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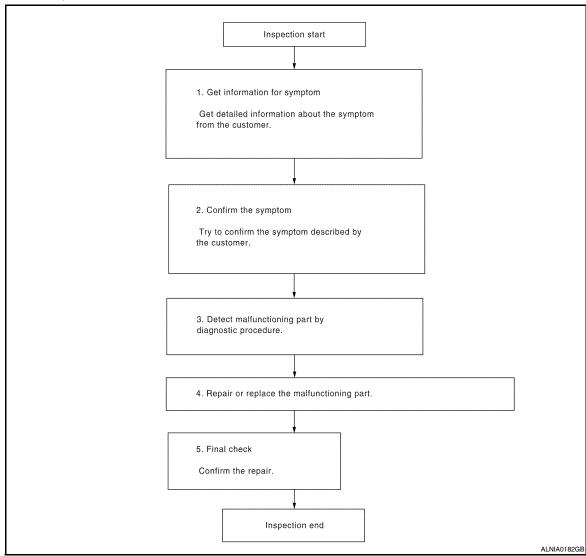
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# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

#### **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	IDACE AUDIO
< BASIC INSPECTION >	[BASE AUDIO]
Is malfunctioning part detected?	
YES >> GO TO 4. NO >> GO TO 2.	
4.REPAIR OR REPLACE THE MALFUNCTIONING PART	
<ol> <li>Repair or replace the malfunctioning part.</li> <li>Reconnect parts or connectors disconnected during Diagnostic Procedure.</li> </ol>	
>> 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.	
	•

Revision: November 2009 AV-17 2010 Maxima

# **FUNCTION DIAGNOSIS**

# **AUDIO SYSTEM**

System Diagram

INFOID:0000000005459984 TEL voice WINDOW ANTENNA Antenna amp. Display signal BLUFTOOTH DISPLAY ON signal CONTROL Display signal ANTENNA UNIT AM/FM main UNIT AMP. SPEAKER **AUDIO UNIT** Audio signal SUBWOOFER SUBWOOFER Audio signal STEERING WHEEL Steering switch signal AUDIO CONTROL **SWITCHES** AWNIA1916G

# **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.

# **Component Parts Location**

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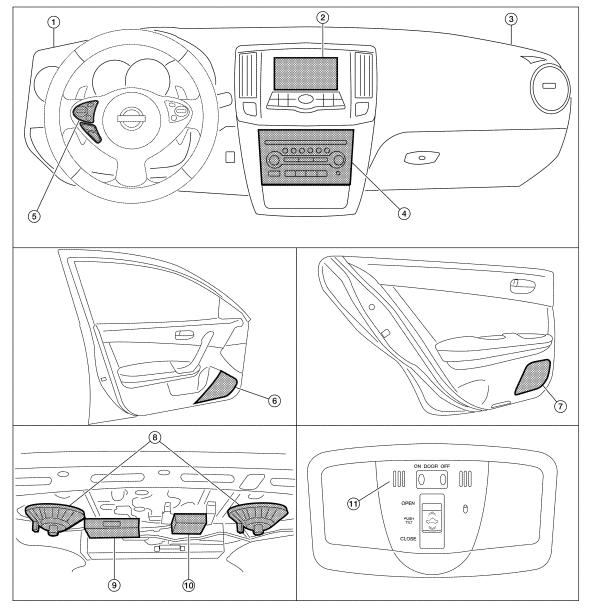
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ALNIA1160ZZ

- 1. Tweeter LH M143
- 4. Audio unit M133, M147
- 7. Rear door speaker LH D209 RH D309
- 10. Subwoofer amp. B21

- 2. Display unit M109
- 5. Steering wheel audio control switches 6.
- 8. Subwoofers (view of underside of par- 9. cel shelf)LH B16RH B17
- 11. Microphone R7

- 3. Tweeter RH M144
- 6. Front door speaker LH D3 RH D103
- Bluetooth control unit B125, B126, B130

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## **AUDIO SYSTEM**

# < FUNCTION DIAGNOSIS >

# [BASE AUDIO]

# **Component Description**

INFOID:0000000005459987

Part name	Description
Audio unit	Controls audio system functions.
Steering wheel audio control switches	<ul><li>Each audio operation can be operated.</li><li>Steering switch signal (operation signal) is output to audio unit.</li></ul>
Front door speakers	<ul><li>Outputs audio signal from audio unit.</li><li>Outputs high, mid and low range sounds.</li></ul>
Tweeters	Outputs audio signal from audio unit.     Outputs high range sounds.
Rear door speakers	<ul><li>Outputs audio signal from audio unit.</li><li>Outputs high, mid and low range sounds.</li></ul>
Bluetooth control unit	<ul><li>Receives signals from the audio unit.</li><li>Outputs display signals.</li></ul>
Display unit	<ul> <li>Receives and displays signals from the Bluetooth control unit.</li> <li>Displays audio system information.</li> </ul>
Subwoofer amp.	<ul><li>Receives and amplifies sound signal from audio unit.</li><li>Outputs amplified sound signal to the subwoofers.</li></ul>
Subwoofers	<ul><li>Outputs audio signal from subwoofer amp.</li><li>Outputs low range sounds.</li></ul>

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# HANDS-FREE PHONE SYSTEM

System Diagram

INFOID:000000005459988 TFI STEERING started **SWITCH BLUETOOTH** ANTENNA TEL voice signal TEL Sound signal **SPEAKER** voice (TEL voice signal) signal AUDIO (Voice guidance signal) TEL voice UNIT **BLUETOOTH** signal MICROPHONE CONTROL UNIT Display Display DISPLAY signal signal UNIT

# System Description

INFOID:0000000005459989

AWNIA16340

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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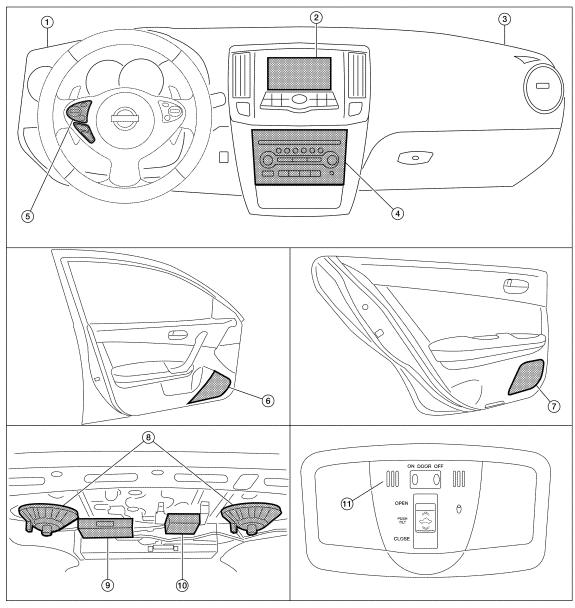
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# **Component Parts Location**

INFOID:000000005459990



ALNIA1160ZZ

- 1. Tweeter LH M143
- 4. Audio unit M133, M147
- 7. Rear door speaker LH D209 RH D309
- 10. Subwoofer amp. B21

- 2. Display unit M109
- 5. Steering wheel audio control switches 6.
- Subwoofers (view of underside of par- 9. cel shelf)
   LH B16
   RH B17
- 11. Microphone R7

- Tweeter RH M144
- Front door speaker LH D3 RH D103

Bluetooth control unit B125, B126, B130

## HANDS-FREE PHONE SYSTEM

# < FUNCTION DIAGNOSIS >

[BASE AUDIO]

# **Component Description**

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Part name	Description
Audio unit	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	Treceives telephone voice signals from the additional.
Steering wheel audio control switches	<ul> <li>Start a voice recognition session.</li> <li>Answer and end telephone calls.</li> <li>Adjust the volume level.</li> </ul>
Microphone	Sends voice signals to Bluetooth control unit.
Bluetooth control unit	<ul> <li>Controls hands-free phone functions.</li> <li>Receives display signals from audio unit.</li> <li>Outputs display signals to the display unit.</li> </ul>
Display unit	<ul> <li>Receives display signals from Bluetooth control unit.</li> <li>Displays audio system information.</li> </ul>
Bluetooth antenna	Sends telephone voice signal to bluetooth control unit.

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[BASE AUDIO]

# **DIAGNOSIS SYSTEM (AUDIO UNIT)**

## **Diagnosis Description**

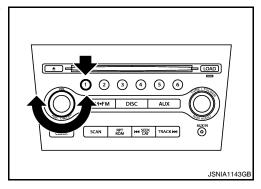
INFOID:0000000005459992

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.

Varaian	dianla	v itom
Version	uispia	iy ileiii

Mode		Description
	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.
Versions display	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

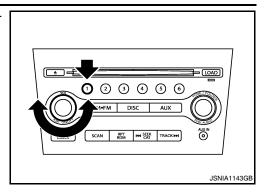
- 1. Turn ignition switch ON.
- 2. Turn the audio unit off.

#### **DIAGNOSIS SYSTEM (AUDIO UNIT)**

#### < FUNCTION DIAGNOSIS >

[BASE AUDIO]

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



4. 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.

5. 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.

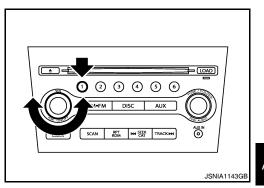
Channel	check	item
CHAINE	CHECK	пеш

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

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

#### KEY CHECK DIAGNOSIS FUNCTION

- 1. Turn ignition switch ON.
- 2. Turn the audio unit off.
- 3. 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. Α

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# **DIAGNOSIS SYSTEM (AUDIO UNIT)**

#### < FUNCTION DIAGNOSIS >

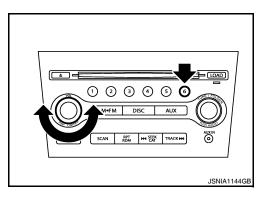
[BASE AUDIO]

Mode	Display item	Switch name	
	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	
Kay abaak	DISC	DISC switch	
Key check	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	
	STR SOURCE	SOURCE switch	
Key check	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		
	STR TEL SEND	<b>€</b> w≤ 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]

- 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	Description
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
DISP MPDT	OK / UN	OK / 0 -39	unit to the audio unit.
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**

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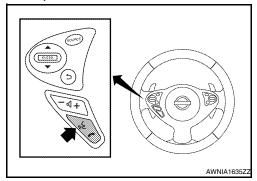
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

#### BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

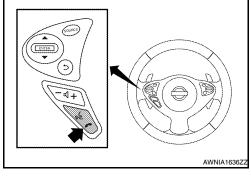
- · Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- · Microphone connection test (with playback to operator)
- · Bluetooth inquiry check

#### **OPERATION PROCEDURE**

- 1. Turn ignition switch to ACC or ON.
- 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

Failure Message	Action		
"Internal failure"	Replace Bluetooth control unit. Refer to AV-85, "Removal and Installation".		
"Bluetooth antenna open"	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 Inst		
"Phone/End for the Hands Free System is stuck"	lation".		
"Microphone test" (failed interactive test)	Inspect harness between Bluetooth control unit and microphone.     Replace microphone. Refer to AV-83, "Removal and Installation".		

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

# **COMPONENT DIAGNOSIS**

# POWER SUPPLY AND GROUND CIRCUIT

**AUDIO UNIT** 

**AUDIO UNIT: Diagnosis Procedure** 

INFOID:0000000005459995

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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
Addio driit	7	Ignition switch ACC or ON	17

#### Are the fuses OK?

YES >> GO TO 2.

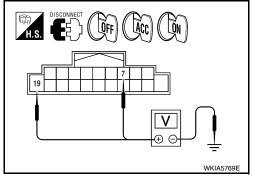
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

# 2.POWER SUPPLY CIRCUIT CHECK

Disconnect audio unit connector M133.

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

(+)		(-)	OFF	ACC	ON
Connector	Terminal	(-)	OH	ACC	ON
M133	19	Ground	Battery voltage	Battery voltage	Battery voltage
W133	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

Regarding Wiring Diagram information, refer to AV-49, "Wiring Diagram".

# 1. CHECK FUSE

Check for blown fuses.

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[BASE AUDIO]

#### < COMPONENT DIAGNOSIS >

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

#### Are the fuses OK?

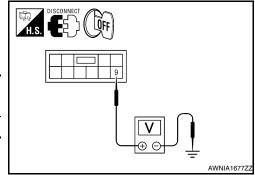
YES >> GO TO 2.

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	(-)	voltage (approx.)	
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	(-)	Continuity	
B21	7	Ground	Yes	

# DISCONNECT OFF

INFOID:0000000005459997

#### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

#### **DISPLAY UNIT**

## **DISPLAY UNIT: Diagnosis Procedure**

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
Display unit	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.

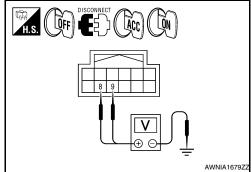
# 2.POWER SUPPLY CIRCUIT CHECK

#### < COMPONENT DIAGNOSIS >

[BASE AUDIO]

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

(+)		(-)	OFF	ACC	ON
Connector	Terminal	(-)	OH	ACC	ON
M109	9	Ground	Battery voltage	Battery voltage	Battery voltage
W 109	8	Ground	0V	Battery voltage	Battery voltage



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#### Are the voltage results as specified?

YES >> GO TO 3.

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

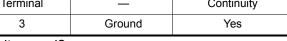
· Repair harness or connector.

# 3.ground circuit check

Turn ignition switch OFF.

Check continuity between display unit harness connector and ground.

Connector	Terminal	_	Continuity
M109	3	Ground	Yes



### Is the inspection result normal?

YES >> Inspection End.

>> Repair harness or connector. NO

## BLUETOOTH CONTROL UNIT

# BLUETOOTH CONTROL UNIT: Diagnosis Procedure

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

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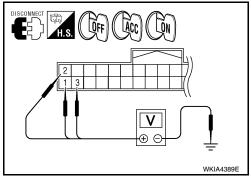
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#### < COMPONENT DIAGNOSIS >

[BASE AUDIO]

Check voltage between Bluetooth control unit harness connector and ground.

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



#### Are the voltage results as specified?

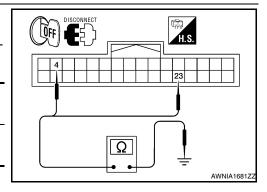
YES >> GO TO 3.

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

# 3. CHECK GROUND CIRCUIT

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

	(-	+)	()	Continuity	
	Connector	Terminal	(-)	Continuity	
	B126	4	Ground	Yes	
_	D120	23	Ground		



#### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

#### **MICROPHONE**

MICROPHONE : Diagnosis Procedure

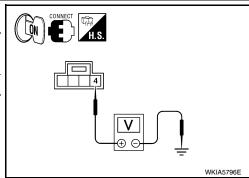
INFOID:0000000005459999

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 po-	Value (Approx.)
Connector	Terminal	(-)	sition	value (Approx.)
R7	4	Ground	ON	5V



#### Is proper voltage present?

YES >> GO TO 3.

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

#### < COMPONENT DIAGNOSIS >

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- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit and microphone connectors.
- Check continuity between microphone harness connector R7

   (A) terminal 4 and Bluetooth control unit harness connector B126 (B) terminal 29.

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

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

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<u></u> <u>Ω</u>	ALNIA0132ZZ

,	A		Continuity
Connector	Terminal		
R7	4	Ground	No

#### Are continuity results as specified?

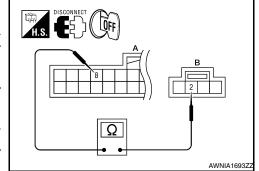
YES >> Replace the Bluetooth control unit. Refer to AV-85, "Removal and Installation".

NO >> Repair harness or connector.

# 3. CHECK GROUND CIRCUIT

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

Α			В	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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INFOID:000000005460001

#### FRONT DOOR SPEAKER

Description INFOID:0000000005460000

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

## Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-49, "Wiring Diagram".

# 1. HARNESS CHECK

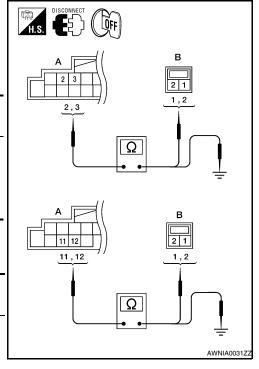
- Disconnect audio unit connector M133 (A) and suspect speaker connector (B).
- Check continuity between audio unit harness connector M133

   (A) terminal and suspect speaker harness connector (B) terminal

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	D3	1	Yes
M133	3		2	
IVITOS	11	D103	1	165
	12	D103	2	

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

	A		Continuity
Connector Terminal			Continuity
	2		No
M133	3	Ground	
WITSS	11	Giodila	
	12		



#### Are continuity results as specified?

YES >> GO TO 2.

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

· Repair harness or connector.

# $2.\mathsf{FRONT}$ 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]

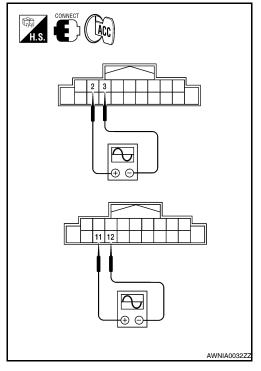
 Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

(+)		(-)	Condition	Reference signal	
Connector	Connector Terminal		Condition		
	2	3			
M133	11	12	Receive audio sig- nal	(V) 1 0 -1 1 ms	

#### Is the inspection result normal?

YES >> Replace speaker. Refer to <u>AV-74, "Removal and Installation"</u>.

NO >> Replace audio unit. Refer to <u>AV-70, "Removal and Installation"</u>.



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[BASE AUDIO]

## **TWEETER**

Description INFOID:000000005460002

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

## Diagnosis Procedure

INFOID:0000000005460003

Regarding Wiring Diagram information, refer to AV-49, "Wiring Diagram".

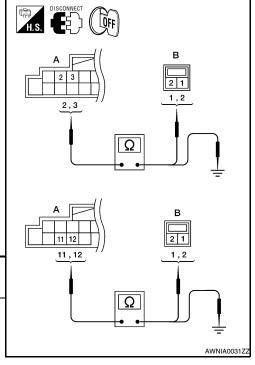
# 1. HARNESS CHECK

- 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).

Α			В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	M143	1	
M133	3	IVI 143	2	Yes
101133	11	N444	1	165
	12	M144	2	

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

	Α		Continuity
Connector Terminal		_	Continuity
	2		No
M133	3	Ground	
IVITOS	11	Giouna	
	12		



#### Are the continuity results as specified?

YES >> GO TO 2.

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

Repair harness or connector.

# 2.TWEETER SIGNAL CHECK

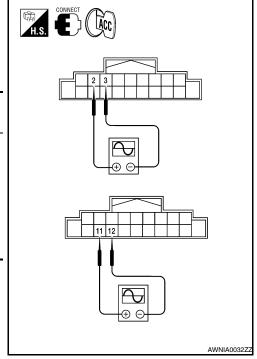
- 1. Connect audio unit connector and tweeter connector.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

(+	(+)		Condition	Reference
Connector	Terminal	Terminal	signal	
'	2	3		
M133	11	12	Receive audio sig- nal	(V) 1 0 -1 1 ms

#### Is the audio signal voltage as specified?

YES >> Replace tweeter. Refer to AV-73, "Removal and Installation".

NO >> Replace audio unit. Refer to <u>AV-70, "Removal and Installation"</u>.



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INFOID:0000000005460005

#### 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

Regarding Wiring Diagram information, refer to AV-49, "Wiring Diagram".

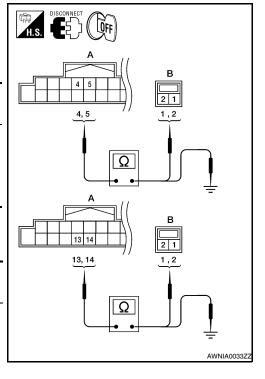
# 1. HARNESS CHECK

- 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).

А		В		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
	4	D209	1		
M133	5	D203	2	Yes	
	13	D309	1	163	
	14	D309	2		

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

'	A		Continuity	
Connector	Terminal	_		
-	4			
M133	5	Ground	No	
WIISS	13	Giodila		
	14			



#### Are the continuity results as specified?

YES >> GO TO 2.

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

· Repair harness or connector.

# 2. REAR DOOR SPEAKER SIGNAL CHECK

#### **REAR DOOR SPEAKER**

#### < COMPONENT DIAGNOSIS >

[BASE AUDIO]

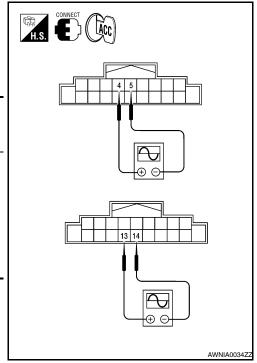
- 1. Connect audio unit connector and rear door speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

(-	+)	(-)		Reference
Connec- tor	Terminal	Terminal	Condition	signal
	4	5		
M133	13	14	Receive audio sig- nal	(V) 1 0 -1 1 ms

#### 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 <u>AV-70, "Removal and Installation"</u>.



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# 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:0000000005460007

Regarding Wiring Diagram information, refer to AV-49, "Wiring Diagram".

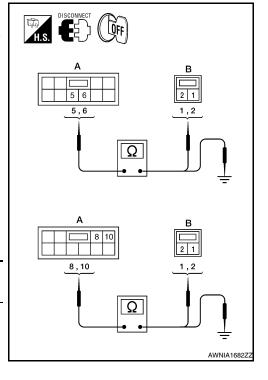
# 1. HARNESS CHECK

- 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		В		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	6	B16	1	Yes	
B21	5	БЮ	2		
DZ I	10	B17	1	165	
	8	ы	2		

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

	Α		Continuity	
Connector	Terminal			
	6			
B21	5	Ground	No	
DZ I	10	Giodila		
	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

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#### < COMPONENT DIAGNOSIS >

- 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	
Connector	Connector (+)		Condition	signal	
	6	5			
B21	10	8	Receive audio signal	(V) 1 0 -1 1 ms	

#### Is the audio signal voltage as specified?

YES >> Replace suspect subwoofer. Refer to <u>AV-76, "Removal and Installation"</u>.

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		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	4		2	
M133	5	B21	1	Yes
	13	DZI	4	165
	14		3	

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

	А	_	Continuity	
Connector	Terminal		Continuity	
	4			
M133	5	Ground	No	
W 133	13			
	14			

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#### 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

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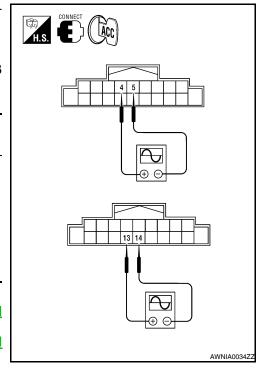
- 1. Connect audio unit connector M133 and subwoofer amp. connector B21.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio unit harness connector M133 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference	
Connector	nnector (+) (-) Condition		Condition	signal	
	4	5			
M133	13	14	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E	

#### Is the audio signal voltage as specified?

YES >> Replace subwoofer Refer to <u>AV-76, "Removal and Installation"</u>.

NO >> Replace audio unit. Refer to <u>AV-70, "Removal and Installation"</u>.



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# STEERING SWITCH

**Description** 

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

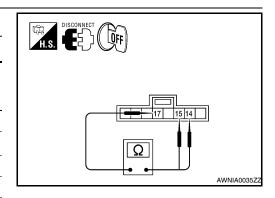
Diagnosis Procedure

# 1. CHECK STEERING SWITCH RESISTANCE

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

Regarding Wiring Diagram information, refer to AV-49, "Wiring Diagram".

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



Do the steering switches check OK?

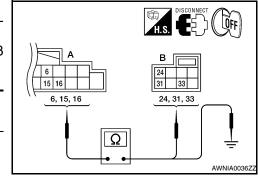
YES >> GO TO 2.

NO >> Replace steering switch. Refer to AV-78, "Removal and Installation".

# 2. CHECK HARNESS

- Turn ignition switch OFF.
- 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).

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



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

	A		Continuity
Connector	Terminal	_	Continuity
	6		
M133	15	Ground	No
	16		

Are the continuity results as specified?

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#### < COMPONENT DIAGNOSIS >

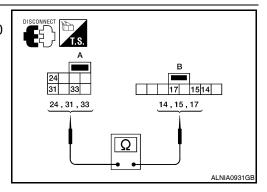
YES >> GO TO 3.

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



#### Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to <u>SR-8</u>, "Removal and Installation".

[BASE AUDIO]

#### MICROPHONE SIGNAL CIRCUIT

Description

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

Diagnosis Procedure

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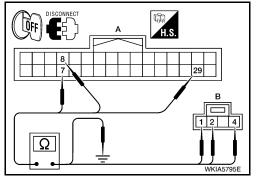
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Regarding Wiring Diagram information, refer to AV-49, "Wiring Diagram".

