(-)		
M160	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-499, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).



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SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

SUBWOOFER

Description

INFOID:000000005523078

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:000000005523079

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

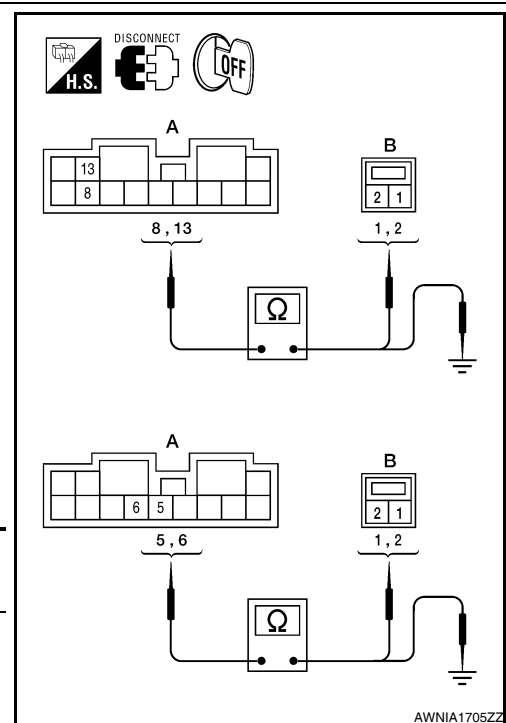
1. HARNESS CHECK

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

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-498](#), "[Removal and Installation](#)".

NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M160 and BOSE speaker amp. connector B109.
2. Check continuity between AV control unit harness connector M160 (A) and BOSE speaker amp. harness connector B109 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M160	4	B109	24	Yes
	5		23	
	13		26	
	14		25	

3. Check continuity between AV control unit harness connector M160 (A) terminal and ground.

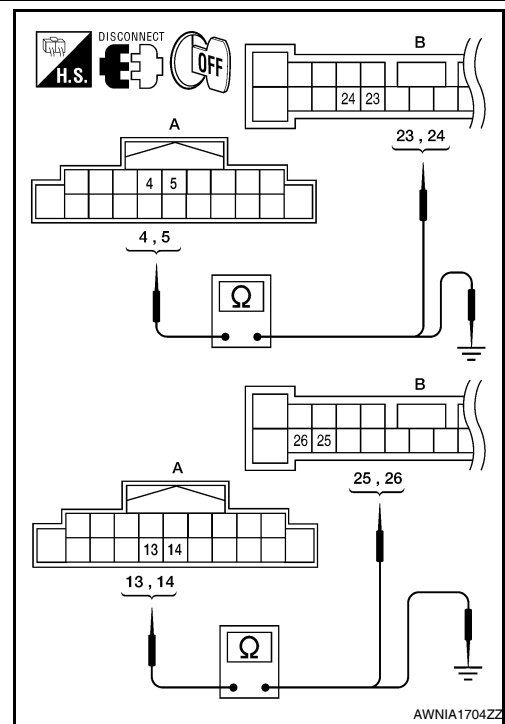
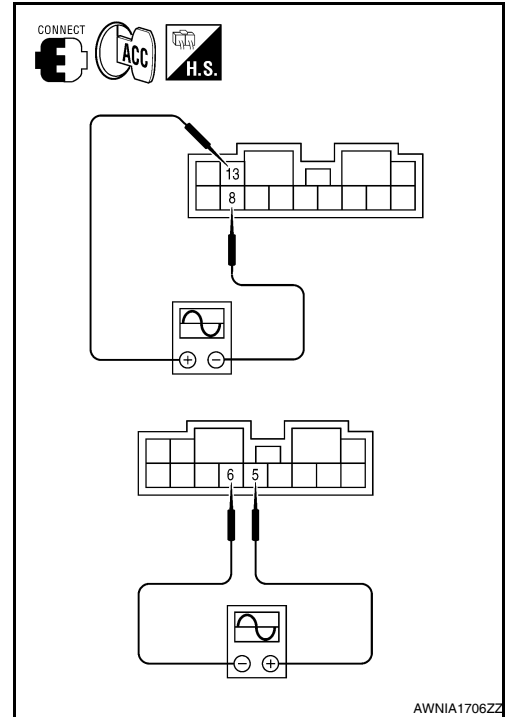
A		—	Continuity
Connector	Terminal		
M160	4	Ground	No
	5		
	13		
	14		

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



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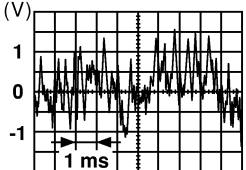
AV

SUBWOOFER

< COMPONENT DIAGNOSIS >

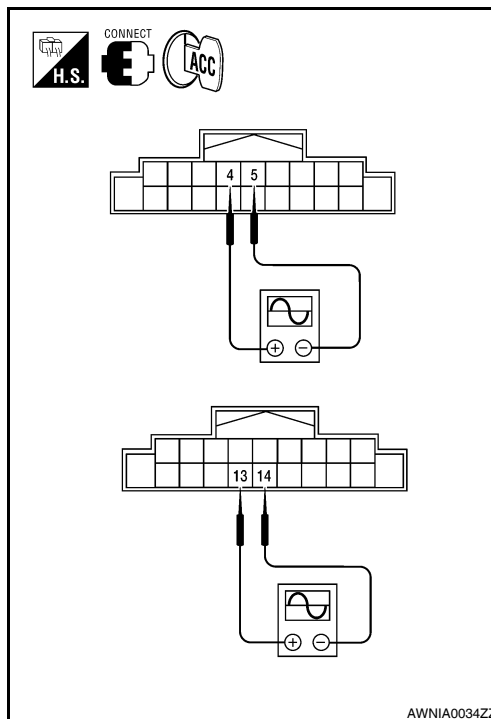
[BOSE W/ COLOR DISPLAY W/ NAVI]

1. Connect AV control unit connector M160 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
	(+)	(-)		
M160	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-499, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-487, "Removal and Installation"](#).



STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

STEERING SWITCH

Description

INFOID:00000000523080

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.

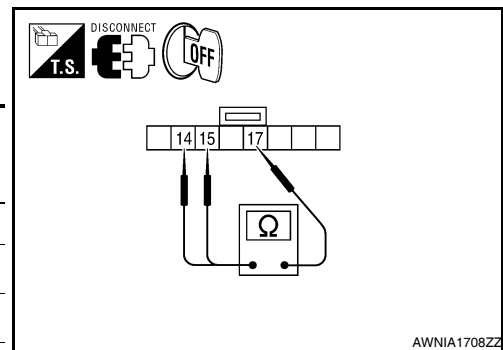
Diagnosis Procedure

INFOID:00000000523081

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

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	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	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?

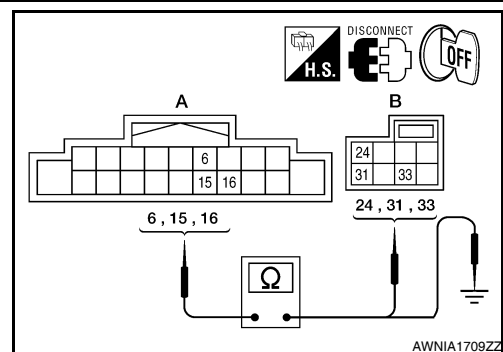
YES >> GO TO 2.

NO >> Replace steering wheel audio control switch. Refer to [AV-502, "Removal and Installation"](#).

2. CHECK HARNESS

1. Disconnect AV control unit connector M160 and spiral cable connector M30.
2. Check continuity between AV control unit harness connector M160 (A) and spiral cable harness connector M30 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M160	6	M30	24	Yes
	15		33	
	16		31	



3. Check continuity between AV switch connector M160 (A) and ground.

STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

A		—	Continuity
Connector	Terminal		
M160	6	Ground	No
	15		
	16		

Are the continuity results as specified?

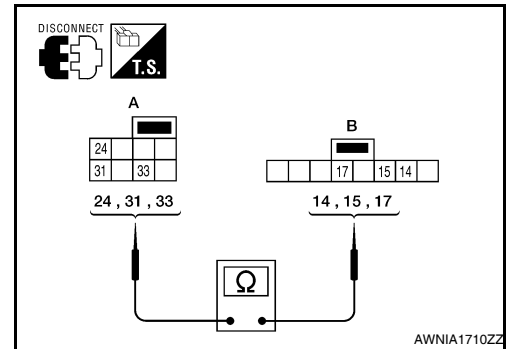
YES >> GO TO 3.

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"](#).

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

ECU DIAGNOSIS

AV CONTROL UNIT

Reference Value

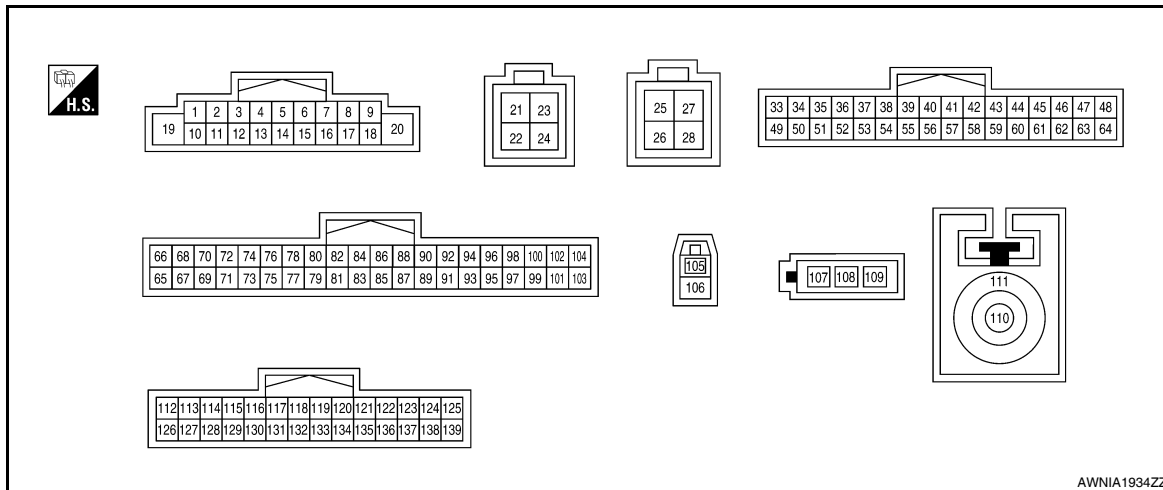
INFOID:000000005524527

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

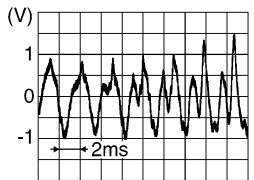
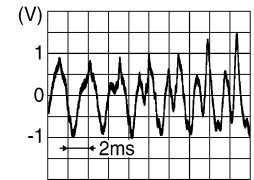
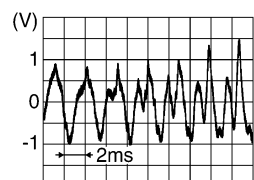
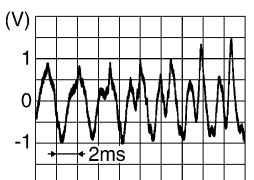


PHYSICAL VALUES

AV CONTROL UNIT

< ECU DIAGNOSIS >

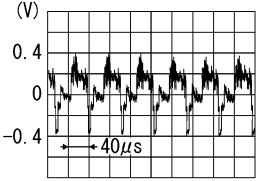
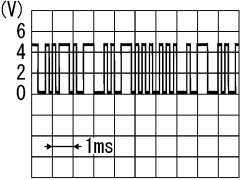
[BOSE W/ COLOR DISPLAY W/ NAVI]

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	 <small>SKIB3609E</small>
4 (W/R)	5 (W/L)	Pre-amp. audio signal rear LH	Output	Ignition switch ON	Audio output	 <small>SKIB3609E</small>
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	 <small>SKIB3609E</small>
13 (V)	14 (LG)	Audio signal rear RH	Output	Ignition switch ON	Audio output	 <small>SKIB3609E</small>
15 (L/B)	Ground	Steering switch signal ground	—	Ignition switch ON	—	0V

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

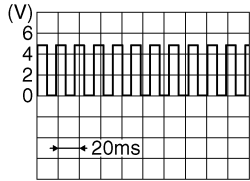
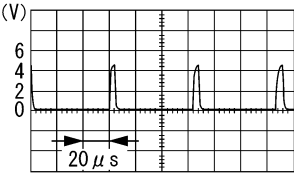
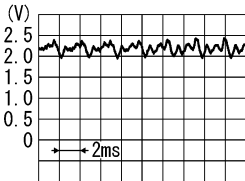
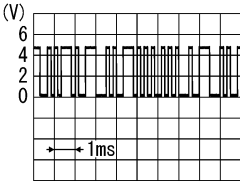
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
16 (GR/L)	15 (L/B)	Steering switch signal B	Input	Ignition switch ON	Depress the back switch.	723Ω
					Depress switch.	321Ω
					Depress VOL up switch.	121Ω
					Depress VOL down switch.	0Ω
19 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0V
23 (R)	Ground	RGB digital image signal (+)	Output	Ignition switch ON	Not connected connector.	1.3 V
24 (W)	Ground	RGB digital image signal (-)	Output	Ignition switch ON	Not connected connector.	1.3 V
25 (B)	—	USB ground	—	—	—	—
26 (W)	—	USB D-	—	—	—	—
27 (R)	—	V BUS signal	—	—	—	—
28 (G)	—	USB D+	—	—	—	—
37 (G/R)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake is ON.	5.0 V
					Parking brake is OFF.	0 V
39 (W)	Ground	Composite image ground	—	Ignition switch ON	—	0 V
40 (R)	Ground	Composite image signal	Output	Ignition switch ON	At DVD image is displayed.	 <small>SKIB2251J</small>
43	—	Shield	—	—	—	—
44 (R)	Ground	Microphone VCC	Output	Ignition switch ON	—	5.0 V
45 (Y)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	 <small>PKIB5039J</small>
46 (P)	—	CAN-L	Input/ Output	—	—	—

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AV CONTROL UNIT

< ECU DIAGNOSIS >

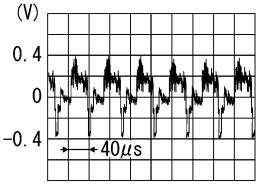
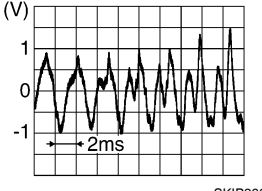
[BOSE W/ COLOR DISPLAY W/ NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
47 (P)	—	AV communication signal (L)	Input/ Output	—	—	—
48 (P)	—	AV communication signal (L)	Input/ Output	—	—	—
51 (R/L)	Ground	Illumination signal	Input	Ignition switch OFF	Lighting switch is OFF.	0 V
				Ignition switch ON	Lighting switch is ON.	12.0 V
52 (G)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
53 (P/B)	Ground	Reverse signal	Input	Ignition switch ON	R position	12.0 V
					Other than R position	0 V
54 (V/W)	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 12.0 V due to specifications (connected units).</p>  <p style="text-align: right; font-size: small;">SKIA6649J</p>
55	—	Shield	—	—	—	—
56 (B)	Ground	Composite synchronizing signal	Output	Ignition switch ON	—	 <p style="text-align: right; font-size: small;">SKIA0187E</p>
59 (L)	Ground	Microphone signal	Input	Ignition switch ON	Give a voice	 <p style="text-align: right; font-size: small;">PKIB5037J</p>
60	—	Shield	—	—	—	—
61 (BR)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	 <p style="text-align: right; font-size: small;">PKIB5039J</p>
62 (L)	—	CAN-H	Input/ Output	—	—	—
63 (L)	—	AV communication signal (H)	Input/ Output	—	—	—

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

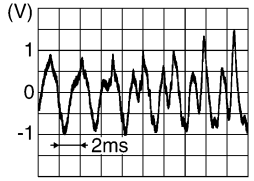
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
64 (L)	—	AV communication signal (H)	Input/ Output	—	—	—
67 (W)	Ground	Rear view camera ground	—	Ignition switch ON	—	0 V
68 (R)	Ground	Camera ON signal	Output	Ignition switch ON	R position.	6.0 V
					Other than R position.	0 V
75 (V)	Ground	AUX image signal ground	—	Ignition switch ON	—	0 V
76 (V)	75 (LG)	AUX image signal	Input	Ignition switch ON	At AUX image is displayed.	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
77	—	Shield	—	—	—	—
81 (BR)	Ground	Switch ground	—	Ignition switch ON	—	0 V
82 (SB)	81 (BR)	Disk eject signal	Input	Ignition switch ON	Pressing the eject switch.	0 V
					Except for above.	5.0 V
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	—	—	—	—
115 (W)	130 (R)	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is select- ed.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

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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			
128	—	Shield	—	—	—	—
129 (B)	130 (R)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is select- ed.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

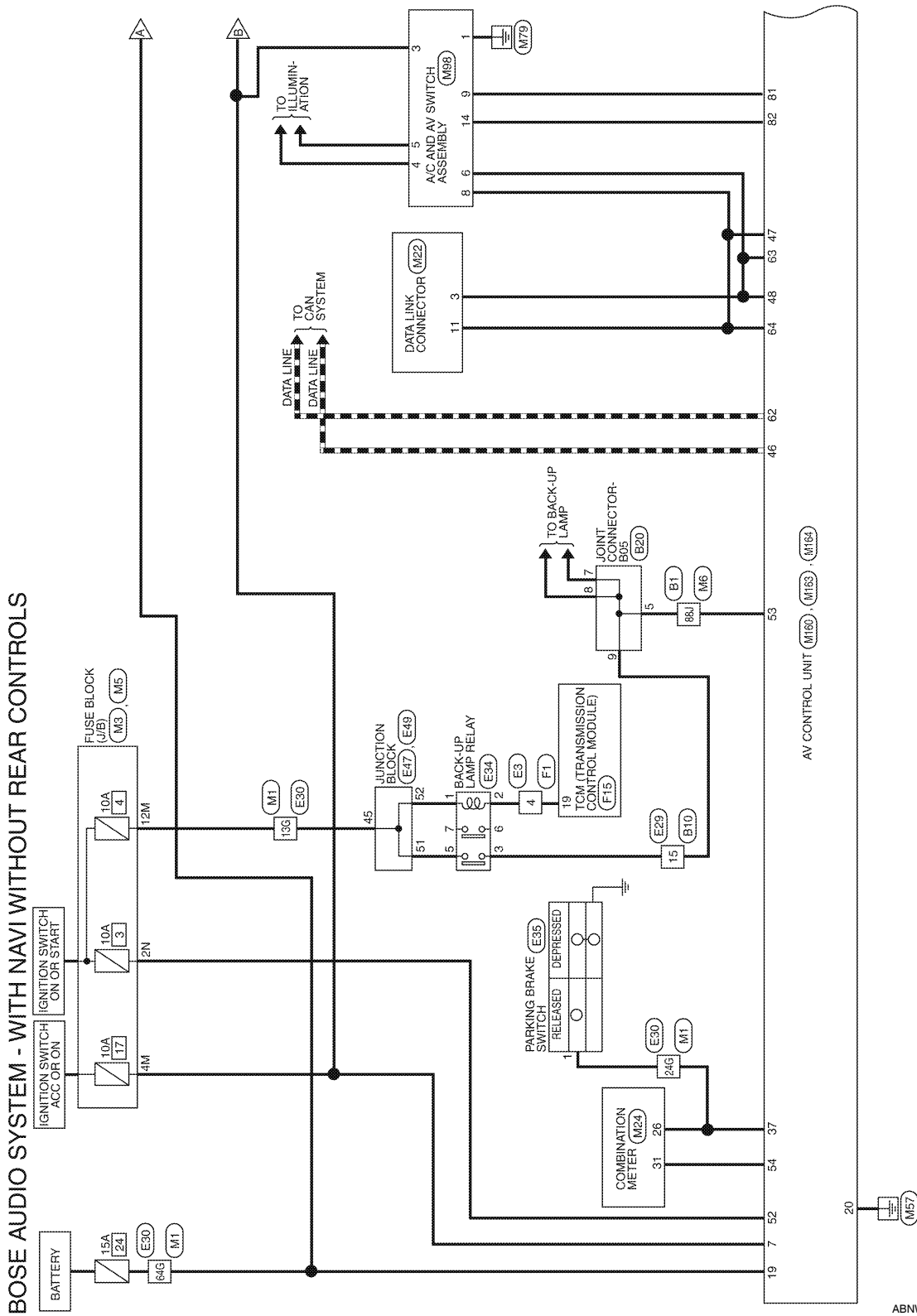
AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY W/ NAVI]

Wiring Diagram

INFOID:000000005460340



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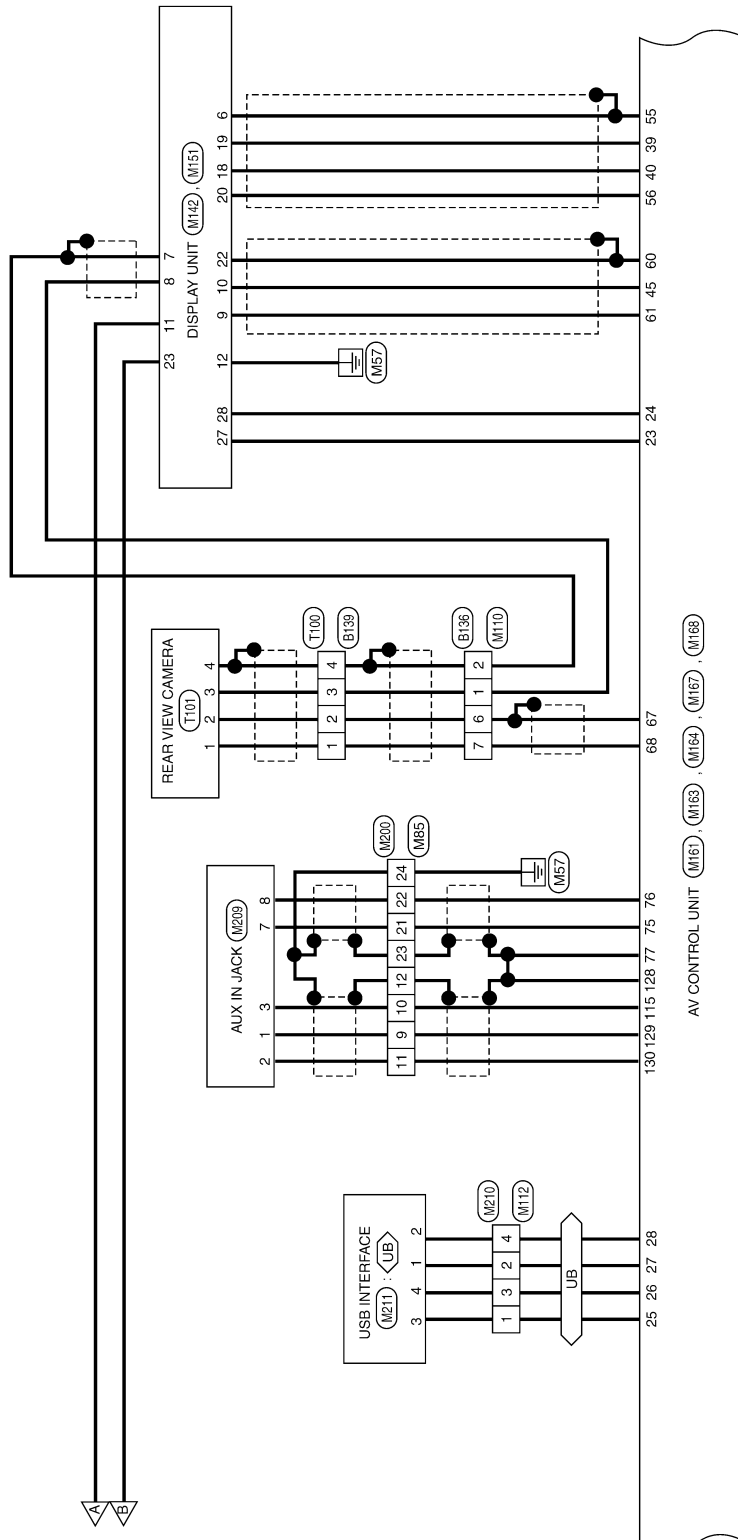
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AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

< ECU DIAGNOSIS >

UB: WITH USB INTERFACE

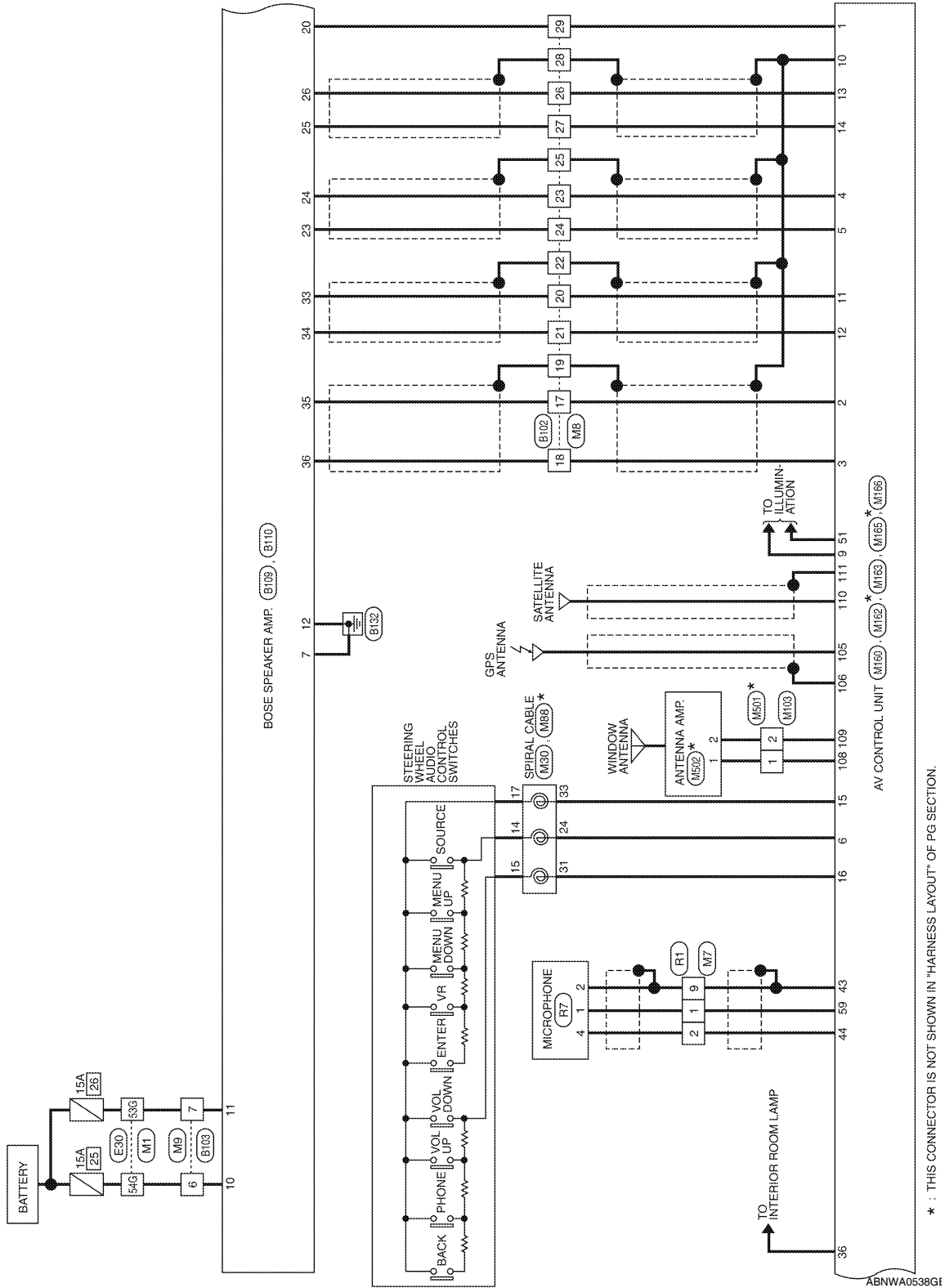


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AV CONTROL UNIT

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[BOSE W/ COLOR DISPLAY W/ NAVI]



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

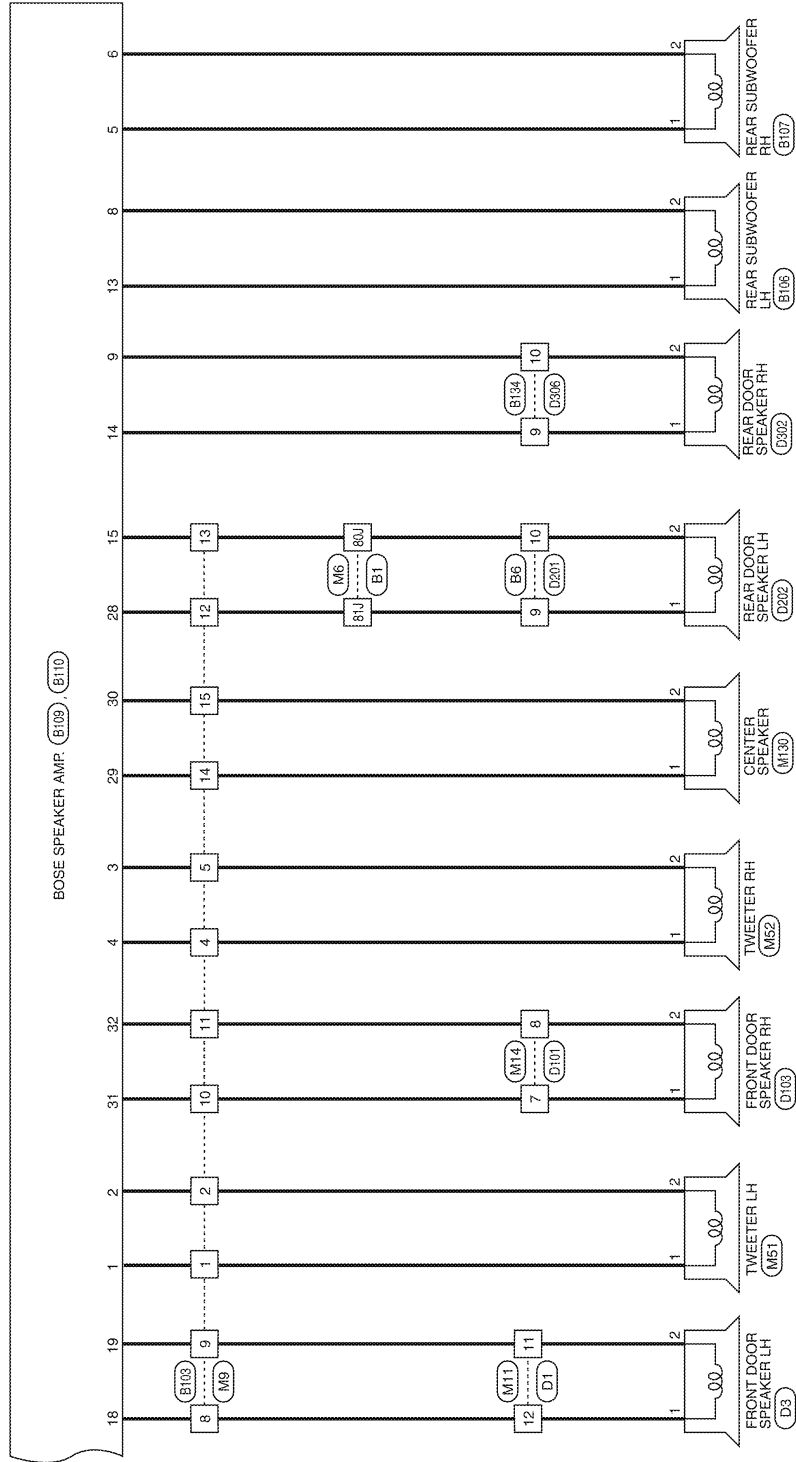
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AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

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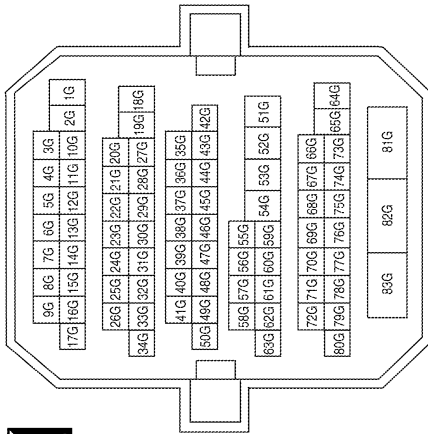
AV CONTROL UNIT

[BOSE W/ COLOR DISPLAY W/ NAVI]

< ECU DIAGNOSIS >

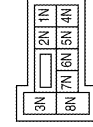
BOSE AUDIO SYSTEM CONNECTORS - WITH NAVI WITHOUT REAR CONTROLS

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



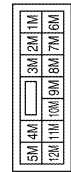
Terminal No.	Color of Wire	Signal Name
13G	O	--
24G	G/R	--
53G	B/R	--
54G	BR	--
64G	Y/R	--

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	--

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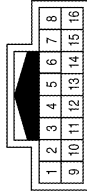
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

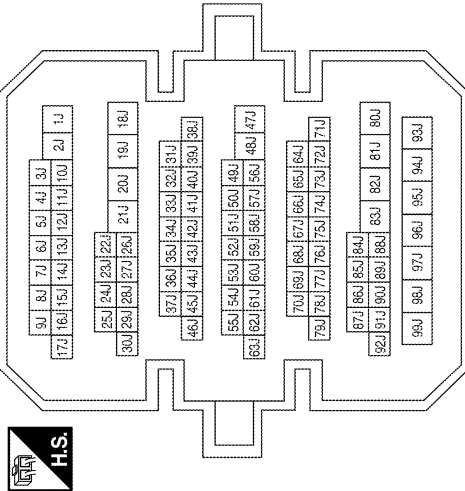
Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

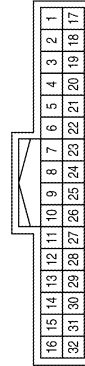
Terminal No.	Color of Wire	Signal Name
80J	B/Y	-
81J	LG	-
88J	P/B	-

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



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	-

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



Terminal No.	Color of Wire	Signal Name
17	G	-
18	R	-
19	SHIELD	-
20	B	-
21	W	-

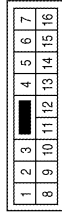
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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

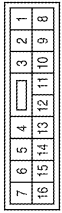
Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

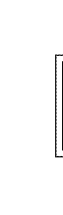
Terminal No.	Color of Wire	Signal Name
9	B/W	--
10	BR	--
11	B/R	--
12	LG	--
13	B/Y	--
14	B/P	--
15	O/B	--

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



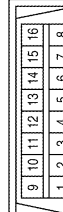
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	B/Y	--
4	L/O	--
5	GR/L	--
6	BR	--
7	B/R	--
8	L	--

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



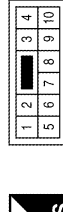
Terminal No.	Color of Wire	Signal Name
26	G/R	PKB
31	V/W	8P/R OUT

Connector No.	M22
Connector Name	DATA LINK CONNECTOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	G	M CAN L
11	R	M CAN H

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/ NAVI]

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



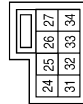
Terminal No.	Color of Wire	Signal Name
1	L/O	-
2	GR/L	-

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



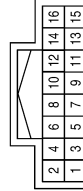
Terminal No.	Color of Wire	Signal Name
1	LG	-
2	BY	-

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	A/C AND AV SWITCH ASSEMBLY
Connector Color	WHITE



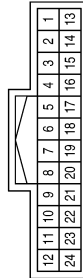
Terminal No.	Color of Wire	Signal Name
1	B	GND
3	V/Y	ACC
4	R/L	ILL+
5	R/Y	ILL CONT GND
6	L	CAN-H
8	P	CAN-L
9	BR	SW GND
14	SB	CD (DVD) EJECT

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.	M85
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	B	-
10	W	-
11	R	-
12	SHIELD	-
21	V	-
22	V	-
23	SHIELD	-
24	B	-

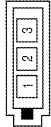
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AV CONTROL UNIT

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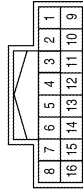
[BOSE W/ COLOR DISPLAY W/ NAVI]

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



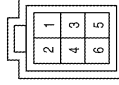
Terminal No.	Color of Wire	Signal Name
1	B	--
2	B	--

Connector No.	M110
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	--
2	SHIELD	--
6	V/G	--
7	L	--

Connector No.	M112
Connector Name	WIRE TO WIRE
Connector Color	GRAY



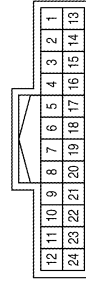
Terminal No.	Color of Wire	Signal Name
1	B	--
2	R	--
3	W	--
4	G	--

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.	M142
Connector Name	DISPLAY UNIT (WITH COLOR DISPLAY AND NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	--	--
2	--	--
3	--	--
4	--	--
5	--	--
6	SHIELD	FRONT COMP SHIELD
7	SHIELD	R CAMERA COMP.
8	B	R CAMERA COMP+
9	BR	DISP IT
10	Y	IT DISP

Terminal No.	Color of Wire	Signal Name
11	Y/R	+B
12	B	GND
13	--	--
14	--	--
15	--	--
16	--	--
17	--	--
18	R	FRONT COMP+
19	W	FRONT COMP-
20	B	FRONT COMP SYNC
21	--	--
22	SHIELD	SHIELD
23	V/Y	ACC
24	--	--

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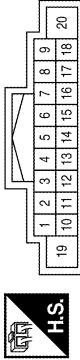
AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

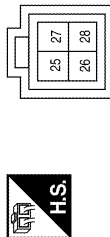
Terminal No.	Color of Wire	Signal Name
9	R/L	ILL
10	SHIELD	SHIELD
11	B	FR RH PRE+
12	W	FR RH PRE-
13	V	RR RH PRE+
14	LG	RR RH PRE-
15	L/B	STRG SW GND
16	GR/L	STRG SW B
17	-	-
18	-	-
19	Y/R	BAT
20	B	GND

Connector No.	M160
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	WHITE



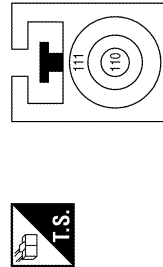
Terminal No.	Color of Wire	Signal Name
1	B/P	AMP ON
2	G	FR LH PRE+
3	R	FR LH PRE-
4	W/R	RR LH PRE+
5	W/L	RR LH PRE-
6	W/G	STRG SW A
7	V/Y	ACC
8	-	-

Connector No.	M151
Connector Name	DISPLAY UNIT (WITH COLOR DISPLAY AND NAVI)
Connector Color	GREEN



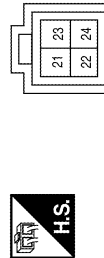
Terminal No.	Color of Wire	Signal Name
25	-	-
26	-	-
27	R	FRONT GVIF+
28	W	FRONT GVIF-

Connector No.	M162
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	PINK



Terminal No.	Color of Wire	Signal Name
110	B	-
111	B	-

Connector No.	M161
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
21	-	-
22	-	-
23	R	GVIF +
24	W	GVIF -

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AV CONTROL UNIT

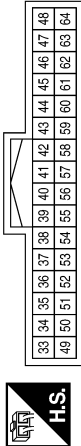
< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Terminal No.	Color of Wire	Signal Name
52	G	IGN
53	P/B	REVERSE SIG
54	V/W	SPEED 8P
55	SHIELD	NAVI COMP1 SHIELD
56	B	NAVI COMP1 SYNC
57	-	-
58	-	-
59	L	MIC SIG
60	SHIELD	SHIELD
61	BR	DISP IT
62	L	CAN-H
63	L	M-CAN H
64	L	M-CAN H TRM

Terminal No.	Color of Wire	Signal Name
39	W	NAVI COMP 1+
40	R	NAVI COMP 1-
41	-	-
42	-	-
43	SHIELD	MIC GND
44	R	MIC VCC
45	Y	IT DISP
46	P	CAN-L
47	P	M-CAN L
48	P	M-CAN L TRM
49	-	-
50	-	-
51	R/L	MIR OUTPUT

Connector No.	M163
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	WHITE

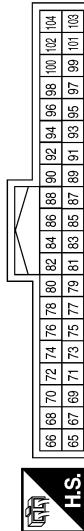


Terminal No.	Color of Wire	Signal Name
33	-	-
34	-	-
35	-	-
36	P/W	ROOM LAMP
37	G/R	PKB SIG
38	-	-

Terminal No.	Color of Wire	Signal Name
89	-	-
90	-	-
91	-	-
92	-	-
93	-	-
94	-	-
95	-	-
96	-	-
97	-	-
98	-	-
99	-	-
100	-	-
101	-	-
102	-	-
103	-	-
104	-	-

Terminal No.	Color of Wire	Signal Name
72	-	-
73	-	-
74	-	-
75	V	AUX VIDEO -
76	LG	AUX VIDEO +
77	SHIELD	VIDEO SHIELD
78	-	-
79	-	-
80	-	-
81	BR	SW GND
82	SB	CD (DVD) EJECT
83	-	-
84	-	-
85	-	-
86	-	-
87	-	-
88	-	-

Connector No.	M164
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
65	-	-
66	-	-
67	W	CAMERA GND
68	R	CAMERA V+
69	-	-
70	-	-
71	-	-

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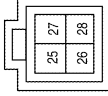
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

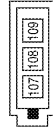
[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	M167
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
25	B	USB GND
26	W	USB D-
27	R	V BUS
28	G	USB D+

Connector No.	M166
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
108	B	ANT MAIN
109	B	ANT +B

Connector No.	M165
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	GRAY

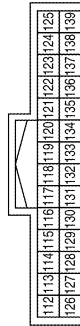


Terminal No.	Color of Wire	Signal Name
105	B	GPS ANT
106	SHIELD	SHIELD

Terminal No.	Color of Wire	Signal Name
132	-	-
133	-	-
134	-	-
135	-	-
136	-	-
137	-	-
138	-	-
139	-	-

Terminal No.	Color of Wire	Signal Name
119	-	-
120	-	-
121	-	-
122	-	-
123	-	-
124	-	-
125	-	-
126	-	-
127	-	-
128	SHIELD	AUX SHIELD
129	B	AUX AUDIO RH+
130	R	AUX GND
131	-	-

Connector No.	M168
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
112	-	-
113	-	-
114	-	-
115	W	AUX AUDIO LH+
116	-	-
117	-	-
118	-	-

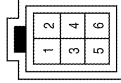
ABNIA1654GB

AV CONTROL UNIT

< ECU DIAGNOSIS >

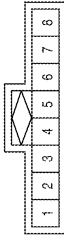
[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	M210
Connector Name	WIRE TO WIRE
Connector Color	GRAY



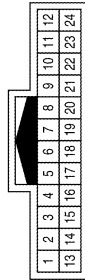
Terminal No.	Color of Wire	Signal Name
1	B	--
2	R	--
3	W	--
4	G	--

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-

Connector No.	M200
Connector Name	WIRE TO WIRE
Connector Color	WHITE



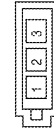
Terminal No.	Color of Wire	Signal Name
9	B	--
10	W	--
11	R	--
12	SHIELD	--
21	LG	--
22	V	--
23	SHIELD	--
24	GR	--

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



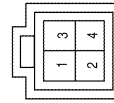
Terminal No.	Color of Wire	Signal Name
1	B	--
2	B	--

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



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

Connector No.	M211
Connector Name	USB INTERFACE
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
1	R	VBUS
2	G	USB D+
3	B	USB GND
4	W	USB D-

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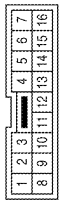
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

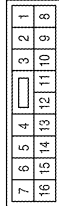
[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



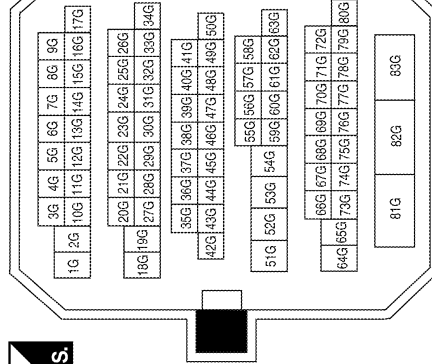
Terminal No.	4	R	Signal Name	-
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Connector No.	E29
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	15	W	Signal Name	-
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Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	13G	BR	Signal Name	-
24G	P	-	-	
53G	GR	-	-	
54G	BR	-	-	
64G	V	-	-	

Connector No.	E34
Connector Name	BACK-UP LAMP RELAY
Connector Color	BLUE



Terminal No.	1	O	Signal Name	-
2	R	-	-	
3	W	-	-	
5	LG	-	-	

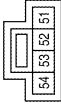
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AV CONTROL UNIT

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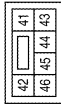
[BOSE W/ COLOR DISPLAY W/ NAVI]

Connector No.	E49
Connector Name	JUNCTION BLOCK
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
51	LG	--
52	O	--

Connector No.	E47
Connector Name	JUNCTION BLOCK
Connector Color	WHITE



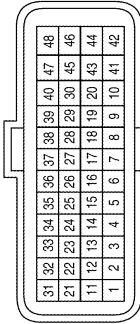
Terminal No.	Color of Wire	Signal Name
45	BR	--

Connector No.	E35
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



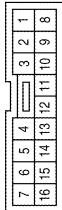
Terminal No.	Color of Wire	Signal Name
1	P	--

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	--

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AV

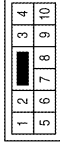
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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

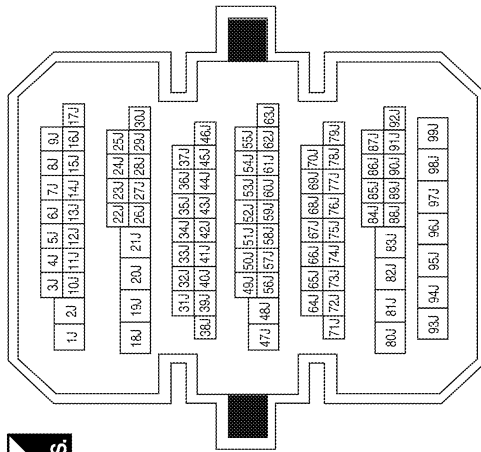
Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



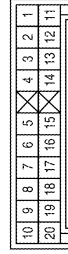
Terminal No.	Color of Wire	Signal Name
9	LG	-
10	O	-

Terminal No.	Color of Wire	Signal Name
80J	O	-
81J	LG	-
88J	V	-

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

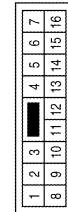


Connector No.	B20
Connector Name	JOINT CONNECTOR-B05
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
5	V	-
7	V	-
8	V	-
9	V	-

Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15	V	-


ABNIA1658GB

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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




1	2	3	4	5	6	7		
8	9	10	11	12	13	14	15	16

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

Terminal No.	Color of Wire	Signal Name
24	Y	--
25	SHIELD	--
26	V	--
27	LG	--
28	SHIELD	--
29	SB	--

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



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

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	--

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



2	1
---	---

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

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



2	1
---	---

Terminal No.	Color of Wire	Signal Name
1	L	--
2	P	--

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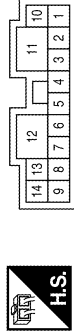
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

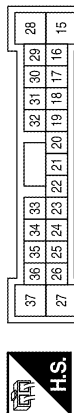
Connector No.	B110
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	FR TWDR LH+ OUT
2	V	FR TWDR LH- OUT
3	W	FR TWDR RH- OUT
4	G	FR TWDR RH+ OUT
5	R	RH WOOFER+ OUT
6	BR	RH WOOFER- OUT
7	B	GND
8	P	LH WOOFER- OUT
9	O	RR DOOR RH- OUT
10	SB	BAT
11	GR	BAT
12	B	GND
13	L	LH WOOFER+ OUT
14	LG	RR DOOR RH+ OUT

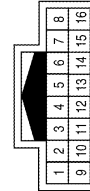
Terminal No.	Color of Wire	Signal Name
31	R	FR DOOR RH+ OUT
32	BR	FR DOOR RH- OUT
33	W/L	FR RH-IN (WITH COLOR DISPLAY)
34	GR/V	FR RH-IN (WITH COLOR DISPLAY)
35	W/R	FR LH-IN (WITH COLOR DISPLAY)
36	B/R	FR LH-IN (WITH COLOR DISPLAY)

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



Terminal No.	Color of Wire	Signal Name
15	L	RR DOOR LH- OUT
18	W	FR DOOR LH+ OUT
19	B	FR DOOR LH- OUT
20	SB	AMP ON
23	Y	RR LH-IN (WITH COLOR DISPLAY)
24	BR	RR LH-IN (WITH COLOR DISPLAY)
25	LG	RR RH-IN (WITH COLOR DISPLAY)
26	V	RR RH-IN (WITH COLOR DISPLAY)
28	G	RR DOOR LH+ OUT
29	V	INST CTR TWDR+ OUT
30	P	INST CTR TWDR- OUT

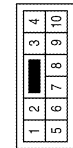
Connector No.	B136
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	SHIELD	-
6	V/G	-
7	L	-



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



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

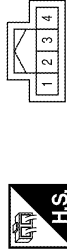
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AV CONTROL UNIT

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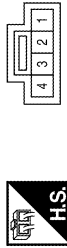
[BOSE W/ COLOR DISPLAY W/ NAVI]

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.	T100
Connector Name	WIRE TO WIRE
Connector Color	WHITE



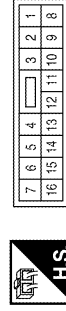
Terminal No.	Color of Wire	Signal Name
1	R	--
2	W	--
3	B	--
4	SHIELD	--

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



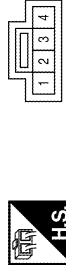
Terminal No.	Color of Wire	Signal Name
1	L	--
2	V/G	--
3	W	--
4	SHIELD	--

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



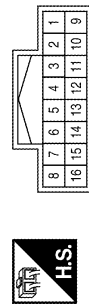
Terminal No.	Color of Wire	Signal Name
11	O	--
12	LG	--

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.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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AV CONTROL UNIT

< ECU DIAGNOSIS >

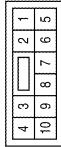
[BOSE W/ COLOR DISPLAY W/ NAVI]

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	--

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.	D302
Connector Name	REAR DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



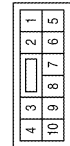
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	O	--

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
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	--

ABNIA1662GB

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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



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

AV

ABNIA1663GB

INFOID:000000005524528

DTC Index

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-380, "Diagnosis Procedure"
U1010	CONTROL UNIT (CAN) [1010]	AV-381, "DTC Logic"
U1200	Cont Unit [U1200]	AV-382, "DTC Logic"
U1201	GYRO NO CONN [U1201]	AV-383, "DTC Logic"
U1202	G-SENSOR NO CONN [U1202]	AV-384, "DTC Logic"
U1204	GPS COMM [U1204]	AV-385, "Diagnosis Procedure"
U1205	GPS ROM [U1205]	AV-386, "Diagnosis Procedure"
U1206	GPS RAM [U1206]	AV-387, "Diagnosis Procedure"
U1207	GPS RTC [U1207]	AV-388, "Diagnosis Procedure"
U1216	CAN CONT [U1216]	AV-389, "DTC Logic"
U1217	BLUETOOTH MODULE [U1217]	AV-390, "DTC Logic"
U1218	HDD CONN [U1218]	AV-391, "Diagnosis Procedure"
U1219	HDD READ [U1219]	AV-392, "Diagnosis Procedure"
U121A	HDD WRITE [U121A]	AV-393, "Diagnosis Procedure"
U121B	HDD COMM [U121B]	AV-394, "Diagnosis Procedure"
U121C	HDD ACCESS [U121C]	AV-395, "Diagnosis Procedure"
U121D	DSP CONN [U121D]	AV-396, "Diagnosis Procedure"
U121E	DSP COMM [U121E]	AV-397, "Diagnosis Procedure"
U1225	USB CONTROLLER [U1225]	AV-398, "DTC Logic"
U1227	DVD COMM [U1227]	AV-399, "Diagnosis Procedure"
U1228	SUB CPU CONN [U1228]	AV-400, "DTC Logic"
U1229	iPod CERTIFICATION [U1229]	AV-401, "DTC Logic"
U122A	CONFIG UNFINISH [U122A]	AV-402, "Diagnosis Procedure"
U122E	Built-in AUDIO CONN [U122E]	AV-403, "DTC Logic"
U1232	ST ANGLE SEN CALIB [1232]	AV-404, "Diagnosis Procedure"
U1243	FRONT DISP CONN [U1243]	AV-405, "Diagnosis Procedure"
U1244	GPS ANTENNA CONN [U1244]	AV-407, "Diagnosis Procedure"
U1263	USB OVERCURRENT [U1263]	AV-408, "Diagnosis Procedure"
U1310	CONTROL UNIT (AV) [U1310]	AV-410, "DTC Logic"
U1300 U1240	<ul style="list-style-type: none"> • AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] 	AV-409, "Description"

DISPLAY UNIT

< ECU DIAGNOSIS >

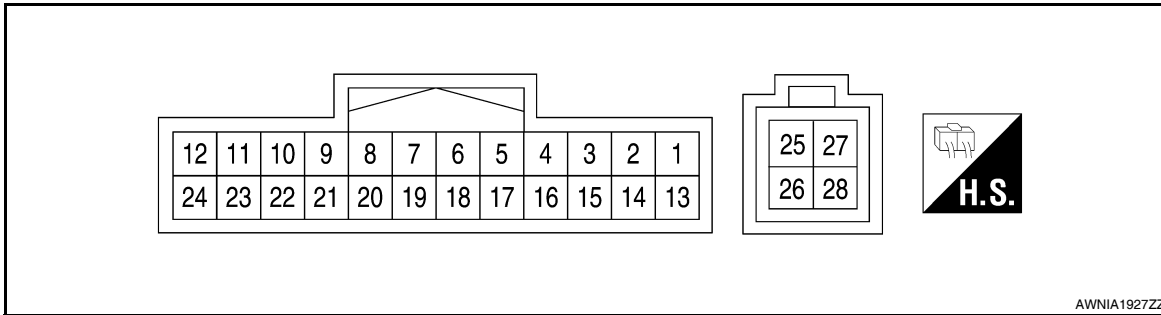
[BOSE W/ COLOR DISPLAY W/ NAVI]

DISPLAY UNIT

Reference Value

INFOID:00000000524529

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
6	—	Shield	—	—	—	—
7	—	Shield	—	—	—	—
8 (B)	Ground	Rear view camera image signal	Input	Ignition switch ON	At rear view camera image is displayed.	<p>SKIB2251J</p>
9 (BR)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display- brightness.	<p>PKIB5039J</p>
10 (Y)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display- brightness.	<p>PKIB5039J</p>
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery Voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0V

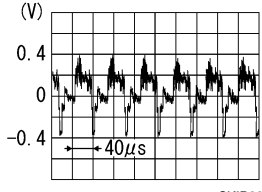
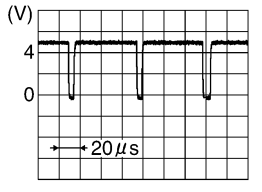
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AV

DISPLAY UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
18 (R)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
19 (W)	Ground	Composite image ground	—	Ignition switch ON	—	0V
20 (B)	Ground	Composite synchronizing signal	Input	Ignition switch ON	—	 <p style="text-align: right; font-size: small;">SKIB3603E</p>
22	—	Shield	—	—	—	—
23 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	—	—
27 (R)	—	RGB digital image signal (+)	Input	—	—	—
28 (W)	—	RGB digital image signal (-)	Input	—	—	—

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

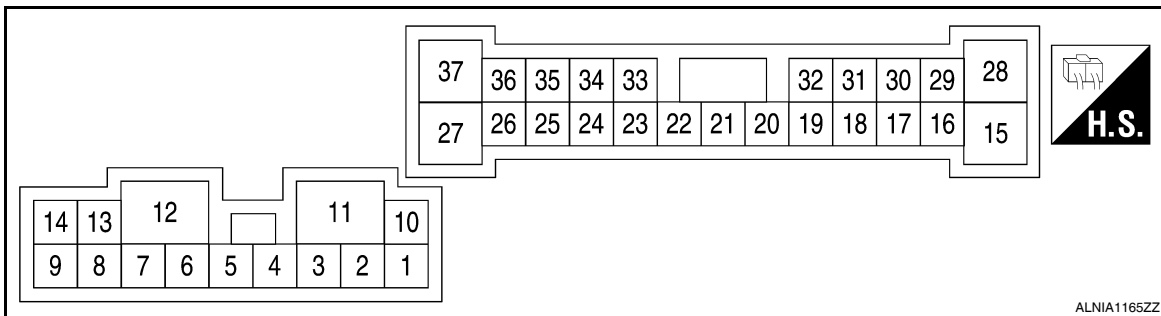
[BOSE W/ COLOR DISPLAY W/ NAVI]

BOSE SPEAKER AMP

Reference Value

INFOID:00000000524530

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 (G)	3 (W)	Audio signal tweeter RH	Output	Ignition switch ON	Audio output	<p>SKIB3609E</p>
5 (R)	6 (BR)	Audio signal subwoofer LH	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

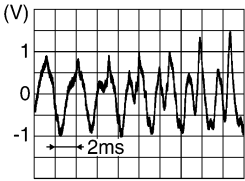
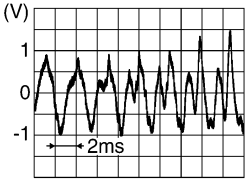
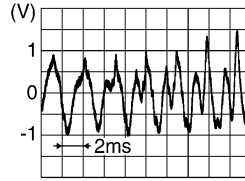
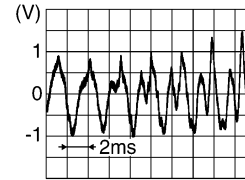
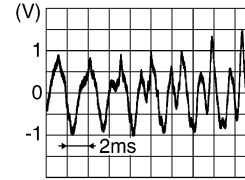
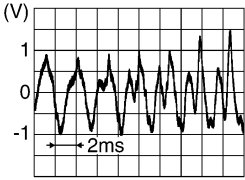
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AV

BOSE SPEAKER AMP

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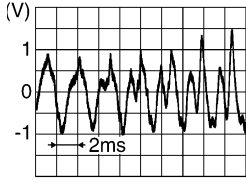
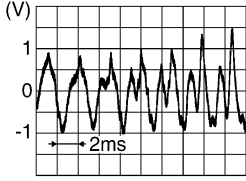
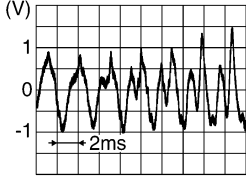
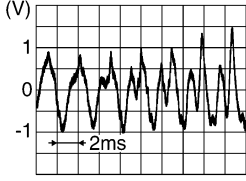
[BOSE W/ COLOR DISPLAY W/ NAVI]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
13 (L)	8 (P)	Audio signal subwoofer LH	Output	Ignition switch ON	Audio output	 <p>SKIB3609E</p>
14 (LG)	9 (O)	Audio signal rear door speaker RH	Output	Ignition switch ON	Audio output	 <p>SKIB3609E</p>
18 (W)	19 (B)	Audio signal front door speaker LH	Output	Ignition switch ON	Audio output	 <p>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>SKIB3609E</p>
26 (V)	25 (LG)	Audio signal rear RH	Input	Ignition switch ON	Audio input	 <p>SKIB3609E</p>
28 (G)	15 (L)	Audio signal rear door speaker LH	Output	Ignition switch ON	Audio output	 <p>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			
29 (V)	30 (P)	Audio signal center speaker	Output	Ignition switch ON	Audio output	
31 (R)	32 (BR)	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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AV

MULTI AV SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM SYMPTOMS

Symptom Table

INFOID:000000005524534

RELATED TO NAVIGATION

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
Multifunction switch and preset switch operation does not work.	<ul style="list-style-type: none"> All switches cannot be operated. "MULTI AV" is displayed on system selection screen when the CONSULT-III is started. 	<ul style="list-style-type: none"> Multifunction switch power supply and ground circuit. Refer to AV-439, "Diagnosis Procedure". AV communication circuit between AV control unit and multifunction switch. Perform CONSULT-III self-diagnosis. Refer to AV-376, "CONSULT - III Function (MULTI AV)".
	<ul style="list-style-type: none"> All switches cannot be operated. "MULTI AV" is not displayed on system selection screen when the CONSULT-III is initialized. 	AV control unit power supply and ground circuit malfunction. Refer to AV-411, "AV CONTROL UNIT : Diagnosis Procedure" .
	Only specified switch cannot be operated.	Multifunction switch or preset switch malfunction. Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-439, "Diagnosis Procedure" .
Fuel economy display is abnormal.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis. Refer to AV-376, "CONSULT - III Function (MULTI AV)" .
	There is no malfunction in the self-diagnosis results.	Ignition signal circuit malfunction. Refer to PCS-65, "Diagnosis Procedure" .
Start of the AV control unit takes time.	—	Room lamp timer control circuit malfunction.
Guide sound is not heard or too low.	On the setting display select "system sound (guide sound volume, etc.)," and confirm that guide sound is ON.	Voice guidance signal circuit malfunction.

RELATED TO HANDS-FREE PHONE

- Check that the cellular phone is the corresponding type (Bluetooth™ enabled) and Bluetooth™ turns ON.
- Malfunction may occur due to the version change of the phone type, etc. even though it is the corresponding type. The cell phone must support at least hands-free profile V1.0 and object push V1.0. Refer to cell phone instruction manual.
- When customers contact concerning Bluetooth™ compatible cell phone malfunction for the first time, always suggest customers to update cellular phone software if possible.
- Check that customer cellular phone is compatible on the published list. The dealer should contact its RBU/NSC for the list.
- Take note of any exceptions that the list may detail, i.e. no ringing tone or no phonebook transfer etc. If the customer phone is not listed then its full function cannot be guaranteed. NISSAN should not replace the AV control unit if the cell phone does not appear on the list or the cell phone is operating as described on the list e.g. no ringing tone, no phonebook transfer etc.
- Take note of any exceptions to other phones made by the same manufacturer as the customers. Any exceptions on one model by a specific manufacturer may be common to all models made by that manufacturer.

Simple Check for Bluetooth™ Communication

If cellular phone and AV control unit cannot be connected with Bluetooth™ communication, following procedure allows the technician to judge which device has malfunction.

- Turn ON cellular phone, not connecting Bluetooth™ communication.
- Start CONSULT-III, then start Windows®.
- Set CONSULT-III near a cellular phone.

MULTI AV SYSTEM SYMPTOMS

[BOSE W/ COLOR DISPLAY W/ NAVI]

< SYMPTOM DIAGNOSIS >

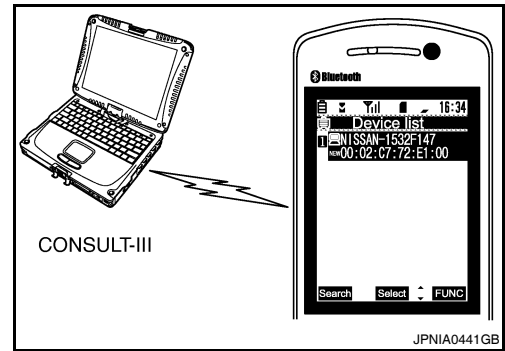
4. When operated Bluetooth™ registration by cellular phone, check if CONSULT-III* would be displayed on the device name. (If other Bluetooth™ device is located near cellular phone, a name of the device would be displayed also.)

NOTE:

*:Displayed device name is "NISSAN-*****".

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

*: There is no 100% guarantee that cellular phone operates all functions on AV control unit. Different phone manufacturers implement Bluetooth™ in different ways. Phones on Supported Phone List are tested and any minor exceptions are listed.



Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection. (no connection is displayed on the display at the guide.)	Repeat the registration of cellular phone.	AV control unit malfunction. Replace AV control unit. Refer to AV-487, "Removal and Installation" .
Hands-free phone cannot be established.	<ul style="list-style-type: none"> • Hands-free phone operation can be made, but the communication cannot be established. • Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation. 	AV control unit malfunction. Replace AV control unit. Refer to AV-487, "Removal and Installation" .
The other party's voice cannot be heard by hands-free phone.	Check the "microphone speaker" in Inspection & Adjustment Mode if sound is heard.	AV control unit malfunction. Replace AV control unit. Refer to AV-487, "Removal and Installation" .
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	AV control unit malfunction. Replace AV control unit. Refer to AV-487, "Removal and Installation" .
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-422, "Diagnosis Procedure" .
The system cannot be operated.	<ul style="list-style-type: none"> • The retractable hard top is fully closed. • The voice recognition cannot be controlled. 	Roof status signal circuit malfunction.
	<ul style="list-style-type: none"> • The retractable hard top is fully closed. • The voice recognition can be controlled. • Steering switch's "VOL UP", "VOL DOWN", "↶" switch works, but "↷" it does not work. 	Steering switch malfunction.
	<ul style="list-style-type: none"> • The retractable hard top is fully closed. • The voice recognition can be controlled. • Steering switch's "↷", "VOL UP", "VOL DOWN", "↶" switches do not work. 	Steering switch signal B circuit malfunction. Refer to AV-439, "Diagnosis Procedure" .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-439, "Diagnosis Procedure" .

RELATED TO RGB IMAGE

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
RGB image is not shown.	—	RGB digital image signal circuit malfunction.

MULTI AV SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

RELATED TO VOICE CONTROL

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
The voice cannot be controlled even if the voice control screen is displayed.	Voice sounds at "Voice Microphone Test" of Confirmation/Adjustment mode.	AV control unit malfunction. Replace AV control unit. Refer to AV-487, "Removal and Installation" .
	Voice does not sound at "Voice Microphone Test" of Confirmation/Adjustment mode.	Microphone circuit malfunction. Refer to AV-422, "Diagnosis Procedure" .
The voice cannot be controlled (Voice control screen is not displayed).	<ul style="list-style-type: none"> Steering switch's "SOURCE", "MENU UP", "MENU DOWN", "ENTER" switch works, but "⏏" does not work. Hands-free phone system can be operated. 	Steering switch malfunction.
	Steering switch's "SOURCE", "MENU UP", "MENU DOWN", "⏏", "ENTER" switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-439, "Diagnosis Procedure" .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-439, "Diagnosis Procedure" .

RELATED TO AUDIO

Symptoms	Check items	Possible malfunction location / Action to take
The CD cannot be removed.	—	Disk eject signal circuit malfunction between AV control unit and preset switch. Refer to AV-421, "Diagnosis Procedure" .
Audio sound is not heard.	No sound from all speakers.	<ul style="list-style-type: none"> Amp. ON signal circuit. BOSE amp. power supply and ground circuit. Refer to AV-414, "BOSE SPEAKER AMP : Diagnosis Procedure".
	There is no sound from the woofer.	<ul style="list-style-type: none"> Woofer amp. power supply and ground circuit. Refer to AV-414, "BOSE SPEAKER AMP : Diagnosis Procedure". Sound signal woofer circuit between BOSE amp. and woofer. Woofer amp. ON signal circuit between BOSE amp. and woofer.
	There is sound only from specific places (RH front, RH rear, LH front and LH rear).	Sound signal circuit of suspect system.
Satellite radio is not received.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-376, "CONSULT - III Function (MULTI AV)" .
	There is no malfunction in the CONSULT-III self-diagnosis result.	Perform the following inspection procedure. <ol style="list-style-type: none"> Check satellite radio antenna mounting nut for looseness. Visually check for satellite radio antenna feeder. Replace the satellite radio antenna. Refer to AV-500, "Removal and Installation". Replace the AV control unit. Refer to AV-487, "Removal and Installation".
AM/FM radio is not received.	Other audio sounds are normal.	<ul style="list-style-type: none"> Antenna amp. ON signal circuit. Antenna feeder.

RELATED TO USB

NOTE:

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

Trouble Diagnosis Chart by Symptom

MULTI AV SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Symptoms	Check items	Possible malfunction location / Action to take
iPod® or USB memory can not be recognized.	—	<ul style="list-style-type: none"> • USB harness malfunction. • USB connector malfunction.

iPod® is a trademark of Apple inc., registered in the U.S. and other countries.

RELATED TO DVD MODE

Symptoms	Check items	Probable malfunction location
The DVD cannot be removed.	—	Disk eject signal circuit malfunction between AV control unit and preset switch. Refer to AV-421, "Diagnosis Procedure" .
DVD image is not displayed.	—	Perform CONSULT-III self-diagnosis. Refer to AV-376, "CONSULT - III Function (MULTI AV)" . When detecting no malfunction in those components, the following items are a possible cause. <ul style="list-style-type: none"> • Composite image signal circuits malfunction. Refer to AV-419, "Diagnosis Procedure".
Audio sound is not heard.	No sound from all speakers.	Perform CONSULT-III self-diagnosis. Refer to AV-376, "CONSULT - III Function (MULTI AV)" .
	Sound is heard only from specific places.	Perform CONSULT-III self-diagnosis. Refer to AV-376, "CONSULT - III Function (MULTI AV)" .

RELATED TO STEERING SWITCH

Trouble Diagnosis Chart by Symptom

Symptoms	Probable malfunction location
None of the steering switch operations work.	Steering switch ground circuit malfunction. Refer to AV-439, "Diagnosis Procedure" .
Only specified switch cannot be operated.	Steering switch malfunction.
Steering switch's "SOURCE", "MENU UP", "MENU DOWN", "↙", "ENTER" switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-439, "Diagnosis Procedure" .
Steering switch's "↘", "VOL UP", "VOL DOWN", "↻" switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-439, "Diagnosis Procedure" .

RELATED TO AUXILIARY INPUT

NOTE:

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

Trouble diagnosis chart by symptom

Symptoms	Check items	Probable malfunction location
No voice sound is heard when AUX mode is selected.	Voice sound is heard when other modes are selected.	AUX sound signal circuit.
Image is not displayed when AUX mode is selected.	DVD image is displayed.	AUX image signal circuit malfunction. Refer to AV-420, "Diagnosis Procedure" .
	DVD image is not displayed.	Composite image signal circuit malfunction. Refer to AV-419, "Diagnosis Procedure" .

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

NORMAL OPERATING CONDITION

Description

INFOID:00000000524535

NOTE:

For Navigation system operation information, refer to Navigation system Owner's Manual.

BASIC OPERATIONS

Symptom	Possible cause	Possible solution
No image is displayed.	The brightness is at the lowest setting.	Adjust the brightness of the display.
	The systems in the video mode.	Press "DISC-AUX" to change the mode.
	The display is turned off.	Press "☀/☾" to turn on the display.
	The interior of the vehicle becomes the a little less than 80°C (176°F) or high temperature, and the protection of the display acts, and a display is turned off.	Wait until the interior of the vehicle has cooled down.
Screen not clear.	Contrast setting is not appropriate.	Adjust the contrast of the display.
No voice guidance is available. Or The volume is too high or too low.	The volume is not set correctly, or it is turned off.	Adjust the volume of voice guidance.
	Voice guidance is not provided for certain streets (roads displayed in gray).	This is not a malfunction.
No map is displayed on the screen.	A screen other than map screen is displayed.	Press "MAP".
The screen is too dim. The movement is slow.	The temperature in the interior of the vehicle is high.	Wait until the interior of the vehicle has cooled down.
Some pixels in the display are darker or brighter than others.	This condition is an inherent characteristic of liquid crystal displays.	This is not a malfunction.
Some menu items cannot be selected.	Some menu items become unavailable while the vehicle is driven.	Park the vehicle in a safe location, and then operate the navigation system.

NOTE:

Locations stored in the Address Book and other memory functions may be lost if the vehicle's battery is disconnected or becomes discharged. If this occurs, service the vehicle's battery as necessary and re-enter the information in the Address Book.

RELATED TO VOICE RECOGNITION

Related to Basic Operation

Symptom	Possible cause	Possible solution
The system does not recognize your command. or The system recognizes your command incorrectly	The interior of the vehicle is too noisy.	Close the windows or have other occupants quiet.
	The volume of your voice is too low.	Speak louder.
	The volume if your voice is too loud.	Speak softer.
	Your pronunciation is unclear.	Speak clearly.
	You are speaking before the voice recognition is ready	Press and release "🗨" switch on the steering switch, and speak a command after the tone sounds.
	8 seconds or more have passed after you pressed and released "🗨" switch on the steering switch.	Make sure to speak a command within 8 seconds after you press and release "🗨" switch on the steering switch.
	Only a limited range of voice commands is usable for each screen.	Use a correct voice command appropriate for the current screen.
	The fan of the air conditioner is too loud.	Lower the fan speed as necessary as voice commands can be recognized more easily.

Related to Item Choice

The system should respond correctly to all voice commands without difficulty. If problems are encountered, follow the solutions given in this guide for the appropriate error.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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

Symptom/ error message	Solution
Displays "COMMAND NOT RECOGNIZED" or the system fails to interpret the command correctly.	1. Ensure that the command format is valid.
	2. Speak clearly without pausing between words and at a level appropriate to the ambient noise level.
	3. Ensure that the ambient noise level is not excessive, for example, windows open or defrost on. NOTE: If it is too noisy to use the phone, it is likely that voice commands will not be recognized.
	4. If optional words of the command have been omitted, then command should be tried with these in place.
The system consistently selects the wrong voicetag	1. Ensure that the voicetag requested matches what was originally stored. This can be confirmed by giving the "Addressbook" Directory or Phone Directory command.
	2. Replace one of the voicetags being confused with a different voicetag.

Related to Telephone

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

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

Symptom	Solution
System fails to interpret the command correctly.	1. Ensure that the command is valid.
	2. Ensure that the command is spoken after the tone.
	3. Speak clearly without pausing between words and at level appropriate to the ambient noise level in the vehicle.
	4. Ensure that the ambient noise level is not excessive (for example, windows open or defroster on). NOTE: If it is too noisy to use the phone, it is likely that the voice commands will not be recognized.
	5. If more than one command was said at a time, try saying the commands separately.
	6. If the system consistently fails to recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker. See "Speaker adaptation (SA) mode" earlier in this section. Refer to "OWNER'S MANUAL".
The system consistently selects the wrong voicetag	1. Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the "List Names" command.
	2. Replace one of the names being confused with a new name.

RELATED TO AUDIO

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

NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA, AAC, M4A) or could be incorrectly mastered by the customer on a computer.
- Check if the CDs carry the Compact Disc Logo. If not, the disc is not mastered to the "red book" Compact Disc Standard and may not play.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Symptom	Cause and Counter measure
Cannot play	Check if the CD was inserted correctly.
	Check if the CD is scratched or dirty.
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.
	If there is a mixture of music CD files (CD-DA data) and MP3/WMA/AAC/M4A files on a CD, only the music CD files (CD-DA data) will be played.
	Files with extensions other than ".MP3", ".WMA", ".AAC", ".M4A", ".mp3", ".wma", ".aac" or ".m4a" cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.
	Check if the disc or the file is generated in an irregular format, This may occur depending on the variation or the setting of MP3/WMA/AAC/M4A writing applications or other text editing applications.
Poor sound quality	Check if the CD is scratched or dirty.
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA/AAC/M4A CD, or if it is a multisession disc, some time may be required before the music starts playing.
Music cuts off or skips	The writing software and hardware combination might not match, or the writing speed, writing depth, writing width might not match the specifications. Try using the slowest writing speed.
Skipping with high bit rate files	Skipping may occur with large quantities if data such as for high bit rate data.
Move immediately to the next song when playing	When a non-MP3/WMA/AAC file has been given an extension of ".MP3", ".WMA", ".AAC", ".M4A", ".mp3", ".wma", ".aac" or ".m4a" or when play is prohibited by copyright protection, the player will skip to the next song.
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.

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

NOTE:

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

RELATED TO DVD

Symptom	Possible cause	Possible solution
Not working as operated	Some operations may be rejected or may not function as intended because of the manufacturer's intent, depending on DVD.	This is not a malfunction.
Operation not accepted	If a requested operation is prohibited, then a message is displayed on the screen. (Message display depends on DVD.)	This is not a malfunction.
DVD can not be played	Check that the DVD is inserted in the right place.	Upturn the DVD (facing the title upward).
	Check if there is condensation inside the player.	wait until the condensation is gone (about 1 hour) before using the player.
	DVD menu is displayed.	Select item to touch "ENTER"
	Insertion of a DVD with a different region code.	DVDs with a different region code can not be played. Check DVD.
	Some DVD softwares may not be played because not all DVD softwares fully comply in the standard.	This is not a malfunction.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Symptom	Possible cause	Possible solution
Interruption during playback or flicker in the display	Check that the DVD has no scratches and dirt.	Errors may not be corrected depending on the size of scratches.
Low sound quality		Wipe and clean the dirt on the disc.
Distortion in picture	In the process of fast-forward or fast-reverse.	This is not a malfunction.
Subtitles not shown	Subtitle setting is OFF.	Set subtitle.
	Subtitle is not included in the software.	Check DVD.
Not played in set language	If a language is not included in the DVD, then the DVD is played in a recommended language.	Check DVD.
Not played with set subtitle	If a set subtitle is not included in the DVD, then the DVD is played with a recommended subtitle.	Check DVD.
Subtitle and language not selectable (not played with set subtitle or in set language)	The DVD is not multilanguage-capable.	The inclusion of the number of languages depends on DVD. Languages may be selectable on the Menu screen. Check DVD.
	The DVD has a priority language or setting.	If the DVD has a priority language or settings, then settings changed with this device are not reflected.
Angle unchangeable	Plural angles are not recorded in the software.	Check if the DVD is multi-angle-capable.
Unusual screen display	Display mode to the output aspect ratio for the DVD software is inappropriate.	Switch to the appropriate display mode.
Playback time is indicated, but no sound comes out.	Playback of Mix mode Truck 1. (Mix mode: Format including Truck 1 with data other than music and Trucks from Truck 2 with music data.)	Play music data included in trucks from Truck 2.

RELATED TO VEHICLE ICON

Symptom	Possible cause	Possible solution
Names of roads differ between Plan View and Birdview™.	This is because the quantity of the displayed information is reduced so that the screen does not become too crowded. There is also a chance that names of the roads may be displayed multiple times, and the names appearing on the screen may be different because of a processing procedure.	This is not a malfunction.
The vehicle icon is not displayed in the correct position.	The vehicle was transported after the ignition switch was pressed off, for example, by a ferry or car transporter.	Drive the vehicle for a while on a road where GPS signals can be received.
	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is traveling on a new road, the vehicle icon is located on another road nearby.	Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available.	Updated road information will be included in the next version of the map data.
The screen does not switch to the night screen even after turning on the headlights.	The daytime screen was set the last time the headlights were turned on.	Set the screen to the night screen mode using <Day/Night> when you turn on the headlights.
The map does not scroll even when the vehicle is moving.	The current location map screen is not displayed.	Press "MAP".
The vehicle icon is not displayed.	The current location map screen is not displayed.	Press "MAP".

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Symptom	Possible cause	Possible solution
The location of the vehicle icon is misaligned from the actual position.	When using tire chains or replacing the tires, speed calculations based on the speed sensor may be incorrect.	Drive the vehicle for a while [at approximately 30 km/h (19 MPH) for about 30 minutes] to automatically correct the vehicle icon position. If this does not correct the vehicle icon position, contact a NISSAN/ INFINITI dealer.
	The map data has a mistake or is incomplete (the vehicle icon position is always misaligned in the same area).	Updated road information will be included in the next version of the map data.