# 1. CHECK HARNESS BETWEEN BLUETOOTH CONTROL UNIT AND MICROPHONE

- 1. Turn ignition switch OFF.
- 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		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	7		1	
B126	8	R7	2	Yes
	29		4	



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

	A		Continuity
Connector	Terminal	_	Continuity
	7		
B126	8	Ground	No
	29		

#### Are the continuity test results as specified?

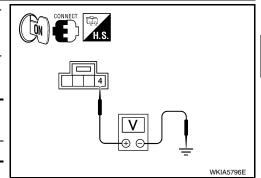
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK MICROPHONE POWER SUPPLY

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

		(+)	(-)	Voltage (approx.)
Conr	ector	Terminal	(-)	voltage (approx.)
R	.7	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

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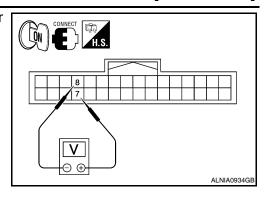
#### **MICROPHONE SIGNAL CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[BASE AUDIO]

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

Connector	(+)	(-)	Reference signal				
Connector	Terminal	Terminal	Neierence signal				
			While talking into microphone				
B126	7	8	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0  PKIB5037J				



#### Are voltage readings as specified?

>> Replace Bluetooth control unit. Refer to <u>AV-85, "Removal and Installation"</u>. >> Replace microphone. Refer to <u>AV-83, "Removal and Installation"</u>. YES

NO

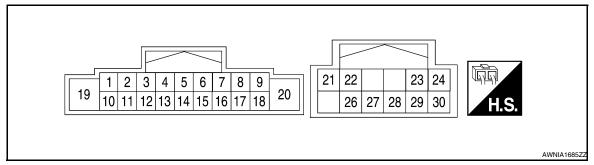
< ECU DIAGNOSIS > [BASE AUDIO]

# **ECU DIAGNOSIS**

# **AUDIO UNIT**

Reference Value

#### TERMINAL LAYOUT



#### PHYSICAL VALUES

	minal e color)		Signal in-		Condition	
+	_	- Item	put/out- put	Ignition switch	Operation	Reference value (approx)
2 (L)	3 (B/W)	Audio sound signal front LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms
4 (LG)	5 (B/Y)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 ms
6		Steering			Depress ♥ switch.  Depress ♠ switch.	220Ω 110Ω
(W/G)	Ground	switch signal A	Input	ON	Depress A switch.	0Ω
7 (V/Y)	Ground	ACC signal	Input	ON	Ignition switch ACC or ON	Battery voltage
9 (R/L)	8 (R/Y)	ILL signal	Input	ON	Headlamps ON	Battery voltage
11 (BR)	12 (B/R)	Audio sound signal front RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 ms

Revision: November 2009 AV-47 2010 Maxima

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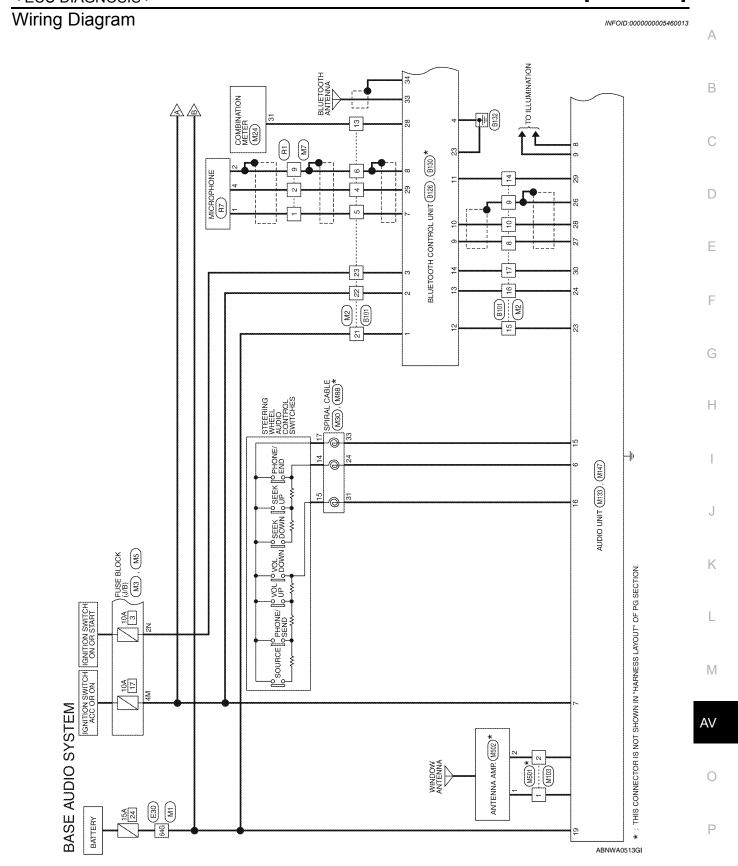
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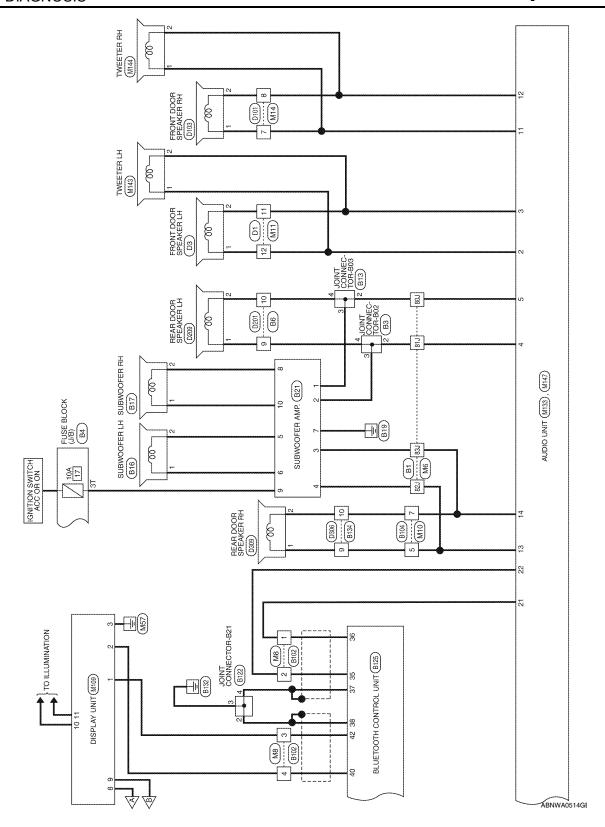
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		I				
	minal e color)	Item	Signal in- put/out-		Condition	Reference value (approx)
+	_	ili Gili	put	Ignition switch	Operation	Telefelice value (applox)
13 (O)	14 (B/P)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 ms
15 (L/B)	_	Remote con- trol ground	Input	-	_	-
					Depress SOURCE switch.	680Ω
16	Ground	Steering switch signal	Input	ON	Depress 🎺 switch.	220Ω
(GR/L)	Ground	B	mpac	0.11	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	_	_	
					Depress ∇ switch.	220Ω
23 (W/B)	Ground	Steering switch signal	Output	ON	Depress $\Delta$ switch.	110Ω
()		A			Depress switch.	$0\Omega$
					Depress SOURCE switch.	680Ω
24	Ground	Steering switch signal	Output	ON	Depress 🎺 switch.	220Ω
(GR/R)	G. Gairia	B	Carpar		Depress volume UP switch.	110Ω
					Depress volume DOWN switch.	$0\Omega$
26	-	Shield	-	-	-	-
27 (BR)	28 (Y)	Tel Voice sig- nal	Input	ON	With Bluetooth transmitting tel- voice signals to the audio unit.	(V) 1 0 -1 → + 2ms SKIB3609E
29 (G/O)	Ground	Telephone ON	Output	ON	_	-
30 (LG/B)	_	Shield	_	_	-	-





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Signal Name	ı	
Color of Wire	٨/٨	G
Terminal No.	22	23

	WIRE TO WIRE	WHITE		8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13		Signal Name			1	Ĭ	\$	-	\$	ī		***		1
M2				11 10 9 23 22 21		Color of Wire	ш	٦	SHIELD	BR	SHIELD	Υ	W/N	G/O	W/B	GR/R	LG/B	Y/R
Connector No.	Connector Name	Connector Color		H.S. 24	]]	Terminal No.	4	ಬ	9	8	6	10	13	14	15	16	17	21

12 11 24 23	ပိ>			R	_	FS.		>		>	Q	ت	_	
H.S.	Terminal No.	4	5	9	8	6	10	13	14	15	16	17	21	
/														
96 86 76 66 56 46 36 176 166 156 146 136 126 116 106 26 16	26G 25G 24G 23G 22G 21G 20G 34G 33G 32G 31G 30G 29G 28G 27G 19G 18G	0.00	50G 49G 48G 47G 46G 45G 44G 43G 42G		59G 57G 56G 55G 62G 62G 61G 60G 50G 54G 53G 52G 51G		72G 71G 70G 69G 68G 67G 66G	80G 79G 78G 77G 76G 75G 74G 73G 65G 64G	826 816	-		Signal Name	2000	
96 86 76 66 176 186 156 146 136	26G 25G 24		41G 40G 3		58G 57G 56G 55G		72G 71G 70	DG 79G 78G 77	836			Color of	WILE	Y/R
山山 H.S.	<u>L. &amp;</u>		L			21		<u> </u>	<u></u>	//	•	Terminal No	3	64G

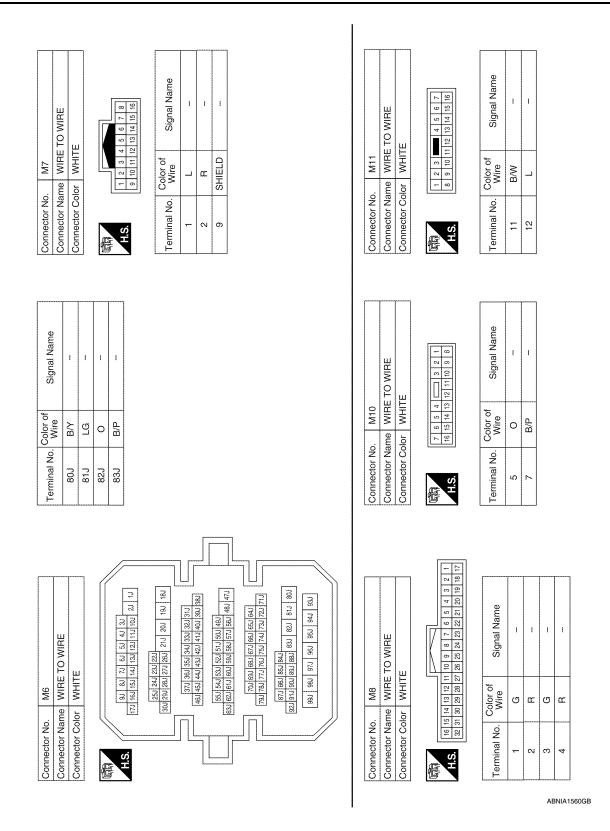
**AUDIO UNIT** 

	Connector Name FUSE BLOCK (J/B)	<u> </u>	2M 4M	Signal Name	1
M5	ne FUS	r WHI	5M 4M [12M 11M 10	Color of Wire	٨/٨
Connector No.   M5	Connector Nan	Connector Colc	E.S.	Terminal No. Wire	4M
	E BLOCK (J/B)	Ш	3N SN 7N SN 5N 4N	Signal Name	ī
<b>M</b> 3	e FUSI	v WHI	88 38 77 77	Color of Wire	9
Connector No.   M3	Connector Name FUSE BLOCK (J/B)	Connector Color WHITE	所 H.S.	Terminal No. Wire	SN

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

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**AUDIO UNIT** 

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Connector No. M30 Connector Name SPIRAL CABLE Connector Color GRAY	M.S. (3) 22 33 34	Color of 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.   M109	le le	Connector Color WHITE	H.S. T 8 9 10 11 12	Terminal No. Color of Signal Name	1 G M-CAN L	2 R M-CAN H	3 B GND	- 4	ı.	. 9	 8 V/Y ACC	9 Y/R +B	10 R/L ILL+	11 R/Y ILL-	- 12
Connector No. M24 Connector Name COMBINATION METER Connector Color WHITE	H.S.	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         36         37         38         39         40	Color of	Terminal No. Wire Signal Name		Connector No. M103	Connector Name WIRE TO WIRE Connector Color GRAY	-	H.S.	Terminal No.   Color of   Signal Name	E	2 B -									
Connector No. M14 Connector Name WIRE TO WIRE Connector Color WHITE	1 2	Terminal No.   Color of   Signal Name	BR	8 B/R -		Connector No M88	9 5		(南) (20 19 18 17 16 15 14 13] H.S.	Terminal No. Color of Signal Name	14 W REMOTE A	L REMOTE	BB								

**AUDIO UNIT** 

Revision: November 2009 AV-53 2010 Maxima

Connector No.	M143	43
Connector Name		TWEETER LH (WITH BASE AUDIO SYSTEM)
Connector Color		BROWN
H.S.		
Terminal No. Wire	Color of Wire	Signal Name
<b>3</b>	بـ	ı
2	B/W	į

51	WIRE TO WIRE	AY	123	Signal Name		ı
, M501		ilor GRAY		Color of Wire	В	В
Connector No.	Connector Name	Connector Color	H.S.	Terminal No. Wire	,	2

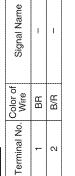
Signal Name	ACC	ILL(-)	ILL(+),LIGHT SW	1	FR SP RH(+)	FR SP RH(-)	RR SP RH(+)	RR SP RH(-)	STRG SW GND	STRG SW B	ı	1	BAT	ŧ
Color of Wire	٨/٨	₽/Y	P/L	ı	ВВ	B/R	0	B/P	L/B	GR/L	ı	ı	Y/R	ı
Terminal No.	7	8	6	10	Ξ	12	13	14	15	16	17	18	19	20

1.		,	,	•					,	,	,						,
	47	AUDIO UNIT (WITH BASE AUDIO SYSTEM)	WHITE		M	28 29 30	Signal Name	MULTIMEDIA CAN L	MULTIMEDIA CAN H	LADDER OUT 1	LADDER OUT 2	1	TEL SHIELD	TEL I/F+	TEL 1/F-	TEL ON	LADDER SHIELD
	. M147					21 22 22 26 27	Color of Wire	Ø	æ	W/B	GR/R	1	SHIELD	BB	≻	0/9	LG/B
	Connector No.	Connector Name	Connector Color		E	H.S.	Terminal No.	21	22	23	24	25	26	27	28	59	30

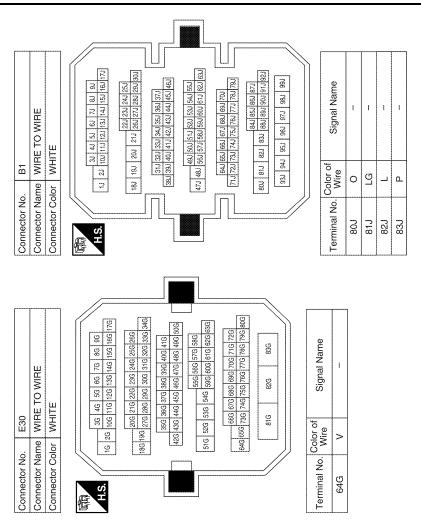
or No. M133	vr Name   AUDIO UNIT (WITH BASE AUDIO SYSTEM)	r Color WHITE	19 10 11 12 13 14 15 16 17 18	No. Color of Signal Name
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.

FR SP LH(+)	FR SP LH(-)	RR SP LH(+)	RR SP LH(-)	STRG SW A	
	B/W	LG	B/Y	W/G	
2	က	4	ಬ	9	

Connector No.	M144
Connector Name	TWEETER RH (WITH BASE AUDIO SYSTEM)
Connector Color	BROWN
H.S.	2 1



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Connector Name	ZOGIN	
		ANTENNA AMP.
Connector Color	r GRAY	,
赋 H.S.	[1]2	
Terminal No. Wire	olor of Wire	Signal Name
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[BASE AUDIO]

Connector No.	. B4		Connector No.	). B6	
Connector Nar	me FUE	SE BLOCK (J/B)	Connector Name WIRE TO WIRE	ume WIF	RE TO WIRE
Connector Col	or BR(	Connector Color   BROWN	Connector Co	olor WH	<u>ш</u>
南南 H.S.	5T 4T 12T 11T	11   12   13   2T   1T   1T   1T   1T   1T   1T   1T	原 H.S.	2 1 2	8 9 3 10 4 4
Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
ЭТ	Ö	100	တ	re	in the second
			10	0	ı

Connector Name JOINT CONNECTOR-B02

83

Connector No.

Connector Color WHITE

Signal Name

Color of Wire

Terminal No.

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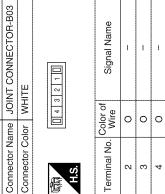
0 0 4

Connector No.   B17	Connector Name SUBWOOFER RH
B16	SUBWOOFFRIH
Connector No.	Connector Name

-	SUBWOOFER RH	ІТЕ		Signal Name	1	***
B17	1	or WHITE		Color of Wire	8	BR
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	+	2

<b></b>	SUBWOOFER LH	WHITE		Signal Name		***
. B16		L	2	Color of Wire	>	>
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No.	-	2

Connector No.	B13
Connector Name	Connector Name JOINT CONNECTOR-B03
Connector Color WHITE	WHITE



ABNIA1564GB

Signal Name	ł	I	į	Ĭ	I
Color of Wire	а	α	>	GR	0
Terminal No. Wire	16	17	21	22	23

Connector Name WIRE TO WIRE Connector Color WHITE	ame	5 5	[등] 동	WIRE T	[일][		E	ш				
				Ш	IN	11/		لــــا				_
É	1 2	က	4	22	9	7	8	9 10 11 12	5	=	12	
	13 14 15 16 17 18 19 20 21 22 23 24	15	16	17	92	6	20	21	22	23	24	
		1	ı	ı				ı		1		
Terminal No.	0	olor o Wire	ţ.			S	ig	Signal Name	eg	Ě	an.	

B101

Connector No.

Connector Color WHITE	2 4 5 6 7 9
Connecto	南 H.S.

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8	7	
П	9	
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Connector Name SUBWOOFER AMP.

B21

Connector No.

Signal Name	SP LH (·) IN	SP LH (+) IN	SP RH (-) IN	SP RH (+) IN	WOOFER LH (-)	WOOFER LH (+)	GND	WOOFER RH (-)	ACC
Color of Wire	0	n S	ď	٦	>	>	В	BB	g
Terminal No.	-	2	8	4	5	9	7	αο	6

SHIELD

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Connector Name WIRE TO WIRE

B102

Connector No.

Connector Color WHITE

BB BB

SHIELD

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22	INT CONNECTOR-B21	ĦE	3 2 1 0		Signal Name	ı	ı	ı
		lor	14		Color of Wire	SHIELD	മ	C III I
Connector No	Connector Na	Connector Co		H.S.	Terminal No.	8	ო	4
	Connector No. B122	<u></u>	9 5	Connector No. B122 Connector Name JOINT CONNECTOR-B21 Connector Color WHITE	Connector No. B122 Connector Name JOINT CONNECTOR-B21 Connector Color WHITE	Connector No. B122 Connector Name JOINT CONNECTOR-B21 Connector Color WHITE  H.S.  Terminal No. Color of Signal Name	Signal Name	Connector No.         B122           Connector Name         JOINT CONNECTOR-B21           Connector Color         WHITE           H.S.         Image: Im

)4	WIRE TO WIRE	ITE	3	Signal Name	1
. B104	ـ	lor WHITE	8 8 10 10 10 10 10 10 10 10 10 10 10 10 10	Color of Wire	re
Connector No.	Connector Name	Connector Color	用.S.	Terminal No.	5

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H.S.	Terminal No.	2	7

	16	32	
	15	31	I
	4	30	I
	13	53	
	12	88	
	=	27	
	10	26	
Ш	6	52	
I۱	8	54	
	7	83	
	9	N	
	S	21	
	4	20	
	8	유	
	2	18	
		17	

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Æ	H.S.
123	

Signal Name	ì	ſ	ŧ	ı
Color of Wire	۵.		Œ	ŋ
Ferminal No.	٦	2	3	4

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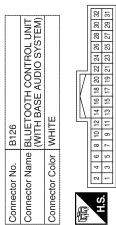
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R SHIELD

Signal Name	LADDER IN2	LADDER GND	Į	ı	1			an	ı	I	CONT4	ı	ı	ŧ	ī	SPEED	MIC POWER		ana.	ia.
Color of Wire	۵	œ	1	ı	ı	ı	1	ı	ı	ı	83	1	ı	ı	ı	BR	ш	ı	j	ı
Terminal No.	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

28	
 1	
32	

Connector Color WHITE
H.S. (15) 14 13 12 11 10 9
Connector Name WIRE TO WIRE
Connector No. R1 Connector Name WIRE TO WIRE



Terminal No.	Color of Wire	Signal Name
,-	>	8+
2	GR	ACC
3	0	IGN
4	В	GND
5	-	ı
9	***	ı
7	٦	MIC IN +
8	SHIELD	MIC IN -
6	BR	AUDIO OUT (+)
10	7	AUDIO OUT (-)
11	SB	MUTE CONTROL
12	٦	LADDER IN1

**AUDIO UNIT** 

Connector No.	). B134	
Connector Name WIRE TO WIRE	ıme WIRE	TO WIRE
Connector Color WHITE	lor WHITI	11.1
原和 H.S.	ru n	3 4 7 8 9 10
Terminal No.	Color of Wire	Signal Name
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Signal Name	CAN H1	CAN L1	CAN SHIELD 1	CAN SHIELD 2	l	CAN H2	ļ	CAN L2
Color of Wire	٦	Ф	SHIELD	SHIELD	ı	Э	ı	В
Terminal No.	35	36	37	38	39	40	41	42

Connector No.	. B130	
Connector Na	me BLUE UNIT	Connector Name BLUETOOTH CONTROL UNIT
Connector Color	lor BLACK	X
而 H.S.	33	
Terminal No.	Color of Wire	Signal Name
33	80	1
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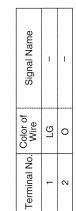
Vo. R7 Name MICROPHONE Color WHITE	Connector Name WIRE T Connector Color WHITE	Connector No. D1  Connector Name WIRE TO WIRE  Connector Color WHITE	Connector No. D3 Connector Name FRONT Connector Color WHITE	me FRONT DC	Connector No. D3  Connector Name FRONT DOOR SPEAKER LH  Connector Color WHITE
234	H.S.	7 6 5 4	原 H.S.	2 1	
Signal Name					
MIC SIG	Terminal No. Color of	olor of Signal Name	Terminal No. Color of	Color of	Signal Name
MIC GEN	A	_		wire	
MIC VCC	<del></del>	0	•	<u> </u>	ı
	12	LG	2	0	1

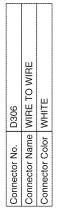
ector No	ector No. D101		Connector No. D103	D103		Connector No. D201	. D201	
nector Na	ector Name WIRE TO WIRE	TO WIRE	Connector Nan	ne FRONT	Connector Name FRONT DOOR SPEAKER	Connector Name WIRE TO WIRE	me WIRE	TO WIRE
Dector Co	ector Color WHITE	U.		I		Connector Col	or WHITE	111
		1	Connector Color WHITE	or WHITE				
	8	2				The state of the s	8	
رن ن	8	7 6 5	H.S.	2 1		H.S.	10 9 8	7 6 5
						_		
	Color of					Torminal No Color of	Color of	Cional Mamo
ninal No.	ninal No.   Wire	Signal Name	Terminal No Color of	Color of	Signal Name	- Gillina vo.	Wire	Olginal Mallie
7	0	an		Wire		6	LG LG	ł
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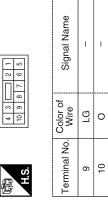
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Revision: November 2009 AV-59 2010 Maxima

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

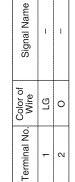






D209	Connector Name (WITH BASE AUDIO SYSTEM)	WHITE
Connector No.	Connector Name	Connector Color WHITE





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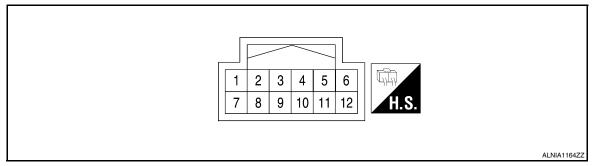
#### **DISPLAY UNIT**

< ECU DIAGNOSIS > [BASE AUDIO]

# **DISPLAY UNIT**

Reference Values

#### TERMINAL LAYOUT



#### PHYSICAL VALUES

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

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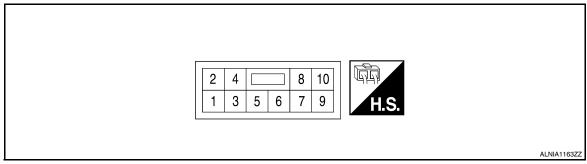
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< ECU DIAGNOSIS > [BASE AUDIO]

# **SUBWOOFER AMP**

Reference Value

#### TERMINAL LAYOUT



#### PHYSICAL VALUES

Term (Wire		Item	Signal			Voltage
+	_	nem	input/ output	Ignition switch	Operation	(approx.)
2 (LG)	1 (O)	Audio signal LH	Input	ON	Receive audio signal.	(V) 1 0 -1 + 2ms SKIB3609E
4 (L)	3 (P)	Audio signal RH	Input	ON	Receive audio signal.	(V) 1 0 -1 + 2ms SKIB3609E
5 (V)	6 (Y)	Subwoofer audio signal LH	Output	ON	Receive audio signal.	(V) 1 0 -1 + 2ms SKIB3609E
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.	(V) 1 0 -1 + 2ms SKIB3609E

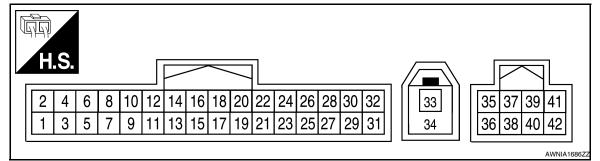
#### **BLUETOOTH CONTROL UNIT**

< ECU DIAGNOSIS > [BASE AUDIO]

#### **BLUETOOTH CONTROL UNIT**

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

Terminal (Wire color)		ltom	Signal	Condition		Reference value
+	_	- Item	input/ output	Ignition switch	Operation	(Approx.)
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	(V) 1 0 -1 * + 2ms SKIB3609E
11 (SB)	_	Mute	Output	_	-	-
				Input ACC/ON	Press SEEK DOWN switch.	0.7 V
12 (L)	Ground	Remote con- trol switch 1	Input		Press SEEK UP switch.	1.3 V
` '		ti Oi SWILCII I			Pressing A switch.	2.0 V
					Except for above.	3.3 V

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#### **BLUETOOTH CONTROL UNIT**

[BASE AUDIO]

Term (Wire	ninal color)	Item	Signal input/		Condition	Reference value	
+	-	item	output		Operation	(Approx.)	
					Press SOURCE switch.	0 V	
					Press "≨ switch.	0.7 V	
13 (P)	Ground	Remote con- trol switch 2	Input	ACC/ON	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)	(V) 15 10 5 0 *** 20ms PKIA1935E	
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:0000000005460017

#### **AUDIO SYSTEM**

Symptom	Possible cause	Reference page
Inoperative	Audio unit power circuit     Audio unit	• AV-29 • AV-70
Steering wheel audio control switches do not operate	Steering wheel audio control switches     Audio unit	• <u>AV-43</u> • <u>AV-70</u>
All speakers do not sound	Audio unit     Audio unit power circuit	• <u>AV-70</u> • <u>AV-29</u>
One or several speakers do not sound	Front door speaker     Tweeter     Rear door speaker     Subwoofer	<ul> <li>AV-34</li> <li>AV-36</li> <li>AV-38</li> <li>AV-40</li> </ul>

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Symptom	Possible cause	Reference page	
CD cannot be inserted.			
CD cannot be ejected.	Audio unit	<u>AV-70</u>	
The CD cannot be played.	Addio driit		
The sound skips, stops suddenly, or is distorted.			