RELATED TO ROUTE CALCULATION AND VISUAL GUIDANCE

Symptom	Possible cause	Possible solution
Waypoints are not included in the auto reroute calculation.	Waypoints that you have already passed are not included in the auto reroute calculation.	If you want to go to that waypoint again, you need to edit the route.
Route information is not displayed.	Route calculation has not yet been performed.	Set the destination and perform route calculation.
	You are not driving on the suggested route.	Drive on the suggested route.
	Route guidance is set to off.	Turn on route guidance.
	Route information is not provided for certain types of roads (roads displayed in gray).	This is not a malfunction.
The auto reroute calculation (or detour calculation) suggests the same route as the one previously suggested.	Route calculations took priority conditions into consideration, but the same route was calculated.	This is not a malfunction.
A waypoint cannot be added.	Five waypoints are already set on the route, including ones that you have already passed.	A maximum of 5 waypoints can be set on the route. If you want to go to 6 or more waypoints, perform route calculations multiple times as necessary.
The suggested route is not displayed.	Roads near the destination cannot be calculated.	Reset the destination to a main or ordinary road, and recalculate the route.
	The starting point and destination are too close.	Set a more distant destination.
	The starting point and destination are too far away.	Divide your trip by selecting one or two intermediate destinations, and perform route calculations multiple times.
	There are time restricted roads (by the day of the week, by time) near the current vehicle location or destination.	Set [Use Time Restricted Roads] to off.
The part of the route that you have already passed is deleted.	A route is managed by sections between waypoints. If you passed the first waypoint, the section between the starting point and the waypoint is deleted. (It may not be deleted depending on the area.)	This is not a malfunction.
An indirect route is suggested.	If there are restrictions (such as one-way streets) on roads close to the starting point or destination, the system may suggest an indirect route.	Adjust the location of the starting of the starting point or destination.
	The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets (gray roads.)	Reset the destination to a main or ordinary road, and recalculate the route.
The landmark information does not correspond to the actual information.	This may be caused by insufficient or incorrect map data.	Updated information will be included in the next version of the data.
The suggested route does not exactly connect to the starting point, waypoints, or destination.	There is no data for route calculation closes to these locations.	Set the starting point, waypoints and destination on a main road, and perform route calculation.

RELATED TO VOICE GUIDANCE

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

Symptom	Possible cause	Possible solution
Voice guidance is not available	Voice guidance is only available at certain intersections marked with? In some case, voice guidance is not available even when the vehicle should make a turn.	This is not a malfunction.
	The vehicle has deviated from the suggested route.	Go back to the suggested route or request route calculation again
	Voice guide is set to off.	Turn on voice guidance.
	Route guidance is set to off.	Turn on voice guidance.
The guidance contact does not correspond to the actual condition.	The contact of voice guidance may vary, depending on the types of intersections at which turn are made.	Follow all traffic rules and regulations.

RELATED TO TRAFFIC INFORMATION

Symptom	Possible cause	Possible solution
The traffic information is not displayed	The traffic information is not set to on.	Set the traffic information to on.
	You are in an area where traffic information is not available	Scroll to an area where traffic information is available
	You have not subscribed to XM NavTraffic or, your subscription to XM NavTraffic has expired.	Check your subscription status of XM NavTraffic.
	The map scale is set at a level where the display of icons is impossible.	Check that the map scale is set at a level in which the display of icons is possible.
With the automatic detour route search ON, no detour route is set to avoid congested areas.	There is no faster route compared to the current route, based on the road network and traffic information.	The automatic detour search is not intended for avoiding traffic jams. It searches for the fastest route taking into consideration such things as traffic jams.
The route does not avoid road section with traffic information stating it is closed due to road construction.	The navigation system is designed not to avoid this event because the actual period of closure may differ from the declared roadwork period.	Observe the actual road condition and follow the instructions on road for detour when necessary. If the road closure is for certain, use detour function and set the detour distance to avoid the closed road section.
Traffic information displayed differs from information from other media (e.g. radio).	Other media may use different information sources.	Observe the actual road conditions and regulations. Always observe safe driving practices and follow all traffic regulations.

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AV

PRECAUTION

PRECAUTIONS

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

INFOID:000000005460347

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 WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

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

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect (Early Production, With Electronic Steering Column Lock)

INFOID:000000005885979

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.

PRECAUTIONS

< PRECAUTION >

[BOSE W/ COLOR DISPLAY W/ NAVI]

- 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.)
- Perform self-diagnosis check of all control units using CONSULT-III.

Precaution for Trouble Diagnosis

INFOID:000000005460349

AV COMMUNICATION SYSTEM

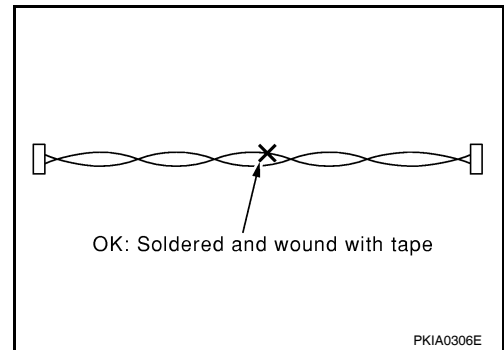
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

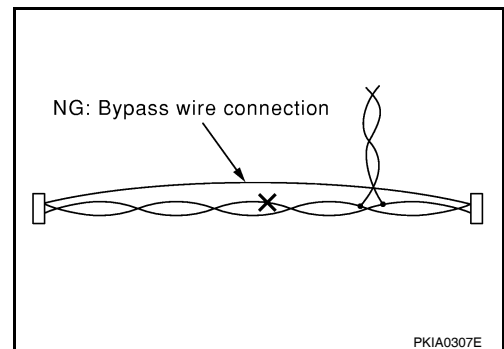
INFOID:000000005460350

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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AV

PREPARATION

< PREPARATION >

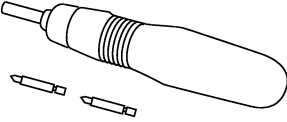
[BOSE W/ COLOR DISPLAY W/ NAVI]

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000005460351

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

AV CONTROL UNIT

< ON-VEHICLE REPAIR >

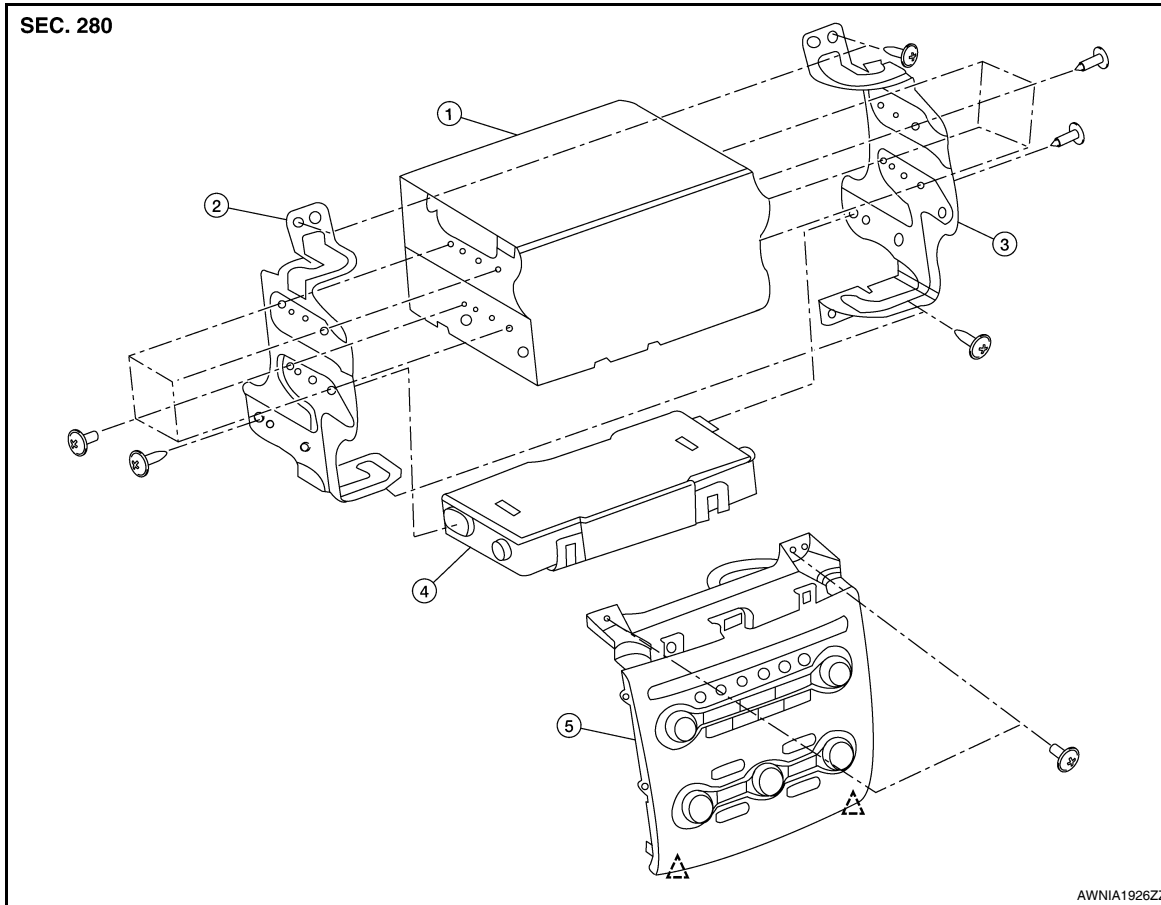
[BOSE W/ COLOR DISPLAY W/ NAVI]

ON-VEHICLE REPAIR

AV CONTROL UNIT

Removal and Installation

INFOID:000000005460352

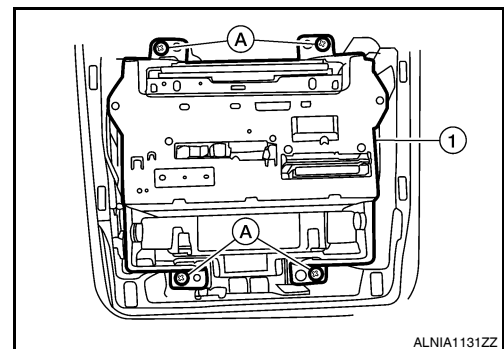


- | | | |
|------------------|---|--------------------------|
| 1. Audio unit | 2. Audio unit bracket LH | 3. Audio unit bracket RH |
| 4. A/C auto amp. | 5. Cluster lid C (with A/C and AV switch assembly attached) | △ Clips |

AUDIO UNIT

Removal

1. Disconnect the battery negative terminal.
2. Remove the cluster lid D. Refer to [IP-12, "Removal and Installation"](#).
3. Remove the cluster lid C. Refer to [IP-11, "Exploded View"](#).
4. 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

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AV

AV CONTROL UNIT

< ON-VEHICLE REPAIR >

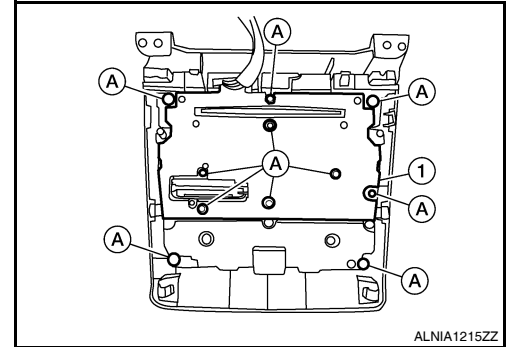
[BOSE W/ COLOR DISPLAY W/ NAVI]

Installation is in the reverse order of removal.

A/C AND AV SWITCH ASSEMBLY

Removal

1. Disconnect the battery negative terminal.
2. Remove the cluster lid D. Refer to [JP-12. "Removal and Installation"](#).
3. Remove the cluster lid C. Refer to [IP-11. "Exploded View"](#).
4. Remove the A/C and AV switch assembly screws (A), then pull out the A/C and AV switch assembly (1) from cluster lid C.



Installation

Installation is in the reverse order of removal.

MULTIFUNCTION SWITCH

< ON-VEHICLE REPAIR >


[BOSE W/ COLOR DISPLAY W/ NAVI]

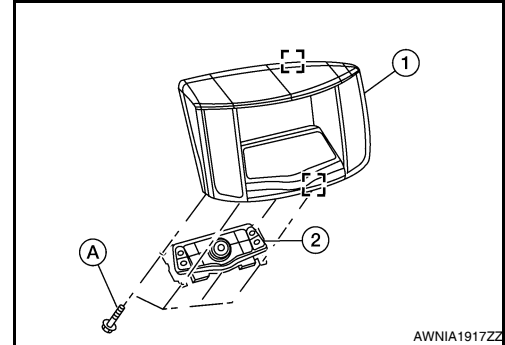
MULTIFUNCTION SWITCH

Removal and Installation

INFOID:000000005519258

REMOVAL

1. Remove cluster lid D. Refer to [IP-11. "Exploded View"](#).
2. Remove the four multifunction switch screws (A) and remove the multifunction switch (2) from cluster lid D (1).
 - : metal clip



INSTALLATION

Installation is in the reverse order of removal.

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AV

AUDIO DISPLAY UNIT

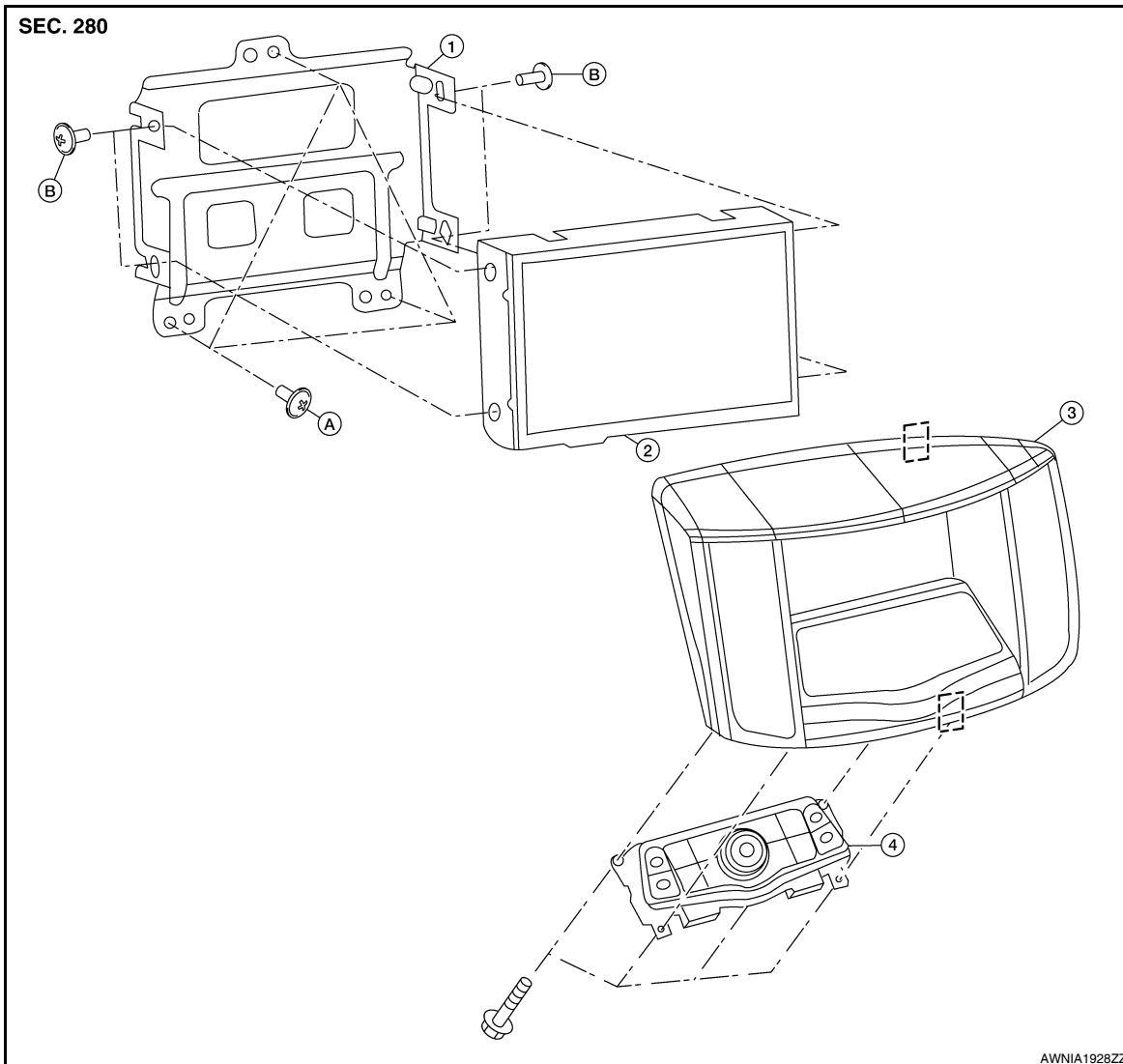
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

AUDIO DISPLAY UNIT

Removal and Installation

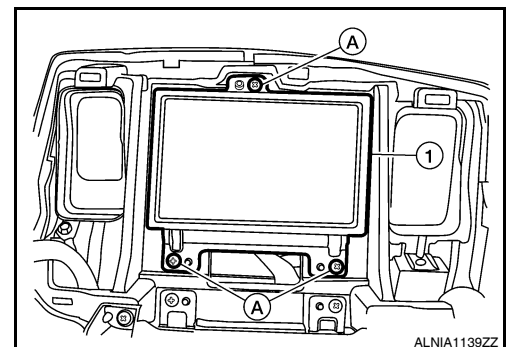
INFOID:000000005460353



- | | | |
|-------------------------------|--------------------------------------|------------------------------|
| 1. Audio display unit bracket | 2. Audio display unit | 3. Cluster lid D |
| 4. Multifunction switch | A. Audio display unit bracket screws | B. Audio display unit screws |
| [] Metal Clip | | |

REMOVAL

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



AUDIO DISPLAY UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

3. Remove the audio display unit screws on the sides and remove the audio display unit from the audio display unit brackets.

INSTALLATION

Installation is in the reverse order of removal.

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USB CONNECTOR

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

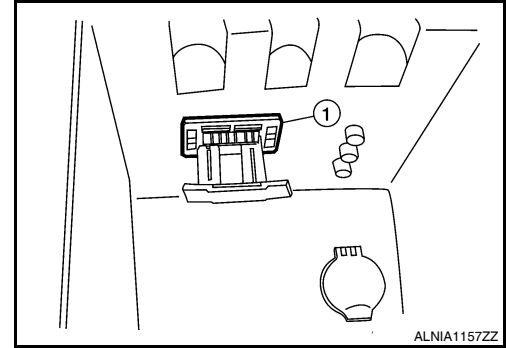
USB CONNECTOR

Removal and Installation

INFOID:000000005460355

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 USB connector (1).



INSTALLATION

Installation is in the reverse order of removal.

AUXILIARY INPUT JACKS

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

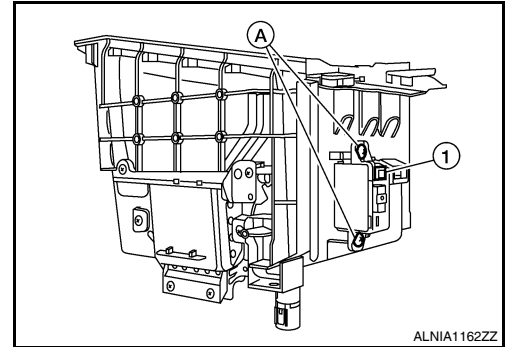
AUXILIARY INPUT JACKS

Removal and Installation

INFOID:000000005460356

REMOVAL

1. Remove the center console. Refer to [IP-16, "Removal and Installation"](#).
2. Remove 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.

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AV

FRONT TWEETER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

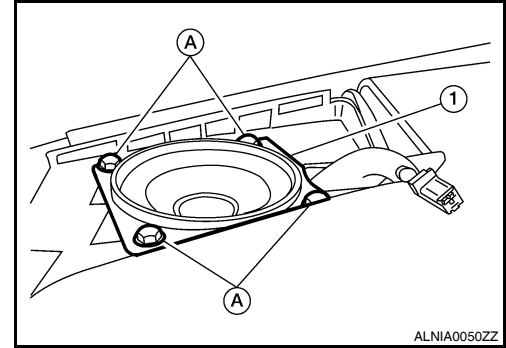
FRONT TWEETER

Removal and Installation

INFOID:000000005460357

REMOVAL

1. Remove front tweeter speaker grille. Refer to [IP-12. "Removal and Installation"](#).
2. 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.

CENTER SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

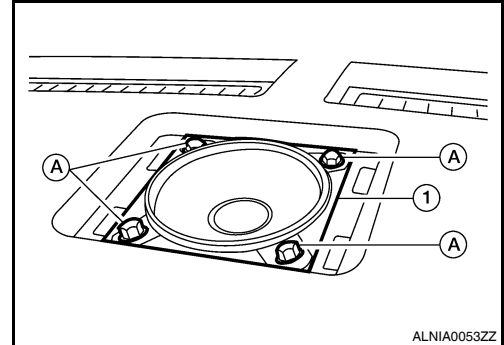
CENTER SPEAKER

Removal and Installation

INFOID:000000005460358

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/ NAVI]

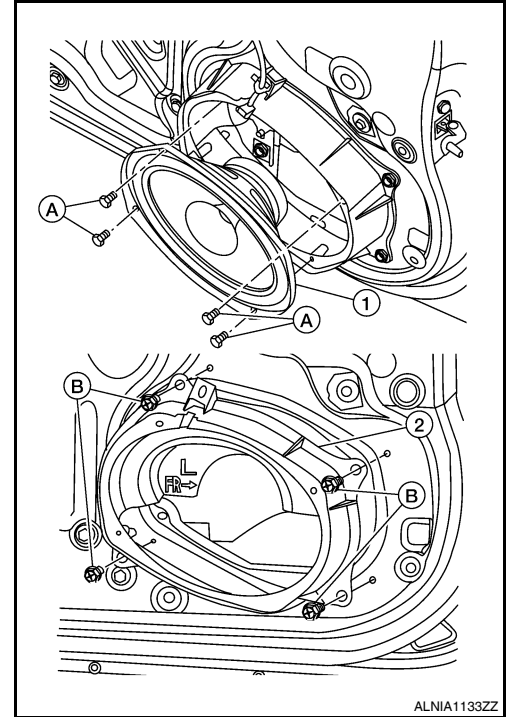
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000005460359

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

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

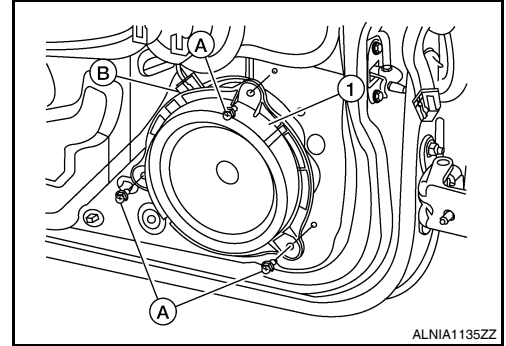
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000005460360

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

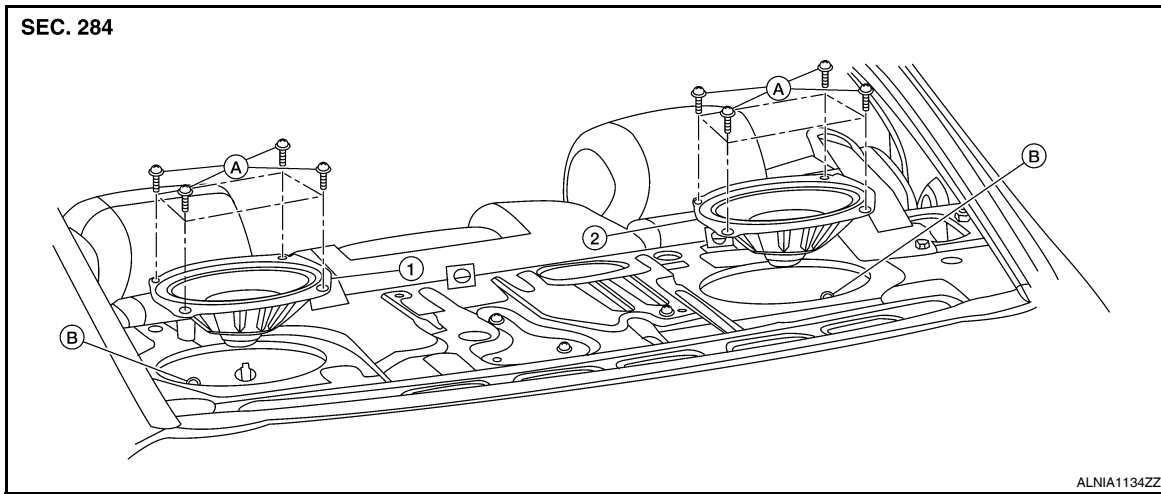
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

SUBWOOFER

Removal and Installation

INFOID:000000005460361



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

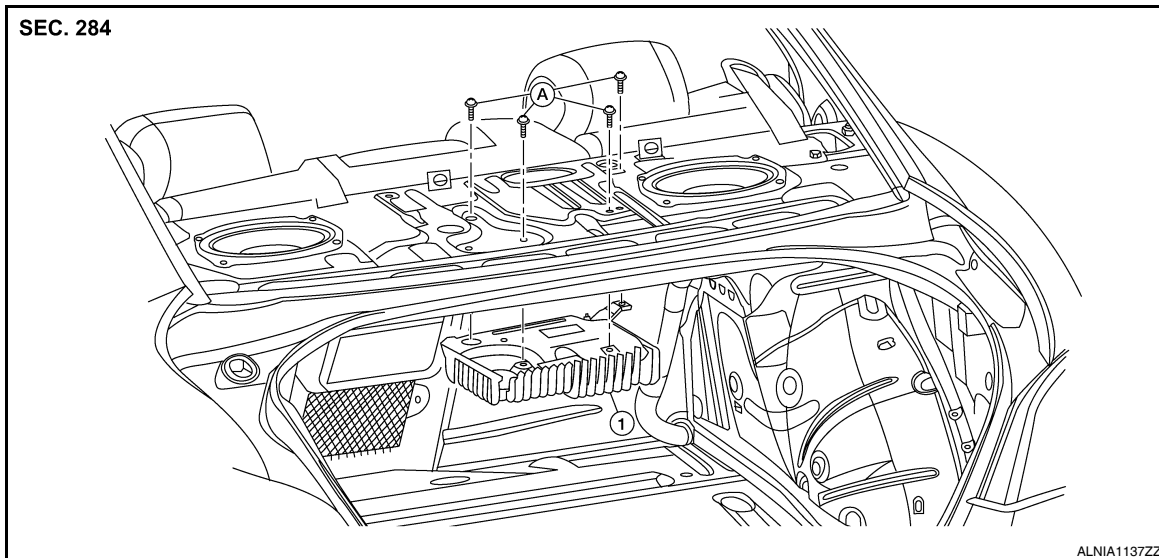
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

BOSE SPEAKER AMP

Removal and Installation

INFOID:000000005460362



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.
4. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
5. 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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SATELLITE RADIO ANTENNA

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

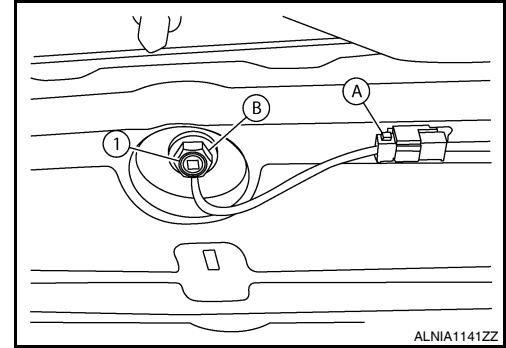
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:000000005460363

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.

GPS ANTENNA

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

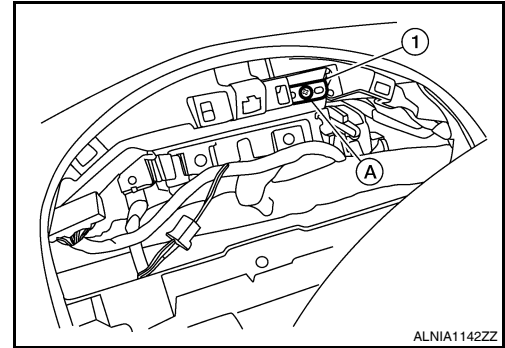
GPS ANTENNA

Removal and Installation

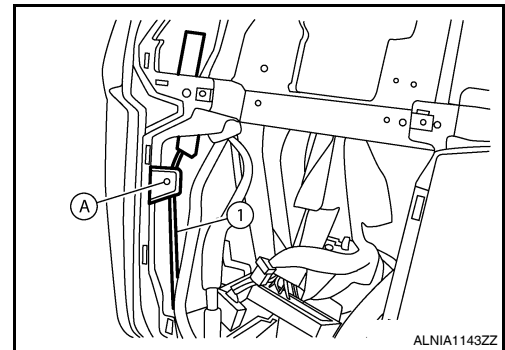
INFOID:000000005460364

REMOVAL

1. Remove cluster lid A. Refer to [IP-11, "Exploded View"](#).
2. Remove the audio unit. Refer to [AV-487, "Removal and Installation"](#).
3. Remove the GPS antenna screw (A).
 - GPS antenna (1)



4. Detach the GPS antenna cable clip (A), then fish the GPS antenna connector and harness (1), through the cluster lid A instrument panel opening and remove the GPS 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]

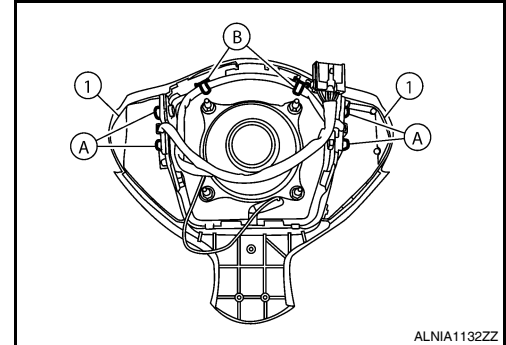
STEERING SWITCH

Removal and Installation

INFOID:000000005460365

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

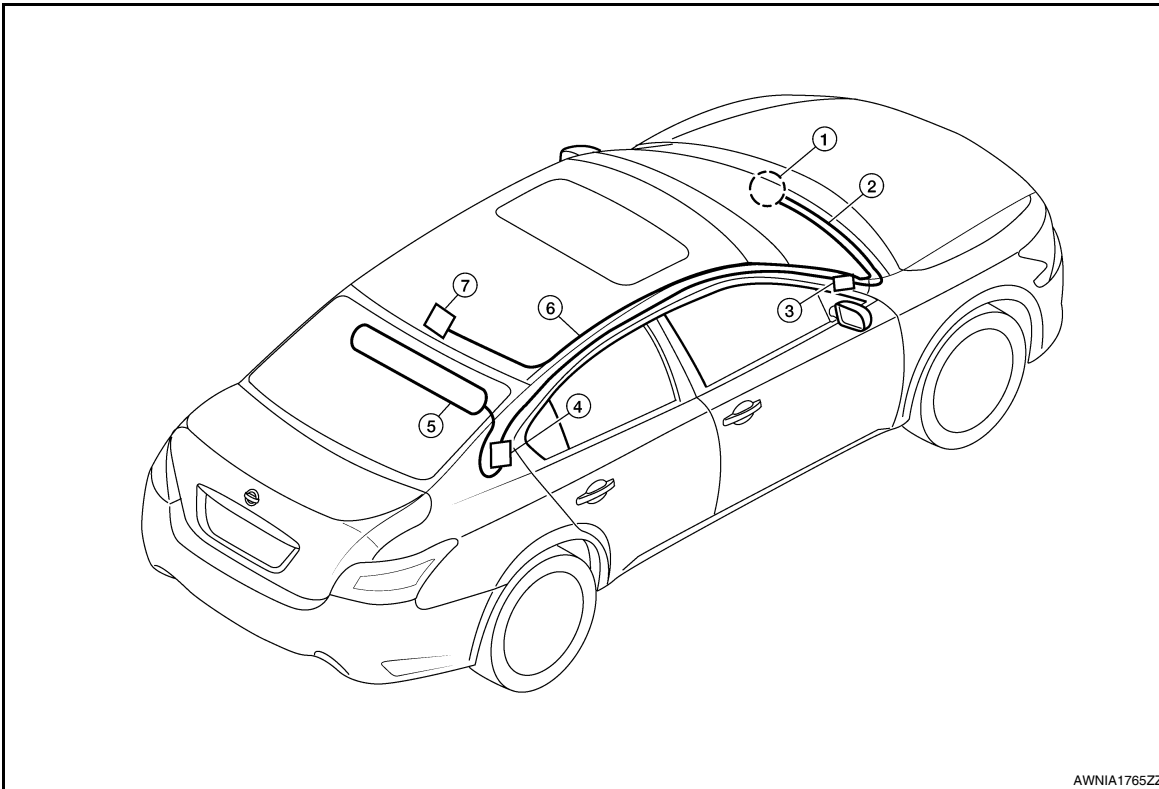
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

AUDIO ANTENNA

Location of Antenna

INFOID:000000005460366



AWNIA1765ZZ

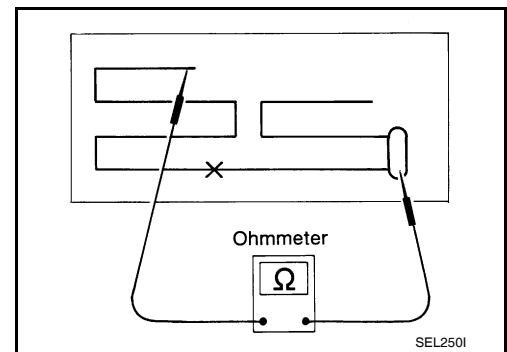
- | | | |
|----------------------------|-----------------------------------|-----------------------------------|
| 1. AV control unit | 2. AV control unit antenna feeder | 3. In-line connectors M103, M501 |
| 4. Antenna amp. | 5. Window antenna | 6. Satellite radio antenna feeder |
| 7. Satellite radio antenna | | |

Window Antenna Repair

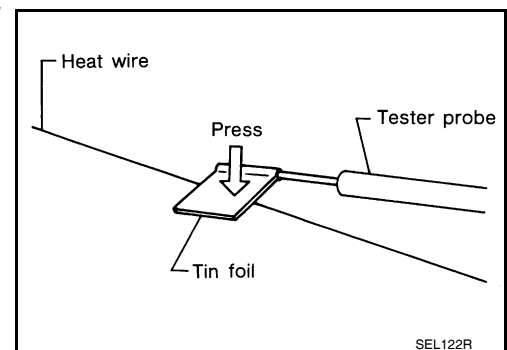
INFOID:000000005460367

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.



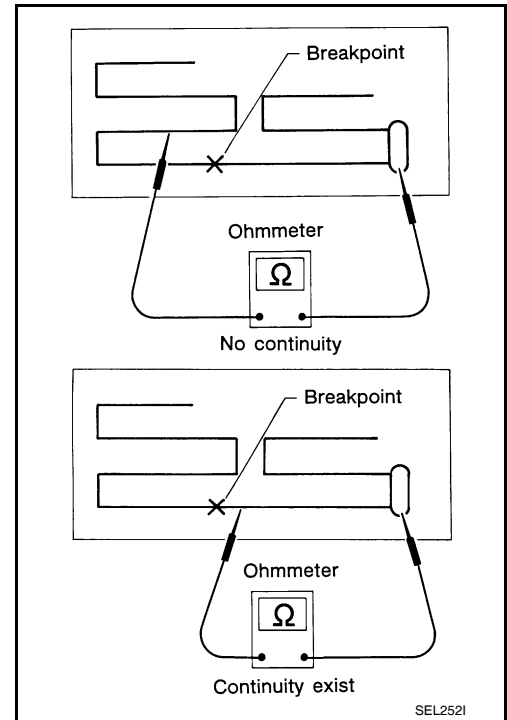
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AUDIO ANTENNA

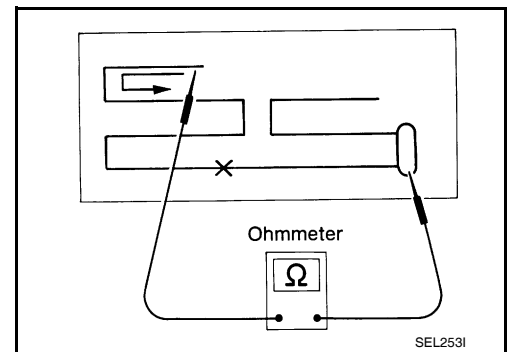
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

- 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.

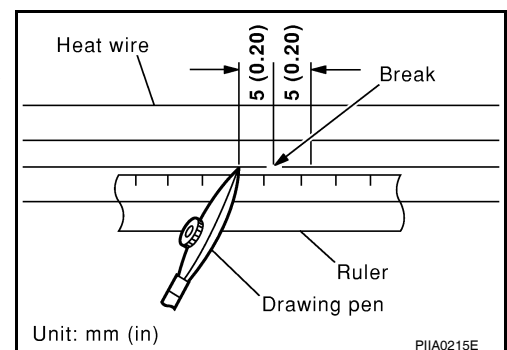


REPAIR EQUIPMENT

- 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.

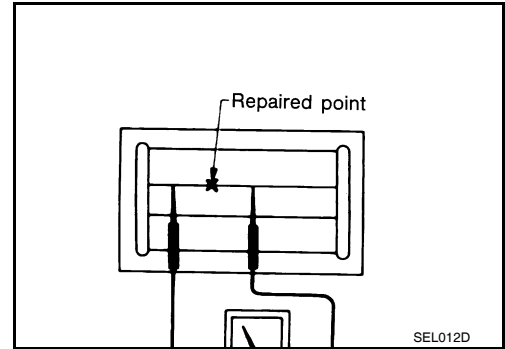


AUDIO ANTENNA

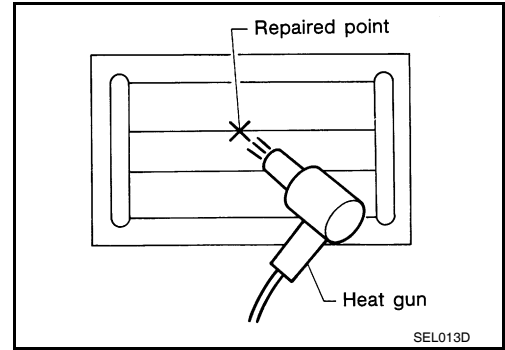
< ON-VEHICLE REPAIR >

[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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AV

ANTENNA AMP.

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

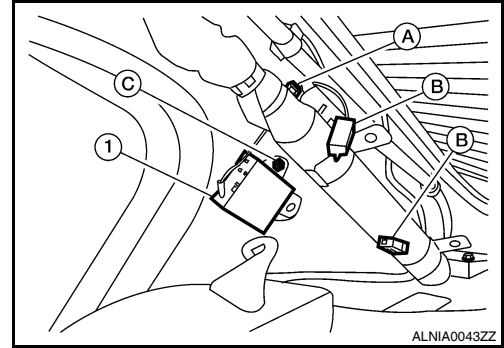
ANTENNA AMP.

Removal and Installation

INFOID:000000005460368

REMOVAL

1. Remove the rear pillar finisher RH. Refer to [INT-23. "Exploded View"](#).
2. 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/ NAVI]

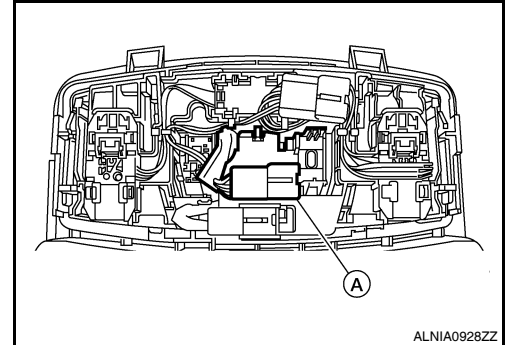
MICROPHONE

Removal and Installation

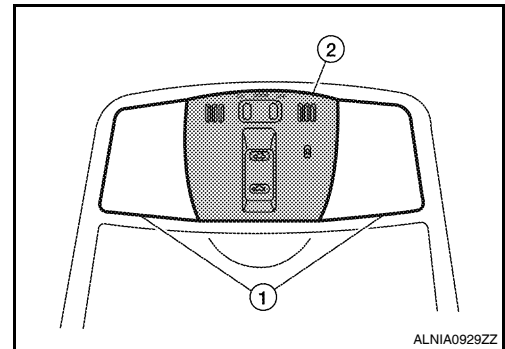
INFOID:000000005460370

REMOVAL

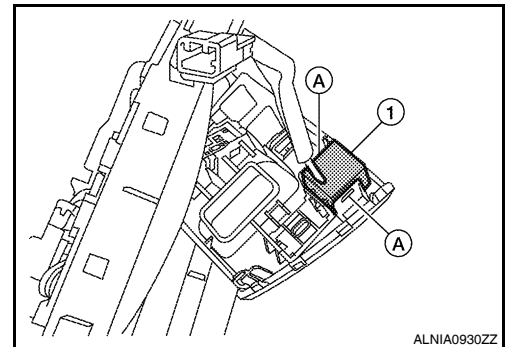
1. Remove the map lamp assembly. Refer to [INL-97, "Removal and Installation"](#).
2. Detach the microphone connector (A).



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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REAR VIEW CAMERA

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY W/ NAVI]

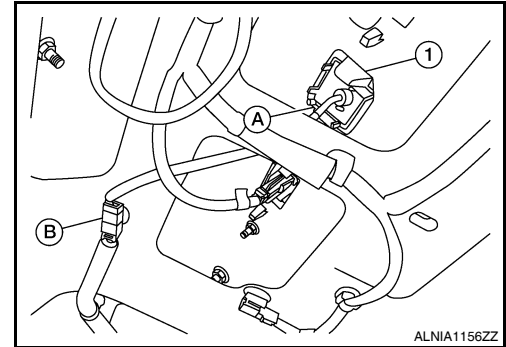
REAR VIEW CAMERA

Removal and Installation

INFOID:000000005460371

REMOVAL

1. Remove the license plate finisher. Refer to [EXL-177. "Removal and Installation"](#).
2. Remove trunk lid finisher. Refer to [INT-35. "Exploded View"](#).
3. Disconnect the rear view camera connector (B), press the rear view camera tab (A) and remove the rear view camera (1).



INSTALLATION

Installation is in the reverse order of removal.

Adjustment

INFOID:000000005460372

REAR VIEW CAMERA

For adjustment on the rear view camera, refer to [DLK-9. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

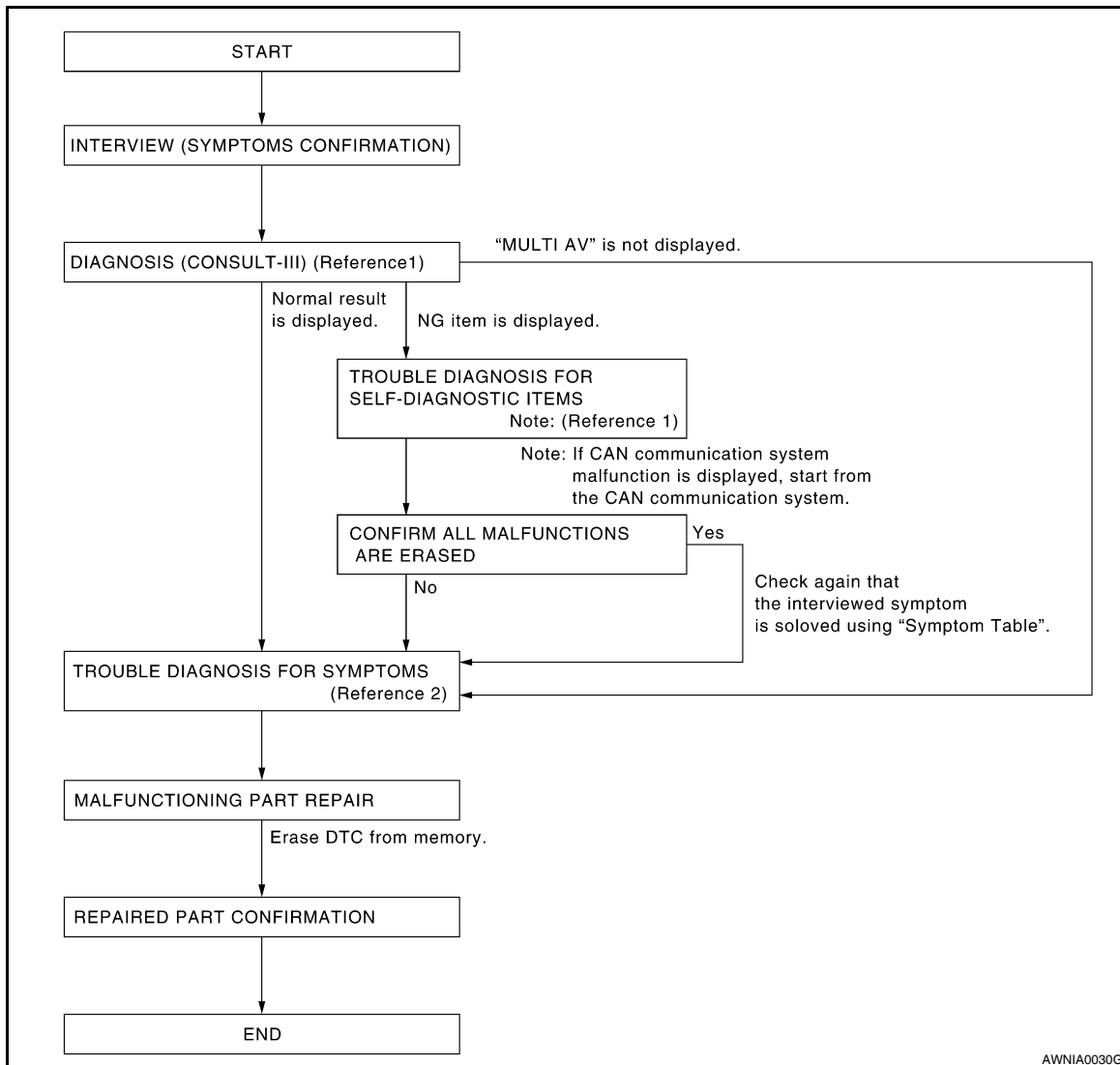
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000005528989

OVERALL SEQUENCE



- Reference 1... Refer to [AV-536, "CONSULT-III Function \(MULTI AV\)"](#).
- Reference 2... Refer to [AV-649, "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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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[BOSE W/ COLOR W/ RR CTL]

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-637, "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-649, "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 W/ RR CTL]

INSPECTION AND ADJUSTMENT

REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUSTMENT

REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUSTMENT : Description

INFOID:000000005528990

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:000000005528991

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000005589328

BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT-III configuration before replacement.

AFTER REPLACEMENT

CAUTION:

When replacing AV control unit, you must perform "WRITE CONFIGURATION" with CONSULT-III.

- Complete the procedure of "WRITE CONFIGURATION" in order.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:000000005589329

1. SAVING VEHICLE SPECIFICATION

Ⓜ-CONSULT-III Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [AV-512. "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection".

>> GO TO 2.

2. REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to [AV-654. "Removal and Installation"](#).

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

Ⓜ-CONSULT-III Configuration

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR W/ RR CTL]

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to [AV-512, "CONFIGURATION \(AV CONTROL UNIT\) : Special Repair Requirement"](#).

>> GO TO 4.

4. OPERATION CHECK

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

>> WORK END

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:000000005589330

- Since vehicle specifications are not included in the AV control unit after replacement, it is required to write vehicle specifications with CONSULT-III.
- Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	<ul style="list-style-type: none">• Reads the vehicle configuration of current AV control unit.• Saves the read vehicle configuration.
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.

CONFIGURATION (AV CONTROL UNIT) : Special Repair Requirement

INFOID:000000005589331

1. WRITING MODE SELECTION

 CONSULT-III Configuration
Select "CONFIGURATION" of AV control unit.


When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2. PERFORM "WRITE CONFIGURATION-CONFIG FILE"

 CONSULT-III Configuration
Perform "WRITE CONFIGURATION-Config file".

>> WORK END

3. PERFORM "WRITE CONFIGURATION-MANUAL SELECTION"

 CONSULT-III Configuration
Select "WRITE CONFIGURATION-Manual selection" to write vehicle specifications into the AV control unit. For data to write, refer to [AV-512, "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).

>> GO TO 4.

4. OPERATION CHECK

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

>> WORK END

CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:000000005589332

CAUTION:

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR W/ RR CTL]

Check vehicle specifications before servicing.

MANUAL SETTING ITEM		Note
Items	Setting value	
STEERING	LHD	—
	RHD	—
GRADE	MODE 1	BASE
	MODE 2	OTHER
ENGINE TYPE	NORMAL	—
	HYBRID	—
BODY TYPE	NORMAL	NORMAL
	CONV	CONVERTIBLE
CAMERA SYSTEM	NONE/AVM	NONE or AVM
	REAR	REAR CAMERA
	REAR + SIDE	REAR + SIDE CAMERA
4WAS	WITHOUT	—
	WITH	—
SOUND SYSTEM	BASE	—
	BOSE	—
ANTENNA TYPE	ROD TYPE	—
	LONG TYPE	—
DUAL-ZONE AUTO TEMP	WITHOUT	—
	WITH	—
DVD PLAY FUNCTION	WITHOUT	—
	WITH	—

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR W/ RR CTL]

MANUAL SETTING ITEM		Note
Items	Setting value	
BODY TYPE	SED 2DR	SEDAN 2 DOOR
	SED 4DR 1	SEDAN 4 DOOR
	SED 4DR 2	SEDAN 4 DOOR (WIDE)
	H/B 2DR	H/B 2 DOOR
	H/B 4DR	H/B 4 DOOR
	COUPE 2DR	COUPE 2 DOOR
	COUPE T	COUPE T BAR
	WGN 4DR 2	49H WAGON 4 DOOR (WIDE)
	H/T 2DR 1	H/T 2 DOOR
	H/T 2DR 2	H/T 2 DOOR (HIGH- ROOF)
	H/T 4DR 1	H/T 4 DOOR
	H/T 4DR 2	H/T 4 DOOR (WIDE)
	WGN 2DR	WAGON 2 DOOR
	WGN 4DR 1	WAGON 4 DOOR
	WGN 4DR 3	WAGON 4 DOOR (HIGH- ROOF)
	WGN 4DR 4	56H WAGON 4 DOOR (WIDE)
	VAN 2DR	VAN 2 DOOR
	VAN 4DR 1	VAN 4 DOOR
	VAN 4DR 2	VAN 4 DOOR (HIGH- ROOF)
	CONV	CONVERTIBLE

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

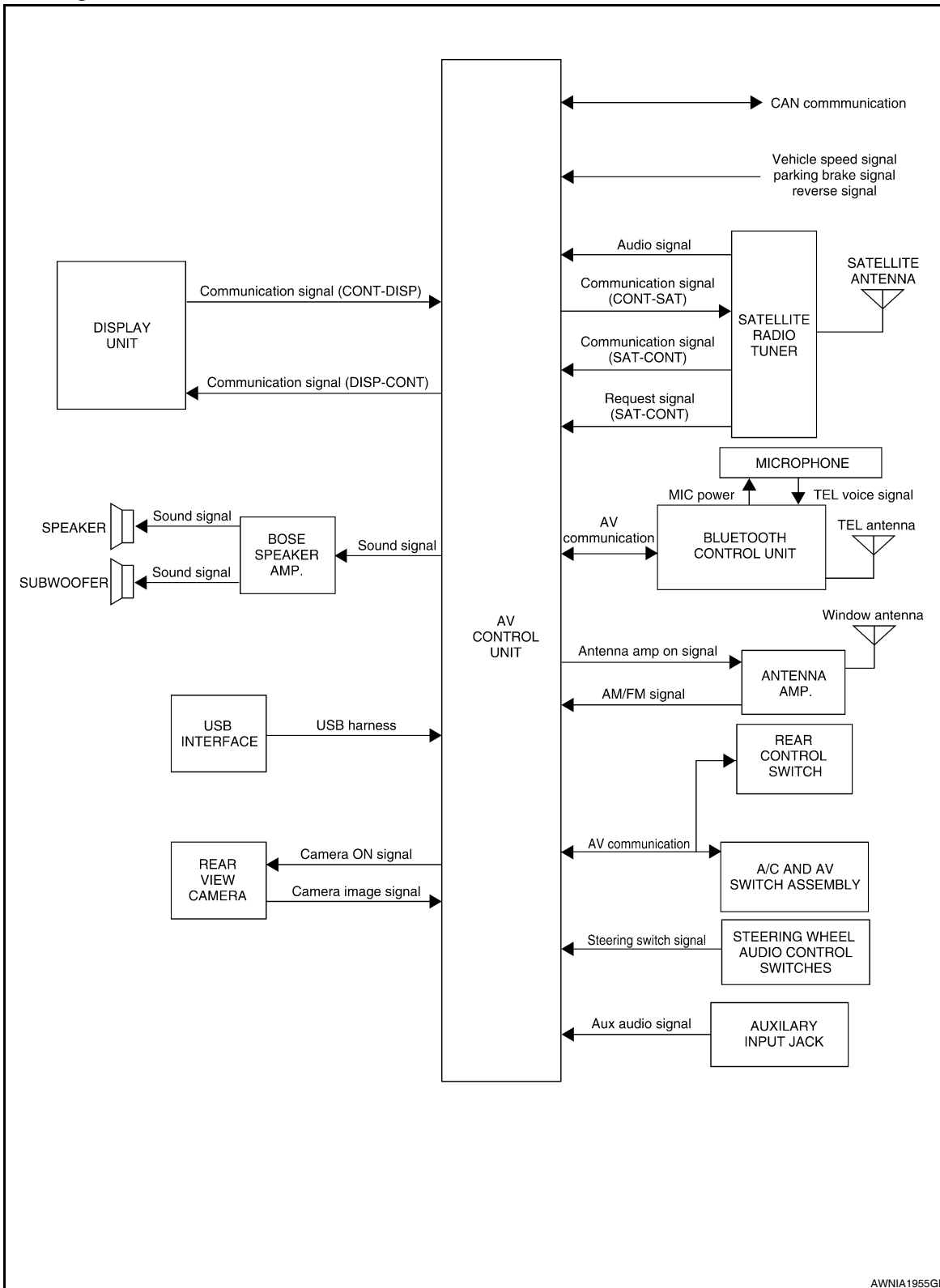
[BOSE W/ COLOR W/ RR CTL]

FUNCTION DIAGNOSIS

AUDIO SYSTEM

System Diagram

INFOID:000000005528992



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System Description

INFOID:000000005528993

AUDIO SYSTEM

AUDIO SYSTEM

[BOSE W/ COLOR W/ RR CTL]

< FUNCTION DIAGNOSIS >

The audio system consists of the following components

- AV control unit
- Display unit
- BOSE speaker amp.
- Window antenna
- Steering wheel audio control switches
- A/C and AV switch assembly
- Rear control switch
- 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.

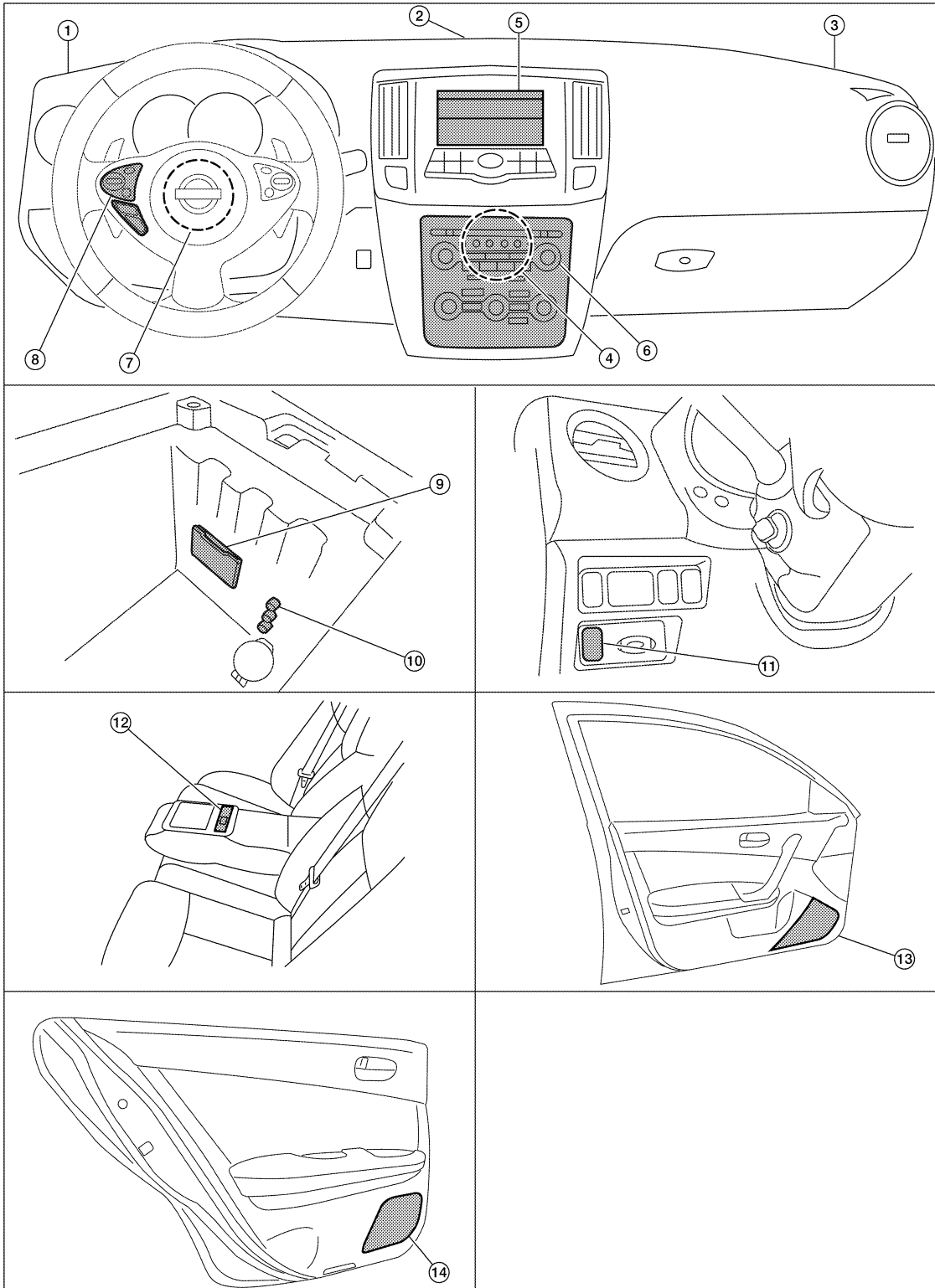
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Component Parts Location

INFOID:00000000528994



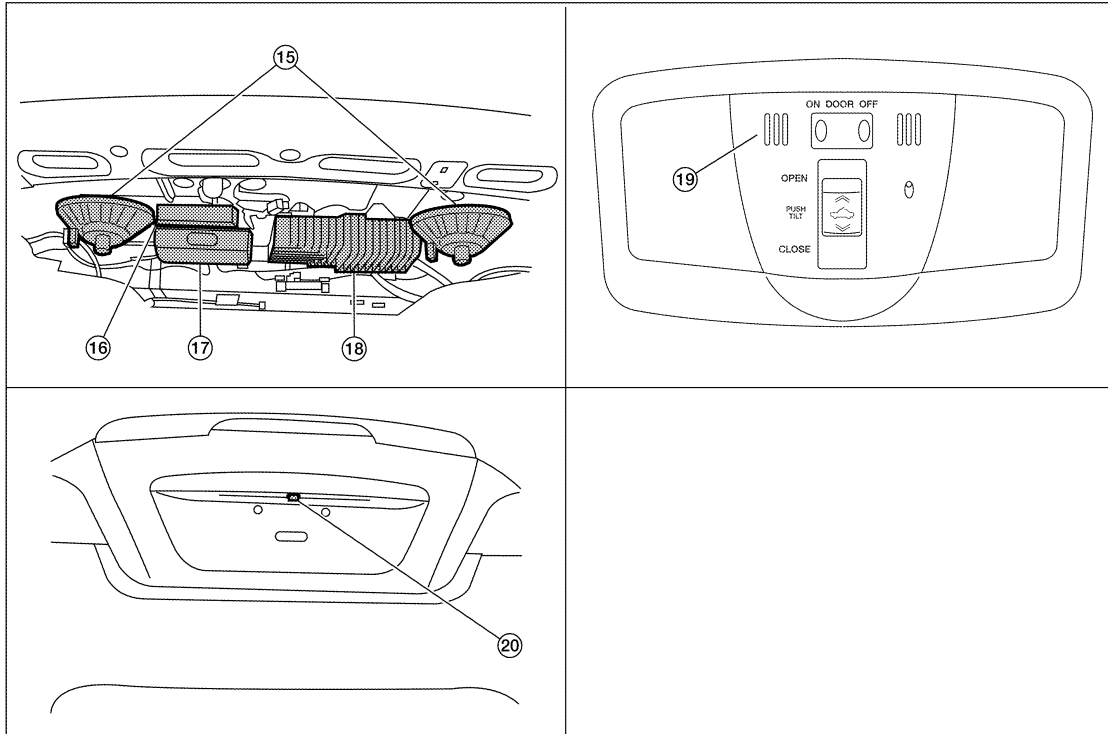
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AWNIA1919ZZ

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]



AWNIA1958ZZ

- | | | |
|--|---|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M42, M43, M44, M45, M46, M47, M48, M111 (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. USB Interface M211 (view in center console) |
| 10. Aux jack M209 | 11. Rear control cancel switch M89 | 12. Rear control switch B402, B403, B404 |
| 13. Front door speaker
LH D3
RH D103 | 14. Rear door speaker
LH D202
RH D302 | 15. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 |
| 16. Satellite radio tuner B111 | 17. Bluetooth control unit B128, B130, B131 | 18. BOSE speaker amp B109, B110 |
| 19. Microphone R7 | 20. Rear view camera T101 | |

Component Description

INFOID:000000005528995

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 wheel audio control 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

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Part name	Description	
Center speaker	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs high range sounds	A
Rear door speakers	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs high, mid and low range sounds	B
Rear subwoofer	<ul style="list-style-type: none">• Outputs audio signal from BOSE speaker amp.• Outputs low range sounds	C
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.	D

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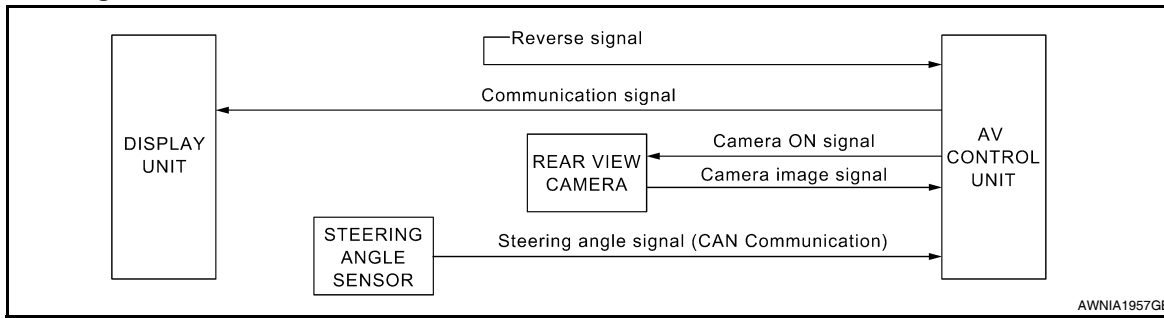
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

REAR VIEW MONITOR SYSTEM

System Diagram



System Description

INFOID:000000005528997

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.

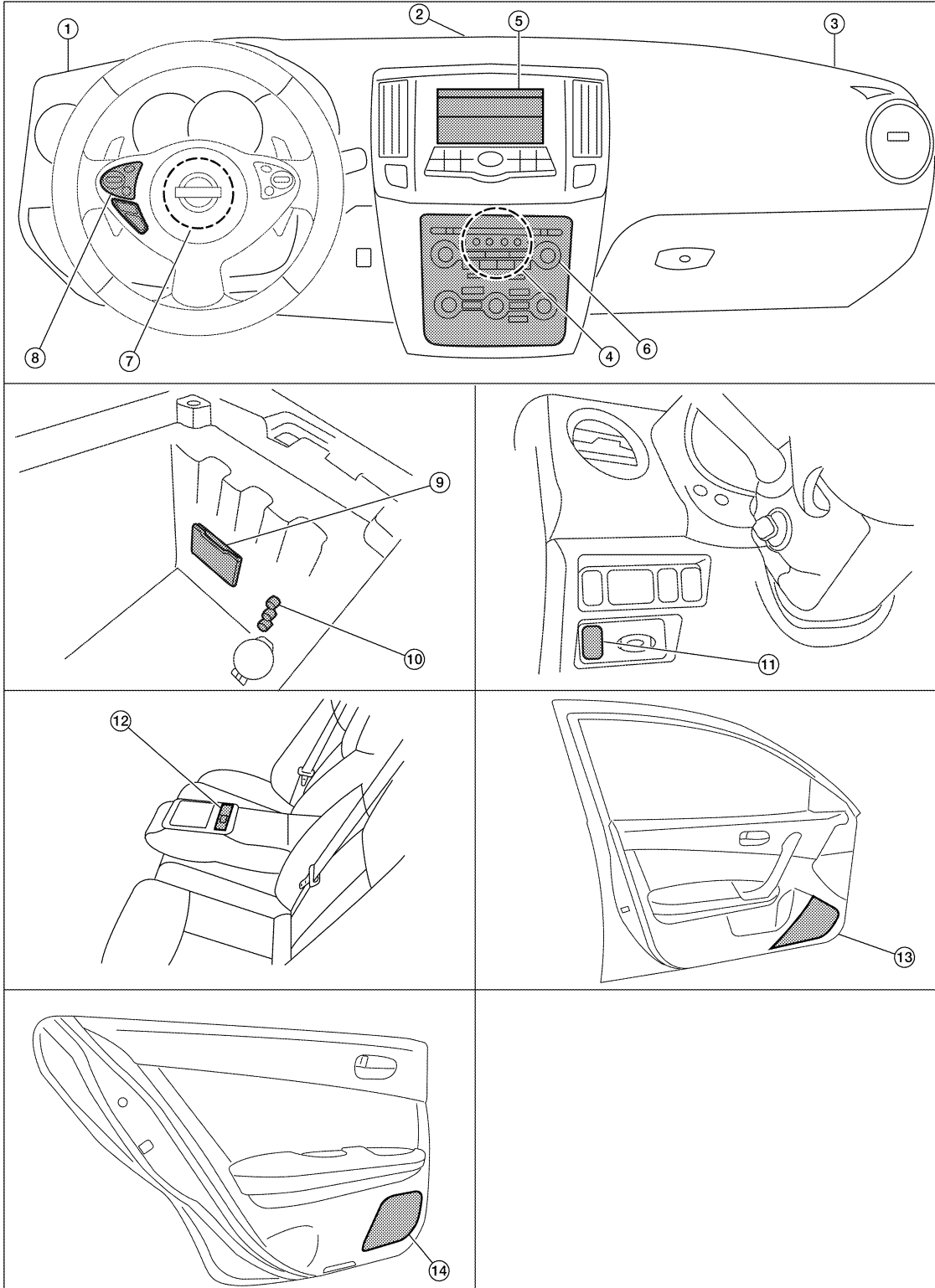
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Component Parts Location

INFOID:00000000528998

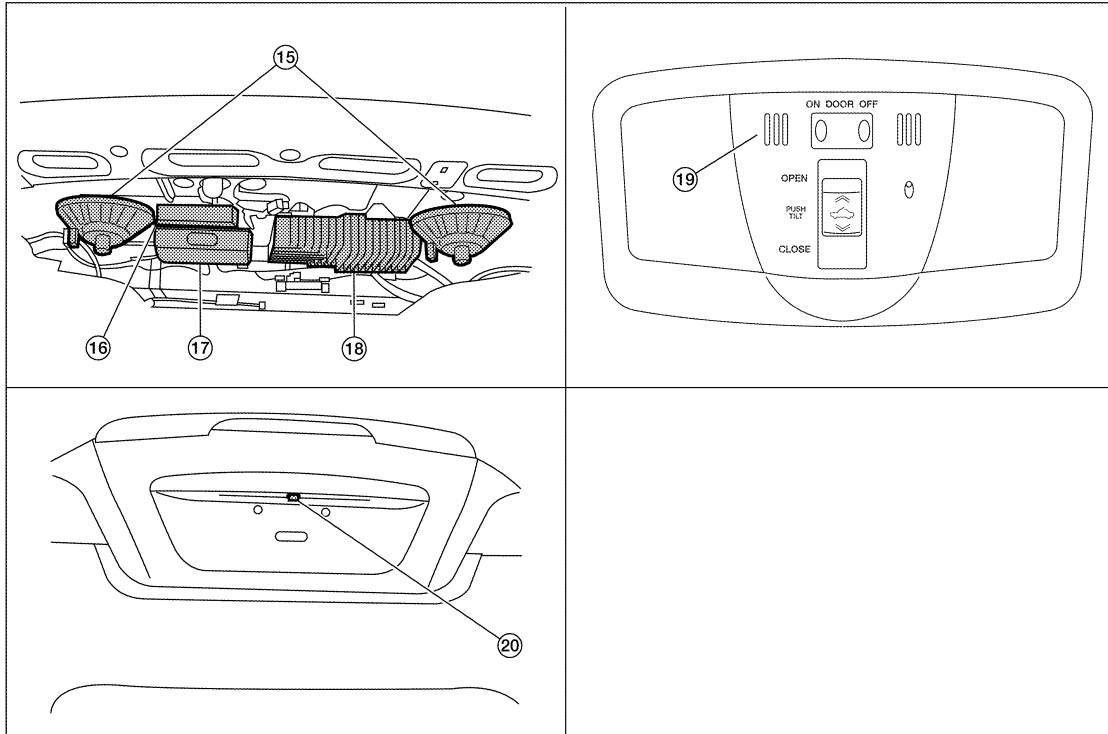


AWNIA1919ZZ

REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]



AWNIA1958ZZ

- | | | |
|--|---|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M42, M43, M44, M45, M46, M47, M48, M111 (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. USB Interface M211 (view in center console) |
| 10. Aux jack M209 | 11. Rear control cancel switch M89 | 12. Rear control switch B402, B403, B404 |
| 13. Front door speaker
LH D3
RH D103 | 14. Rear door speaker
LH D202
RH D302 | 15. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 |
| 16. Satellite radio tuner B111 | 17. Bluetooth control unit B128, B130, B131 | 18. BOSE speaker amp B109, B110 |
| 19. Microphone R7 | 20. Rear view camera T101 | |

Component Description

INFOID:000000005528999

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

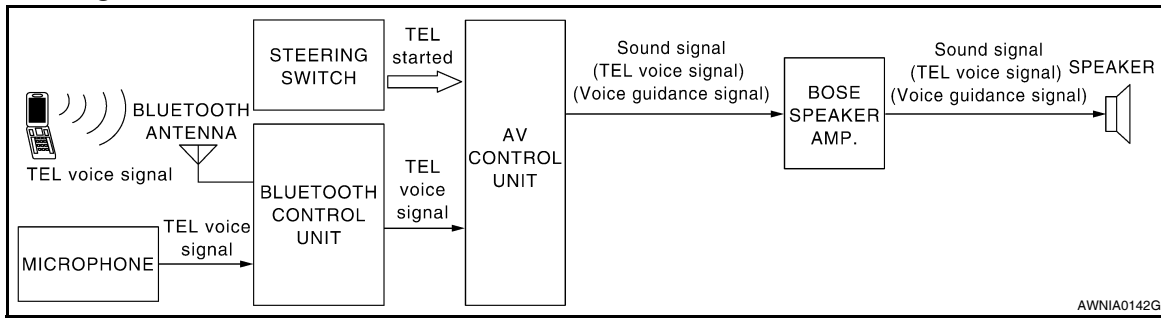
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

HANDS-FREE PHONE SYSTEM

System Diagram



System Description

INFOID:00000000529001

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. 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 20 seconds. If a phone is present in the vehicle and paired with the Bluetooth control unit, Nissan Voice Recognition will then become active. Bluetooth telephone functions can be turned off using the Nissan Voice Recognition system.

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

MICROPHONE

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

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.

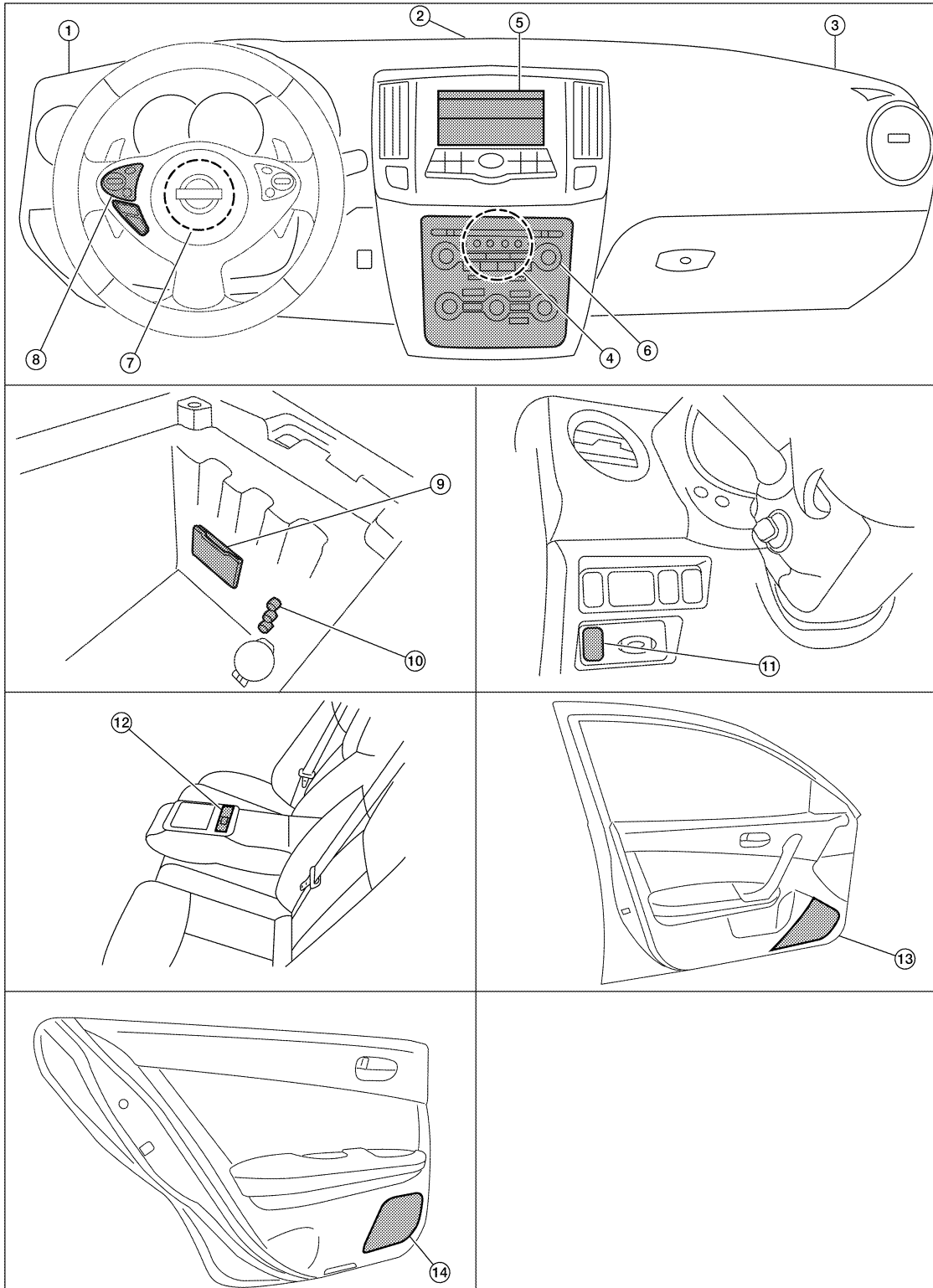
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Component Parts Location

INFOID:000000005529002

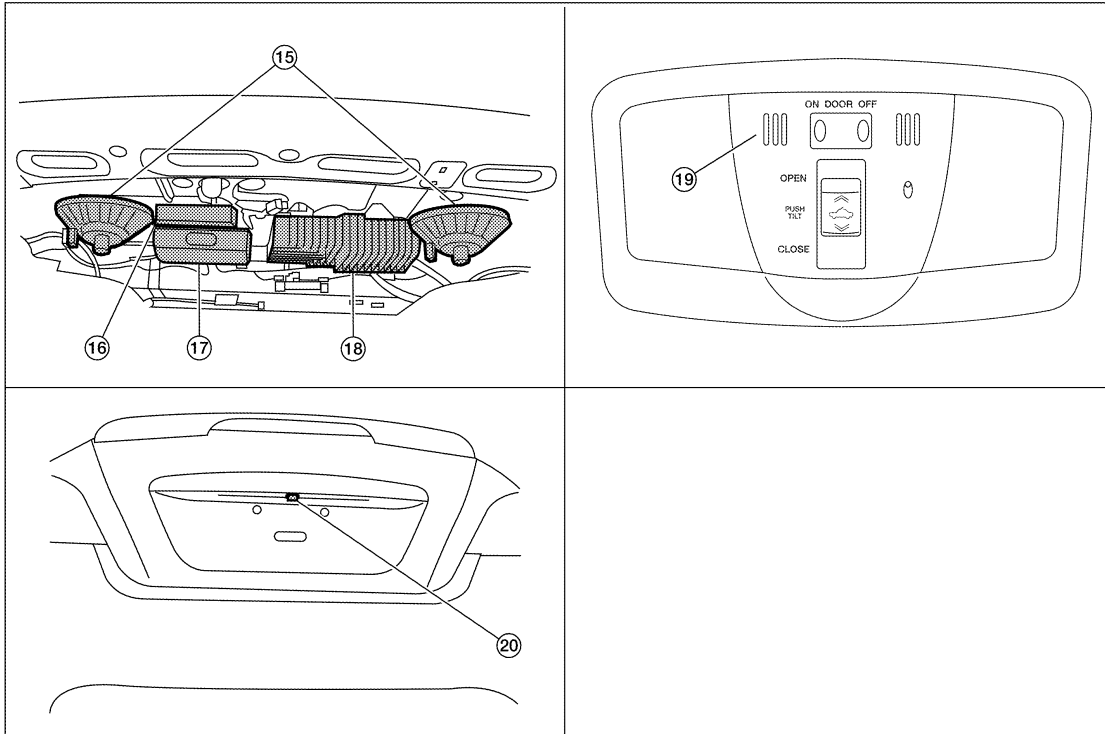


AWNIA1919ZZ

HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]



AWNIA1958ZZ

- | | | |
|--|---|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M42, M43, M44, M45, M46, M47, M48, M111 (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. USB Interface M211 (view in center console) |
| 10. Aux jack M209 | 11. Rear control cancel switch M89 | 12. Rear control switch B402, B403, B404 |
| 13. Front door speaker
LH D3
RH D103 | 14. Rear door speaker
LH D202
RH D302 | 15. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 |
| 16. Satellite radio tuner B111 | 17. Bluetooth control unit B128, B130, B131 | 18. BOSE speaker amp B109, B110 |
| 19. Microphone R7 | 20. Rear view camera T101 | |

Component Description

INFOID:000000005529003

AV

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	
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

HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Part name	Description
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 W/ RR CTL]

DIAGNOSIS SYSTEM (AV CONTROL UNIT)


Diagnosis Description

INFOID:000000005529004

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.

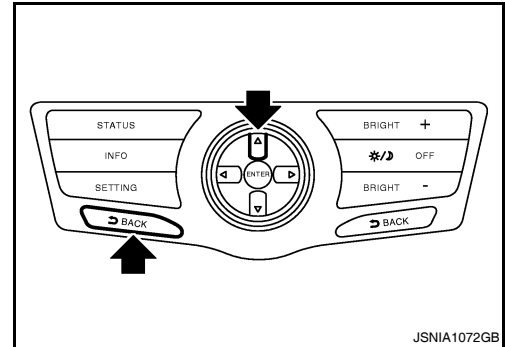
Self-Diagnosis Mode

- 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.



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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AV

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

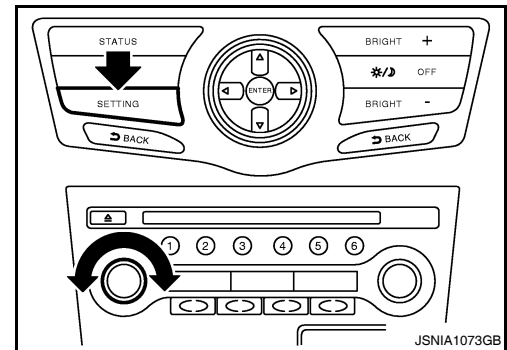
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

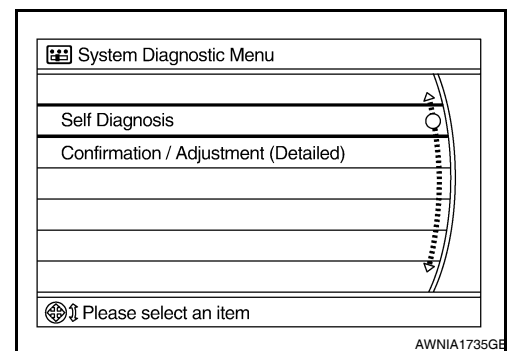
Mode	Description
Display Diagnosis	The confirmation of the tint with the color spectrum bar display and shading of color with the gradation bar display can be performed.
Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse.
Speaker Test	The connection of a speaker can be confirmed by test tone.
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.

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.



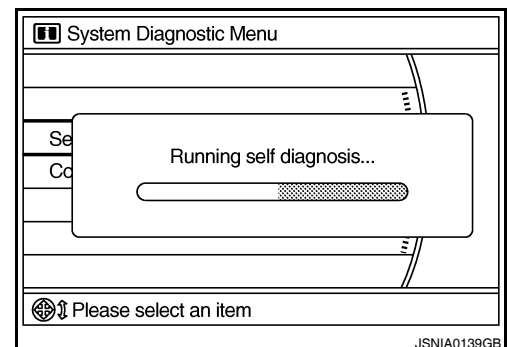
SELF-DIAGNOSIS MODE

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.



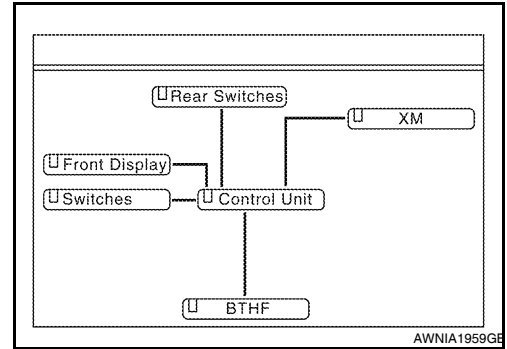
DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

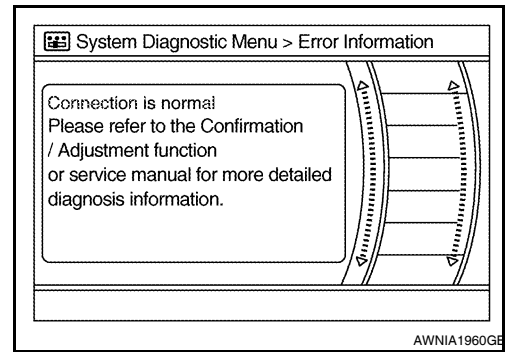
2. Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

Diagnosis results	Unit	Connection 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 multi-function switch.

Self-diagnosis Result Chart

Diagnosis results	Detection logic	Possible malfunction location / Action to take
<p>AWNIA1961GE</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>

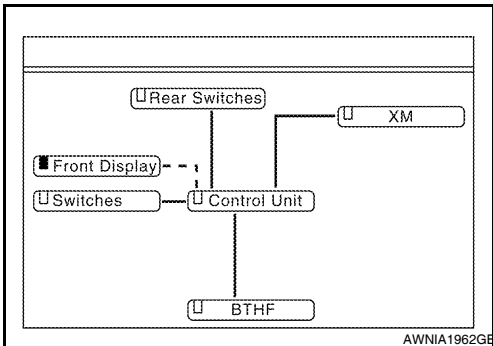
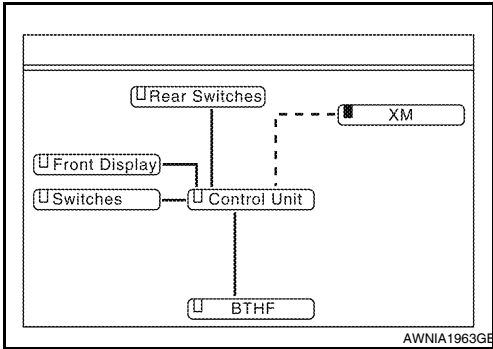
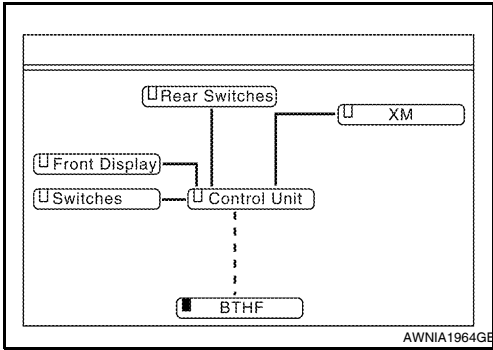
NOTE:

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”

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Diagnosis results	Detection logic	Possible malfunction location / Action to take
 <p style="text-align: right; font-size: small;">AWNIA1962GE</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;">AWNIA1963GE</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.
 <p style="text-align: right; font-size: small;">AWNIA1964GE</p>	<p>When any one of the following items is detected:</p> <ul style="list-style-type: none"> Bluetooth control unit power supply and ground circuits are malfunctioning. AV communication circuits between camera control unit and Bluetooth control 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 Bluetooth control unit is malfunctioning. 	<ul style="list-style-type: none"> Bluetooth control unit power supply and ground circuits. AV communication circuits between camera control unit and Bluetooth control 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 Bluetooth control unit. (without rear view camera)

NOTE:

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

CONFIRMATION/ADJUSTMENT MODE

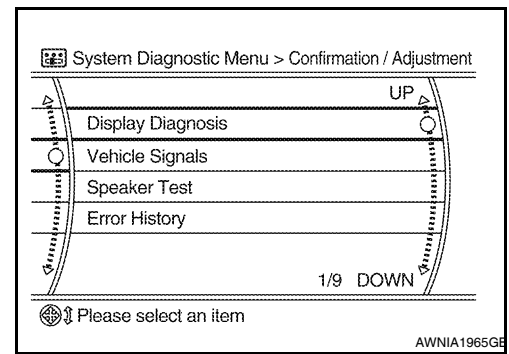
1. Start the diagnosis function and select "Confirmation/Adjustment". The confirmation/adjustment mode indicates where each item can be checked or adjusted.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

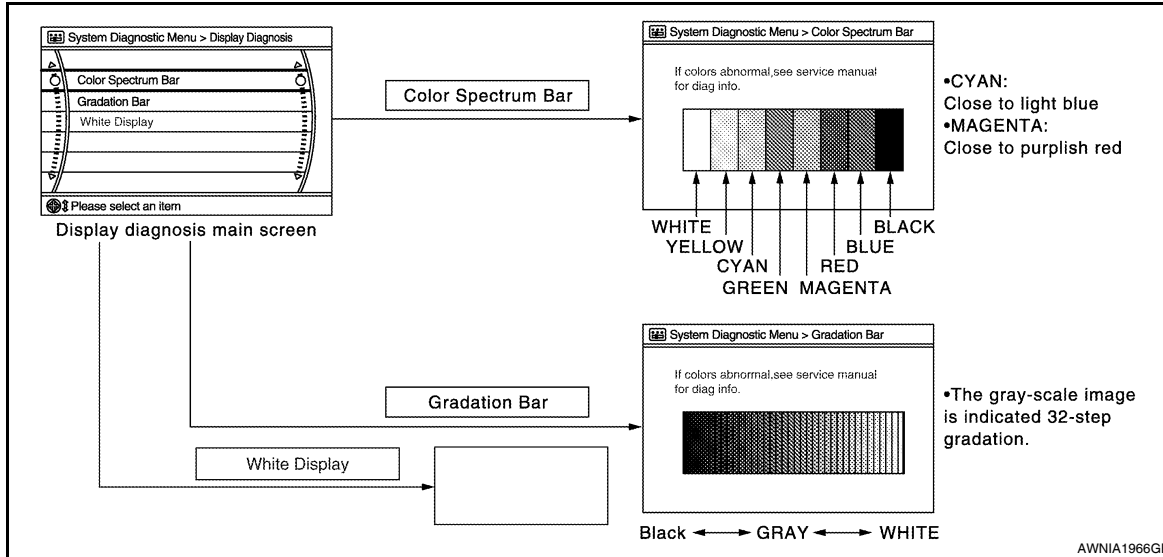
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

- Select each switch on the "Confirmation/Adjustment Mode" screen to display the relevant trouble diagnosis screen. Press the RETURN switch to return to the initial Confirmation/Adjustment Mode screen.



Display Diagnosis

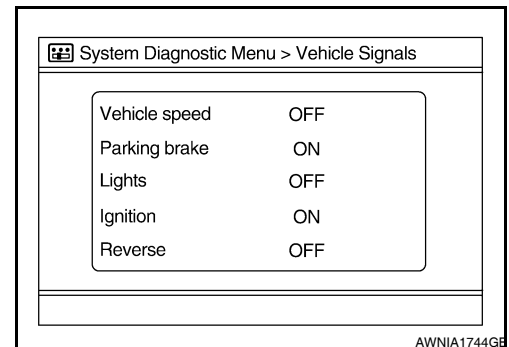


The tint of the color bar indication is as per the following list if RGB image signal error is detected.

- 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.	

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Diagnosis item	Display	Vehicle status	Remarks
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	

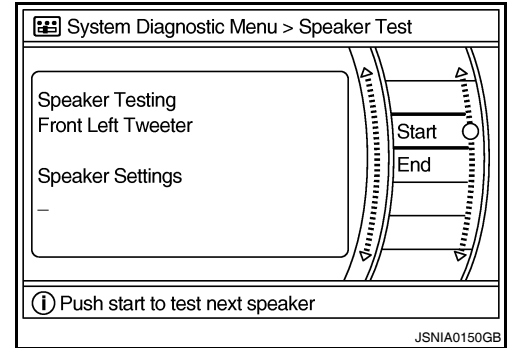
Speaker Test

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.
Refer to [AV-536, "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

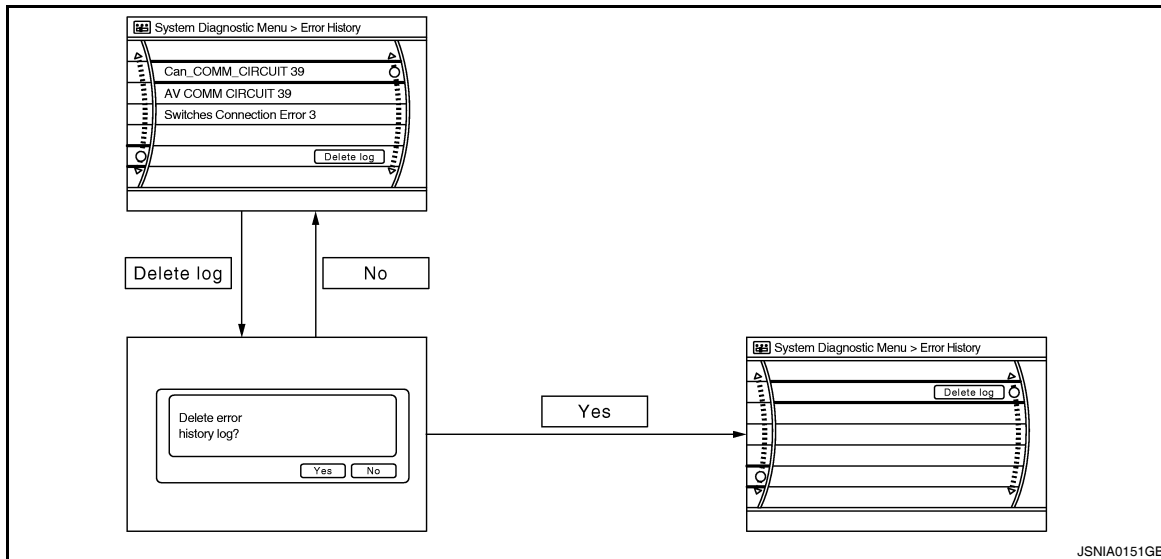
- The counter increases by 1 if an error occurs when IGN switch is ON. The counter will not decrease even if the condition is normal at the next IGN ON cycle.
- The counter upper limit is 50. Any counts exceeding 50 are ignored. The counter can be reset (no error record display) with the "Delete log"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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]



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-536. "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.

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AV

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

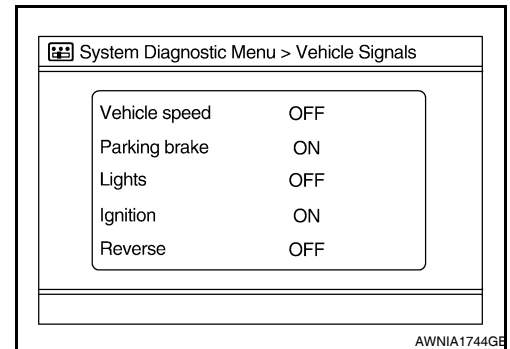
Error item	Description	Possible malfunction factor/Action to take
SAT Connection Error	When any one of the following items is detected: <ul style="list-style-type: none"> • satellite radio tuner power supply and ground circuits are malfunctioning. • serial communication circuits between AV control unit 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.

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.

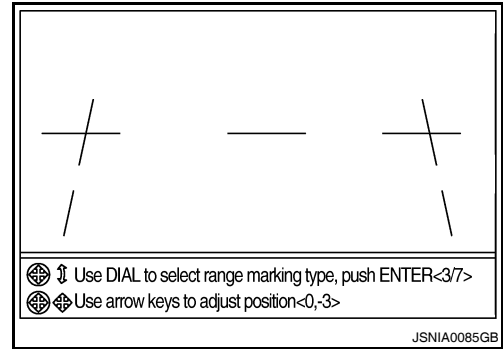
ADJUST OFFSET OF REAR VIEW CAMERA

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[BOSE W/ COLOR W/ RR CTL]

< FUNCTION DIAGNOSIS >

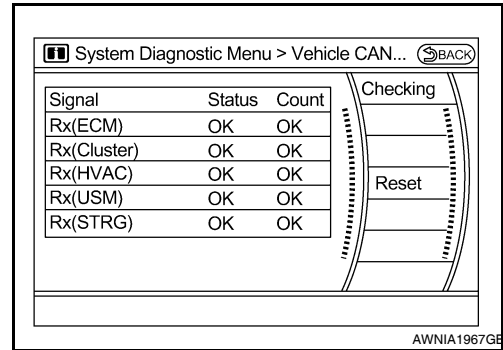
Use this mode to adjust the guide line display position of the rear-view monitor if necessary after removing the rear view monitor camera.



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.

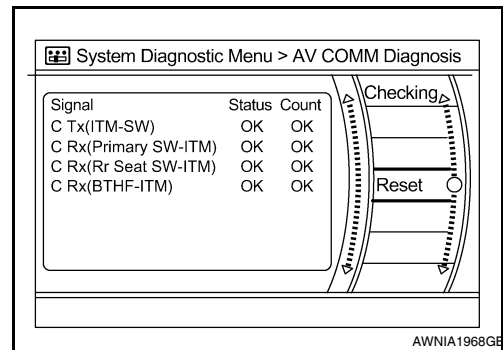
Items	Display (Current)	Malfunction counter (Past)
Tx (HVAC)	OK / UNKWN	OK / 0 - 39
Rx (ECM)	OK / UNKWN	OK / 0 - 39
Rx (Cluster)	OK / UNKWN	OK / 0 - 39
Rx (HVAC)	OK / UNKWN	OK / 0 - 39
Rx (USM)	OK / UNKWN	OK / 0 - 39
Rx (STRG)	OK / UNKWN	OK / 0 - 39



AV COMM Diagnosis

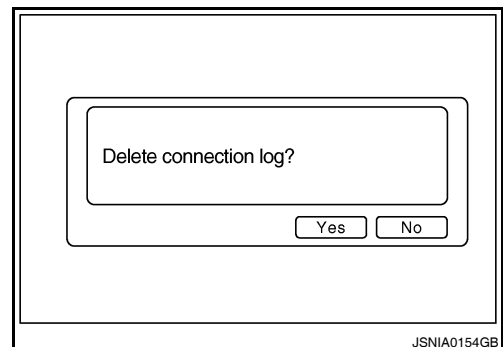
- Displays the communication status between AV control unit (master unit) and each unit.
- The error counter displays “OK” if any malfunction was not detected in the past and displays “0” if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle.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

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



DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

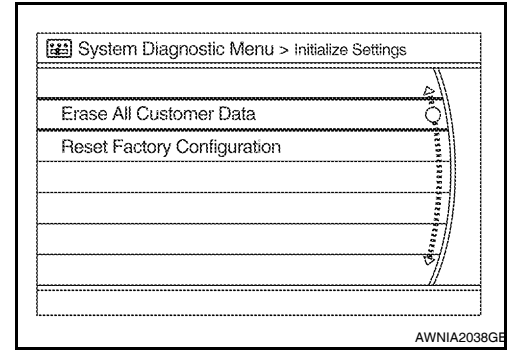
[BOSE W/ COLOR W/ RR CTL]

Initialize Settings

“Erase All Customer Data” and “Reset Factory Configuration” are possible.

CAUTION:

- Never perform Reset Factory Configuration except when configuration is unsuccessful.
- Factory Configuration Initialize requires configuration. For details, refer to [AV-365. "Description"](#).



CONSULT-III Function (MULTI AV)

INFOID:000000005529005

APPLICATION ITEMS

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.
Configuration	<ul style="list-style-type: none"> • Read and save the vehicle specification. • Write the vehicle specification when replacing AV control unit.

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-540. "Diagnosis Procedure" .

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Error item	Description	Possible malfunction factor/Action to take	
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.		A
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.		B
Cont Unit [U1200]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.	C
CAN CONT [U1216]			
SUB CPU CONN [U1228]			
iPod CERTIFICATION [U1229]			
Built-in AUDIO CONN [U122E]			
HDD CONN [U1218]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly. 	D
HDD READ [U1219]			E
HDD WRITE [U121A]			F
HDD COMM [U121B]			F
HDD ACCESS [U121C]			F
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.	
DSP CONN [U121D]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If a disc can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly. 	G
DSP COMM [U121E]			H
DVD COMM [U1227]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If DVD can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly. 	I
CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.	J
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.	K
FRONT DISP CONN [U1243]	When either one of the following items are detected: <ul style="list-style-type: none"> • Display unit power supply and ground circuits malfunction is detected. • Communication circuits between AV control unit and display unit. 	<ul style="list-style-type: none"> • Display unit power supply and ground circuits. • Communication circuits between AV control unit and AV display unit. 	L
SAT CONN [U1255]	Satellite radio tuner malfunction is detected.	Replace the satellite radio tuner if the malfunction occurs constantly.	M
USB OVERCURRENT [U1263]	Detection of over current in USB connector.	Check USB harness between the AV control unit and USB connector.	AV
<ul style="list-style-type: none"> • AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] 	When either one of the following items are 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. 	<ul style="list-style-type: none"> • Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch. 	O
			P

DATA MONITOR

ALL SIGNALS

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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

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 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		

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	

CONFIGURATION

Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	<ul style="list-style-type: none"> • Reads the vehicle configuration of current AV control unit. • Saves the read vehicle configuration.
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

Diagnosis Description

INFOID:000000005529006

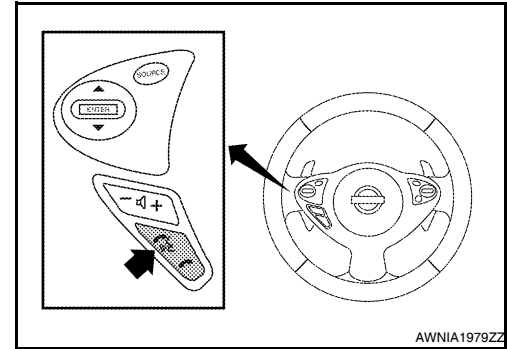
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

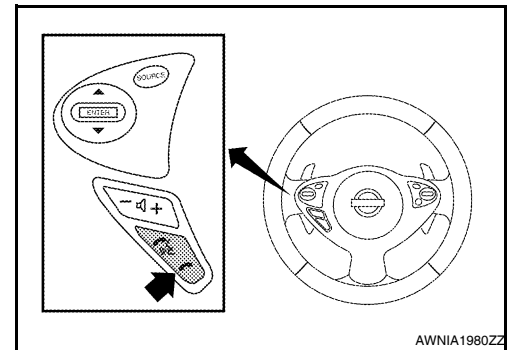
- Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

OPERATION PROCEDURE

1. Turn ignition switch to ACC or ON.
2. Wait for the Bluetooth system to complete initialization. This may take up to 20 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-539, "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-539, "Work Flow"](#).



Work Flow

INFOID:000000005529007

Failure Message	Action
"Internal failure"	Replace Bluetooth control unit. Refer to AV-85, "Removal and Installation" .
"Bluetooth antenna open"	<ol style="list-style-type: none"> 1. Inspect harness connection. 2. Replace Bluetooth antenna. Refer to AV-84, "Removal and Installation".
"Bluetooth antenna shorted"	
"Phone/Send for Hands Free System is stuck"	Check steering wheel audio control switches. Refer to AV-78, "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-83, "Removal and Installation".

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:000000005529008

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:000000005529009

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:000000005529010

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-16, "Trouble Diagnosis Flow Chart"](#).
- NO >> Refer to GI section. Refer to [GI-39, "Intermittent Incident"](#).

U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1010 CONTROL UNIT (CAN)

Description

INFOID:000000005529011

Initial diagnosis of AV control unit.

DTC Logic

INFOID:000000005529012

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:000000005529013

1. REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

>> Inspection End.

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AV

U1200 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1200 AV CONTROL UNIT

Description

INFOID:000000005529014

Replace the AV control unit if this DTC is displayed. Refer to [AV-322. "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:000000005529015

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-322. "Removal and Installation" .

U1216 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1216 AV CONTROL UNIT

Description

INFOID:000000005529016

Replace the AV control unit if this DTC is displayed. Refer to [AV-322, "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:000000005529017

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-322, "Removal and Installation" .

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AV

U1218 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1218 AV CONTROL UNIT

DTC Logic

INFOID:000000005530063

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005530064

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-654, "Removal and Installation"](#).

U1219 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1219 AV CONTROL UNIT

DTC Logic

INFOID:000000005530065

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005530066

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-654, "Removal and Installation"](#).

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U121A AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U121A AV CONTROL UNIT

DTC Logic

INFOID:000000005530067

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005530068

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-654, "Removal and Installation"](#).

U121B AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U121B AV CONTROL UNIT

DTC Logic

INFOID:000000005530069

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005530070

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-654, "Removal and Installation"](#).

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AV

U121C AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U121C AV CONTROL UNIT

DTC Logic

INFOID:000000005530071

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005530072

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-654, "Removal and Installation"](#).

U121D AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U121D AV CONTROL UNIT

DTC Logic

INFOID:000000005530073

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121D	DSP CONN [U121D]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If a disc can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005530074

1. CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-654, "Removal and Installation"](#).

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AV

U121E AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U121E AV CONTROL UNIT

DTC Logic

INFOID:000000005530075

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If a disc can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005530076

1. CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-654, "Removal and Installation"](#).

U1225 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1225 AV CONTROL UNIT

DTC Logic

INFOID:000000005530077

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1225	USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.

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U1227 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1227 AV CONTROL UNIT

DTC Logic

INFOID:000000005530078

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1227	DVD COMM [U1227]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If DVD can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005530079

1. CHECK PLAYBACK OF A DISK (DVD)

Can a disc (DVD) be played?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-654, "Removal and Installation"](#).

U1228 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1228 AV CONTROL UNIT

DTC Logic

INFOID:000000005530080

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1228	SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation" .

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AV

U1229 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1229 AV CONTROL UNIT

DTC Logic

INFOID:000000005530081

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1229	iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation" .

U122A AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U122A AV CONTROL UNIT

DTC Logic

INFOID:000000005530082

DTC	Display contents of CONSULT-III	DTC detection condition	Action to take
U122A	CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with "MULTI AV" of CONSULT-III.

Diagnosis Procedure

INFOID:000000005530083

1.PERFORM THE SELF-DIAGNOSIS

When U122A is detected, write configuration data with "MULTI AV" of CONSULT-III.

>> Write configuration data with "MULTI AV" of CONSULT-III. Refer to [AV-681, "CONFIGURATION \(AV CONTROL UNIT\) : Special Repair Requirement"](#).

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U122E AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U122E AV CONTROL UNIT

DTC Logic

INFOID:000000005530084

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U122E	Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation" .

U1232 STEERING ANGLE SENSOR

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1232 STEERING ANGLE SENSOR

DTC Logic

INFOID:000000005530085

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1232	ST ANGLE SEN CALIB [1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.

Diagnosis Procedure

INFOID:000000005530086

1. ADJUST THE PREDICTIVE COURSE LINE CENTER POSITION OF THE STEERING ANGLE SENSOR

When U1232 is detected, adjust the predictive course line center position of the steering angle sensor.

>> Adjust the steering angle sensor neutral position on ABS actuator and electrical unit (control unit) side. Refer to [BRC-8. "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement"](#).

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AV

U1243 DISPLAY UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1243 DISPLAY UNIT

Description

INFOID:000000005529018

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:000000005529019

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:000000005529020

Regarding Wiring Diagram information, refer to [AV-613. "Wiring Diagram"](#).

1. CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuit. Refer to [AV-566. "DISPLAY UNIT : Diagnosis Procedure"](#).

Is inspection result OK?

YES >> GO TO 2.

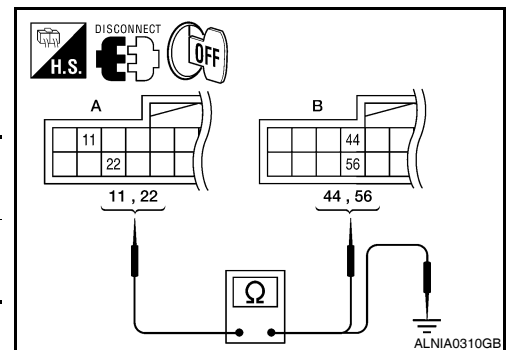
NO >> Repair malfunctioning parts.

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.

U1243 DISPLAY UNIT

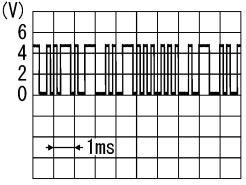
[BOSE W/ COLOR W/ RR CTL]

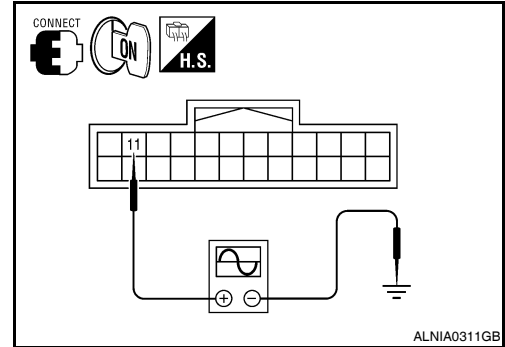
< COMPONENT DIAGNOSIS >

NO >> Repair harness or connector.

3. CHECK COMMUNICATION SIGNAL

1. Connect display unit connector and AV control unit connector.
2. Turn ignition switch ON.
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	 <p>PKIB5039J</p>



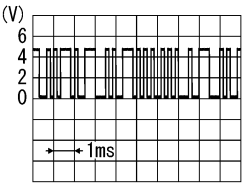
Are voltage readings as specified?

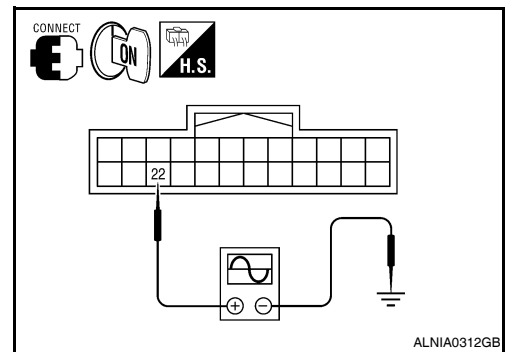
YES >> GO TO 4.

NO >> Replace AV control unit. Refer to [AV-322. "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	 <p>PKIB5039J</p>



Are voltage readings as specified?

YES >> Inspection End.

NO >> Replace display unit. Refer to [AV-325. "Removal and Installation"](#).

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AV

U1263 USB

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1263 USB

DTC Logic

INFOID:000000005530087

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1263	USB OVERCURRENT [U1263]	Detection of over current in USB interface.	Check USB harness between the AV control unit and USB interface.

Diagnosis Procedure

INFOID:000000005530088

1. CHECK USB HARNESS

Visually check USB harness.

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-654, "Removal and Installation"](#).
- NO >> Replace USB harness.

U1255 SATELLITE RADIO TUNER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1255 SATELLITE RADIO TUNER

Description

INFOID:000000005529024

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:000000005529025

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:000000005529026

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

1. CHECK SATELLITE RADIO TUNER POWER SUPPLY AND GROUND CIRCUIT

Check satellite radio tuner power supply and ground circuit. Refer to [AV-569, "SATELLITE RADIO TUNER : Diagnosis Procedure"](#).

Is the inspection result normal?

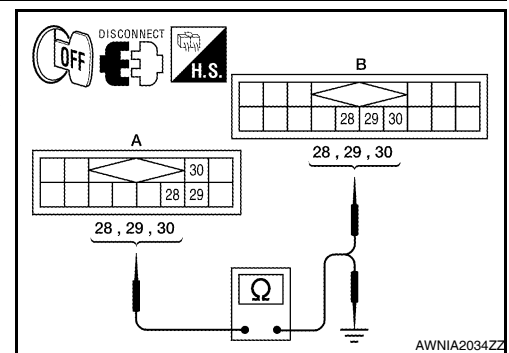
YES >> GO TO 2.

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		

U1255 SATELLITE RADIO TUNER

[BOSE W/ COLOR W/ RR CTL]

< COMPONENT DIAGNOSIS >

M43	28	Ground	No
	29		
	30		

Is the inspection result normal?

- 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-322. "Removal and Installation"](#).

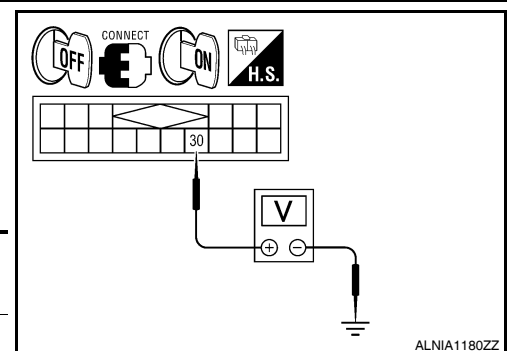
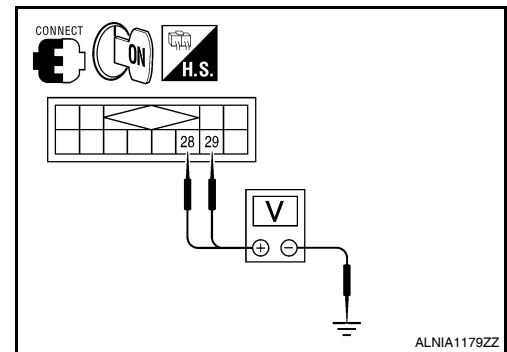
4. CHECK SATELLITE RADIO TUNER

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-335. "Removal and Installation"](#).



U1300 AV COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1300 AV COMM CIRCUIT

Description

INFOID:000000005529027

U1300 is indicated when a communication signal malfunction occurs. U1300 is indicated along with DTCs that identify components connected to the AV control unit through communication lines. Determine the possible malfunction cause from the table below.

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1300 U1240	<ul style="list-style-type: none">AV COMM CIRCUIT [U1300]SWITCH CONN [U1240]	When either one of the following items are detected: <ul style="list-style-type: none">A/C and AV switch assembly power supply and ground circuits are malfunctioning.AV communication circuits between AV control unit and A/C and AV switch assembly are malfunctioning.AV communication signal between AV control unit and A/C and AV switch assembly is malfunctioning.	<ul style="list-style-type: none">A/C and AV switch assembly power supply and ground circuits.AV communication circuits between AV control unit and A/C and AV switch assembly.

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U1310 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

U1310 AV CONTROL UNIT

Description

INFOID:000000005529028

Replace the AV control unit if this DTC is displayed. Refer to [AV-565, "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:000000005529029

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-322, "Removal and Installation" .

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:000000005529030

Regarding Wiring Diagram information, refer to [AV-613. "Wiring Diagram"](#).

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

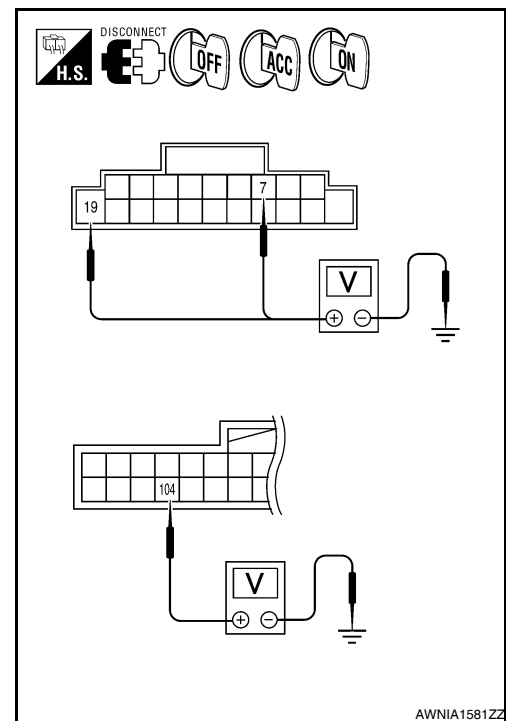
1. Disconnect AV control unit connectors M42 and M46.
2. Check voltage between the AV control unit connectors M42 and M46 and ground.

Connector	(+) Terminal		(-)	OFF	ACC	ON
	Terminal	Terminal				
M42	7		Ground	0V	Battery voltage	Battery voltage
	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.



3. GROUND CIRCUIT CHECK

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AV

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR W/ RR CTL]

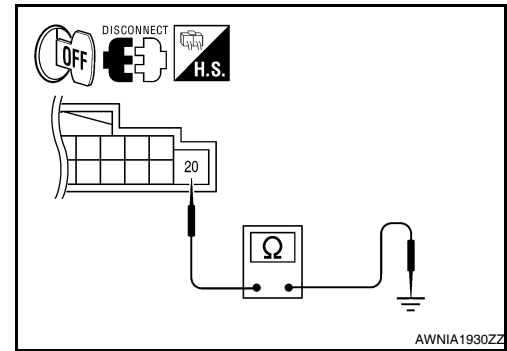
< COMPONENT DIAGNOSIS >

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

Connector	Terminal	—	Continuity
M42	20	Ground	Yes

Are the inspection results OK?

- YES >> Inspection End.
 NO >> Repair AV control unit ground.



DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:000000005529031

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

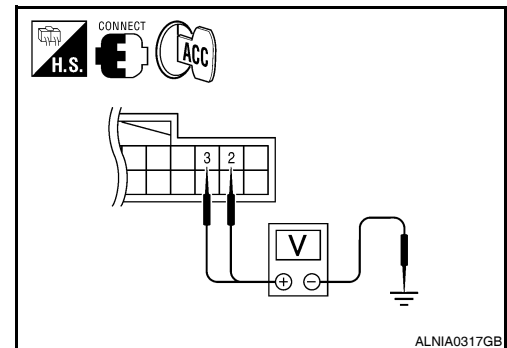
1.CHECK POWER SUPPLY CIRCUIT

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?

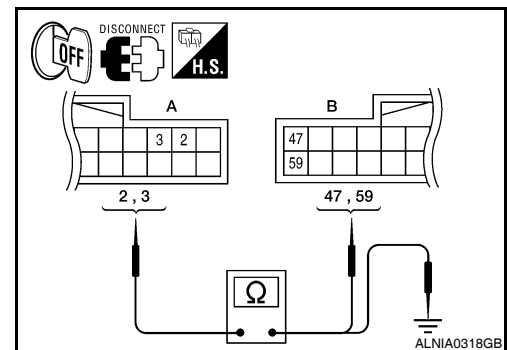
- YES >> GO TO 3.
 NO >> GO TO 2.



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	



4. Check continuity between the display unit harness connector M141 (A) and ground.

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-565, "AV CONTROL UNIT : Diagnosis Procedure"](#).
 NO >> Repair harness or connector.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

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:000000005529032

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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

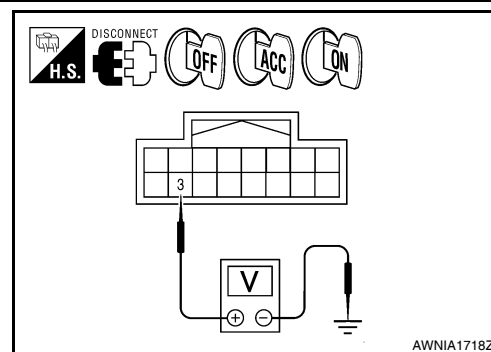
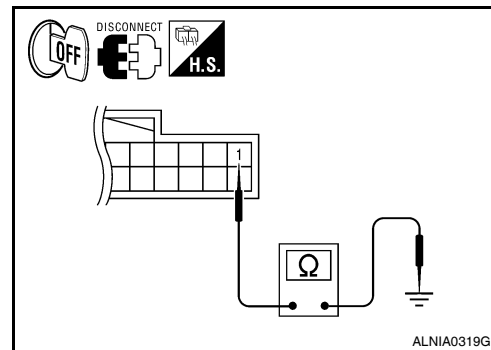
1. Disconnect A/C and AV switch assembly connector M98.
2. Check voltage between the A/C and AV switch assembly connector M98 and ground.

(+) Connector		(-)	OFF	ACC	ON
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



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POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR W/ RR CTL]

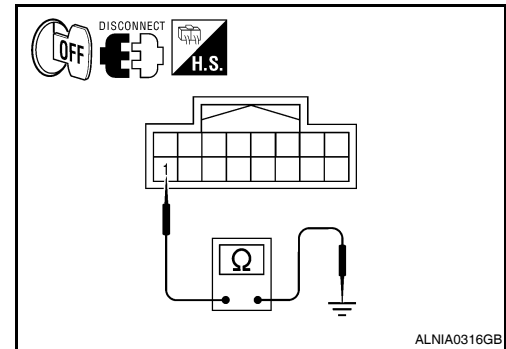
< COMPONENT DIAGNOSIS >

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.



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BOSE SPEAKER AMP

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:000000005529033

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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.

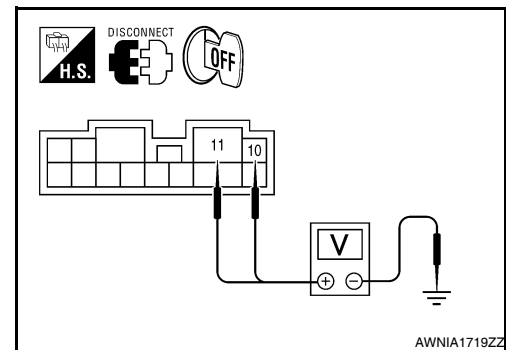
2.CHECK POWER SUPPLY CIRCUIT

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.



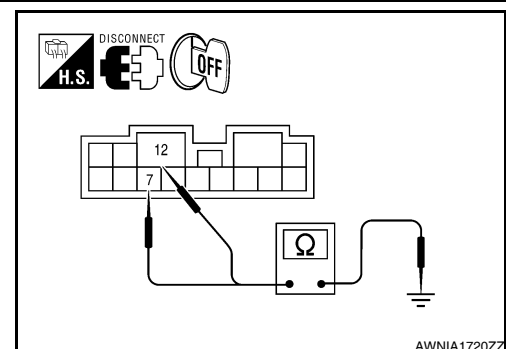
AWNIA1719ZZ

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?



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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

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

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000005529034

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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

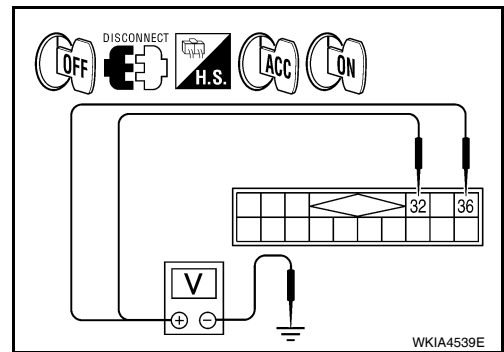
Are the fuses OK?

- 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

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

(+) Connector		Terminal	(-)	OFF	ACC	ON
B111	32			Ground	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.

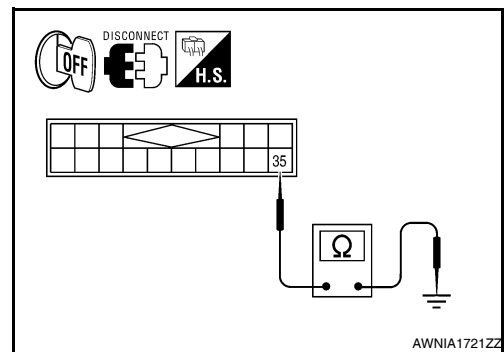
3. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. 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

REAR VIEW CAMERA : Diagnosis Procedure

INFOID:000000005530116

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Regarding Wiring Diagram information, refer to [AV-613. "Wiring Diagram"](#).

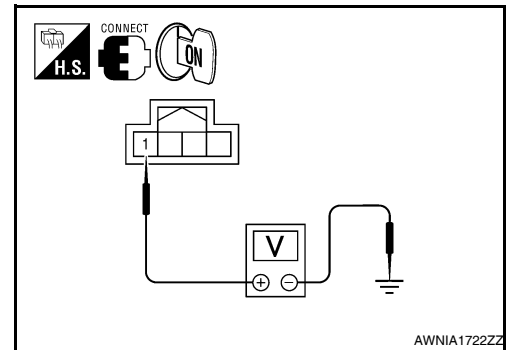
1. CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA SIDE)

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 AV control unit connectors.
3. Check continuity between rear view camera harness connector T101 (A) terminal 1 and AV control unit harness connector M45 (B) terminal 70.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
T101	1	M45	70	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.

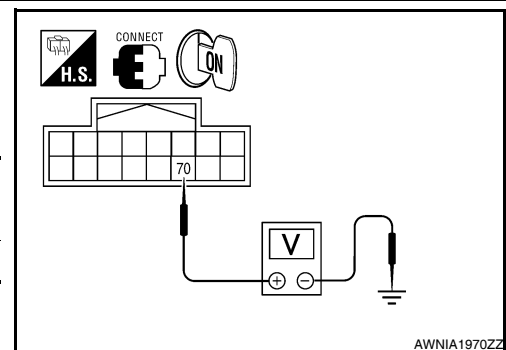
3. CHECK POWER SUPPLY CIRCUIT (AV CONTROL UNIT SIDE)

1. Connect rear view camera harness connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit harness connector M45 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
M45	70	Ground	Reverse	6V

Is voltage reading approximately 6 volts?

- YES >> Inspection End.
NO >> Replace AV control unit. Refer to [AV-654. "Removal and Installation"](#).



4. CHECK GROUND CIRCUIT

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR W/ RR CTL]

< COMPONENT DIAGNOSIS >

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:000000005529037

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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

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 B131 and ground.

(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
B131	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.

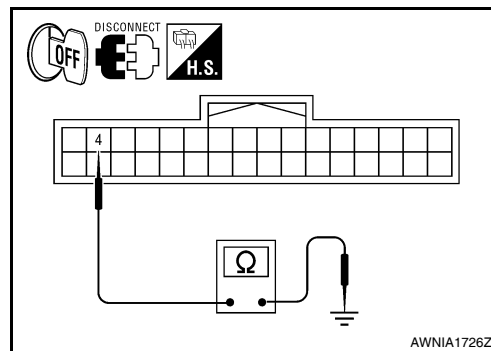
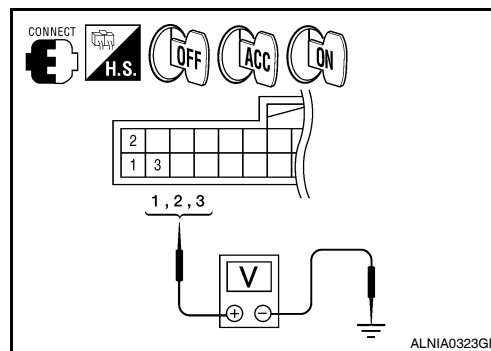
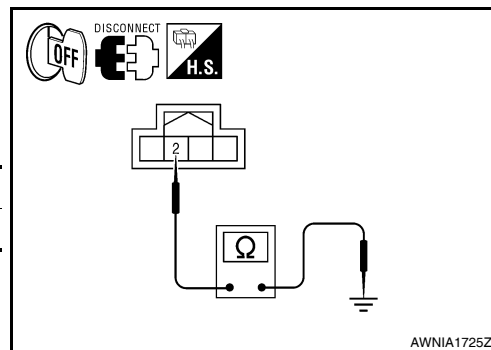
3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit connector.
3. Check continuity between Bluetooth control unit harness connector B131 and ground.

Connector.	Terminal	—	Continuity
B131	4	Ground	Yes

Are continuity results as sepcified?

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



POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

REAR CONTROL SWITCH

REAR CONTROL SWITCH : Diagnosis Procedure

INFOID:000000005532030

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

1. CHECK FUSE

Check that the rear control switch fuse is not blown.

Unit	Terminal	Signal name	Fuse No.
Rear control switch	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

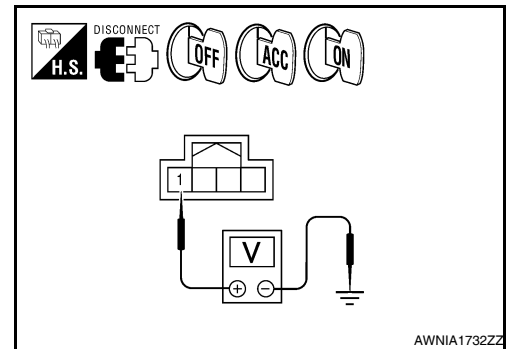
1. Disconnect rear control switch connector B402.
2. Check voltage between the rear audio remote control unit connector B402 and ground.

(+)		(-)	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.



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3. GROUND CIRCUIT CHECK

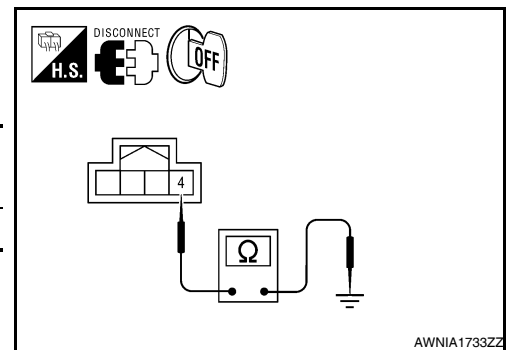
1. Turn ignition switch OFF.
2. Check continuity between rear control switch harness connector B402 and ground.

(+)		(-)	Continuity
Connector	Terminal		
B402	4	Ground	Yes

Are the continuity results as specified?

YES >> Inspection End.

NO >> Repair harness or connector.



AWNIA1733ZZ

MICROPHONE

MICROPHONE : Diagnosis Procedure

INFOID:000000005529038

Regarding Wiring Diagram information, refer to [AV-613. "Wiring Diagram"](#).

1. CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR W/ RR CTL]

< COMPONENT DIAGNOSIS >

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)

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 B131 (B) terminal 29.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	4	B131	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)

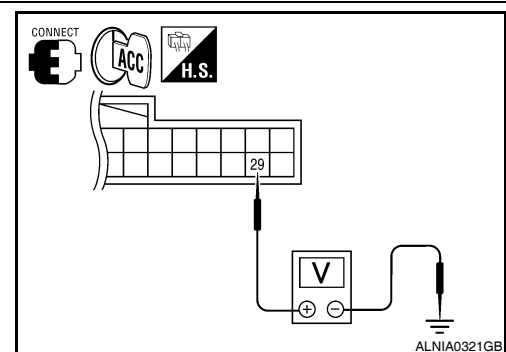
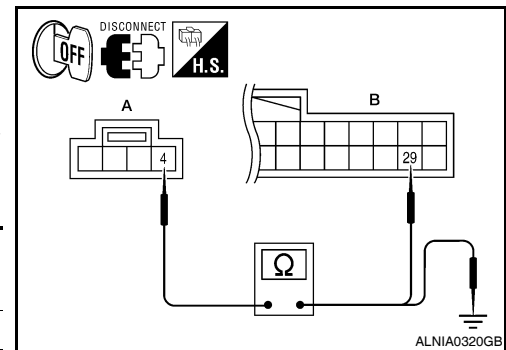
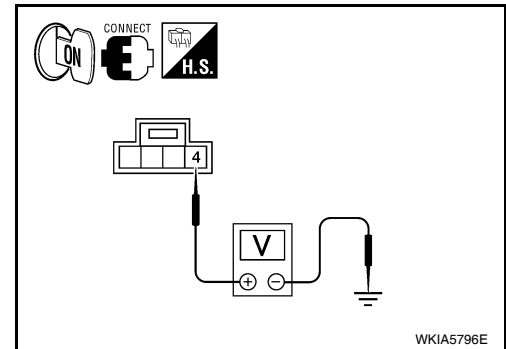
1. Connect Bluetooth control unit harness connector.
2. Turn ignition switch to ACC.
3. Check voltage between Bluetooth control unit harness connector B131 terminal 29 and ground.

(+)		(-)	Value (Approx.)
Connector	Terminal		
B131	29	Ground	5V

Is approximately 5V present?

- YES >> Go to 4.
NO >> Replace Bluetooth control unit. Refer to [AV-677](#), "Removal and Installation".

4.CHECK GROUND CIRCUIT



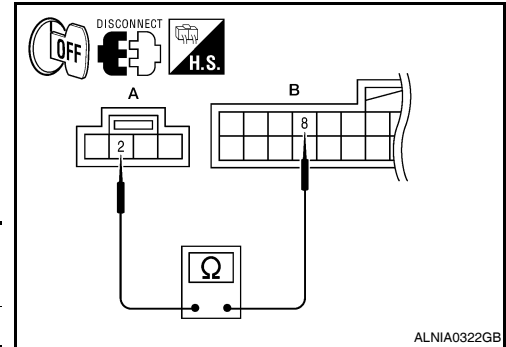
POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR W/ RR CTL]

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect microphone harness connector R7 and Bluetooth control unit harness connector B131.
3. Check continuity between microphone harness connector R7 (A) terminal 2 and Bluetooth control unit harness connector B131 (B) terminal 8.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	2	B131	8	Yes



ALNIA0322GB

Does continuity exist?

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

RGB (R: RED) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

RGB (R: RED) SIGNAL CIRCUIT

Description

INFOID:00000000529039

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

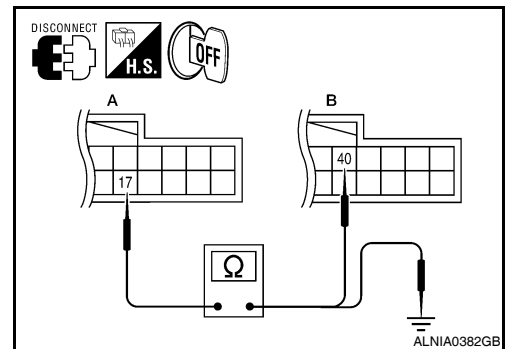
Diagnosis Procedure

INFOID:00000000529040

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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

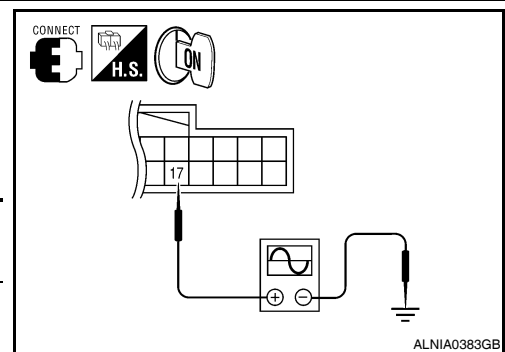
Are the continuity results as specified?

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.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M141	17	Ground	Receive audio signal	

Are the voltage readings as specified?

YES >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

RGB (G: GREEN) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

RGB (G: GREEN) SIGNAL CIRCUIT

Description

INFOID:000000005529041

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

Diagnosis Procedure

INFOID:000000005529042

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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.

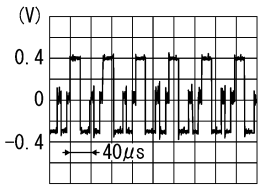
A		—	Continuity
Connector	Terminal		
M141	6	Ground	No

Are the continuity results as specified?

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

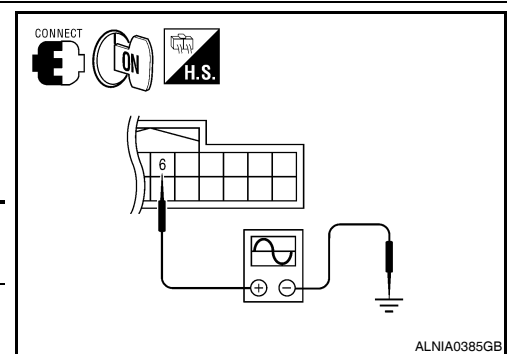
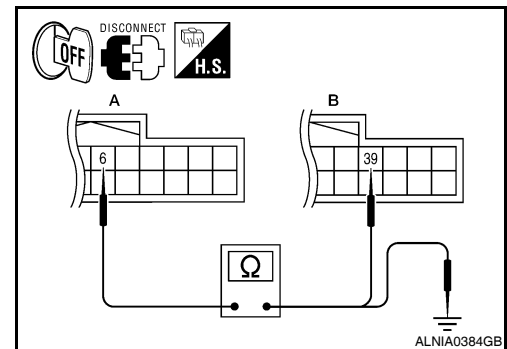
2. CHECK RGB (G: GREEN) SIGNAL

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.

(+)		(-)	Condition	Reference signal
Connector	Terminal			
M141	6	Ground	Receive audio signal	 <p>SKIB2236J</p>

Are voltage readings as specified?

- YES >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).



RGB (B: BLUE) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

RGB (B: BLUE) SIGNAL CIRCUIT

Description

INFOID:00000000529043

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

Diagnosis Procedure

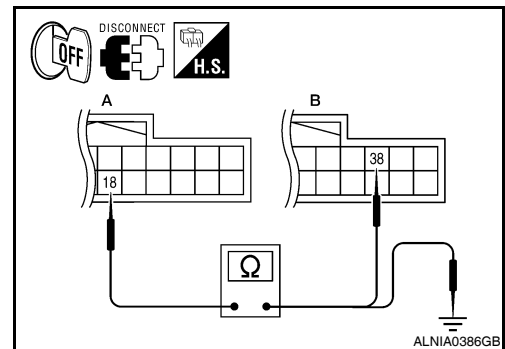
INFOID:00000000529044

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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?

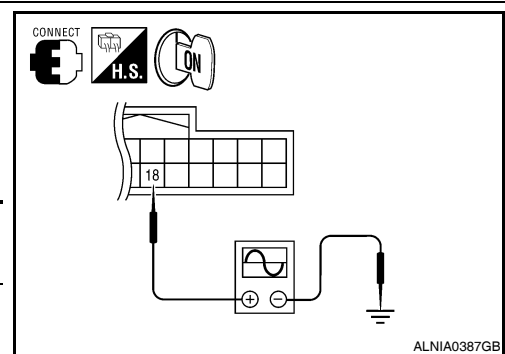
YES >> GO TO 2.

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.

(+)		(-)	Condition	Reference signal
Connector	Terminal			
M141	18	Ground	Receive audio signal	<p>SKIB2237J</p>



Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

RGB SYNCHRONIZING SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

RGB SYNCHRONIZING SIGNAL CIRCUIT

Description

INFOID:000000005529045

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

Diagnosis Procedure

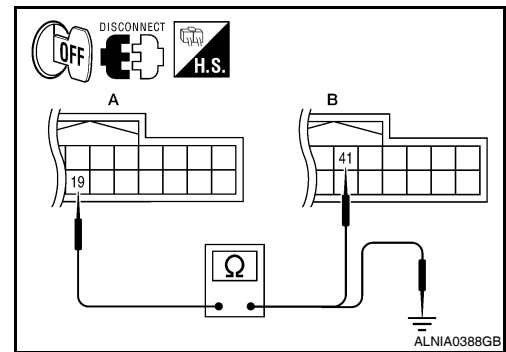
INFOID:000000005529046

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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?

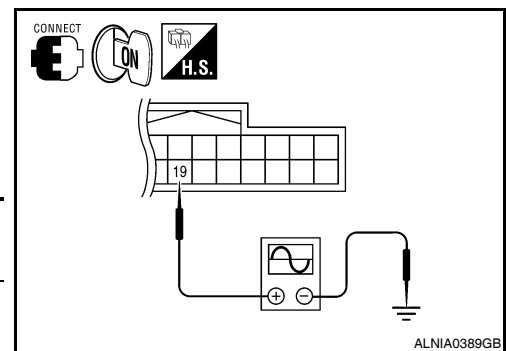
YES >> GO TO 2.

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.

(+)		(-)	Condition	Reference signal
Connector	Terminal			
M141	19	Ground	Receive audio signal	<p>SKIB3603E</p>



Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

RGB AREA (YS) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

RGB AREA (YS) SIGNAL CIRCUIT

Description

INFOID:000000005529047

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

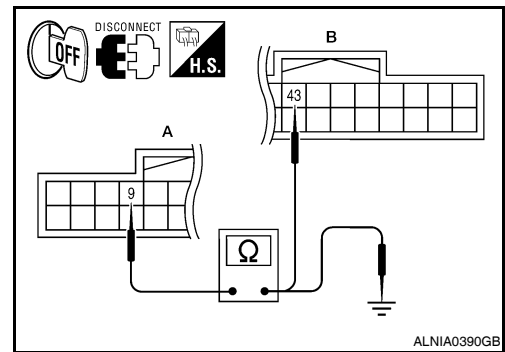
Diagnosis Procedure

INFOID:000000005529048

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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

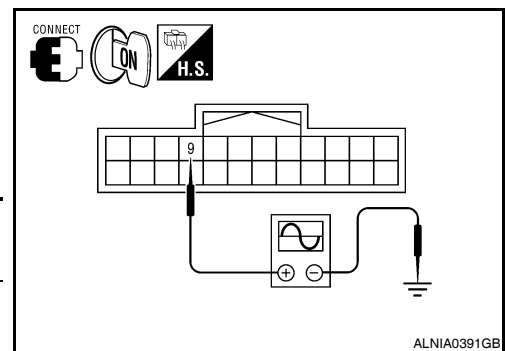
Are continuity results as specified?

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	<p style="text-align: right;">PKIB4948J</p>

Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

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HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Description

INFOID:000000005529049

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.

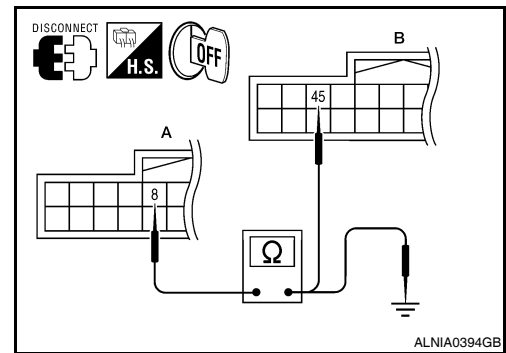
Diagnosis Procedure

INFOID:000000005529050

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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.

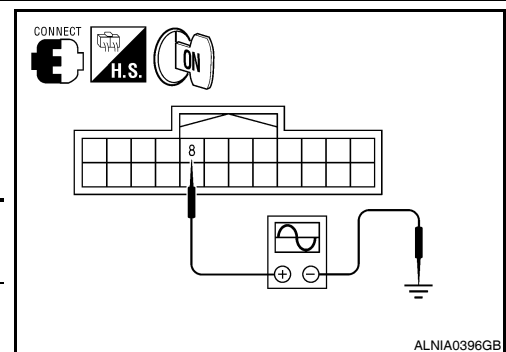
A		—	Continuity
Connector	Terminal		
M141	8	Ground	No

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		(-) Terminal	Condition	Reference signal
M141	8	Ground	Receive audio signal	<p>SKIB3601E</p>

Are voltage readings as specified?

- YES >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).
 NO >> Replace display unit. Refer to [AV-325, "Removal and Installation"](#).

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description

INFOID:000000005529051

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.

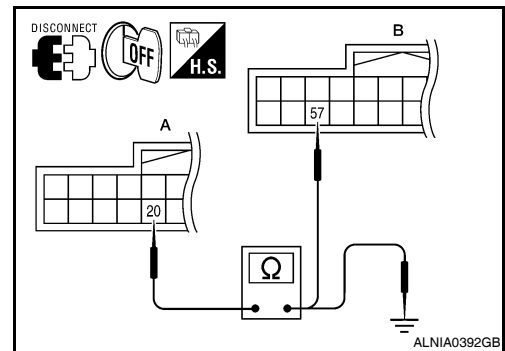
Diagnosis Procedure

INFOID:000000005529052

Regarding Wiring Diagram information, refer to [AV-613. "Wiring Diagram"](#).

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

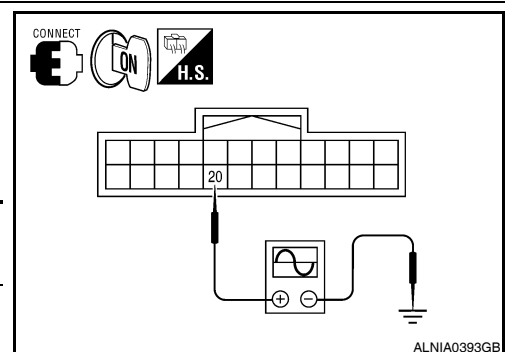
Are continuity results as specified?

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	<p style="text-align: right; font-size: small;">SKIB3598E</p>

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to [AV-322. "Removal and Installation"](#).

NO >> Replace display unit. Refer to [AV-325. "Removal and Installation"](#).

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AV

FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

FRONT DOOR SPEAKER

Description

INFOID:000000005529053

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:000000005529054

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

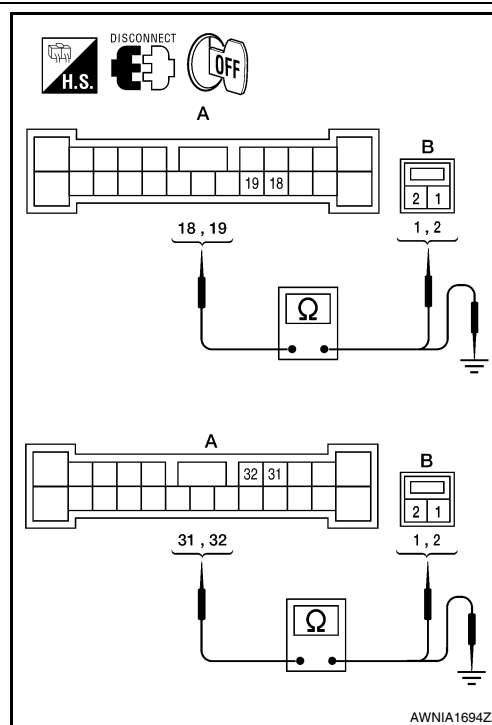
1. HARNESS CHECK

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 W/ RR CTL]

< 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-331. "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.

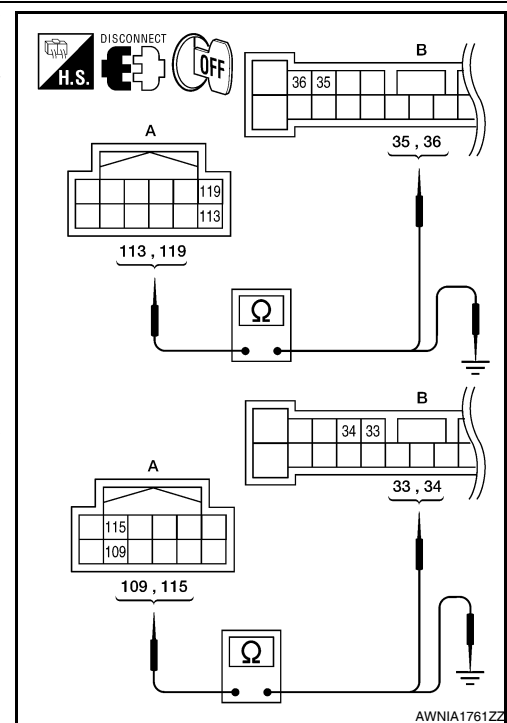
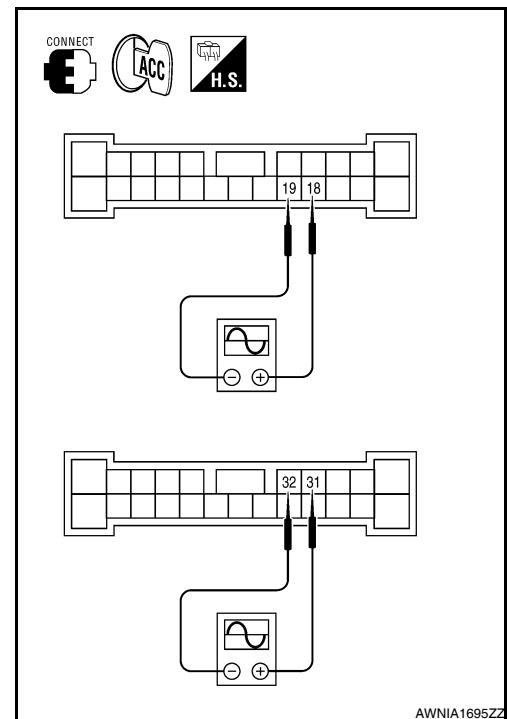
A		—	Continuity
Connector	Terminal		
M47	113	Ground	No
	119		
	109		
	115		

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

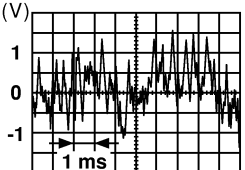


FRONT DOOR SPEAKER

[BOSE W/ COLOR W/ RR CTL]

< COMPONENT DIAGNOSIS >

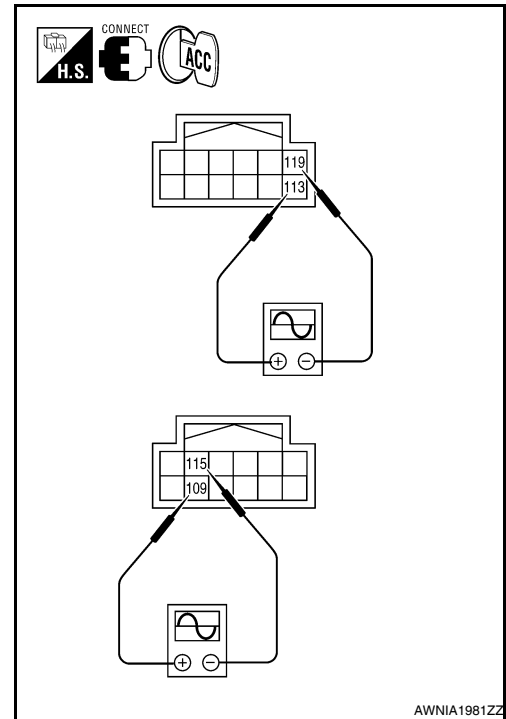
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

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-334, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).



AWNIA1981ZZ

TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

TWEETER

Description

INFOID:000000005529055

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:000000005529056

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

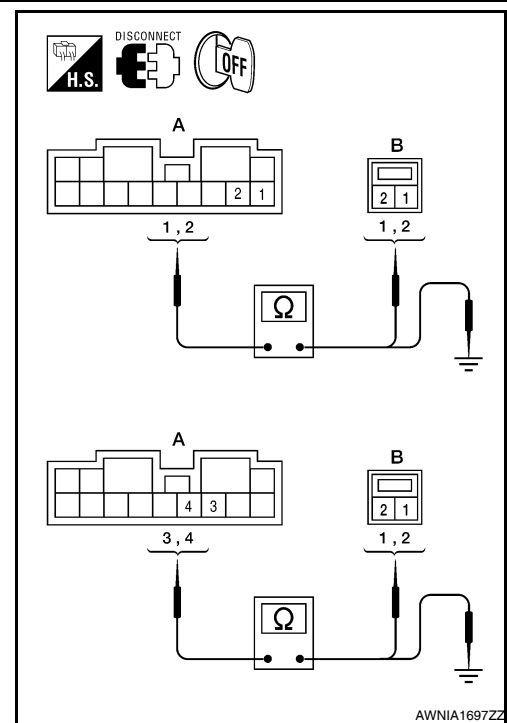
1. HARNESS CHECK

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

AV

TWEETER

[BOSE W/ COLOR W/ RR CTL]

< 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-164, "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.

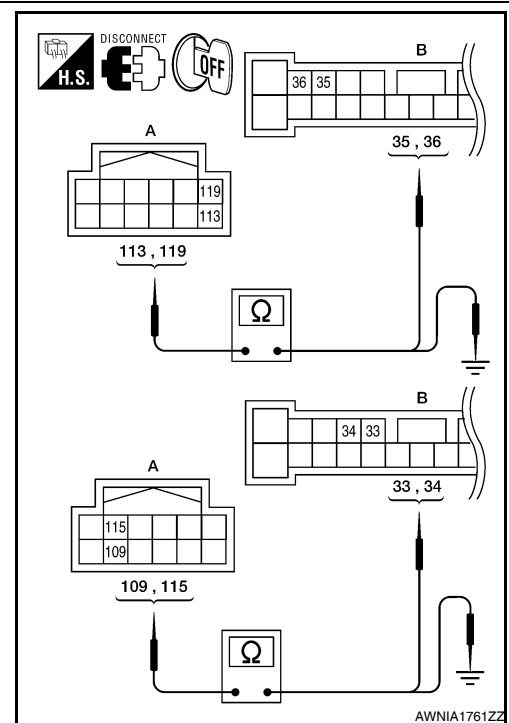
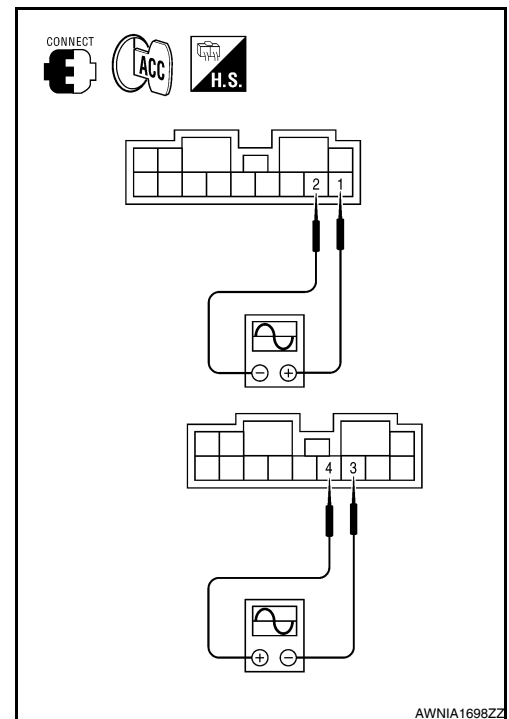
A		—	Continuity
Connector	Terminal		
M47	113	Ground	No
	119		
	109		
	115		

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

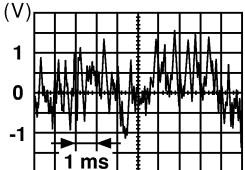


TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

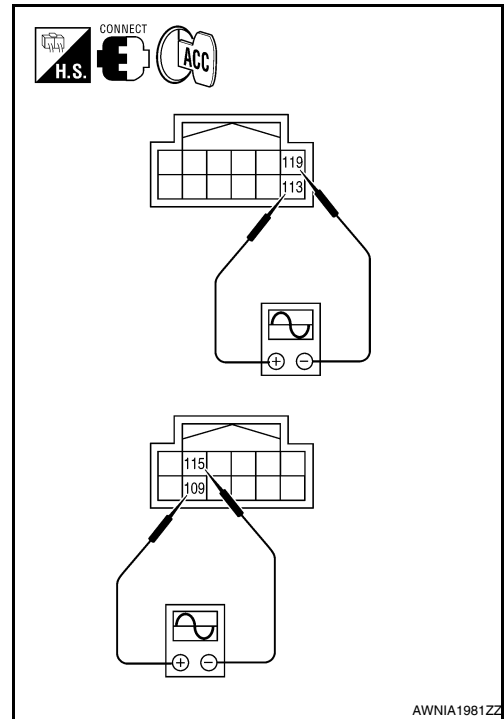
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

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-169, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-654, "Removal and Installation"](#).



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AV

CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

CENTER SPEAKER

Description

INFOID:000000005529057

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

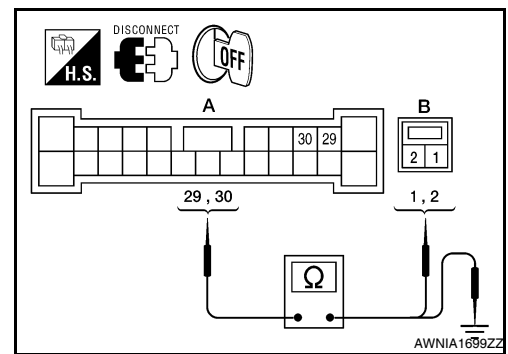
INFOID:000000005529058

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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.

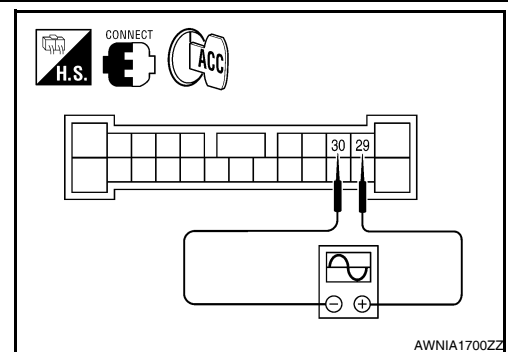
- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

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	

SKIA0177E



AWNIA1700ZZ

Is the audio signal voltage reading as specified?

CENTER SPEAKER

[BOSE W/ COLOR W/ RR CTL]

< COMPONENT DIAGNOSIS >

- YES >> Replace center speaker. Refer to [AV-165. "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.

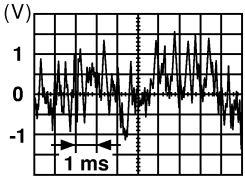
A		—	Continuity
Connector	Terminal		
M47	113	Ground	No
	119		
	109		
	115		

Are continuity test results as specified?

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

4. CENTER SPEAKER SIGNAL CHECK

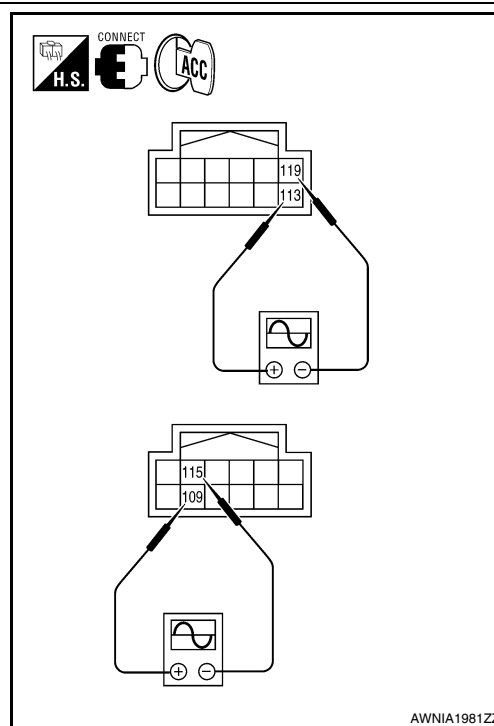
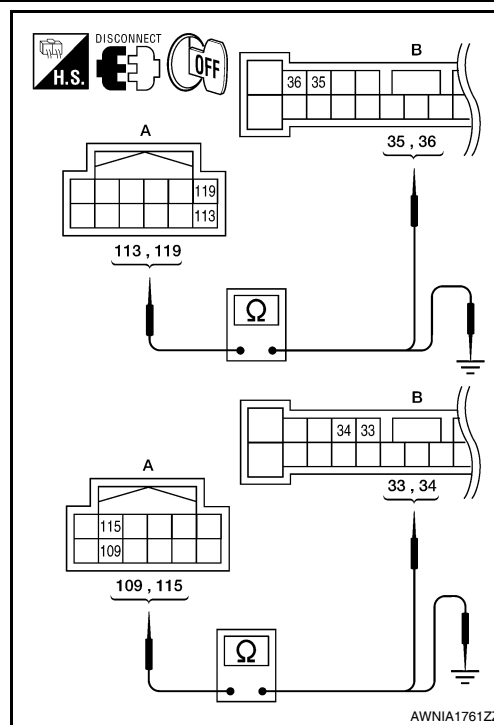
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch to ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M47	113	119	Receive audio signal	
	109	115		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-169. "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-654. "Removal and Installation"](#).



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REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

REAR DOOR SPEAKER

Description

INFOID:000000005529059

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:000000005529060

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

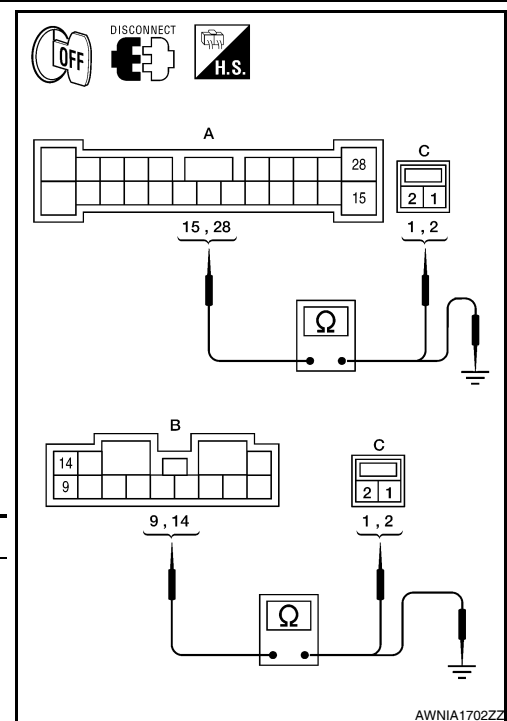
1. HARNESS CHECK

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		



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

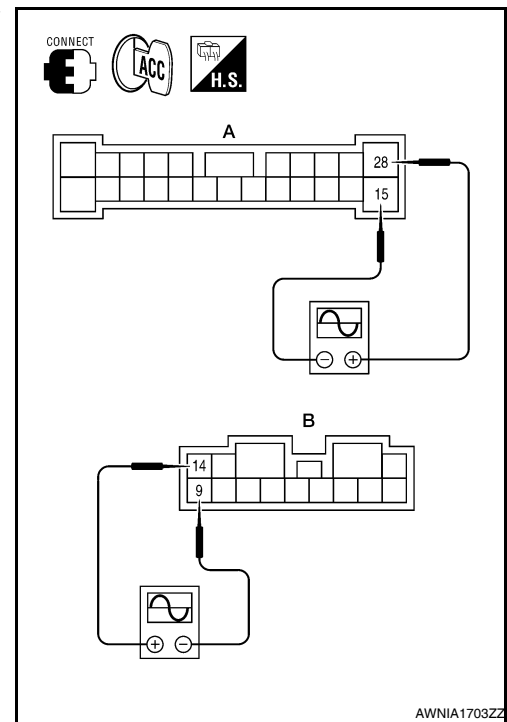
[BOSE W/ COLOR W/ RR CTL]

< 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-332, "Removal and Installation"](#).
- NO >> GO TO 3.