#### HANDS-FREE PHONE

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Symptom	Possible cause	Reference page
Inoperative	Bluetooth control unit power and ground circuit     Bluetooth control unit	• <u>AV-31</u> • <u>AV-85</u>
Steering wheel audio control switches do not operate	Steering wheel audio control switches     Audio unit     Bluetooth control unit	• AV-43 • AV-70 • AV-85
Voice activated control does not operate	Microphone     Steering wheel audio control switches     Bluetooth control unit	<ul><li>AV-45</li><li>AV-43</li><li>AV-85</li></ul>

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[BASE AUDIO]

#### NORMAL OPERATING CONDITION

Description INFOID:0000000005460018

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

C	Possible cause	
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	Ignition components
The occurrence of the noise is lin	ked with the operation of the fuel pump.	Fuel pump condenser
Noise only occurs when various electrical components are oper-	A cracking or snapping sound occurs with the operation of various switches.	Relay malfunction, audio unit malfunction
ating.	The noise occurs when various motors are operating.	Motor case ground     Motor
The noise occurs constantly, not j	Rear defogger coil malfunction     Open circuit in printed heater     Poor ground of antenna feeder line	
A cracking or snapping sound occ it is vibrating excessively.	Ground wire of body parts     Ground due to improper part installation     Wiring connections or a short circuit	

#### **PRECAUTIONS**

[BASE AUDIO] < PRECAUTION >

# **PRECAUTION**

#### **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRF-TFNSIONER"

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:0000000005885976

#### 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.
- 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 > [BASE AUDIO]

# **PREPARATION**

# **PREPARATION**

# **Commercial Service Tools**

Tool name		Description
		Loosening bolts and nuts
Power tool		
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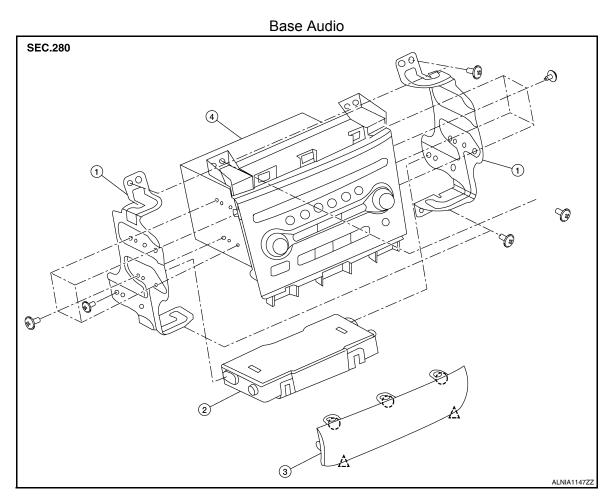
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# **ON-VEHICLE REPAIR**

#### **AUDIO UNIT**

#### Removal and Installation

INFOID:0000000005460022



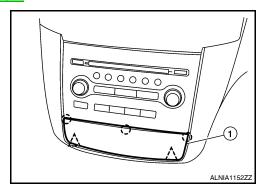
- 1. Audio unit brackets LH/RH
- 4. Audio unit

- 2. A/C auto amp.
- ,^ Clip

- Cluster lid C lower
- ? Pawl

#### **REMOVAL**

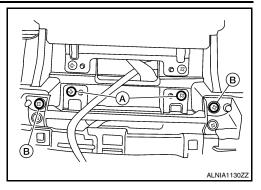
- 1. Disconnect the battery negative terminal.
- 2. Remove the cluster lid D. Refer to IP-12, "Removal and Installation".
- 3. Remove the cluster lid C lower finisher (1).
  - ( ]): Pawl
  - 🔨: Clip



#### **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**

#### Removal and Installation

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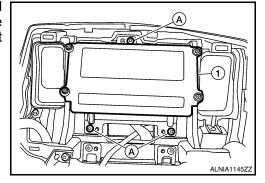
# SEC.280 One of the control of the c

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

#### 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

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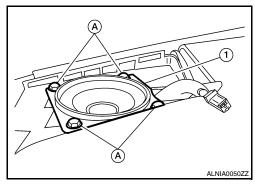
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#### **REMOVAL**

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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[BASE AUDIO]

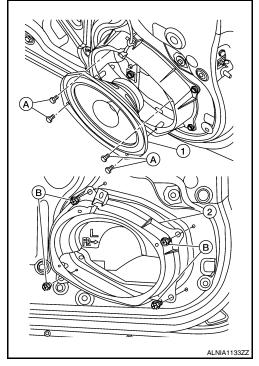
## FRONT DOOR SPEAKER

## Removal and Installation

#### INFOID:0000000005460025

#### **REMOVAL**

- 1. Remove the front door finisher. Refer to <a href="INT-18">INT-18</a>, "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 >

[BASE AUDIO]

## REAR DOOR SPEAKER

## Removal and Installation

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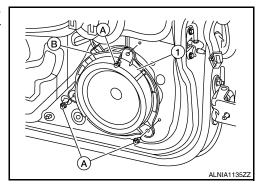
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#### **REMOVAL**

- 1. Remove the rear door finisher. Refer to <a href="INT-21">INT-21</a>, "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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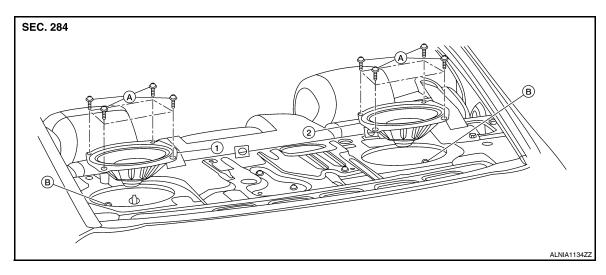
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## **SUBWOOFER**

## Removal and Installation

INFOID:0000000005460027



Subwoofer LH

2. Subwoofer RH

A. Subwoofer screws

B. Subwoofer connectors

#### **REMOVAL**

- 1. Remove the rear parcel shelf finisher. Refer to <a href="INT-26">INT-26</a>, "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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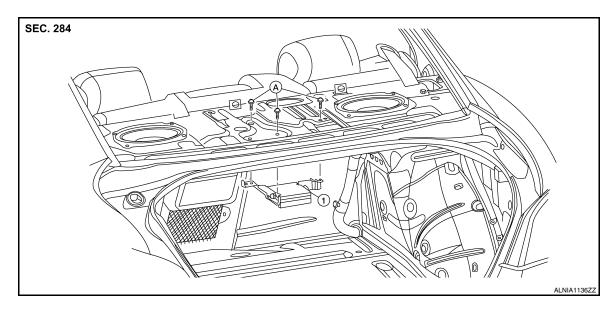
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## SUBWOOFER AMP

## Removal and Installation



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.
- Remove the trunk upper finisher. Refer to <u>INT-35</u>, "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.

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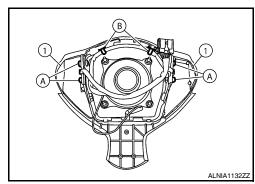
## STEERING SWITCH

## Removal and Installation

#### INFOID:0000000005460029

#### **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).

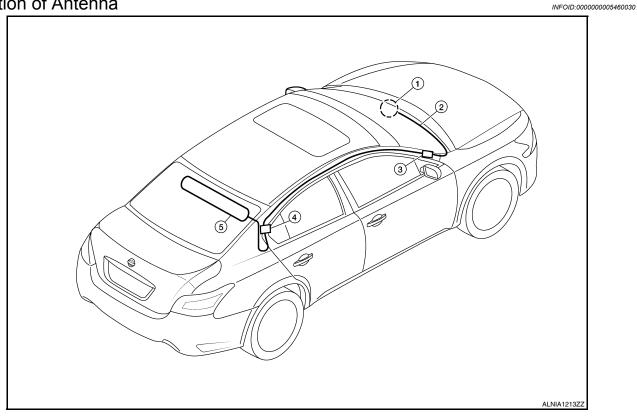


#### **INSTALLATION**

Installation is in the reverse order of removal.

## **AUDIO ANTENNA**

## Location of Antenna



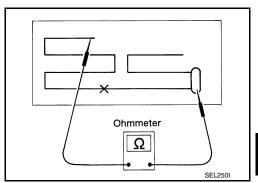
- Audio unit
- Antenna amp.

- Audio unit antenna feeder
- Window antenna
- In-line connectors M103, M501

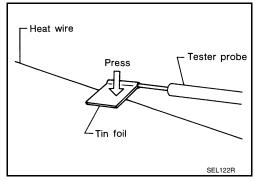
## Window Antenna Repair

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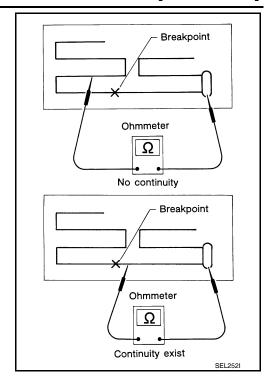
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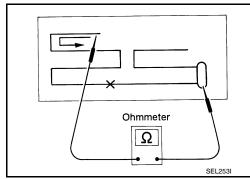
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2. If an element is broken, no continuity will exist.



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



#### REPAIR EQUIPMENT

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

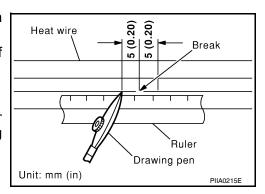
#### REPAIRING PROCEDURE

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

#### NOTE:

Shake silver composition container before use.

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

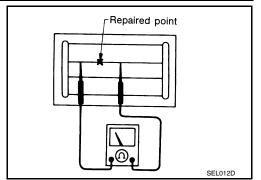


#### **AUDIO ANTENNA**

## < ON-VEHICLE REPAIR > [BASE AUDIO]

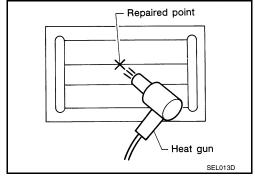
After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

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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[BASE AUDIO]

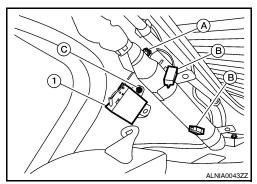
## ANTENNA AMP.

## Removal and Installation

#### INFOID:0000000005460032

#### **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

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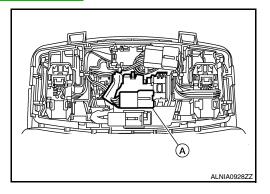
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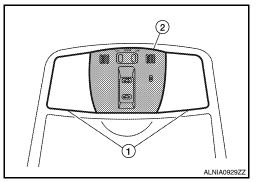
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#### **REMOVAL**

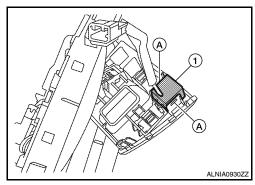
- 1. Remove the map lamp assembly. Refer to <a href="INL-97">INL-97</a>, "Removal and Installation".
- 2. Detach the microphone connector (A).



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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#### [BASE AUDIO]

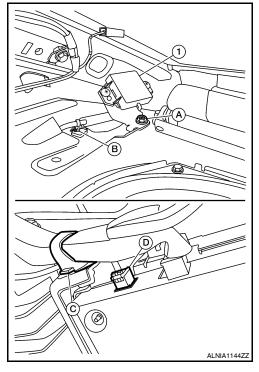
## **TEL ANTENNA**

## Removal and Installation

#### INFOID:000000005460034

#### **REMOVAL**

- 1. Remove the rear parcel shelf. Refer to <a href="INT-26">INT-26</a>, "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**

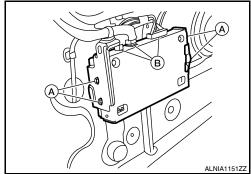
< ON-VEHICLE REPAIR > [BASE AUDIO]

## **BLUETOOTH CONTROL UNIT**

## Removal and Installation

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 <a href="INT-26">INT-26</a>, "Removal and Installation".
- 4. From inside the passenger compartment, remove the Bluetooth control unit bracket screws.
- 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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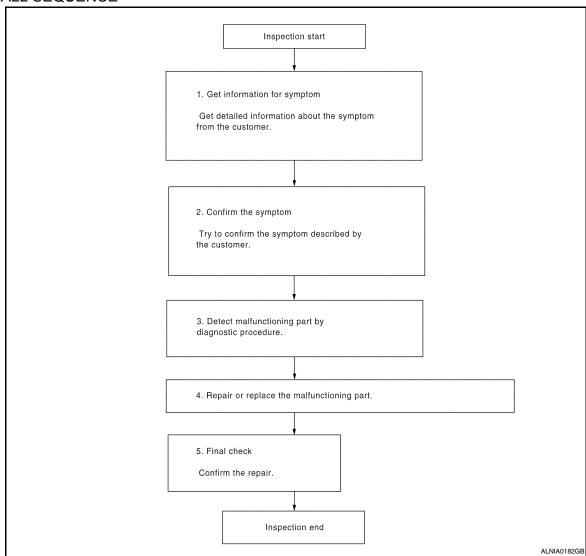
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# **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

#### **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** [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 Repair or replace the malfunctioning part. 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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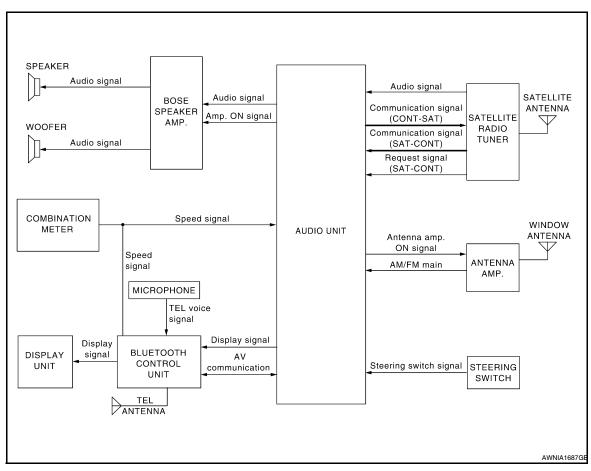
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## **FUNCTION DIAGNOSIS**

## AUDIO SYSTEM

System Diagram

INFOID:0000000005460037



## System Description

INFOID:0000000005460038

#### 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)

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#### · Satellite radio tuner

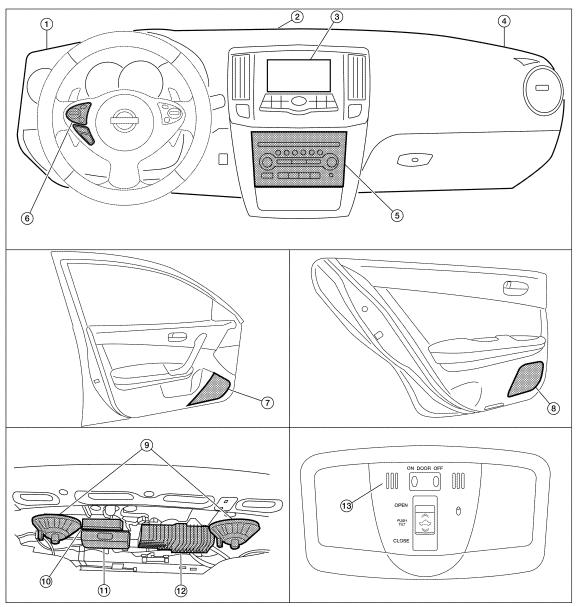
When the satellite radio system is on, radio signals are supplied to the satellite radio tuner from the satellite antenna. The satellite radio tuner then sends audio signals to the audio unit.

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**



AWNIA168877

- Tweeter LH M51
- Tweeter RH M52
- Front door speaker LH D3 RH D103
- 10. Bluetooth control unit B125, B130, B131
- 13. Microphone R7

- Center speaker M130
- 5. Audio unit M132, M135, M138
- Rear door speaker LH D202 RH D302
- 11. Satellite radio tuner (if equipped) B111 12. BOSE speaker amp. B109, B110
- 3. Display unit M109
- Steering wheel audio control switches
- Rear subwoofer LH B106 **RH B107**

## **AUDIO SYSTEM**

## < FUNCTION DIAGNOSIS >

## [BOSE W/ MONOCHROME DISPLAY]

# **Component Description**

INFOID:0000000005460040

Part name	Description
Audio unit	Controls audio system and satellite radio system functions
Bluetooth control unit	<ul><li>Receives display signals from the audio unit.</li><li>Outputs display signals to the display unit.</li></ul>
Display unit	<ul> <li>Receives display signals from the Bluetooth control unit (with Bluetooth) or from the audio unit.</li> <li>Displays audio system information.</li> </ul>
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> <li>Each audio operation can be operated</li> <li>Steering switch signal (operation signal) is output to audio unit</li> </ul>
Front door speakers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Center speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Tweeters	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sounds</li></ul>
Rear door speakers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Rear subwoofers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs low range sounds</li></ul>
Satellite radio tuner (if equipped)	<ul><li>Receives radio signals from satellite antenna</li><li>Sends audio signals to audio unit</li></ul>
Satellite antenna (if equipped)	Audio signal (satellite radio) is received and output to audio unit.

## HANDS-FREE PHONE SYSTEM

## System Diagram

INFOID:000000005460041

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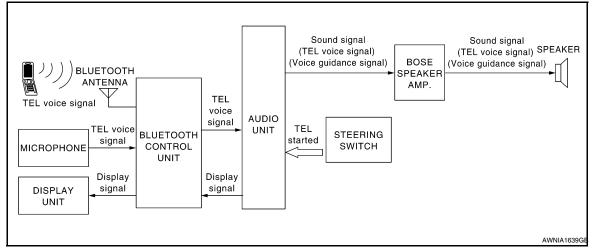
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## System Description

INFOID:0000000005460042

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**

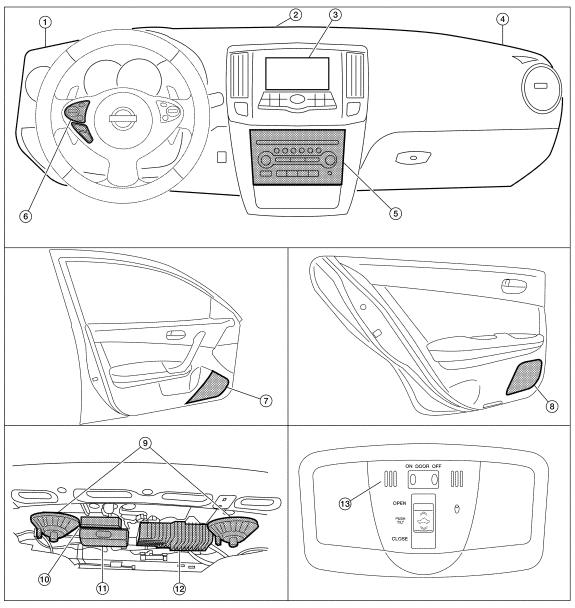
The microphone is located in the roof console assembly. The microphone sends a signal to the Bluetooth con-

#### **AUDIO UNIT**

trol unit. The microphone can be actively tested during self-diagnosis. Р The audio unit receives signals from the Bluetooth control unit and sends audio signals to the speakers.

## **Component Parts Location**

INFOID:0000000005460043



AWNIA1688ZZ

- Tweeter LH M51
- Tweeter RH M52
- Front door speaker LH D3 **RH D103**
- 10. Bluetooth control unit B125, B130, B131
- 13. Microphone R7

- Center speaker M130
- 5. Audio unit M132, M135, M138
- Rear door speaker LH D202 RH D302
- 11. Satellite radio tuner (if equipped) B111 12. BOSE speaker amp. B109, B110
- Display unit M109
- Steering wheel audio control switches
- 9. Rear subwoofer **LH B106 RH B107**

## **HANDS-FREE PHONE SYSTEM**

< FUNCTION DIAGNOSIS >

## [BOSE W/ MONOCHROME DISPLAY]

# **Component Description**

INFOID:0000000005460044

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Part name	Description	
Audio unit	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		
Front tweeter	Receives telephone voice and voice guidance signals from BOSE speaker amp.	
Center speaker		
Steering wheel audio control switches	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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[BOSE W/ MONOCHROME DISPLAY]

# DIAGNOSIS SYSTEM (AUDIO UNIT)

## **Diagnosis Description**

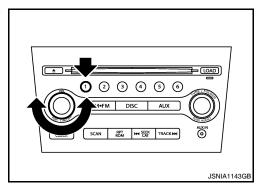
INFOID:0000000005460045

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	dienl	av itam
version	uispi	ay item

Mode		Description		
	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.		
Versions display	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

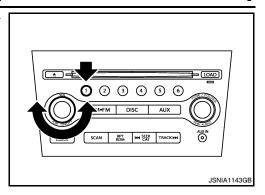
- 1. Turn ignition switch ON.
- Turn the audio unit off.

## **DIAGNOSIS SYSTEM (AUDIO UNIT)**

#### < FUNCTION DIAGNOSIS >

## [BOSE W/ MONOCHROME DISPLAY]

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



4. 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.

5. 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.

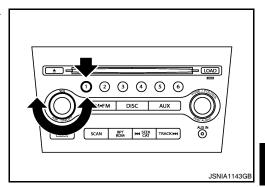
Channel che	eck item
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	Mode	Description
Channel check  Channel check  Channel Rear Rig  Channel	Channel Check Front Left	
	Channel Check Front Right	Connection of a greater can be confirmed by test tone
	Channel Check Rear Right	Connection of a speaker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

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

#### KEY CHECK DIAGNOSIS FUNCTION

- 1. Turn ignition switch ON.
- 2. Turn the audio unit off.
- 3. 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. Α

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## **DIAGNOSIS SYSTEM (AUDIO UNIT)**

#### < FUNCTION DIAGNOSIS >

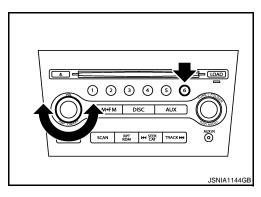
#### [BOSE W/ MONOCHROME DISPLAY]

Key check item (audio unit)		
Mode	Display item	Switch name
	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
Vov shook	DISC	DISC switch
Key check	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 sw	vitch)	
Mode	Display item	Switch name
	STR SOURCE	SOURCE switch
	STR VOL UP	VOL up switch
	STR VOL DOWN	VOL down switch
Key check	STR UP	MENU up switch
	STR DOWN	MENU down switch
	STR TEL END	
	STR TEL SEND	<b>€</b> w≤ 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 >

## [BOSE W/ MONOCHROME DISPLAY]

- 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	Description	
TRANSMIT	OK / UN	OK / 0 –39	The communication condition and error counter from the audio unit the audio display unit are displayed.	
DISP	OK / UN	OK / 0 -39	The communication condition and error counter from the audio display	
DISP MPDT	OK / UN	OK / 0 -39	unit to the audio unit.	
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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Revision: November 2009 AV-97 2010 Maxima

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

< FUNCTION DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

# DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

## **Diagnosis Description**

INFOID:0000000005460046

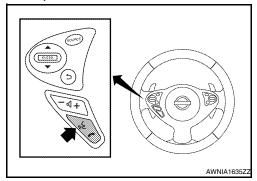
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

#### BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

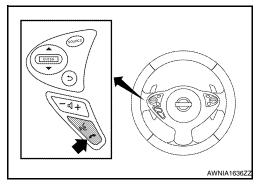
- · Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- · Bluetooth inquiry check

#### OPERATION PROCEDURE

- Turn ignition switch to ACC or ON.
- Wait for the Bluetooth system to complete initialization. This may take up to 20 seconds.
- 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.



- 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".
- After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails, refer to <u>AV-98</u>, "Work Flow".



Work Flow

Failure Message	Action		
"Internal failure"	Replace Bluetooth control unit. Refer to AV-85, "Removal and Installation".		
"Bluetooth antenna open"	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 Ins		
"Phone/End for the Hands Free System is stuck"	lation".		
"Microphone test" (failed interactive test)	Inspect harness between Bluetooth control unit and microphone.     Replace microphone. Refer to AV-83, "Removal and Installation".		

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

## COMPONENT DIAGNOSIS

# POWER SUPPLY AND GROUND CIRCUIT

**AUDIO UNIT** 

AUDIO UNIT: Diagnosis Procedure

INFOID:0000000005460048

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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	
Addio driit	7	Ignition switch ACC or ON	17	

#### Are the fuses OK?

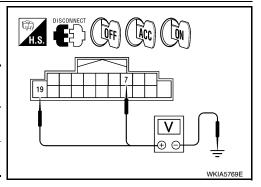
YES >> GO TO 2.

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	(-)	OH	700	
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**

Regarding Wiring Diagram information, refer to AV-133, "Wiring Diagram".

## 1. CHECK FUSES

Check that the following fuses are not blown.

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INFOID:000000005460049

#### [BOSE W/ MONOCHROME DISPLAY]

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

#### Are the fuses OK?

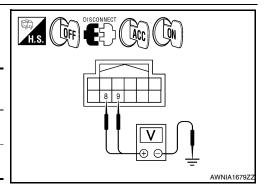
YES >> GO TO 2.

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

# 2. POWER SUPPLY CIRCUIT CHECK

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

(+)		(-)	OFF	ACC	ON
Connector	Terminal	(-)	OH	ACC	ON
M109	9	Ground	Battery voltage	Battery voltage	Battery voltage
IVI 103	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.
- Check continuity between display unit harness connector and ground.