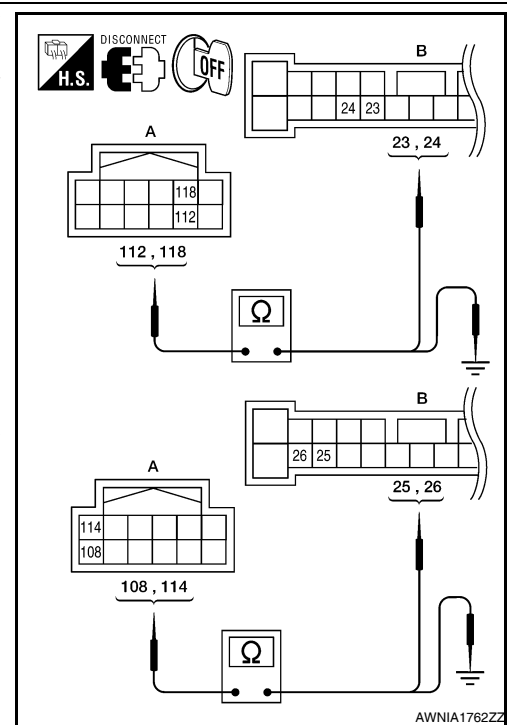
3. HARNESS CHECK

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.

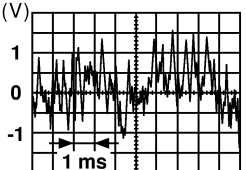
4. REAR DOOR SPEAKER SIGNAL CHECK

REAR DOOR SPEAKER

[BOSE W/ COLOR W/ RR CTL]

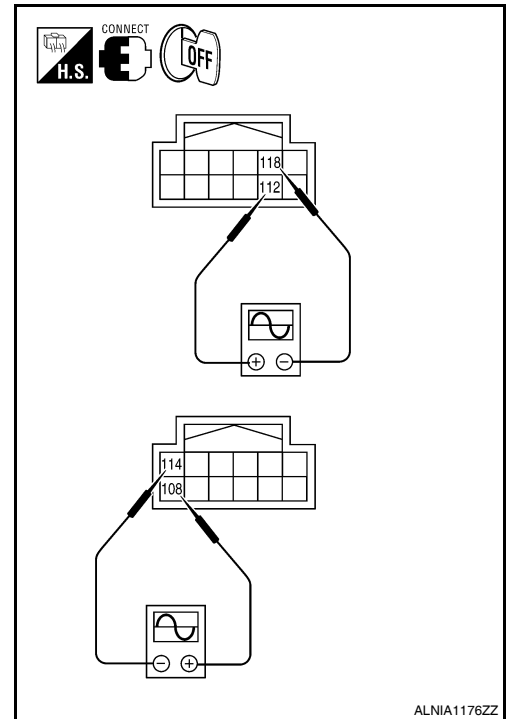
< COMPONENT DIAGNOSIS >

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-334, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).



SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

SUBWOOFER

Description

INFOID:000000005529061

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:000000005529062

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

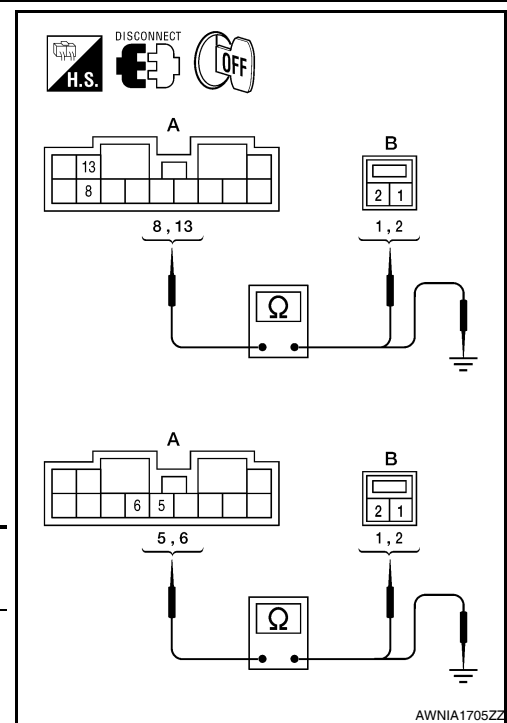
1. HARNESS CHECK

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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AV

SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

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-168](#), "[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.

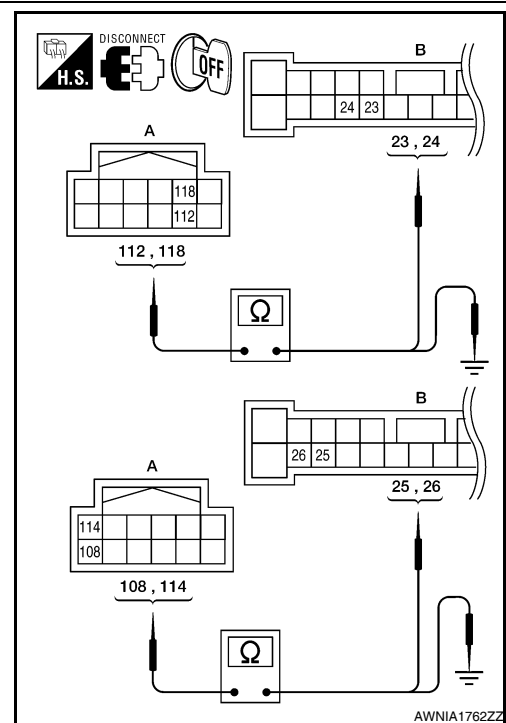
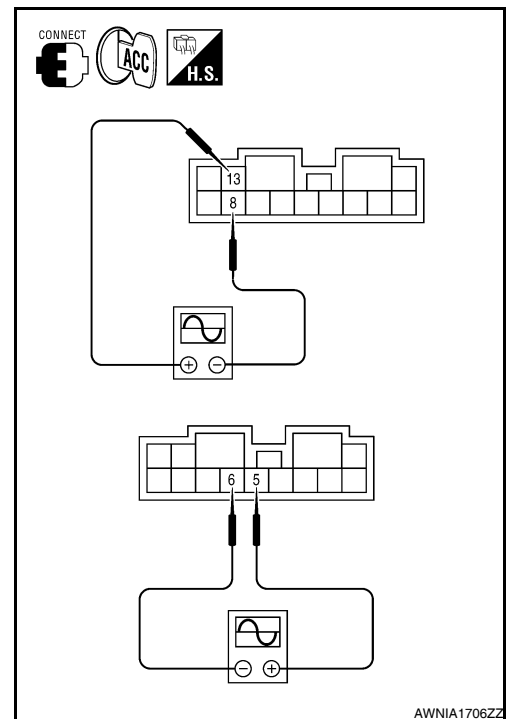
A		—	Continuity
Connector	Terminal		
M47	112	Ground	No
	118		
	108		
	114		

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

< COMPONENT DIAGNOSIS >

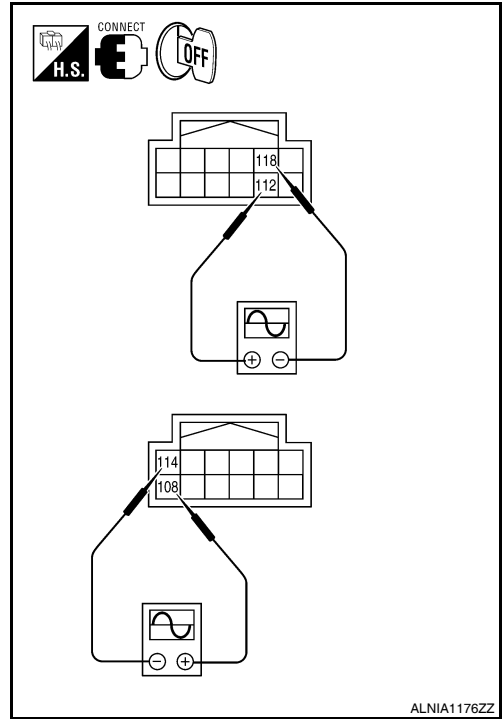
[BOSE W/ COLOR W/ RR CTL]

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	
	108	114		

Is the audio signal voltage as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-169, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-654, "Removal and Installation"](#).



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AV

AMP ON SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

AMP ON SIGNAL CIRCUIT

Description

INFOID:000000005529063

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:000000005529064

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

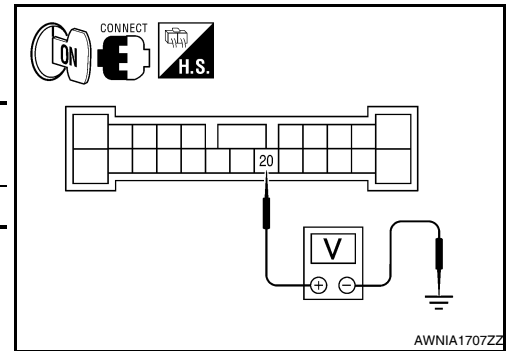
1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

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.



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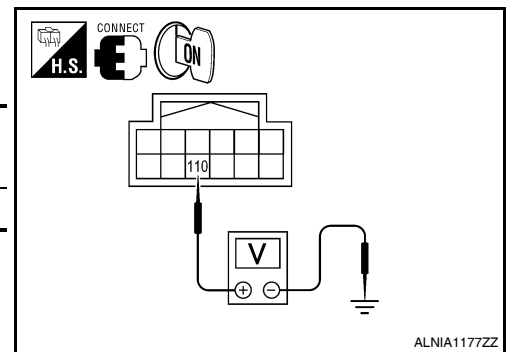
2. CHECK AMP ON SIGNAL (AV CONTROL UNIT)

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-654, "Removal and Installation"](#).



ALNIA1177ZZ

STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

STEERING SWITCH

Description

INFOID:000000005529065

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.

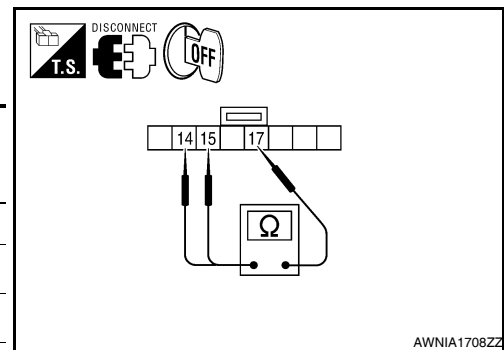
Diagnosis Procedure

INFOID:000000005529066

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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	Enter	Depress ENTER switch.	2023
	Voice recognition	Depress switch.	723
	Menu (down)	Depress switch.	321
	Menu (up)	Depress switch.	121
15	Source	Depress SOURCE switch.	0
	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?

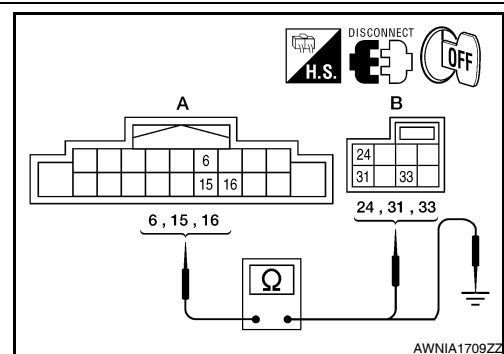
YES >> GO TO 2.

NO >> Replace steering wheel audio control switch. Refer to [AV-669, "Removal and Installation"](#).

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.

STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

A		—	Continuity
Connector	Terminal		
M42	6	Ground	No
	15		
	16		

Are the continuity results as specified?

YES >> GO TO 3.

NO >> Repair harness.

3. SPIRAL CABLE CHECK

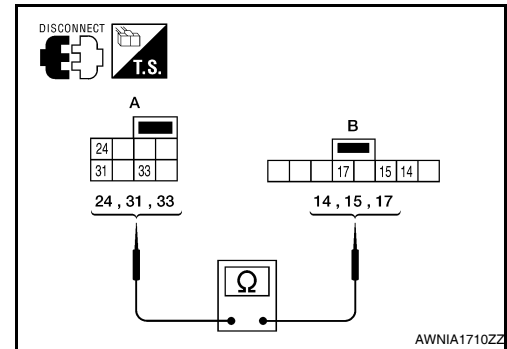
1. Disconnect spiral cable connector M88.
2. Check continuity between spiral cable harness connector M30 (A) and M88 (B).

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

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

COMMUNICATION SIGNAL CIRCUIT SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000005529067

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

SATELLITE RADIO TUNER : Diagnosis Procedure

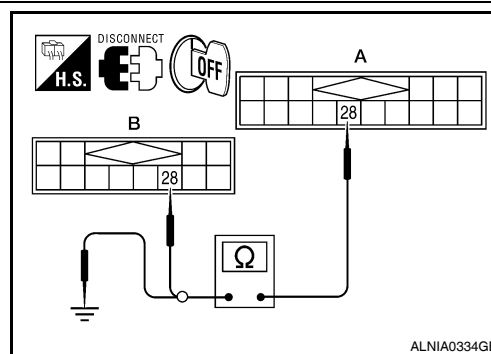
INFOID:000000005529068

Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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?

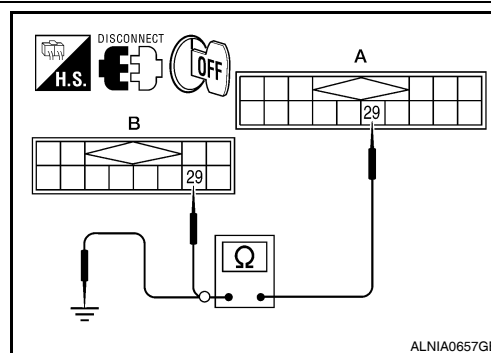
YES >> GO TO 2.

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.

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COMMUNICATION SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

3. CHECK HARNESS - 3

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

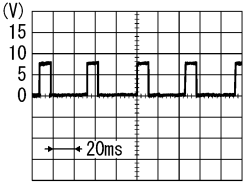
Are continuity results as specified?

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.

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

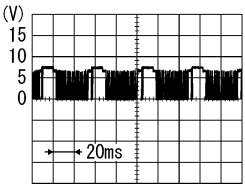
Are voltage readings as specified?

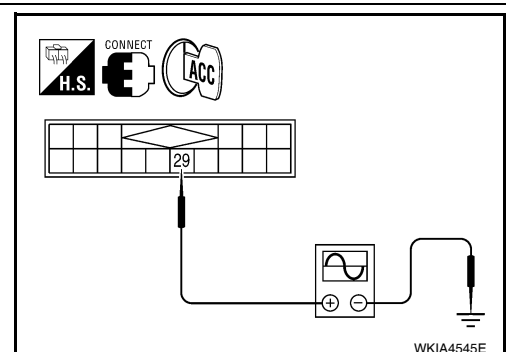
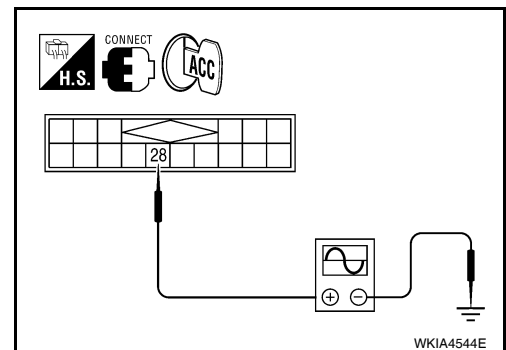
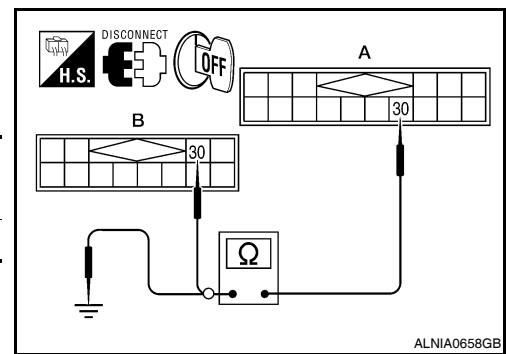
YES >> GO TO 5.

NO >> Replace AV control unit. Refer to [AV-322. "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>



COMMUNICATION SIGNAL CIRCUIT

[BOSE W/ COLOR W/ RR CTL]

< COMPONENT DIAGNOSIS >

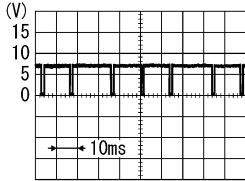
Are the voltage readings as specified?

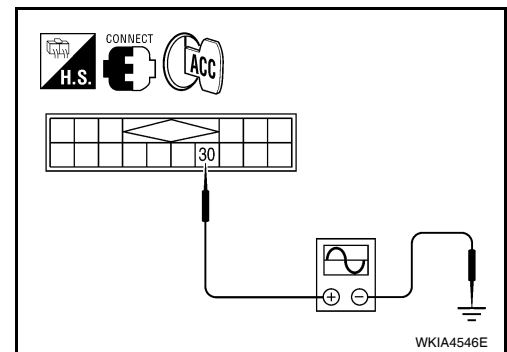
YES >> GO TO 6.

NO >> Replace satellite radio tuner. Refer to [AV-335. "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;">SKIB3826E</p>



Are the voltage readings as specified?

YES >> Replace satellite radio tuner. Refer to [AV-335. "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-322. "Removal and Installation"](#).

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SOUND SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

SOUND SIGNAL CIRCUIT SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000005529069

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:000000005529070

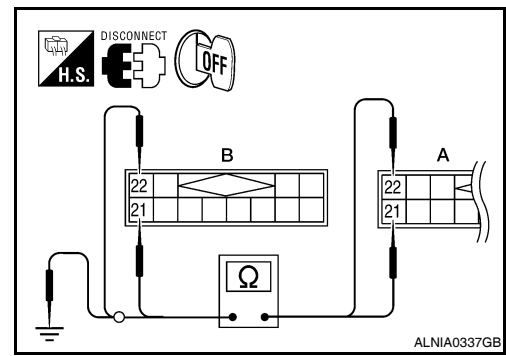
Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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		

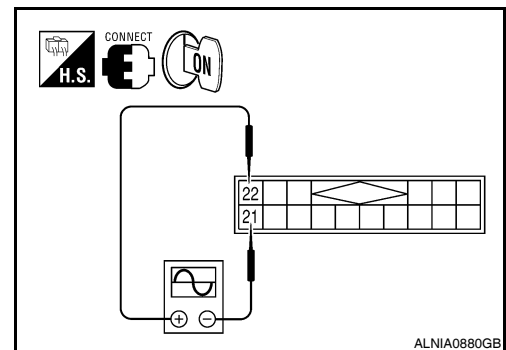
Are continuity results as specified?

- 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.

Connector	Reference signal	
	(+)	(-)
B111	22	21



Are voltage readings as specified?

- YES >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

SOUND SIGNAL CIRCUIT

[BOSE W/ COLOR W/ RR CTL]

< COMPONENT DIAGNOSIS >

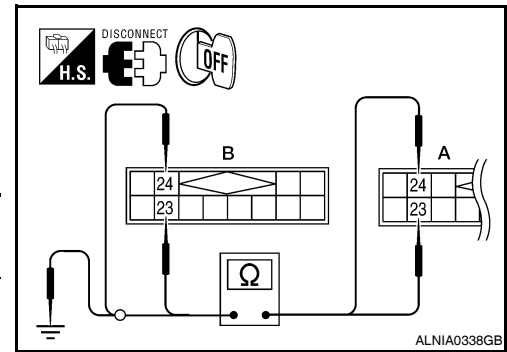
NO >> Replace satellite radio tuner. Refer to [AV-335, "Removal and Installation"](#).

RIGHT 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) 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?

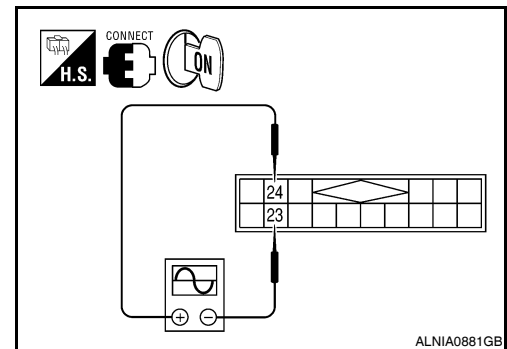
YES >> GO TO 2.

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-322, "Removal and Installation"](#).

NO >> Replace satellite radio tuner. Refer to [AV-335, "Removal and Installation"](#).

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AV

MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000005529071

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

Diagnosis Procedure

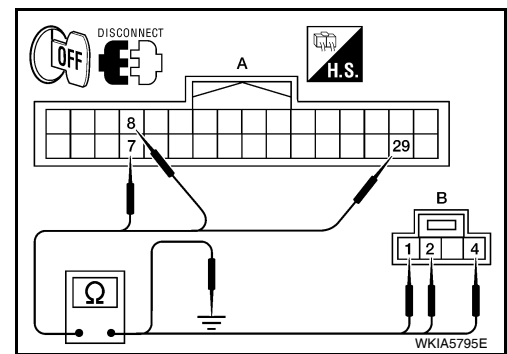
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Regarding Wiring Diagram information, refer to [AV-613, "Wiring Diagram"](#).

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 B131 (A) and microphone harness connector R7 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B131	7	R7	1	Yes
	8		2	
	29		4	



4. Check continuity between Bluetooth control unit harness connector B131 (A) and ground.

A		—	Continuity
Connector	Terminal		
B131	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

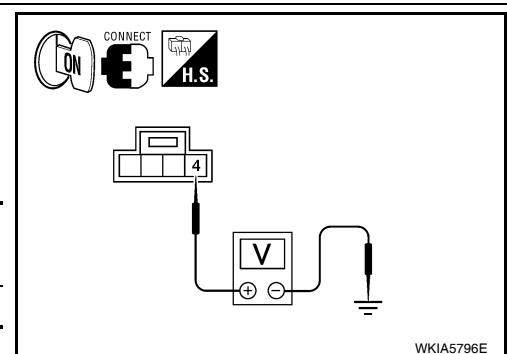
1. Connect Bluetooth control unit connector and microphone connector.
2. Turn ignition switch ON.
3. Check voltage between microphone harness connector R7 terminal 4 and ground.

(+)		(-)	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-677, "Removal and Installation"](#).

3. CHECK MICROPHONE SIGNAL

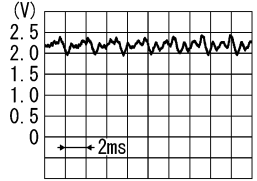


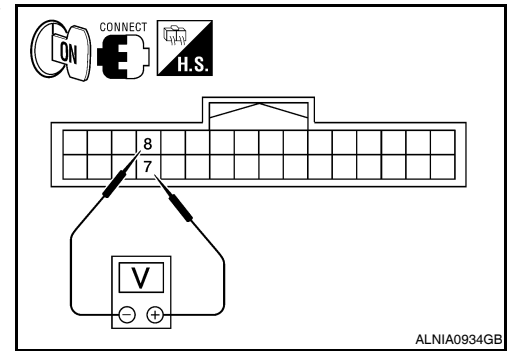
MICROPHONE SIGNAL CIRCUIT

[BOSE W/ COLOR W/ RR CTL]

< COMPONENT DIAGNOSIS >

Check signal between Bluetooth control unit harness connector B131 terminals 7 and 8.

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
B131	7	8	While talking into microphone  <small>PKIB5037J</small>



Are voltage readings as specified?

- YES >> Replace Bluetooth control unit. Refer to [AV-677, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-675, "Removal and Installation"](#).

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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

ECU DIAGNOSIS

AV CONTROL UNIT

Reference Value

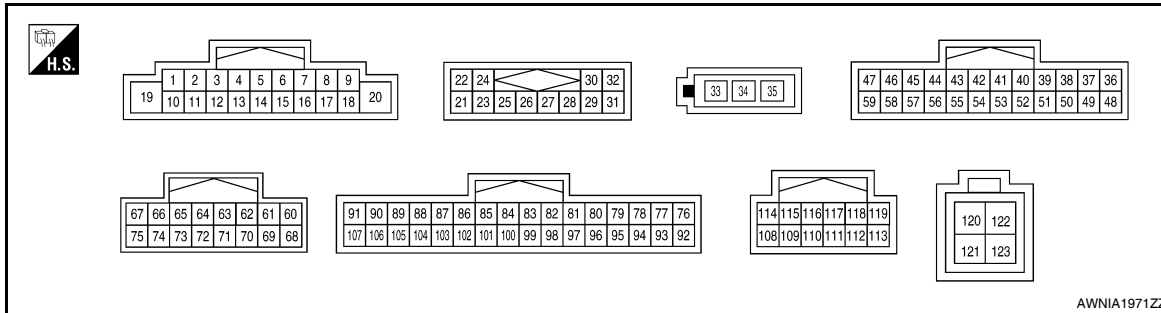
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VALUES ON THE DIAGNOSIS TOOL

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



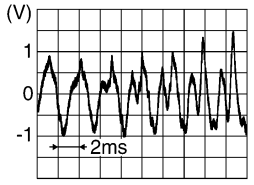
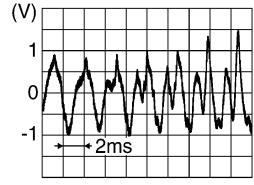
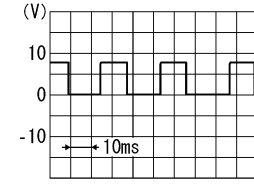
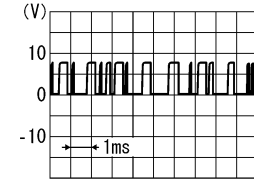
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)	
+	-	Signal name	Input/ Output			
6 (W/G)	15 (L/B)	Steering switch signal A	Input	Ignition switch OFF	Depress ENTER switch.	2023Ω
				Depress \curvearrowright switch.	723Ω	
				Depress ∇ switch.	321Ω	
				Depress \triangle 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 W/ RR CTL]

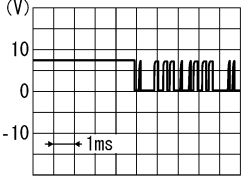
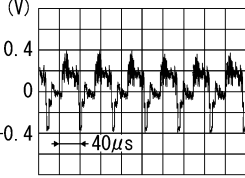
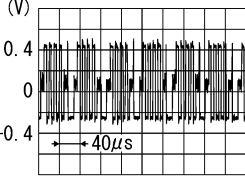
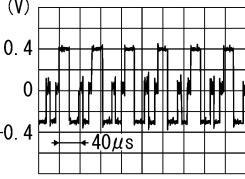
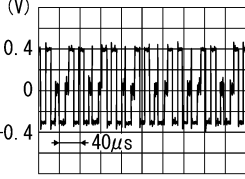
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
9 (R/L)	Ground	Illumination signal	Input	OFF	Lighting switch is OFF.	0V
					Lighting switch is ON.	Battery voltage
16 (GR/L)	15 (L/B)	Steering switch signal B	Input	Ignition switch ON	Depress the 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	 <small>SKIB3609E</small>
24 (BR/L)	23 (Y/G)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected	 <small>SKIB3609E</small>
25	—	Shield	—	—	—	—
26	—	Shield	—	—	—	—
28 (R)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	 <small>SKIA9299J</small>
29 (B)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	 <small>SKIA9300J</small>

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AV CONTROL UNIT

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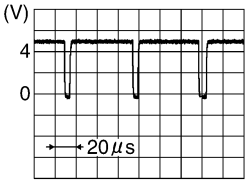
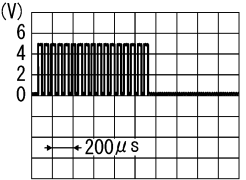
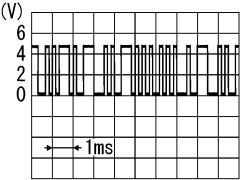
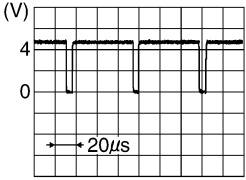
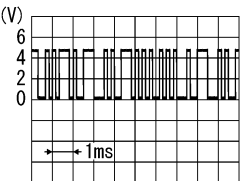
[BOSE W/ COLOR W/ RR CTL]

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 (W)	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 W/ RR CTL]

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
49	—	Shield	—	—	—	—
50	—	Shield	—	—	—	—
55	—	Shield	—	—	—	—
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>

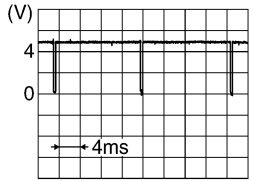
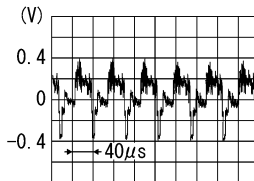
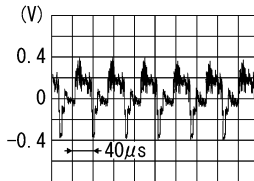
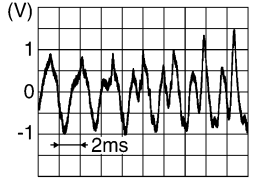
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AV CONTROL UNIT

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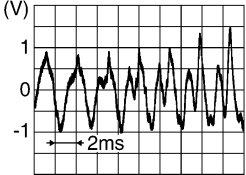
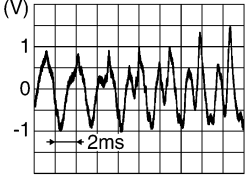
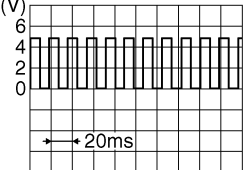
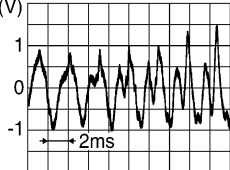
[BOSE W/ COLOR W/ RR CTL]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
57 (W)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch ON	—	 <small>SKIB3598E</small>
58 (BR)	Ground	Inverter ground	—	Ignition switch ON	—	0V
59 (Y)	Ground	Inverter VCC	Output	Ignition switch ACC	—	9V
65 (W)	Ground	Rear view camera video in (+)	Input	Ignition switch ON	With rear view camera ON	 <small>SKIB2251J</small>
66 (LG)	74 (V)	Aux image signal	Input	Ignition switch ON	When aux mode is selected	 <small>SKIB2251J</small>
70 (L)	Ground	RV_CAM_SIG	Output	Ignition switch ACC	Shift selector is in R position	6V
71 (V/G)	Ground	RV_CAM_GND	—	—	—	—
72	—	Shield	—	—	—	—
73	—	Shield	—	—	—	—
80 (BR)	79 (Y)	TEL voice audio signal	Input	Ignition switch ON	Start confirmation/adjustment mode, and then Voice Microphone Test by selecting "Voice Microphone Test" on Handsfree Microphone screen.	 <small>SKIB3609E</small>
81	—	Shield	—	—	—	—
85 (BR)	Ground	Ground	—	Ignition switch ON	—	0V
86 (L)	—	CAN-H	Input/ Output	—	—	—
87 (P)	—	CAN-L	Input/ Output	—	—	—

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
88 (L)	—	AV communication signal 1 (H)	Input/ Output	—	—	—
89 (P)	—	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	 <small>SKIB3609E</small>
96 (W)	97 (R)	AUX audio signal LH	Input	Ignition switch ON	When AUX mode is select- ed	 <small>SKIB3609E</small>
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)	 <small>SKIA6649J</small>
108 (V)	114 (LG)	Rear RH pre-amp. sound signal	Output	Ignition switch ON	Audio output	 <small>SKIB3609E</small>

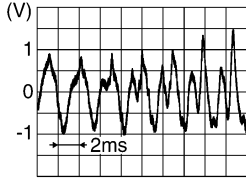
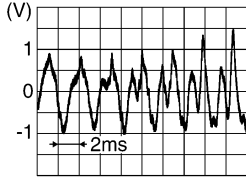
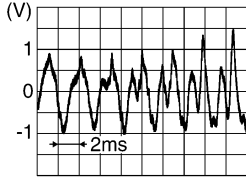
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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
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	—	—	—	—
112 (W/R)	118 (W/L)	Rear LH pre-amp. sound signal	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
113 (G)	119 (R)	Front LH pre-amp. sound signal	Output	Ignition switch ON	Audio output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
120 (B)	—	USB ground	—	—	—	—
121 (W)	—	USB D-	—	—	—	—
122 (R)	—	V BUS signal	—	—	—	—
123 (G)	—	USB D+	—	—	—	—

AV CONTROL UNIT

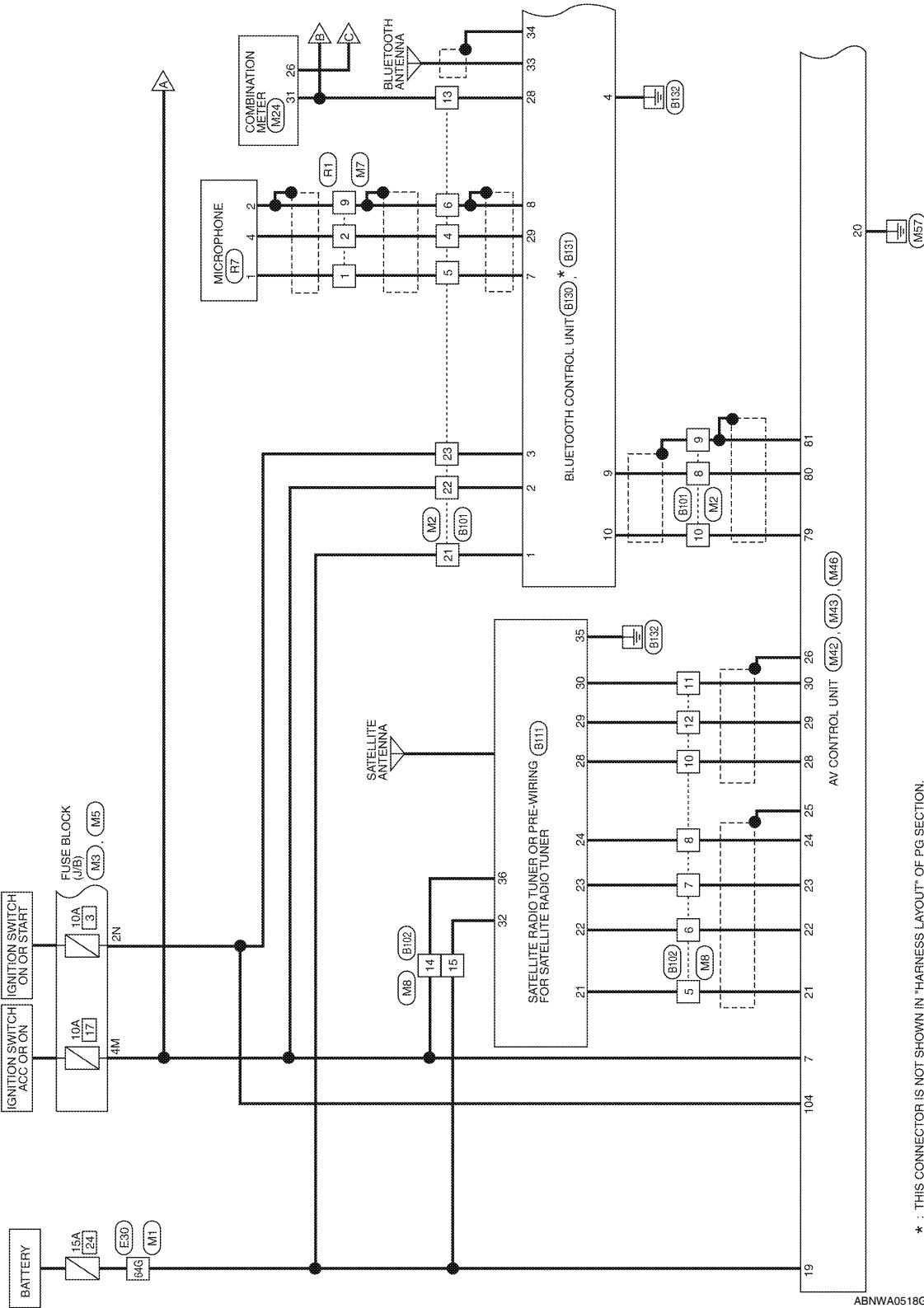
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[BOSE W/ COLOR W/ RR CTL]

Wiring Diagram

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BOSE AUDIO SYSTEM - WITH COLOR DISPLAY WITHOUT NAVI WITH REAR CONTROLS



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

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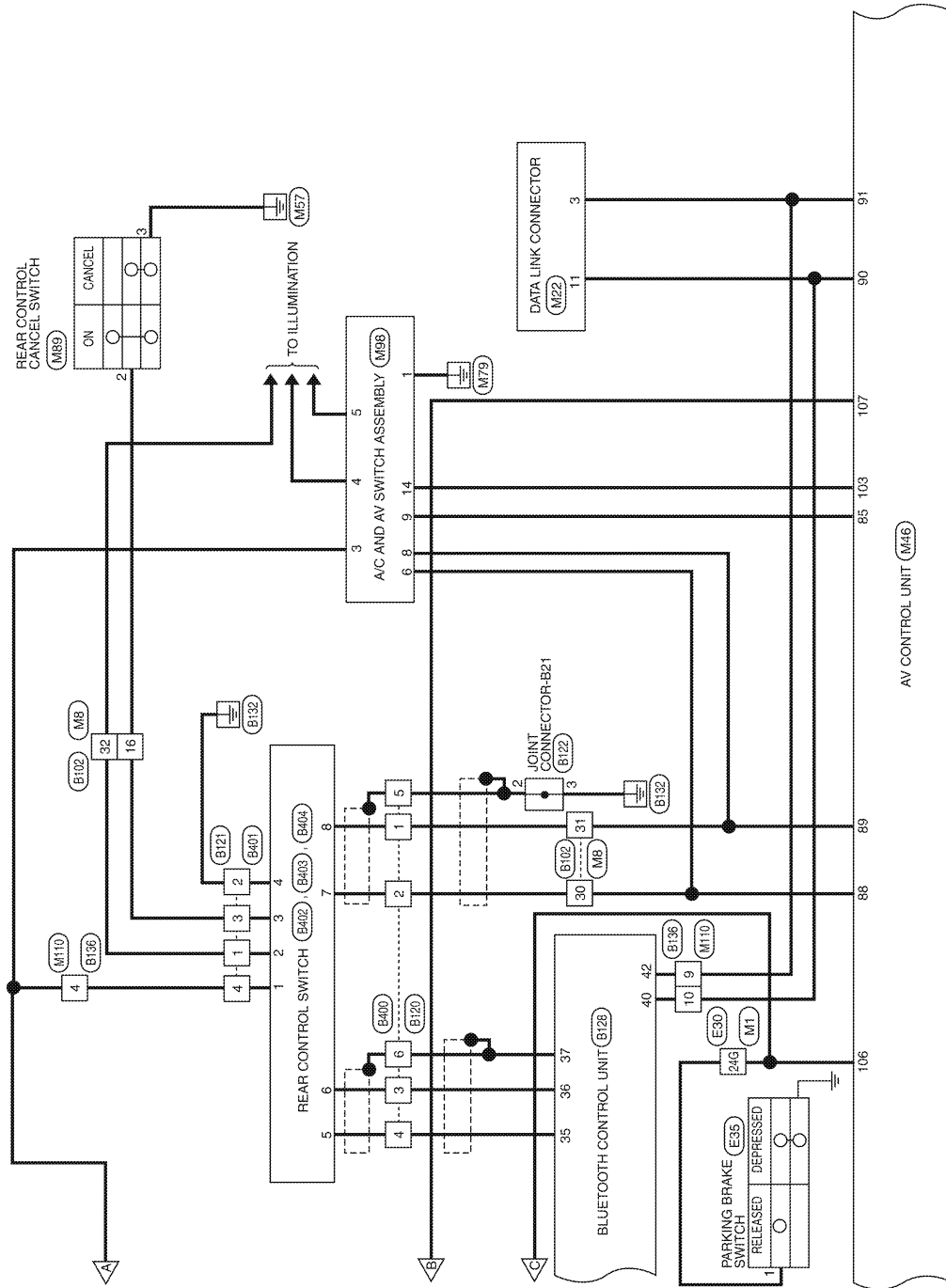
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[BOSE W/ COLOR W/ RR CTL]

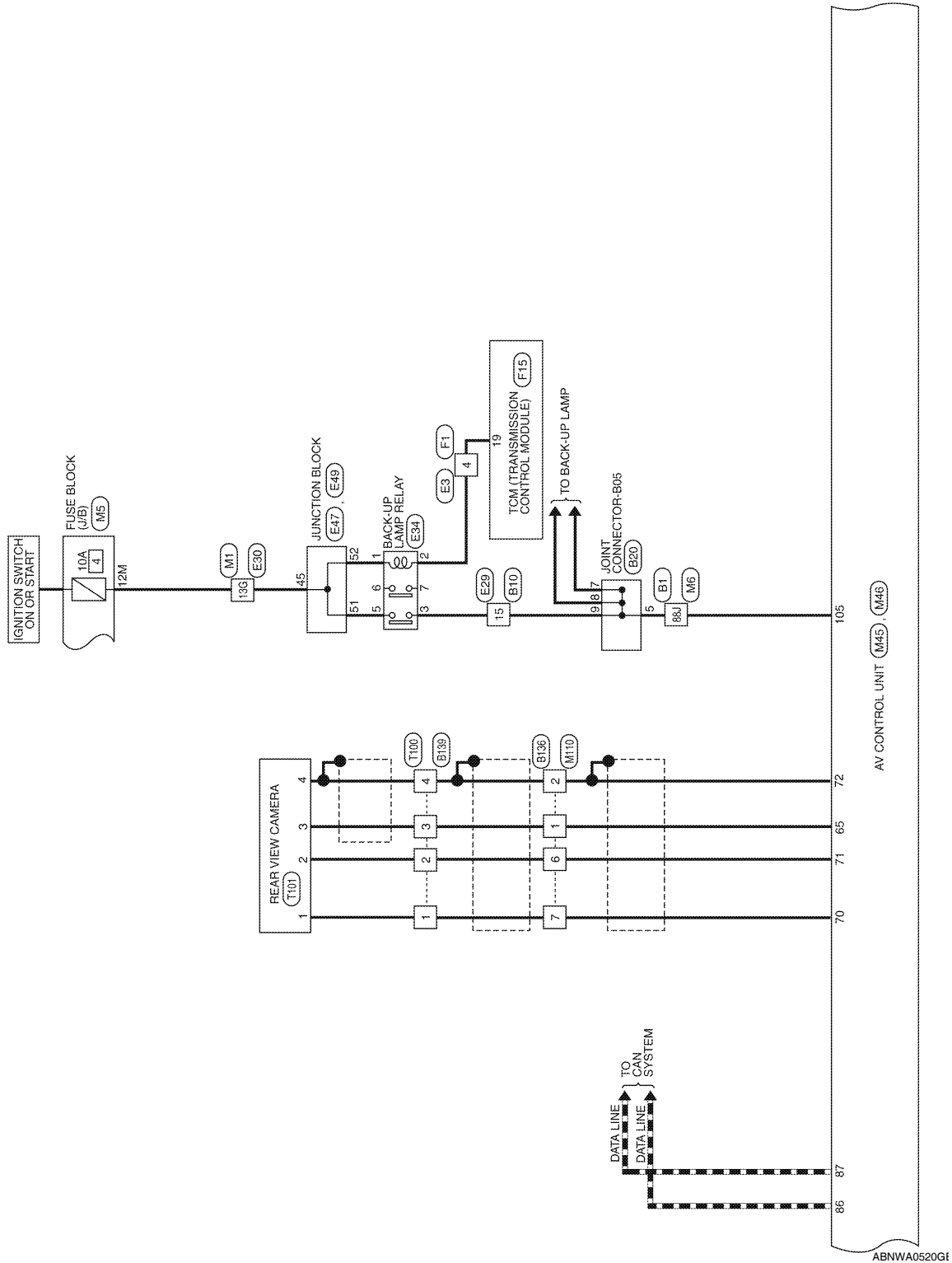


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AV CONTROL UNIT

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[BOSE W/ COLOR W/ RR CTL]



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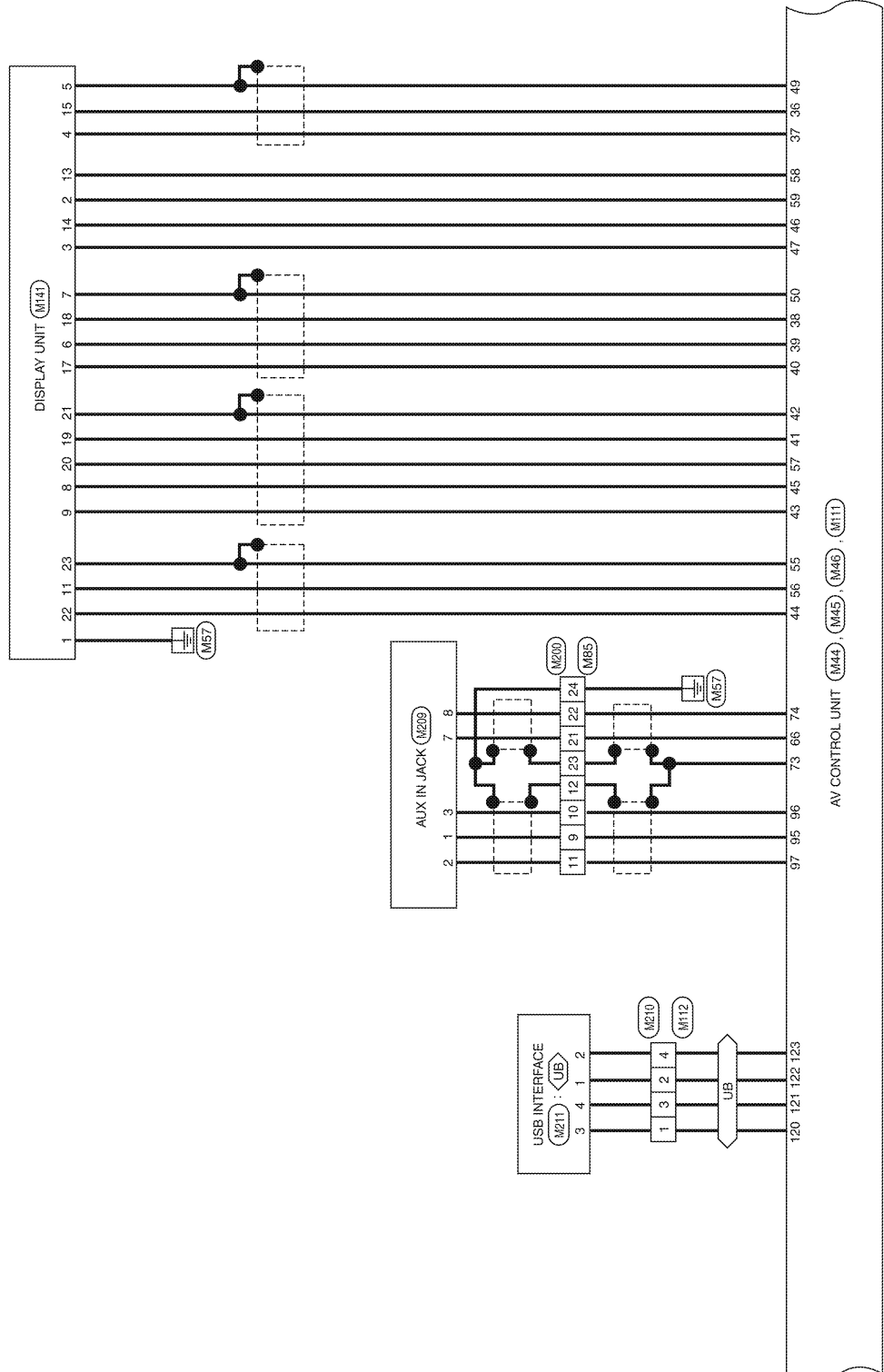
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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

UB : WITH USB INTERFACE

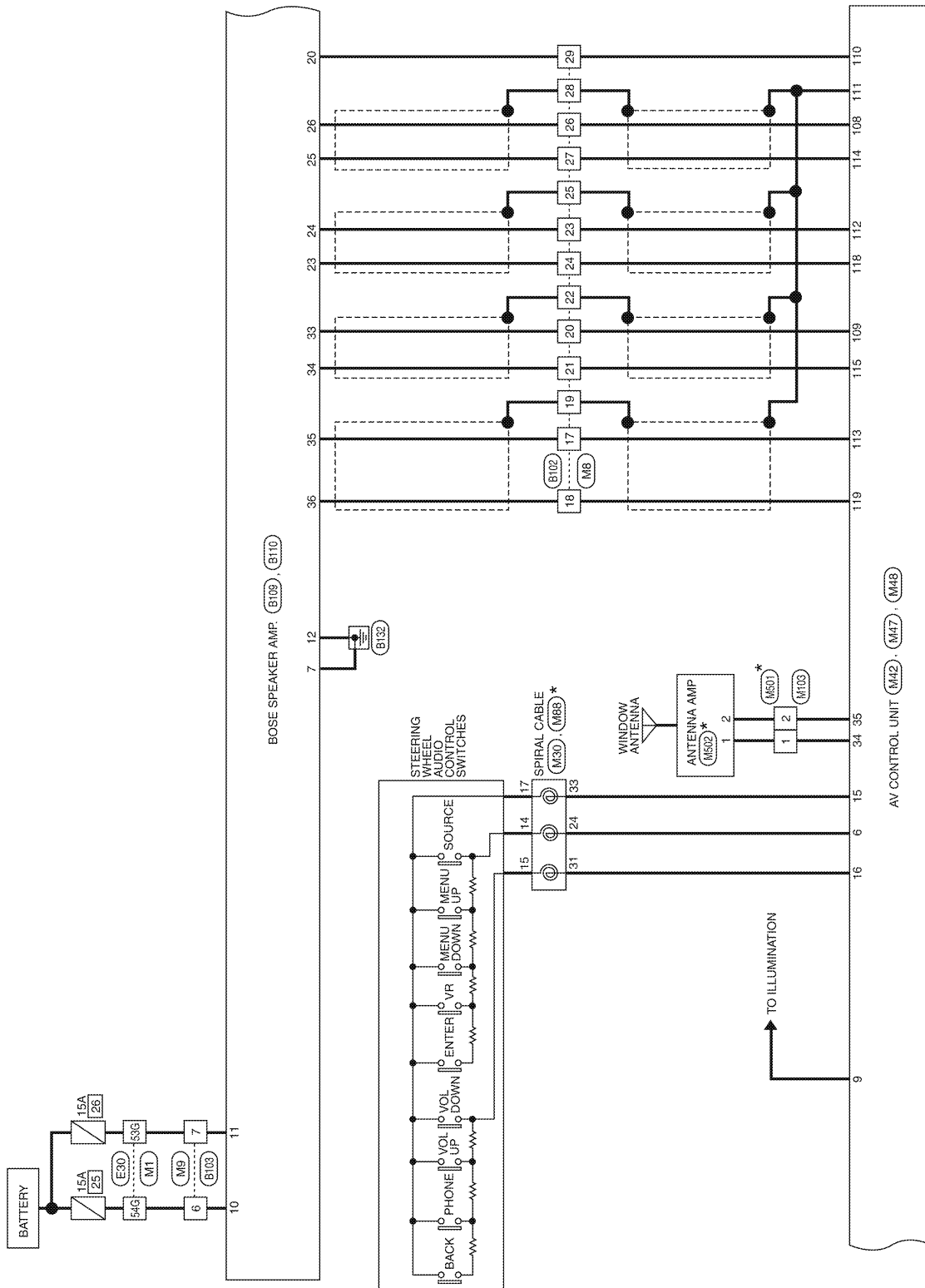


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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]



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

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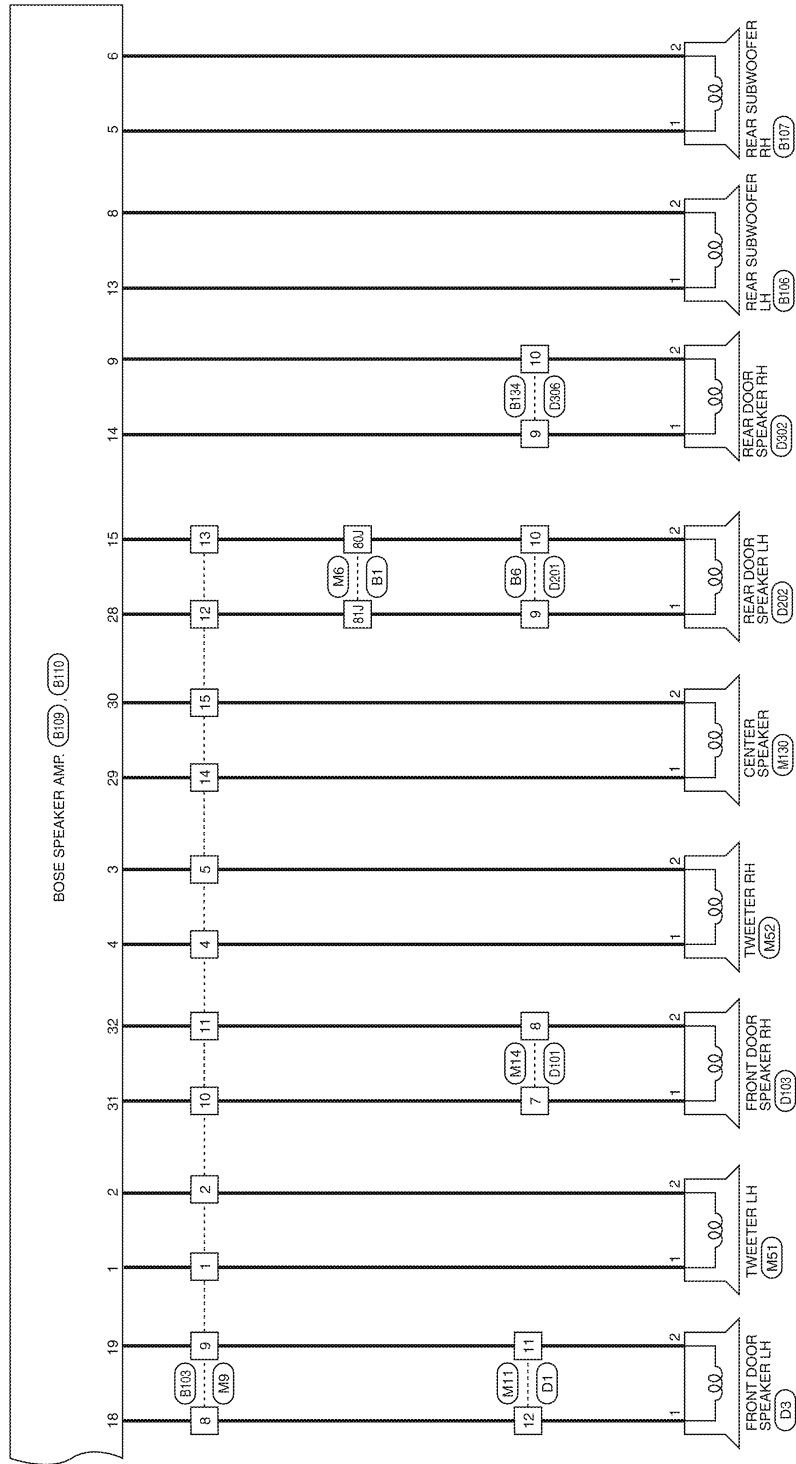
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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]



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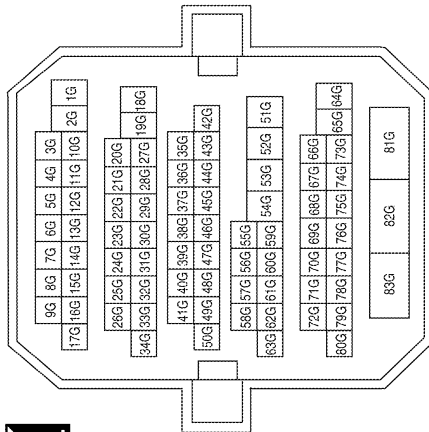
AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

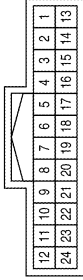
BOSE AUDIO SYSTEM CONNECTORS - WITH COLOR DISPLAY WITHOUT NAVI WITH REAR CONTROLS

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



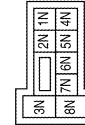
Terminal No.	Color of Wire	Signal Name
13G	O	--
24G	G/R	--
53G	B/R	--
54G	BR	--
64G	Y/R	--

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



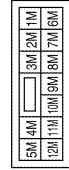
Terminal No.	Color of Wire	Signal Name
4	R	--
5	L	--
6	SHIELD	--
8	BR	--
9	SHIELD	--
10	Y	--
13	V/W	--
21	Y/R	--
22	V/Y	--
23	G	--

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	--

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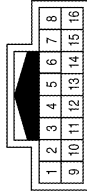
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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

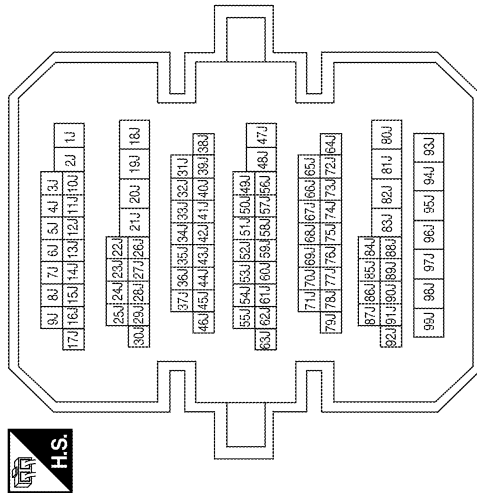
Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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	--
88J	P/B	--

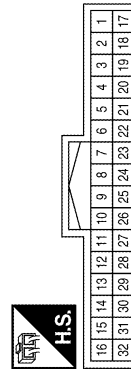
Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
10	R	--
11	G	--
12	B	--
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	--

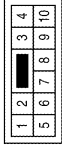
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AV CONTROL UNIT

< ECU DIAGNOSIS >

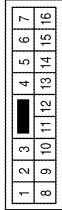
[BOSE W/ COLOR W/ RR CTL]

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



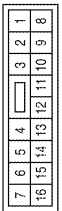
Terminal No.	Color of Wire	Signal Name
7	BR	--
8	B/R	--

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



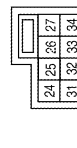
Terminal No.	Color of Wire	Signal Name
11	B/W	--
12	L	--

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



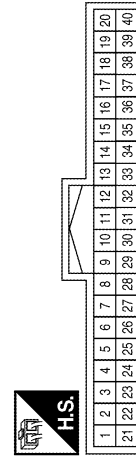
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	B/Y	--
4	L/O	--
5	GR/L	--
6	BR	--
7	B/R	--
8	L	--
9	B/W	--
10	BR	--
11	B/R	--
12	LG	--
13	B/Y	--
14	B/P	--
15	O/B	--

Connector No.	M30
Connector Name	SPIRAL CABLE
Connector Color	GRAY



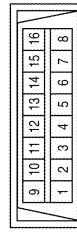
Terminal No.	Color of Wire	Signal Name
24	W/G	AUDIO STRG SW REMOTE A
31	GR/L	AUDIO STRG SW REMOTE B
33	L/B	AUDIO STRG SW GND

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.	M22
Connector Name	DATA LINK CONNECTOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	G	M CAN L
11	R	M CAN H

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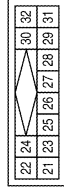


AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Connector No.	M43
Connector Name	AV CONTROL UNIT (WITHOUT NAVI WITH REAR CONTROLS)
Connector Color	WHITE



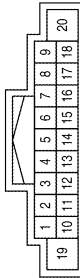
Terminal No.	Color of Wire	Signal Name
21	W/L	NBUS LH-
22	Y/L	NBUS LH+
23	Y/G	NBUS RH-
24	BR/L	NBUS RH+
25	SHIELD	NBUS SHIELD
26	SHIELD	DATA GND
27	--	--
28	R	REQI(TO HU)
29	B	FX(TO HU)
30	G	TX(FROM HU)
31	--	--
32	--	--

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

Terminal No.	Color of Wire	Signal Name
8	--	--
9	R/L	ILL
10	--	--
11	--	--
12	--	--
13	--	--
14	--	--
15	L/B	STRG SW GND
16	GR/L	STRG SW B
17	--	--
18	--	--
19	Y/R	BAT
20	B	GND

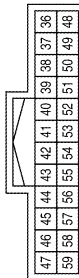
Terminal No.	Color of Wire	Signal Name
42	SHIELD	RGB SYNC GND
43	B	YS
44	BR	DISP IT
45	R	HP
46	LG	SIG GND
47	O	SIG VCC
48	--	--
49	SHIELD	COMP OUT SHIELD
50	SHIELD	RGB GND
51	--	--
52	--	--
53	--	--
54	--	--

Connector No.	M42
Connector Name	AV CONTROL UNIT (WITHOUT NAVI WITH REAR CONTROLS)
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

Connector No.	M44
Connector Name	AV CONTROL UNIT (WITHOUT NAVI WITH REAR CONTROLS)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
36	W	COMP OUT+
37	B	COMP OUT-
38	W	B
39	R	G
40	B	R
41	G	RGB SYNC

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AV CONTROL UNIT

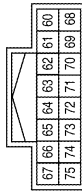
< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Terminal No.	Color of Wire	Signal Name
69	--	--
70	L	RV CAM SIG
71	V/G	CAM GND
72	SHIELD	COMP2 GND
73	SHIELD	COMP1 IN SHIELD
74	V	COMP1 IN-
75	--	--

Terminal No.	Color of Wire	Signal Name
60	--	--
61	--	--
62	--	--
63	--	--
64	--	--
65	W	COMP2 IN+
66	LG	COMP1 IN+
67	--	--
68	--	--

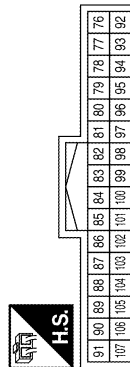
Connector No.	M45
Connector Name	AV CONTROL UNIT (WITHOUT NAVI WITH REAR CONTROLS)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
94	--	--
95	B	AUX AUDIO RH+
96	W	AUX AUDIO LH+
97	R	AUX GND
98	--	--
99	--	--
100	--	--
101	--	--
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
81	SHIELD	VOICE SHIELD
82	--	--
83	--	--
84	--	--
85	BR	SW GND
86	L	CAN-H
87	P	CAN-L
88	L	M-CAN H
89	P	M-CAN L
90	R	M CAN2 H
91	G	M CAN2 L
92	--	--
93	--	--

Connector No.	M46
Connector Name	AV CONTROL UNIT (WITHOUT NAVI WITH REAR CONTROLS)
Connector Color	WHITE



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

< ECU DIAGNOSIS >

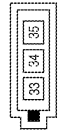
[BOSE W/ COLOR W/ RR CTL]

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



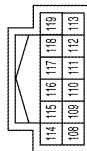
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	B/Y	--

Connector No.	M48
Connector Name	AV CONTROL UNIT (WITHOUT NAVI WITH REAR CONTROLS)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
34	B	ANT MAIN
35	B	ANT +B

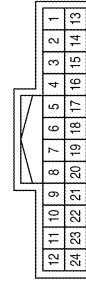
Connector No.	M47
Connector Name	AV CONTROL UNIT (WITHOUT NAVI WITH REAR CONTROLS)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
108	V	RR RH PRE-
109	B	FR RH PRE+
110	B/P	AMP ON
111	SHIELD	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-

Terminal No.	Color of Wire	Signal Name
9	B	--
10	W	--
11	R	--
12	SHIELD	--
21	LG	--
22	V	--
23	SHIELD	--
24	B	--

Connector No.	M85
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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	--

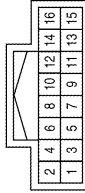
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AV CONTROL UNIT

< ECU DIAGNOSIS >

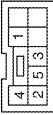
[BOSE W/ COLOR W/ RR CTL]

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



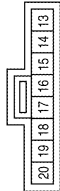
Terminal No.	Color of Wire	Signal Name
1	B	GND
3	V/Y	ACC
4	R/L	ILL+
5	R/Y	ILL CONT GND
6	L	CAN-H
8	P	CAN-L
9	BR	SW GND
14	SB	CD (DVD) EJECT

Connector No.	M89
Connector Name	REAR CONTROL CANCEL SWITCH
Connector Color	WHITE



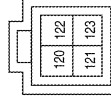
Terminal No.	Color of Wire	Signal Name
2	BR	-
3	B	-

Connector No.	M88
Connector Name	SPIRAL CABLE
Connector Color	GRAY



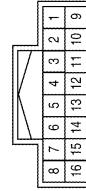
Terminal No.	Color of Wire	Signal Name
14	W	REMOTE A
15	L	REMOTE B
17	BR	GND

Connector No.	M111
Connector Name	AV CONTROL UNIT (WITHOUT NAVI WITH REAR CONTROLS)
Connector Color	GREEN



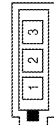
Terminal No.	Color of Wire	Signal Name
120	B	USB GND
121	W	USB D-
122	R	VBUS
123	G	USB D+

Connector No.	M110
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	SHIELD	-
4	V/Y	-
6	V/G	-
7	L	-
9	G	-
10	R	-

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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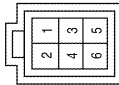
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Connector No.	M112
Connector Name	WIRE TO WIRE
Connector Color	GRAY



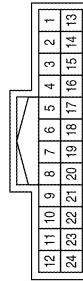
Terminal No.	Color of Wire	Signal Name
1	B	-
2	R	-
3	W	-
4	G	-

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.	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-

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	W	COMP IN+
16	-	-
17	B	R

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	-	-

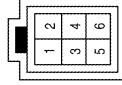
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AV CONTROL UNIT

< ECU DIAGNOSIS >

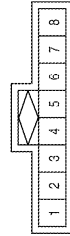
[BOSE W/ COLOR W/ RR CTL]

Connector No.	M210
Connector Name	WIRE TO WIRE
Connector Color	GRAY



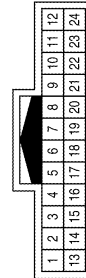
Terminal No.	Color of Wire	Signal Name
1	B	-
2	R	-
3	W	-
4	G	-

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-

Connector No.	M200
Connector Name	WIRE TO WIRE
Connector Color	WHITE



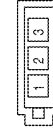
Terminal No.	Color of Wire	Signal Name
9	B	-
10	W	-
11	R	-
12	SHIELD	-
21	LG	-
22	V	-
23	SHIELD	-
24	GR	-

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



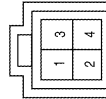
Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

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



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

Connector No.	M211
Connector Name	USB INTERFACE
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
1	R	VBUS
2	G	USB D+
3	B	USB GND
4	W	USB D-

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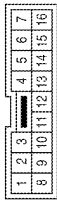
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

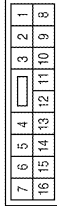
[BOSE W/ COLOR W/ RR CTL]

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



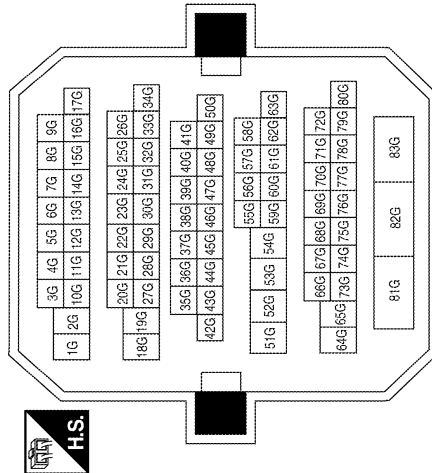
Terminal No.	4	R	Signal Name	--
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Connector No.	E29
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	15	W	Signal Name	--
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Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	13G	BR	Signal Name	--
24G	P	--	--	
53G	GR	--	--	
54G	BR	--	--	
64G	V	--	--	

Connector No.	E34
Connector Name	BACK-UP LAMP RELAY
Connector Color	BLUE



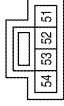
Terminal No.	1	O	Signal Name	--
2	R	--	--	
3	W	--	--	
5	LG	--	--	

AV CONTROL UNIT

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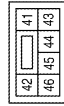
[BOSE W/ COLOR W/ RR CTL]

Connector No.	E49
Connector Name	JUNCTION BLOCK
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
51	LG	-
52	O	-

Connector No.	E47
Connector Name	JUNCTION BLOCK
Connector Color	WHITE



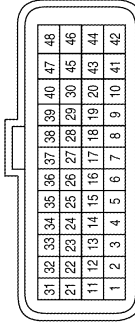
Terminal No.	Color of Wire	Signal Name
45	BR	-

Connector No.	E35
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



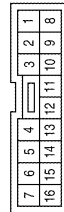
Terminal No.	Color of Wire	Signal Name
1	P	-

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	-

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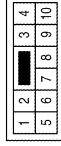
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[BOSE W/ COLOR W/ RR CTL]

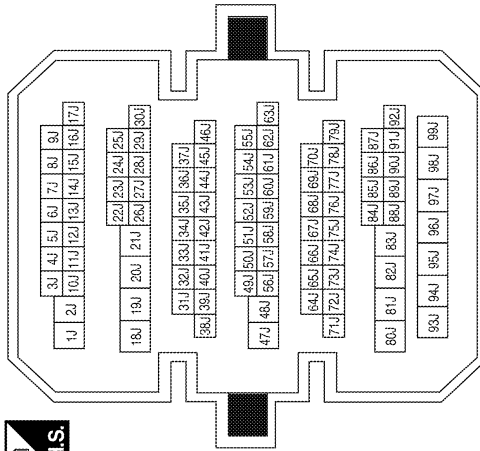
Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
80J	O	--
81J	LG	--
88J	V	--

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

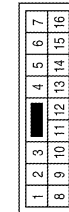


Connector No.	B20
Connector Name	JOINT CONNECTOR-B05
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
5	V	--
7	V	--
8	V	--
9	V	--

Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15	V	--

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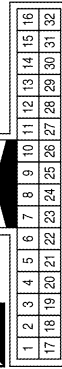
AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

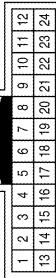
Terminal No.	Color of Wire	Signal Name
14	GR	--
15	P	--
16	O	--
17	W/R	--
18	B/R	--
19	SHIELD	--
20	W/L	--
21	GR/V	--
22	SHIELD	--
23	BR	--
24	Y	--
25	SHIELD	--
26	V	--
27	LG	--
28	SHIELD	--
29	SB	--
30	R	--
31	G	--
32	P	--

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



Terminal No.	Color of Wire	Signal Name
5	BR	--
6	W	--
7	Y	--
8	B	--
10	R	--
11	L	--
12	V	--

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	--
21	V	--
22	GR	--
23	O	--

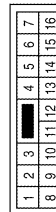
Connector No.	B106
Connector Name	REAR SUBWOOFER LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	--
2	P	--

Terminal No.	Color of Wire	Signal Name
8	W	--
9	B	--
10	R	--
11	BR	--
12	G	--
13	L	--
14	V	--
15	P	--

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



Terminal No.	Color of Wire	Signal Name
1	LG	--
2	V	--
4	G	--
5	W	--
6	SB	--
7	GR	--

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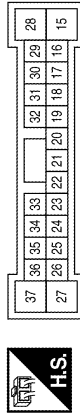
AV CONTROL UNIT

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[BOSE W/ COLOR W/ RR CTL]

Terminal No.	Color of Wire	Signal Name
25	LG	RR RH-IN (WITH COLOR DISPLAY)
26	V	RR RH+IN (WITH COLOR DISPLAY)
28	G	RR DOOR LH+ OUT
29	V	INST CTR TWDR+ OUT
30	P	INST CTR TWDR- OUT
31	R	FR DOOR RH+ OUT
32	BR	FR DOOR RH- OUT
33	W/L	FR RH+IN (WITH COLOR DISPLAY)
34	GRV	FR RH-IN (WITH COLOR DISPLAY)
35	W/R	FR LH+IN (WITH COLOR DISPLAY)
36	B/R	FR LH-IN (WITH COLOR DISPLAY)

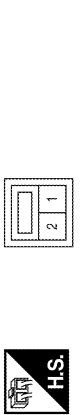
Connector No.	B109
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
15	L	RR DOOR LH- OUT
18	W	FR DOOR LH+ OUT
19	B	FR DOOR LH- OUT
20	SB	AMP ON
23	Y	RR LH-IN (WITH COLOR DISPLAY)
24	BR	RR LH+IN (WITH COLOR DISPLAY)

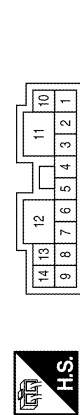
Terminal No.	Color of Wire	Signal Name
7	B	GND
8	P	LH WOOFER- OUT
9	O	RR DOOR RH- OUT
10	SB	BAT
11	GR	BAT
12	B	GND
13	L	LH WOOFER+ OUT
14	LG	RR DOOR RH+ OUT

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



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

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	W	FR TWDR RH- OUT
4	G	FR TWDR RH+ OUT
5	R	RH WOOFER+ OUT
6	BR	RH WOOFER- OUT

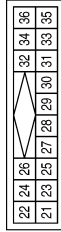
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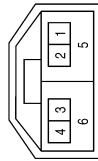
[BOSE W/ COLOR W/ RR CTL]

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



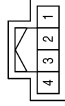
Terminal No.	Color of Wire	Signal Name
21	BR	SAT LCH (-)
22	W	SAT LCH (+)
23	Y	SAT RCH (-)
24	B	SAT RCH(+)
28	R	REQ1 (SAT->COMB)
29	V	TXD (SAT->COMB)
30	L	RXD (COMB->SAT)
32	P	BAT
35	B	HARN EARTH
36	GR	ACC

Connector No.	B120
Connector Name	WIRE TO WIRE
Connector Color	GRAY



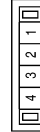
Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-
3	P	-
4	L	-
5	SHIELD	-
6	SHIELD	-

Connector No.	B121
Connector Name	WIRE TO WIRE
Connector Color	WHITE



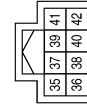
Terminal No.	Color of Wire	Signal Name
1	P	-
2	B	-
3	O	-
4	Y	-

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



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

Connector No.	B128
Connector Name	BLUETOOTH CONTROL UNIT (WITH COLOR DISPLAY AND REAR CONTROLS)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
35	L	CAN H1
36	P	CAN L1
37	SHIELD	CAN SHIELD 1
38	-	-

Terminal No.	Color of Wire	Signal Name
38	-	-
39	-	-
40	R	CAN H2
41	-	-
42	G	CAN L2

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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

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.	B131
Connector Name	BLUETOOTH CONTROL UNIT (WITH BOSE AUDIO SYSTEM)
Connector Color	WHITE



2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31

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 -

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



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

Terminal No.	Color of Wire	Signal Name
1	W	-
2	SHIELD	-
4	Y	-
6	W	-
7	R	-
9	G	-
10	R	-

Connector No.	B136
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

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



1	2	3	4
5	6	7	8
9	10	11	12

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

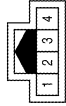
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AV CONTROL UNIT

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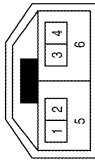
[BOSE W/ COLOR W/ RR CTL]

Connector No.	B401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



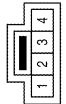
Terminal No.	Color of Wire	Signal Name
1	R/L	--
2	B	--
3	BR	--
4	V/Y	--

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.	B139
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



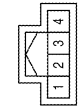
Terminal No.	Color of Wire	Signal Name
7	R	--
8	G	--

Connector No.	B403
Connector Name	REAR CONTROL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	--
6	P	--

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	--

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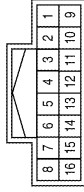
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

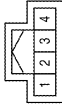
[BOSE W/ COLOR W/ RR CTL]

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



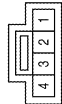
Terminal No.	Color of Wire	Signal Name
1	L	--
2	R	--
9	SHIELD	--

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.	T100
Connector Name	WIRE TO WIRE
Connector Color	WHITE



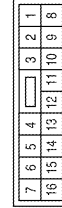
Terminal No.	Color of Wire	Signal Name
1	R	--
2	W	--
3	B	--
4	SHIELD	--

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



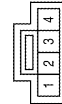
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	O	--

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

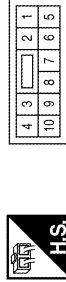
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[BOSE W/ COLOR W/ RR CTL]

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



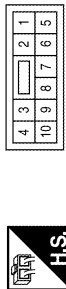
Terminal No.	Color of Wire	Signal Name
9	LG	--
10	O	--

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



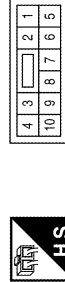
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	O	--

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



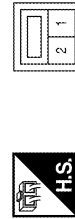
Terminal No.	Color of Wire	Signal Name
7	LG	--
8	O	--

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 (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



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

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



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

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DTC Index

Self-diagnosis results display item

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INFOID:000000005529075

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-540, "Diagnosis Procedure"
U1010	CONTROL UNIT (CAN) [1010]	AV-541, "DTC Logic"
U1200	Cont Unit [U1200]	AV-542, "DTC Logic"
U1216	CAN CONT [U1216]	AV-543, "DTC Logic"
U1218	HDD CONN [U1218]	AV-544, "Diagnosis Procedure"
U1219	HDD READ [U1219]	AV-545, "Diagnosis Procedure"
U121A	HDD WRITE [U121A]	AV-546, "Diagnosis Procedure"
U121B	HDD COMM [U121B]	AV-547, "Diagnosis Procedure"
U121C	HDD ACCESS [U121C]	AV-548, "Diagnosis Procedure"
U121D	DSP CONN [U121D]	AV-549, "Diagnosis Procedure"
U121E	DSP COMM [U121E]	AV-550, "Diagnosis Procedure"
U1225	USB CONTROLLER [U1225]	AV-551, "DTC Logic"
U1227	DVD COMM [U1227]	AV-552, "Diagnosis Procedure"
U1228	SUB CPU CONN [U1228]	AV-553, "DTC Logic"
U1229	iPod CERTIFICATION [U1229]	AV-554, "DTC Logic"
U122A	CONFIG UNFINISH [U122A]	AV-555, "Diagnosis Procedure"
U122E	Built-in AUDIO CONN [U122E]	AV-556, "DTC Logic"
U1232	ST ANGLE SEN CALIB [1232]	AV-557, "Diagnosis Procedure"
U1243	FRONT DISP CONN [U1243]	AV-558, "Diagnosis Procedure"
U1255	SATELLITE TUNER [U1255]	AV-563, "Description"
U1263	USB OVERCURRENT [U1263]	AV-560, "Diagnosis Procedure"
U1310	CONTROL UNIT (AV) [U1310]	AV-564, "DTC Logic"
U1300 U1240	<ul style="list-style-type: none"> • AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] 	AV-563, "Description"

DISPLAY UNIT

< ECU DIAGNOSIS >

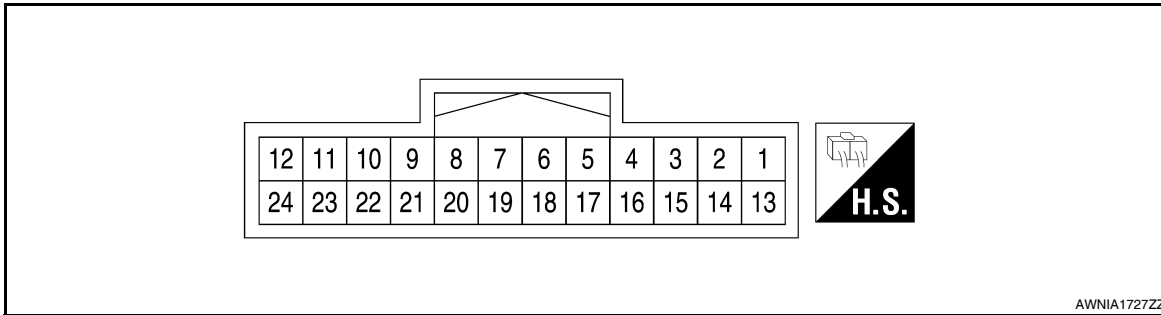
[BOSE W/ COLOR W/ RR CTL]

DISPLAY UNIT

Reference Value

INFOID:000000005529076

TERMINAL LAYOUT



AWNIA1727ZZ

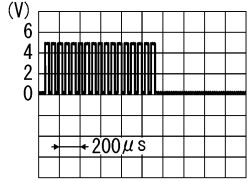
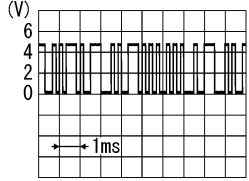
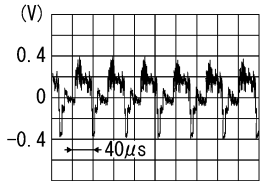
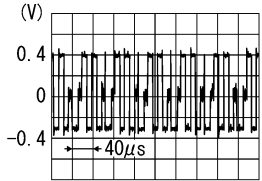
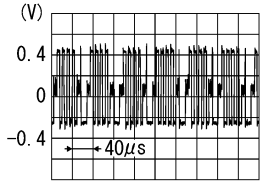
PHYSICAL VALUES

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>(V)</p> <p>0.4</p> <p>0</p> <p>-0.4</p> <p>40µs</p> <p>SKIB2236J</p>
7	—	Shield	—	—	—	—
8 (R)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	—	<p>(V)</p> <p>4</p> <p>0</p> <p>20µs</p> <p>SKIB3601E</p>

DISPLAY UNIT

< ECU DIAGNOSIS >

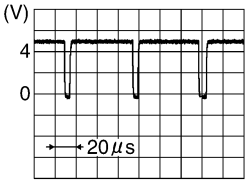
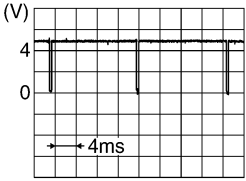
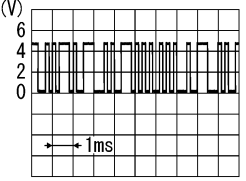
[BOSE W/ COLOR W/ RR CTL]

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
				At rear view camera image displayed	 <p style="text-align: right; font-size: small;">PKIB4948J</p>
11 (Y)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display-brightness  <p style="text-align: right; font-size: small;">PKIB5039J</p>
13 (BR)	Ground	Inverter ground	—	Ignition switch ON	— 0V
14 (LG)	Ground	Signal ground	—	Ignition switch ON	— 0V
15 (W)	Ground	AUX image signal	Input	Ignition switch ON	When AUX mode is selected  <p style="text-align: right; font-size: small;">SKIB2251J</p>
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.  <p style="text-align: right; font-size: small;">SKIB2238J</p>
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.  <p style="text-align: right; font-size: small;">SKIB2237J</p>

DISPLAY UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

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	—	—	—	—

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BOSE SPEAKER AMP

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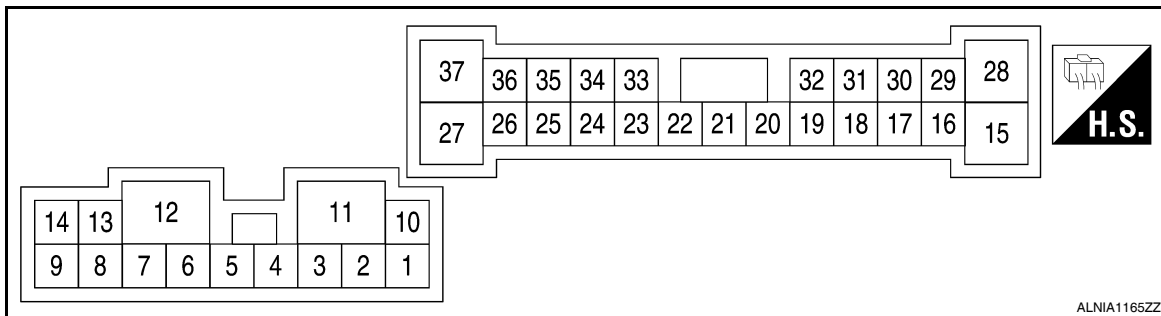
[BOSE W/ COLOR W/ RR CTL]

BOSE SPEAKER AMP

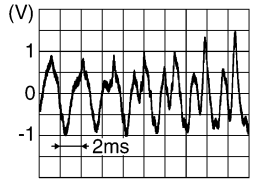
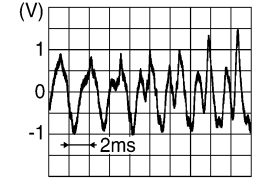
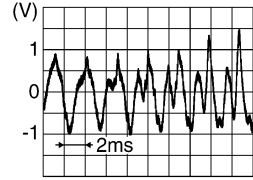
Reference Value

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TERMINAL LAYOUT



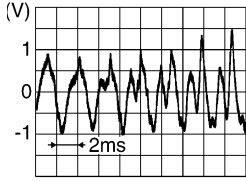
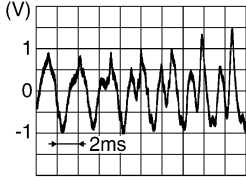
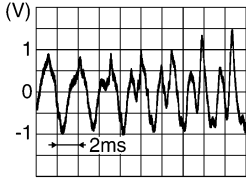
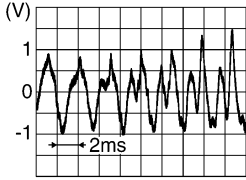
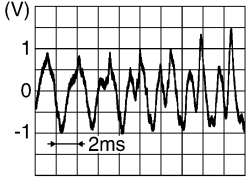
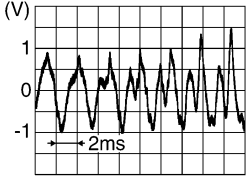
PHYSICAL VALUES

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	 SKIB3609E
4 (G)	3 (W)	Audio signal tweeter RH	Output	Ignition switch ON	Audio output	 SKIB3609E
5 (R)	6 (BR)	Audio signal subwoofer RH	Output	Ignition switch ON	Audio output	 SKIB3609E
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

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
13 (L)	8 (P)	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>

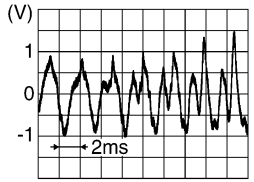
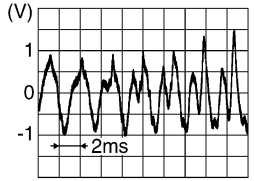
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BOSE SPEAKER AMP

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

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	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
35 (W/R)	36 (B/R)	Audio signal front LH	Input	Ignition switch ON	Audio input	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

SATELLITE RADIO TUNER

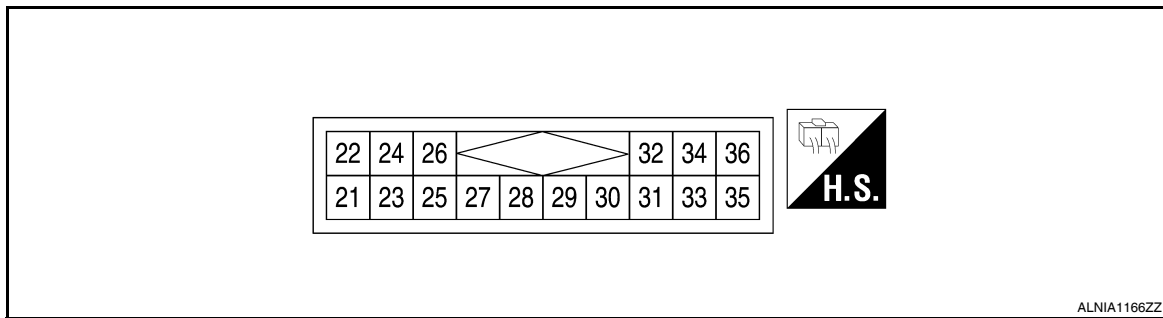
< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

SATELLITE RADIO TUNER

Reference Value

INFOID:000000005529078



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PHYSICAL VALUES

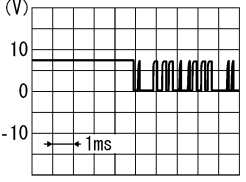
Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/Output			
22 (W)	21 (BR)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIB3609E</p>
24 (B)	23 (Y)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIB3609E</p>
28 (R)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIA9299J</p>
29 (V)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIA9300J</p>

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SATELLITE RADIO TUNER

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
30 (L)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	 <p>SKIA9301J</p>
32 (P)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
35 (B)	—	Shield	—	—	—	—
36 (GR)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS >

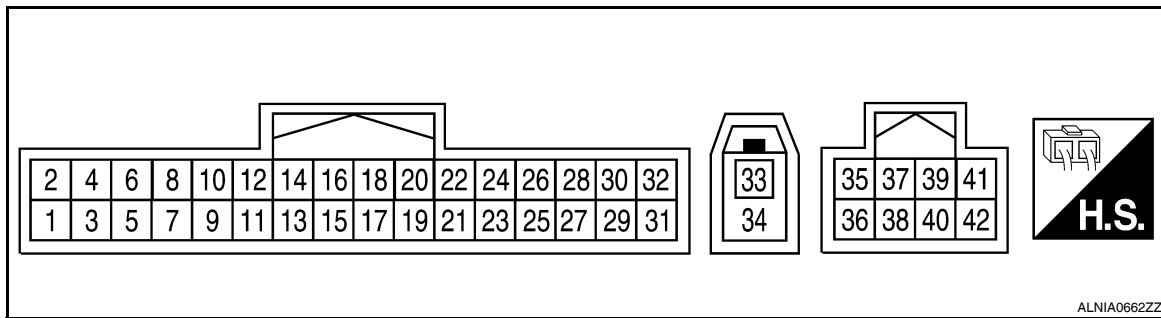
[BOSE W/ COLOR W/ RR CTL]

BLUETOOTH CONTROL UNIT

Reference Value

INFOID:000000005529079

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 signal (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	-	-	-	-

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BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ output			
34 (B)	-	Bluetooth antenna	-	-	-	—
35 (L)	-	M-CAN1 (+)	-	-	-	—
36 (P)	-	M-CAN1 (-)	-	-	-	—
37	-	Shield	-	-	-	—
40 (R)	-	M-CAN2 (-)	-	-	-	—
42 (G)	-	M-CAN2 (-)	-	-	-	—

AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:000000005529080

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> AV control unit power circuit AV control unit 	<ul style="list-style-type: none"> AV-565 AV-322
Steering switch does not operate	<ul style="list-style-type: none"> Steering switch AV control unit 	<ul style="list-style-type: none"> AV-597 AV-322
All speakers do not sound	<ul style="list-style-type: none"> AV control unit AV control unit power circuit BOSE speaker amp. ON signal BOSE speaker amp. power/ground circuit BOSE speaker amp. 	<ul style="list-style-type: none"> AV-322 AV-565 AV-596 AV-568 AV-334
One or several speakers do not sound	<ul style="list-style-type: none"> Front door speaker Tweeter Center speaker Rear door speaker Subwoofer 	<ul style="list-style-type: none"> AV-582 AV-585 AV-588 AV-590 AV-593

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	AV control unit	AV-322
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-569 AV-599 AV-335
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-602 AV-602 AV-335

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-571 AV-344
Steering switch does not operate	<ul style="list-style-type: none"> Steering switch Bluetooth control unit 	<ul style="list-style-type: none"> AV-337 AV-344
Voice activated control does not operate	<ul style="list-style-type: none"> Microphone Steering switch Bluetooth control unit 	<ul style="list-style-type: none"> AV-342 AV-337 AV-344

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

NORMAL OPERATING CONDITION

Description

INFOID:000000005529081

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

NOISE

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

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

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

NOTE:

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

Type of Noise and Possible Cause

Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	• Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		• Fuel pump condenser
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	• Relay malfunction, AV control unit malfunction
	The noise occurs when various motors are operating.	• Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		• 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

PRECAUTION

PRECAUTIONS

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

INFOID:000000005522914

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 WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

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

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect (Early Production, With Electronic Steering Column Lock)

INFOID:0000000055885980

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.

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PRECAUTIONS

[BOSE W/ COLOR W/ RR CTL]

< PRECAUTION >

- 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.)
- Perform self-diagnosis check of all control units using CONSULT-III.

Precaution for Trouble Diagnosis

INFOID:000000005522916

AV COMMUNICATION SYSTEM

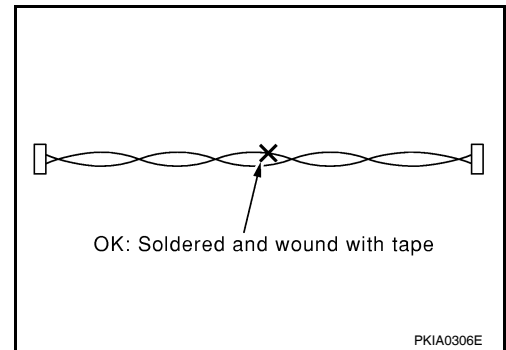
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

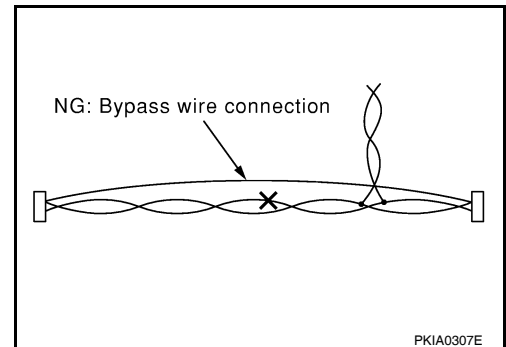
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AV COMMUNICATION SYSTEM

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



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

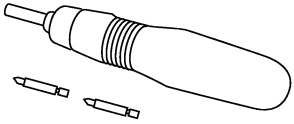


PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000005522918

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

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AV
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AV

AV CONTROL UNIT

< ON-VEHICLE REPAIR >

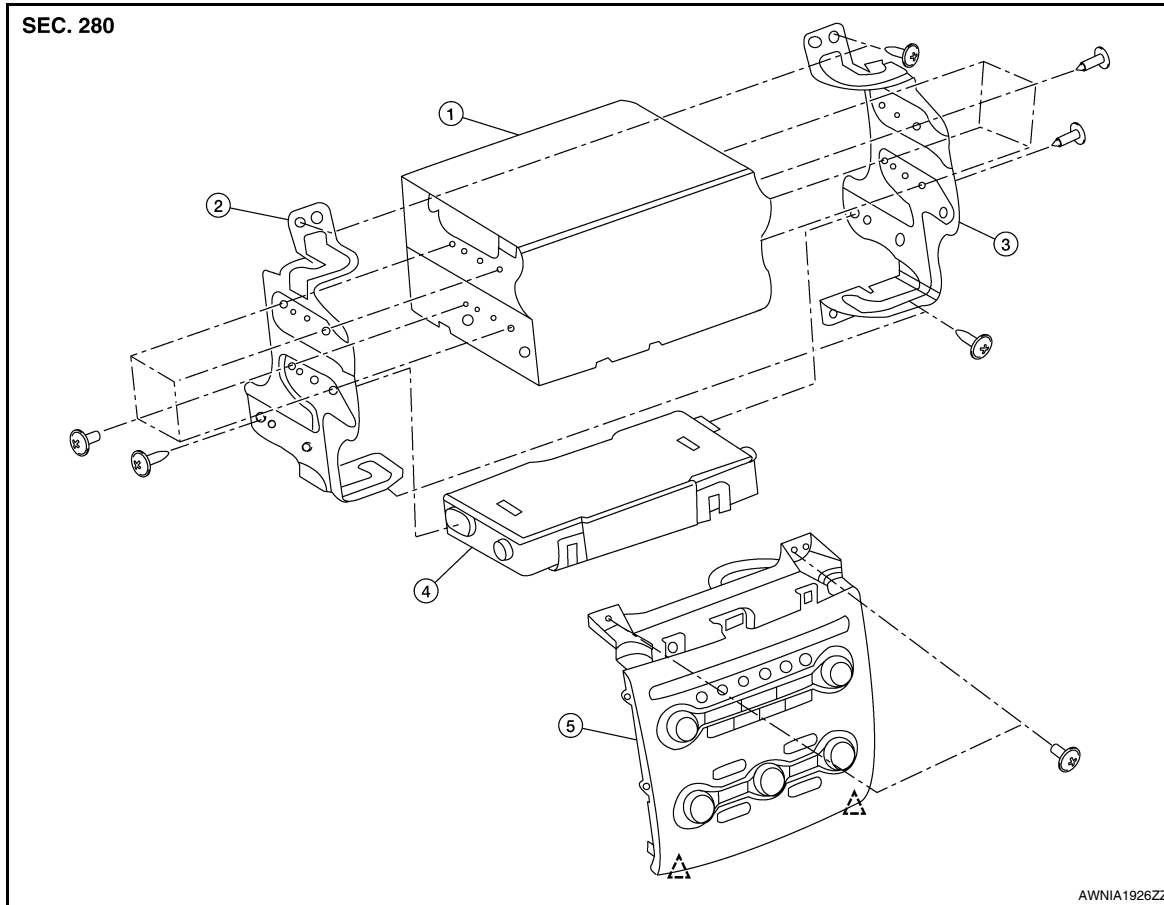
[BOSE W/ COLOR W/ RR CTL]

ON-VEHICLE REPAIR

AV CONTROL UNIT

Removal and Installation

INFOID:000000005522919

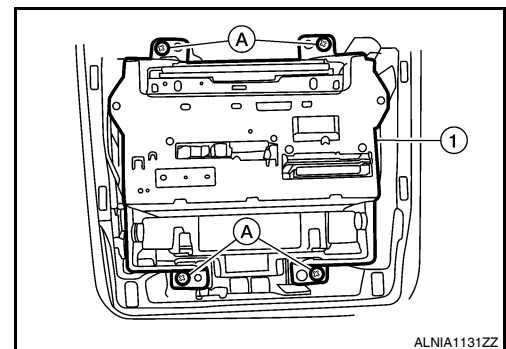


- | | | |
|------------------|---|--------------------------|
| 1. Audio unit | 2. Audio unit bracket LH | 3. Audio unit bracket RH |
| 4. A/C auto amp. | 5. Cluster lid C (with A/C and AV switch assembly attached) | △ Clips |

AUDIO UNIT

Removal

1. Disconnect the battery negative terminal.
2. Remove the cluster lid D. Refer to [IP-12, "Removal and Installation"](#).
3. Remove the cluster lid C. Refer to [IP-11, "Exploded View"](#).
4. 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

AV CONTROL UNIT

[BOSE W/ COLOR W/ RR CTL]

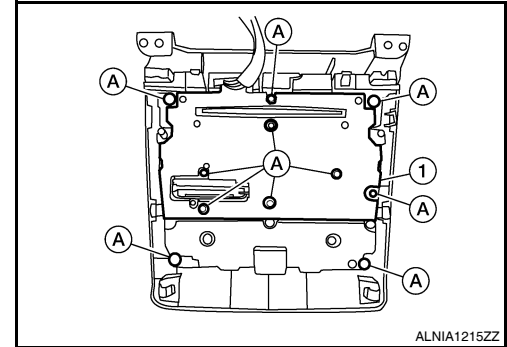
< ON-VEHICLE REPAIR >

Installation is in the reverse order of removal.

A/C AND AV SWITCH ASSEMBLY

Removal

1. Disconnect the battery negative terminal.
2. Remove the cluster lid D. Refer to [IP-12. "Removal and Installation"](#).
3. Remove the cluster lid C. Refer to [IP-11. "Exploded View"](#).
4. Remove the A/C and AV switch assembly screws (A), then pull out the A/C and AV switch assembly (1) from cluster lid C.



Installation

Installation is in the reverse order of removal.

A
B
C
D
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AV

MULTIFUNCTION SWITCH

< ON-VEHICLE REPAIR >


[BOSE W/ COLOR W/ RR CTL]

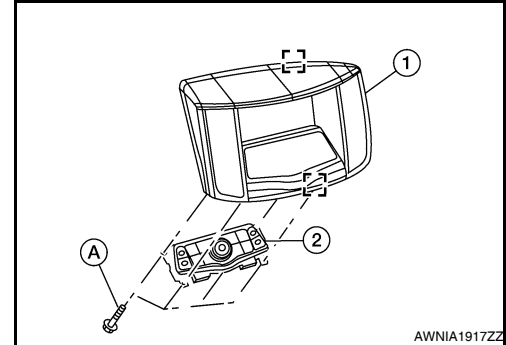
MULTIFUNCTION SWITCH

Removal and Installation

INFOID:000000005522920

REMOVAL

1. Remove cluster lid D. Refer to [IP-11. "Exploded View"](#).
2. Remove the four multifunction switch screws (A) and remove the multifunction switch (2) from cluster lid D (1).
 -  metal clip



INSTALLATION

Installation is in the reverse order of removal.

AUDIO DISPLAY UNIT

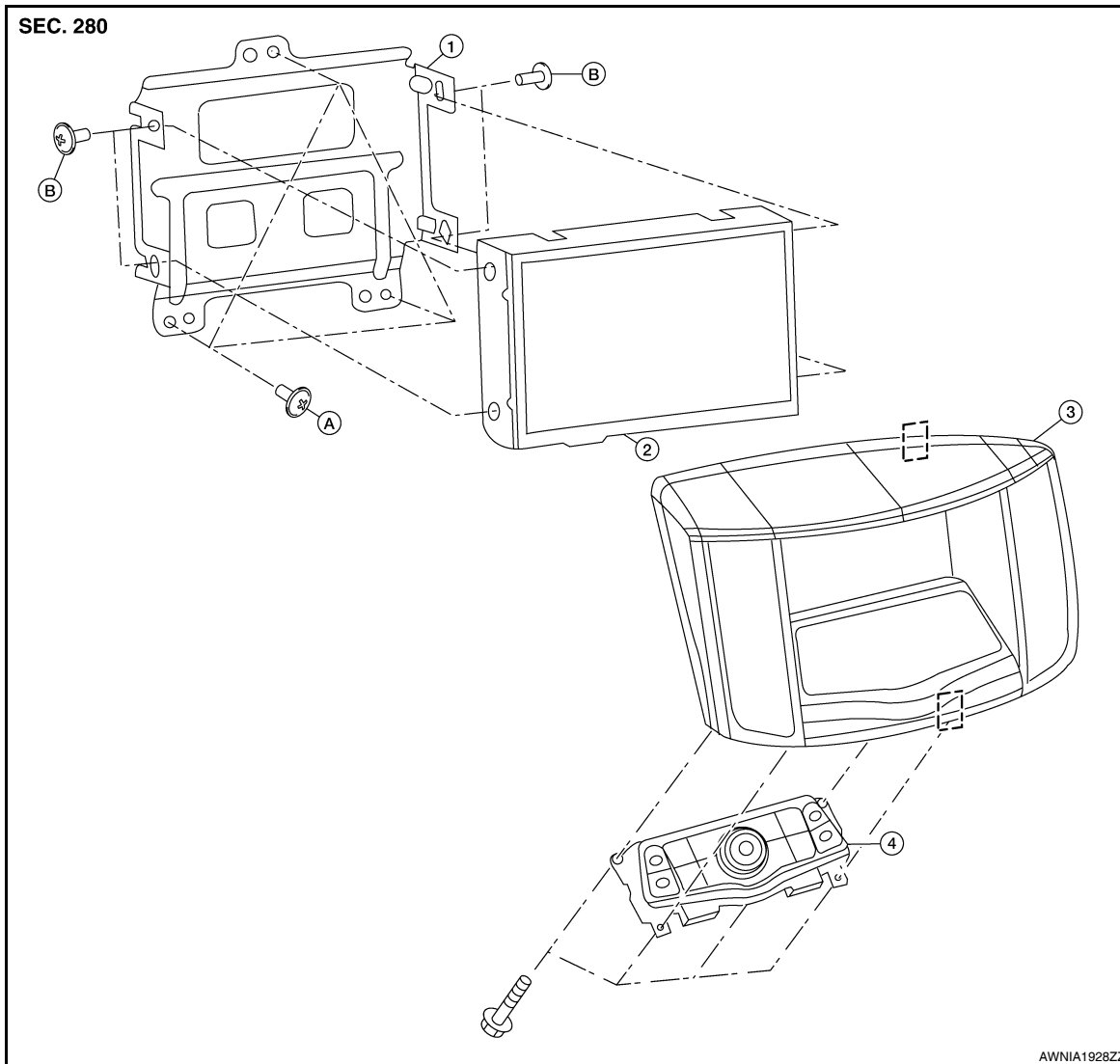
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

AUDIO DISPLAY UNIT

Removal and Installation

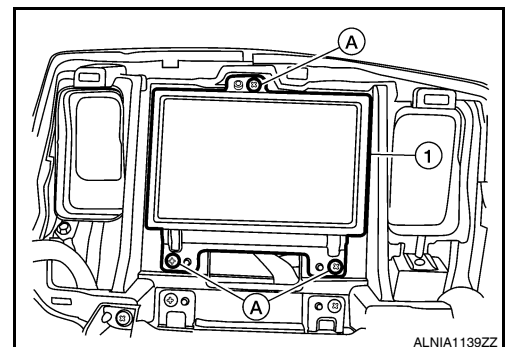
INFOID:000000005522921



- | | | |
|-------------------------------|--------------------------------------|------------------------------|
| 1. Audio display unit bracket | 2. Audio display unit | 3. Cluster lid D |
| 4. Multifunction switch | A. Audio display unit bracket screws | B. Audio display unit screws |
| ☐ Metal Clip | | |

REMOVAL

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



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AV

AUDIO DISPLAY UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

3. Remove the audio display unit screws on the sides and remove the audio display unit from the audio display unit brackets.

INSTALLATION

Installation is in the reverse order of removal.

USB CONNECTOR

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

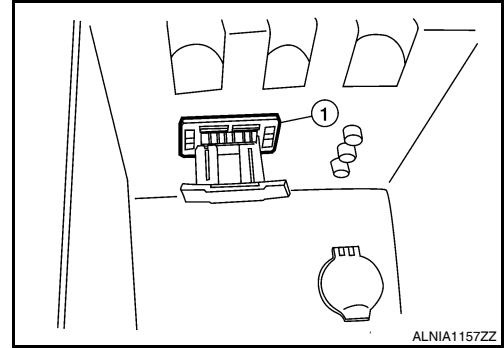
USB CONNECTOR

Removal and Installation

INFOID:000000005522922

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 USB connector (1).



INSTALLATION

Installation is in the reverse order of removal.

A
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AUXILIARY INPUT JACKS

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

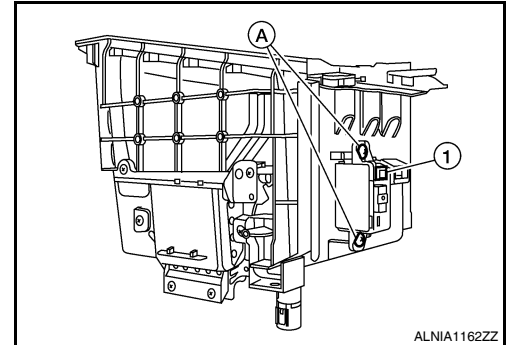
AUXILIARY INPUT JACKS

Removal and Installation

INFOID:000000005522923

REMOVAL

1. Remove the center console. Refer to [IP-16. "Removal and Installation"](#).
2. Remove 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 W/ RR CTL]

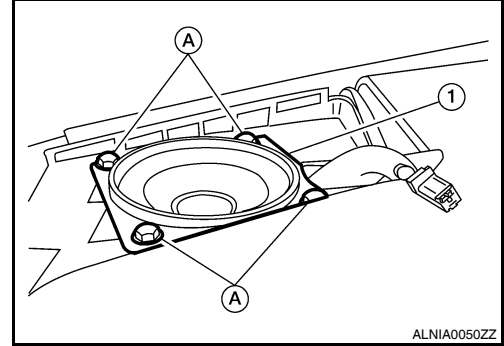
FRONT TWEETER

Removal and Installation

INFOID:000000005522924

REMOVAL

1. Remove front tweeter speaker grille. Refer to [IP-12. "Removal and Installation"](#).
2. 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.

A
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C
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AV

CENTER SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

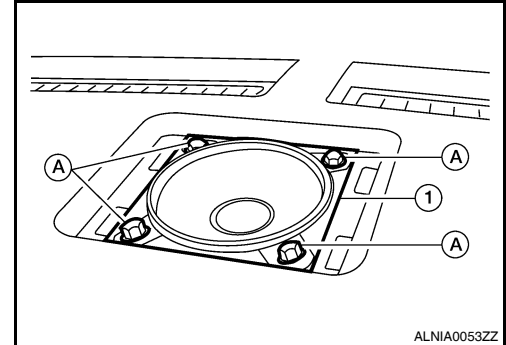
CENTER SPEAKER

Removal and Installation

INFOID:000000005522925

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 W/ RR CTL]

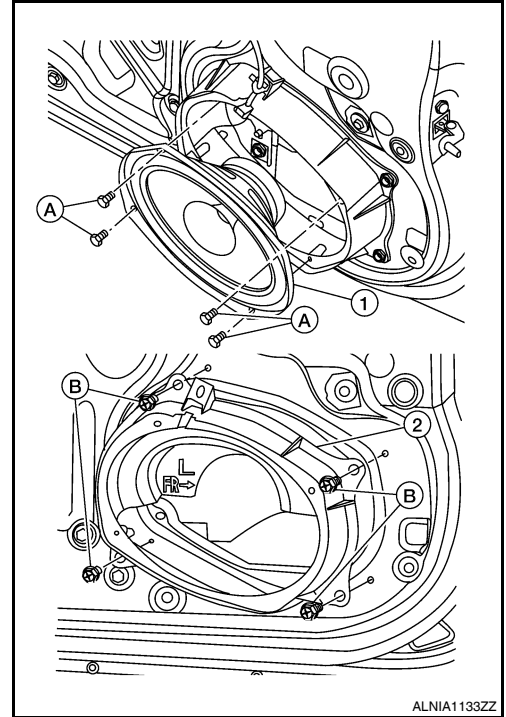
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000005522926

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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AV

REAR DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

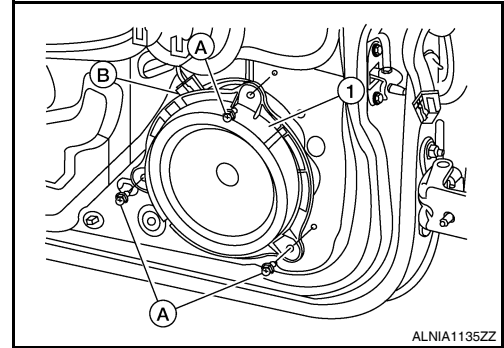
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000005522927

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).



ALNIA1135ZZ

INSTALLATION

Installation is in the reverse order of removal.

SUBWOOFER

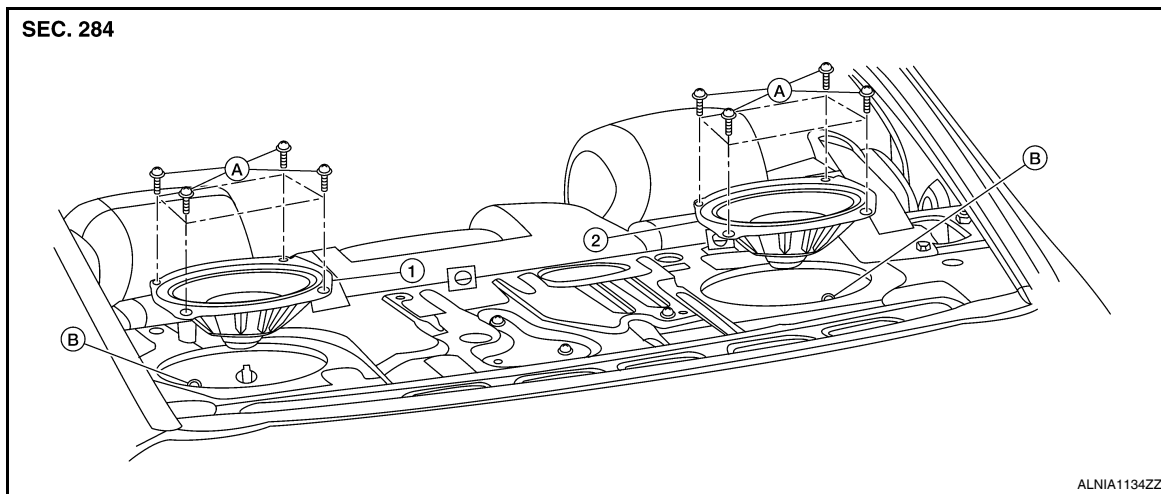
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

SUBWOOFER

Removal and Installation

INFOID:000000005522928



- 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

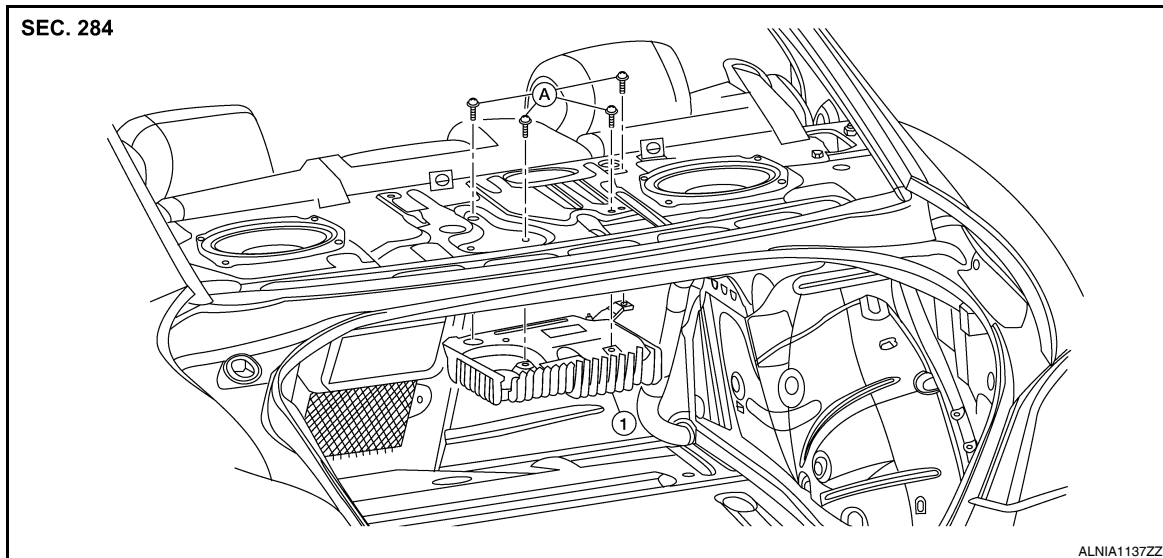
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

BOSE SPEAKER AMP

Removal and Installation

INFOID:000000005522929



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.
4. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
5. 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/ COLOR W/ RR CTL]

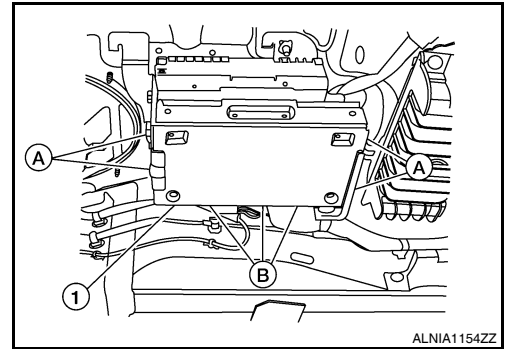
SATELLITE RADIO TUNER

Removal and Installation

INFOID:000000005522940

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
3. Remove the parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
4. From inside the passenger compartment, remove the bracket screws and lower the assembly for access.
5. 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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AV

SATELLITE RADIO ANTENNA

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

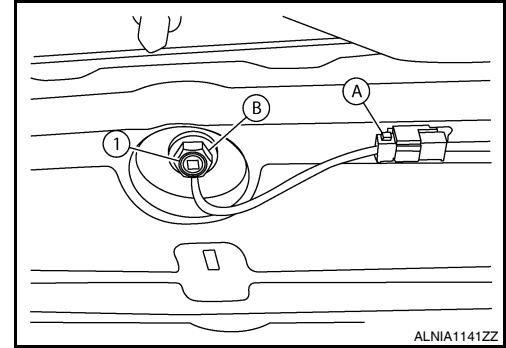
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:000000005522930

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/ COLOR W/ RR CTL]

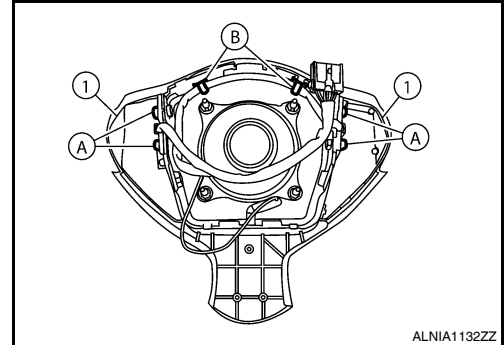
STEERING SWITCH

Removal and Installation

INFOID:000000005522932

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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AV

AUDIO ANTENNA

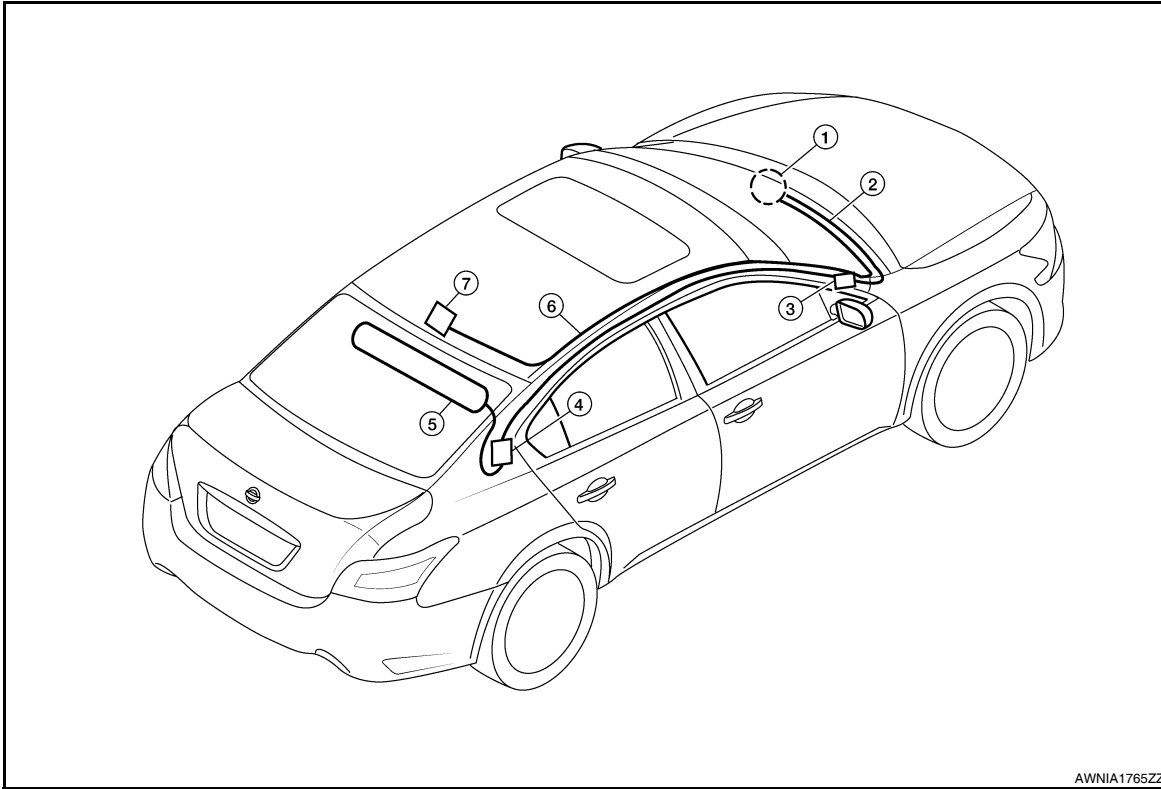
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

AUDIO ANTENNA

Location of Antenna

INFOID:000000005522933



AWNIA1765ZZ

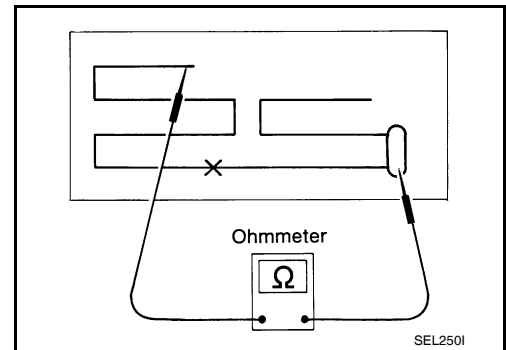
- | | | |
|----------------------------|-----------------------------------|-----------------------------------|
| 1. AV control unit | 2. AV control unit antenna feeder | 3. In-line connectors M103, M501 |
| 4. Antenna amp. | 5. Window antenna | 6. Satellite radio antenna feeder |
| 7. Satellite radio antenna | | |

Window Antenna Repair

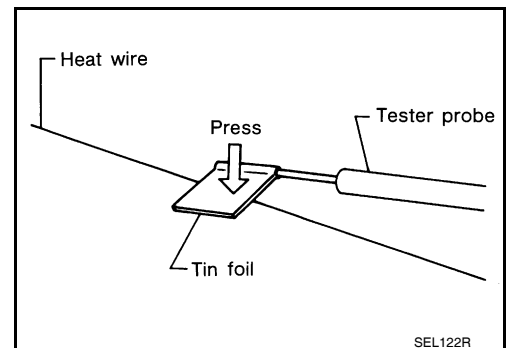
INFOID:000000005522934

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.

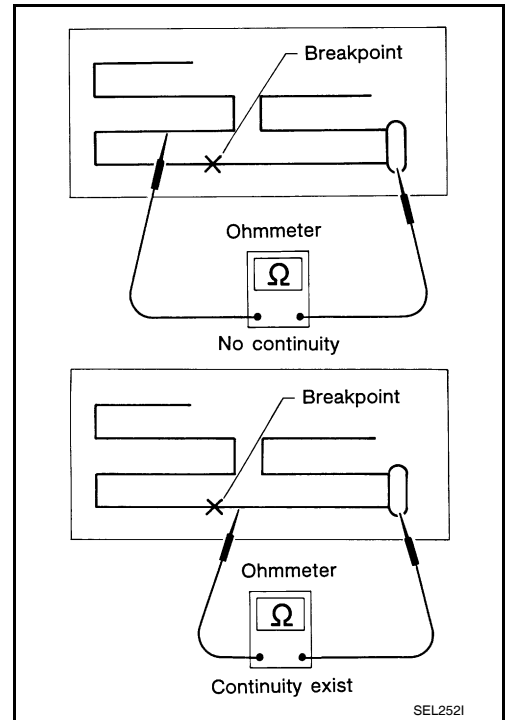


AUDIO ANTENNA

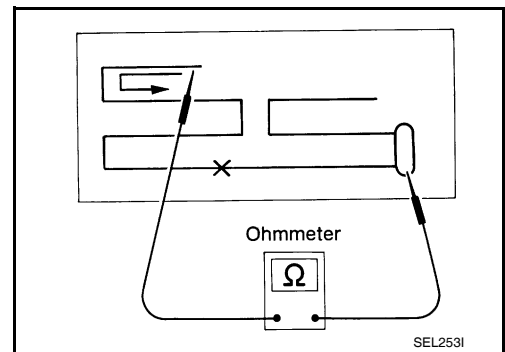
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

- 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

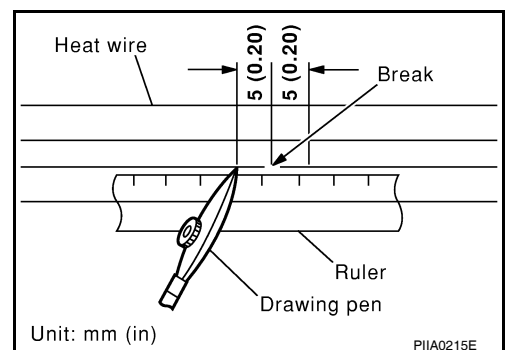
REPAIRING PROCEDURE

- 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.



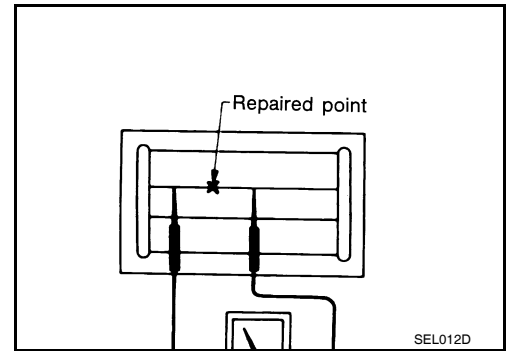
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AUDIO ANTENNA

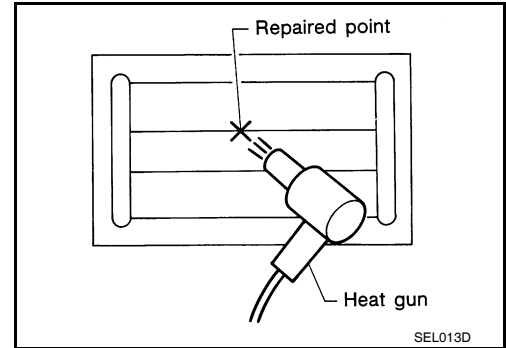
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

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/ COLOR W/ RR CTL]

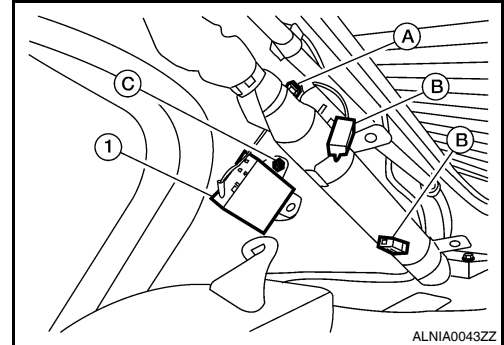
ANTENNA AMP.

Removal and Installation

INFOID:000000005522935

REMOVAL

1. Remove the rear pillar finisher RH. Refer to [INT-23, "Exploded View"](#).
2. 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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AV

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REAR AUDIO REMOTE CONTROL UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

REAR AUDIO REMOTE CONTROL UNIT

Removal and Installation

INFOID:000000005522939

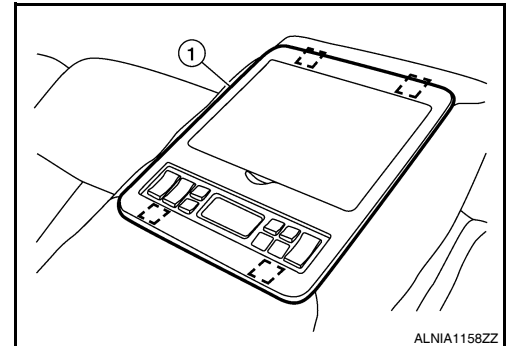
REMOVAL

1. Carefully remove the rear audio remote control unit finisher (1) from the rear center arm rest.

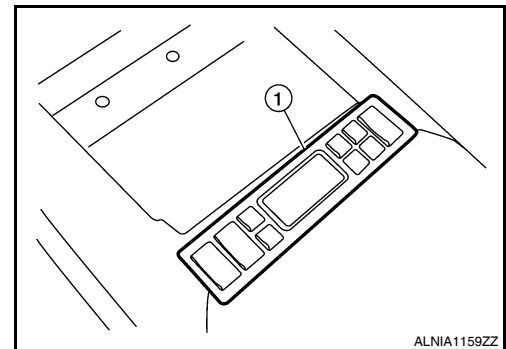
•  Metal clip

CAUTION:

Wrap removal tool with clean shop cloth to prevent damage to the rear audio remote control finisher.



2. Detach the rear audio remote control unit (1), then disconnect the rear audio remote control unit connector and remove the rear audio remote control unit (1).



INSTALLATION

Installation is in the reverse order of removal.

MICROPHONE

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

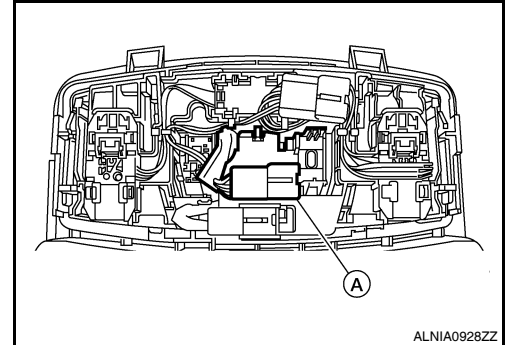
MICROPHONE

Removal and Installation

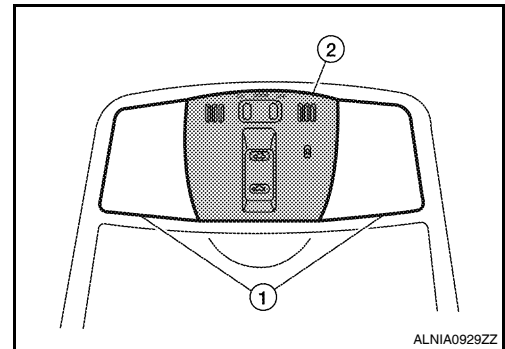
INFOID:000000005522936

REMOVAL

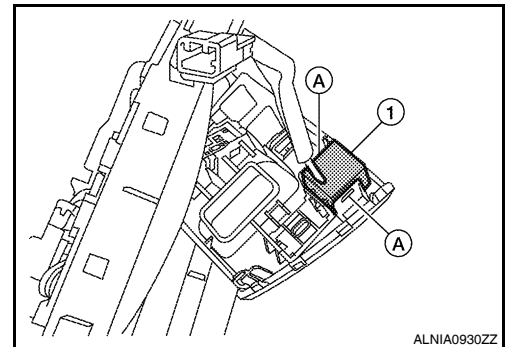
1. Remove the map lamp assembly. Refer to [INL-97, "Removal and Installation"](#).
2. Detach the microphone connector (A).



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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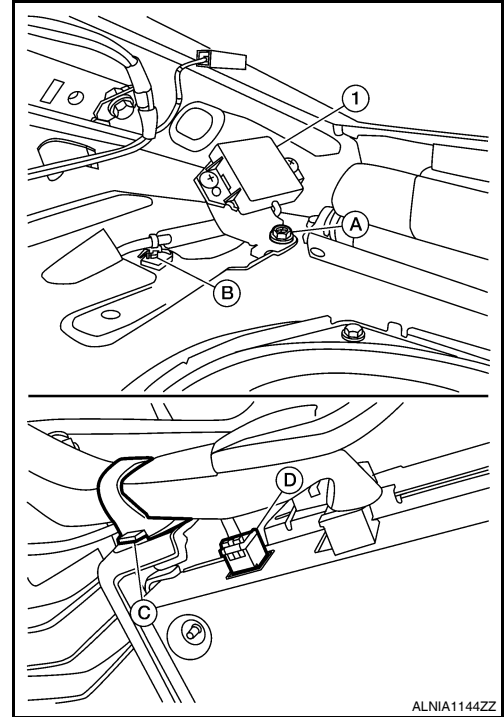
TEL ANTENNA

Removal and Installation

INFOID:000000005522941

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 antenna harness clip (C), disconnect the Bluetooth antenna harness connector (D) and remove the Bluetooth antenna (1).



INSTALLATION

Installation is in the reverse order of removal.

BLUETOOTH CONTROL UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

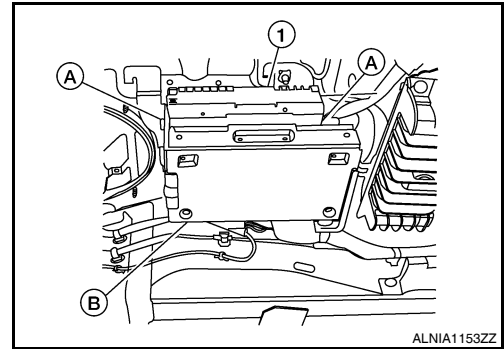
BLUETOOTH CONTROL UNIT

Removal and Installation

INFOID:000000005522942

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
3. Remove the parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
4. From inside the passenger compartment, remove the bracket screws and lower the assembly for access.
5. 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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AV

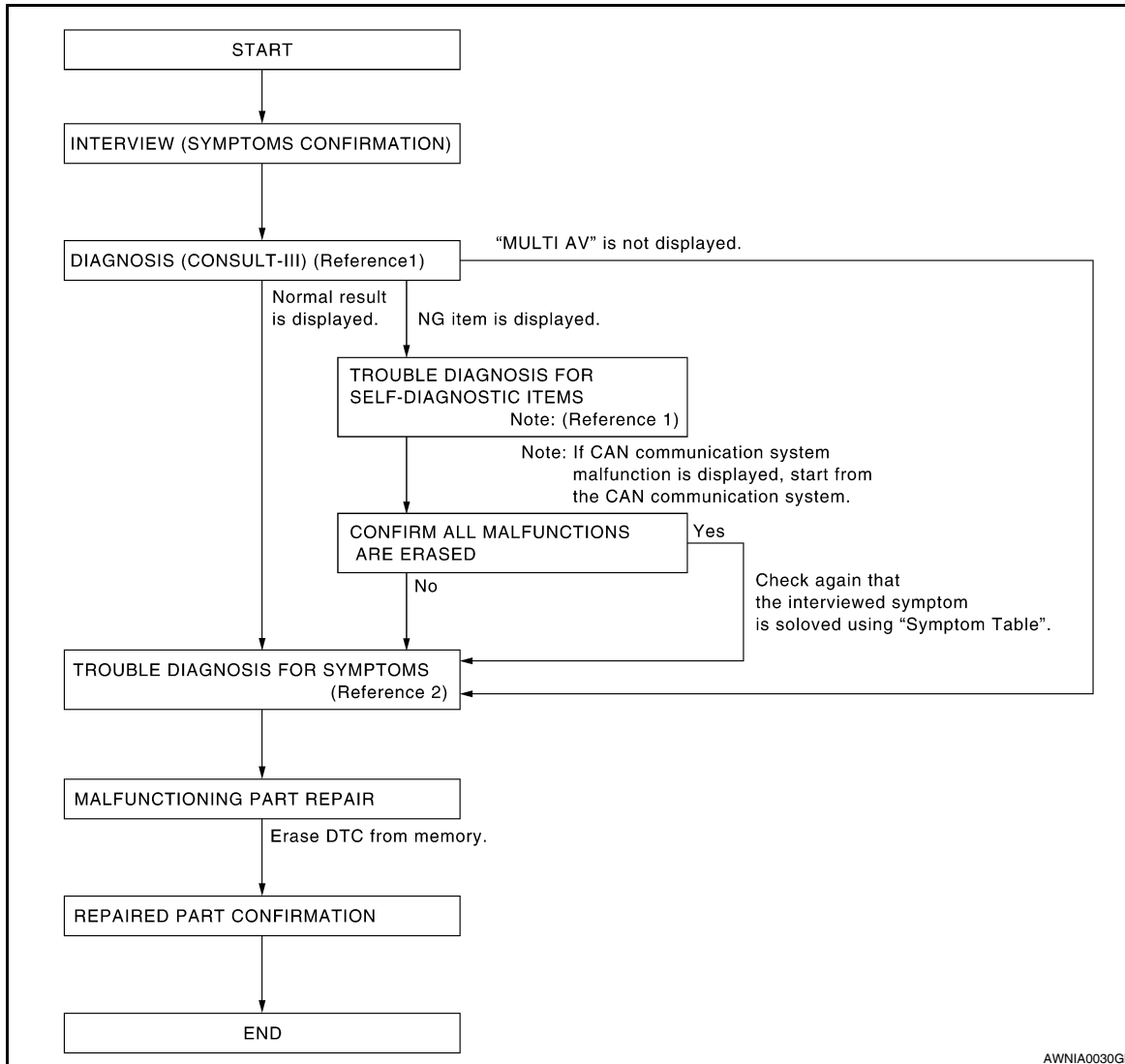
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000005519026

OVERALL SEQUENCE



- Reference 1... Refer to [AV-711, "CONSULT - III Function \(MULTI AV\)"](#).
- Reference 2... Refer to [AV-811, "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 W/ NAVI W/RR CTL]

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-804, "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-811, "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

< BASIC INSPECTION >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000005522895

BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT-III configuration before replacement.

AFTER REPLACEMENT

CAUTION:

When replacing AV control unit, you must perform "WRITE CONFIGURATION" with CONSULT-III.

- Complete the procedure of "WRITE CONFIGURATION" in order.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:000000005522896

1.SAVING VEHICLE SPECIFICATION

Ⓟ-CONSULT-III Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [AV-680, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection".

>> GO TO 2.

2.REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

Ⓟ-CONSULT-III Configuration

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to [AV-681, "CONFIGURATION \(AV CONTROL UNIT\) : Special Repair Requirement"](#).

>> GO TO 4.

4.OPERATION CHECK

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

>> WORK END

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:000000005522892

- Since vehicle specifications are not included in the AV control unit after replacement, it is required to write vehicle specifications with CONSULT-III.
- Configuration has three functions as follows.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Function	Description
READ CONFIGURATION	<ul style="list-style-type: none"> • Reads the vehicle configuration of current AV control unit. • Saves the read vehicle configuration.
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.

CONFIGURATION (AV CONTROL UNIT) : Special Repair Requirement

INFOID:000000005522893

1. WRITING MODE SELECTION

ⓂCONSULT-III Configuration
Select "CONFIGURATION" of AV control unit.

When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2. PERFORM "WRITE CONFIGURATION-CONFIG FILE"

ⓂCONSULT-III Configuration
Perform "WRITE CONFIGURATION-Config file".

>> WORK END

3. PERFORM "WRITE CONFIGURATION-MANUAL SELECTION"

ⓂCONSULT-III Configuration
Select "WRITE CONFIGURATION-Manual selection" to write vehicle specifications into the AV control unit.
For data to write, refer to [AV-681, "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).

>> GO TO 4.

4. OPERATION CHECK

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

>> WORK END

CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:000000005589327

CAUTION:
Check vehicle specifications before servicing.

MANUAL SETTING ITEM		Note
Items	Setting value	
STEERING	LHD	—
	RHD	—
GRADE	MODE 1	BASE
	MODE 2	OTHER
ENGINE TYPE	NORMAL	—
	HYBRID	—
BODY TYPE	NORMAL	NORMAL
	CONV	CONVERTIBLE
CAMERA SYSTEM	NONE/AVM	NONE or AVM
	REAR	REAR CAMERA
	REAR + SIDE	REAR + SIDE CAMERA

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AV

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

MANUAL SETTING ITEM		Note
Items	Setting value	
4WAS	WITHOUT	—
	WITH	—
SOUND SYSTEM	BASE	—
	BOSE	—
ANTENNA TYPE	ROD TYPE	—
	LONG TYPE	—
DUAL-ZONE AUTO TEMP	WITHOUT	—
	WITH	—
DVD PLAY FUNCTION	WITHOUT	—
	WITH	—
BODY TYPE	SED 2DR	SEDAN 2 DOOR
	SED 4DR 1	SEDAN 4 DOOR
	SED 4DR 2	SEDAN 4 DOOR (WIDE)
	H/B 2DR	H/B 2 DOOR
	H/B 4DR	H/B 4 DOOR
	COUPE 2DR	COUPE 2 DOOR
	COUPE T	COUPE T BAR
	WGN 4DR 2	49H WAGON 4 DOOR (WIDE)
	H/T 2DR 1	H/T 2 DOOR
	H/T 2DR 2	H/T 2 DOOR (HIGH-ROOF)
	H/T 4DR 1	H/T 4 DOOR
	H/T 4DR 2	H/T 4 DOOR (WIDE)
	WGN 2DR	WAGON 2 DOOR
	WGN 4DR 1	WAGON 4 DOOR
	WGN 4DR 3	WAGON 4 DOOR (HIGH-ROOF)
	WGN 4DR 4	56H WAGON 4 DOOR (WIDE)
	VAN 2DR	VAN 2 DOOR
	VAN 4DR 1	VAN 4 DOOR
	VAN 4DR 2	VAN 4 DOOR (HIGH-ROOF)
	CONV	CONVERTIBLE

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

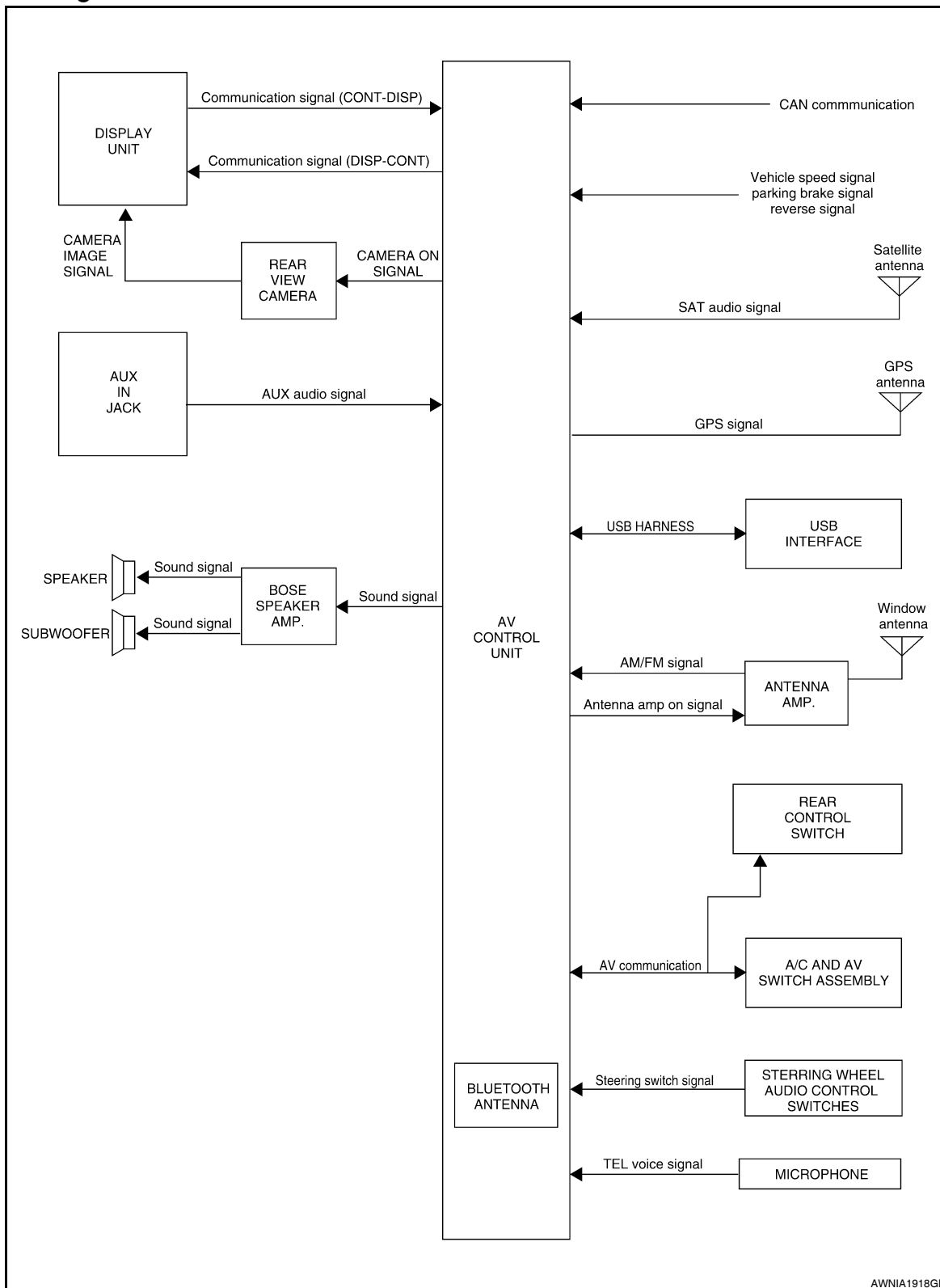
[BOSE W/ COLOR W/ NAVI W/RR CTL]

FUNCTION DIAGNOSIS

AUDIO SYSTEM

System Diagram

INFOID:000000005519029



System Description

INFOID:000000005519030

AUDIO SYSTEM

Revision: November 2009

AV-683

2010 Maxima

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AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

The audio system consists of the following components

- AV control unit
- Display unit
- BOSE speaker amp.
- Window antenna
- Steering wheel audio control switches
- A/C and AV switch assembly
- Rear control switch
- 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.

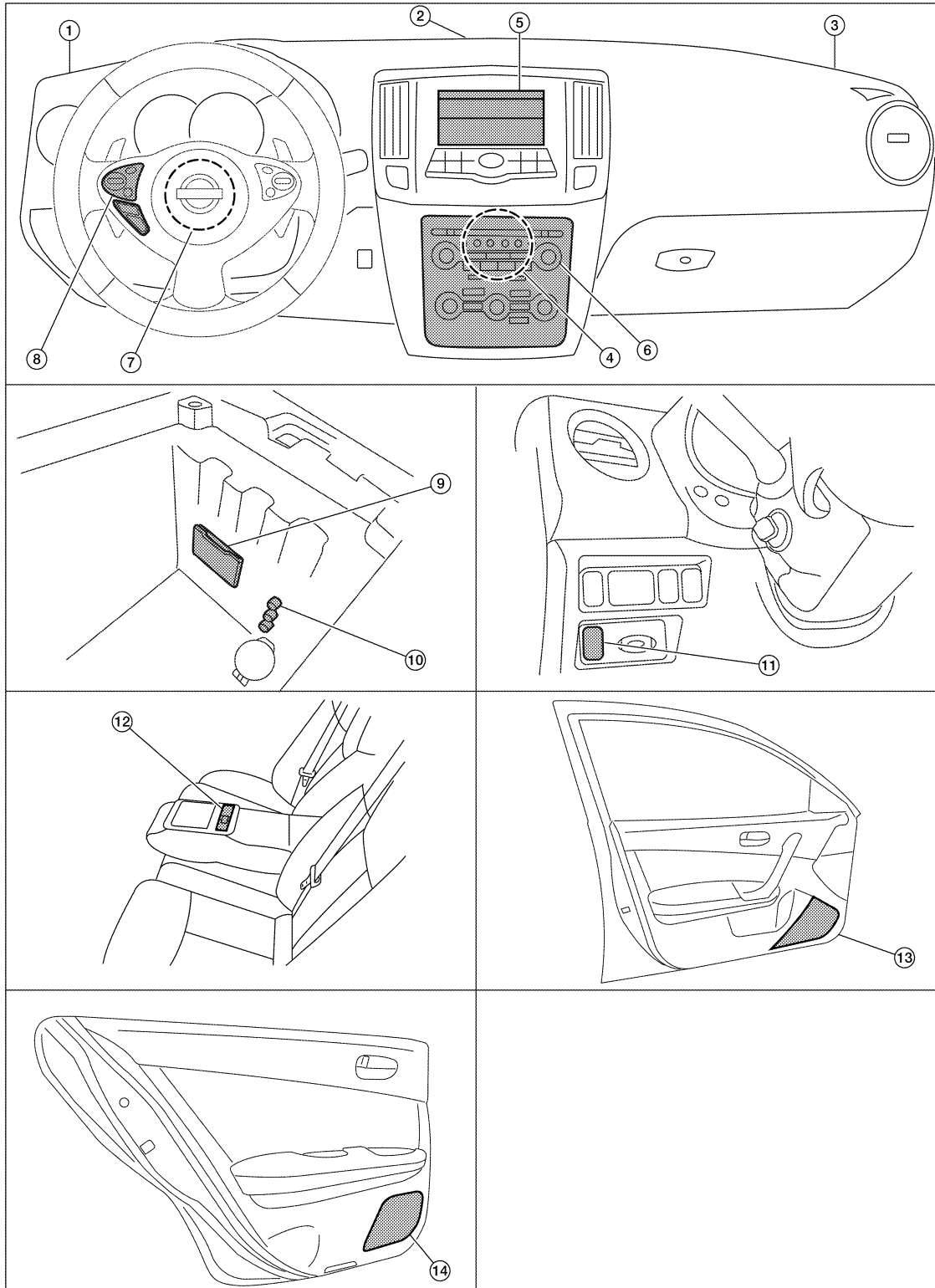
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Component Parts Location

INFOID:000000005519031



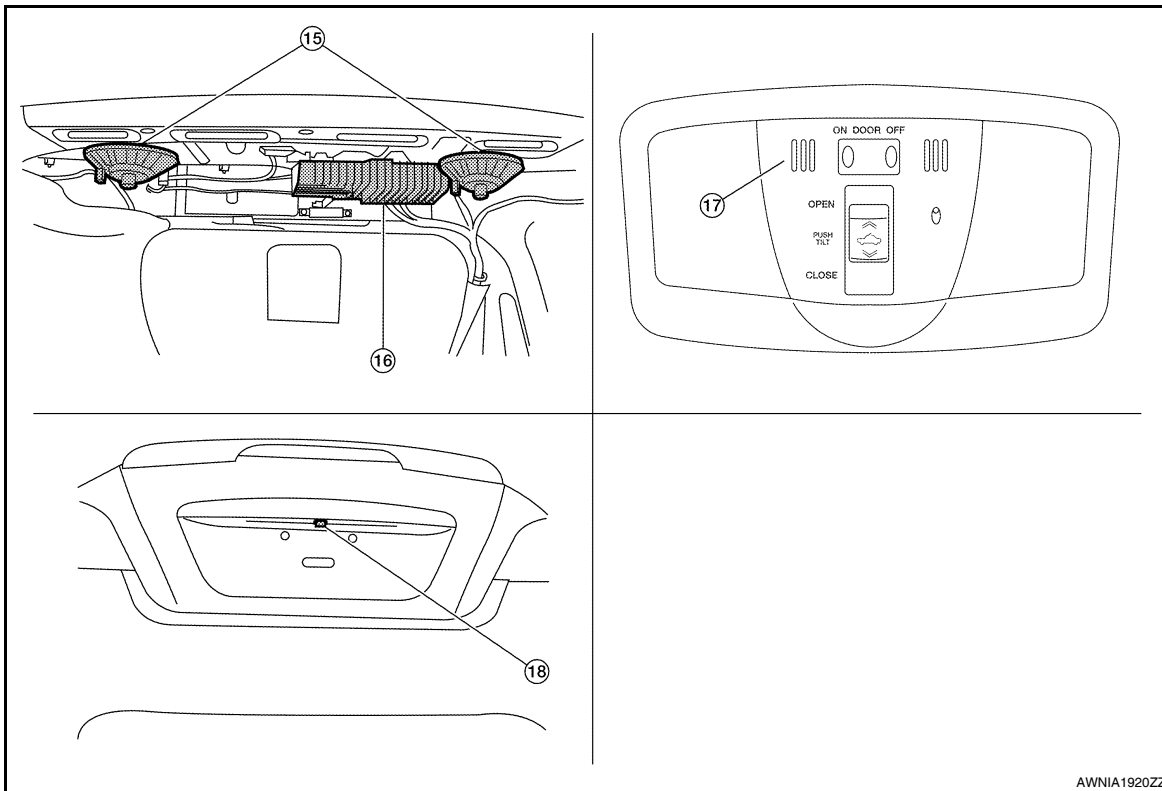
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AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]



- | | | |
|---|---|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M131, M134, M136, M137, M139, M145, M146, M148, M149 (located behind A/C and AV switch assembly) | 5. Display unit M142, M151 | 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. USB interface M211 (view in center console) |
| 10. Aux in jack M209 | 11. Rear control cancel switch M89 | 12. Rear control switch B402, B403, B404 |
| 13. Front door speaker
LH D3
RH D103 | 14. Rear door speaker
LH D202
RH D302 | 15. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 |
| 16. BOSE speaker amp B109, B110 | 17. Microphone R7 | 18. Rear view camera T101 |

Component Description

INFOID:000000005519032

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.
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit and outputs audio signals to each speaker.
Steering wheel audio control 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.

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Part name	Description
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.

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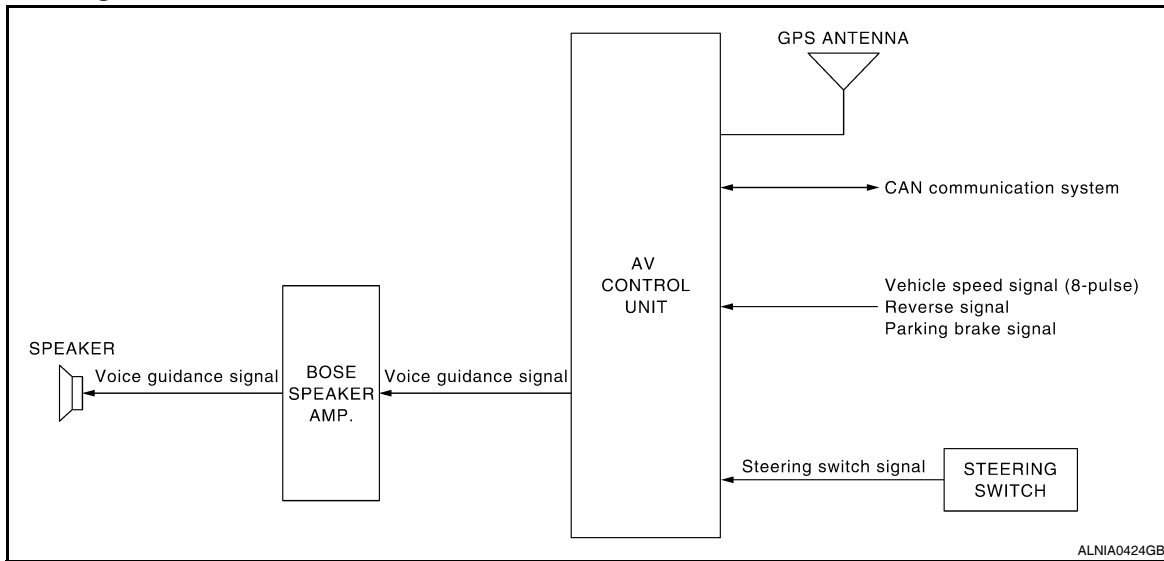
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NAVIGATION SYSTEM

System Diagram



System Description

INFOID:000000005519034

NOTE:

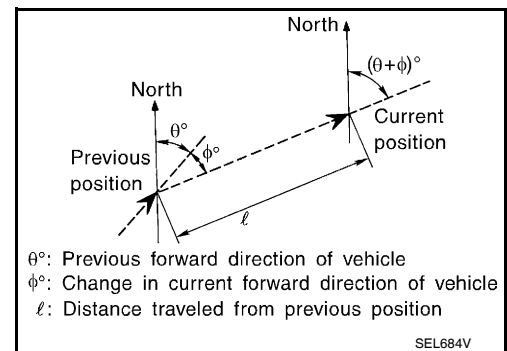
Refer to NAVI System Owner's Manual for system operation.

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 W/ NAVI W/RR CTL]

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.

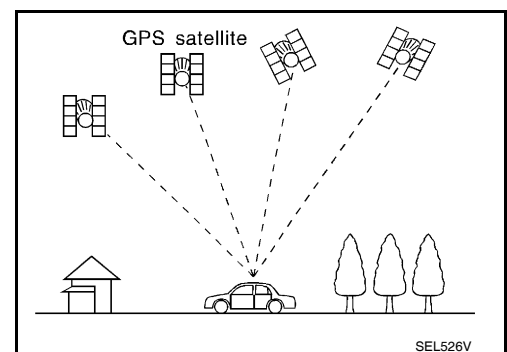
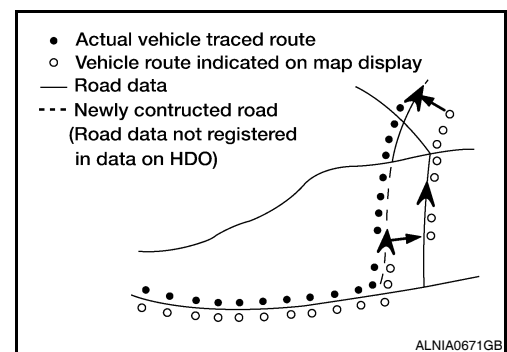
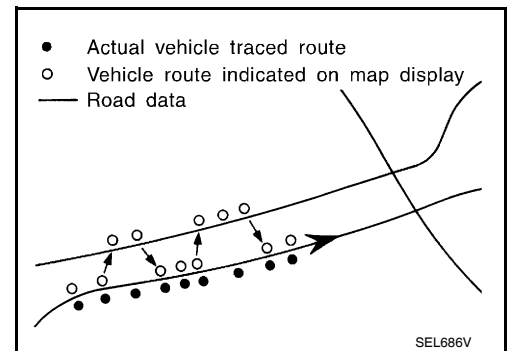
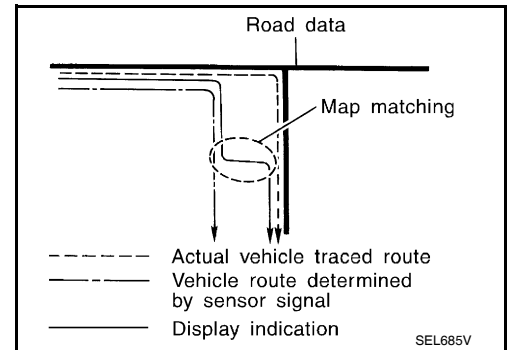
When driving on a road not present in the map, the map-matching function may find another road and position the current-location mark on it. Then, when the correct road is detected, the current-location mark may leap to it.

- 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 W/ NAVI W/RR CTL]

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.