Connector	Terminal	_	Continuity
M109	3	Ground	Yes

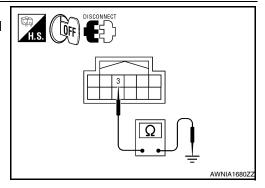
#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair harness or connector.

#### **BOSE SPEAKER AMP**

## **BOSE SPEAKER AMP: Diagnosis Procedure**



INFOID:0000000005460050

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	Ballery power	26

#### Are the fuses OK?

YES >> GO TO 2.

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

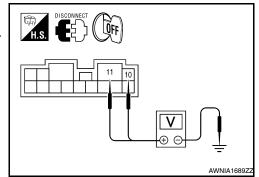
#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ MONOCHROME DISPLAY]

# 2.check power supply circuit

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

(+)		()	Voltago (approx.)	
Connector	Terminal	(-)	Voltage (approx.)	
B110	10	Ground	Battery voltage	
5110	11	Ground	Dattery Voltage	



#### Is battery voltage present?

>> GO TO 3. YES

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

# 3.CHECK GROUND CIRCUIT

Check continuity between BOSE speaker amp harness connector and ground.

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

#### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

#### SATELLITE RADIO TUNER

## SATELLITE RADIO TUNER: Diagnosis Procedure

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 in-	32	Battery power	24
stalled)	36	Ignition switch ACC or ON	17

#### Are the fuses OK?

YES

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.
- Check voltage between the satellite radio tuner (factory installed) and ground.

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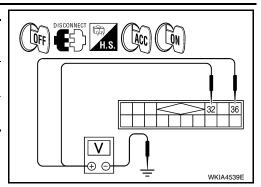
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#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ MONOCHROME DISPLAY]

(+)		(-)	OFF	ACC	ON
Connector	Terminal	(-)	OH	700	ON
B111	32	Ground	Battery voltage	Battery voltage	Battery voltage
5111	36	Ground	0V	Battery voltage	Battery voltage



#### Are the voltage results as specified?

YES >> GO TO 3.

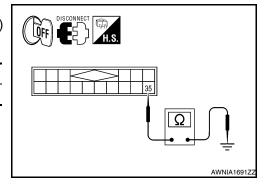
NO >> • Check connector housings for disconnected or loose terminals.

· Repair harness or connector.

# 3. GROUND CIRCUIT CHECK

- 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.

#### BLUETOOTH CONTROL UNIT

## BLUETOOTH CONTROL UNIT: Diagnosis Procedure

INFOID:0000000005460052

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?

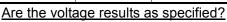
YES >> GO TO 2

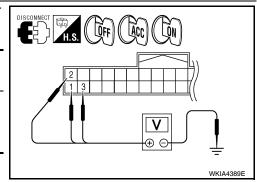
NO >> Be sure to eliminate cause of malfunction before installing new fuse.

## 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between Bluetooth control unit harness connector and ground.

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





#### < COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

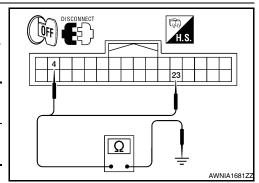
YES >> GO TO 3.

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

(+)		(-)	Continuity	
Connector	Terminal	(-)	Continuity	
B131	4		Yes	
B131	23	Ground	169	



#### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

## **MICROPHONE**

## MICROPHONE : Diagnosis Procedure

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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 po-	Value (Approx.)
Connector	Terminal	(-)	sition	value (Approx.)
R7	4	Ground	ON	5V

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#### Is proper voltage present?

YES >> GO TO 3.

NO >> GO TO 2.

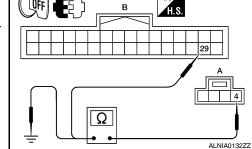
# 2.check power supply circuit (continuity)

- Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit and microphone connectors.
- Check continuity between microphone harness connector R7

   (A) terminal 4 and Bluetooth control unit harness connector B131 (B) terminal 29.

	Α		В	
Connector	Terminal	Connector	Terminal	Continuity
R7	4	B131	29	Yes

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



	A		Continuity	
Connector	Terminal	_	Continuity	
R7	4	Ground	No	

#### Are continuity results as specified?

YES >> Replace the Bluetooth control unit. Refer to AV-85, "Removal and Installation".

Revision: November 2009 AV-103 2010 Maxima

## < COMPONENT DIAGNOSIS >

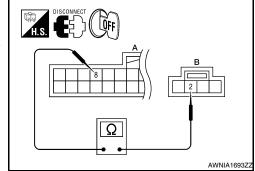
[BOSE W/ MONOCHROME DISPLAY]

NO >> Repair harness or connector.

# 3. CHECK GROUND CIRCUIT

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

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



#### Is continuity present?

YES >> Inspection End.

NO >> Repair harness or connector.

## FRONT DOOR SPEAKER

Description INFOID:0000000005460054

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

# 1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B109 and suspect speaker connector.

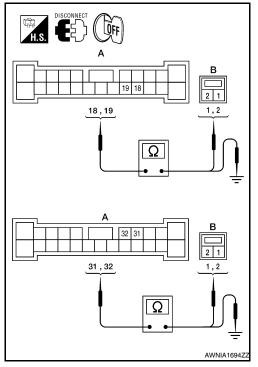
Regarding Wiring Diagram information, refer to AV-133, "Wiring Diagram".

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

А		В		Continuity
Connector	Terminal	Connector	Terminal	
B109	18	D3	1	
	19		2	Yes
	31		1	165
	32	D103	2	

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

	A	В	Continuity	
Connector	Terminal	D		
	18		No	
B109	19	Ground		
D109	31	Giodila		
	32			



#### Are continuity test results as specified?

YES >> GO TO 2.

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

· Repair harness or connector.

# 2.front door speaker signal check

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INFOID:0000000005460055

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- 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.

Connec-	Terminal		Condition	Reference	
tor	(+)	(-)	Condition	signal	
	18	19			
B109	31	32	Receive audio sig- nal	1 0 -1 1 ms SKIAO177E	

#### Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to <u>AV-166, "Removal and Installation"</u>.

NO >> GO TO 3.

## 3. HARNESS CHECK

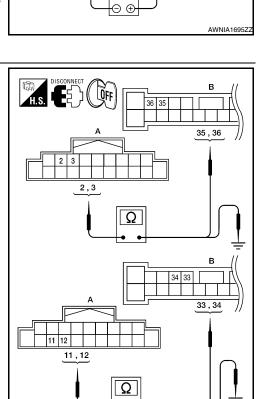
- 1. Disconnect audio unit connector M132 and BOSE speaker amp. connector B109.
- Check continuity between audio unit harness connector M132

   (A) and BOSE speaker amp. harness connector B109 (B).

Α		В		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	2	B109	35	35	
M132	3		36	Yes	
	11		33	165	
	12		34		

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

	Α		Continuity	
Connector	Terminal		Continuity	
	2	Ground	No	
M132	3			
IVI 132	11			
	12			



AWNIA1696Z

#### 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

## < COMPONENT DIAGNOSIS >

#### [BOSE W/ MONOCHROME DISPLAY]

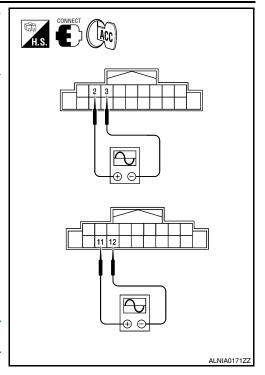
- Connect audio unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch ACC.
- 3. Push POWER switch.
- 4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Tern	ninals	Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	2	3			
M132	11	12	Receive audio sig- nal	1 0 -1 1 ms SKIA0177E	

## Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>, <u>"Removal and Installation"</u>.

NO >> Replace audio unit. Refer to <u>AV-161, "Removal and Installation"</u>.



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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:0000000005460057

Regarding Wiring Diagram information, refer to AV-133, "Wiring Diagram".

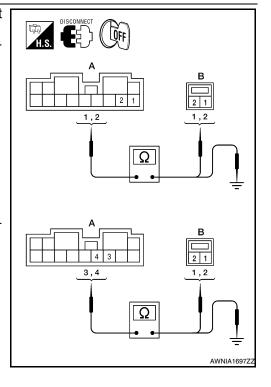
## 1. HARNESS CHECK

- 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).

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	1	NA54	1	
B110	2	M51	2	Yes
	4	MEO	1	res
	3	M52	2	

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

	Α		Continuity
Connector	Terminal	_	Continuity
	1		No
B110	2	Ground	
БПО	4	Glound	
	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

### [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	
Connector	(+)	(-)	Condition	signal	
	1	2			
B110	4	3	Receive audio sig- nal	(V) 1 0 -1 1 ms	

### Are the audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to <u>AV-164, "Removal and Installation"</u>.

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).

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2		35	
M132	3	B109	36	Yes
	11	D 109	33	
	12		34	

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

	А		Continuity
Connector	Terminal		Continuity
	2	Ground	No
M132	3		
IVI 132	11		
	12		

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### Are continuity test results as specified?

YES >> GO TO 4.

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

Repair harness or connector.

### 4.TWEETER SIGNAL CHECK

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### **TWEETER**

### < COMPONENT DIAGNOSIS >

### [BOSE W/ MONOCHROME DISPLAY]

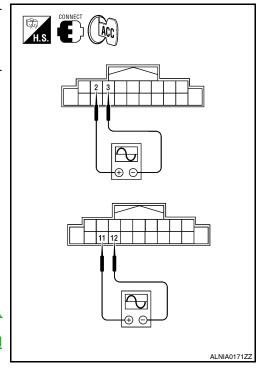
- Connect audio unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch ACC.
- 3. Push POWER switch.
- 4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals Condition		Reference	
Connector	(+)	(-)	Condition	signal	
	2	3			
M132	11	12	Receive audio sig- nal	(V) 1 0 -1 1 ms	

### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>. "<u>Removal and Installation"</u>.

NO >> Replace audio unit. Refer to <u>AV-161, "Removal and Installation"</u>.



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INFOID:0000000005460059

### **CENTER SPEAKER**

**Description** 

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.

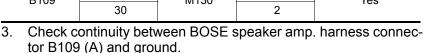
Diagnosis Procedure

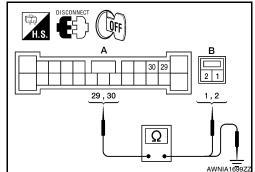
Regarding Wiring Diagram information, refer to AV-133, "Wiring Diagram".

### 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		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B109	29	M130	1	Yes
D109	30	IVITOU	2	165





	Α		Continuity
Connector	Terminal	<del>_</del>	Continuity
B109	29	Ground	No
D109	30	Giodila	INO

### Are continuity test results as specified?

YES >> GO TO 2.

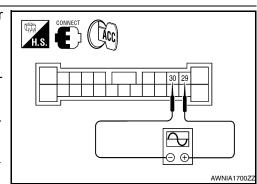
NO >> • Check connector housings for disconnected or loose terminals.

· 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	
Connector	(+)	(-)	Condition	signal	
B109	29	30	Receive audio sig- nal	(V) 1 0 -1 1 ms	



Is the audio signal voltage reading as specified?

### < COMPONENT DIAGNOSIS >

YES >> Replace center speaker. Refer to AV-165, "Removal and Installation".

NO >> GO TO 3.

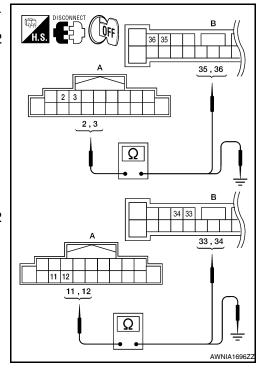
### 3. HARNESS CHECK

- 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).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2		35	
M132	3	B109	36	Yes
IVITSZ	11	D 109	33	res
	12		34	

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

	A		Continuity	
Connector	Terminal	_	Continuity	
	2	- Ground	No	
M132	3			
WITSE	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

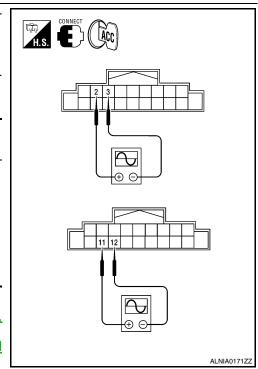
- Connect audio unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch ACC.
- 3. Push POWER switch.
- 4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	Terminals Condition		Reference
Connector	(+)	(-)	Condition	signal
	2	3		
M132	11	12	Receive audio sig- nal	1 0 -1 1 ms skia0177E

### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>, "Removal and Installation".

NO >> Replace audio unit. Refer to <u>AV-161, "Removal and Installation"</u>.



### REAR DOOR SPEAKER

Description

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

Regarding Wiring Diagram information, refer to AV-133, "Wiring Diagram".

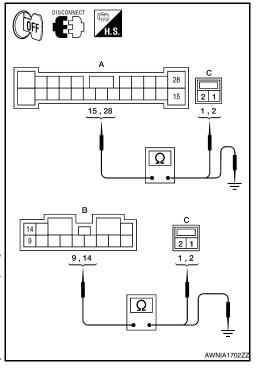
### 1. HARNESS CHECK

- 1. Disconnect BOSE speaker amp. connectors B109, B110 and suspect speaker connector.
- 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	0. D000	2	
	28 C: D202		1	Voo
B: B110	9	C: D202	2	Yes
	14	C: D302	1	

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

Connector	Terminal	-	Continuity	
A: B109	15			
A. B109	28	Ground	No	
B: B110	9			
	14	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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- 1. Connect BOSE speaker amp. connectors and suspect speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- Check the signal between BOSE speaker amp. harness connectors B109 (A) and B110 (B) terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
A: B109	28	15		
B: B110	14	9	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E

### Are audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to <u>AV-167, "Removal and Installation"</u>.

NO >> GO TO 3.

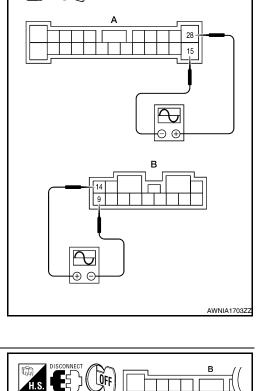
### 3. HARNESS CHECK

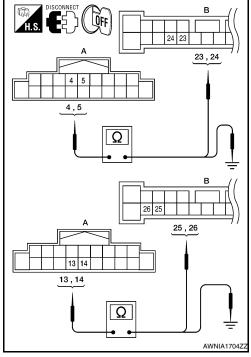
- 1. Disconnect audio unit connector M132 and BOSE speaker amp. connector B109.
- 2. Check continuity between audio unit harness connector M132 (A) and BOSE speaker amp. harness connector B109 (B).

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	4		24	
M132	5	B109	23	Yes
101132	13	D109	26	res
	14		25	

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

	Α	_	Continuity	
Connector	Terminal			
	4	Ground	No	
M132	5			
W132	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**

### < COMPONENT DIAGNOSIS >

### [BOSE W/ MONOCHROME DISPLAY]

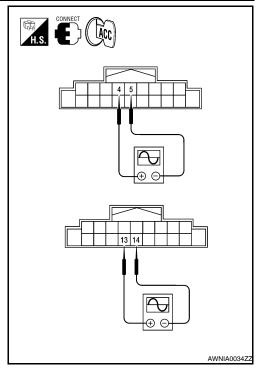
- 1. Connect audio unit connector M132 and BOSE speaker amp. connector B109.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	4	5			
M132	13	14	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E	

### Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>, <u>"Removal and Installation"</u>.

NO >> Replace audio unit. Refer to <u>AV-161, "Removal and Installation"</u>.



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### **SUBWOOFER**

Description INFOID:0000000005460062

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:0000000005460063

Regarding Wiring Diagram information, refer to AV-133, "Wiring Diagram".

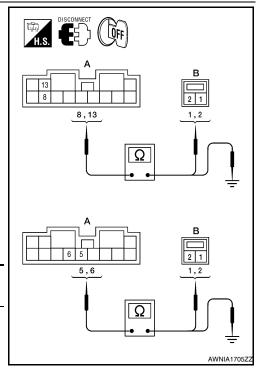
### 1. HARNESS CHECK

- 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).

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	13	B106	1	
B110	8	D100	2	Yes
	5	B107	1	165
	6	D 107	2	

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

	Α	_	Continuity	
Connector	Terminal			
	13		No	
B110	8	Ground		
2110	5	Ground		
	6			



[BOSE W/ MONOCHROME DISPLAY]

### 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

### [BOSE W/ MONOCHROME DISPLAY]

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- 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	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	13	8		
B110	5	6	Receive au- dio signal	(V) 1 0 -1 1 ms

### Is the audio signal voltage as specified?

YES >> Replace suspect rear subwoofer. Refer to <u>AV-168</u>. "<u>Removal and Installation"</u>.

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).

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	4		24	
M132	5	B109	23	Yes
101132	13	D 109	26	165
	14	•	25	

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

	А	_	Continuity	
Connector	Terminal		Continuity	
	4	- Ground	No	
M132	5			
W1132	13			
	14			

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### 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/ MONOCHROME DISPLAY]

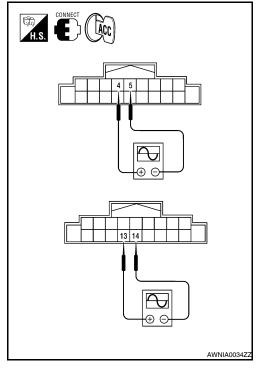
- 1. Connect audio unit connector M132 and BOSE speaker amp. connector B109.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	4	5			
M132	13	14	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E	

### Is the audio signal voltage as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>, <u>"Removal and Installation"</u>.

NO >> Replace audio unit. Refer to <u>AV-161, "Removal and Installation"</u>.



### **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

Regarding Wiring Diagram information, refer to AV-133, "Wiring Diagram".

### $1.\mathsf{CHECK}\,\mathsf{AMP}\,\mathsf{ON}\,\mathsf{SIGNAL}\,(\mathsf{BOSE}\,\mathsf{SPEAKER}\,\mathsf{AMP})$

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

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

### Is inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

### 2.CHECK AMP ON SIGNAL (AUDIO UNIT)

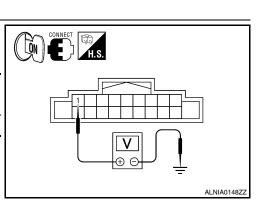
Check voltage between audio unit harness connector M132 terminal 1 and ground.

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

### Is inspection result normal?

YES >> Repair harness or connector.

NO >> Replace audio unit. Refer to <u>AV-161, "Removal and Installation"</u>.



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### STEERING SWITCH

Description INFOID:0000000005460066

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

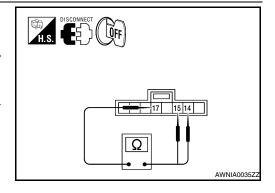
INFOID:0000000005460067

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 $(\Omega)$ (Approx.)
		Source	Depress SOURCE switch.	680
15	17	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 A switch.	0



### Do the steering switches check OK?

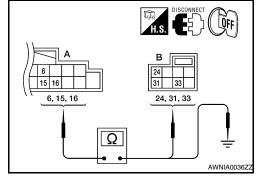
YES >> GO TO 2.

NO >> Replace steering switch. Refer to AV-78, "Removal and Installation".

### 2. CHECK HARNESS

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

A	1	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	6		24	
M132	16	M30	31	Yes
	15		33	



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

	Α		Continuity	
Connector	Terminal	_		
	6			
M132	15	Ground	No	
	16			

### STEERING SWITCH

### < COMPONENT DIAGNOSIS >

### [BOSE W/ MONOCHROME DISPLAY]

### Are the continuity results as specified?

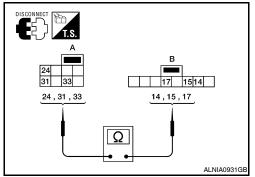
YES >> GO TO 3.

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).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	24		14	
M30	31	M88	15	Yes
	33		17	



### Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to <u>SR-8, "Removal and Installation"</u>.

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## 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

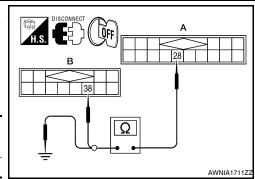
INFOID:0000000005460069

Regarding Wiring Diagram information, refer to AV-133, "Wiring Diagram".

### 1. CHECK HARNESS - 1

- 1. Turn ignition switch OFF.
- 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		Continuity	
Connector	Connector Terminal		Terminal	Continuity
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			Continuity	
B111	28	Ground	No	

### Are continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK HARNESS - 2

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

Α		В		Continuity
Connector Terminal		Connector	Terminal	Continuity
B111	29	M138	39	Yes

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

DISCONNECT OFF
B 29
39
$\overline{\Omega}$
AWNIA1712ZZ

	A		Continuity	
Connector	Connector Terminal		Continuity	
B111	29	Ground	No	

### Are continuity results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

### **COMMUNICATION SIGNAL CIRCUIT**

### < 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.

	Α		В		
Connector Terminal		Connector Terminal		- Continuity	
B111	30	M138	40	Yes	

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

A A B B B 30
40
AWNIA1713ZZ

[BOSE W/ MONOCHROME DISPLAY]

	A		Continuity	
Connector Terminal			Continuity	
B111	30	Ground	No	

### Are continuity results as specified?

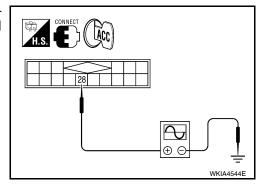
YES >> GO TO 4.

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.
- Check signal between satellite radio tuner (factory installed) harness connector B111 terminal 28 and ground with CONSULT-III or oscilloscope.

(-	+)	(-)	Reference signal
Connector	Terminal	(-)	reference signal
B111	28	Ground	(V) 15 10 5 0 *** 20ms *** SKIB3825E



### Are voltage readings as specified?

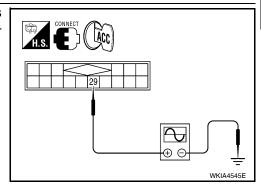
YES >> GO TO 5.

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.

(+)		()	Deference signal	
Connector	Terminal	(-)	Reference signal	
B111	29	Ground	(V) 15 10 5 0 ** 20ms SKIB3824E	



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### **COMMUNICATION SIGNAL CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

### Are the voltage readings as specified?

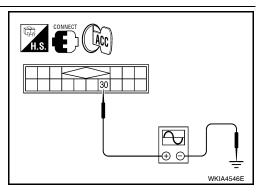
YES >> GO TO 6.

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.

(+)		()	Deference signal	
Connector	Terminal	(-)	Reference signal	
B111	30	Ground	(V) 15 10 5 0 ++10ms 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 SATELLITE RADIO TUNER

### SATELLITE RADIO TUNER: Description

INFOID:000000005460070

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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:0000000005460071

Regarding Wiring Diagram information, refer to AV-133, "Wiring Diagram".

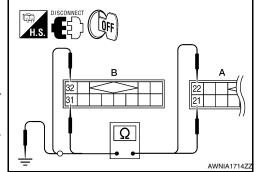
### LEFT CHANNEL

### 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	\	Е	3	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B111	21	M138	31	Yes
БПП	22	IVITO	32	162



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

	A		Continuity
Connector	Terminal		
B111	21	Ground	No
וווט	22	Giodila	110

### Are continuity results as specified?

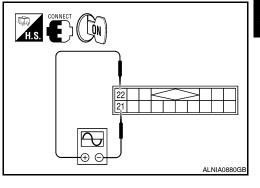
YES >> GO TO 2.

NO >> Repair harness or connector.

### 2.CHECK LEFT CHANNEL AUDIO SIGNAL

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

(	+)	(-)	Reference signal
Connector	Terminal	Terminal	reference signal
B111	22	21	(V) 1 0 -1 → 2ms SKIB3609E



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### < 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".

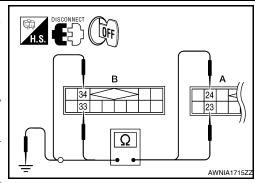
### RIGHT CHANNEL

### 1. CHECK HARNESS

1. Turn ignition switch OFF.

- 2. Disconnect satellite radio tuner (factory installed) connector B111 and audio unit connector M138.
- 3. Check continuity between satellite radio tuner (factory installed) B111 (A) and audio unit M138 (B).

	١	E	3	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B111	23	M138	33	Yes
БП	24	WITSO	34	165



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

	A		Continuity
Connector	Terminal		Continuity
B111	23	Ground	No
БП	24	Glound	NO

### Are continuity results as specified?

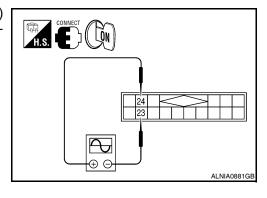
YES >> GO TO 2.

NO >> Repair harness or connector.

### 2. CHECK RIGHT CHANNEL AUDIO SIGNAL

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

(+)		(-)	Reference signal
Connector	Terminal	Terminal	Telerence signal
B111	24	23	(V) 1 0 -1 + 2ms SKIB3609E



### 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

Description INFOID:000000005460072

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

Diagnosis Procedure

INFOID:0000000005460073

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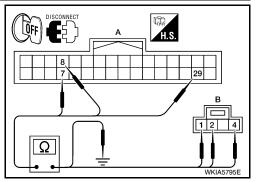
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Regarding Wiring Diagram information, refer to AV-133, "Wiring Diagram".

### 1. CHECK HARNESS BETWEEN BLUETOOTH CONTROL UNIT AND MICROPHONE

- 1. Turn ignition switch OFF.
- 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	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	7		1	
B131	8	R7	2	Yes
	29		4	



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

Α		_	Continuity	
Connector Terminal			Continuity	
	7			
B131	8	Ground	No	
	29			

### Are the continuity test results as specified?

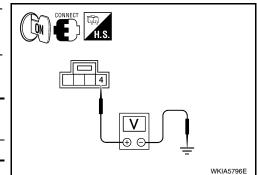
YES >> GO TO 2.

NO >> Repair harness or connector.