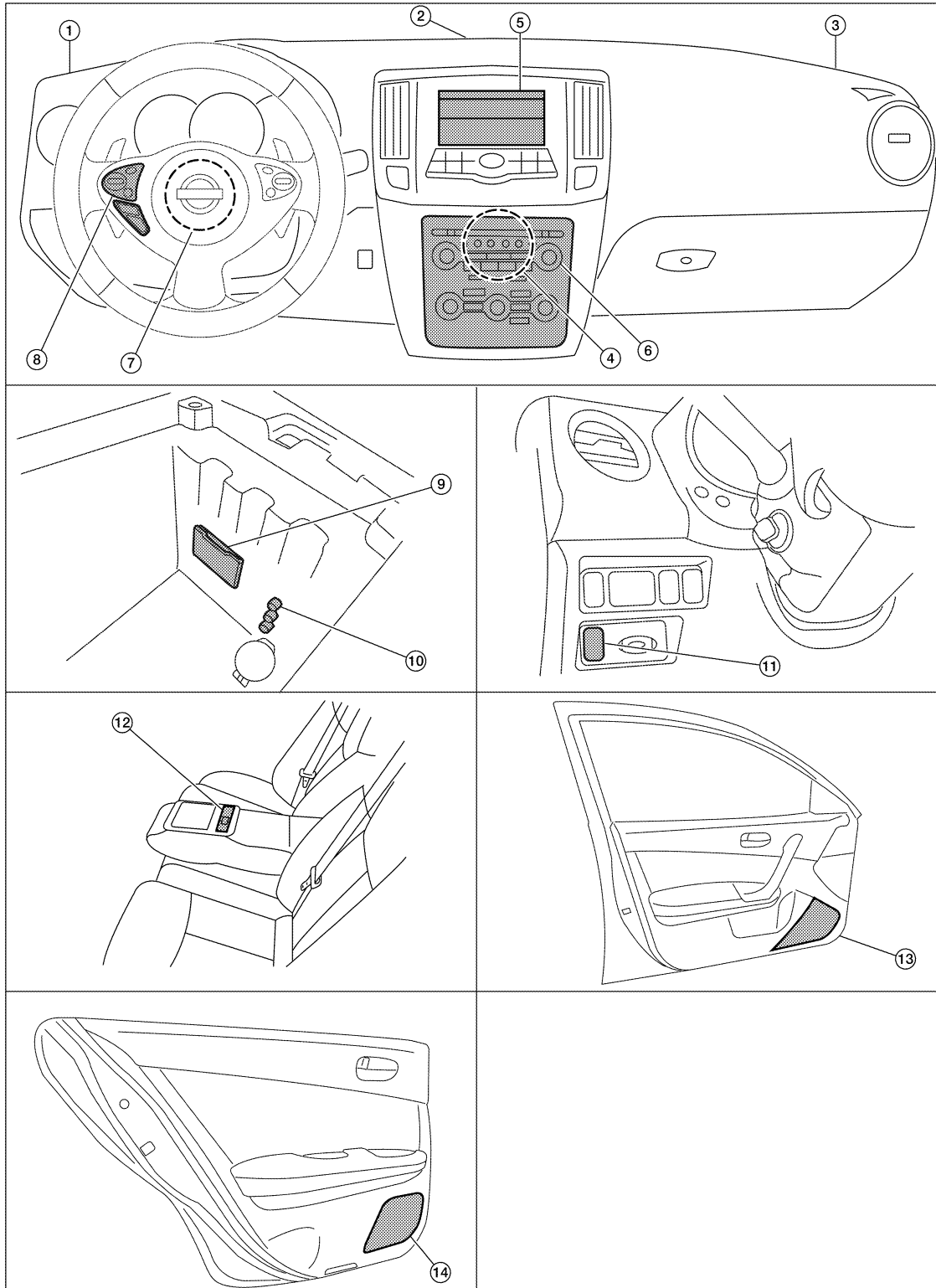
NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Component Parts Location

INFOID:000000005519035



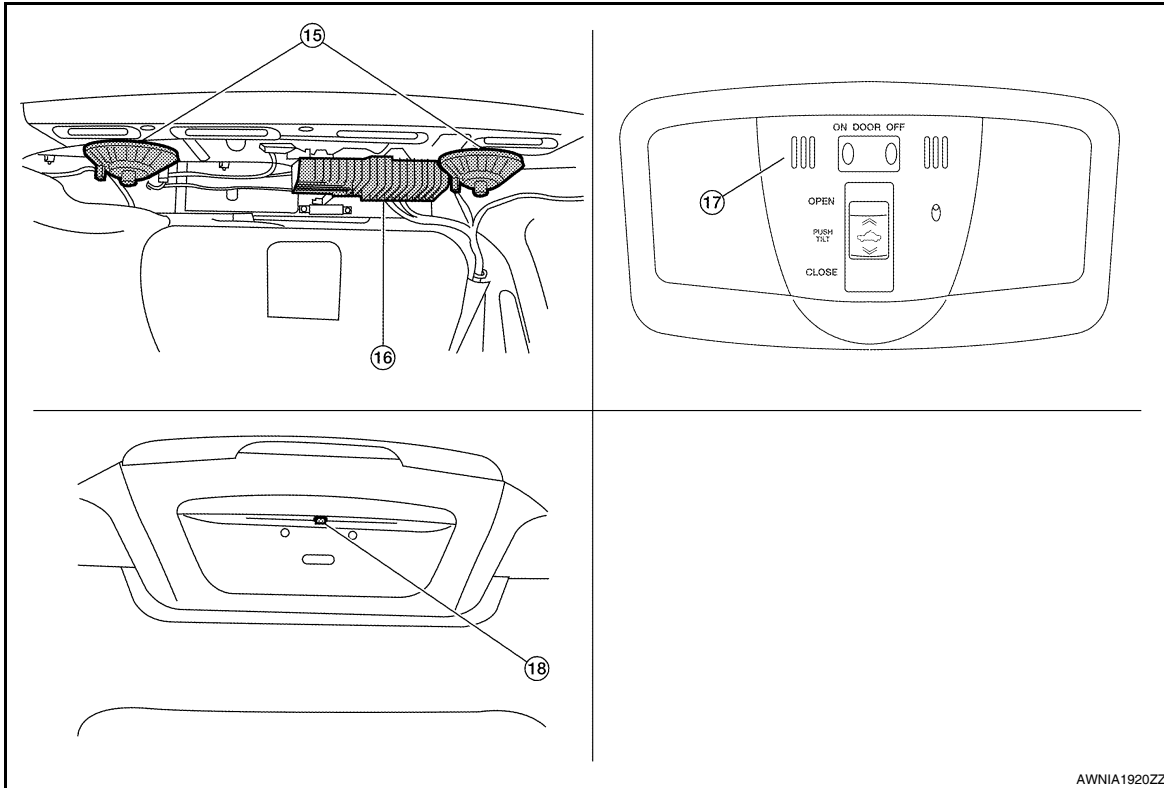
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NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]



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|---|---|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M131, M134, M136, M137, M139, M145, M146, M148, M149 (located behind A/C and AV switch assembly) | 5. Display unit M142, M151 | 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. USB interface M211 (view in center console) |
| 10. Aux in jack M209 | 11. Rear control cancel switch M89 | 12. Rear control switch B402, B403, B404 |
| 13. Front door speaker
LH D3
RH D103 | 14. Rear door speaker
LH D202
RH D302 | 15. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 |
| 16. BOSE speaker amp B109, B110 | 17. Microphone R7 | 18. Rear view camera T101 |

Component Description

INFOID:000000005519036

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 wheel audio control switches	<ul style="list-style-type: none"> Each operation of navigation system can be performed Switch operating signal is output to AV control unit
Microphone	Sends voice signals to AV control unit
GPS antenna	GPS signal is received and is output to AV control unit.

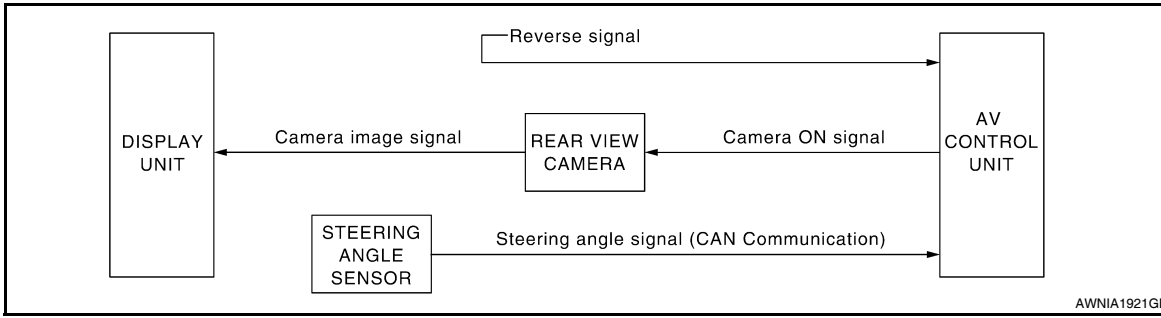
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

REAR VIEW MONITOR SYSTEM

System Diagram



System Description

INFOID:000000005519038

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

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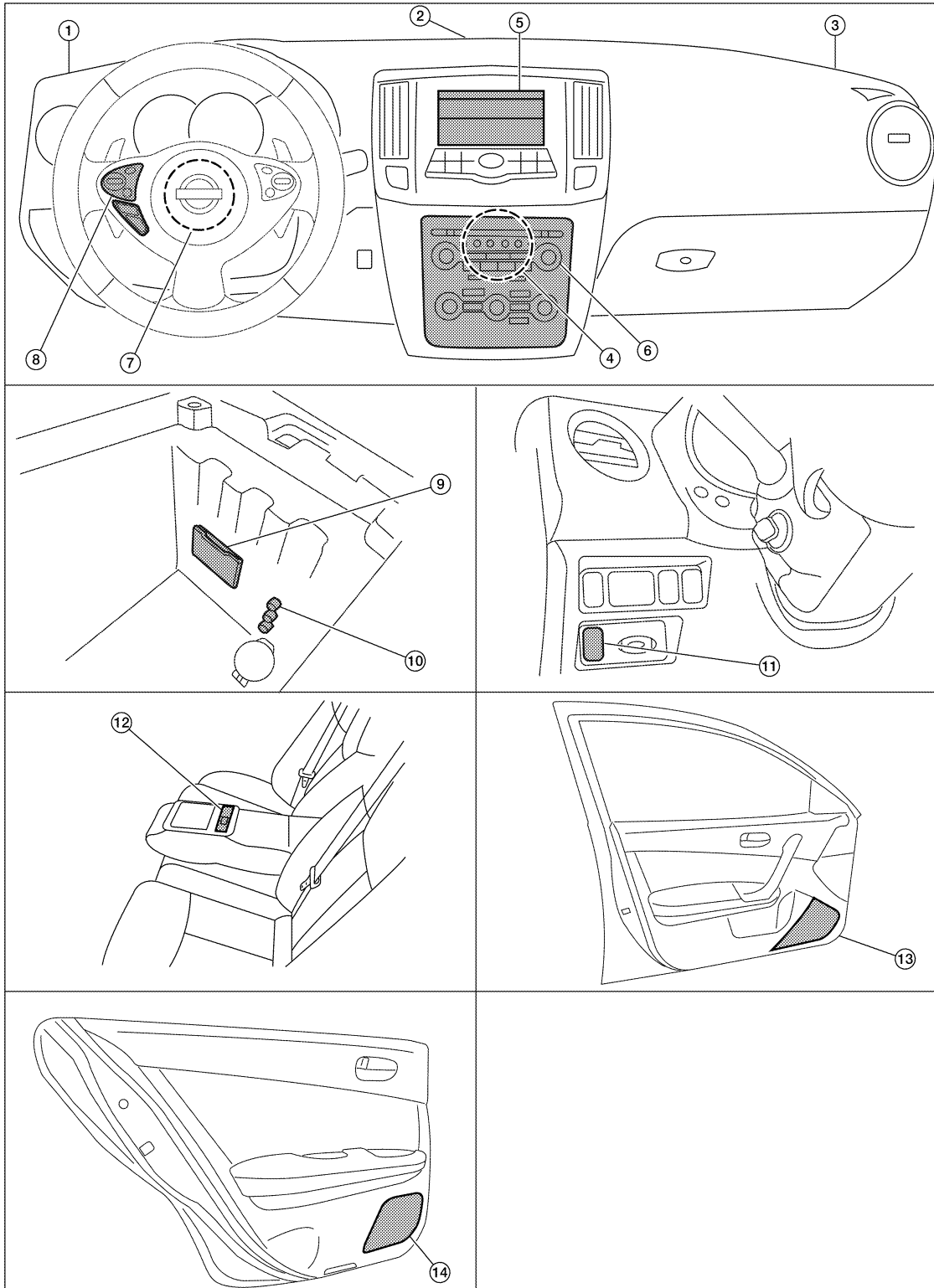
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Component Parts Location

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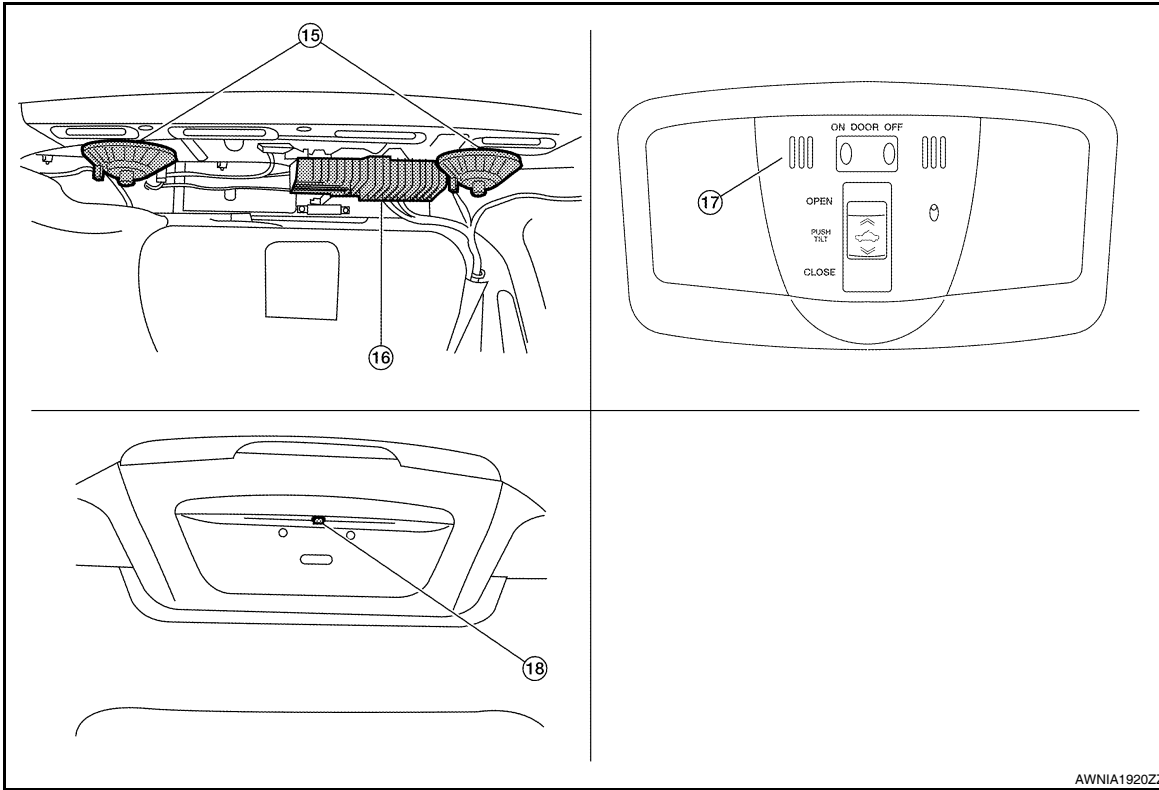


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REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]



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|---|---|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M131, M134, M136, M137, M139, M145, M146, M148, M149 (located behind A/C and AV switch assembly) | 5. Display unit M142, M151 | 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. USB interface M211(view in center console) |
| 10. Aux in jack M209 | 11. Rear control cancel switch M89 | 12. Rear control switch B402, B403, B404 |
| 13. Front door speaker
LH D3
RH D103 | 14. Rear door speaker
LH D202
RH D302 | 15. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 |
| 16. BOSE speaker amp B109, B110 | 17. Microphone R7 | 18. Rear view camera T101 |

Component Description

INFOID:000000005519040

Part name	Description
AV control unit	<ul style="list-style-type: none"> Receives reverse signal from back-up lamp relay Receives steering angle sensor signal Sends camera ON signal to rear view camera
Rear view camera	<ul style="list-style-type: none"> Receives camera ON signal from the AV control unit Sends image signal to the display unit
Steering angle sensor	Sends steering angle information to the AV control unit via CAN communication

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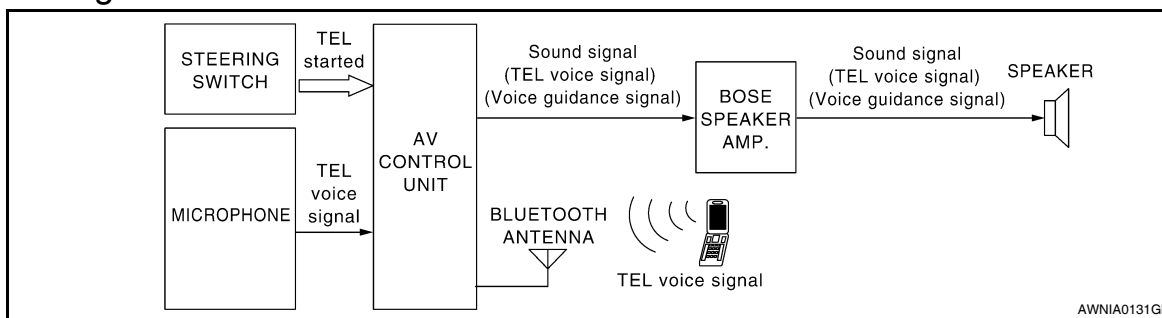
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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.

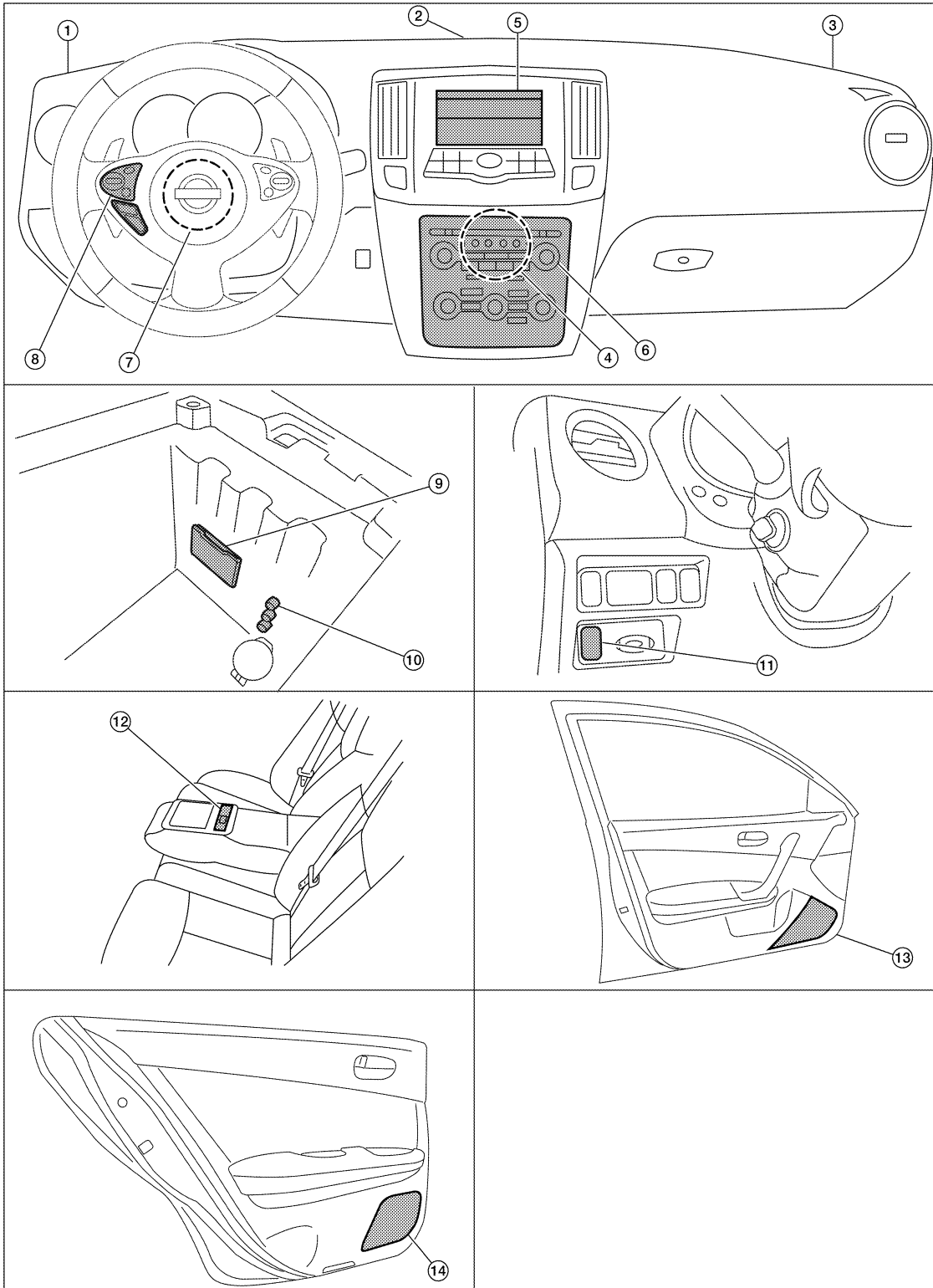
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Component Parts Location

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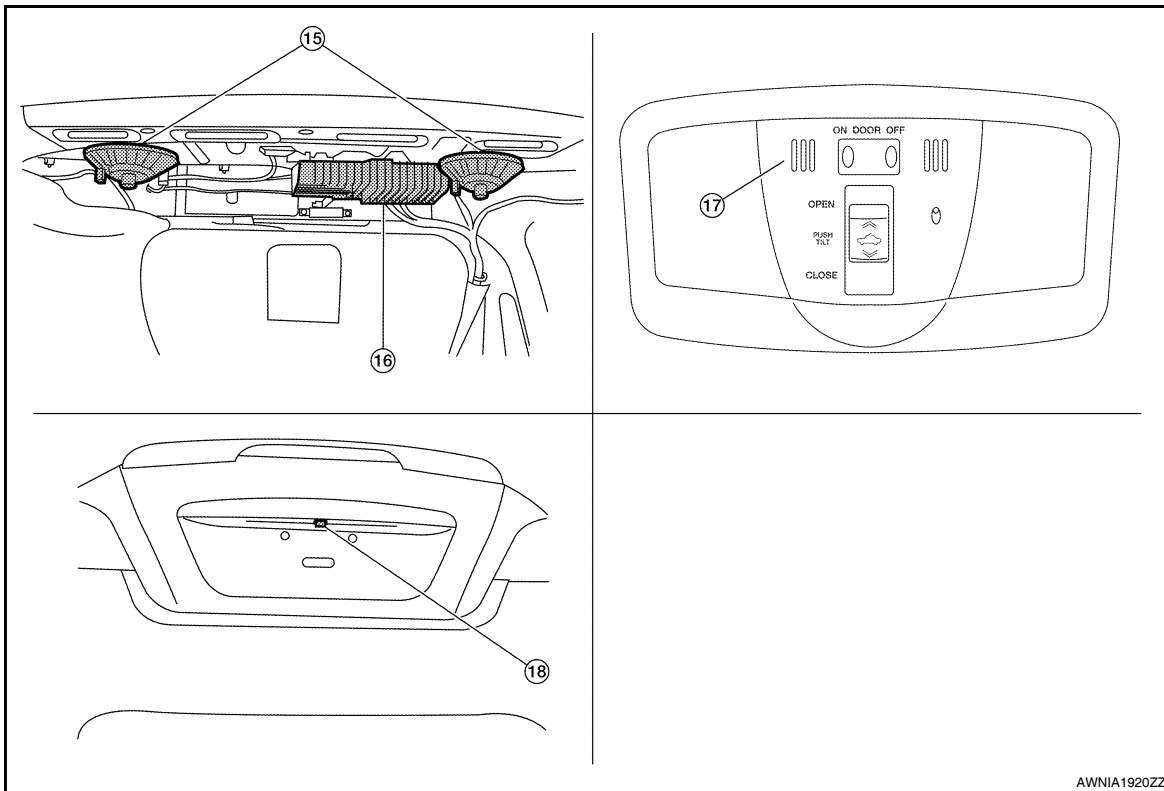


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HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]



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|---|---|--|
| 1. Tweeter LH M51 | 2. Center speaker M130 | 3. Tweeter RH M52 |
| 4. AV control unit M131, M134, M136, M137, M139, M145, M146, M148, M149 (located behind A/C and AV switch assembly) | 5. Display unit M142, M151 | 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. USB interface M211 (view in center console) |
| 10. Aux in jack M209 | 11. Rear control cancel switch M89 | 12. Rear control switch B402, B403, B404 |
| 13. Front door speaker
LH D3
RH D103 | 14. Rear door speaker
LH D202
RH D302 | 15. Rear subwoofers (view under rear parcel shelf)
LH B106
RH B107 |
| 16. BOSE speaker amp B109, B110 | 17. Microphone R7 | 18. Rear view camera T101 |

Component Description

INFOID:000000005519044

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	
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

HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Part name	Description
Microphone	Sends voice signals to AV control unit
Bluetooth antenna	Sends telephone voice signal to AV control unit

A

B

C

D

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K

L

M

AV

O

P

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description

INFOID:000000005519249

- 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 Function

INFOID:000000005519250

MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

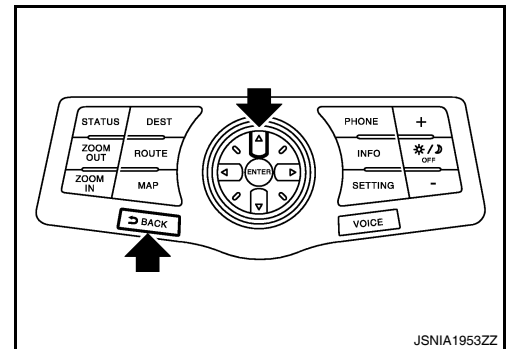
The ON/OFF operation (continuity) of each switch in the multifunction switch and preset switch can be checked.

Self-diagnosis Mode

- Press the “BACK” switch and the “UP” switch of the 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.



Finishing Self-diagnosis Mode

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

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. 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 make judgment 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.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

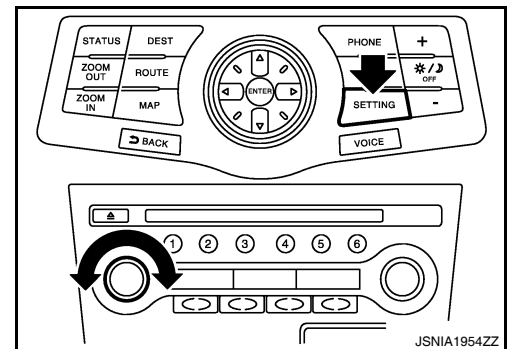
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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, touch panel calibration and response check, and color tone check by white display.	
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition, reverse, side view switch and room lamp.	
	Speaker Test	The connection of a speaker can be confirmed by test tone.	
	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 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.	
	Synchronize FES Clock	-	
	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.	
	Hands-free Phone	The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.	
	Camera	The four functions of "Correct Draw Line""Alter/Confirm Configuration", "Reset Configuration" and "Camera Syst Type" are available.	
	XM	XM NavTraffic	Change Channel • Any necessary channels required to receive traffic information from the satellite radio system can be set.
		XM NavWeather	
		XM CGS	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.		
Version Information	Version information of the AV control unit is displayed.		

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 "BACK" button.

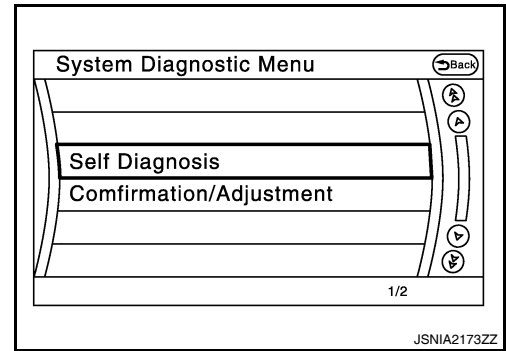


DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< FUNCTION DIAGNOSIS >

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



SELF-DIAGNOSIS MODE

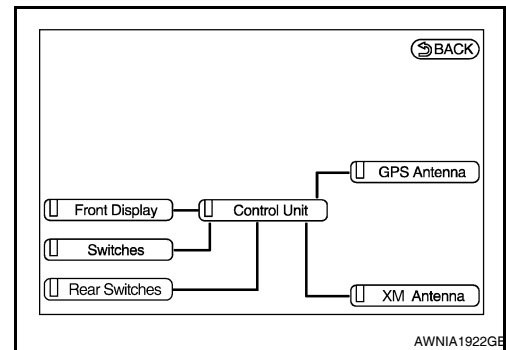
- Start the self-diagnosis function and select "Self Diagnosis".
 - Self-diagnosis subdivision screen is displayed, and the self-diagnosis mode starts.
 - The bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.
- Diagnosis results are 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	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction ^{Note}	Red	Green

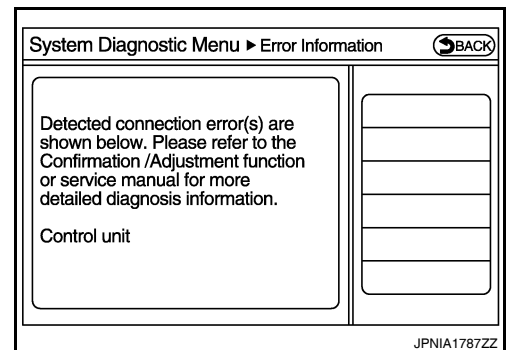
NOTE:

Control unit (AV control unit) and amplifier (BOSE amp.) are 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.



Detection Range of Self-diagnosis Mode

- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between AV control unit and each unit and the internal operation of 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.

SELF-DIAGNOSIS RESULTS

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

Only Unit Part Is Displayed In Red.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

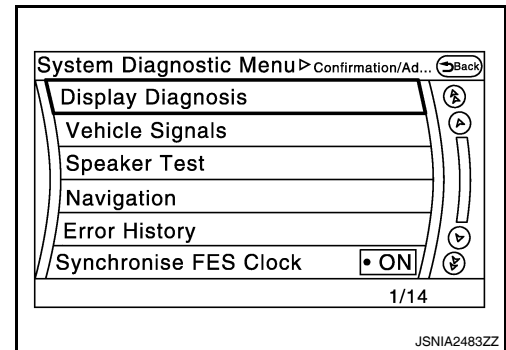
Screen switch	Description	Possible malfunction location / Action to take
Control unit	Malfunction is detected in AV control unit power supply and ground circuits.	Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.

A Connecting Cable Between Units Is Displayed In Yellow.

Area with yellow connection lines	Description	Possible malfunction location / Action to take
Control unit ↔ Front Display	Malfunction is detected in serial communication circuits between AV control unit and front display unit.	Serial communication circuits between AV control unit and front display unit.
Control unit ↔ GPS Antenna	GPS antenna connection malfunctions detected.	GPS antenna

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.



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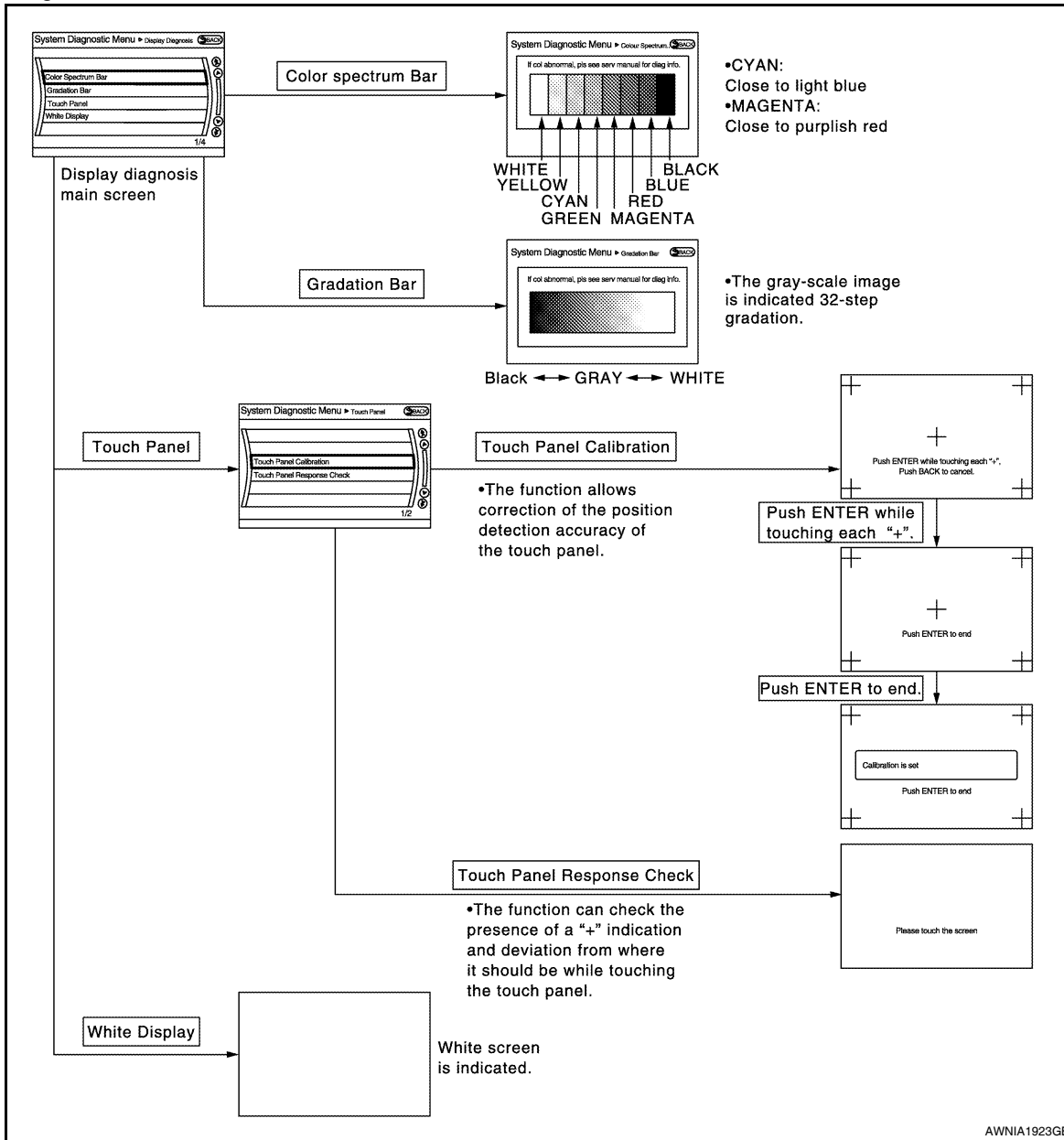
AV

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Display Diagnosis



Vehicle Signals

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

System Diagnostic Menu ▶ Vehicle Signals	
Vehicle speed	OFF
Parking brake	ON
Lights	OFF
Ignition	ON
Reverse	OFF
Side view Switch	-
Room Lamp	OFF

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

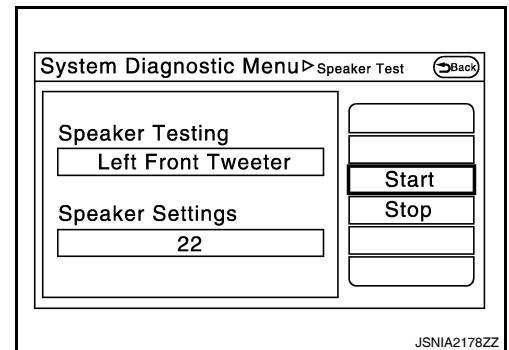
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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 ACC position	—
Reverse	ON	Shift the selector lever to "R" position	Changes in indication may be delayed. This is normal.
	OFF	Shift the selector lever other than "R" position	
Side view Switch	—	—	This item is displayed, but cannot be monitored.
Room Lamp	OFF	—	This item is displayed, but not used.

Speaker Test

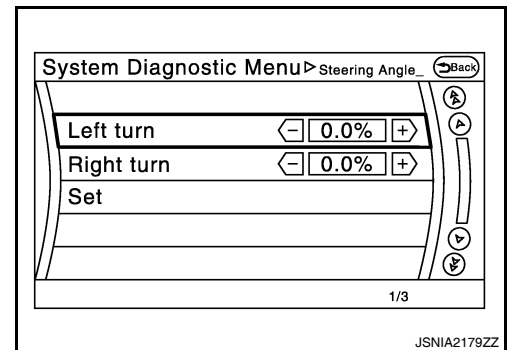
Select "SPEAKER DIAGNOSIS" to display the Speaker Diagnosis screen. Press "Start" to generate a test tone in a speaker. Press "Start" to generate a test tone in the next speaker. Press "Stop" to stop the test tones.



Navigation

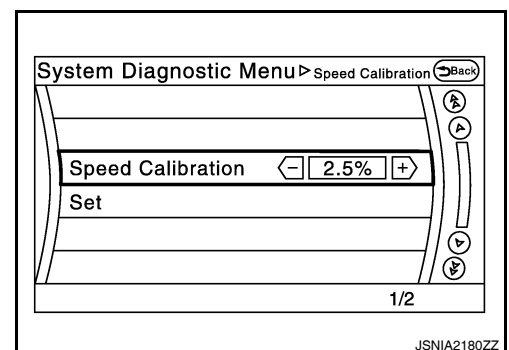
STEERING ANGLE ADJUSTMENT

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



SPEED CALIBRATION

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



DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< FUNCTION DIAGNOSIS >

Error History

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

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

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

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

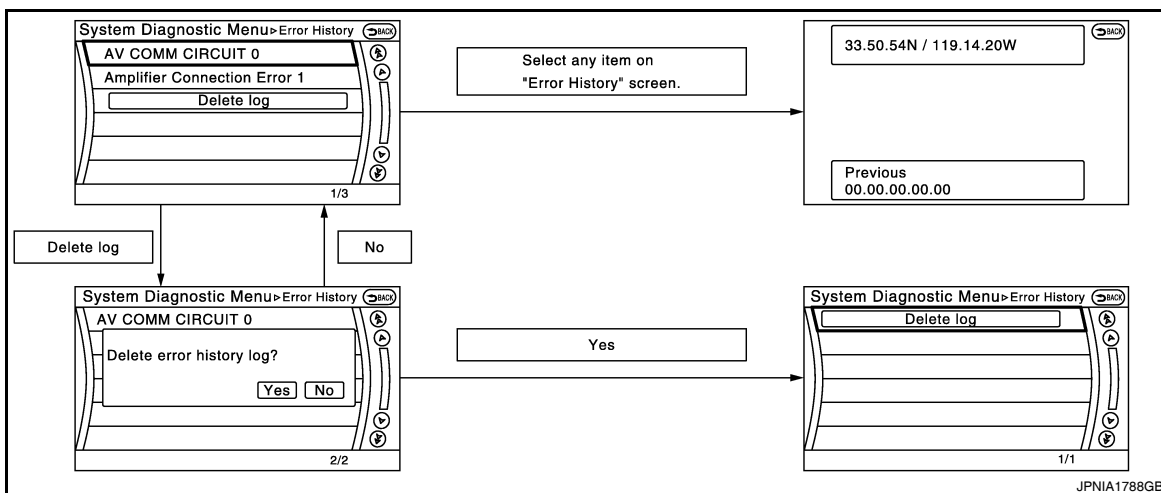
Count up method A

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

Count up method B

- The counter increases by 1 if an error occurs when ignition switch is ON. The counter will not decrease even if the condition is normal at the next ignition ON cycle.
- The counter upper limit is 50. Any counts exceeding 50 are ignored. The counter can be reset (no error record display) with the “Delete log” switch or CONSULT-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)
Count up method B	Other than the above



Error item

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-711, "CONSULT - III Function (MULTI AV)" .

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Error item	Description	Possible malfunction factor/Action to take	
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.	A
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.		B
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.		C
Connection Of Gyro			D
Connection of G Sensor			E
CAN Controller Memory Error			F
Bluetooth Module Connection Error			G
Sub CPU Connection Error			H
iPod authentication chip error			I
Audio connection error			J
DSP Connection Error	AV control unit malfunction is detected.	<ul style="list-style-type: none"> If a disc can be played, then there is a possibility of the detection of a temporary malfunction. Replace the AV control unit if the malfunction occurs constantly. 	K
DSP Communication Error			L
HDD Connection Error	AV control unit malfunction is detected.	<ul style="list-style-type: none"> If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. Replace the AV control unit if the malfunction occurs constantly. 	M
HDD Read Error			N
HDD Write Error			O
HDD Communication Error			P
HDD Access Error			Q
GPS Communication Error	GPS malfunction is detected.	<p>An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.</p> <p>Replace the AV control unit if the malfunction occurs constantly.</p>	R
GPS ROM Error			S
GPS RAM Error			T
GPS RTC Error			U
Unfinished configuration	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.	V
USB Controller Communication Error	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.	W
DVD Mechanism Communication Error	AV control unit malfunction is detected.	<ul style="list-style-type: none"> If DVD can be played, then there is a possibility of the detection of a temporary malfunction. Replace the AV control unit if the malfunction occurs constantly. 	X
Front Display Connection Error	<p>When either one of the following items is detected:</p> <ul style="list-style-type: none"> Display unit power supply and ground circuits malfunction is detected. Malfunction is detected in communication circuits between AV control unit and display unit. Malfunction is detected in communication signal between AV control unit and display unit. 	<ul style="list-style-type: none"> Display unit power supply and ground circuits. Communication circuits between AV control unit and display unit. 	Y
USB electric current Error	Detection of over current in USB interface.	Check USB harness between the AV control unit and USB interface.	Z

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Error item	Description	Possible malfunction factor/Action to take
GPS Antenna Error	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
<ul style="list-style-type: none"> • AV COMM CIRCUIT • Switches Connection Error 	When either one of the following items are 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. 	<ul style="list-style-type: none"> • Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch.

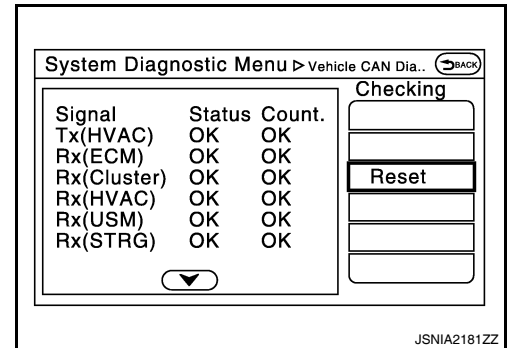
Vehicle CAN Diagnosis

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

Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx(STRG)	OK / ???	OK / 0 – 39

NOTE:

“???” indicates UNKWN



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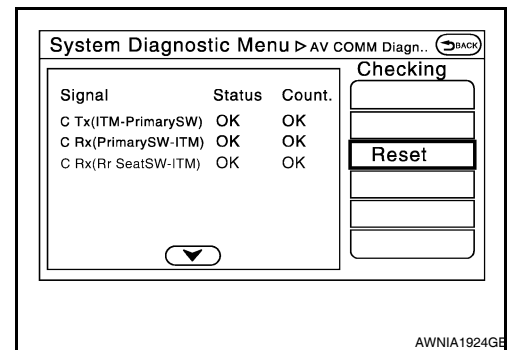
AV COMM Diagnosis

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

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

NOTE:

“???” indicates UNKWN



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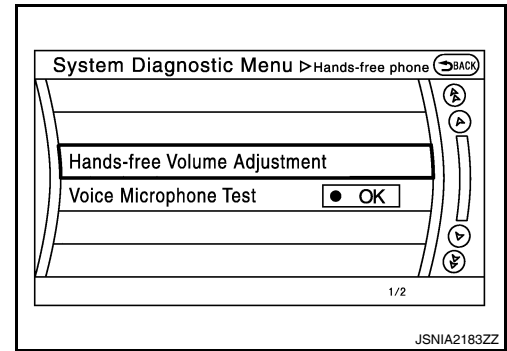
Hands-Free Phone

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

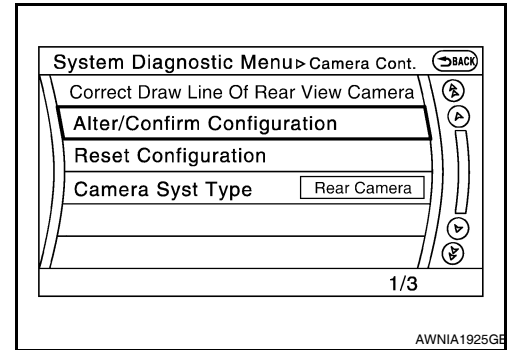
[BOSE W/ COLOR W/ NAVI W/RR CTL]

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



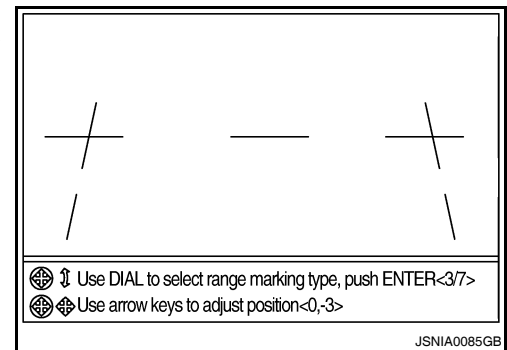
Camera

The four functions of “Correct Draw Line of Rear View Camera”, “Alter/Confirm Configuration”, “Reset Configuration” and “Camera Syst Type” are available.



Correct Draw Line 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.



Alter/Confirm Configuration

- Configuration stored in the AV control unit can be checked and modified.

Configuration list

Setting item	Setting	Setting item	Setting
Predi. Course Lines	Without	Wheelbase	0.0000000
Rear Coeff. K	0.0000000	Total Length	0.0000000
Rear Coeff. F	0.0000000	Steering Gear Ratio	0.0000000
Rear Coeff. P1	0.0000000	Side Coeff. K	0.0000000
Rear Coeff. P2	0.0000000	Side Coeff. F	0.0000000
Rear Coeff. C1	0.0000000	Side Coeff. P1	0.0000000
Rear Coeff. C2	0.0000000	Side Coeff. P2	0.0000000
Rear Coeff. D1	0.0000000	Side Coeff. C1	0.0000000
Rear Coeff. D2	0.0000000	Side Coeff. C2	0.0000000
Car Width	0.0000000	Side Coeff. D1	0.0000000
Rear Offset	0.0000000	Side Coeff. D2	0.0000000
Rear Height	0.0000000	Side Offset	0.0000000

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

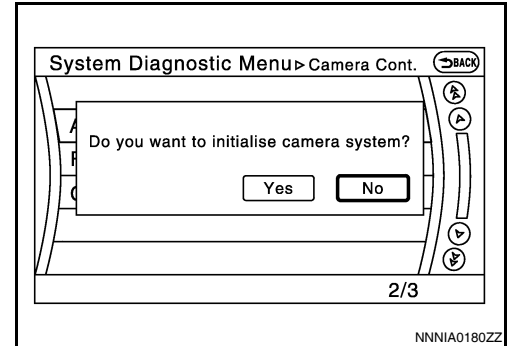
< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Setting item	Setting	Setting item	Setting
Rear L/R Angle	0.0000000	Overall Height	0.0000000
Rear Up/Dn Angle	0.0000000	Side L/R Angle	0.0000000
Rear Roll Angle	0.0000000	Side Up/Dn Angle	0.0000000
Bumper Rear Dist.	0.0000000	Side Roll Angle	0.0000000
Bumper Rear Ax Dist	0.0000000	Side Front End Dist	0.0000000
Steer. Max Angle	0.0000000	Total Width	0.0000000
Min. Turning Red.	0.0000000	—	—

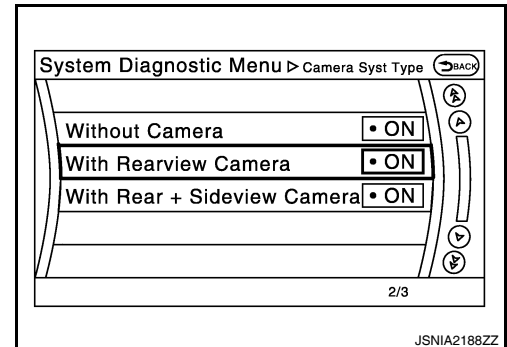
Reset Configuration

- Configuration stored in the AV control unit can be initialized.



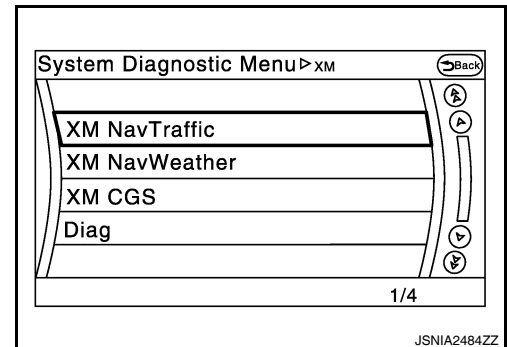
Camera Syst Type

- Type of camera system is selectable.



XM

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



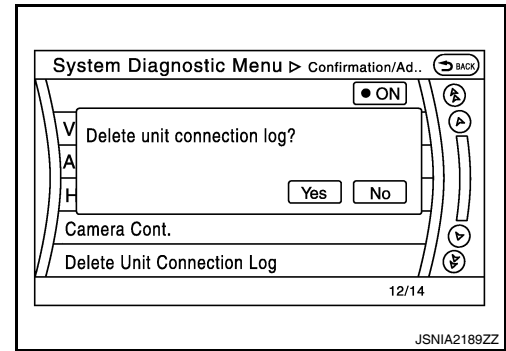
Delete Unit Connection Log

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< FUNCTION DIAGNOSIS >

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

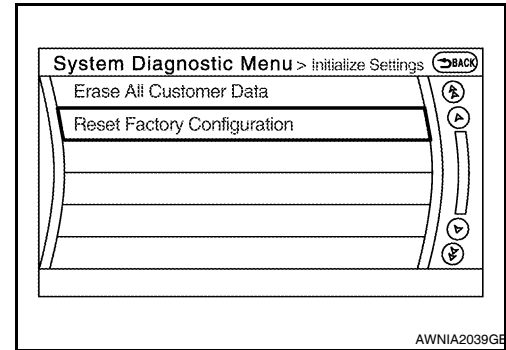


Initialize Settings

“Erase All Customer Data” and “Reset Factory Configuration” are possible.

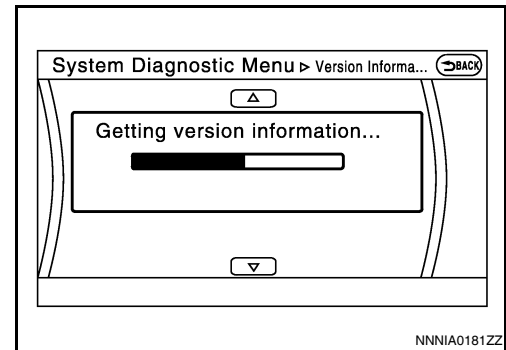
CAUTION:

- Never perform Reset Factory Configuration except when configuration is unsuccessful.
- Factory Configuration Initialize requires configuration. For details, refer to [AV-365, "Description"](#).



Version Information

Version information of the AV control unit is displayed.



CONSULT - III Function (MULTI AV)

INFOID:000000005519251

APPLICATION ITEMS

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.
Configuration	<ul style="list-style-type: none"> • Read and save the vehicle specification. • Write the vehicle specification when replacing AV control unit.

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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-715. "Diagnosis Procedure"
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	
Cont Unit [U1200]	AV control unit malfunction is detected.	
GYRO NO CONN [U1201]		
G-SENSOR NO CONN [U1202]		
CAN CONT [U1216]		
BLUETOOTH MODULE [U1217]		
SUB CPU CONN [U1228]		
iPod CERTIFICATION [U1229]		
Built-in AUDIO CONN [U122E]		
HDD CONN [U1218]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
HDD READ [U1219]		
HDD WRITE [U121A]		
HDD COMM [U121B]		
HDD ACCESS [U121C]		
GPS COMM [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any 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]		
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DSP CONN [U121D]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If a disc can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
DSP COMM [U121E]		
DVD COMM [U1227]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If DVD can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.
CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Error item	Description	Possible malfunction factor/Action to take
FRONT DISP CONN [U1243]	When either one of the following items are detected: <ul style="list-style-type: none"> • Display unit power supply and ground circuits malfunction is detected. • Communication circuits between AV control unit and display unit. 	<ul style="list-style-type: none"> • Display unit power supply and ground circuits. • Communication circuits between AV control unit and AV display unit.
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
USB OVERCURRENT [U1263]	Detection of over current in USB connector.	Check USB harness between the AV control unit and USB connector.
<ul style="list-style-type: none"> • AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] 	When either one of the following items are 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. 	<ul style="list-style-type: none"> • Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch.

DATA MONITOR

ALL SIGNALS

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

Display Item	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 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		
SIDE VIEW SW	Off	This item is displayed, but cannot be monitored.		—
ROOM LAMP	Off	This item is displayed, but not used.		—

SELECTION FROM MENU

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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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

CONFIGURATION

Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	<ul style="list-style-type: none">• Reads the vehicle configuration of current AV control unit.• Saves the read vehicle configuration.
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.

U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:000000005522882

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:000000005522888

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Probable malfunction location
U1000	CAN COMM CIRCUIT [U1000]	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

Diagnosis Procedure

INFOID:000000005522884

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-16, "Trouble Diagnosis Flow Chart"](#).
NO >> Refer to GI section. Refer to [GI-39, "Intermittent Incident"](#).

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AV

U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000005522889

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Probable malfunction factor
U1010	CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation" .

U1200 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1200 AV CONTROL UNIT

DTC Logic

INFOID:000000005519180

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1200	Cont Unit [U1200]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824. "Removal and Installation" .

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AV

U1201 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1201 AV CONTROL UNIT

DTC Logic

INFOID:000000005519181

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1201	GYRO NO CONN [U1201]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824. "Removal and Installation" .

U1202 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1202 AV CONTROL UNIT

DTC Logic

INFOID:000000005519182

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1202	G-SENSOR NO CONN [U1202]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824. "Removal and Installation" .

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AV

U1204 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1204 AV CONTROL UNIT

DTC Logic

INFOID:000000005519183

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1204	GPS CONN [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824. "Removal and Installation" .

Diagnosis Procedure

INFOID:000000005519184

1. PERFORM THE SELF-DIAGNOSIS

1. Delete the "self-diagnosis" results of "MULTI AV". Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

- YES >> Replace AV control unit. Refer to [AV-824. "Removal and Installation"](#).
- NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

U1205 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1205 AV CONTROL UNIT

DTC Logic

INFOID:000000005519185

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1205	GPS ROM [U1205]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824. "Removal and Installation" .

Diagnosis Procedure

INFOID:000000005519186

1. PERFORM THE SELF-DIAGNOSIS

1. Delete the "self-diagnosis" results of "MULTI AV". Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

- YES >> Replace AV control unit. Refer to [AV-824. "Removal and Installation"](#).
- NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

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AV

U1206 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1206 AV CONTROL UNIT

DTC Logic

INFOID:000000005519187

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1206	GPS RAM [U1206]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation" .

Diagnosis Procedure

INFOID:000000005519188

1. PERFORM THE SELF-DIAGNOSIS

1. Delete the "self-diagnosis" results of "MULTI AV". Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

- YES >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).
- NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

U1207 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1207 AV CONTROL UNIT

DTC Logic

INFOID:000000005519189

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1207	GPS RTC [U1207]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824. "Removal and Installation" .

Diagnosis Procedure

INFOID:000000005519190

1. PERFORM THE SELF-DIAGNOSIS

1. Delete the "self-diagnosis" results of "MULTI AV". Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

- YES >> Replace AV control unit. Refer to [AV-824. "Removal and Installation"](#).
- NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

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AV

U1216 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1216 AV CONTROL UNIT

DTC Logic

INFOID:000000005519191

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1216	CAN CONT [U1216]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824. "Removal and Installation" .

U1217 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1217 AV CONTROL UNIT

DTC Logic

INFOID:000000005519192

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1217	BLUETOOTH MODULE [U1217]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824. "Removal and Installation" .

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AV

U1218 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1218 AV CONTROL UNIT

DTC Logic

INFOID:000000005519193

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005519194

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

U1219 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1219 AV CONTROL UNIT

DTC Logic

INFOID:000000005519195

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005519196

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

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AV

U121A AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U121A AV CONTROL UNIT

DTC Logic

INFOID:000000005519197

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005519198

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

U121B AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U121B AV CONTROL UNIT

DTC Logic

INFOID:000000005519199

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005519200

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

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U121C AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U121C AV CONTROL UNIT

DTC Logic

INFOID:000000005519201

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005519202

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

U121D AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U121D AV CONTROL UNIT

DTC Logic

INFOID:000000005519203

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121D	DSP CONN [U121D]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If a disc can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005519204

1. CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

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AV

U121E AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U121E AV CONTROL UNIT

DTC Logic

INFOID:000000005519205

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If a disc can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005519206

1. CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

U1225 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1225 AV CONTROL UNIT

DTC Logic

INFOID:000000005519207

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1225	USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.

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U1227 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1227 AV CONTROL UNIT

DTC Logic

INFOID:000000005519208

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1227	DVD COMM [U1227]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If DVD can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005519209

1. CHECK PLAYBACK OF A DISK (DVD)

Can a disc (DVD) be played?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

U1228 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1228 AV CONTROL UNIT

DTC Logic

INFOID:00000000519210

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1228	SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation" .

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U1229 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1229 AV CONTROL UNIT

DTC Logic

INFOID:000000005519211

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1229	iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation" .

U122A AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U122A AV CONTROL UNIT

DTC Logic

INFOID:000000005519212

DTC	Display contents of CONSULT-III	DTC detection condition	Action to take
U122A	CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with "MULTI AV" of CONSULT-III.

Diagnosis Procedure

INFOID:000000005519213

1.PERFORM THE SELF-DIAGNOSIS

When U122A is detected, write configuration data with "MULTI AV" of CONSULT-III.

>> Write configuration data with "MULTI AV" of CONSULT-III. Refer to [AV-681, "CONFIGURATION \(AV CONTROL UNIT\) : Special Repair Requirement"](#).

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AV

U122E AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U122E AV CONTROL UNIT

DTC Logic

INFOID:000000005519214

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U122E	Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation" .

U1232 STEERING ANGLE SENSOR

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1232 STEERING ANGLE SENSOR

DTC Logic

INFOID:000000005519215

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1232	ST ANGLE SEN CALIB [1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.

Diagnosis Procedure

INFOID:000000005519216

1. ADJUST THE PREDICTIVE COURSE LINE CENTER POSITION OF THE STEERING ANGLE SENSOR

When U1232 is detected, adjust the predictive course line center position of the steering angle sensor.

>> Adjust the steering angle sensor neutral position on ABS actuator and electrical unit (control unit) side. Refer to [BRC-8. "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement"](#).

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AV

U1243 DISPLAY UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1243 DISPLAY UNIT

DTC Logic

INFOID:000000005519217

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1243	FRONT DISP CONN [U1243]	When either one of the following items are detected: <ul style="list-style-type: none"> display unit power supply and ground circuit malfunction is detected. communication circuit between AV control unit and display unit. 	<ul style="list-style-type: none"> Display unit power supply and ground circuit. Communication circuit between AV control unit and display unit.

Diagnosis Procedure

INFOID:000000005519218

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

1. CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuit. Refer to [AV-747, "DISPLAY UNIT : Diagnosis Procedure"](#).

Is inspection result OK?

YES >> GO TO 2.

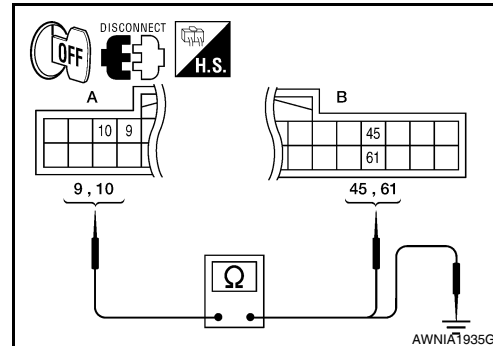
NO >> Repair malfunctioning parts.

2. CHECK CONTINUITY OF COMMUNICATION CIRCUIT

- Turn ignition switch OFF.
- Disconnect display unit connector M142 and AV control unit connector M137.
- Check continuity between display unit harness connector M142 (A) terminals 9, 10 and AV control unit harness connector M137 (B) terminals 45 and 61.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M142	9	M137	61	Yes
	10		45	

- Check continuity between display unit harness connector M142 (A) terminals 9, 10 and ground.



A		—	Continuity
Connector	Terminal		
M142	9	Ground	No
	10		

Are continuity results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK COMMUNICATION SIGNAL

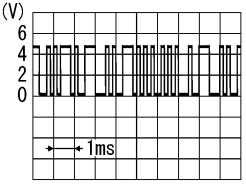
- Connect display unit connector and AV control unit connector.
- Turn ignition switch ON.

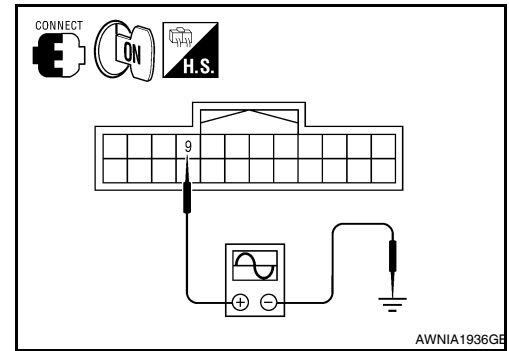
U1243 DISPLAY UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< COMPONENT DIAGNOSIS >

3. Check signal between display unit harness connector M142 terminal 9 and ground with an oscilloscope or CONSULT-III.

(+)		(-)	Reference signal
Connector	Terminal		
M142	9	Ground	 <p>PKIB5039J</p>



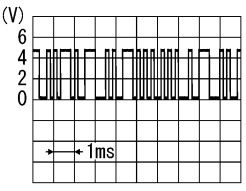
Are voltage readings as specified?

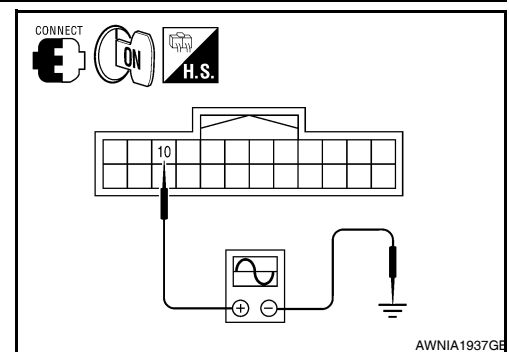
YES >> GO TO 4.

NO >> Replace AV control unit. Refer to [AV-322, "Removal and Installation"](#).

4. CHECK COMMUNICATION SIGNAL

- Check signal between display unit harness connector M142 terminal 10 and ground with an oscilloscope or CONSULT-III.

(+)		(-)	Reference signal
Connector	Terminal		
M142	10	Ground	 <p>PKIB5039J</p>



Are voltage readings as specified?

YES >> Inspection End.

NO >> Replace display unit. Refer to [AV-827, "Removal and Installation"](#).

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U1244 GPS ANTENNA

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1244 GPS ANTENNA

DTC Logic

INFOID:000000005519219

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1244	GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.

Diagnosis Procedure

INFOID:000000005522944

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

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

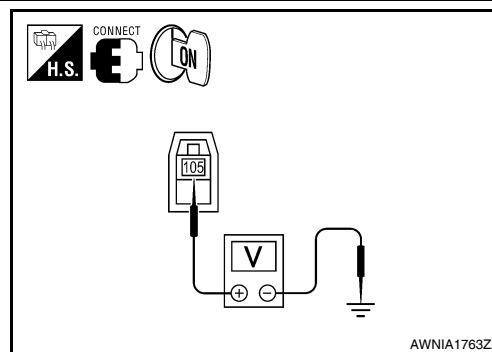
1. Turn ignition switch ON.
2. Check voltage between AV control unit connector M145 terminal 105 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal		
M145	105	Ground	5V

Is the voltage reading as specified?

YES >> Replace GPS antenna. Refer to [AV-501. "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-487. "Removal and Installation"](#).



U1263 USB

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1263 USB

DTC Logic

INFOID:000000005519221

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1263	USB OVERCURRENT [U1263]	Detection of over current in USB interface.	Check USB harness between the AV control unit and USB interface.

Diagnosis Procedure

INFOID:000000005519222

1.CHECK USB HARNESS

Visually check USB harness.

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).
- NO >> Replace USB harness.

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U1300 AV COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1300 AV COMM CIRCUIT

Description

INFOID:000000005519223

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

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1300 U1240	<ul style="list-style-type: none">• AV COMM CIRCUIT [U1300]• SWITCH CONN [U1240]	When either one of the following items are 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.	<ul style="list-style-type: none">• Multifunction switch power supply and ground circuits.• AV communication circuits between AV control unit and multifunction switch.

U1310 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

U1310 AV CONTROL UNIT

DTC Logic

INFOID:000000005519224

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit. If the malfunction occurs constantly. Refer to AV-824. "Removal and Installation" .

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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:000000005522945

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

1. CHECK FUSES

Check that the following AV control unit fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
AV control unit	19	Battery power	24
	7	Ignition switch ACC or ON	17
	52	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

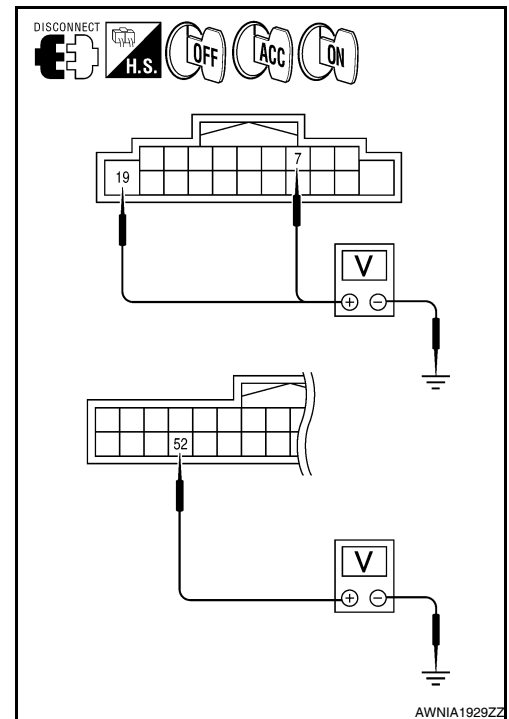
1. Disconnect AV control unit connectors M131 and M137.
2. Check voltage between the AV control unit connectors M131 and M137 and ground.

(+) Connector		Terminal	(-)	OFF	ACC	ON
Terminal	Terminal					
M131	7	7	Ground	0V	Battery voltage	Battery voltage
	19	19	Ground	Battery voltage	Battery voltage	Battery voltage
M137	52	52	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

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Check continuity between AV control unit harness connector M131 and ground.

(+)		(-)	Continuity
Connector	Terminal		
M131	20	Ground	Yes

Are the continuity results as specified?

- YES >> Inspection End.
 NO >> Repair AV control unit ground.

DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:000000005522946

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

1.CHECK FUSES

Check that the following display unit fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Display Unit	11	Battery power	24
	23	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

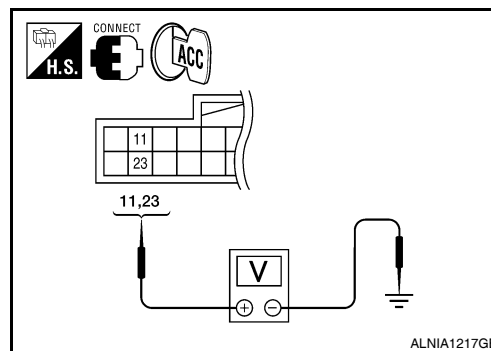
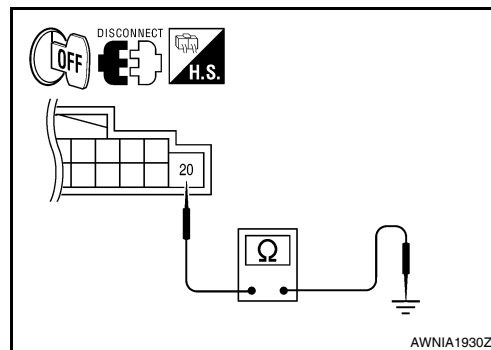
1. Turn ignition switch to ACC.
2. Check voltage between display unit harness connector M142 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal		OFF	ACC	ON
M142	11	Ground	Battery voltage	Battery voltage	Battery voltage
	23		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



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POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect display unit connector.
3. Check continuity between display unit harness connector M142 and ground.

(+)		(-)	Continuity
Connector	Terminal		
M142	12	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:000000005522947

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

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

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.

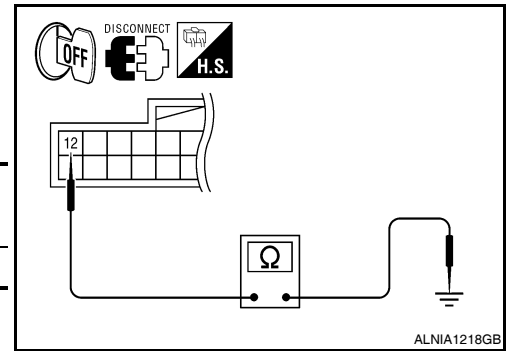
3.GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Check continuity between A/C and AV switch assembly harness connector M98 and ground.

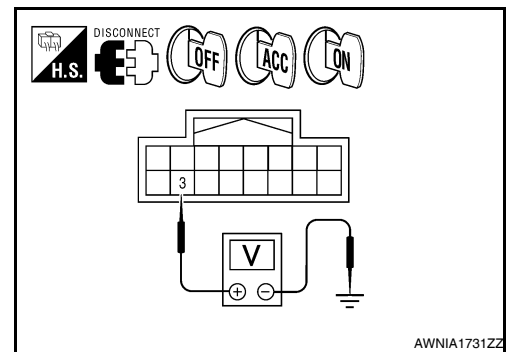
(+)		(-)	Continuity
Connector	Terminal		
M98	1	Ground	Yes

Are the continuity results as specified?

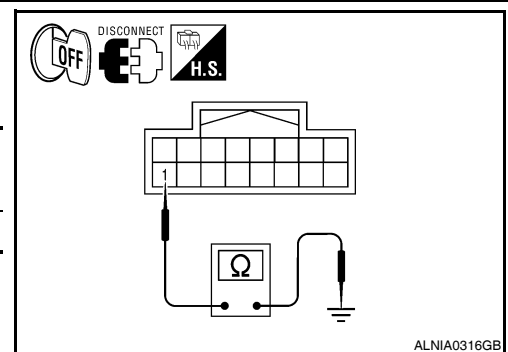
- YES >> Inspection End.
 NO >> Repair A/C and AV switch assembly ground.



ALNIA1218GB



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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

BOSE SPEAKER AMP

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:000000005522948

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

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?

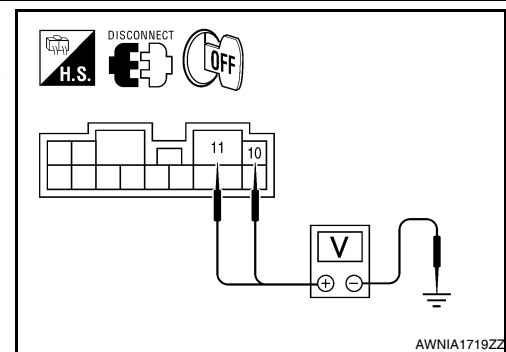
YES >> GO TO 2.

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?

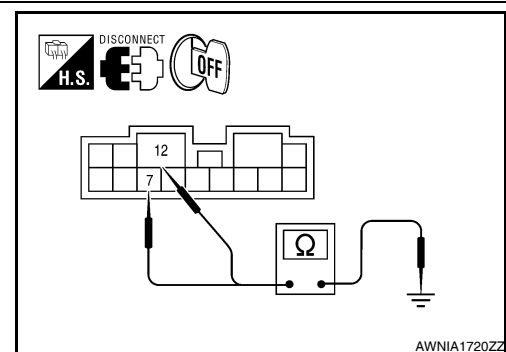
YES >> GO TO 3.

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.

REAR VIEW CAMERA

REAR VIEW CAMERA : Diagnosis Procedure

INFOID:000000005522950

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< COMPONENT DIAGNOSIS >

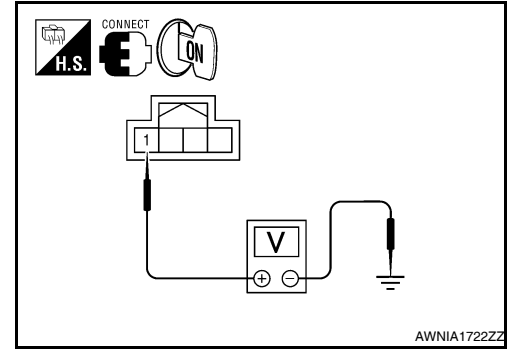
1. CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA SIDE)

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.



AWNIA172ZZ

2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect rear view camera and AV control unit connectors.
3. Check continuity between rear view camera harness connector T101 (A) terminal 1 and AV control unit harness connector M139 (B) terminal 68.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
T101	1	M139	68	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.

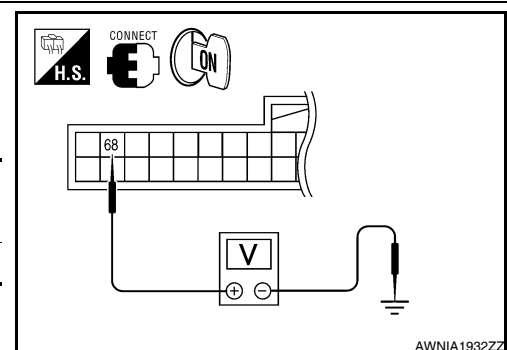
3. CHECK POWER SUPPLY CIRCUIT (AV CONTROL UNIT SIDE)

1. Connect rear view camera control unit harness connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit harness connector M139 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
M139	68	Ground	Reverse	6V

Is voltage reading approximately 6 volts?

- YES >> Inspection End.
NO >> Replace AV control unit. Refer to [AV-824. "Removal and Installation"](#).



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4. CHECK GROUND CIRCUIT

POWER SUPPLY AND GROUND CIRCUIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< COMPONENT DIAGNOSIS >

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.

REAR CONTROL SWITCH

REAR CONTROL SWITCH : Diagnosis Procedure

INFOID:000000005522951

Regarding Wiring Diagram information, refer to [AV-447, "Wiring Diagram"](#).

1.CHECK FUSE

Check that the rear control switch fuse is not blown.

Unit	Terminal	Signal name	Fuse No.
Rear control switch	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 control switch 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.

3.GROUND CIRCUIT CHECK

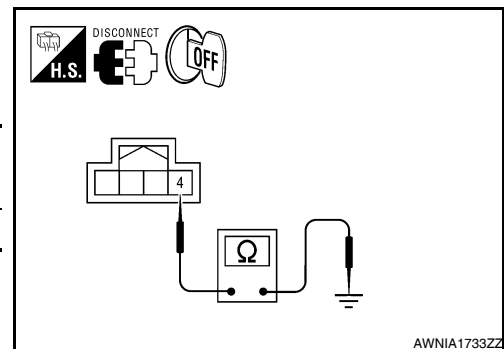
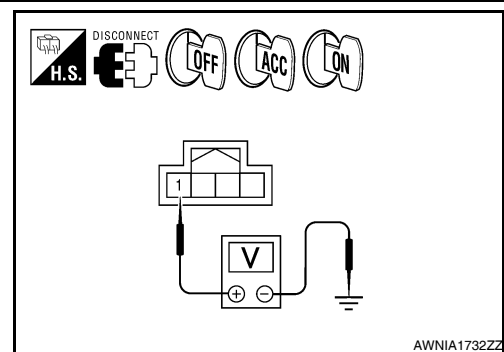
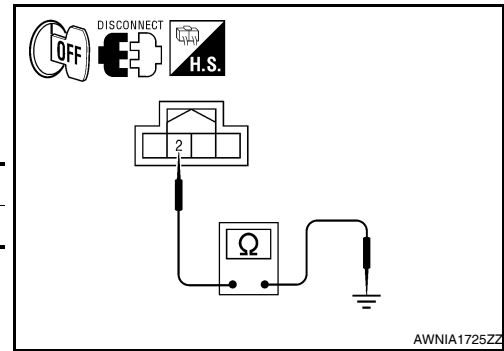
1. Turn ignition switch OFF.
2. Check continuity between rear control switch harness connector B402 and ground.

(+)		(-)	Continuity
Connector	Terminal		
B402	4	Ground	Yes

Are the continuity results as specified?

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

MICROPHONE



POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

MICROPHONE : Diagnosis Procedure

INFOID:000000005522952

Regarding Wiring Diagram information, refer to [AV-447. "Wiring Diagram"](#).

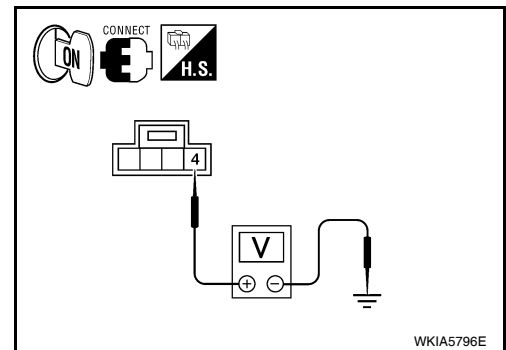
1.CHECK POWER SUPPLY CIRCUIT

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.

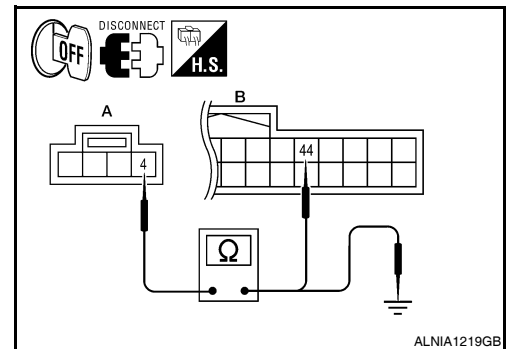


2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

- Turn ignition switch OFF.
- Disconnect microphone and AV control unit harness connectors.
- Check continuity between microphone harness connector R7 (A) terminal 4 and AV control unit harness connector M137 (B) terminal 44.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	4	M137	44	Yes

- 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-487. "Removal and Installation"](#).
NO >> Repair harness or connector.

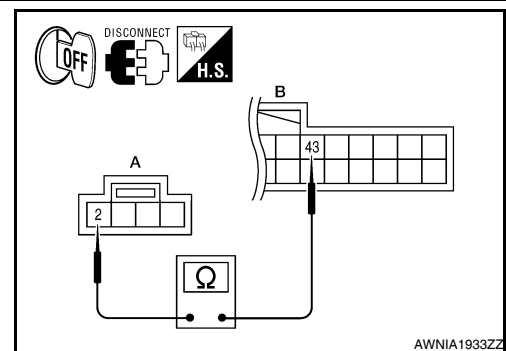
3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect microphone harness connector R7 and AV control unit harness connector M137.
- Check continuity between microphone harness connector R7 (A) terminal 2 and AV control unit harness connector M137 (B) terminal 43.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	2	M137	43	Yes

Does continuity exist?

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



RGB DIGITAL IMAGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

RGB DIGITAL IMAGE SIGNAL CIRCUIT

Description

INFOID:00000000519231

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

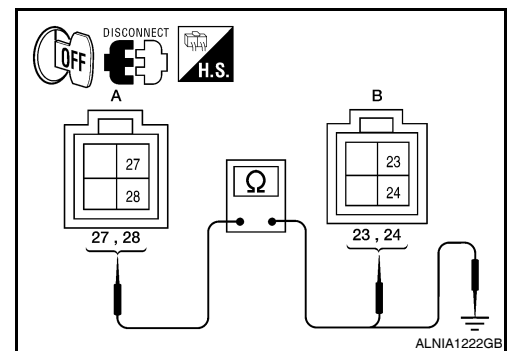
Diagnosis Procedure

INFOID:00000000519231

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

1. CHECK CONTINUITY RGB DIGITAL IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M151 and AV control unit connector M134.
3. Check continuity between display unit harness connector M151 (A) terminals 27, 28 and AV control unit harness connector M134 (B) terminals 23 and 24.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M151	27	M134	23	Yes
	28		24	

4. Check continuity between display unit harness connector M151 (A) terminals 27, 28 and ground.

A		—	Continuity
Connector	Terminal		
M151	27	Ground	No
	28		

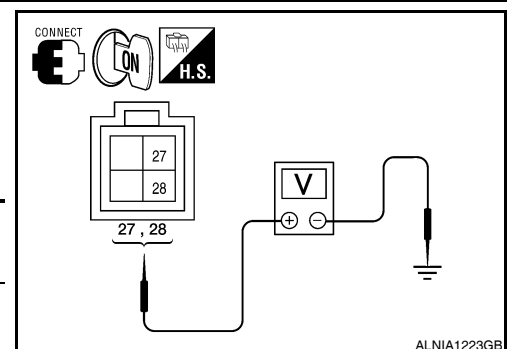
Are continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK RGB DIGITAL IMAGE SIGNAL

1. Connect display unit connector M151 and AV control unit connector M134.
2. Turn ignition switch ON.
3. Check voltage between display unit harness connector M151 terminals 27, 28 and ground.



(+)		(-)	Condition	Voltage (Approx.)
Connector	Terminal			
M151	27	Ground	Not connected connector	1.3 V
	28			

Are voltage readings as specified?

YES >> Replace display unit. Refer to [AV-827, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

COMPOSITE IMAGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

COMPOSITE IMAGE SIGNAL CIRCUIT

Description

INFOID:000000005519232

AV control unit transmits the playback DVD image signal and AUX image signal to the display unit.

Diagnosis Procedure

INFOID:000000005519233

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

1. CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M137 and display unit connector M142.
3. Check continuity between AV control unit connector M137 (A) terminal 40 and display unit connector M142 (B) terminal 18.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M137	40	M142	18	Yes

4. Check continuity between AV control unit connector M137 (A) terminal 40 and ground.

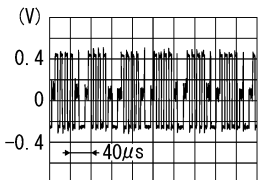
A		—	Continuity
Connector	Terminal		
M137	40	Ground	No

Are continuity results as specified?

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

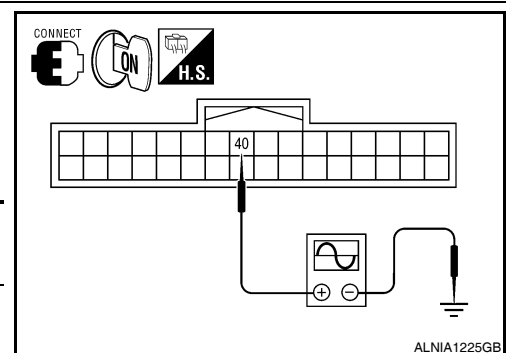
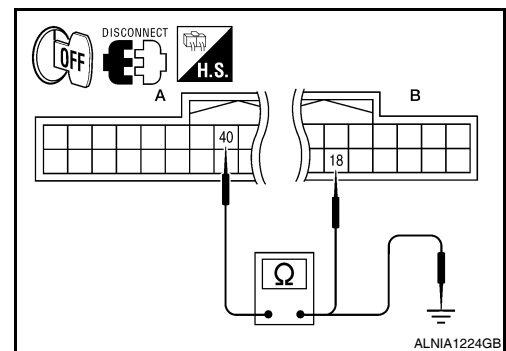
2. CHECK AUX COMPOSITE SIGNAL

1. Connect AV control unit connector M137 and display unit connector M142.
2. Turn ignition switch ON.
3. Check signal between AV control unit harness connector M137 terminal 40 and ground.

(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M137	40	Ground	At DVD image is displayed	 <p>SKIB2237J</p>

Are voltage readings as specified?

- YES >> Replace display unit. Refer to [AV-827, "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).



AUX IMAGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

AUX IMAGE SIGNAL CIRCUIT

Description

INFOID:00000000519234

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

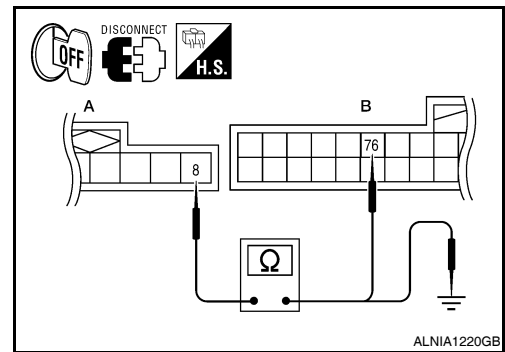
Diagnosis Procedure

INFOID:00000000519235

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

1. CHECK CONTINUITY AUX IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect auxiliary input jack connector M209 and AV control unit connector M139.
3. Check continuity between auxiliary input jack harness connector M209 (A) terminal 8 and AV control unit harness connector M139 (B) terminal 76.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M209	8	M139	76	Yes

4. Check continuity between auxiliary input jack harness connector M209 (A) terminal 8 and ground.

A		—	Continuity
Connector	Terminal		
M209	8	Ground	No

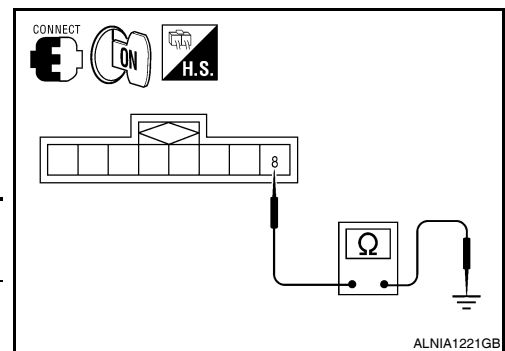
Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK AUX IMAGE SIGNAL

1. Connect auxiliary input jack connector M209 and AV control unit connector M139.
2. Turn ignition switch ON.
3. Check signal between auxiliary input jack connector M209 terminal 8 and ground.



(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M209	8	Ground	Receive audio signal	<p>SKIB2236J</p>

Is the inspection result normal?

YES >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

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

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DISK EJECT SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

DISK EJECT SIGNAL CIRCUIT

Description

INFOID:000000005519236

The eject signal is output to AV control unit when the eject switch of A/C and AV switch assembly is pressed.

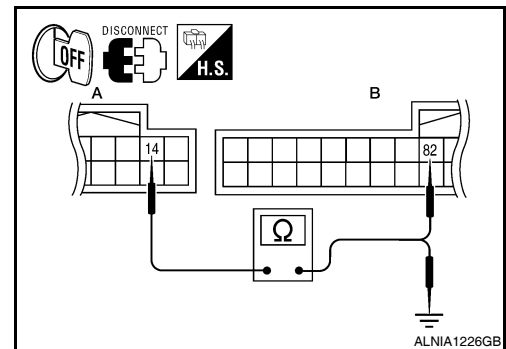
Diagnosis Procedure

INFOID:000000005519237

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

1. CHECK CONTINUITY DISK EJECT SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect A/C and AV switch assembly connector M98 and AV control unit connector M139.
3. Check continuity between A/C and AV switch assembly connector M98 (A) terminal 14 and AV control unit harness connector M139 (B) terminal 82.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M98	14	M139	82	Yes

4. Check continuity between A/C and AV switch assembly connector M98 (A) terminal 14 and ground.

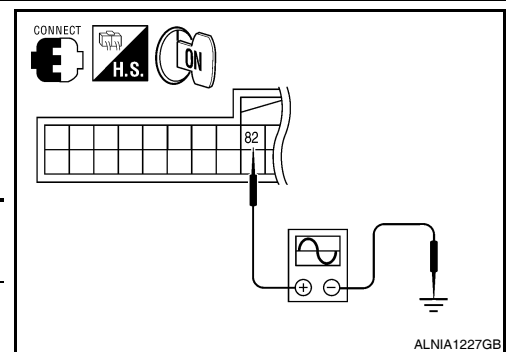
A		—	Continuity
Connector	Terminal		
M98	14	Ground	No

Are continuity results as specified?

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

2. CHECK AV CONTROL UNIT VOLTAGE

1. Connect A/C and AV switch assembly connector M98 and AV control unit connector M139.
2. Turn ignition switch ON.
3. Check voltage between AV control unit harness connector M139 terminal 82 and ground.



(+)		(-)	Condition	Voltage (Approx.)
Connector	Terminal			
M139	82	Ground	Pressing the eject switch	0 V
			Except for above	5.0 V

Are voltage readings as specified?

- YES >> Replace A/C and AV switch assembly. Refer to [AV-826, "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).

MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000005522909

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

Diagnosis Procedure

INFOID:000000005522910

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

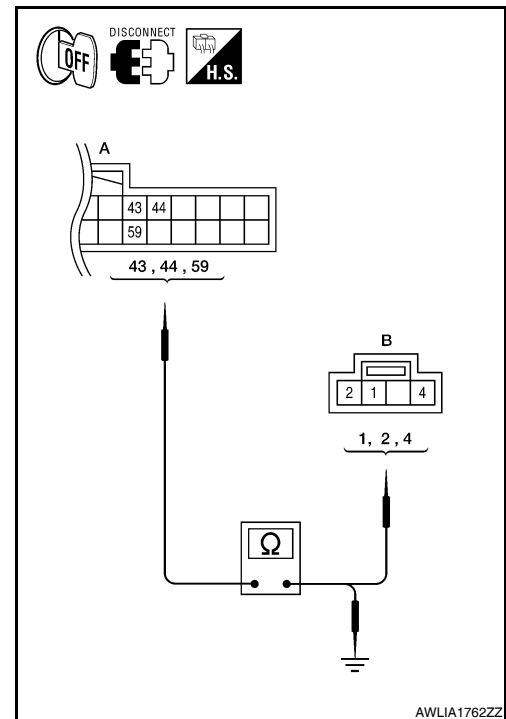
1. CHECK HARNESS BETWEEN AV CONTROL UNIT AND MICROPHONE

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector and microphone connector.
3. Check continuity between AV control unit harness connector M137 (A) and microphone harness connector R7 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M137	59	R7	1	Yes
	43		2	
	44		4	

4. Check continuity between AV control unit harness connector M137 (A) and ground.

A		—	Continuity
Connector	Terminal		
M137	44	Ground	No
	43		
	59		



Are the continuity test results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK MICROPHONE POWER SUPPLY

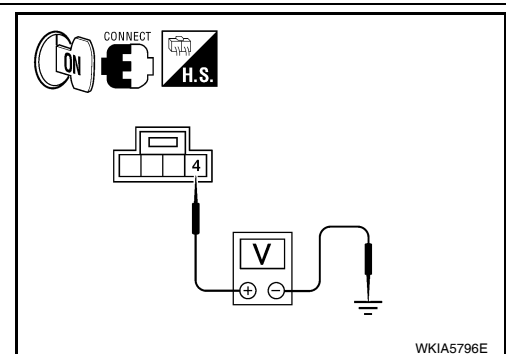
1. Connect AV control unit connector and microphone connector.
2. Turn ignition switch ON.
3. Check voltage between microphone harness connector R7 terminal 4 and ground.

(+)		(-)	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-824, "Removal and Installation"](#).



3. CHECK MICROPHONE SIGNAL

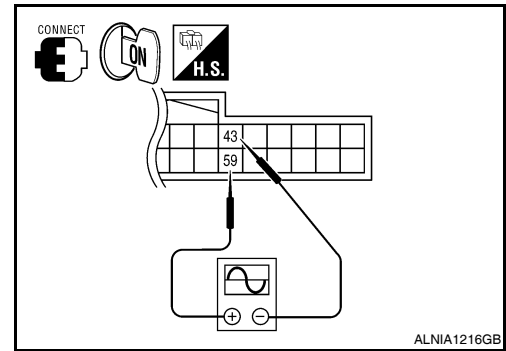
MICROPHONE SIGNAL CIRCUIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< COMPONENT DIAGNOSIS >

Check signal between AV control unit harness connector M137 terminals 43 and 59.

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
M137	59	43	<p>While speaking into MIC</p> <p>PKIB5037J</p>



Are voltage readings as specified?

- YES >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-845, "Removal and Installation"](#).

AMP ON SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

AMP ON SIGNAL CIRCUIT

Description

INFOID:000000005519135

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:000000005519136

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

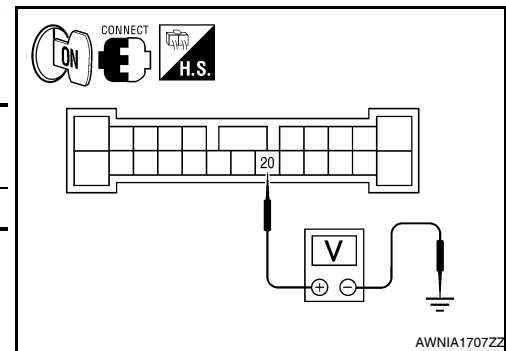
1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

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.



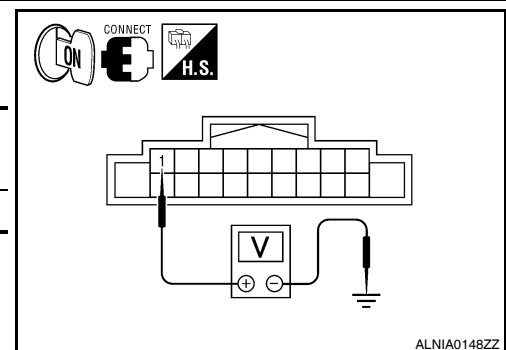
2. CHECK AMP ON SIGNAL (AV CONTROL UNIT)

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 [AV-824, "Removal and Installation"](#).



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AV

FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

FRONT DOOR SPEAKER

Description

INFOID:000000005519125

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:000000005519126

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

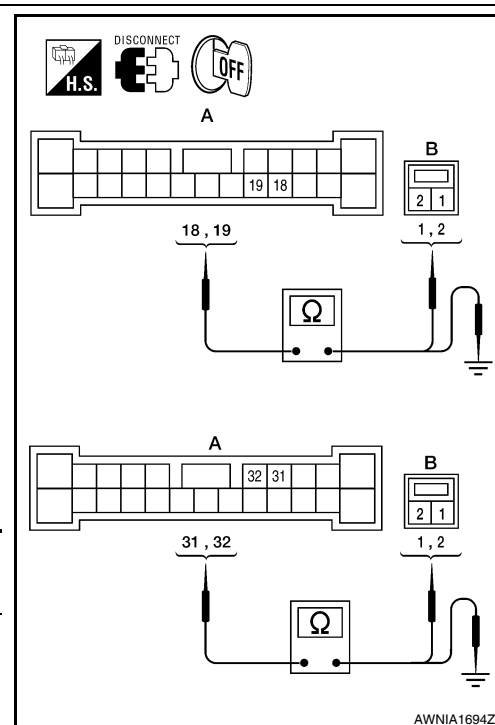
1. HARNESS CHECK

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		-	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 W/ NAVI W/RR CTL]

< 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-833. "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.

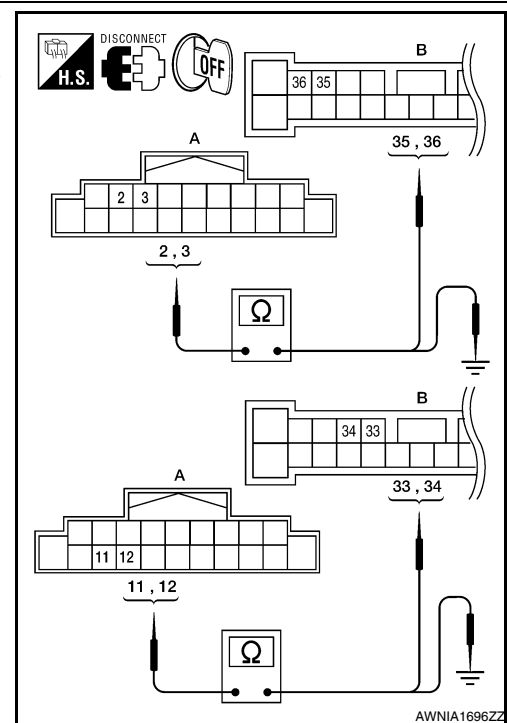
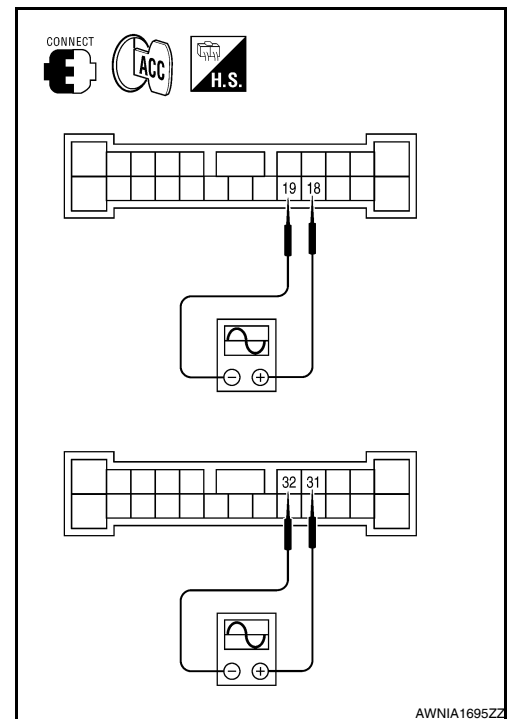
A		—	Continuity
Connector	Terminal		
M131	2	Ground	No
	3		
	11		
	12		

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

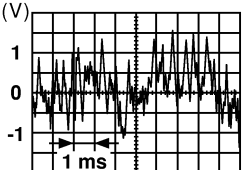


FRONT DOOR SPEAKER

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< COMPONENT DIAGNOSIS >

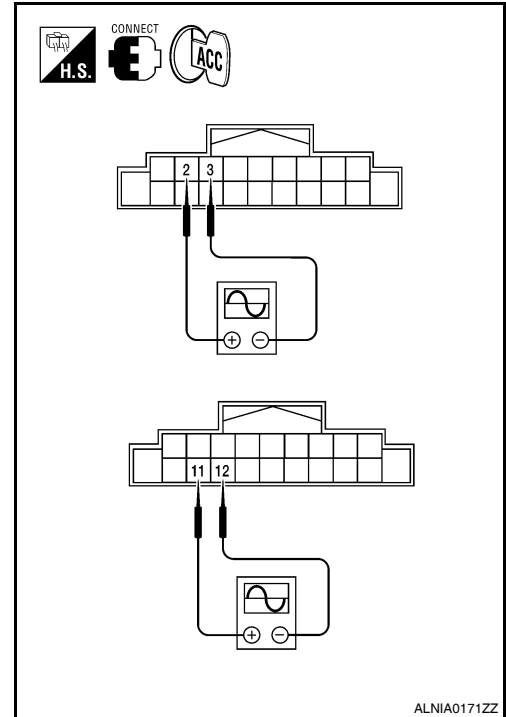
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M131	2	3	Receive audio signal	
	11	12		

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Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-836, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).



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TWEETER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

TWEETER

Description

INFOID:000000005519127

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:000000005519128

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

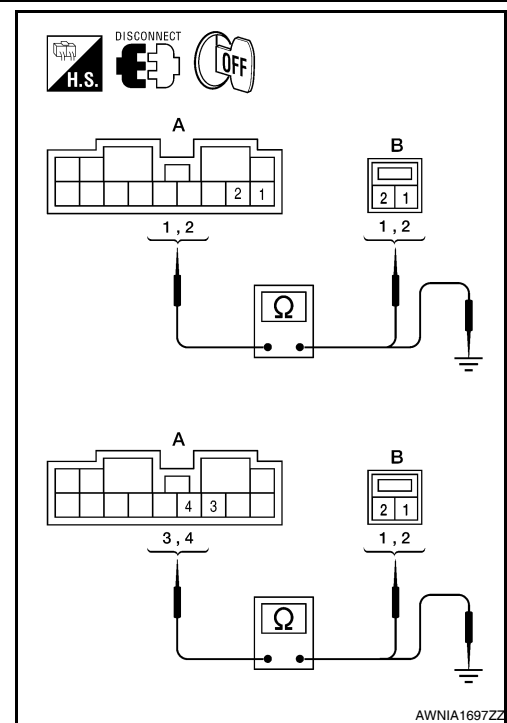
1. HARNESS CHECK

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 W/ NAVI W/RR CTL]

< 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-164, "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.

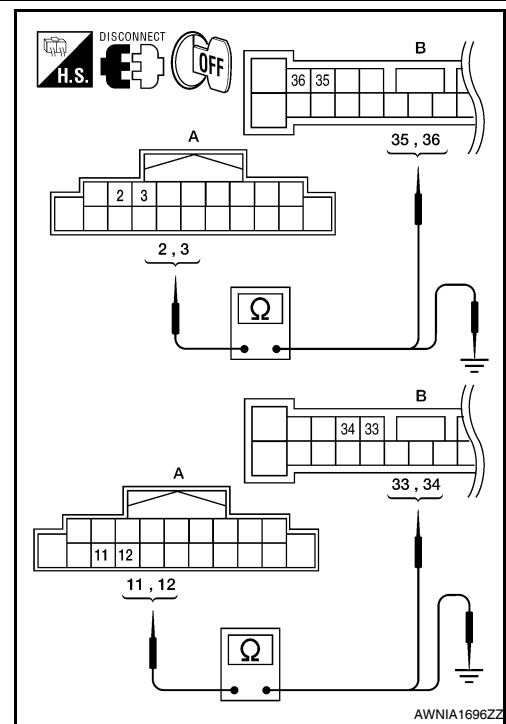
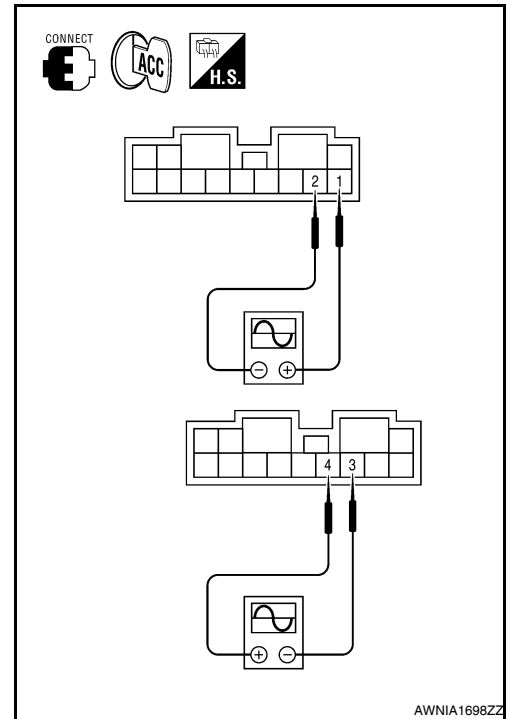
A		—	Continuity
Connector	Terminal		
M131	2	Ground	No
	3		
	11		
	12		

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

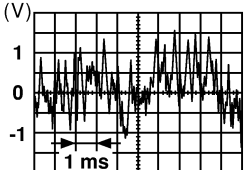


TWEETER

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< COMPONENT DIAGNOSIS >

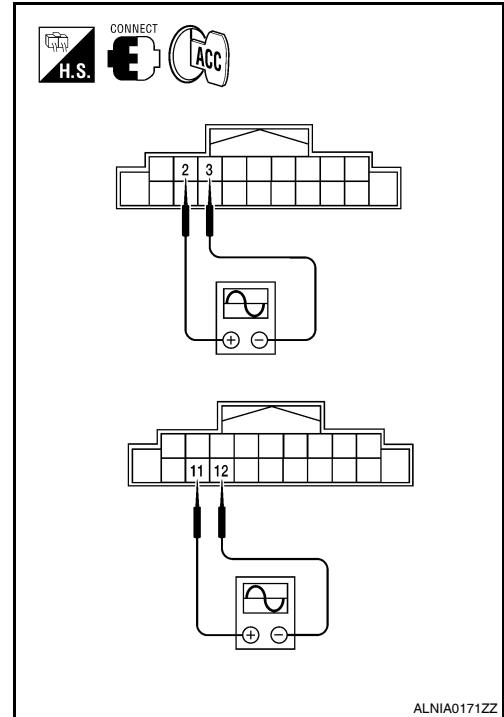
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push POWER switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

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-169, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).



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AV

CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

CENTER SPEAKER

Description

INFOID:000000005519129

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

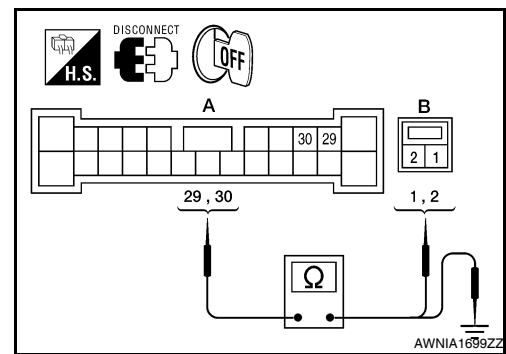
INFOID:000000005519130

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

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.

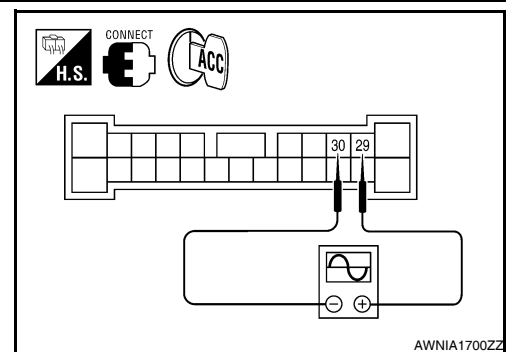
- NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

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	

SKIA0177E



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Is the audio signal voltage reading as specified?

CENTER SPEAKER

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< COMPONENT DIAGNOSIS >

- YES >> Replace center speaker. Refer to [AV-165. "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.

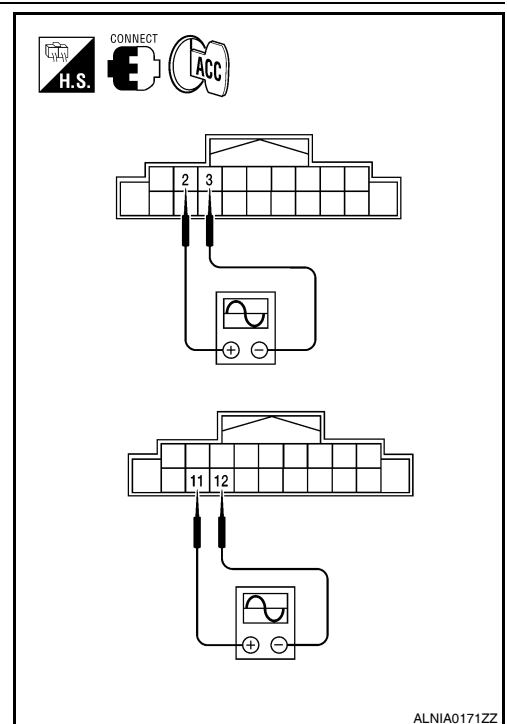
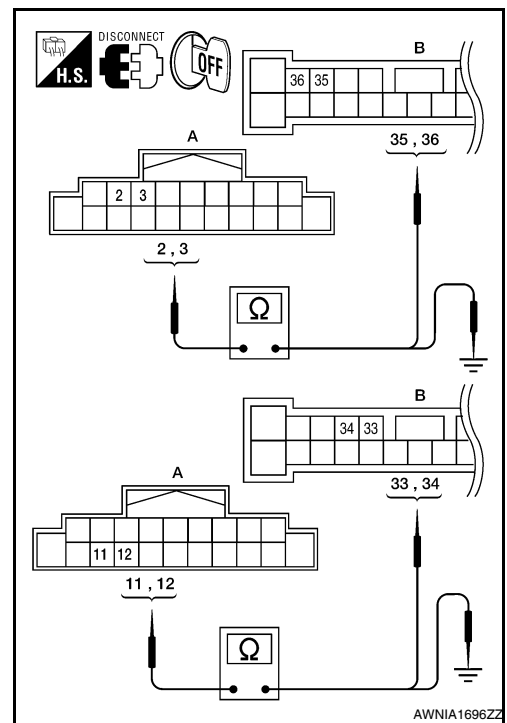
4. CENTER SPEAKER SIGNAL CHECK

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-169. "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-824. "Removal and Installation"](#).



REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

REAR DOOR SPEAKER

Description

INFOID:000000005519131

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:000000005519132

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

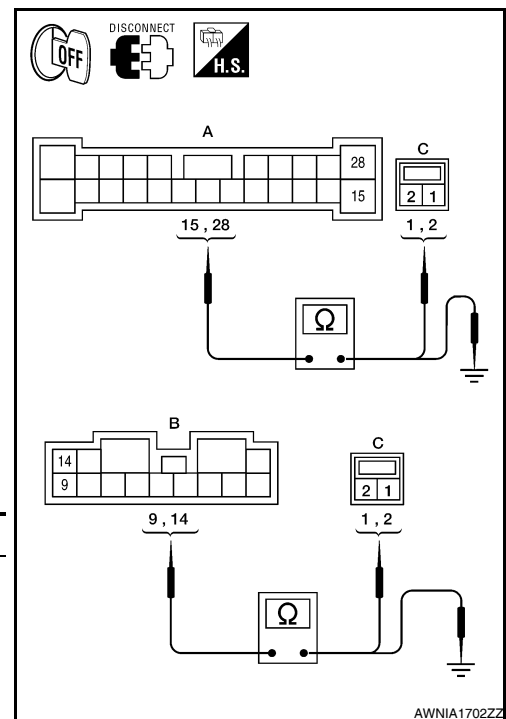
1. HARNESS CHECK

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		



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

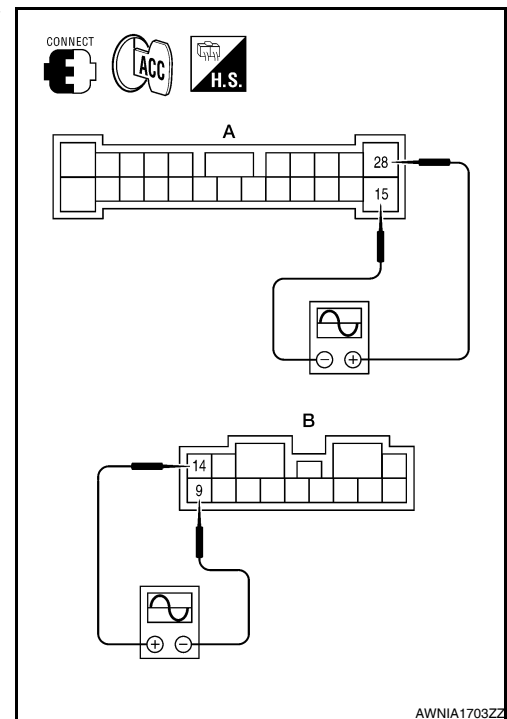
[BOSE W/ COLOR W/ NAVI W/RR CTL]

< 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		

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Are audio signal voltage readings as specified?

- YES >> Replace suspect speaker. Refer to [AV-834. "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	

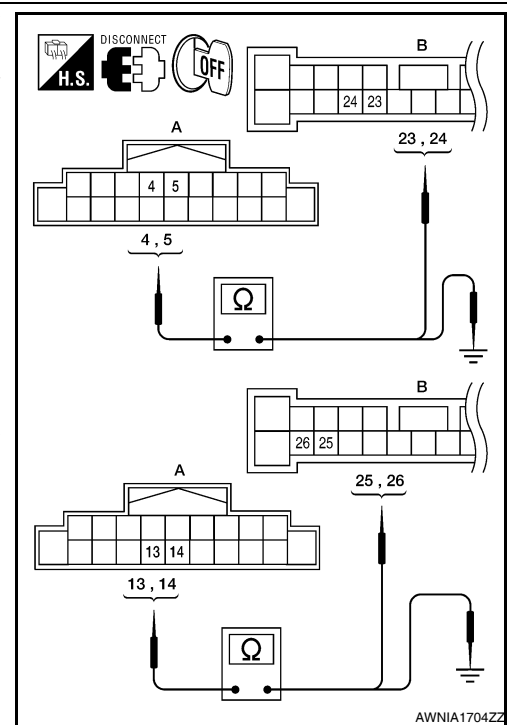
3. Check continuity between AV control unit harness connector M131 (A) and ground.

A		—	Continuity
Connector	Terminal		
M131	4	Ground	No
	5		
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	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

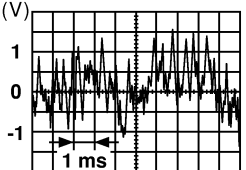


REAR DOOR SPEAKER

[BOSE W/ COLOR W/ NAVI W/RR CTL]

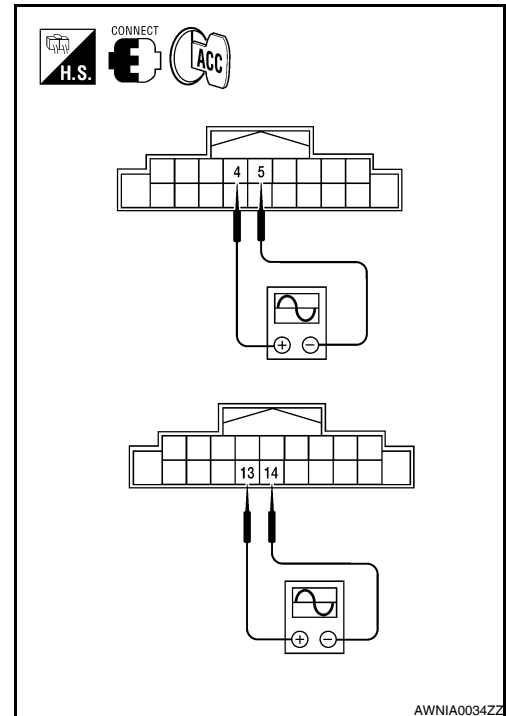
< COMPONENT DIAGNOSIS >

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 style="text-align: right; font-size: small;">SKIA0177E</p>
	13	14		

Is the audio signal voltage reading as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-836, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).



SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

SUBWOOFER

Description

INFOID:000000005519133

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:000000005519134

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

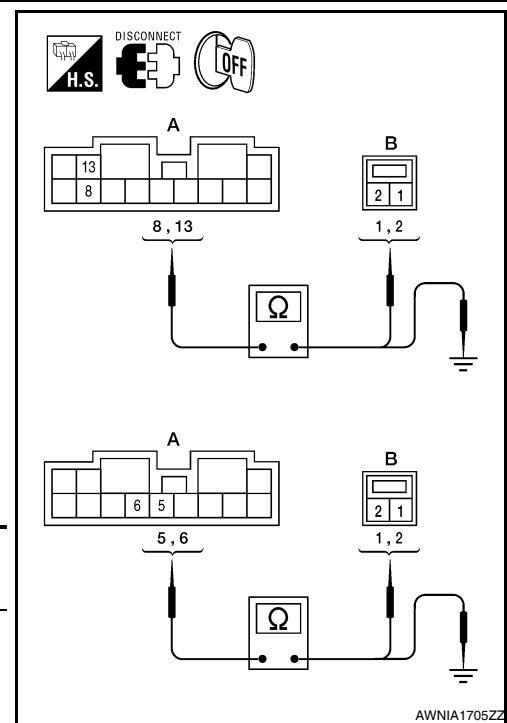
1. HARNESS CHECK

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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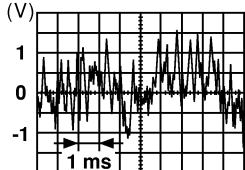
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SUBWOOFER

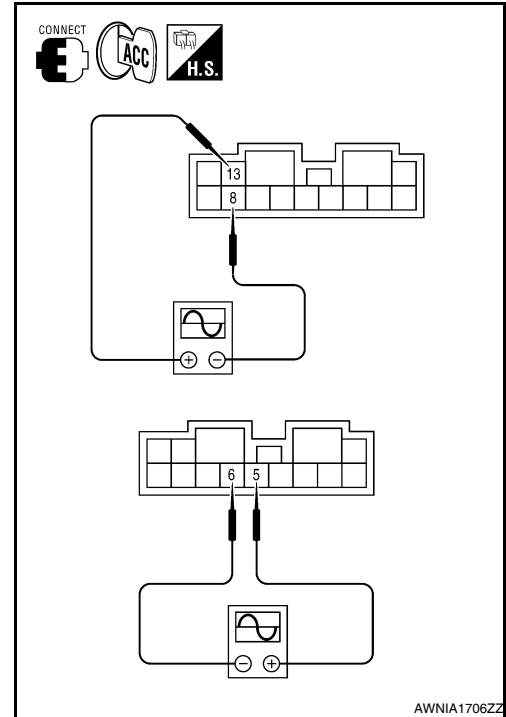
< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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-168](#), "[Removal and Installation](#)".

NO >> GO TO 3.

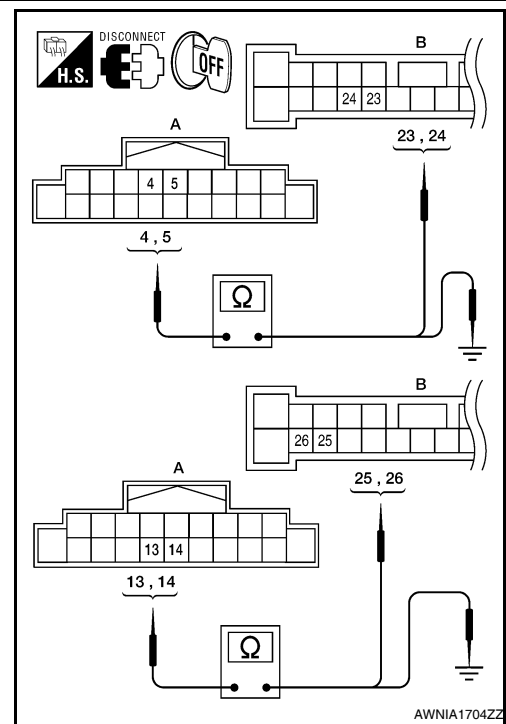
3. HARNESS CHECK

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.

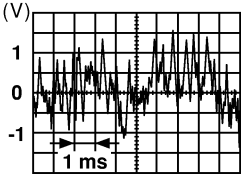
4. REAR SUBWOOFER SIGNAL CHECK

SUBWOOFER

[BOSE W/ COLOR W/ NAVI W/RR CTL]

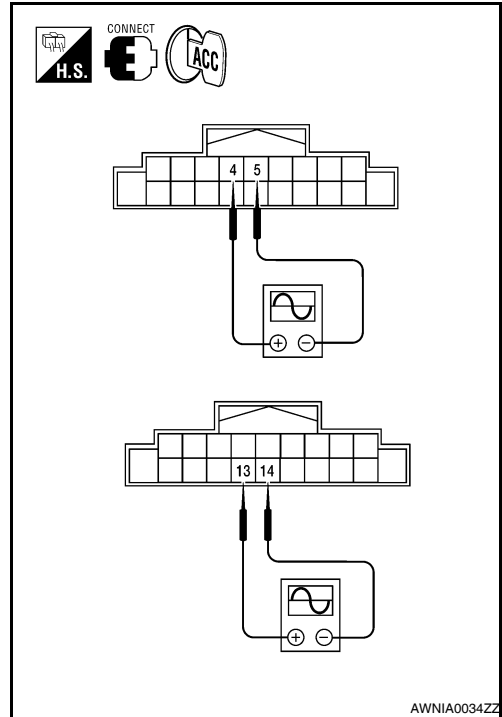
< COMPONENT DIAGNOSIS >

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	 <small>SKIA0177E</small>
	13	14		

Is the audio signal voltage as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-169, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-824, "Removal and Installation"](#).



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STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

STEERING SWITCH

Description

INFOID:000000005519137

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

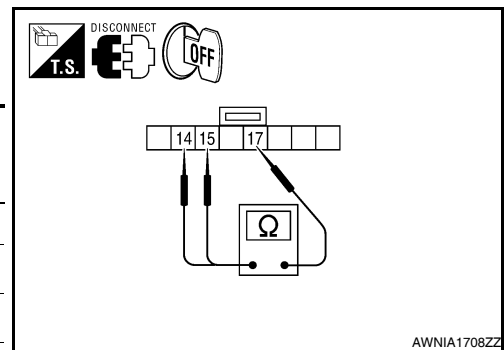
INFOID:000000005519138

Regarding Wiring Diagram information, refer to [AV-782, "Wiring Diagram"](#).

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



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Do the steering wheel audio control switches check OK?

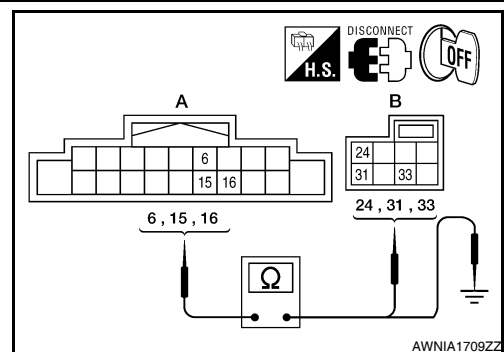
YES >> GO TO 2.

NO >> Replace steering wheel audio control switch. Refer to [AV-839, "Removal and Installation"](#).

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	



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3. Check continuity between AV switch connector M131 (A) and ground.

STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

A		—	Continuity
Connector	Terminal		
M131	6	Ground	No
	15		
	16		

Are the continuity results as specified?

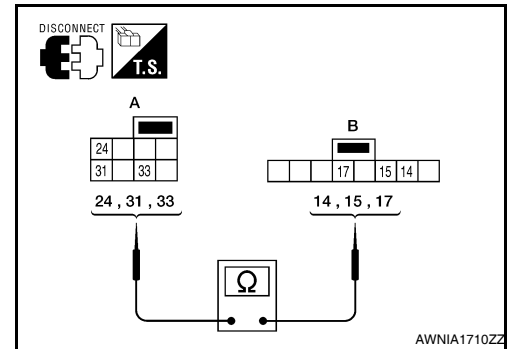
YES >> GO TO 3.

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"](#).

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[BOSE W/ COLOR W/ NAVI W/RR CTL]

ECU DIAGNOSIS

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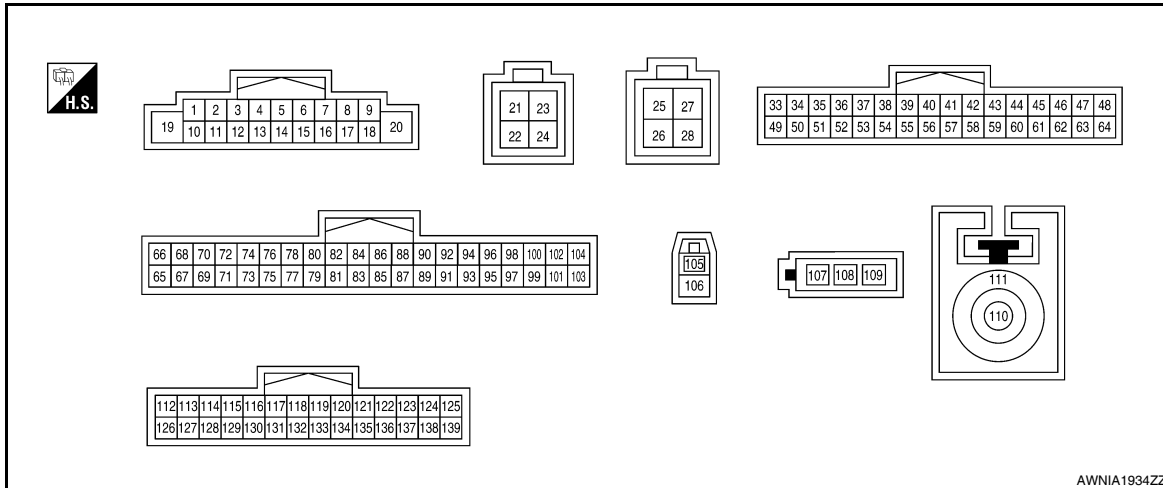
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VALUES ON THE DIAGNOSIS TOOL

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



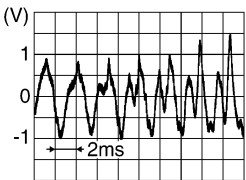
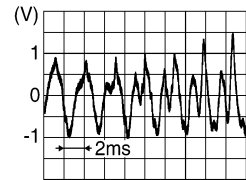
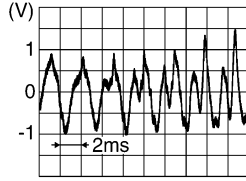
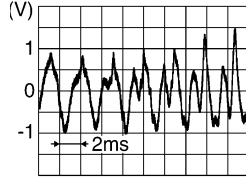
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PHYSICAL VALUES

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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	 <small>SKIB3609E</small>
4 (W/R)	5 (W/L)	Pre-amp. audio signal rear LH	Output	Ignition switch ON	Audio output	 <small>SKIB3609E</small>
6 (W/G)	15 (L/B)	Steering switch signal A	Input	Ignition switch OFF	Depress ENTER switch.	2023Ω
					Depress \swarrow switch.	723Ω
					Depress ∇ switch.	321Ω
					Depress \triangle 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	 <small>SKIB3609E</small>
13 (V)	14 (LG)	Audio signal rear RH	Output	Ignition switch ON	Audio output	 <small>SKIB3609E</small>
15 (L/B)	Ground	Steering switch signal ground	—	Ignition switch ON	—	0V

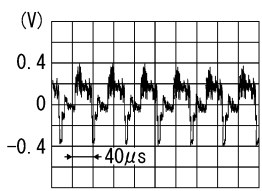
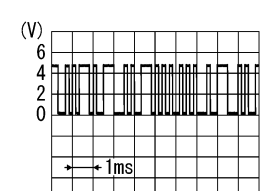
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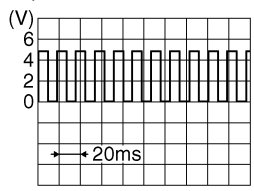
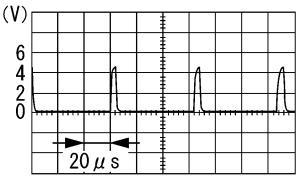
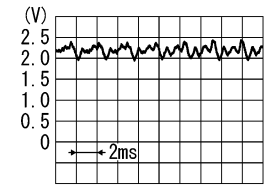
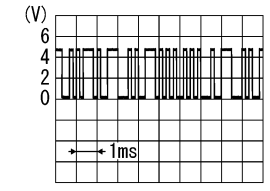
[BOSE W/ COLOR W/ NAVI W/RR CTL]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
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
23 (R)	Ground	RGB digital image signal (+)	Output	Ignition switch ON	Not connected connector.	1.3 V
24 (W)	Ground	RGB digital image signal (-)	Output	Ignition switch ON	Not connected connector.	1.3 V
25 (B)	—	USB ground	—	—	—	—
26 (W)	—	USB D-	—	—	—	—
27 (R)	—	V BUS signal	—	—	—	—
28 (G)	—	USB D+	—	—	—	—
37 (G/R)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake is ON.	5.0 V
					Parking brake is OFF.	0 V
39 (W)	Ground	Composite image ground	—	Ignition switch ON	—	0 V
40 (R)	Ground	Composite image signal	Output	Ignition switch ON	At DVD image is displayed.	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
43	—	Shield	—	—	—	—
44 (R)	Ground	Microphone VCC	Output	Ignition switch ON	—	5.0 V
45 (Y)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	 <p style="text-align: right; font-size: small;">PKIB5039J</p>
46 (P)	—	CAN-L	Input/ Output	—	—	—

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
47 (P)	—	AV communication signal (L)	Input/ Output	—	—	—
48 (P)	—	AV communication signal (L)	Input/ Output	—	—	—
51 (R/L)	Ground	Illumination signal	Input	Ignition switch OFF	Lighting switch is OFF.	0 V
				Ignition switch ON	Lighting switch is ON.	12.0 V
52 (G)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
53 (P/B)	Ground	Reverse signal	Input	Ignition switch ON	R position	12.0 V
				Ignition switch ON	Other than R position	0 V
54 (V/W)	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 12.0 V due to specifications (connected units).</p>  <p style="text-align: right; font-size: small;">SKIA6649J</p>
55	—	Shield	—	—	—	—
56 (B)	Ground	Composite synchronizing signal	Output	Ignition switch ON	—	 <p style="text-align: right; font-size: small;">SKIA0187E</p>
59 (L)	Ground	Microphone signal	Input	Ignition switch ON	Give a voice	 <p style="text-align: right; font-size: small;">PKIB5037J</p>
60	—	Shield	—	—	—	—
61 (BR)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	 <p style="text-align: right; font-size: small;">PKIB5039J</p>
62 (L)	—	CAN-H	Input/ Output	—	—	—
63 (L)	—	AV communication signal (H)	Input/ Output	—	—	—

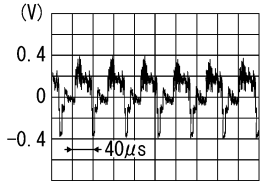
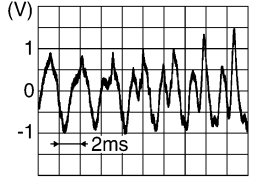
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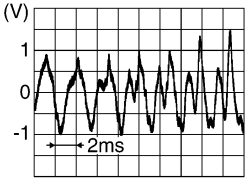
[BOSE W/ COLOR W/ NAVI W/RR CTL]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
64 (L)	—	AV communication signal (H)	Input/ Output	—	—	—
67 (W)	Ground	Rear view camera ground	—	Ignition switch ON	—	0 V
68 (R)	Ground	Camera ON signal	Output	Ignition switch ON	R position.	6.0 V
					Other than R position.	0 V
75 (V)	Ground	AUX image signal ground	—	Ignition switch ON	—	0 V
76 (V)	75 (LG)	AUX image signal	Input	Ignition switch ON	At AUX image is displayed.	 <small>SKIB2251J</small>
77	—	Shield	—	—	—	—
81 (BR)	Ground	Switch ground	—	Ignition switch ON	—	0 V
82 (SB)	81 (BR)	Disk eject signal	Input	Ignition switch ON	Pressing the eject switch.	0 V
					Except for above.	5.0 V
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	—	—	—	—
115 (W)	130 (R)	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is select- ed.	 <small>SKIB3609E</small>

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
128	—	Shield	—	—	—	—
129 (B)	130 (R)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is select- ed.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

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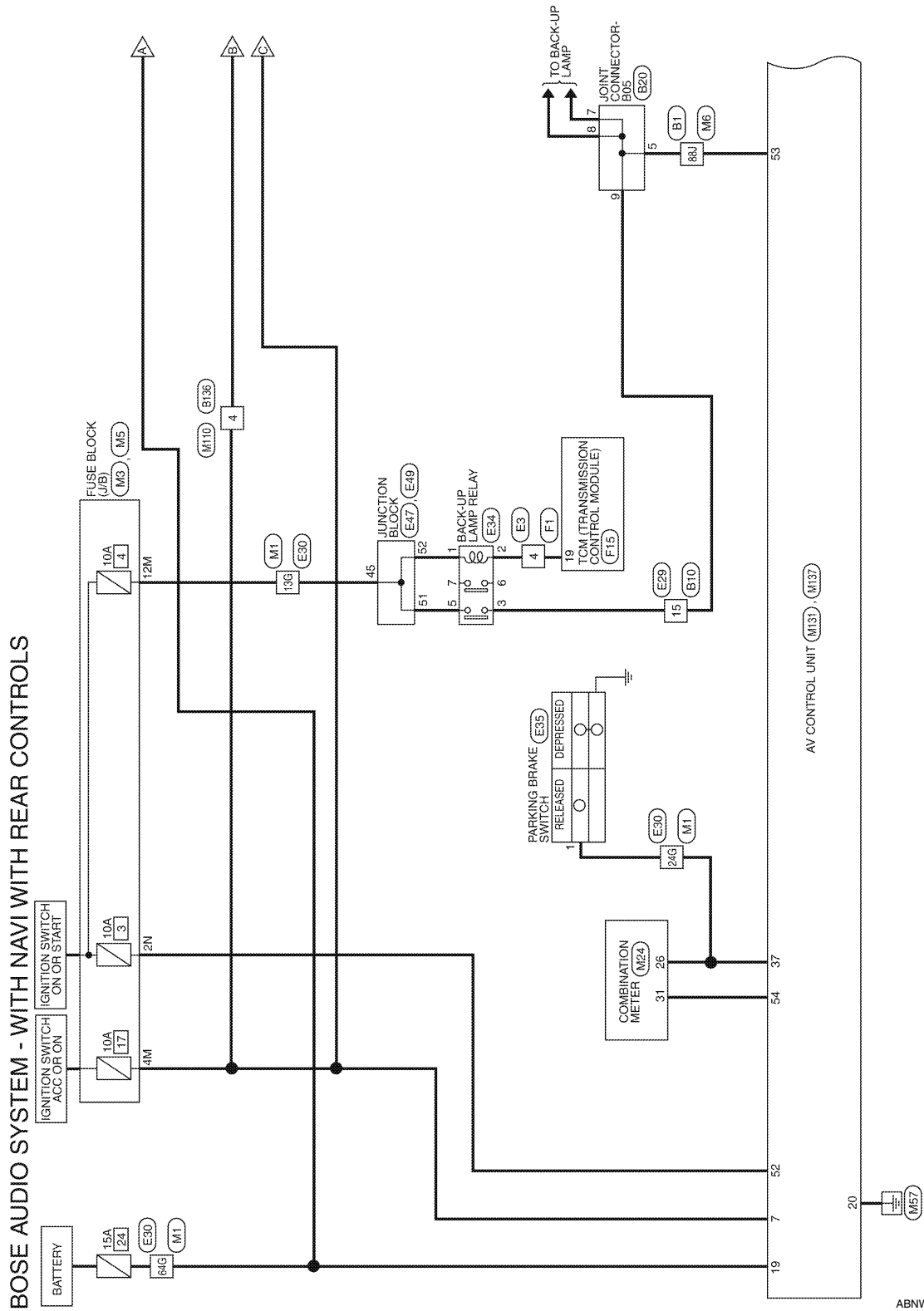
AV CONTROL UNIT

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[BOSE W/ COLOR W/ NAVI W/RR CTL]

Wiring Diagram

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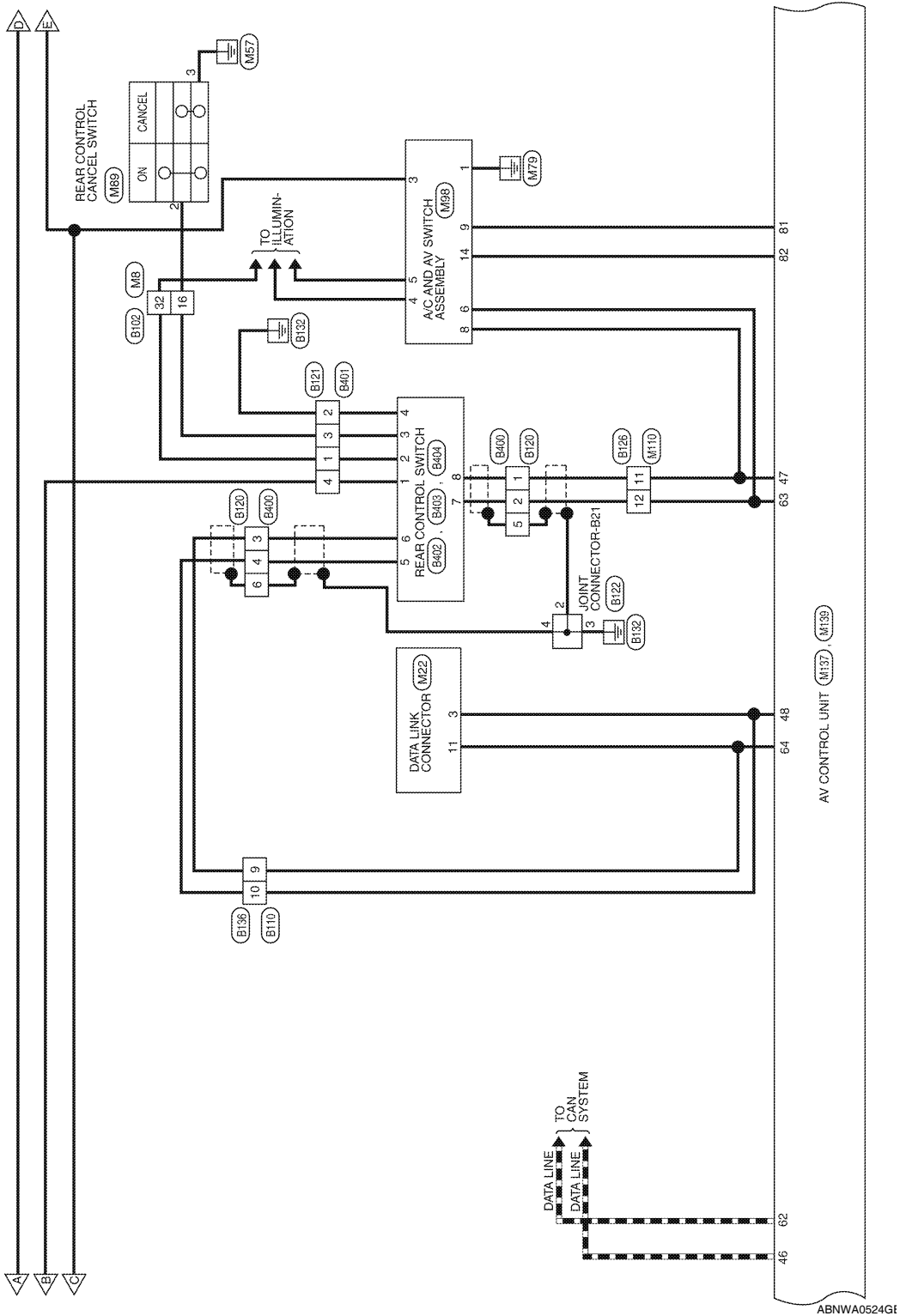


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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]



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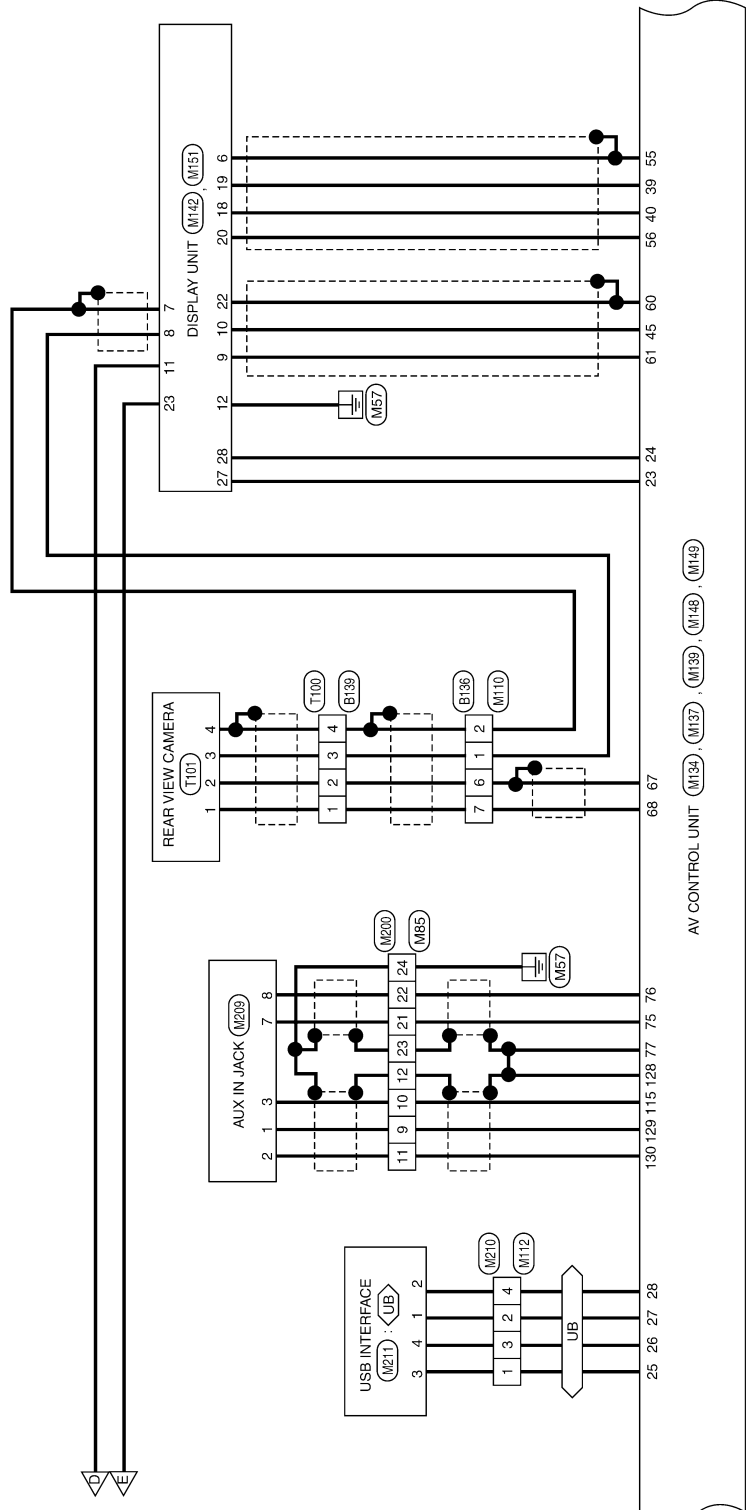
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AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< ECU DIAGNOSIS >

UB : WITH USB INTERFACE

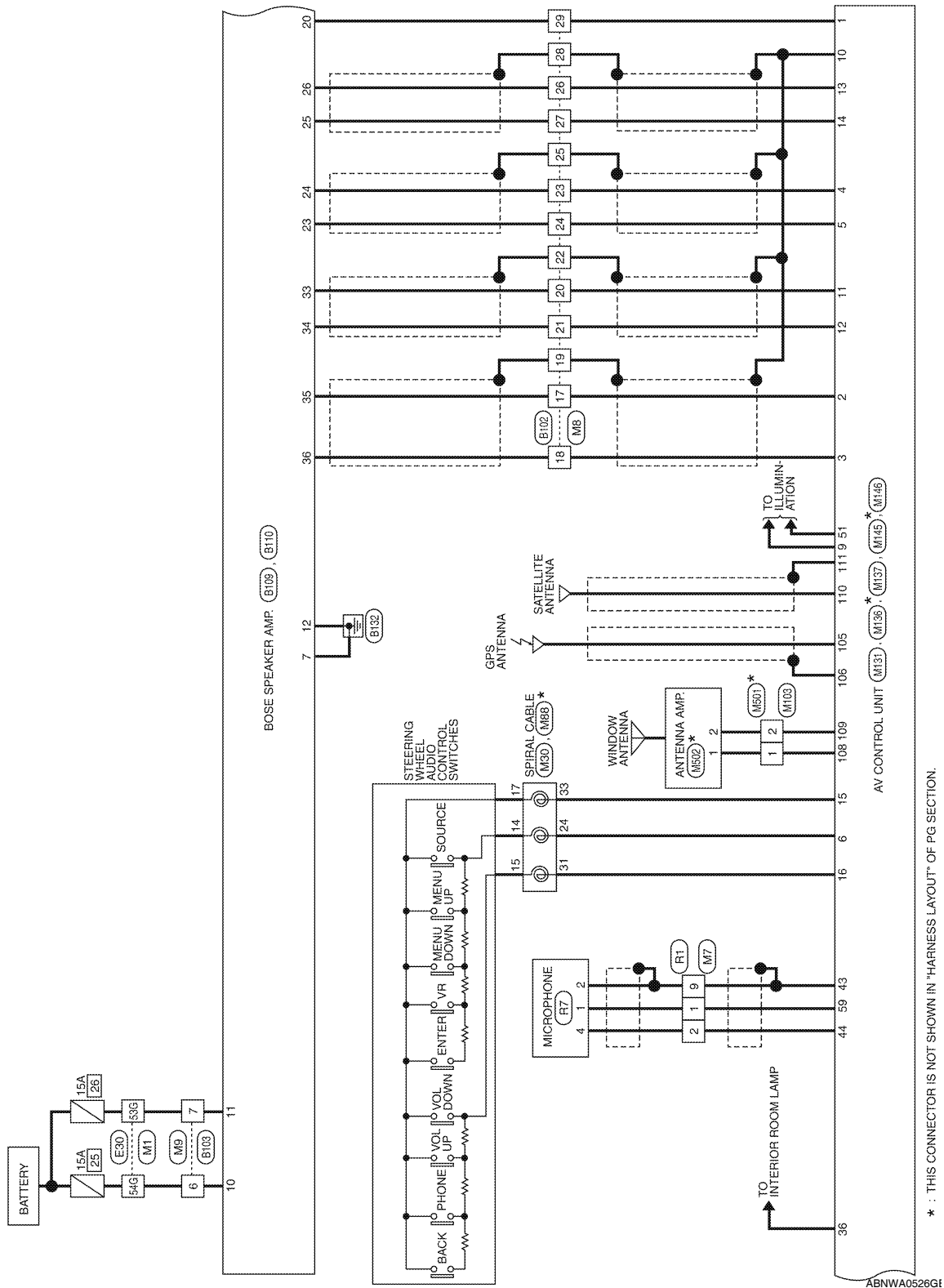


ABNWA0525G1

AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< ECU DIAGNOSIS >



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

ABNWA0526G1

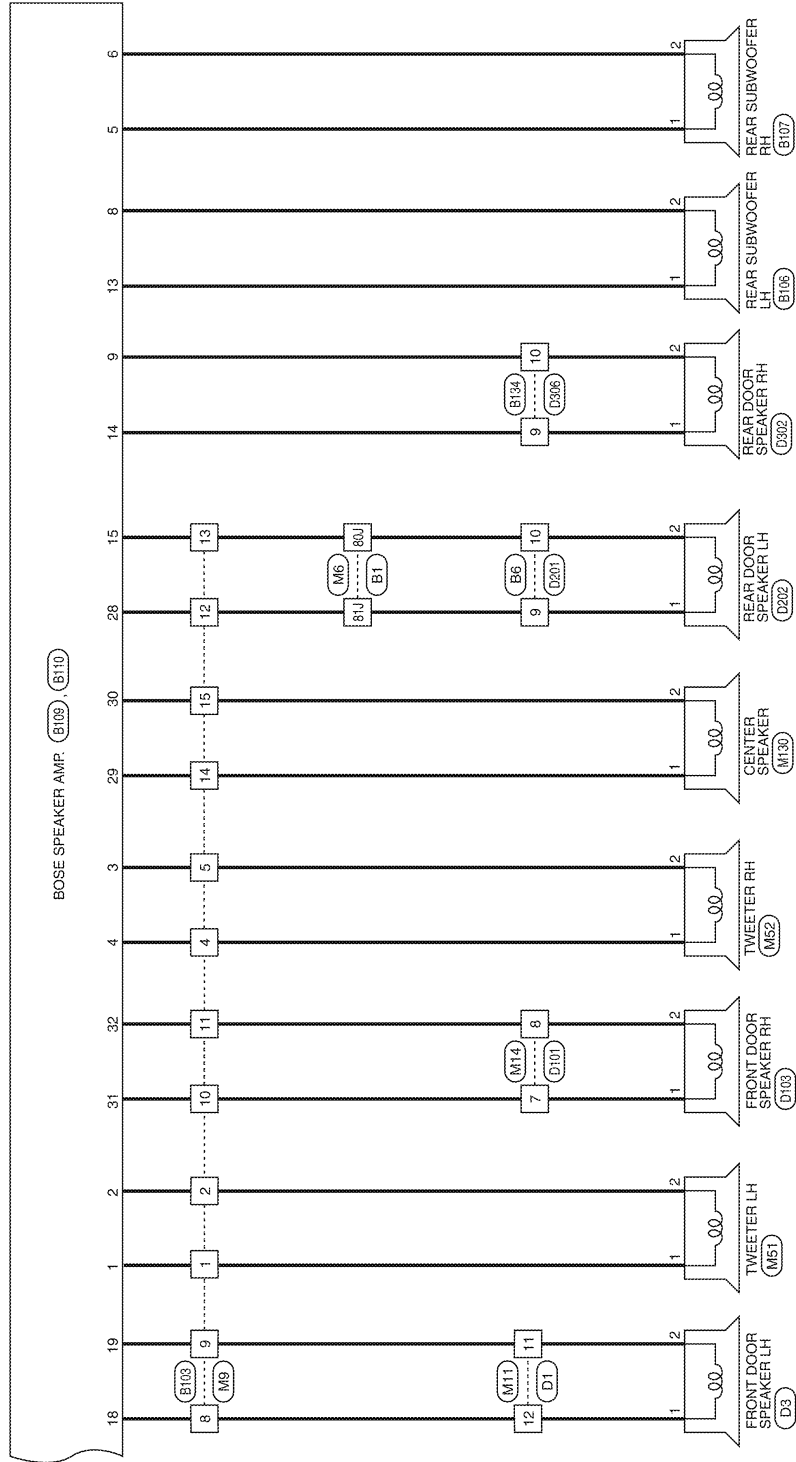
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AV

AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< ECU DIAGNOSIS >



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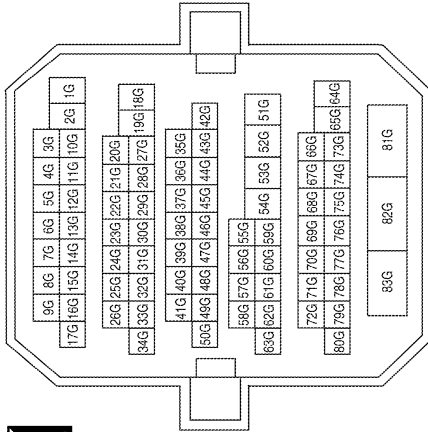
AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< ECU DIAGNOSIS >

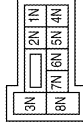
BOSE AUDIO SYSTEM CONNECTORS - WITH NAVI WITH REAR CONTROLS

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



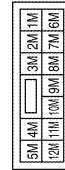
Terminal No.	Color of Wire	Signal Name
13G	O	--
24G	G/R	--
53G	B/R	--
54G	BR	--
64G	Y/R	--

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	--

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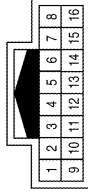
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

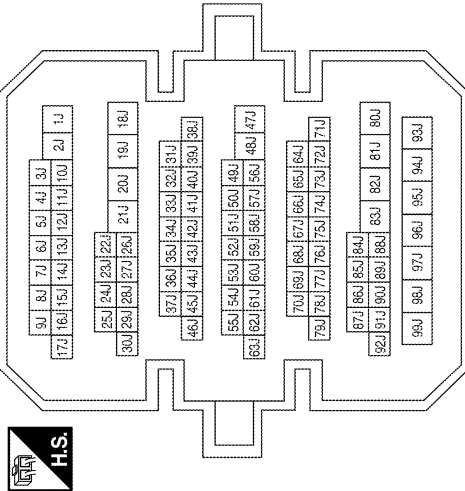
Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

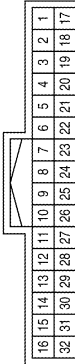
Terminal No.	Color of Wire	Signal Name
80J	B/Y	-
81J	L/G	-
88J	P/B	-

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



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	-
32	R/L	-

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	-

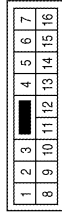
ABNIA1601GB

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

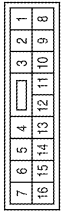
Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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	BROWN



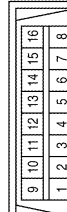
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	B/Y	--
4	L/O	--
5	GR/L	--
6	BR	--
7	B/R	--
8	L	--

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



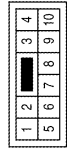
Terminal No.	Color of Wire	Signal Name
26	G/R	PKB
31	V/W	8P/R OUT

Connector No.	M22
Connector Name	DATA LINK CONNECTOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	G	M CAN L
11	R	M CAN H

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

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< ECU DIAGNOSIS >

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



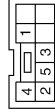
Terminal No.	Color of Wire	Signal Name
1	LG	-
2	B/Y	-

Connector No.	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.	M89
Connector Name	REAR CONTROL CANCEL SWITCH
Connector Color	WHITE



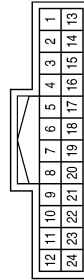
Terminal No.	Color of Wire	Signal Name
2	BR	-
3	B	-

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.	M85
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	B	-
10	W	-
11	R	-
12	SHIELD	-
21	V	-
22	V	-
23	SHIELD	-
24	B	-

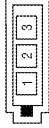
ABNIA1603GB

AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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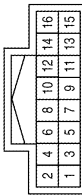
Connector No.	M103
Connector Name	WIRE TO WIRE
Connector Color	GRAY



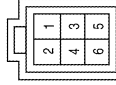
Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

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	L	CAN-H
8	P	CAN-L
9	BR	SW GND
14	SB	CD (DVD) EJECT

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



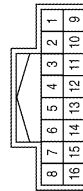
Connector No.	M112
Connector Name	WIRE TO WIRE
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
9	G	-
10	R	-
11	P	-
12	L	-

Connector No.	M110
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	SHIELD	-
4	V/Y	-
6	V/G	-
7	L	-

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AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

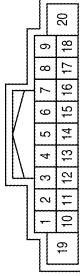
< ECU DIAGNOSIS >

Connector No.	M130
Connector Name	CENTER SPEAKER
Connector Color	BROWN



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

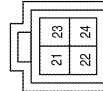
Connector No.	M131
Connector Name	AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)
Connector Color	WHITE



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	--	--

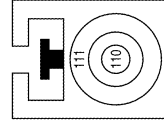
Terminal No.	Color of Wire	Signal Name
9	R/L	ILL
10	SHIELD	SHIELD
11	B	FR RH PRE+
12	W	FR RH PRE-
13	V	RR RH PRE+
14	LG	RR RH PRE-
15	L/B	STRG SW GND
16	GR/L	STRG SW B
17	--	--
18	--	--
19	Y/R	BAT
20	B	GND

Connector No.	M134
Connector Name	AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
21	--	--
22	--	--
23	R	GVIF +
24	W	GVIF -

Connector No.	M136
Connector Name	AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)
Connector Color	PINK



Terminal No.	Color of Wire	Signal Name
110	B	--
111	B	--

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AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< ECU DIAGNOSIS >

Connector No.	M137
Connector Name	AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)
Connector Color	WHITE



33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64

Terminal No.	Color of Wire	Signal Name
33	-	-
34	-	-
35	-	-
36	Y	ROOM LAMP
37	G/R	PKB SIG
38	-	-

Terminal No.	Color of Wire	Signal Name
39	W	NAVI COMP 1+
40	R	NAVI COMP 1-
41	-	-
42	-	-
43	SHIELD	MIC GND
44	R	MIC VCC
45	Y	IT DISP
46	P	CAN-L
47	P	M-CAN L
48	P	M-CAN L TRM
49	-	-
50	-	-
51	R/L	MR OUTPUT

Terminal No.	Color of Wire	Signal Name
52	G	IGN
53	P/B	REVERSE SIG
54	V/W	SPEED 8P
55	SHIELD	NAVI COMP1 SHIELD
56	B	NAVI COMP1 SYNC
57	-	-
58	-	-
59	L	MIC SIG
60	SHIELD	SHIELD
61	BR	DISP IT
62	L	CAN-H
63	L	M-CAN H
64	L	M-CAN H TRM

Connector No.	M139
Connector Name	AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)
Connector Color	WHITE



66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125

Terminal No.	Color of Wire	Signal Name
65	-	-
66	-	-
67	W	CAMERA GND
68	R	CAMERA V+
69	-	-
70	-	-
71	-	-

Terminal No.	Color of Wire	Signal Name
72	-	-
73	-	-
74	-	-
75	LG	AUX VIDEO-
76	V	AUX VIDEO+
77	SHIELD	VIDEO SHIELD
78	-	-
79	-	-
80	-	-
81	BR	SW GND
82	SB	CD (DVD) EJECT
83	-	-
84	-	-
85	-	-
86	-	-
87	-	-
88	-	-

Terminal No.	Color of Wire	Signal Name
89	-	-
90	-	-
91	-	-
92	-	-
93	-	-
94	-	-
95	-	-
96	-	-
97	-	-
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99	-	-
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103	-	-
104	-	-

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AV CONTROL UNIT

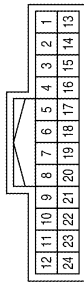
< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Terminal No.	Color of Wire	Signal Name
14	-	-
15	-	-
16	-	-
17	-	-
18	R	FRONT COMP-
19	W	FRONT COMP+
20	B	FRONT COMP SYNC
21	-	-
22	SHIELD	SHIELD
23	V/Y	ACC
24	-	-

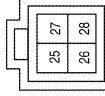
Terminal No.	Color of Wire	Signal Name
4	-	-
5	-	-
6	SHIELD	FRONT COMP SHIELD
7	SHIELD	R CAMERA COMP-
8	B	R CAMERA COMP+
9	BR	DISP IT
10	Y	IT DISP
11	Y/R	+B
12	B	GND
13	-	-

Connector No.	M142
Connector Name	DISPLAY UNIT (WITH COLOR DISPLAY AND NAVI)
Connector Color	WHITE



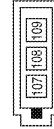
Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-

Connector No.	M148
Connector Name	AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
25	B	USB GND
26	W	USB D-
27	R	V BUS
28	G	USB D+

Connector No.	M146
Connector Name	AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)
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 AND REAR CONTROLS)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
105	B	GFS ANT
106	SHIELD	SHIELD

ABNIA1607GB

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Terminal No.	Color of Wire	Signal Name
132	-	-
133	-	-
134	-	-
135	-	-
136	-	-
137	-	-
138	-	-
139	-	-

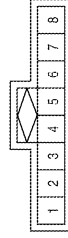
Terminal No.	Color of Wire	Signal Name
119	-	-
120	-	-
121	-	-
122	-	-
123	-	-
124	-	-
125	-	-
126	-	-
127	-	-
128	SHIELD	AUX SHIELD
129	B	AUX AUDIO RH+
130	R	AUX GND
131	-	-

Connector No.	M149
Connector Name	AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
112	-	-
113	-	-
114	-	-
115	W	AUX AUDIO LH+
116	-	-
117	-	-
118	-	-

Connector No.	M209
Connector Name	AUX IN JACK
Connector Color	WHITE



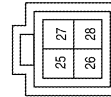
Terminal No.	Color of Wire	Signal Name
1	B	AUX AUDIO RH+
2	R	AUX GND
3	W	AUX AUDIO LH+
7	LG	COMP OUT+
8	V	COMP OUT-

Connector No.	M200
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	B	-
10	W	-
11	R	-
12	SHIELD	-
21	LG	-
22	V	-
23	SHIELD	-
24	GR	-

Connector No.	M151
Connector Name	DISPLAY UNIT (WITH COLOR DISPLAY AND NAVI)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
25	-	-
26	-	-
27	R	FRONT GVIF+
28	W	FRONT GVIF-

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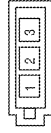
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

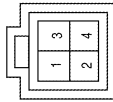
[BOSE W/ COLOR W/ NAVI W/RR CTL]

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



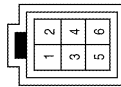
Terminal No.	Color of Wire	Signal Name
1	B	--
2	B	--

Connector No.	M211
Connector Name	USB INTERFACE
Connector Color	GREEN



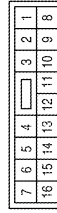
Terminal No.	Color of Wire	Signal Name
1	R	VBUS
2	G	USB D+
3	B	USB GND
4	W	USB D-

Connector No.	M210
Connector Name	WIRE TO WIRE
Connector Color	GRAY



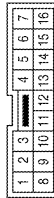
Terminal No.	Color of Wire	Signal Name
1	B	--
2	R	--
3	W	--
4	G	--

Connector No.	E29
Connector Name	WIRE TO WIRE
Connector Color	WHITE



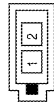
Terminal No.	Color of Wire	Signal Name
15	W	--

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	--

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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

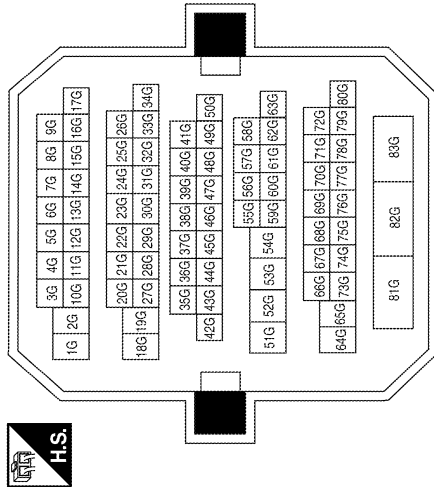
Connector No.	E34
Connector Name	BACK-UP LAMP RELAY
Connector Color	BLUE



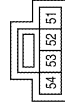
Terminal No.	Color of Wire	Signal Name
1	O	--
2	R	--
3	W	--
5	LG	--

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

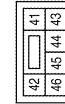


Connector No.	E49
Connector Name	JUNCTION BLOCK
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
51	LG	--
52	O	--

Connector No.	E47
Connector Name	JUNCTION BLOCK
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
45	BR	--

Connector No.	E35
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	P	--

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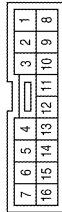
AV

AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

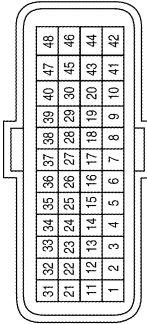
< ECU DIAGNOSIS >

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



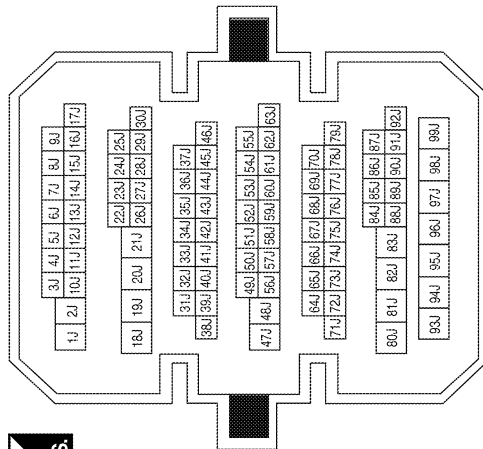
Terminal No.	Color of Wire	G/B	Signal Name
4			--