### 2. CHECK MICROPHONE POWER SUPPLY

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

(+)		(-)	Voltage (Approx.)
Connector	Terminal	(-)	voltage (Approx.)
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

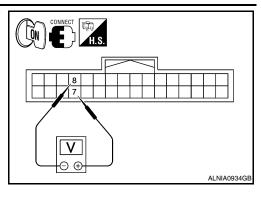
### **MICROPHONE SIGNAL CIRCUIT**

### < COMPONENT DIAGNOSIS >

### [BOSE W/ MONOCHROME DISPLAY]

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

Connector	(+)	(-)	Reference signal
Connector	Terminal	Terminal	resolution digital
			While talking into microphone
B131	7	8	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0



### Are voltage readings as specified?

>> Replace Bluetooth control unit. Refer to <u>AV-179, "Removal and Installation"</u>. >> Replace microphone. Refer to <u>AV-177, "Removal and Installation"</u>. YES

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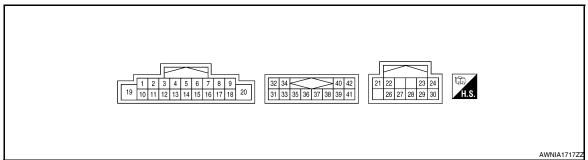
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### **ECU DIAGNOSIS**

### **AUDIO UNIT**

Reference Value

### TERMINAL LAYOUT



### PHYSICAL VALUES

	ninal color)		Signal in-		Condition	
+	-	ltem	put/out- put	Ignition switch	Operation	Reference value (Approx.)
1 (B/P)	Ground	Amp ON	Output	ON	_	Battery voltage
2 (G)	3 (R)	Audio signal front LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms
4 (W/R)	5 (B/R)	Audio signal rear LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 ms
					Depress ∇ switch.	220Ω
6	Ground	Steering switch signal	Input	ON	Depress $\Delta$ switch.	110Ω
(W/G)		A			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	_		_	

### [BOSE W/ MONOCHROME DISPLAY]

	minal e color)	11	Signal in-		Condition	Defense of Alberta
+	_	- Item	put/out- put	Ignition switch	Operation	Reference value (Approx.)
11 (B)	12 (W)	Audio signal front RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 ms skia0177E
13 (V)	14 (P)	Audio sound signal rear RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms
15 (L/B)	-	Steering switch ground	-	_	-	-
					Depress SOURCE switch.	680Ω
16	Ground	Steering switch signal	Input	ON	Depress ູ√≤ switch.	$220\Omega$
(GR/L)	Ordana	B	прас	0.11	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)	(V) 6 4 2 0 ** 20ms SKIA6649J
19 (Y/R)	Ground	Battery power	Input	_	-	Battery voltage
20 (B)	_	Shield	-	-	-	-
21 (G)	22 (R)	Multimedia CAN	Input	_	-	
		Otenania			Depress ∇ switch.	220Ω
23 (W/B)	Ground	Steering switch signal	Output	ON	Depress △ switch.	110Ω
,		A			Depress A switch.	$0\Omega$

### **AUDIO UNIT**

### [BOSE W/ MONOCHROME DISPLAY]

	ninal color)		Signal in-		Condition	
+	-	Item	put/out- put	Ignition switch	Operation	Reference value (Approx.)
					Depress SOURCE switch.	680Ω
24	Ground	Steering switch signal	Output	ON	Depress w≨ switch.	220Ω
(GR/R)	Ground	B	Output	ON	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.	(V) 1 0 -1 + 2ms SKIB3609E
29 (G/O)	Ground	Telephone ON	Output	ON	_	_
30 (LG/B)	_	Shield	1	-	_	_
32 (Y/L)	31 (W/L)	Satellite radio sound signal LH	Input	ON	When satellite mode is selected	(V) 1 0 -1 + 2ms SKIB3609E
34 (BR/L)	33 (Y/G)	Satellite radio sound signal RH	Input	ON	When satellite mode is selected	(V) 1 0 -1 + 2ms SKIB3609E
35	_	Shield	_	_	_	_
36	_	Shield	_	_	_	-
38 (R)	Ground	Request signal (SAT-CONT)	Input	ON	When satellite mode is selected	(V) 10 -10 + 10ms SKIA9299J

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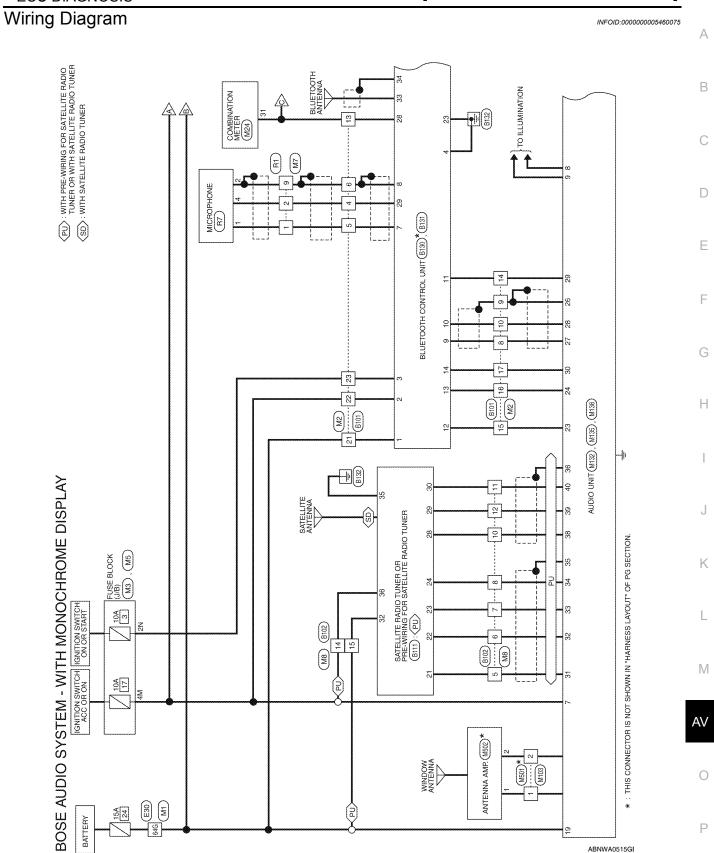
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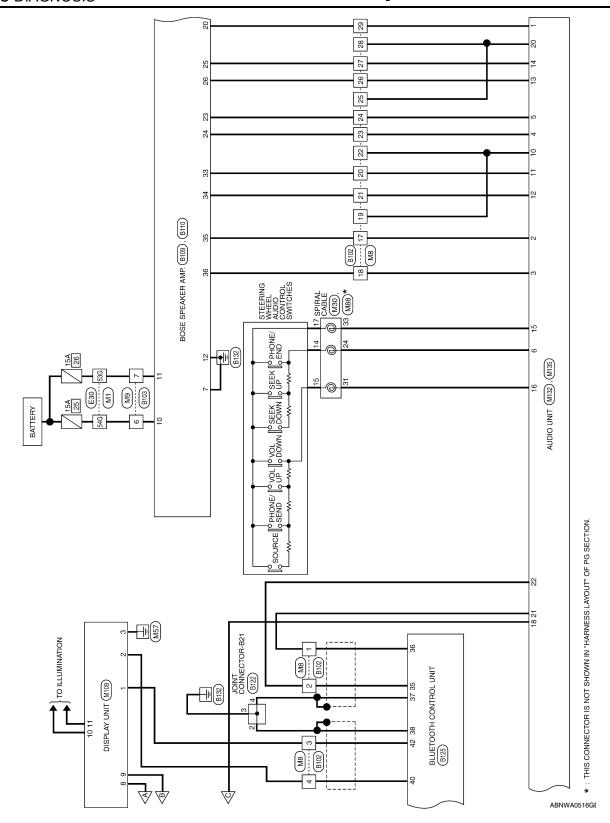
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### [BOSE W/ MONOCHROME DISPLAY]

	ninal color)	- Item	Signal in- put/out-		Condition	Reference value (Approx.)
+	_	item	put	Ignition switch	Operation	Telefelice value (Applox.)
39 (B)	Ground	Communication signal (SAT-CONT)	Input	ON	When satellite mode is selected	(V) 10 0 -10 + 1ms SKIA9300J
40 (G)	Ground	Communica- tion signal (CONT-SAT)	Input	ON	When satellite mode is selected	(V) 10 0 -10 → +1ms SKIA9301J





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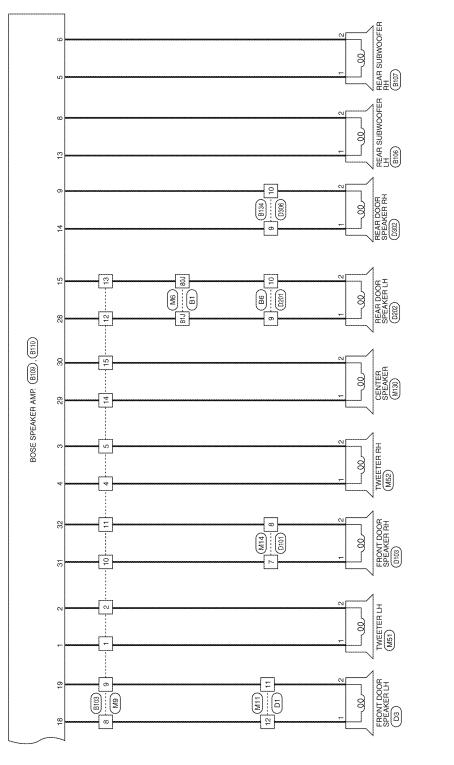
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# BOSE AUDIO SYSTEM CONNECTORS - WITH MONOCHROME DISPLAY

M1	Conn	Connector No.	M2		Terminal No.	Color of Wire	Signal Name	[
	Conn	Connector Name	WIRE TO WIRE	IRE	8	2 2/2	,	Т
Connector Color   WHITE	Conn	Connector Color	WHITE		3 8	<u> </u>		
H.S.   96 86 76 66 56 46 36   76 16 176 176 176 176 176 176 176 176 1	H.S.	12 11 10 9 24 23 22 21	8 7 6 20 19 18	5 4 4 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		3		7
286 256 246 226 226 276 206	Termi	Terminal No. Wire		Signal Name				
246 236 316 346 2845 286 286 1		4 B		9				
416 406 386 376 366 356		5 L						
		क	9	1				
28G 57G 50G 57G 57G 57G 57G 57G 57G			~					
		9 SHIELD	O O	4				
		10 Y						
80G 79G 77G 76G 75G 74G 73G 65G 64G		13 V/W	>	8				
288 208		14 G/O	0	1				
2		15 W/B	m	ı				
		16 GR/R	Œ					
Terminal No With Signal Name		17 LG/B	В	and the state of t				
D I AA		21 Y/R	~	ı				
54G BR								
64G Y/R –								
Connector No.   M3	Conne	Connector No.	M5					
Connector Name FUSE BLOCK (J/B)	Conne	Connector Name	FUSE BLOCK (J/B)	CK (J/B)				
Connector Color WHITE	Conne	Connector Color	WHITE					
(中) 3N   1N   1N   1N   1N   1N   1N   1N	师 H.S.		5M 4M	7M 6W				
Terminal No. Color of Signal Name	Termi	Terminal No. W	Color of Si	Signal Name				
2N G -	4	4M V,	V/Y	1				

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M7 WIRE TO WIRE		1		4     5     6     7     8       12     13     14     15     16		Signal Name	ı	1	ı				Signal Name	1	ı	1	1	ı	I	_	1	1					
		_		9 10 11 12 13		Color of Wire	_	Œ	SHIELD				Color of Wire	>	В	M/R	B/R	В	>	Ь	SHIELD	B/P					
Connector No. Connector Name	Connector Color			H.S.		Terminal No.	-	2	6				Terminal No.	21	22	23	24	25	26	27	28	29					
Signal Name	I	ı											Signal Name	ı	I	1	1	ı	ı	I	1	I	I	_	1		
Wire		တ											Color of Wire	۵	W/R	B/B	Ж	8	В	٨/٨	Y/R	ŋ	В	В	В		
Terminal No.	807	81)											Terminal No.	9	7	8	10	11	12	14	15	17	18	19	20		
			//				1 [																				
WIRE TO WIRE				90         81         74         64         53         44         33           172         163         153         144         133         112         114         100         23         13	Ī	<u>181 273 263 213 200 190 180 </u>	37.1 36.1 35.1 34.1 33.1 32.1 31.1	441 431 421 411 401 391 381	55.3 54.3 52.3 51.3 50.3 49.3	70J 69J 68J 67J 66J 65J 64J 79J 78J 77J 78J 75J 74J 73J 72J 71J	87.1 86.1 85.1 84.1 92.2 97.1 90.1 89.1 88.1 83.2 87.1 80.1	N 97J 96J 95J 94J 93J	M8	7118			[		23 22 21 20 19 18 17	7 77	Signal Name		1	1	1	1	1
	_	_		90 8. 17J 16J 15	25.1 24	30J 29J 28J 27J 26J	37.0	460 450	55J 54	707 709	87J 86 92J 91J 90	196 P66			$\dashv$				11 10 9 8 7 27 26 25 24 2	<u>*</u>	Color of	Wire	o l	œ	σ i	۳	>
Connector Name	Connector Color			H.S.								_//	Connector No.	Connector Color		Œ		H	16 15 14 13 12 1	2 2 2 2 2 2	Terminal No	-		2	ო -	4	2
		_													_										ABN	IIA15	570GB

Revision: November 2009 AV-137 2010 Maxima

Connector No.	. M11	
Connector Name		WIRE TO WIRE
Connector Color	olor WHITE	TE
雨 H.S.	8 9 10	2 3 <b>1 1 1</b> 2 13 14 15 16
Terminal No.	Color of Wire	Signal Name
11	В	1
12	M	1

	_	_	_	_		_	_
Signal Name	ī	-	_	Î	-	_	İ
Color of Wire	В	BB	B/R	ŋ	٦	B/P	O/B
Terminal No. Wire	6	10	11	12	13	14	15

					ıme							
	WIRE TO WIRE	NW	12 11 10 9 8		Signal Name	I	I	I	I	_	_	1
. M9		lor BROWN	7 6 5 4 16 15 14 13	30,010	Wire	D D	В/Υ	0/1	GR/L	BR	B/B	8
Connector No.	Connector Name	Connector Color	H.S.		Terminal No.	-	2	4	5	9	2	80

	SPIRAL CABLE	\	25 26 27 32 33 34	Signal Name	AUDIO STRG SW REMOTE A	AUDIO STRG SW REMOTE B	AUDIO STRG SW GND
M30		or GRAY	31 3	Color of Wire	M/G	GR/L	L/B
Connector No.	Connector Name	Connector Color	是 H.S.	Terminal No.	24	31	33

			ı	19 20	39 40		
	ON METER			9 10 11 12 13 14 15 16 17 18	33 34 35 36 37 38	Signal Name	8P/R OUT
M24	COMBINATION METER	WHITE		-	29 30 31 32		V/W 8P
Connector No.	Connector Name	Connector Color		3 4 5 6 7	22 23 24 25 26 27 28	Terminal No. Wire	
Conne	Conne	Conne	明.H.S.	1 2	21 22	Termi	31

Connector No.		M14	
Connector Name		IRE T	WIRE TO WIRE
Connector Color		WHITE	
H.S.	1 2 5	7 8 9	4 01
Terminal No.	Color of Wire	o	Signal Name
7	ВВ		ì
8	B/R		ı

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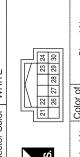
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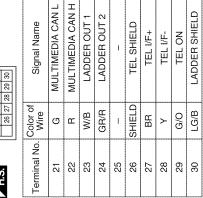
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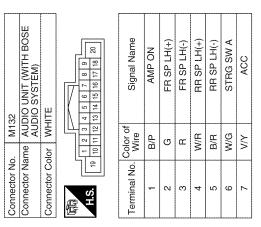
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Connector No.	M135
Connector Name	Connector Name   AUDIO UNIT (WITH BOSE AUDIO SYSTEM)
Connector Color WHITE	WHITE

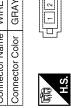




	·····	,	<b>,</b>	,	,						,		,
Signal Name	ILL(-)	ILL(+),LIGHT SW	GND,SHIELD1	FR SP RH(+)	FR SP RH(-)	RR SP RH(+)	RR SP RH(-)	STRG SW GND	STRG SW B	I	SPEED SIGNAL	BAT	SHIELD2
Color of Wire	₽X	R/L	В	В	≷	>	Д	1/8	GR/L	1	W/V	Y/R	Ю
Terminal No.	8	6	10	<del>-</del>	12	13	14	15	16	17	18	19	20



Connector No.	M501
Connector Name	WIRE TO WIRE
Connector Color	GRAY
	1 2 3





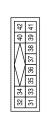
Color of Wire	В	
Terminal No.	τ	

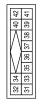
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Signal Name

Signal Name		REQ(SAT-COMBI)	RX(SAT-COMBI)	TX(COMBI-SAT)	o e e e e e e e e e e e e e e e e e e e	ł
Color of Wire	ı	Œ	В	g	-	ı
Terminal No. Wire	37	38	39	40	41	42

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





Signal Name	SAT LH INPUT(-)	SAT LH INPUT(+)	SAT RH INPUT(-)	SAT RH INPUT(+)	EARTH	DATA SHIELD
Color of Wire	M/L	A/L	Y/G	BR/L	SHIELD	SHIELD
Terminal No.	31	32	33	34	35	98

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B1 WIRE TO WIRE WHITE	2) (4) (5) (6) (7) (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	310 320 330 340 350 350 370	383 383 403 413 423 433 443 453 463	49J 50J 51J 52J 53J 54J 55J	71 484 564 564 564 564 564 564 564 564 564 56		Signal Name	tree	***************************************	***
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Connector No. Connector Name Connector Color	H.S.	<u> </u>					Terminal No.	100	333	813
	<u> </u>					•				
E30 WIRE TO WIRE WHITE	36 46 56 66 76 86 96 100 110 120 130 146 156 166 170 200 210 220 230 246 256 266	27G 28G 29G 30G 31G 32G 33G 34G	35u 36u 37u 38u 39u 40u 41u 42G 43G 44G 45G 46G 47G 48G 49G 50G	Con Const	516   526   536   546   580   610   620   630   640   680   6110   620   630   640   680   6110   620   630   640   680   776   776   776   776   776   776   600   610   620   630   640   68	Signal Name		1	***	ı
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Connector No. M502 Connector Name ANTENNA AMP. Connector Color GRAY	H.S.	Terminal No.	-	2						

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Connector No.		and the state of t	Connector No.	L		Terminal No. Color of Wire	Color of Wire	Signal Name	
Connector Name		WIRE 10 WIRE	Connector Name		WITH IO WITH	9	SHIELD	l	<del></del>
5						8	BB	ł	
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0				15 16	17 18 19 20 21 22 23 24	13	BR	***	
	Color of			Color of		14	SB	ı	
Terminal No.	Wire	Signal Name	Terminal No.	Wire	Signal Name	15		•	
0	P	ı	4	œ	No.	16	۵	****	
10	0	ı	S		ı	17	œ		
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						22	GR	-	
						23	0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Connector No.		)2	Terminal No.	Color of	Signal Name	Connector No.	Jo. B103	3	
Connector Name		WIRE TO WIRE				Connector Name	1	WIRE TO WIRE	
Connector Color		WHITE		>	1	Connector Color		BROWN	
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Tarminal No	Color of	Signal Name	17	3		2	>	1	1
	Wire		18	<u>a</u>		4	g	1	Ţ
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ო	æ	î	23	GR		7	GR	***	T
ব	O	1	24			8	8	***	T
ಬ	ВВ		26	BH HB	-	6	æ	1	T
9	8	Į.	27	>		02	Œ	I	T
			59	SB	1	=	BR		1
						12	g	***	
						13		ı	
						14	>	ł	

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r		·····																	
B110	BOSE SPEAKER AMP.	BROWN		7 6 5 4 3 2 1	Signal Name	FR TWDR LH+ OUT	FR TWDR LH- OUT	FR TWDR RH- OUT	FR TWDR RH+ OUT	RH WOOFER+ OUT	RH WOOFER- OUT	GND	LH WOOFER- OUT	RR DOOR RH- OUT	BAT	BAT	GND	LH WOOFER+ OUT	RR DOOR RH+ OUT
-			11-	9 8 13	Color of Wire	97	>	≯		œ	BR	82	a.	0	SB	GR	В		LG
Connector No.	Connector Name	Connector Color		H.S.	Terminal No.	<b>,</b>	2	3	4	5	9		8	6	10	1-	12	13	14

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

r===========	Sign		
2	Color of Wire	Œ	BR
S. T.	rminal No.	-	2

Signal N	ŧ	ŧ	
Color of Wire	ш	BR	
Terminal No.	-	2	

	REAR SUBWOOFER LH	uı		Signal Name	1	1	
0 2 2 3		or WHITE	2	Color of Wire		Q.	
Connector No.	Connector Name	Connector Color	所 H.S.	Terminal No.	-	2	

Signal Name	RR DOOR LH+ OUT	INST CTR TWDR+ OUT	INST CTR TWDR- OUT	FR DOOR RH+ OUT	FR DOOR RH- OUT	FR RH+IN (WITH MONCHROME DISPLAY)	FR RH-IN (WITH MONCHROME DISPLAY)	FR LH+IN (WITH MONCHROME DISPLAY)	MONCHROME DISPLAY)
Color of Wire	ŋ	>	Ф	Œ	BR	LG	>	×	В
Terminal No.	28	29	30	31	32	33	34	35	36

Connector No.	No.		É	B109									
Connector Name	Nam	ø.	ã	8	щ	200	m	玄	E.	₹	BOSE SPEAKER AMP.	١.	
Connector Color	90 0	<b>1</b>	<u>aa</u>	8	BROWN	z							
		١,										'	
A COL		۲	1	1	1	1	1				1	ī	
村村	37	38	33	36 35 34 33	33	L		_	83	8	32 31 30 29	8	38
H.S.	27	56	25	24	23	22	7	20	19	18	26 25 24 23 22 21 20 19 18 17 16	16	5
		L				1						F	1
		1											

Signal Name	RR DOOR LH- OUT	FR DOOR LH+ OUT	FR DOOR LH- OUT	NO AWA	RR LH-IN (WITH MONCHROME DISPLA	RR LH+IN (WITH MONCHROME DISPLA	RR RH-IN (WITH MONCHROME DISPLA	RR RH+IN (WITH MONCHROME DISPLA
Color of Wire	۔۔ا	*	æ	SB	٦	GR	>	ВВ
Terminal No.	15	18	19	20	23	24	25	26

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Connector No.	). B122	22
Connector Name		JOINT CONNECTOR-B21
Connector Color WHITE	lor WF	<u>ш</u>
明.S.	043210	
Terminal No. Wire	Color of Wire	Signal Name
2	SHIELD	1
3	а	1

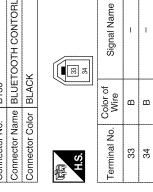
SHIELD

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	,	,	,				,		,	,
Signal Name	SAT LCH (-)	SAT LCH (+)	SAT RCH (-)	SAT RCH (+)	REQ1 (SAT->COMB)	TXD (SAT->COMB)	RXD (COMB->SAT)	BAT	HARN EARTH	ACC
Color of Wire	BR	Α	>-	В	Œ	>	٦	OL.	В	GR
Terminal No.	21	22	23	24	28	59	30	32	35	36

Connector No.	B111
Connector Name	SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER
Connector Color WHITE	WHITE
22 24 28 21 23 25 H S	22 22 24 26 25 27 28 29 30 31 33 35





Connector No.	. B125	
Connector Name		BLUETOOTH CONTROL UNIT (WITH MONOCHROME DISPLAY)
Connector Color	lor WHITE	1E
原列 H.S.	38 37	39 41 40 42
Terminal No.	Color of Wire	Signal Name
35	٦	CAN H1
36	σ	CAN L1
37	SHIELD	CAN SHIELD 1
88	SHIELD	CAN SHIELD 2
39	ı	1
40	9	CAN H2
41	-	I
42	Œ	CAN L2

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MHITE    1 2		Connector Name Connector Color  Terminal No. (Vo. 9) 1  Connector No. Connector Name Connector Name Connector Name Connector Color H.S.  Terminal No. (Co. Vo. Vo. Vo. Connector Color  Terminal No. (Co. Vo. Vo. Vo. Vo. Vo. Vo. Co. Vo. Connector Color	MONOCHROME DISPLAY) LADDER INT (WITH MONOCHROME DISPLAY) LADDER GND (WITH MONOCHROME DISPLAY)	ail	12
1	0	<del>-</del>	MIC SIG	7	-
	Wire		200000	Wire	
	Color	Terminal No.	Signal Name	Color of	Terminal No.
6 01 11 21		H.S.		]	H.S.
3 2	2 6		П «		
HITE		Connector Co	iп		Connector Col
IRE TO WIRE		Connector Na	OPHONE		Connector Nar
<b></b>		Connector No			Connector No.
			3	1	55
			ı	3	31
			***	ı	30
			MIC POWER	Œ	53
			SPEED	BR	28
			ı	ı	27
			I	į.	26
			ı	ı	25
			ı	1	24
			AONOCHROME DISPLAY)		23
			CONTA (WITH	T	
			Person	1	22
			***	1	21
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1	0	10	***	1	19
	EG LG	6	ren	1	18
	Wire	l erminal No.	1	1	17
	Color		1	ı	16
			1	ı	15
2 <b>1</b> 3 6 7 8 9	- 2	SI	LADDER GND (WITH MONOCHROME DISPLAY)		41
	Ц	G G	LADDER IN2 (WITH MONOCHROME DISPLAY)		13
쁘	<del>  </del>	Connector Co	MONOCHROME DISPLAY)		12
		Connector Na	CONTRACTOR OF THE CONTRACTOR O	- 1	- Cromono
WIRE TO WIRE	<b>↓~~~</b>				

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		·	1				,	
	Connector Name   FRONT DOOR SPEAKER   RH	យ		Signal Name	1	-		
D103	ne FRON RH	or WHITI		Ш	2	Color of Wire	9	0
Connector No.	Connector Nar	Connector Color WHITE			H.S.	Terminal No.	-	2
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	TO WIRE	ш	2 5 7	Signal Name	3	1
<u>-</u>	e WIRE	WHIT	10 9 8	Color of Wire	re	C
o.	am	9				
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	南南 H.S.	Terminal No.	7	a

Connector Name FRONT DOOR SPEAKER LH Connector Color WHITE  H.S.
инте
RONT DOOR SPEA

Connector No.	. D302	
Connector Name		REAR DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	lor BROWN	VN
H.S.	2 1	
Terminal No.	Color of Wire	Signal Name
<b>,</b>	re	ı
2	0	ı

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN
	<u> </u>
Terminal No.	Color of Signal Name
	- 0

Connector No.	. D201	
nector Na	Connector Name WIRE TO WIRE	TO WIRE
nector Co	Connector Color WHITE	ш
H.S.	10 9 8	© 0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Terminal No.	Color of Wire	Signal Name
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10	0	ı

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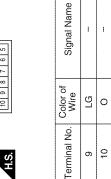
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Connector Name WIRE TO WIRE
Connector Color WHITE

D306

Connector No.





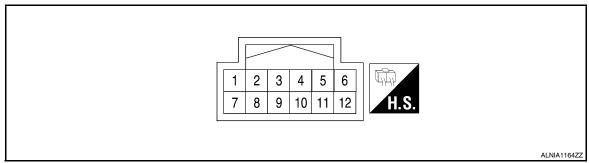
### **DISPLAY UNIT**

### [BOSE W/ MONOCHROME DISPLAY]

# **DISPLAY UNIT**

Reference Values

### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)
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**

## **BOSE SPEAKER AMP**

Reference Values

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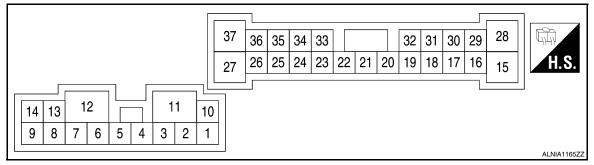
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#### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	rminal e color)	Description			O an disting	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
1 (LG)	2 (V)	Sound signal front tweeter LH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E	
4 (G)	3 (W)	Sound signal front tweeter RH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E	
5 (R)	6 (BR)	Sound signal rear subwoof- er RH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E	
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	

# [BOSE W/ MONOCHROME DISPLAY]

Ter	minal e color)	Description				Reference value	
+	_	Signal name	Input/ Output		Condition	Reference value (Approx.)	
13 (L)	8 (P)	Sound signal rear subwoof- er LH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 → + 2ms SKIB3609E	
14 (LG)	9 (O)	Sound signal rear door speaker RH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E	
18 (W)	19 (B)	Sound signal front door speaker LH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E	
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.	(V) 1 0 -1 + 2ms SKIB3609E	
26 (BR)	25 (Y)	Sound signal rear RH	Input	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E	
28 (G)	15 (L)	Sound signal rear door speaker LH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 → • 2ms SKiB3609E	

### **BOSE SPEAKER AMP**

### < ECU DIAGNOSIS >

# [BOSE W/ MONOCHROME DISPLAY]

	rminal e color)	Description			Condition	Reference value	A
+	_	Signal name	Input/ Output		Condition	(Approx.)	
29 (V)	30 (P)	Sound signal center speaker	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E	С
31 (R)	32 (BR)	Sound signal front door speaker RH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E	F
33 (LG)	34 (V)	Sound signal front RH	Input	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E	G
35 (W)	36 (B)	Sound signal front LH	Input	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E	J

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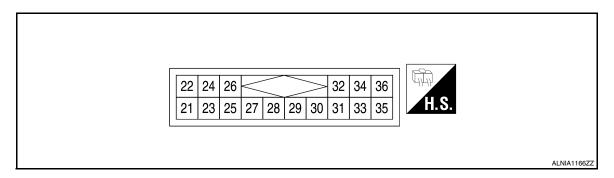
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# SATELLITE RADIO TUNER

Reference Values



#### PHYSICAL VALUES

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

### **SATELLITE RADIO TUNER**

### < ECU DIAGNOSIS >

## [BOSE W/ MONOCHROME DISPLAY]

Terminal		Description				Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
30 (L)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 -1ms	
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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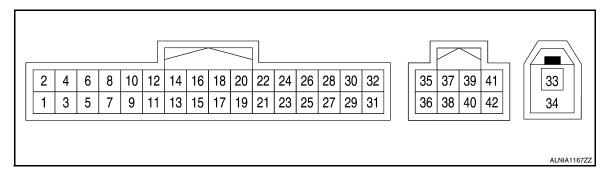
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## **BLUETOOTH CONTROL UNIT**

Reference Values



#### PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
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	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0 PKIB5037J	
8	_	Shield	_	_	_	_	
9 (BR)	10 (Y)	TEL voice signal	Output	Ignition switch ON	During voice guide output with the w w switch pressed	(V) 1 0 -1 + 2ms SKIB3609E	
11 (SB)	_	Mute control	_	Ignition switch ON	_	_	

### **BLUETOOTH CONTROL UNIT**

### < ECU DIAGNOSIS >

# [BOSE W/ MONOCHROME DISPLAY]

Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
					Press SOURCE switch	Approx. 0.0V	
12	Ground	Steering switch signal A	Output	ON	Press SEEK UP switch	Approx. 0.75V	
(L)	Ground	Steering switch signal A	Output	ON	Press VOL UP switch	Approx. 2.0V	
					Except for above	Approx. 5.0V	
40					Press SEEK DOWN switch	Approx. 0.75V	
13 (P)	Ground	Steering switch signal B	Output	ON	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 approx. 40 km/h (25MPH)	(V) 6 4 2 0 *** * 20ms SKIA6649J	
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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# SYMPTOM DIAGNOSIS

# **AUDIO SYSTEM**

# Symptom Table

#### INFOID:000000005460080

### **AUDIO SYSTEM**

Symptom	Possible cause	Reference page
Inoperative	Audio unit power supply and ground circuit     Audio unit	AV-99     AV-161, "Removal and Installation"
Steering wheel audio control switches do not operate	Steering wheel audio control switches     Audio unit	AV-120     AV-161, "Removal and Installation"
All speakers do not sound	<ul> <li>Audio unit</li> <li>Audio unit power supply and ground circuit</li> <li>BOSE speaker amp. ON signal</li> <li>BOSE speaker amp.</li> </ul>	AV-161, "Removal and Installation"     AV-99     AV-119     AV-169
One or several speakers do not sound	<ul><li>Front door speaker</li><li>Tweeter</li><li>Center speaker</li><li>Rear door speaker</li><li>Rear subwoofer</li></ul>	• AV-105 • AV-108 • AV-111 • AV-113 • AV-116

#### CD

Symptom	Possible cause	Reference page
CD cannot be inserted.		
CD cannot be ejected.	Audio unit	AV-161, "Removal and Installation"
The CD cannot be played.	Addio driit	
The sound skips, stops suddenly, or is distorted.		

#### SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	Satellite radio tuner power or ground circuit     Satellite radio tuner communication circuit     Satellite radio tuner	• <u>AV-101</u> • <u>AV-122</u> • <u>AV-170</u>
Right or left channel does not sound	<ul> <li>Satellite radio tuner right channel audio signal circuit</li> <li>Satellite radio tuner left channel audio signal circuit</li> <li>Satellite radio tuner</li> </ul>	• <u>AV-125</u> • <u>AV-125</u> • <u>AV-170</u>

#### HANDS-FREE PHONE

Symptom	Possible cause	Reference page
Inoperative	Bluetooth control unit power and ground circuit     Bluetooth control unit	• <u>AV-102</u> • <u>AV-179</u>
Steering wheel audio control switches do not operate	Steering wheel audio control switches     audio unit     Bluetooth control unit	AV-120     AV-161, "Removal and Installation"     AV-179
Voice activated control does not operate	Microphone     Steering wheel audio control switches     Bluetooth control unit	• AV-127 • AV-120 • AV-179

#### NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE W/ MONOCHROME DISPLAY]

### NORMAL OPERATING CONDITION

Description INFOID:0000000005460081

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

C	Possible cause	
Occurs only when engine is ON. A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.		Ignition components
The occurrence of the noise is lin	ked with the operation of the fuel pump.	Fuel pump condenser
Noise only occurs when various electrical components are oper-	A cracking or snapping sound occurs with the operation of various switches.	Relay malfunction, audio unit malfunction
ating.	The noise occurs when various motors are operating.	Motor case ground     Motor
The noise occurs constantly, not	<ul><li>Rear defogger coil malfunction</li><li>Open circuit in printed heater</li><li>Poor ground of antenna feeder line</li></ul>	
A cracking or snapping sound occit is vibrating excessively.	<ul><li> Ground wire of body parts</li><li> Ground due to improper part installation</li><li> Wiring connections or a short circuit</li></ul>	

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# **PRECAUTION**

#### **PRECAUTIONS**

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

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

#### 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

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.)
- 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:0000000005460084

Tool name		Description
Power tool	PBIC0191E	Loosening bolts and nuts
	1 51001312	

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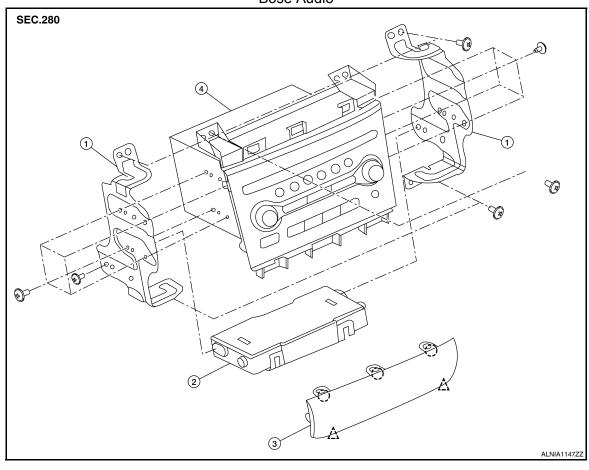
INFOID:0000000005528983

# **ON-VEHICLE REPAIR**

## **AUDIO UNIT**

Removal and Installation

Bose Audio



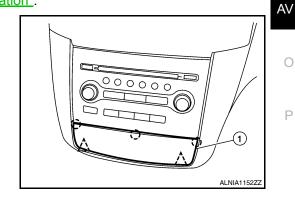
- 1. Audio unit brackets LH/RH
- 4. Audio unit

- 2. A/C auto amp.
- 八 Clip

- 3. Cluster lid C lower
  - 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

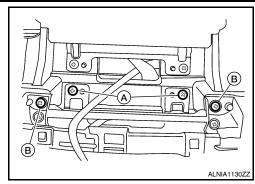


### **AUDIO UNIT**

### < ON-VEHICLE REPAIR >

### [BOSE W/ MONOCHROME DISPLAY]

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



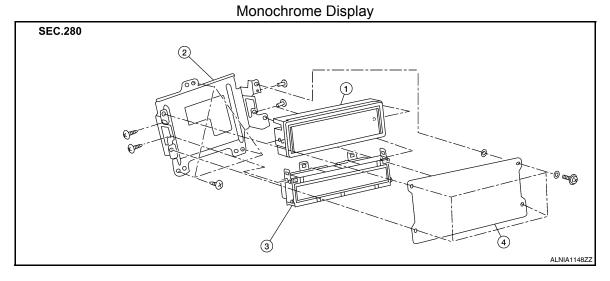
5. Pull out the audio unit, disconnect the connectors and remove the audio unit.

#### **INSTALLATION**

## **AUDIO DISPLAY UNIT**

#### Removal and Installation

INFOID:000000005460086

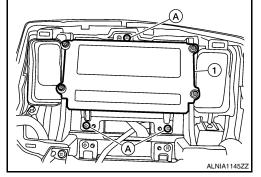


- 1. Audio display unit
- 2. Audio display unit bracket
- 3. A/C display unit

4. Front cover

#### **REMOVAL**

- 1. Disconnect the battery negative terminal.
- 2. Remove the cluster lid D. Refer to IP-12, "Removal and Installation".
- 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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#### [BOSE W/ MONOCHROME DISPLAY]

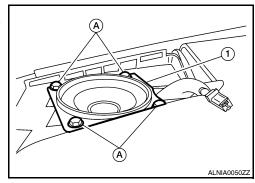
## FRONT TWEETER

### Removal and Installation

#### INFOID:0000000005460087

#### **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**

#### **CENTER SPEAKER**

#### < ON-VEHICLE REPAIR >

#### [BOSE W/ MONOCHROME DISPLAY]

## **CENTER SPEAKER**

#### Removal and Installation

#### INFOID:0000000005460088

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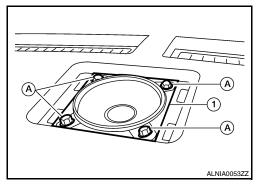
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#### **REMOVAL**

- 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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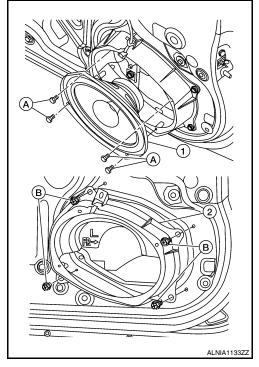
### FRONT DOOR SPEAKER

### Removal and Installation

#### INFOID:0000000005460089

#### **REMOVAL**

- 1. Remove the front door finisher. Refer to <a href="INT-18">INT-18</a>, "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**

## **REAR DOOR SPEAKER**

#### < ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

### REAR DOOR SPEAKER

### Removal and Installation

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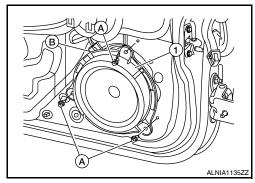
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#### **REMOVAL**

- 1. Remove the rear door finisher. Refer to <a href="INT-21">INT-21</a>, "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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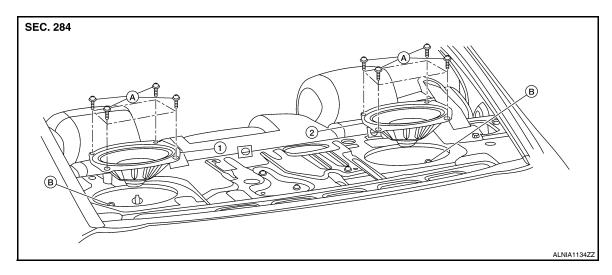
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### **SUBWOOFER**

### Removal and Installation

INFOID:000000005460091



Subwoofer LH

Subwoofer RH

A. Subwoofer screws

B. Subwoofer connectors

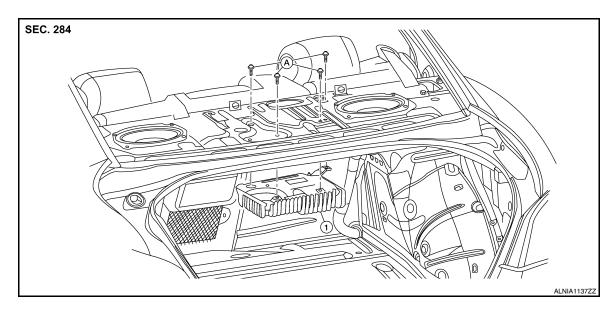
#### **REMOVAL**

- 1. Remove the rear parcel shelf finisher. Refer to <a href="INT-26">INT-26</a>, "Removal and Installation".
- 2. Remove the subwoofer screws, then pull out the subwoofer, disconnect the subwoofer connector and remove the subwoofer.

#### **INSTALLATION**

### **BOSE SPEAKER AMP**

#### Removal and Installation



1. Bose speaker amp.

A. Bose speaker amp. screws

#### **REMOVAL**

- 1. Disconnect the battery negative terminal.
- 2. Remove the rear parcel shelf. Refer to <a href="INT-26">INT-26</a>, "Removal and Installation".
- 3. Remove the Bose speaker amp. screws.
- 4. Remove the trunk upper finisher. Refer to <a href="INT-35">INT-35</a>, "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

[BOSE W/ MONOCHROME DISPLAY]

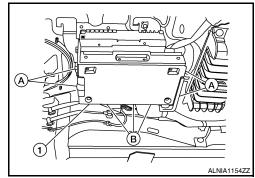
### SATELLITE RADIO TUNER

### 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 <a href="INT-26">INT-26</a>, "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**

#### **SATELLITE RADIO ANTENNA**

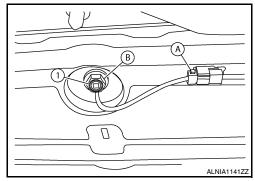
[BOSE W/ MONOCHROME DISPLAY]

### SATELLITE RADIO ANTENNA

### Removal and Installation

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**

**REMOVAL** 

Installation is in the reverse order of removal.

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#### STEERING SWITCH

#### [BOSE W/ MONOCHROME DISPLAY]

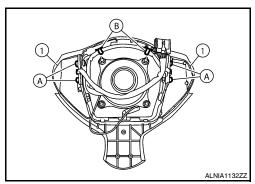
## STEERING SWITCH

### Removal and Installation

#### INFOID:0000000005460095

#### **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**

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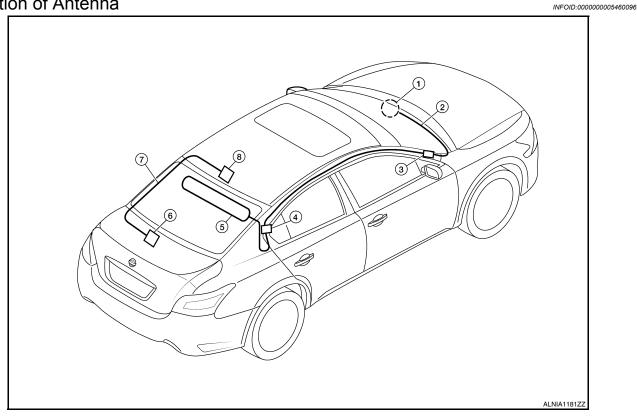
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## **AUDIO ANTENNA**

### Location of Antenna

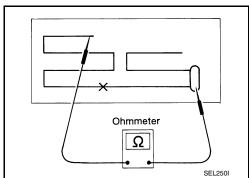


- 1. Audio unit
- 4. Antenna amp.
- 7. Satellite radio antenna feeder
- 2. Audio unit antenna feeder
- 5. Window antenna
- Satellite radio antenna
- 3. In-line connectors M103, M501
- S. Satellite radio tuner

# Window Antenna Repair

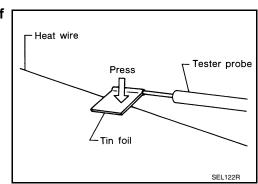
#### **ELEMENT CHECK**

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



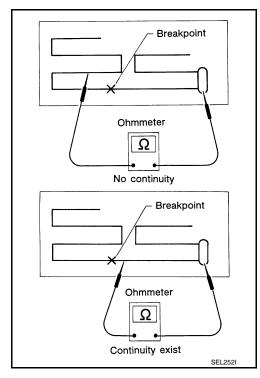
INFOID:0000000005460097

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

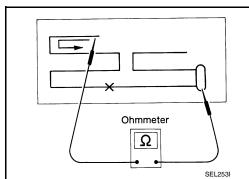


Revision: November 2009 AV-173 2010 Maxima

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



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



#### REPAIR EQUIPMENT

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

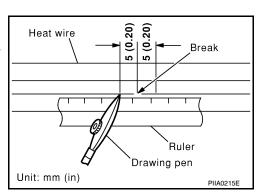
#### REPAIRING PROCEDURE

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

#### NOTE:

Shake silver composition container before use.

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



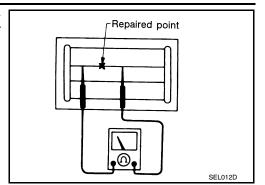
#### **AUDIO ANTENNA**

#### < ON-VEHICLE REPAIR >

#### [BOSE W/ MONOCHROME DISPLAY]

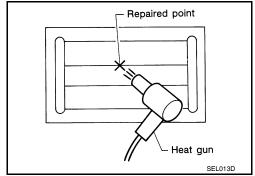
After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

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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#### [BOSE W/ MONOCHROME DISPLAY]

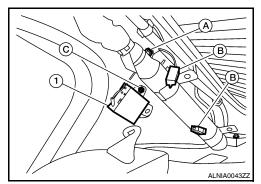
### ANTENNA AMP.

### Removal and Installation

#### INFOID:0000000005460098

#### **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**

### **MICROPHONE**

### Removal and Installation

INFOID:0000000005460099

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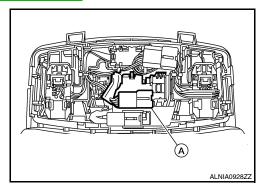
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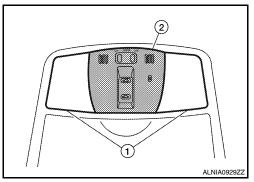
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### **REMOVAL**

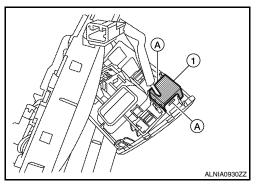
- 1. Remove the map lamp assembly. Refer to <a href="INL-97">INL-97</a>, "Removal and Installation".
- 2. Detach the microphone connector (A).



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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#### [BOSE W/ MONOCHROME DISPLAY]

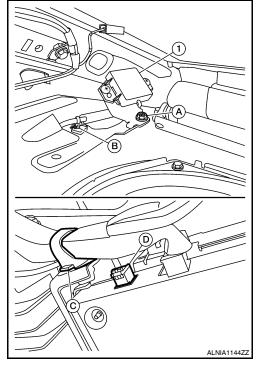
## TEL ANTENNA

### Removal and Installation

#### INFOID:0000000005460100

#### **REMOVAL**

- 1. Remove the rear parcel shelf. Refer to <a href="INT-26">INT-26</a>, "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**

#### **BLUETOOTH CONTROL UNIT**

< ON-VEHICLE REPAIR >

[BOSE W/ MONOCHROME DISPLAY]

### **BLUETOOTH CONTROL UNIT**

### Removal and Installation

INFOID:0000000005460101

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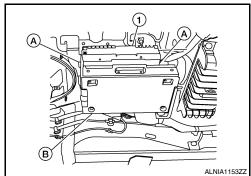
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#### **REMOVAL**

- 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 <a href="INT-26">INT-26</a>, "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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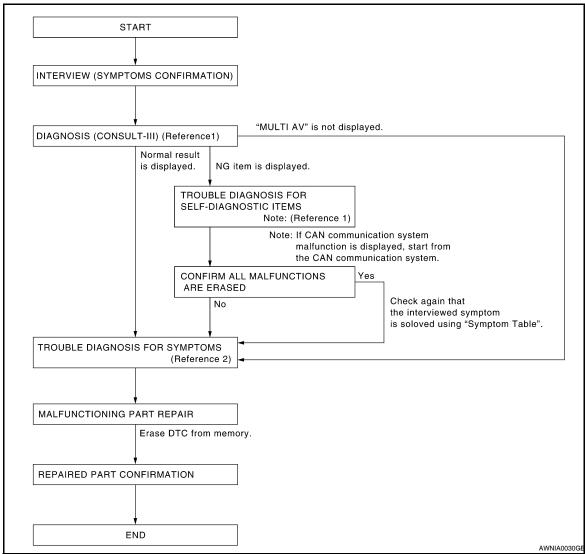
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# **BASIC INSPECTION**

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

#### **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)

Connect CONSULT-III and perform "SELF-DIAGNOSIS" for "MULTI AV".

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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

### [BOSE W/ COLOR DISPLAY] < BASIC INSPECTION > Is any DTC No. displayed? Α YES >> GO TO 3 NO >> GO TO 4 $3. {\sf CHECK}$ SELF-DIAGNOSIS RESULTS (CONSULT-III) Check the DTC No. indicated in the self-diagnosis results. Perform the relevant diagnosis referring to the DTC No. list. Refer to AV-304, "DTC Index". 2. NOTE: Start with the diagnosis for the CAN communication system if "CAN COMM CIRCUIT [U1000] or CONTROL UNIT (CAN) [U1010]" is displayed. D >> 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 F ${f 5}.$ 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. Н >> GO TO 6 **6.**CHECK AFTER REPAIR Perform self-diagnosis for "MULTI AV" with CONSULT-III after repairing or replacing the malfunctioning 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 K 7. FINAL CHECK Perform the operation check to confirm that the malfunction symptom is solved or that any other symptoms L are present. Are any symptoms present? YES >> GO TO 4 M NO >> Inspection End.

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[BOSE W/ COLOR DISPLAY]

## INSPECTION AND ADJUSTMENT

REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUST-MENT

REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUST-

MENT : Description

INFOID:0000000005460103

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 ADJUST-

MENT : Special Repair Requirement

INFOID:0000000005460104

### 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:0000000005589322

#### 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

## 1. SAVING VEHICLE SPECIFICATION

(P)-CONSULT-III Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>AV-183</u>, "CONFIGURATION (AV CONTROL UNIT): <u>Description</u>".

#### 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

### **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

 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> <li>Reads the vehicle configuration of current AV control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
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:0000000005589325

INFOID:0000000005589324

### 1. WRITING MODE SELECTION

(P)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"

(P)CONSULT-III Configuration

Perform "WRITE CONFIGURATION-Config file".