Connector No.	F15
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	BLACK



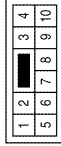
Terminal No.	Color of Wire	G/B	Signal Name
19			REV LAMP RLY

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



Terminal No.	Color of Wire	Signal Name
80J	O	--
81J	LG	--
88J	V	--

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



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

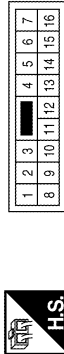
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AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

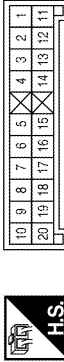
< ECU DIAGNOSIS >

Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



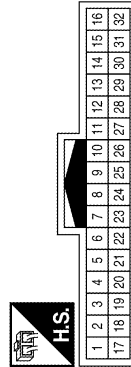
Terminal No.	Color of Wire	Signal Name
15	V	--

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	V	--

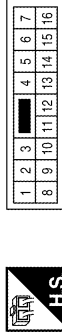
Connector No.	B102
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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	--
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	G	--
5	W	--
6	SB	--
7	GR	--
8	W	--
9	B	--
10	R	--
11	BR	--
12	G	--
13	L	--
14	V	--
15	P	--

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AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< ECU DIAGNOSIS >

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



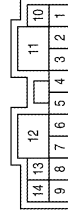
Terminal No.	Color of Wire	Signal Name
1	R	-
2	BR	-

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



Terminal No.	Color of Wire	Signal Name
1	L	-
2	P	-

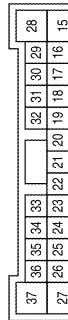
Connector No.	B110
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	FR TWDR LH+ OUT
2	V	FR TWDR LH- OUT
3	W	FR TWDR RH- OUT
4	G	FR TWDR RH+ OUT
5	R	RH WOOFER+ OUT
6	BR	RH WOOFER- OUT
7	B	GND
8	P	LH WOOFER- OUT
9	O	RR DOOR RH+ OUT
10	SB	BAT
11	GR	BAT
12	B	GND
13	L	LH WOOFER+ OUT
14	LG	RR DOOR RH+ OUT

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

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



Terminal No.	Color of Wire	Signal Name
15	L	RR DOOR LH- OUT
18	W	FR DOOR LH+ OUT
19	B	FR DOOR LH- OUT
20	SB	AMP ON
23	Y	RR LH-IN (WITH COLOR DISPLAY)
24	BR	RR LH+IN (WITH COLOR DISPLAY)
25	LG	RR RH-IN (WITH COLOR DISPLAY)
26	V	RR RH+IN (WITH COLOR DISPLAY)
28	G	RR DOOR LH+ OUT
29	V	INST CTR TWDR+ OUT
30	P	INST CTR TWDR- OUT

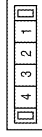
ABNIA1613GB

AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

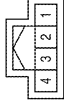
< ECU DIAGNOSIS >

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



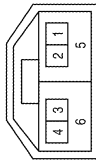
Terminal No.	Color of Wire	Signal Name
2	SHIELD	--
3	B	--
4	SHIELD	--

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	--

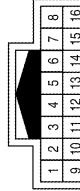
Connector No.	B120
Connector Name	WIRE TO WIRE
Connector Color	GRAY



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

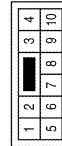
Terminal No.	Color of Wire	Signal Name
9	P	--
10	L	--
11	G	--
12	R	--
16	SB	--

Connector No.	B136
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	--
2	SHIELD	--
4	Y	--
6	V/G	--
7	L	--

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



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

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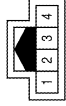
AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

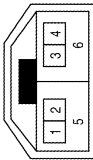
[BOSE W/ COLOR W/ NAVI W/RR CTL]

Connector No.	B401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



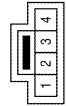
Terminal No.	Color of Wire	Signal Name
1	R/L	--
2	B	--
3	BR	--
4	V/Y	--

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.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	B404
Connector Name	REAR CONTROL SWITCH
Connector Color	GRAY



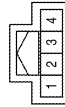
Terminal No.	Color of Wire	Signal Name
7	R	--
8	G	--

Connector No.	B403
Connector Name	REAR CONTROL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	--
6	P	--

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	--

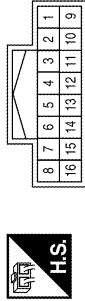
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AV CONTROL UNIT

< ECU DIAGNOSIS >

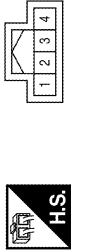
[BOSE W/ COLOR W/ NAVI W/RR CTL]

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



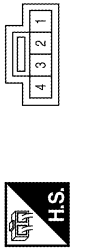
Terminal No.	Color of Wire	Signal Name
1	L	--
2	R	--
9	SHIELD	--

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.	T100
Connector Name	WIRE TO WIRE
Connector Color	WHITE



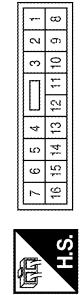
Terminal No.	Color of Wire	Signal Name
1	R	--
2	W	--
3	B	--
4	SHIELD	--

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



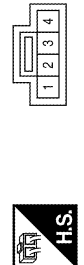
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	O	--

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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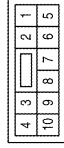
AV

AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< ECU DIAGNOSIS >

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



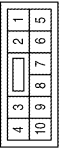
Terminal No.	Color of Wire	Signal Name
9	LG	--
10	O	--

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



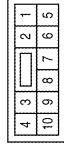
Terminal No.	Color of Wire	Signal Name
1	LG	--
2	O	--

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



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

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 (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



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

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



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

ABNIA1617GB

INFOID:000000005522912

DTC Index

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

DTC	Display item	Refer to	
U1000	CAN COMM CIRCUIT [U1000]	AV-715, "Diagnosis Procedure"	A
U1010	CONTROL UNIT (CAN) [1010]	AV-716, "DTC Logic"	
U1200	Cont Unit [U1200]	AV-717, "DTC Logic"	B
U1201	GYRO NO CONN [U1201]	AV-718, "DTC Logic"	
U1202	G-SENSOR NO CONN [U1202]	AV-719, "DTC Logic"	
U1204	GPS COMM [U1204]	AV-720, "Diagnosis Procedure"	C
U1205	GPS ROM [U1205]	AV-721, "Diagnosis Procedure"	
U1206	GPS RAM [U1206]	AV-722, "Diagnosis Procedure"	D
U1207	GPS RTC [U1207]	AV-723, "Diagnosis Procedure"	
U1216	CAN CONT [U1216]	AV-724, "DTC Logic"	
U1217	BLUETOOTH MODULE [U1217]	AV-725, "DTC Logic"	E
U1218	HDD CONN [U1218]	AV-726, "Diagnosis Procedure"	
U1219	HDD READ [U1219]	AV-727, "Diagnosis Procedure"	F
U121A	HDD WRITE [U121A]	AV-728, "Diagnosis Procedure"	
U121B	HDD COMM [U121B]	AV-729, "Diagnosis Procedure"	
U121C	HDD ACCESS [U121C]	AV-730, "Diagnosis Procedure"	G
U121D	DSP CONN [U121D]	AV-731, "Diagnosis Procedure"	
U121E	DSP COMM [U121E]	AV-732, "Diagnosis Procedure"	
U1225	USB CONTROLLER [U1225]	AV-733, "DTC Logic"	H
U1227	DVD COMM [U1227]	AV-734, "Diagnosis Procedure"	
U1228	SUB CPU CONN [U1228]	AV-735, "DTC Logic"	I
U1229	iPod CERTIFICATION [U1229]	AV-736, "DTC Logic"	
U122A	CONFIG UNFINISH [U122A]	AV-737, "Diagnosis Procedure"	J
U122E	Built-in AUDIO CONN [U122E]	AV-738, "DTC Logic"	
U1232	ST ANGLE SEN CALIB [1232]	AV-739, "Diagnosis Procedure"	
U1243	FRONT DISP CONN [U1243]	AV-740, "Diagnosis Procedure"	K
U1244	GPS ANTENNA CONN [U1244]	AV-742, "Diagnosis Procedure"	
U1263	USB OVERCURRENT [U1263]	AV-743, "Diagnosis Procedure"	
U1310	CONTROL UNIT (AV) [U1310]	AV-745, "DTC Logic"	L
U1300 U1240	<ul style="list-style-type: none"> • AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] 	AV-744, "Description"	M

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DISPLAY UNIT

< ECU DIAGNOSIS >

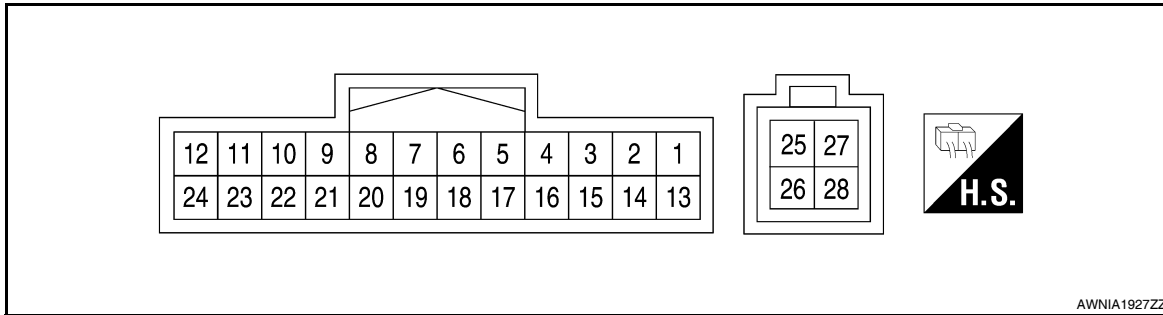
[BOSE W/ COLOR W/ NAVI W/RR CTL]

DISPLAY UNIT

Reference Value

INFOID:000000005519144

TERMINAL LAYOUT



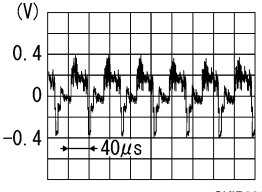
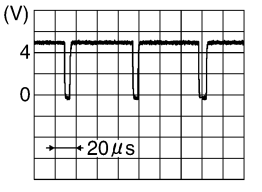
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
6	—	Shield	—	—	—	—
7	—	Shield	—	—	—	—
8 (B)	Ground	Rear view camera image signal	Input	Ignition switch ON	At rear view camera image is displayed.	<p style="text-align: right;">SKIB2251J</p>
9 (BR)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display- brightness.	<p style="text-align: right;">PKIB5039J</p>
10 (Y)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display- brightness.	<p style="text-align: right;">PKIB5039J</p>
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery Voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0V

DISPLAY UNIT

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
18 (R)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	
19 (W)	Ground	Composite image ground	—	Ignition switch ON	—	0V
20 (B)	Ground	Composite synchronizing signal	Input	Ignition switch ON	—	
22	—	Shield	—	—	—	—
23 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	—	—
27 (R)	—	RGB digital image signal (+)	Input	—	—	—
28 (W)	—	RGB digital image signal (-)	Input	—	—	—

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BOSE SPEAKER AMP

[BOSE W/ COLOR W/ NAVI W/RR CTL]

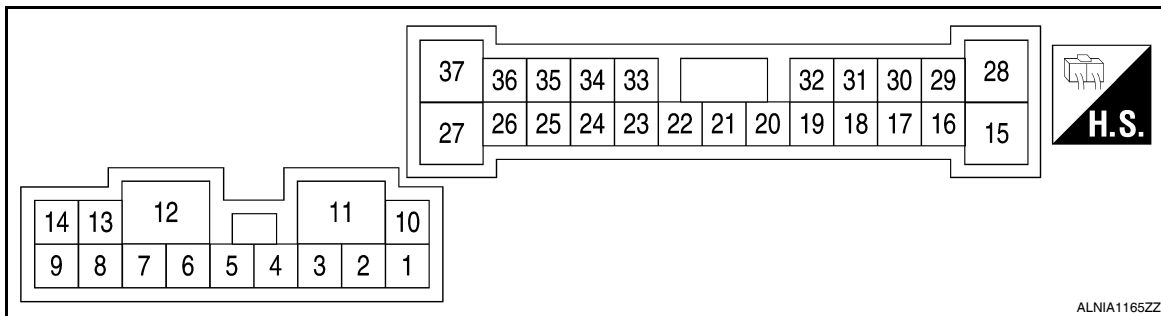
< ECU DIAGNOSIS >

BOSE SPEAKER AMP

Reference Value

INFOID:000000005519145

TERMINAL LAYOUT



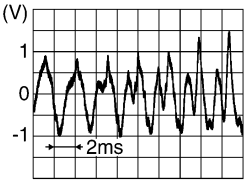
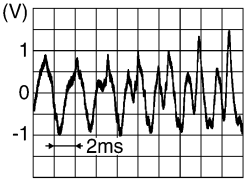
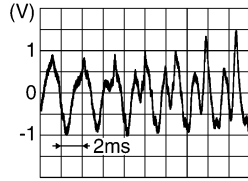
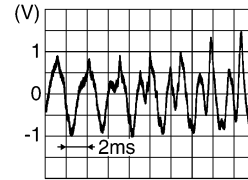
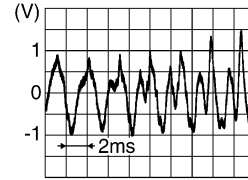
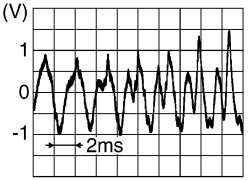
PHYSICAL VALUES

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 (G)	3 (W)	Audio signal tweeter RH	Output	Ignition switch ON	Audio output	<p>SKIB3609E</p>
5 (R)	6 (BR)	Audio signal subwoofer LH	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

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	-	Signal name	Input/ Output		
13 (L)	8 (P)	Audio signal subwoofer LH	Output	Ignition switch ON	Audio output 
14 (LG)	9 (O)	Audio signal rear door speaker RH	Output	Ignition switch ON	Audio output 
18 (W)	19 (B)	Audio signal front door speaker LH	Output	Ignition switch ON	Audio output 
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 
26 (V)	25 (LG)	Audio signal rear RH	Input	Ignition switch ON	Audio input 
28 (G)	15 (L)	Audio signal rear door speaker LH	Output	Ignition switch ON	Audio output 

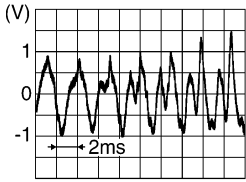
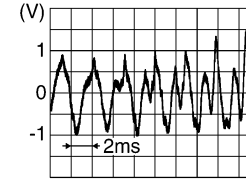
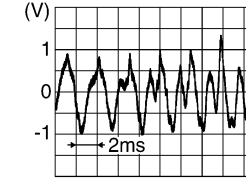
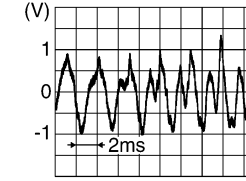
A
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P

AV

BOSE SPEAKER AMP

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< ECU DIAGNOSIS >

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
29 (V)	30 (P)	Audio signal center speaker	Output	Ignition switch ON	Audio output	 <p>SKIB3609E</p>
31 (R)	32 (BR)	Audio signal front door speaker RH	Output	Ignition switch ON	Audio output	 <p>SKIB3609E</p>
33 (W/L)	34 (GR/V)	Audio signal front RH	Input	Ignition switch ON	Audio input	 <p>SKIB3609E</p>
35 (W/R)	36 (B/R)	Audio signal rear LH	Input	Ignition switch ON	Audio input	 <p>SKIB3609E</p>

MULTI AV SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM SYMPTOMS

Symptom Table

INFOID:000000005520634

RELATED TO NAVIGATION

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
Multifunction switch and preset switch operation does not work.	<ul style="list-style-type: none"> All switches cannot be operated. "MULTI AV" is displayed on system selection screen when the CONSULT-III is started. 	<ul style="list-style-type: none"> Multifunction switch power supply and ground circuit. Refer to AV-774, "Diagnosis Procedure". AV communication circuit between AV control unit and multifunction switch. Perform CONSULT-III self-diagnosis. Refer to AV-711, "CONSULT - III Function (MULTI AV)".
	<ul style="list-style-type: none"> All switches cannot be operated. "MULTI AV" is not displayed on system selection screen when the CONSULT-III is initialized. 	AV control unit power supply and ground circuit malfunction. Refer to AV-746, "AV CONTROL UNIT : Diagnosis Procedure" .
	Only specified switch cannot be operated.	Multifunction switch or preset switch malfunction. Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-774, "Diagnosis Procedure" .
Fuel economy display is abnormal.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis. Refer to AV-711, "CONSULT - III Function (MULTI AV)" .
	There is no malfunction in the self-diagnosis results.	Ignition signal circuit malfunction. Refer to PCS-65, "Diagnosis Procedure" .
Start of the AV control unit takes time.	—	Room lamp timer control circuit malfunction.
Guide sound is not heard or too low.	On the setting display select "system sound (guide sound volume, etc.)," and confirm that guide sound is ON.	Voice guidance signal circuit malfunction.

RELATED TO HANDS-FREE PHONE

- Check that the cellular phone is the corresponding type (Bluetooth™ enabled) and Bluetooth™ turns ON.
- Malfunction may occur due to the version change of the phone type, etc. even though it is the corresponding type. The cell phone must support at least hands-free profile V1.0 and object push V1.0. Refer to cell phone instruction manual.
- When customers contact concerning Bluetooth™ compatible cell phone malfunction for the first time, always suggest customers to update cellular phone software if possible.
- Check that customer cellular phone is compatible on the published list. The dealer should contact its RBU/NSC for the list.
- Take note of any exceptions that the list may detail, i.e. no ringing tone or no phonebook transfer etc. If the customer phone is not listed then its full function cannot be guaranteed. NISSAN should not replace the AV control unit if the cell phone does not appear on the list or the cell phone is operating as described on the list e.g. no ringing tone, no phonebook transfer etc.
- Take note of any exceptions to other phones made by the same manufacturer as the customers. Any exceptions on one model by a specific manufacturer may be common to all models made by that manufacturer.

Simple Check for Bluetooth™ Communication

If cellular phone and AV control unit cannot be connected with Bluetooth™ communication, following procedure allows the technician to judge which device has malfunction.

- Turn ON cellular phone, not connecting Bluetooth™ communication.
- Start CONSULT-III, then start Windows®.
- Set CONSULT-III near a cellular phone.

MULTI AV SYSTEM SYMPTOMS

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< SYMPTOM DIAGNOSIS >

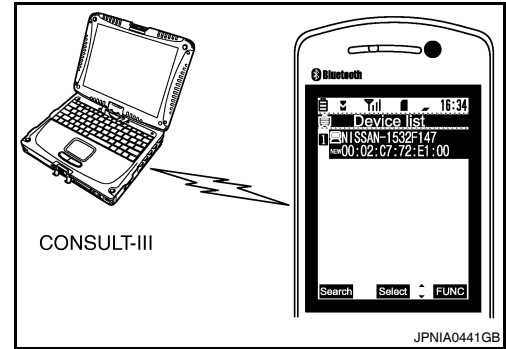
4. When operated Bluetooth™ registration by cellular phone, check if CONSULT-III* would be displayed on the device name. (If other Bluetooth™ device is located near cellular phone, a name of the device would be displayed also.)

NOTE:

*:Displayed device name is “NISSAN-*****”.

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

*: There is no 100% guarantee that cellular phone operates all functions on AV control unit. Different phone manufacturers implement Bluetooth™ in different ways. Phones on Supported Phone List are tested and any minor exceptions are listed.



Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection. (no connection is displayed on the display at the guide.)	Repeat the registration of cellular phone.	AV control unit malfunction. Replace AV control unit. Refer to AV-824, "Removal and Installation" .
Hands-free phone cannot be established.	<ul style="list-style-type: none"> • Hands-free phone operation can be made, but the communication cannot be established. • Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation. 	AV control unit malfunction. Replace AV control unit. Refer to AV-824, "Removal and Installation" .
The other party's voice cannot be heard by hands-free phone.	Check the “microphone speaker” in Inspection & Adjustment Mode if sound is heard.	AV control unit malfunction. Replace AV control unit. Refer to AV-824, "Removal and Installation" .
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	AV control unit malfunction. Replace AV control unit. Refer to AV-824, "Removal and Installation" .
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-757, "Diagnosis Procedure" .
The system cannot be operated.	<ul style="list-style-type: none"> • The retractable hard top is fully closed. • The voice recognition cannot be controlled. 	Roof status signal circuit malfunction.
	<ul style="list-style-type: none"> • The retractable hard top is fully closed. • The voice recognition can be controlled. • Steering switch's "VOL UP", "VOL DOWN", "↶" switch works, but "↷" it does not work. 	Steering switch malfunction.
	<ul style="list-style-type: none"> • The retractable hard top is fully closed. • The voice recognition can be controlled. • Steering switch's "↷", "VOL UP", "VOL DOWN", "↶" switches do not work. 	Steering switch signal B circuit malfunction. Refer to AV-774, "Diagnosis Procedure" .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-774, "Diagnosis Procedure" .

RELATED TO RGB IMAGE

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
RGB image is not shown.	—	RGB digital image signal circuit malfunction.

MULTI AV SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

RELATED TO VOICE CONTROL

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
The voice cannot be controlled even if the voice control screen is displayed.	Voice sounds at "Voice Microphone Test" of Confirmation/Adjustment mode.	AV control unit malfunction. Replace AV control unit. Refer to AV-824, "Removal and Installation" .
	Voice does not sound at "Voice Microphone Test" of Confirmation/Adjustment mode.	Microphone circuit malfunction. Refer to AV-757, "Diagnosis Procedure" .
The voice cannot be controlled (Voice control screen is not displayed).	<ul style="list-style-type: none"> Steering switch's "SOURCE", "MENU UP", "MENU DOWN", "ENTER" switch works, but "⏏" does not work. Hands-free phone system can be operated. 	Steering switch malfunction.
	Steering switch's "SOURCE", "MENU UP", "MENU DOWN", "⏏", "ENTER" switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-774, "Diagnosis Procedure" .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-774, "Diagnosis Procedure" .

RELATED TO AUDIO

Symptoms	Check items	Possible malfunction location / Action to take
The CD cannot be removed.	—	Disk eject signal circuit malfunction between AV control unit and preset switch. Refer to AV-756, "Diagnosis Procedure" .
Audio sound is not heard.	No sound from all speakers.	<ul style="list-style-type: none"> Amp. ON signal circuit. BOSE amp. power supply and ground circuit. Refer to AV-749, "BOSE SPEAKER AMP : Diagnosis Procedure" .
	There is no sound from the woofer.	<ul style="list-style-type: none"> Woofer amp. power supply and ground circuit. Sound signal woofer circuit between BOSE amp. and woofer. Woofer amp. ON signal circuit between BOSE amp. and woofer.
	There is sound only from specific places (RH front, RH rear, LH front and LH rear).	Sound signal circuit of suspect system.
Satellite radio is not received.	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-711, "CONSULT - III Function (MULTI AV)" .
	There is no malfunction in the CONSULT-III self-diagnosis result.	Perform the following inspection procedure. <ol style="list-style-type: none"> Check satellite radio antenna mounting nut for looseness. Visually check for satellite radio antenna feeder. Replace the satellite radio antenna. Refer to AV-837, "Removal and Installation". Replace the AV control unit. Refer to AV-824, "Removal and Installation".
AM/FM radio is not received.	Other audio sounds are normal.	<ul style="list-style-type: none"> Antenna amp. ON signal circuit. Antenna feeder.

RELATED TO USB

NOTE:

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

Trouble Diagnosis Chart by Symptom

MULTI AV SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Symptoms	Check items	Possible malfunction location / Action to take
iPod® or USB memory can not be recognized.	—	<ul style="list-style-type: none"> • USB harness malfunction. • USB connector malfunction.

iPod® is a trademark of Apple inc., registered in the U.S. and other countries.

RELATED TO DVD MODE

Symptoms	Check items	Probable malfunction location
The DVD cannot be removed.	—	Disk eject signal circuit malfunction between AV control unit and preset switch. Refer to AV-756, "Diagnosis Procedure" .
DVD image is not displayed.	—	Perform CONSULT-III self-diagnosis. Refer to AV-711, "CONSULT - III Function (MULTI AV)" . When detecting no malfunction in those components, the following items are a possible cause. <ul style="list-style-type: none"> • Composite image signal circuits malfunction. Refer to AV-754, "Diagnosis Procedure".
Audio sound is not heard.	No sound from all speakers.	Perform CONSULT-III self-diagnosis. Refer to AV-711, "CONSULT - III Function (MULTI AV)" .
	Sound is heard only from specific places.	Perform CONSULT-III self-diagnosis. Refer to AV-711, "CONSULT - III Function (MULTI AV)" .

RELATED TO STEERING SWITCH

Trouble Diagnosis Chart by Symptom

Symptoms	Probable malfunction location
None of the steering switch operations work.	Steering switch ground circuit malfunction. Refer to AV-774, "Diagnosis Procedure" .
Only specified switch cannot be operated.	Steering switch malfunction.
Steering switch's "SOURCE", "MENU UP", "MENU DOWN", "⏪", "ENTER" switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-774, "Diagnosis Procedure" .
Steering switch's "⏩", "VOL UP", "VOL DOWN", "⏪" switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-774, "Diagnosis Procedure" .

RELATED TO AUXILIARY INPUT

NOTE:

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

Trouble diagnosis chart by symptom

Symptoms	Check items	Probable malfunction location
No voice sound is heard when AUX mode is selected.	Voice sound is heard when other modes are selected.	AUX sound signal circuit.
Image is not displayed when AUX mode is selected.	DVD image is displayed.	AUX image signal circuit malfunction. Refer to AV-755, "Diagnosis Procedure" .
	DVD image is not displayed.	Composite image signal circuit malfunction. Refer to AV-754, "Diagnosis Procedure" .

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

NORMAL OPERATING CONDITION

Description

INFOID:000000005520635

NOTE:

For Navigation system operation information, refer to Navigation system Owner's Manual.

BASIC OPERATIONS

Symptom	Possible cause	Possible solution
No image is displayed.	The brightness is at the lowest setting.	Adjust the brightness of the display.
	The systems in the video mode.	Press "DISC-AUX" to change the mode.
	The display is turned off.	Press "☀/☾" to turn on the display.
	The interior of the vehicle becomes the a little less than 80°C (176°F) or high temperature, and the protection of the display acts, and a display is turned off.	Wait until the interior of the vehicle has cooled down.
Screen not clear.	Contrast setting is not appropriate.	Adjust the contrast of the display.
No voice guidance is available. Or The volume is too high or too low.	The volume is not set correctly, or it is turned off.	Adjust the volume of voice guidance.
	Voice guidance is not provided for certain streets (roads displayed in gray).	This is not a malfunction.
No map is displayed on the screen.	A screen other than map screen is displayed.	Press "MAP".
The screen is too dim. The movement is slow.	The temperature in the interior of the vehicle is high.	Wait until the interior of the vehicle has cooled down.
Some pixels in the display are darker or brighter than others.	This condition is an inherent characteristic of liquid crystal displays.	This is not a malfunction.
Some menu items cannot be selected.	Some menu items become unavailable while the vehicle is driven.	Park the vehicle in a safe location, and then operate the navigation system.

NOTE:

Locations stored in the Address Book and other memory functions may be lost if the vehicle's battery is disconnected or becomes discharged. If this occurs, service the vehicle's battery as necessary and re-enter the information in the Address Book.

RELATED TO VOICE RECOGNITION

Related to Basic Operation

Symptom	Possible cause	Possible solution
The system does not recognize your command. or The system recognizes your command incorrectly	The interior of the vehicle is too noisy.	Close the windows or have other occupants quiet.
	The volume of your voice is too low.	Speak louder.
	The volume if your voice is too loud.	Speak softer.
	Your pronunciation is unclear.	Speak clearly.
	You are speaking before the voice recognition is ready	Press and release "☞" switch on the steering switch, and speak a command after the tone sounds.
	8 seconds or more have passed after you pressed and released "☞" switch on the steering switch.	Make sure to speak a command within 8 seconds after you press and release "☞" switch on the steering switch.
	Only a limited range of voice commands is usable for each screen.	Use a correct voice command appropriate for the current screen.
The fan of the air conditioner is too loud.	Lower the fan speed as necessary as voice commands can be recognized more easily.	

Related to Item Choice

The system should respond correctly to all voice commands without difficulty. If problems are encountered, follow the solutions given in this guide for the appropriate error.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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

Symptom/ error message	Solution
Displays "COMMAND NOT RECOGNIZED" or the system fails to interpret the command correctly.	1. Ensure that the command format is valid.
	2. Speak clearly without pausing between words and at a level appropriate to the ambient noise level.
	3. Ensure that the ambient noise level is not excessive, for example, windows open or defrost on. NOTE: If it is too noisy to use the phone, it is likely that voice commands will not be recognized.
	4. If optional words of the command have been omitted, then command should be tried with these in place.
The system consistently selects the wrong voicetag	1. Ensure that the voicetag requested matches what was originally stored. This can be confirmed by giving the "Addressbook" Directory or Phone Directory command.
	2. Replace one of the voicetags being confused with a different voicetag.

Related to Telephone

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

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

Symptom	Solution
System fails to interpret the command correctly.	1. Ensure that the command is valid.
	2. Ensure that the command is spoken after the tone.
	3. Speak clearly without pausing between words and at level appropriate to the ambient noise level in the vehicle.
	4. Ensure that the ambient noise level is not excessive (for example, windows open or defroster on). NOTE: If it is too noisy to use the phone, it is likely that the voice commands will not be recognized.
	5. If more than one command was said at a time, try saying the commands separately.
	6. If the system consistently fails to recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker. See "Speaker adaptation (SA) mode" earlier in this section. Refer to "OWNER'S MANUAL".
The system consistently selects the wrong voicetag	1. Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the "List Names" command.
	2. Replace one of the names being confused with a new name.

RELATED TO AUDIO

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

NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA, AAC, M4A) or could be incorrectly mastered by the customer on a computer.
- Check if the CDs carry the Compact Disc Logo. If not, the disc is not mastered to the "red book" Compact Disc Standard and may not play.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Symptom	Cause and Counter measure	A
Cannot play	Check if the CD was inserted correctly.	A
	Check if the CD is scratched or dirty.	B
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.	C
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.	D
	If there is a mixture of music CD files (CD-DA data) and MP3/WMA/AAC/M4A files on a CD, only the music CD files (CD-DA data) will be played.	E
	Files with extensions other than ".MP3", ".WMA", ".AAC", "M4A".mp3, ".wma", ".aac" or ".m4a" cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.	F
	Check if the disc or the file is generated in an irregular format, This may occur depending on the variation or the setting of MP3/WMA/AAC/M4A writing applications or other text editing applications.	G
	Check if the finalization process, such as session close and disc close, is done for the disc.	H
Poor sound quality	Check if the CD is scratched or dirty.	I
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA/AAC/M4A CD, or if it is a multisession disc, some time may be required before the music starts playing.	J
Music cuts off or skips	The writing software and hardware combination might not match, or the writing speed, writing depth, writing width might not match the specifications. Try using the slowest writing speed.	K
Skipping with high bit rate files	Skipping may occur with large quantities if data such as for high bit rate data.	L
Move immediately to the next song when playing	When a non-MP3/WMA/AAC file has been given an extension of ".MP3", ".WMA", ".AAC", "M4A".mp3, ".wma", ".aac" or ".m4a" or when play is prohibited by copyright protection, the player will skip to the next song.	M
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.	N

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

NOTE:

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

RELATED TO DVD

Symptom	Possible cause	Possible solution	O
Not working as operated	Some operations may be rejected or may not function as intended because of the manufacturer's intent, depending on DVD.	This is not a malfunction.	O
Operation not accepted	If a requested operation is prohibited, then a message is displayed on the screen. (Message display depends on DVD.)	This is not a malfunction.	P
DVD can not be played	Check that the DVD is inserted in the right place.	Upturn the DVD (facing the title upward).	Q
	Check if there is condensation inside the player.	wait until the condensation is gone (about 1 hour) before using the player.	R
	DVD menu is displayed.	Select item to touch "ENTER"	S
	Insertion of a DVD with a different region code.	DVDs with a different region code can not be played. Check DVD.	T
	Some DVD softwares may not be played because not all DVD softwares fully comply in the standard.	This is not a malfunction.	U

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Symptom	Possible cause	Possible solution
Interruption during playback or flicker in the display	Check that the DVD has no scratches and dirt.	Errors may not be corrected depending on the size of scratches.
Low sound quality		Wipe and clean the dirt on the disc.
Distortion in picture	In the process of fast-forward or fast-reverse.	This is not a malfunction.
Subtitles not shown	Subtitle setting is OFF.	Set subtitle.
	Subtitle is not included in the software.	Check DVD.
Not played in set language	If a language is not included in the DVD, then the DVD is played in a recommended language.	Check DVD.
Not played with set subtitle	If a set subtitle is not included in the DVD, then the DVD is played with a recommended subtitle.	Check DVD.
Subtitle and language not selectable (not played with set subtitle or in set language)	The DVD is not multilanguage-capable.	The inclusion of the number of languages depends on DVD. Languages may be selectable on the Menu screen. Check DVD.
	The DVD has a priority language or setting.	If the DVD has a priority language or settings, then settings changed with this device are not reflected.
Angle unchangeable	Plural angles are not recorded in the software.	Check if the DVD is multi-angle-capable.
Unusual screen display	Display mode to the output aspect ratio for the DVD software is inappropriate.	Switch to the appropriate display mode.
Playback time is indicated, but no sound comes out.	Playback of Mix mode Truck 1. (Mix mode: Format including Truck 1 with data other than music and Trucks from Truck 2 with music data.)	Play music data included in trucks from Truck 2.

RELATED TO VEHICLE ICON

Symptom	Possible cause	Possible solution
Names of roads differ between Plan View and Birdview™.	This is because the quantity of the displayed information is reduced so that the screen does not become too crowded. There is also a chance that names of the roads may be displayed multiple times, and the names appearing on the screen may be different because of a processing procedure.	This is not a malfunction.
The vehicle icon is not displayed in the correct position.	The vehicle was transported after the ignition switch was pressed off, for example, by a ferry or car transporter.	Drive the vehicle for a while on a road where GPS signals can be received.
	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is traveling on a new road, the vehicle icon is located on another road nearby.	Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available.	Updated road information will be included in the next version of the map data.
The screen does not switch to the night screen even after turning on the headlights.	The daytime screen was set the last time the headlights were turned on.	Set the screen to the night screen mode using <Day/Night> when you turn on the headlights.
The map does not scroll even when the vehicle is moving.	The current location map screen is not displayed.	Press "MAP".
The vehicle icon is not displayed.	The current location map screen is not displayed.	Press "MAP".

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Symptom	Possible cause	Possible solution
The location of the vehicle icon is misaligned from the actual position.	When using tire chains or replacing the tires, speed calculations based on the speed sensor may be incorrect.	Drive the vehicle for a while [at approximately 30 km/h (19 MPH) for about 30 minutes] to automatically correct the vehicle icon position. If this does not correct the vehicle icon position, contact a NISSAN/ INFINITI dealer.
	The map data has a mistake or is incomplete (the vehicle icon position is always misaligned in the same area).	Updated road information will be included in the next version of the map data.

RELATED TO ROUTE CALCULATION AND VISUAL GUIDANCE

Symptom	Possible cause	Possible solution
Waypoints are not included in the auto reroute calculation.	Waypoints that you have already passed are not included in the auto reroute calculation.	If you want to go to that waypoint again, you need to edit the route.
Route information is not displayed.	Route calculation has not yet been performed.	Set the destination and perform route calculation.
	You are not driving on the suggested route.	Drive on the suggested route.
	Route guidance is set to off.	Turn on route guidance.
	Route information is not provided for certain types of roads (roads displayed in gray).	This is not a malfunction.
The auto reroute calculation (or detour calculation) suggests the same route as the one previously suggested.	Route calculations took priority conditions into consideration, but the same route was calculated.	This is not a malfunction.
A waypoint cannot be added.	Five waypoints are already set on the route, including ones that you have already passed.	A maximum of 5 waypoints can be set on the route. If you want to go to 6 or more waypoints, perform route calculations multiple times as necessary.
The suggested route is not displayed.	Roads near the destination cannot be calculated.	Reset the destination to a main or ordinary road, and recalculate the route.
	The starting point and destination are too close.	Set a more distant destination.
	The starting point and destination are too far away.	Divide your trip by selecting one or two intermediate destinations, and perform route calculations multiple times.
	There are time restricted roads (by the day of the week, by time) near the current vehicle location or destination.	Set [Use Time Restricted Roads] to off.
The part of the route that you have already passed is deleted.	A route is managed by sections between waypoints. If you passed the first waypoint, the section between the starting point and the waypoint is deleted. (It may not be deleted depending on the area.)	This is not a malfunction.
An indirect route is suggested.	If there are restrictions (such as one-way streets) on roads close to the starting point or destination, the system may suggest an indirect route.	Adjust the location of the starting of the starting point or destination.
	The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets (gray roads.)	Reset the destination to a main or ordinary road, and recalculate the route.
The landmark information does not correspond to the actual information.	This may be caused by insufficient or incorrect map data.	Updated information will be included in the next version of the data.
The suggested route does not exactly connect to the starting point, waypoints, or destination.	There is no data for route calculation closes to these locations.	Set the starting point, waypoints and destination on a main road, and perform route calculation.

RELATED TO VOICE GUIDANCE

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Symptom	Possible cause	Possible solution
Voice guidance is not available	Voice guidance is only available at certain intersections marked with? In some case, voice guidance is not available even when the vehicle should make a turn.	This is not a malfunction.
	The vehicle has deviated from the suggested route.	Go back to the suggested route or request route calculation again
	Voice guide is set to off.	Turn on voice guidance.
	Route guidance is set to off.	Turn on voice guidance.
The guidance contact does not correspond to the actual condition.	The contact of voice guidance may vary, depending on the types of intersections at which turn are made.	Follow all traffic rules and regulations.

RELATED TO TRAFFIC INFORMATION

Symptom	Possible cause	Possible solution
The traffic information is not displayed	The traffic information is not set to on.	Set the traffic information to on.
	You are in an area where traffic information is not available	Scroll to an area where traffic information is available
	You have not subscribed to XM NavTraffic or, your subscription to XM NavTraffic has expired.	Check your subscription status of XM NavTraffic.
	The map scale is set at a level where the display of icons is impossible.	Check that the map scale is set at a level in which the display of icons is possible.
With the automatic detour route search ON, no detour route is set to avoid congested areas.	There is no faster route compared to the current route, based on the road network and traffic information.	The automatic detour search is not intended for avoiding traffic jams. It searches for the fastest route taking into consideration such things as traffic jams.
The route does not avoid road section with traffic information stating it is closed due to road construction.	The navigation system is designed not to avoid this event because the actual period of closure may differ from the declared roadwork period.	Observe the actual road condition and follow the instructions on road for detour when necessary. If the road closure is for certain, use detour function and set the detour distance to avoid the closed road section.
Traffic information displayed differs from information from other media (e.g. radio).	Other media may use different information sources.	Observe the actual road conditions and regulations. Always observe safe driving practices and follow all traffic regulations.

PRECAUTIONS

< PRECAUTION >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

PRECAUTION

PRECAUTIONS

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

INFOID:000000005519149

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 WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

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

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect (Early Production, With Electronic Steering Column Lock)

INFOID:000000005885981

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.

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PRECAUTIONS

[BOSE W/ COLOR W/ NAVI W/RR CTL]

< PRECAUTION >

- 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.)
- Perform self-diagnosis check of all control units using CONSULT-III.

Precaution for Trouble Diagnosis

INFOID:000000005519151

AV COMMUNICATION SYSTEM

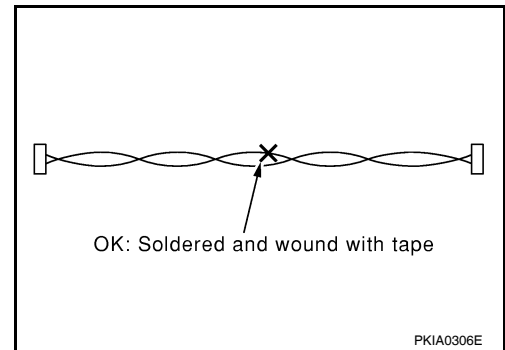
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

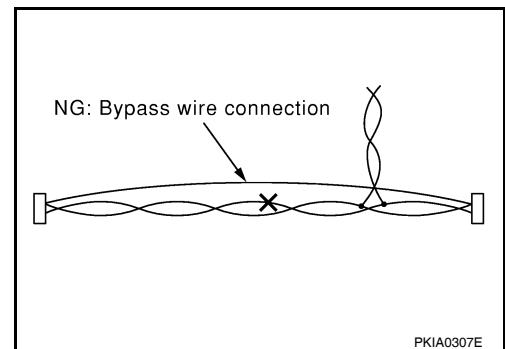
INFOID:000000005519152

AV COMMUNICATION SYSTEM

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



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



PREPARATION

< PREPARATION >

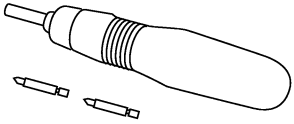
[BOSE W/ COLOR W/ NAVI W/RR CTL]

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000005519153

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

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AV CONTROL UNIT

< ON-VEHICLE REPAIR >

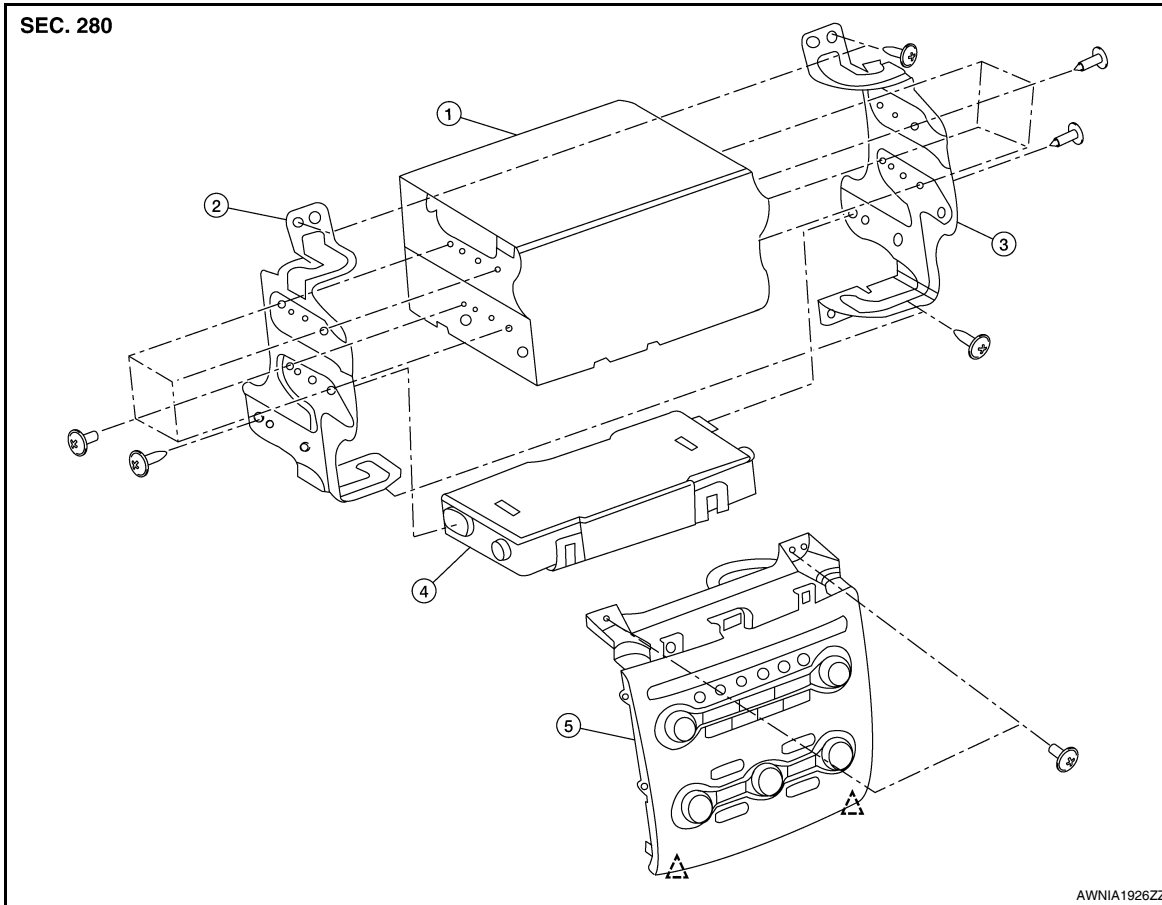
[BOSE W/ COLOR W/ NAVI W/RR CTL]

ON-VEHICLE REPAIR

AV CONTROL UNIT

Removal and Installation

INFOID:000000005522953

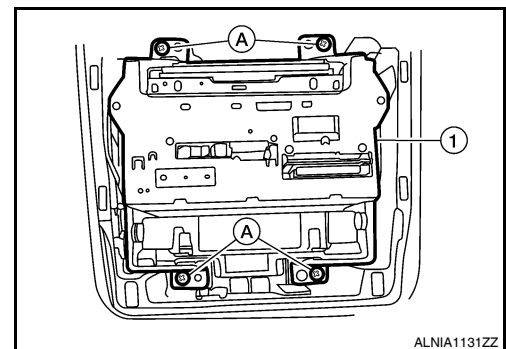


- | | | |
|------------------|---|--------------------------|
| 1. Audio unit | 2. Audio unit bracket LH | 3. Audio unit bracket RH |
| 4. A/C auto amp. | 5. Cluster lid C (with A/C and AV switch assembly attached) | △ Clips |

AUDIO UNIT

Removal

1. Disconnect the battery negative terminal.
2. Remove the cluster lid D. Refer to [IP-12, "Removal and Installation"](#).
3. Remove the cluster lid C. Refer to [IP-11, "Exploded View"](#).
4. 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

AV CONTROL UNIT

[BOSE W/ COLOR W/ NAVI W/RR CTL]

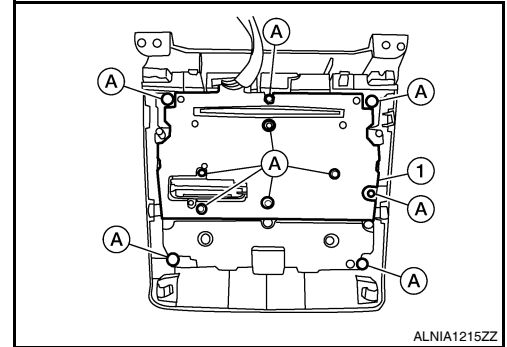
< ON-VEHICLE REPAIR >

Installation is in the reverse order of removal.

A/C AND AV SWITCH ASSEMBLY

Removal

1. Disconnect the battery negative terminal.
2. Remove the cluster lid D. Refer to [IP-12. "Removal and Installation"](#).
3. Remove the cluster lid C. Refer to [IP-11. "Exploded View"](#).
4. Remove the A/C and AV switch assembly screws (A), then pull out the A/C and AV switch assembly (1) from cluster lid C.



Installation

Installation is in the reverse order of removal.

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AV

MULTIFUNCTION SWITCH

< ON-VEHICLE REPAIR >


[BOSE W/ COLOR W/ NAVI W/RR CTL]

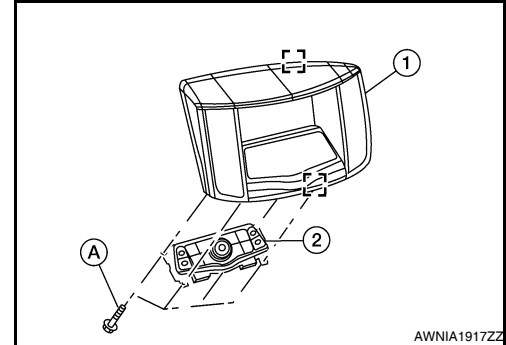
MULTIFUNCTION SWITCH

Removal and Installation

INFOID:000000005522954

REMOVAL

1. Remove cluster lid D. Refer to [IP-11. "Exploded View"](#).
2. Remove the four multifunction switch screws (A) and remove the multifunction switch (2) from cluster lid D (1).
 -  metal clip



INSTALLATION

Installation is in the reverse order of removal.

AUDIO DISPLAY UNIT

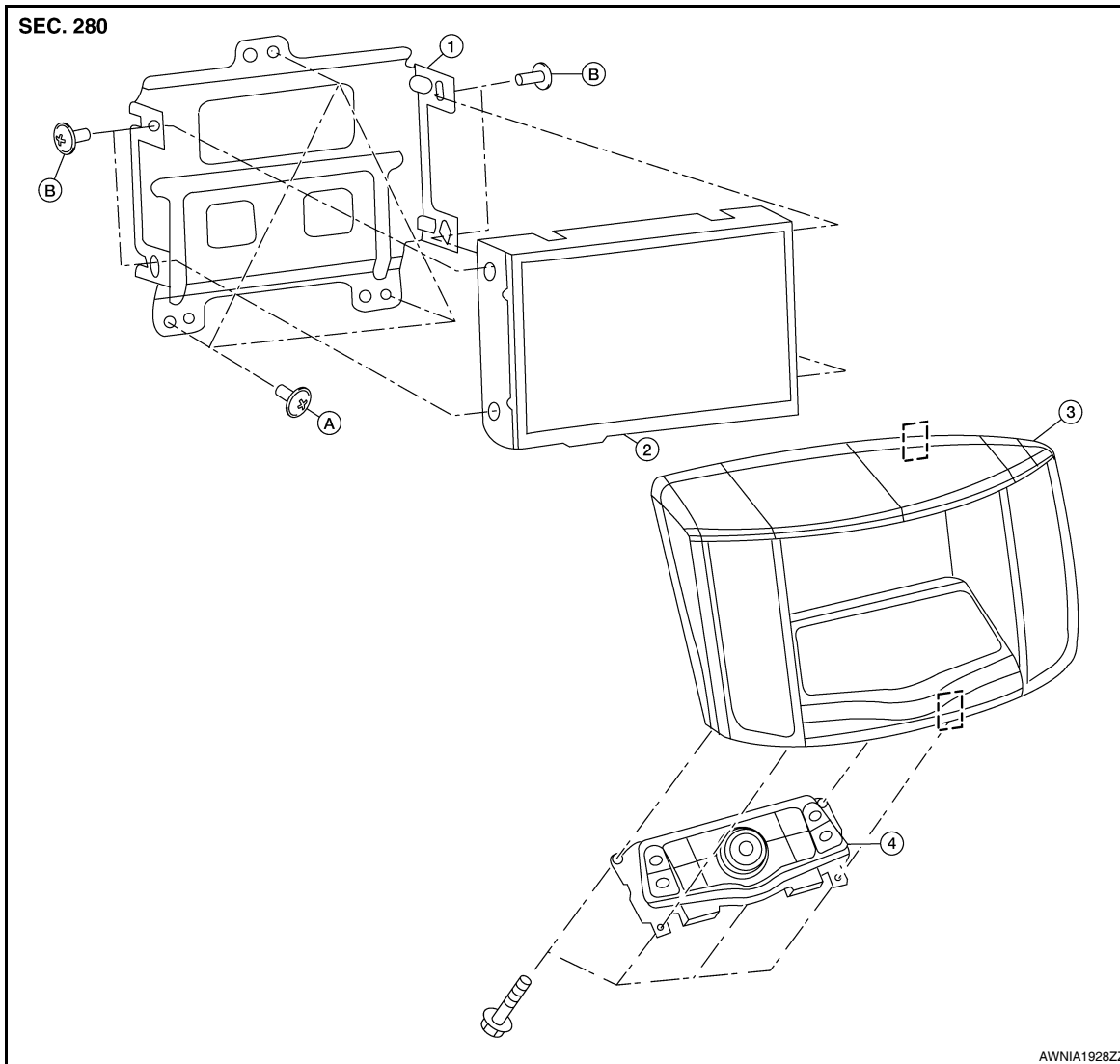
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
[BOSE W/ COLOR W/ NAVI W/RR CTL]

AUDIO DISPLAY UNIT

Removal and Installation

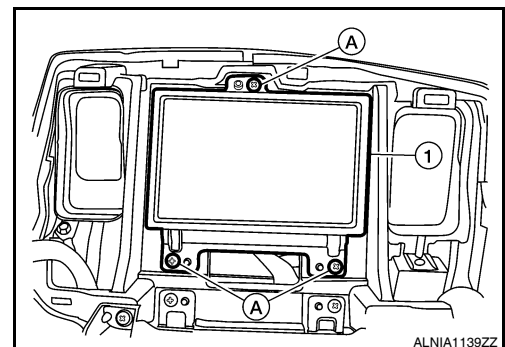
INFOID:000000005522955



- | | | |
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| 1. Audio display unit bracket | 2. Audio display unit | 3. Cluster lid D |
| 4. Multifunction switch | A. Audio display unit bracket screws | B. Audio display unit screws |
|  Metal Clip | | |

REMOVAL

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



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AUDIO DISPLAY UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

3. Remove the audio display unit screws on the sides and remove the audio display unit from the audio display unit brackets.

INSTALLATION

Installation is in the reverse order of removal.

USB CONNECTOR

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

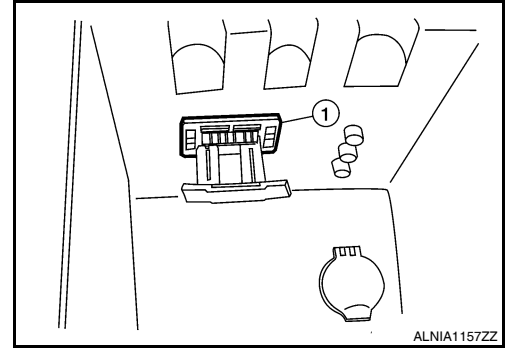
USB CONNECTOR

Removal and Installation

INFOID:000000005522956

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 USB connector (1).



INSTALLATION

Installation is in the reverse order of removal.

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AUXILIARY INPUT JACKS

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

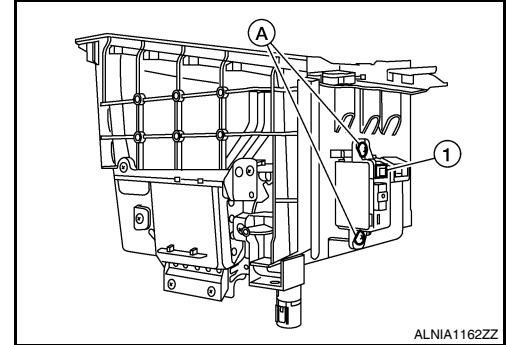
AUXILIARY INPUT JACKS

Removal and Installation

INFOID:000000005522957

REMOVAL

1. Remove the center console. Refer to [IP-16. "Removal and Installation"](#).
2. Remove the center console bin box.
3. Remove the auxiliary input jacks screws (A), then remove the auxiliary input jacks (1).



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INSTALLATION

Installation is in the reverse order of removal.

FRONT TWEETER

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

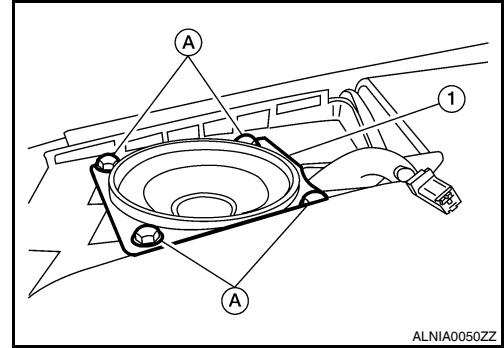
FRONT TWEETER

Removal and Installation

INFOID:000000005522958

REMOVAL

1. Remove front tweeter speaker grille. Refer to [IP-12. "Removal and Installation"](#).
2. 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 W/ NAVI W/RR CTL]

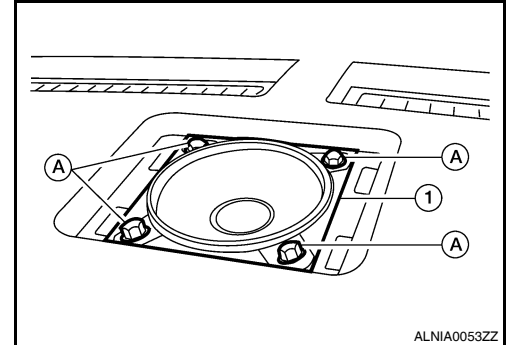
CENTER SPEAKER

Removal and Installation

INFOID:000000005522959

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 W/ NAVI W/RR CTL]

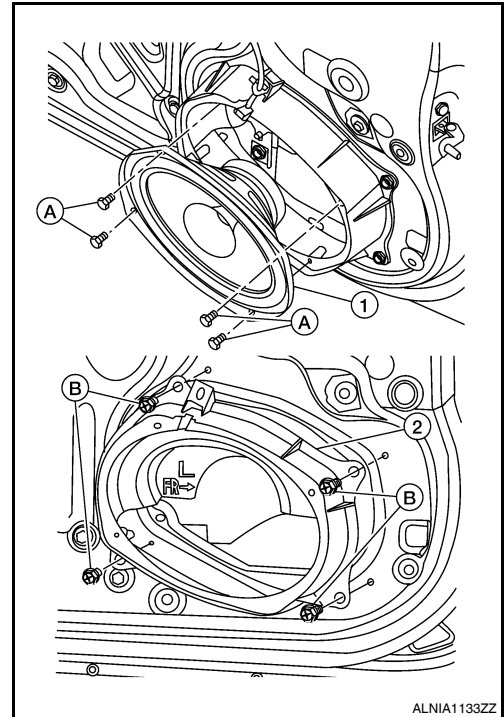
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000005522960

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 W/ NAVI W/RR CTL]

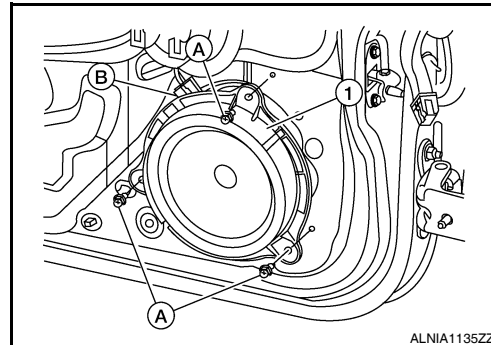
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000005522961

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

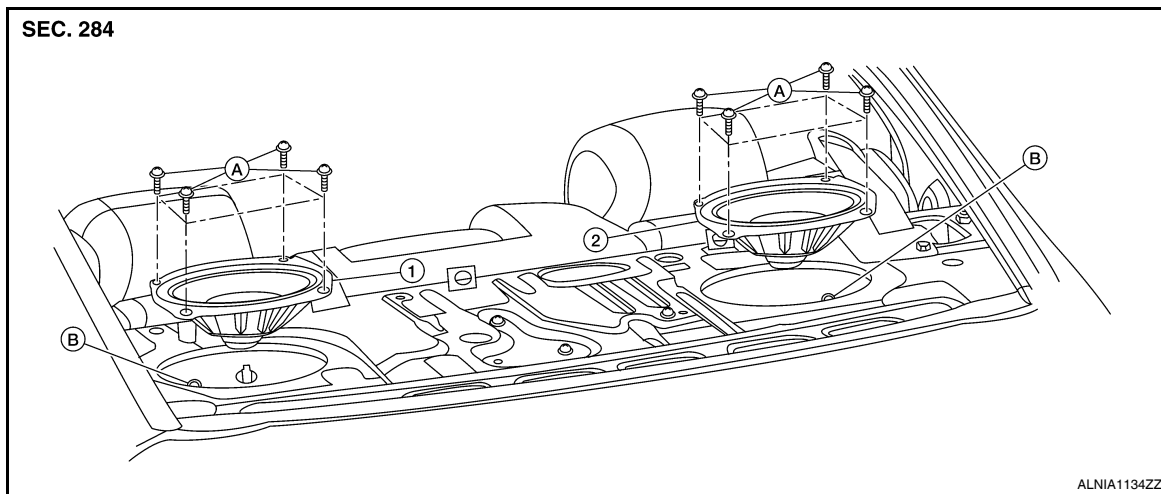
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

SUBWOOFER

Removal and Installation

INFOID:000000005522962



- 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

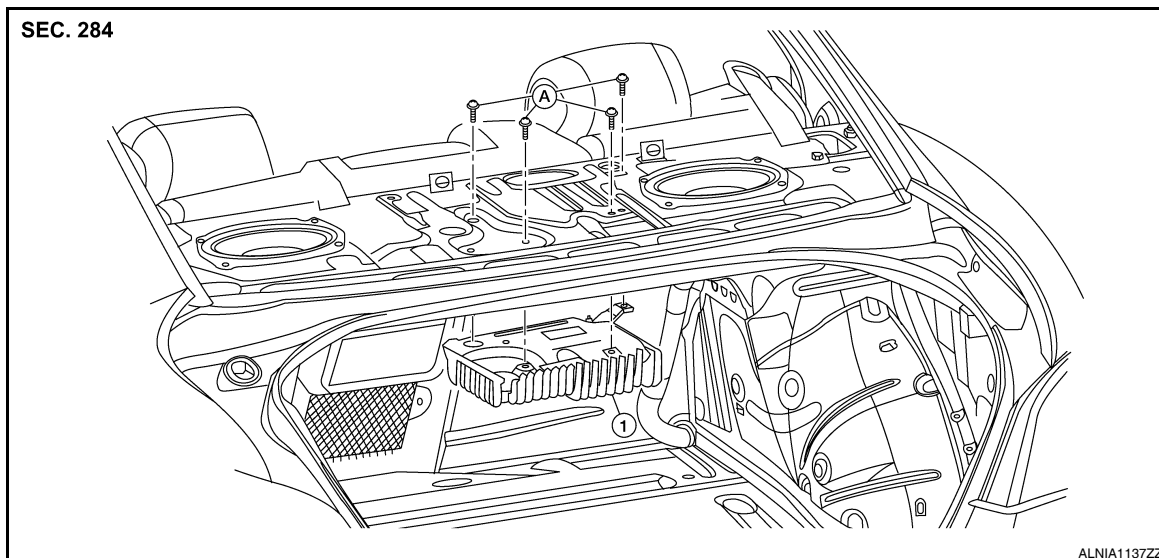
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

BOSE SPEAKER AMP

Removal and Installation

INFOID:000000005522963



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.
4. Remove the trunk upper finisher. Refer to [INT-35, "Exploded View"](#).
5. Disconnect the Bose speaker amp. connectors and remove the Bose speaker amp.

INSTALLATION

Installation is in the reverse order of removal.

SATELLITE RADIO ANTENNA

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

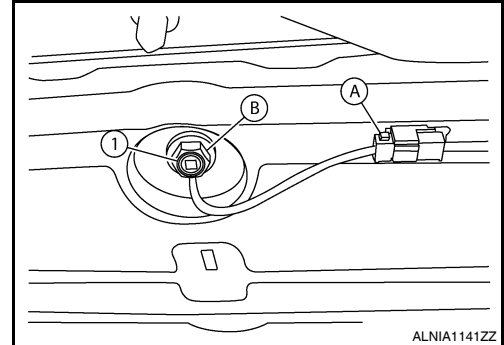
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:000000005522964

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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GPS ANTENNA

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

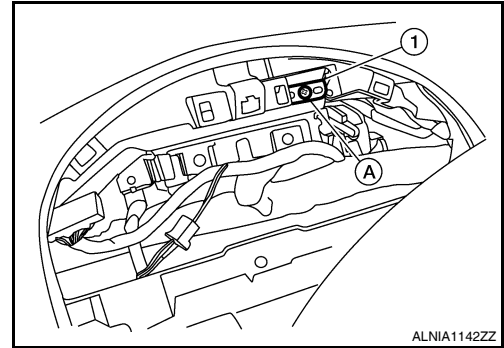
GPS ANTENNA

Removal and Installation

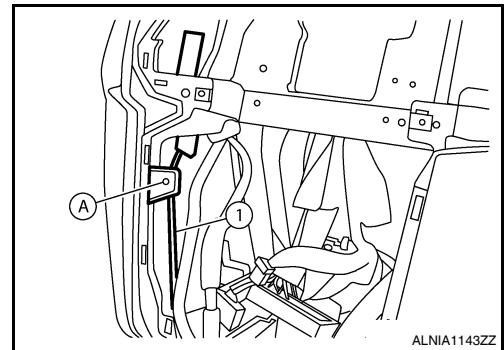
INFOID:000000005522965

REMOVAL

1. Remove cluster lid A. Refer to [IP-11, "Exploded View"](#).
2. Remove the audio unit. Refer to [AV-824, "Removal and Installation"](#).
3. Remove the GPS antenna screw (A).
 - GPS antenna (1)



4. Detach the GPS antenna cable clip (A), then fish the GPS antenna connector and harness (1), through the cluster lid A instrument panel opening and remove the GPS antenna.



INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

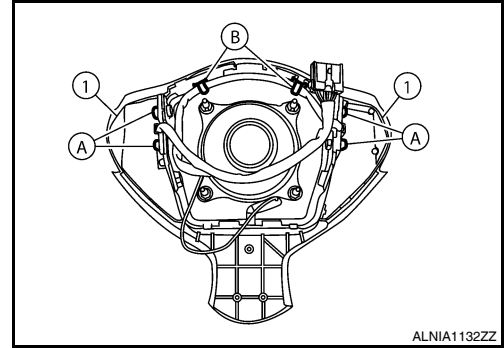
STEERING SWITCH

Removal and Installation

INFOID:000000005522966

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

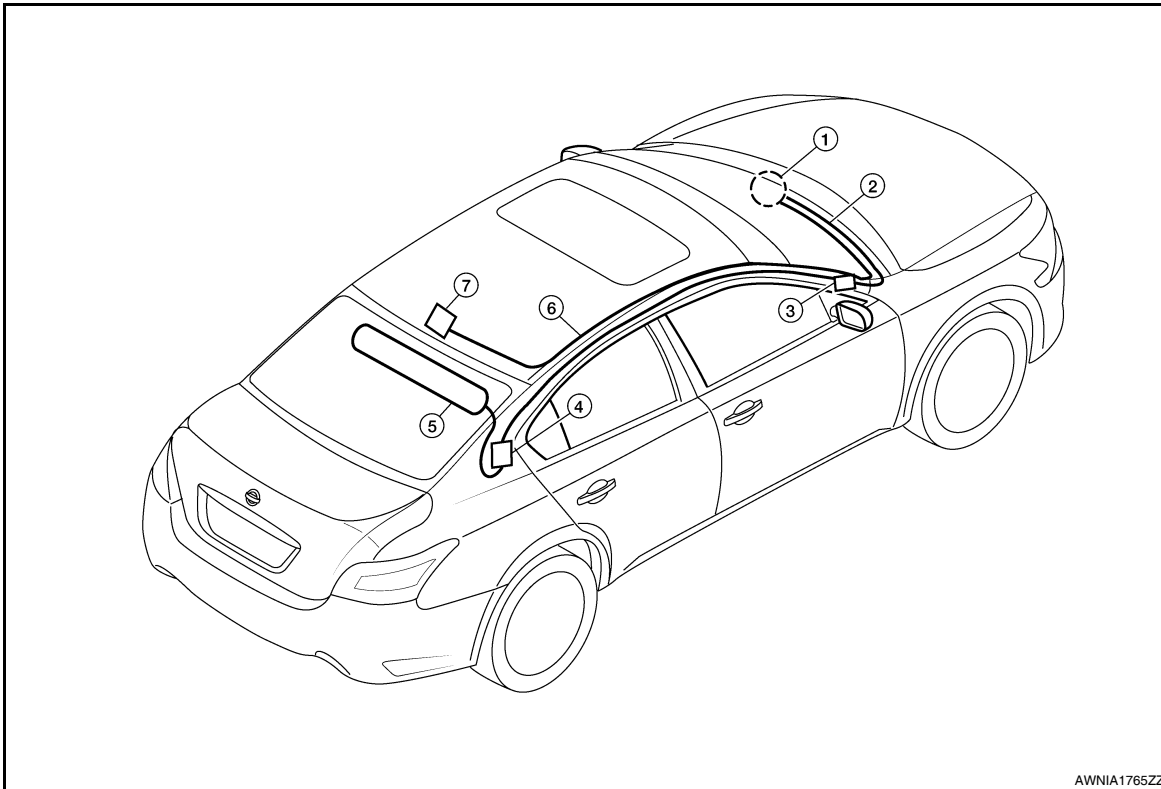
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

AUDIO ANTENNA

Location of Antenna

INFOID:000000005522967



AWNIA1765ZZ

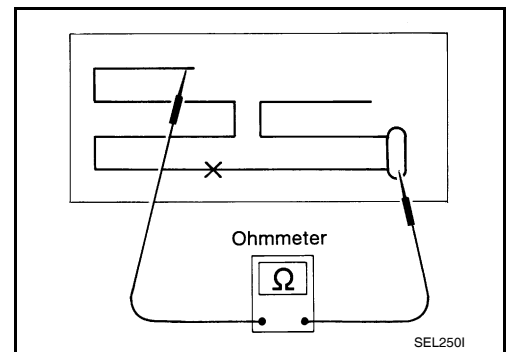
- | | | |
|----------------------------|-----------------------------------|-----------------------------------|
| 1. AV control unit | 2. AV control unit antenna feeder | 3. In-line connectors M103, M501 |
| 4. Antenna amp. | 5. Window antenna | 6. Satellite radio antenna feeder |
| 7. Satellite radio antenna | | |

Window Antenna Repair

INFOID:000000005522968

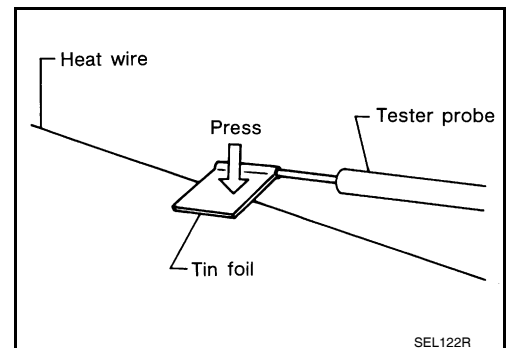
ELEMENT CHECK

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.



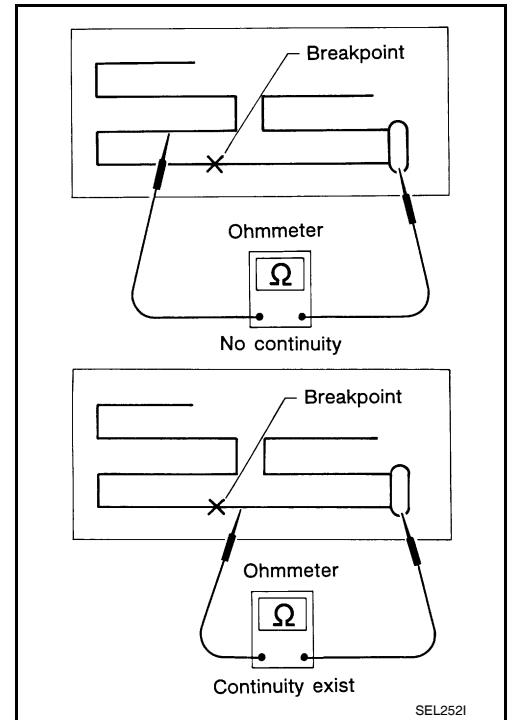
SEL122R

AUDIO ANTENNA

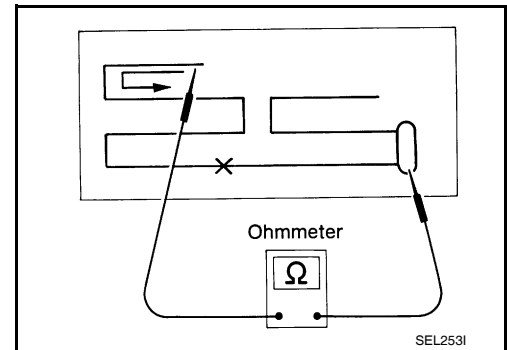
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

- 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.

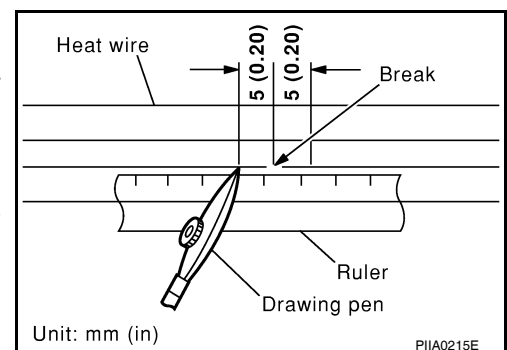


REPAIR EQUIPMENT

- 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.

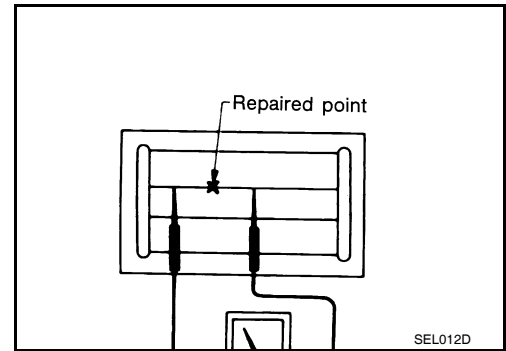


AUDIO ANTENNA

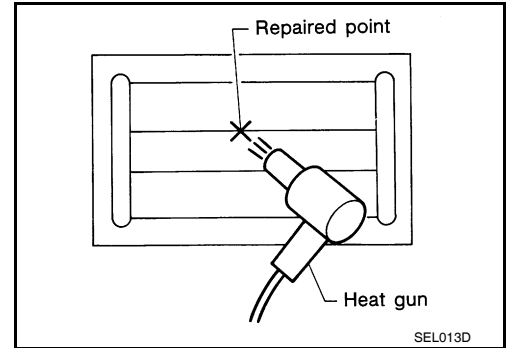
< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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/ COLOR W/ NAVI W/RR CTL]

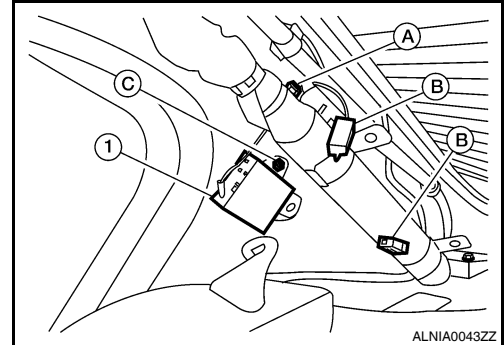
ANTENNA AMP.

Removal and Installation

INFOID:000000005522969

REMOVAL

1. Remove the rear pillar finisher RH. Refer to [INT-23, "Exploded View"](#).
2. 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.

A
B
C
D
E
F
G
H
I
J
K
L
M

AV

O
P

REAR AUDIO REMOTE CONTROL UNIT

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

REAR AUDIO REMOTE CONTROL UNIT

Removal and Installation

INFOID:000000005522973

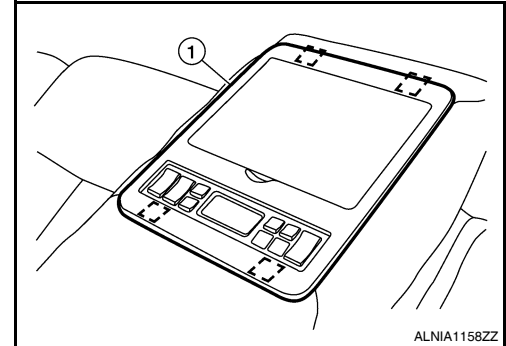
REMOVAL

1. Carefully remove the rear audio remote control unit finisher (1) from the rear center arm rest.

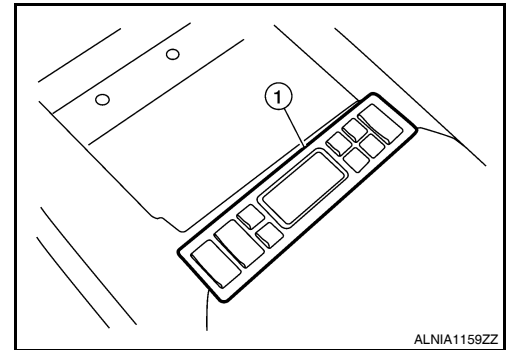
•  Metal clip

CAUTION:

Wrap removal tool with clean shop cloth to prevent damage to the rear audio remote control finisher.



2. Detach the rear audio remote control unit (1), then disconnect the rear audio remote control unit connector and remove the rear audio remote control unit (1).



INSTALLATION

Installation is in the reverse order of removal.

MICROPHONE

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

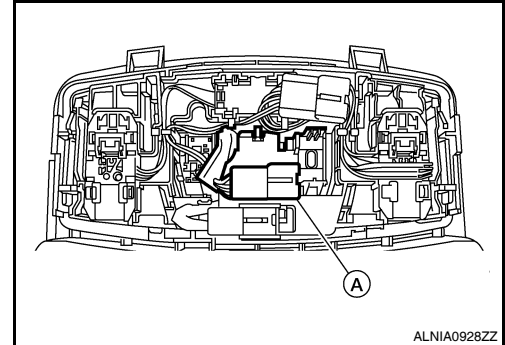
MICROPHONE

Removal and Installation

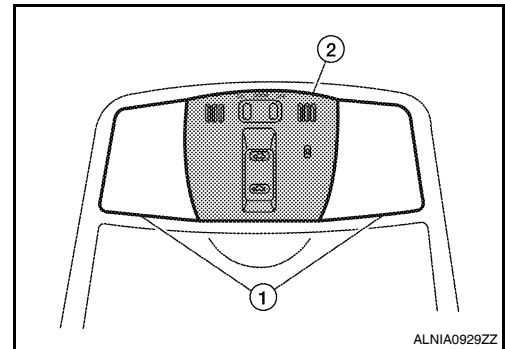
INFOID:000000005522970

REMOVAL

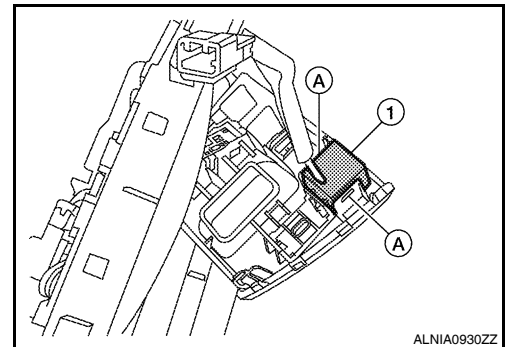
1. Remove the map lamp assembly. Refer to [INL-97, "Removal and Installation"](#).
2. Detach the microphone connector (A).



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.

A
B
C
D
E
F
G
H
I
J
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M

AV

REAR VIEW CAMERA

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

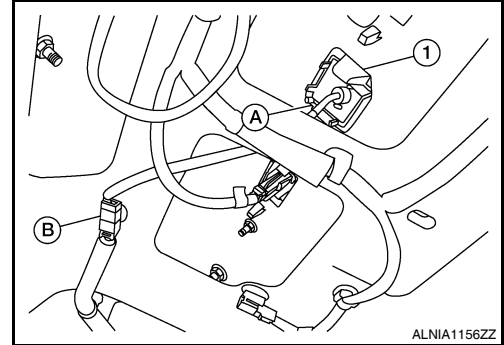
REAR VIEW CAMERA

Removal and Installation

INFOID:000000005522971

REMOVAL

1. Remove the license plate finisher. Refer to [EXL-177. "Removal and Installation"](#).
2. Remove trunk lid finisher. Refer to [INT-35. "Exploded View"](#).
3. Disconnect the rear view camera connector (B), press the rear view camera tab (A) and remove the rear view camera (1).



INSTALLATION

Installation is in the reverse order of removal.

Adjustment

INFOID:000000005522972

REAR VIEW CAMERA

For adjustment on the rear view camera, refer to [DLK-9. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).