#### >> WORK END

## $oldsymbol{3}.$ PERFORM "WRITE CONFIGURATION-MANUAL SELECTION"

(P)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:0000000005589326

#### **CAUTION:**

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## **INSPECTION AND ADJUSTMENT**

[BOSE W/ COLOR DISPLAY]

## Check vehicle specifications before servicing.

MANUAL S	Nete	
Items	Setting value	Note
STEERING	LHD	_
STEERING	RHD	_
GRADE	MODE 1	BASE
GIVADE	MODE 2	OTHER
ENGINE TYPE	NORMAL	_
ENGINE TITE	HYBRID	_
BODY TYPE	NORMAL	NORMAL
BODT THE	CONV	CONVERTIBLE
	NONE/AVM	NONE or AVM
CAMERA SYSTEM	REAR	REAR CAMERA
	REAR + SIDE	REAR + SIDE CAMERA
4WAS	WITHOUT	_
71170	WITH	_
SOUND SYSTEM	BASE	_
SOUND STOTEM	BOSE	_
ANTENNA TYPE	ROD TYPE	_
ANTENNATITE	LONG TYPE	_
DUAL-ZONE AUTO	WITHOUT	_
TEMP	WITH	_
DVD PLAY FUNCTION	WITHOUT	_
DVDFLATTONCTION	WITH	_

## **INSPECTION AND ADJUSTMENT**

### < BASIC INSPECTION >

## [BOSE W/ COLOR DISPLAY]

MANUAL SETTING ITEM		Note
Items	Setting value	Note
	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)
BODY TYPE	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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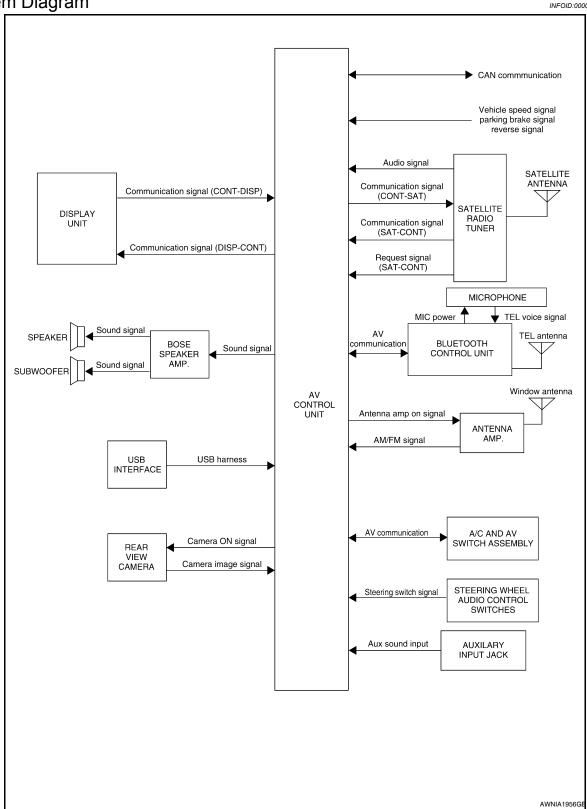
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# **FUNCTION DIAGNOSIS**

## **AUDIO SYSTEM**

System Diagram

INFOID:0000000005460105



System Description

INFOID:0000000005460106

### AUDIO SYSTEM

### < FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

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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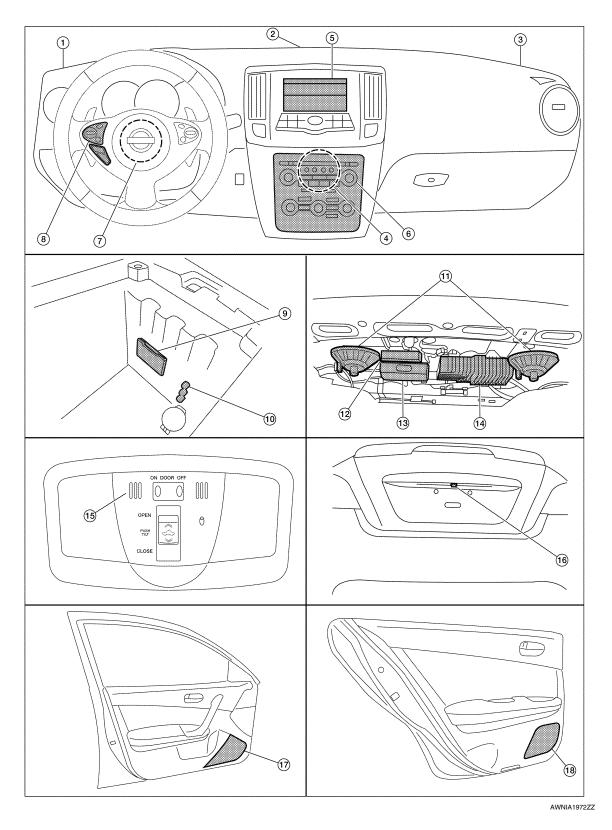
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## **Component Parts Location**

INFOID:0000000005528984



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

### **AUDIO 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)	A
10.	Aux jack M209	11.	Rear subwoofers (view under rear parcel shelf) LH B106 RH B107	12.	Satellite radio tuner B111	Е
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:0000000005460108

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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><li>Audio operation can be operated</li><li>Steering switch signal is output to AV control unit</li></ul>
Front door speakers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Tweeters	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sounds</li></ul>
Center speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sounds</li></ul>
Rear door speakers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Rear subwoofer	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs low range sounds</li></ul>
Satellite radio tuner	<ul><li>Receives radio signals from satellite antenna</li><li>Sends audio signals to AV control unit</li></ul>
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.

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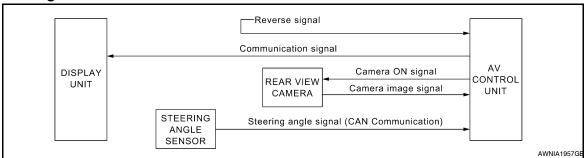
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Revision: November 2009 AV-189 2010 Maxima

## **REAR VIEW MONITOR SYSTEM**

# System Diagram

INFOID:0000000005530143



## **System Description**

INFOID:0000000005530144

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.

## **Component Parts Location**

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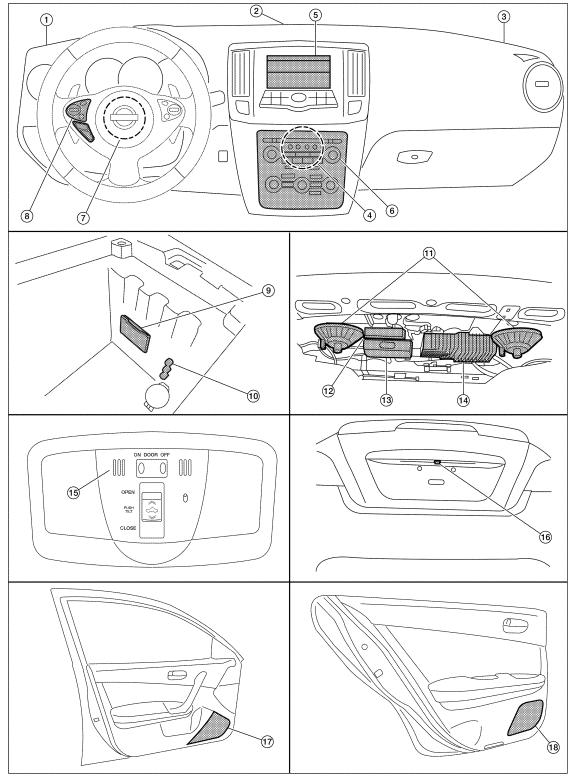
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AWNIA1972ZZ

- 1. Tweeter LH M51
- AV control unit M152, M153, M154, M155, M156, M157, M158, M159 (located behind A/C and AV switch assembly)
- 2. Center speaker M130
- 5. Display unit M141
- 3. Tweeter RH M52
- 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:0000000005530145

Part name	Description
AV control unit	<ul> <li>Sends camera ON signal to the rear view camera</li> <li>Receives camera image signal from the rear view camera</li> <li>Sends image signal to the display unit</li> </ul>
Rear view camera	<ul> <li>Receives camera ON signal from the AV control unit</li> <li>Sends image signal to the AV control unit</li> </ul>
Steering angle sensor	Sends steering angle information to the AV control unit via CAN communication

## HANDS-FREE PHONE SYSTEM

## System Diagram

INFOID:0000000005460113

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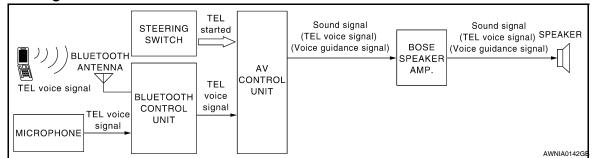
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## System Description

INFOID:0000000005460114

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

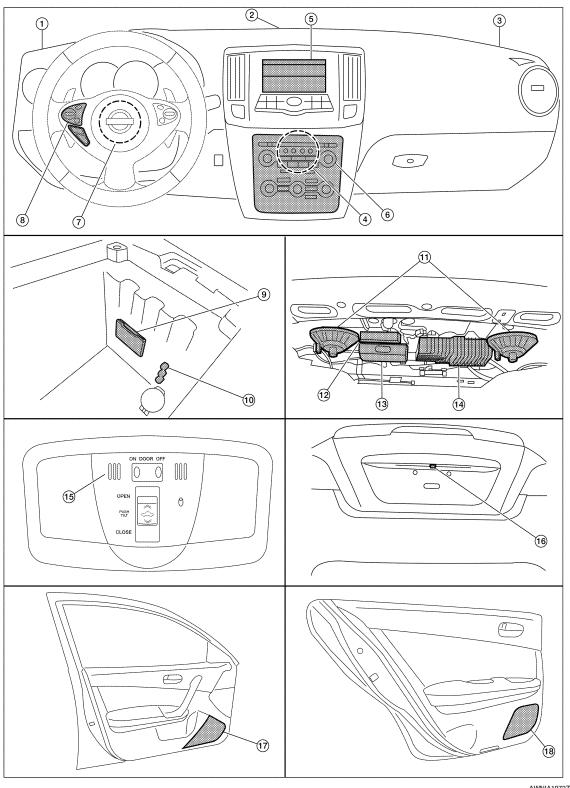
The AV control unit receives signals from the Bluetooth control unit and sends audio signals to the BOSE speaker amp. then on to the speakers.

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## **Component Parts Location**

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AWNIA1972ZZ

- Tweeter LH M51
- AV control unit M152, M153, M154, 5. M155, M156, M157, M158, M159 (located behind A/C and AV switch assembly)
- Center speaker M130
  - Display unit M141
- 3. Tweeter RH M52
- 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)	А
10.	Aux jack M209	11.	Rear subwoofers (view under rear parcel shelf) LH B106 RH B107	12.	Satellite radio tuner B111	В
13.	Bluetooth control unit B128, B130, B131	14.	BOSE speaker amp B109, B110	15.	Microphone R7	С
16.	Rear view camera T101	17.	Front door speaker LH D3 RH D103	18.	Rear door speaker LH D202 RH D302	D
<u> </u>	and the Control of the Control					

# **Component Description**

INFOID:0000000005530153

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Part name	Description
AV control unit	<ul> <li>Receives telephone voice signal from Bluetooth control unit</li> <li>Sends telephone voice and voice guidance signals to the speakers</li> </ul>
BOSE speaker amp.	<ul> <li>Recieves audio signals from the AV control unit</li> <li>Outputs amplified audio signals to the speakers.</li> </ul>
Front door speaker	
Front tweeter	Receives telephone voice and voice guidance signals from the AV control unit
Center speaker	
Steering wheel audio control switches	<ul> <li>Start a voice recognition session</li> <li>Answer and end telephone calls</li> <li>Adjust the volume level</li> </ul>
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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< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

## DIAGNOSIS SYSTEM (AV CONTROL UNIT)

## **Diagnosis Description**

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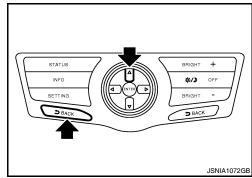
#### MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

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

#### Self-Diagnosis Mode

- Press the BACK switch and the 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><li>AV control unit diagnosis</li><li>Perform the connection diagnosis between each of the units.</li></ul>

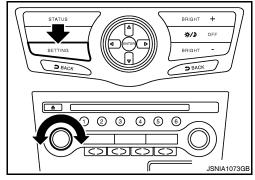
#### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY]

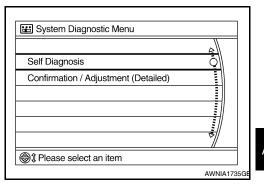
	Mode	Description			
	Display Diagnosis	The confirmation of the tint with the color spectrum bar display and shading of color with the gradation bar display can be performed.			
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse.			
	Speaker Test	The connection of a speaker can be confirmed by test tone.			
Confirmation/	Error History (Detailed)	System malfunctions and the frequency when occurring in the past a displayed. When the malfunctioning item is selected, the time and plathat the selected malfunction last occurred are displayed.			
Adjustment	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 adjust ed.			
	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.

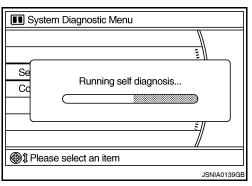


#### **SELF-DIAGNOSIS MODE**

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.



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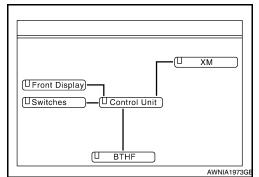
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#### < FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

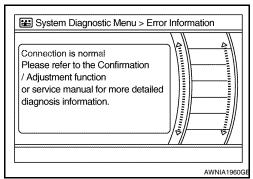
Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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



#### NOTE:

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



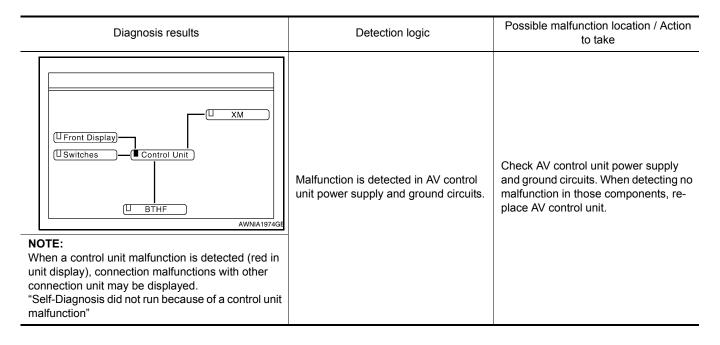
#### SELF-DIAGNOSIS RESULTS

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

#### NOTE:

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

Self-diagnosis Result Chart



Diagnosis results	Detection logic	Possible malfunction location / Action to take
Front Display) - 1  U Switches  U Control Unit  BTHF  AWNIA1975GE	When either one of the following items are detected:  • 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.	Serial communication circuits between AV control unit and front display unit.
☐ SAT ☐ SAT ☐ SAT ☐ SAT ☐ SHEET SWITCHES ☐ SAT ☐ SAT ☐ SHEET SWITCHES ☐ SAT ☐	<ul> <li>When any one of the following items is detected:</li> <li>satellite radio tuner power supply and ground circuits are malfunctioning.</li> <li>serial communication circuits between AV control unit and satellite radio tuner are malfunctioning.</li> <li>serial communication or request signal between AV control unit and satellite radio tuner is malfunctioning.</li> <li>request signal circuit between AV control unit and satellite radio tuner is malfunctioning.</li> </ul>	<ul> <li>Satellite radio tuner power supply and ground circuits.</li> <li>Serial communication circuits between AV control unit and satellite radio tuner.</li> <li>Request signal circuit between AV control unit and satellite radio tuner.</li> </ul>
U Switches U Control Unit  BTHF  AWNIA1977GE	<ul> <li>When any one of the following items is detected:</li> <li>Bluetooth control unit power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between camera control unit and Bluetooth control unit are malfunctioning.</li> <li>AV communication circuits between multifunction switch and camera control unit are malfunctioning. (without DVD player models)</li> <li>AV communication circuits between DVD player and camera control unit are malfunctioning. (with DVD player models)</li> <li>AV communication signal between AV control unit and Bluetooth control unit is malfunctioning.</li> </ul>	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:

Revision: November 2009

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.

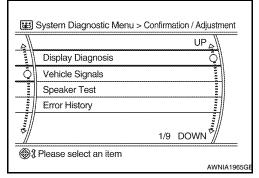
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**AV-199** 2010 Maxima

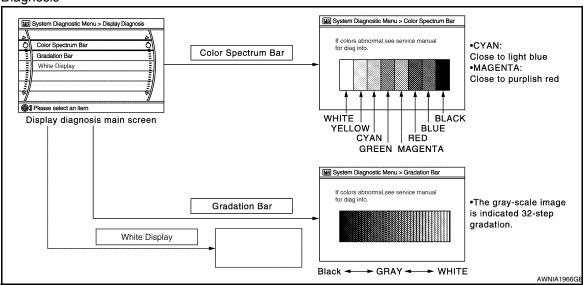
#### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY]

 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**



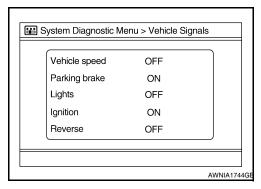
The tint of the color bar indication is as per the following list if RGB image signal error is detected.

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.
verlicie speed	ON	Vehicle speed = 0 km/h (0 MPH)	
Parking brake	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.
raining blane	OFF	Parking brake is released.	

#### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY]

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

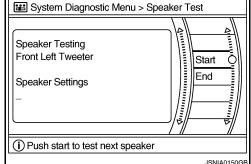
#### Speaker Test

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

#### NOTE:

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

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



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

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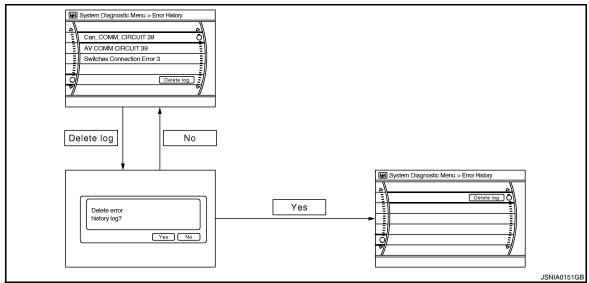
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Error Item

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.		
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	Replace the AV control unit.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.		
CAN Controller Memory Error	Av control unit manufiction is detected.		
Front Display Connection Error	When ane one of the following items is detected:  • 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> <li>Front display unit power supply and ground circuits.</li> <li>Serial communication circuits between AV control unit and front display unit.</li> </ul>	

### < FUNCTION DIAGNOSIS >

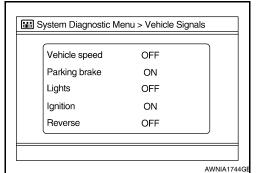
## [BOSE W/ COLOR DISPLAY]

Error item	Description	Possible malfunction factor/Action to take
SAT Connection Error	When any one of the following items is detected:  • 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> <li>Satellite radio tuner power supply and ground circuits.</li> <li>Serial communication circuits between AV control unit and satellite radio tuner.</li> <li>Request signal circuit between AV control unit and satellite radio tuner.</li> </ul>
AV COMM CIRCUIT     Switches Connection Error	<ul> <li>When any one of the following items is detected:</li> <li>multifunction switch power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between AV control unit and multifunction switch are malfunctioning.</li> <li>AV communication signal between AV control unit and multifunction switch is malfunctioning.</li> </ul>	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.



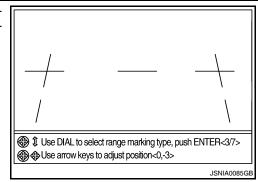
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Diagnosis item	Display	Vehicle status	
	ON	When steering the vehicle with ignition switch ON (remains ON until connection mode is stopped when it is turned ON).	
Steer. Angle Sensor	OFF	Ignition switch at ACC.     No steering with ignition switch ON.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

ADJUST OFFSET OF REAR VIEW CAMERA

Use this mode to adjust the guide line display position of the rearview 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.

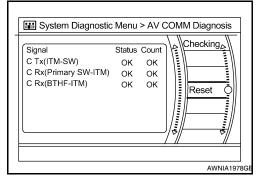
Items	Display (Current)	Malfunction counter (Past)
Tx (HVAC)	OK / UNKWN	OK / 0 - 39
Rx (ECM)	OK / UNKWN	OK / 0 - 39
Rx (Cluster)	OK / UNKWN	OK / 0 - 39
Rx (HVAC)	OK / UNKWN	OK / 0 - 39
Rx (USM)	OK / UNKWN	OK / 0 - 39
Rx (STRG)	OK / UNKWN	OK / 0 - 39

#### System Diagnostic Menu > Vehicle CAN... (S)BACK) Checking Status Count Signal Rx(ECM) OK OK Rx(Cluster) OK OK Rx(HVAC) OK OK Reset Rx(USM) OK OK Rx(STRG) OK OK AWNIA1967G

#### AV COMM Diagnosis

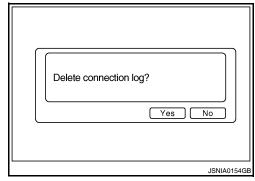
- Displays the communication status between AV control unit (master unit) and each unit.
- The error counter displays "OK" if any malfunction was not detected in the past and displays "0" if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle.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



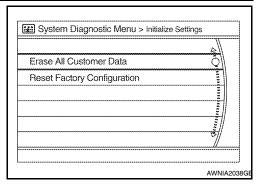
### < FUNCTION DIAGNOSIS >

[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:0000000005531993

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#### 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> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing AV control unit.</li> </ul>	

#### **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.	
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	
Cont Unit [U1200]		Replace the AV control unit if the malfunc-
CAN CONT [U1216]		tion occurs constantly.
SUB CPU CONN [U1228]	AV control unit malfunction is detected.	
iPod CERTIFICATION [U1229]		
Built-in AUDIO CONN [U122E]		

### < FUNCTION DIAGNOSIS >

## [BOSE W/ COLOR DISPLAY]

Error item	Description	Possible malfunction factor/Action to take	
HDD CONN [U1218]  HDD READ [U1219]  HDD WRITE [U121A]  HDD COMM [U121B]  HDD ACCESS [U121C]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>	
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.	
DSP CONN [U121D]  DSP COMM [U121E]	AV control unit malfunction is detected.	<ul> <li>If a disc can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>	
DVD COMM [U1227]	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>	
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: Display unit power supply and ground circuits malfunction is detected. Communication circuits between AV control unit and display unit.	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 mal- function occurs constantly.	
USB OVERCURRENT [U1263]	Detection of over current in USB connecter.	Check USB harness between the AV control unit and USB connector.	
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	<ul> <li>When either one of the following items are detected:</li> <li>Multifunction switch power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between AV control unit and multifunction switch are malfunctioning.</li> </ul>	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>	

### **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	
VIIOL OF DISIO	Off	Vehicle speed =0 km/h (0 MPH)		
PKB SIG	On	Parking brake is applied.	normal.	
FRD SIG	Off	Parking brake is released.		

### < 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.	
ILLUM SIG	Off	Expose the auto light optical sensor to light when the light SW is OFF or ON.	_
IGN SIG	On	Ignition switch ON	
IGIN SIG	Off	Ignition switch in ACC position	
	On	Selector lever in R position	Changes in indication may be delayed. This is
REV SIG	Off	Selector lever in any position other than R	normal.

### **SELECTION FROM MENU**

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

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

### **CONFIGURATION**

Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	<ul> <li>Reads the vehicle configuration of current AV control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
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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Revision: November 2009 AV-207 2010 Maxima

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INFOID:0000000005530161

## DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

## **Diagnosis Description**

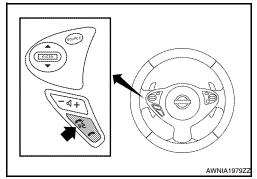
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

### BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

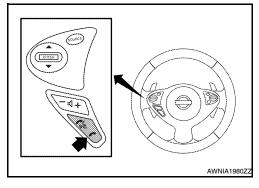
- · Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- · Bluetooth inquiry check

### **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.



- 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".
- After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails, refer to <u>AV-208</u>, "Work Flow".



Work Flow

Failure Message	Action	
"Internal failure"	Replace Bluetooth control unit. Refer to AV-85, "Removal and Installation".	
"Bluetooth antenna open"	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)	Inspect harness between Bluetooth control unit and microphone.     Replace microphone. Refer to AV-83, "Removal and Installation".	

### **U1000 CAN COMM CIRCUIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

# **COMPONENT DIAGNOSIS**

### U1000 CAN COMM CIRCUIT

Description INFOID:0000000005530164

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

#### DTC DETECTION LOGIC

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

## Diagnosis Procedure

1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 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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## **U1010 CONTROL UNIT (CAN)**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

# U1010 CONTROL UNIT (CAN)

Description INFOID:0000000005530167

Initial diagnosis of AV control unit.

DTC Logic

### DTC DETECTION LOGIC

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

## Diagnosis Procedure

INFOID:0000000005530169

## 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:0000000005530170

Replace the AV control unit if this DTC is displayed. Refer to AV-322, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	<ul> <li>It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>AV control unit includes audio function and vehicle information function.</li> <li>It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
 J1200	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**

[BOSE W/ COLOR DISPLAY]

## **U1216 AV CONTROL UNIT**

Description INFOID:0000000005530172

Replace the AV control unit if this DTC is displayed. Refer to AV-322, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	<ul> <li>It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>AV control unit includes audio function and vehicle information function.</li> <li>It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1216	CAN CONT [U1216]	Internal malfunction of AV control unit (CAN controller) is detected.	Replace AV control unit. Refer to AV-322, "Removal and Installation".

### **U1218 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY]

## **U1218 AV CONTROL UNIT**

DTC Logic

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	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:0000000005531995

# 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005531997

# 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	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

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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## **U121B AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

# **U121B AV CONTROL UNIT**

DTC Logic

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005532001

# 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	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:0000000005532003

# 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121D	DSP CONN [U121D]	AV control unit malfunction is detected.	<ul> <li>If a disc can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation".</li> </ul>

## Diagnosis Procedure

INFOID:0000000005532005

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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	AV control unit malfunction is detected.	<ul> <li>If a disc can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

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

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1227	DVD COMM [U1227]	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-322. "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005532009

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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#### **U1228 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

# **U1228 AV CONTROL UNIT**

DTC Logic

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

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:0000000005530194

# 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 <u>AV-681, "CONFIGURATION (AV CONTROL UNIT) : Special Repair Requirement"</u>.

#### **U122E AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR DISPLAY]

## **U122E AV CONTROL UNIT**

DTC Logic

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

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:0000000005530197

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 <a href="https://example.com/BRC-8">BRC-8</a>, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION: Special Repair Requirement".

#### [BOSE W/ COLOR DISPLAY]

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INFOID:0000000005530200

# U1243 DISPLAY UNIT

Description INFOID:0000000005530198

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

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1243	FRONT DISP CONN [U1243]	<ul> <li>Display unit power supply and ground circuit malfunction is detected.</li> <li>Malfunction is detected on communication circuit between display unit and AV control unit.</li> <li>Malfunction is detected on communication signal between display unit and AV control unit.</li> </ul>	Display unit power supply and ground circuit.     Communication circuit between display unit and AV control unit.

# Diagnosis Procedure

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 <u>AV-235, "DISPLAY UNIT : Diagnosis Procedure"</u>. <u>Is inspection result OK?</u>

**AV-227** 

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# 2.CHECK CONTINUITY OF COMMUNICATION CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect display unit connector and AV control unit connector.
- Check continuity between display unit harness connector M141

   (A) terminals 11, 22 and AV control unit harness connector M154 (B) terminals 56, 44.

	A	В		Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	11	M154	56	Yes
IVI 14 I	22	101154	44	165

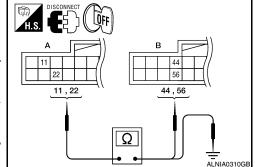
 Check continuity between display unit harness connector M141 (A) terminals 11, 22 and ground.

	A		Continuity	
Connector	Terminal	_	Continuity	
M141	11	Cround	No	
IVI 14 I	22	Ground	No	

#### Are continuity results as specified?

YES >> GO TO 3.

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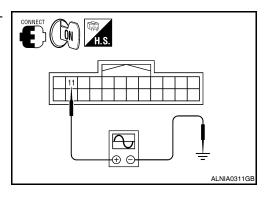
#### < COMPONENT DIAGNOSIS >

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 oscilliscope or CONSULT-III.

(	(+)		Reference signal	
Connector	Terminal	(-)	Reference signal	
M141	11	Ground	(V) 6 4 2 0	



#### Are voltage readings as specified?

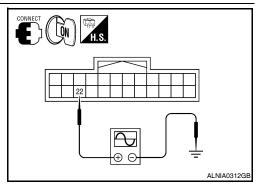
YES >> GO TO 4.

NO >> Replace AV control unit. Refer to <u>AV-322. "Removal and Installation"</u>.

#### 4. CHECK COMMUNICATION SIGNAL

Check signal between display unit harness connector M141 terminal 22 and ground with an oscilliscope or CONSULT-III.

(+) Connector Terminal		(-)	Reference signal
M141	22	Ground	(V) 6 4 2 0 +



#### 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

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:0000000005532011

# 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**

Description INFOID:000000005530203

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

DTC Logic

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

#### Diagnosis Procedure

INFOID:0000000005530205

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 <u>AV-238, "SATELLITE RADIO TUNER:</u> <u>Diagnosis Procedure"</u>.

Is the inspection result normal?

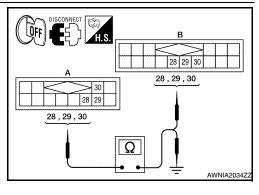
YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# 2.CHECK CONTINUITY COMMUNICATION CIRCUIT AND REQUEST SIGNAL CIRCUIT

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

-	А		В		Continuity
	Connector	Terminals	Connector	Terminals	Continuity
_		28		28	
	M153	29	B111	29	Yes
		30		30	



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

Α		 Continuity
Connector Terminals		Continuity

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

#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR DISPLAY]

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	28		
M153	29	Ground	No
	30		

#### Is the inspection result normal?

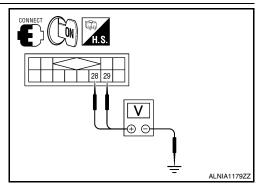
YES >> GO TO 3.

NO >> Repair harness or connector.

# 3.check av control unit voltage

- 1. Connect AV control unit connector.
- 2. Turn ignition switch ON.
- Check voltage between AV control unit harness connector M153 and ground.

(	+)		Voltage
Connector	Terminals	(–)	(Approx.)
M153	28	Ground	7.0V
	29	Giodila	7.00



#### Is the inspection result normal?

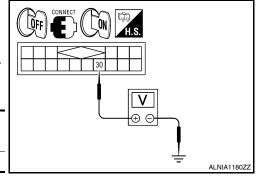
YES >> GO TO 4.

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.
- Check voltage between satellite radio tuner harness connector terminal ground.

(	+)		Voltage
Connector	Terminal	(–)	(Approx.)
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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#### **U1300 AV COMM CIRCUIT**

[BOSE W/ COLOR DISPLAY]

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

Description INFOID:0000000005532015

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	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	<ul> <li>When either one of the following items are detected:</li> <li>A/C and AV switch assembly power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between AV control unit and A/C and AV switch assembly are malfunctioning.</li> <li>AV communication signal between AV control unit and A/C and AV switch assembly is malfunctioning.</li> </ul>	<ul> <li>A/C and AV switch assembly power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and A/C and AV switch assembly.</li> </ul>

#### **U1310 AV CONTROL UNIT**

#### [BOSE W/ COLOR DISPLAY]

#### **U1310 AV CONTROL UNIT**

Description INFOID:0000000005530207

Replace the AV control unit if this DTC is displayed. Refer to <u>AV-234, "AV CONTROL UNIT : Diagnosis Procedure"</u>.

Part name	Description		
AV CONTROL UNIT	<ul> <li>It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>AV control unit includes audio function and vehicle information function.</li> <li>It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>		

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit. Refer to AV-322, "Removal and Installation".

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[BOSE W/ COLOR DISPLAY]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000005530209

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.
	19	Battery power	24
AV control unit	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

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

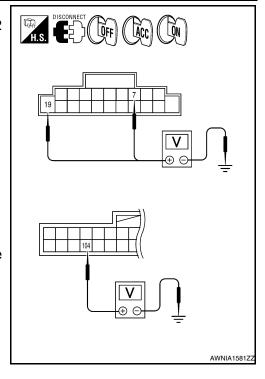
(+)		()	OFF	ACC	ON
Connector	Terminal	(-)	OFF	ACC	ON
M152	7	Ground	0V	Battery voltage	Battery voltage
	19	Ground	Battery voltage	Battery voltage	Battery voltage
M156	104	Ground	0V	0V	Battery voltage

#### 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

#### < COMPONENT DIAGNOSIS >

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- Turn ignition switch OFF.
- 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**

D INFOID:0000000005530210

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Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

# 1. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch to ACC.
- Check voltage between display unit harness connector M141 and ground.

	(+)	(-)	Value (Approx.)	
Connector	Terminal	(-)		
M141	2	Ground	9V	
IVI 14 I	3	Giouria	90	

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#### Does specified voltage exist?

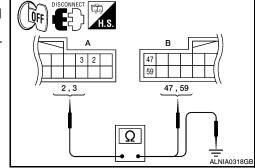
YES >> GO TO 3.

NO >> GO TO 2.

#### 2.CHECK POWER SUPPLY CIRCUIT

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

	А		В		Continuity
-	Connector	Terminal	Connector	Terminal	Continuity
-	M141	2	M154	59	Yes
	101141	3	IVI I O4	47	165



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

,	A		Continuity	
Connector	Terminal	_		
M141	2	Ground	No	
101141	3	Giouna	INO	

#### 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.

#### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

# 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

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#### 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:0000000005530211

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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?

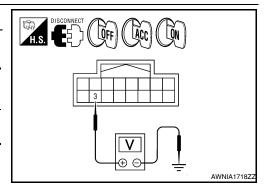
YES >> GO TO 2.

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

# 2. POWER SUPPLY CIRCUIT CHECK

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

(+)		(-)	OFF	ACC	ON
Connector	Terminal	(-)	OH	700	ON
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

#### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

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

DISCONNECT THE H.S.

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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	Pattony nowor	26
	10	- Battery power	25

#### Are the fuses OK?

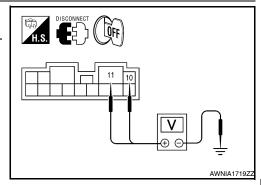
YES >> GO TO 2.

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

## 2. CHECK POWER SUPPLY CIRCUIT

- 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	(-)	voltage (approx.)	
B110	10	Ground	Battery voltage	
	11	Giodila	Battery voltage	



#### Is battery voltage present?

YES >> GO TO 3.

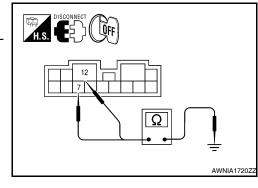
NO >> Check harness between BOSE speaker amp. and fuse.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BOSE speaker amp. connector.
- Check continuity between BOSE speaker amp. harness connector B110 terminal 7,12 and ground.

(+)		(-)	Continuity	
Connector	Terminal	(-)	Continuity	
B110	7	Ground	Yes	
	12	Giouria	163	

#### Does continuity exist?



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#### [BOSE W/ COLOR DISPLAY]

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#### < COMPONENT DIAGNOSIS >

YES >> Inspection End.

NO >> Repair harness or connector.

#### SATELLITE RADIO TUNER

#### SATELLITE RADIO TUNER: Diagnosis Procedure

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 in-	32	Battery power	24
stalled)	36	Ignition switch ACC or ON	17

#### Are the fuses OK?

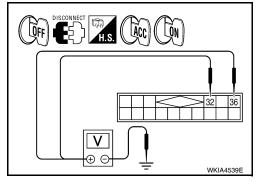
YES >> GO TO 2.

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.
- 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	(-)	(-) OFF		ON	
B111	32	Ground	Battery voltage	Battery voltage	Battery voltage	
	36	Giodila	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.
- Check continuity between satellite radio tuner (factory installed) harness connector and ground.

Connector	Terminal	_	Continuity	
B111	35	Ground	Yes	

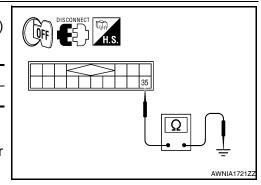
#### Does continuity exist?

YES >> Inspection End.

NO >> Repair satellite radio tuner (factory installed) harness or connector.

#### REAR VIEW CAMERA

REAR VIEW CAMERA : Diagnosis Procedure



INFOID:0000000005530214

#### < COMPONENT DIAGNOSIS >

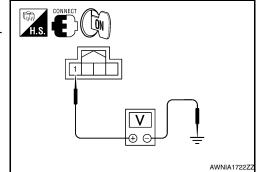
[BOSE W/ COLOR DISPLAY]

Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

# ${\bf 1.} {\sf CHECK\ POWER\ SUPPLY\ CIRCUIT\ (REAR\ VIEW\ CAMERA\ SIDE)}$

- 1. Turn ignition switch ON.
- 2. Shift transmission into Reverse.
- 3. Check voltage between rear view camera harness connector T101 and ground.

(+)		(-)	Transmission	Value (Approx.)
Connector	Terminal	(-)	position	value (Approx.)
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	В		Continuity
Connector	Terminal	Connector Terminal		Continuity
T101	1	M155	70	Yes

 Check continuity between rear view camera harness connector T101 (A) terminal 1 and ground.

H.S. DISCONNECT OFF
A B
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Α			Continuity	
Connector	Terminal	_	Continuity	
T101	1	Ground	No	

#### Are continuity test results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

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

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

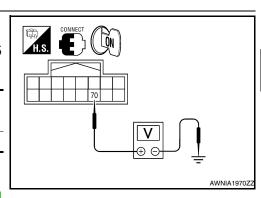
(+)		(-)	Transmission	Value (Approx.)
Connector	Terminal	(-)	position	value (Approx.)
M155	70	Ground	Reverse	6V

# 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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- 1. Turn ignition switch OFF.
- 2. Disconnect rear view camera harness connector.
- 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:0000000005530215

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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.

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

# CONNECT CON LLS COFF CACC CON 2 1 1 3 1 , 2 , 3 ALNIA0323GB

#### Is battery voltage present as specified?

YES >> GO TO 3.

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

# 3. CHECK GROUND CIRCUIT

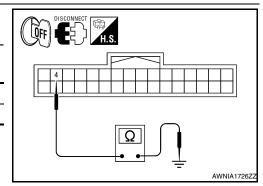
- Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit connector.
- 3. Check continuity between Bluetooth control unit harness connector B131 and ground.

			Continuity
B131	4	Ground	Yes

#### Are continuity results as sepcified?

YES >> Inspection End.

NO >> Repair harness or connector.



#### **MICROPHONE**

#### MICROPHONE: Diagnosis Procedure

INFOID:0000000005530216

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Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

# 1. CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

- 1. Turn ignition switch ON.
- Check voltage between microphone harness connector R7 terminal 4 and ground.

(	+)	(-)	Value (Approx.)	
Connector	Connector Terminal		value (Applox.)	
R7	4	Ground	5V	

# CONNECT H.S. WKIAS796E

#### Is approximately 5V present?

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

# 2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

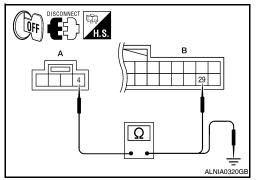
- Turn ignition switch OFF.
- Disconnect microphone and Bluetooth control unit harness connectors.
- Check continuity between microphone harness connector R7

   (A) terminal 4 and Bluetooth control unit harness connector B131 (B) terminal 29.

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

Check continuity between microphone harness connector R7

 (A) terminal 4 and ground.



	A		Continuity	
Connector Terminal			Continuity	
R7	4	Ground	No	

#### Are the continuity test results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

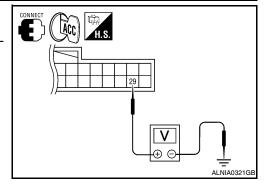
# 3.CHECK POWER SUPPLY CIRCUIT (BLUETOOTH CONTROL UNIT SIDE)

- 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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#### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

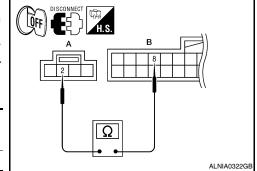
NO >> Replace Bluetooth control unit. Refer to AV-677, "Removal and Installation".

# 4. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect microphone harness connector R7 and Bluetooth control unit harness connector B131.
- Check continuity between microphone harness connector R7

   (A) terminal 2 and Bluetooth control unit harness connector B131 (B) terminal 8.

Α			Continuity	
Connector	Terminal	Connector	Terminal	Continuity
R7	2	B131	8	Yes



#### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

# RGB (R: RED) SIGNAL CIRCUIT

Description INFOID:0000000005530217

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

#### Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect display unit connector M141 and AV control unit connector M154.
- Check continuity between display unit harness connector M141

   (A) terminal 17 and AV control unit harness connector M154 (B) terminal 40.

	A		В	Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	17	M154	40	Yes

Check continuity between display unit harness connector M141

 (A) terminal 17 and ground.

	A	_	Continuity
Connector	Terminal		Continuity
M141	17	Ground	No

#### Are the continuity results as specified?

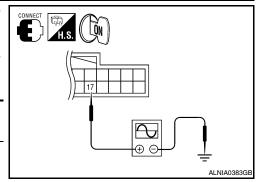
YES >> GO TO 2.

NO >> Repair harness or connector.

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

- Connect display unit connector M141 and AV control unit connector M154.
- Turn ignition switch ON.
- 3. Check signal between display unit harness connector M141 terminal 17 and ground.

(+)		(-)	Condition	Reference signal
Connector	Terminal	(-)	Condition	received signal
M141	17	Ground	Receive audio sig- nal	(V) 0. 4 0 −0. 4 → 40μs SKIB2238J



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

Description INFOID:000000005530219

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

Diagnosis Procedure

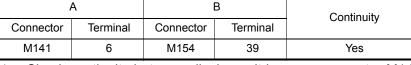
INFOID:0000000005530220

Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

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

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

	Α		В	Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	6	M154	39	Yes



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

	4	_	Continuity	
Connector	Terminal			
M141	6	Ground	No	

#### Are the continuity results as specified?

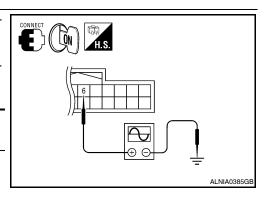
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (G: GREEN) SIGNAL

- Connect display unit connector M141 and AV control unit connector M154.
- Turn ignition switch ON.
- Check signal between display unit harness connector M141 terminal 6 and ground.

(+)		(-)	Condition	Peference signal	
Connector	Terminal	(-)	Condition	Reference signal	
M141	6	Ground	Receive audio sig- nal	(V) 0. 4 0 −0. 4 • + 40μs skib2236J	



#### Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-325, "Removal and Installation".

>> Replace AV control unit. Refer to AV-322, "Removal and Installation". NO

# RGB (B: BLUE) SIGNAL CIRCUIT

Description INFOID:0000000005530221

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

Diagnosis Procedure

INFOID:000000005530222

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Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect display unit connector M141 and AV control unit connector M154.
- Check continuity between display unit harness connector M141

   (A) terminal 18 and AV control unit harness connector M154 (B) terminal 38.

	A		В	Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	18	M154	38	Yes

 Check continuity between display unit harness connector M141 (A) terminal 18 and ground.

DISCONNECT H.S.
A B 33
ALNIA0386GB

	A	_	Continuity	
Connector	Terminal		Continuity	
M141	18	Ground	No	

#### Are continuity results as specified?

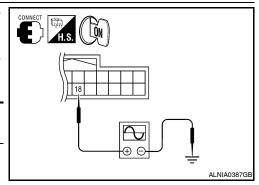
YES >> GO TO 2.

NO >> Repair harness or connector.

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

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

(+)		(-)	Condition	Peference signal	
Connector	Terminal	(-)	Condition	Reference signal	
M141	18	Ground	Receive audio sig- nal	(V) 0. 4 0 -0. 4	
•					



#### 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

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

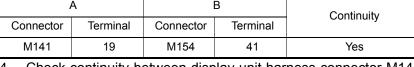
INFOID:0000000005530224

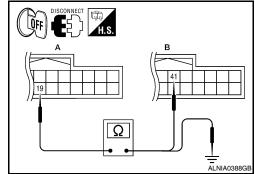
Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

# 1. CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 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		Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M141	19	M154	41	Yes





Check continuity between display unit harness connector M141 (A) terminal 19 and ground.

	A		Continuity
Connector	Terminal	_	Continuity
M141	19	Ground	No

#### Are continuity results as specified?

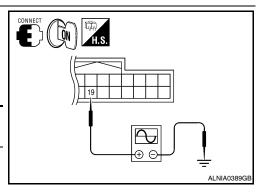
YES >> GO TO 2.

NO >> Repair harness or connector.

## 2.CHECK RGB SYNCHRONIZING SIGNAL

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

(+)		(-) Condition		Reference signal	
Connector	Terminal	. ,		G	
M141	19	Ground	Receive audio sig- nal	(V) + + 20 µs SKIB3603E	



#### Are voltage readings as specified?

>> Replace display unit. Refer to AV-325. "Removal and Installation". YFS

>> Replace AV control unit. Refer to AV-322, "Removal and Installation". NO

# RGB AREA (YS) SIGNAL CIRCUIT

Description INFOID:00000000005530225

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

Diagnosis Procedure

INFOID:0000000005530226

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Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect display unit connector M141 and AV control unit connector M154.
- Check continuity between display unit harness connector M141

   (A) terminal 9 and AV control unit harness connector M154 (B) terminal 43.

	А		В	Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	9	M154	43	Yes

Check continuity between display unit harness connector M141

 (A) terminal 9 and ground.

DISCONNECT H.S.	B 43 43 43 43 43 43 43 43 43 43 43 43 43
	ALNIA0390GB

Α			Continuity
Connector	Terminal		Continuity
M141	9	Ground	No

#### Are continuity results as specified?

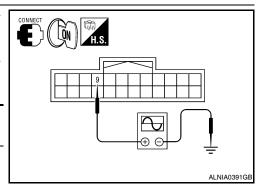
YES >> GO TO 2.

NO >> Repair harness or connector.

#### 2.CHECK RGB SYNCHRONIZING SIGNAL

- Connect display unit connector M141 and AV control unit connector M154.
- 2. Turn ignition switch ON.
- Check signal between display unit harness connector M141 terminal 9 and ground.

(+) Connector Terminal		(-)	Condition	Reference signal
M141	9	Ground	Receive audio sig- nal	(V) 6 4 2 0 → ← 200 µ S PKIB4948J



Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-325, "Removal and Installation".

NO >> Replace AV control unit. Refer to <a href="AV-322">AV-322</a>. "Removal and Installation".

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# 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

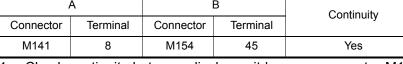
INFOID:0000000005530228

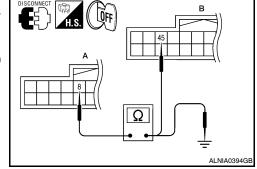
Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

# $1.\mathsf{check}$ continuity horizontal synchronizing (HP) signal circuit

- Turn ignition switch OFF.
- 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		В	Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	8	M154	45	Yes





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

	A		Continuity
Connector	Terminal	_	Continuity
M141	8	Ground	No

#### Are continuity results as specified?

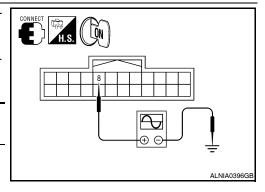
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

- Connect display unit connector M141 and AV control unit connector M154.
- Turn ignition switch ON.
- Check signal between display unit harness connector M141 terminal 8 and ground.

(+)		- (-) Condition		Poforonco cianal	
Connector	Terminal	(-)	Condition Reference signal		
M141	8	Ground	Receive audio sig- nal	(V) 4 0 ++20µs 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]

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INFOID:0000000005530230

# VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

**Description** 

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

Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect display unit connector M141 and AV control unit connector M154.
- Check continuity between display unit harness connector M141

   (A) terminal 20 and AV control unit harness connector M154 (B) terminal 57.

Α			В	Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	20	M154	57	Yes

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

	A		Continuity	
Connector	Connector Terminal		Continuity	
M141	20	Ground	No	

#### Are continuity results as specified?

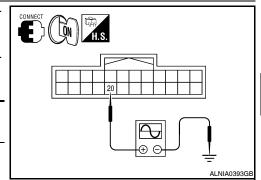
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

- Connect display unit connector M141 and AV control unit connector M154.
- 2. Turn ignition switch ON.
- Check signal between display unit harness connector M141 terminal 20 and ground.

(+)		(-)	Condition	Reference signal		
Connector	Terminal	(-)	(-) Condition Reference signal		(-) Condition Reference signs	
M141	20	Ground	Receive audio sig- nal	(V) 4 0 ++4ms SKIB3598E		



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#### Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-322, "Removal and Installation".

NO >> Replace display unit. Refer to <a href="AV-325">AV-325</a>, "Removal and Installation".

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INFOID:0000000005530232

#### FRONT DOOR SPEAKER

**Description** 

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

Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

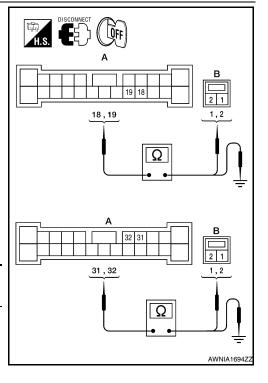
#### 1. HARNESS CHECK

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

A			В	Continuity
Connector	Terminal	Connector	Terminal	
	18	D3	1	
B109	19	D3	2	Yes
B109	31	D103	1	165
	32	D 103	2	

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

Α		В	Continuity	
Connector	Terminal	5	Continuity	
	18		No	
B109	19	Ground		
	31	Giodila		
	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

#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR DISPLAY]

- 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.

Connec-	Terr	minal	Condition	Reference
tor	(+)	(-)	signal	
	18	19		
B109	31	32	Receive audio sig- nal	1 0 -1 1 ms 3 SKA0177E

#### Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to <u>AV-331, "Removal and Installation"</u>.

NO >> GO TO 3.

# 3. HARNESS CHECK

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

	АВ		Continuity	
Connector	Terminal	Connector	Terminal	Continuity
	113		35	
M157	119	B109	36	Yes
	109		33	res
	115		34	

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

	А	_	Continuity	
Connector	Terminal		Continuity	
M157	113		No	
	119	Ground		
	109			
	115			

# AWNIA1695ZZ DISCONNECT A 35,36 35,36 A 313,119 113,119 109,115

#### Are continuity test results as specified?

YES >> GO TO 4.

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

Repair harness or connector.

#### 4.FRONT DOOR SPEAKER SIGNAL CHECK

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#### FRONT DOOR SPEAKER

#### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

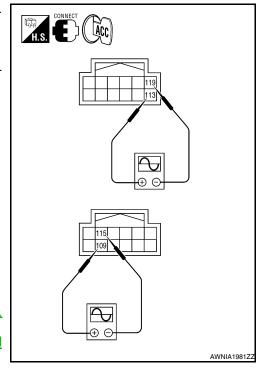
- 1. Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference	
	(+)	(-)	Condition	signal	
	113	119			
M157	109	115	Receive audio sig- nal	(V) 1 0 -1 1 ms	

#### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-334</u>, <u>"Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to <u>AV-322, "Removal and Installation"</u>.



#### [BOSE W/ COLOR DISPLAY]

INFOID:0000000005530234

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# **TWEETER**

Description

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

Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

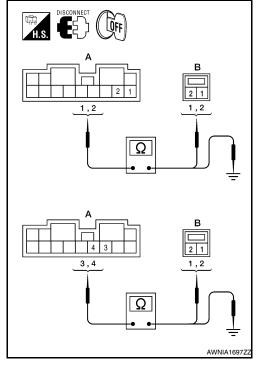
# 1. HARNESS CHECK

- 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).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	1	M51	1	
B110	2	IVIOI	2	Yes
	4	M52	1	163
	3	IVIOZ	2	

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

	Α		Continuity	
Connector	Terminal		Continuity	
	1		No	
B110	2	Ground		
БПО	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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# < 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	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	1	2		
B110	4	3	Receive audio sig- nal	1 0 -1 1 ms SKIA0177E

# Are the audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to <u>AV-164, "Removal and Installation"</u>.

NO >> GO TO 3.

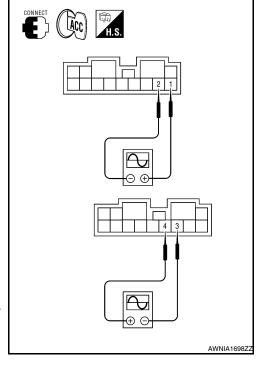
# 3. HARNESS CHECK

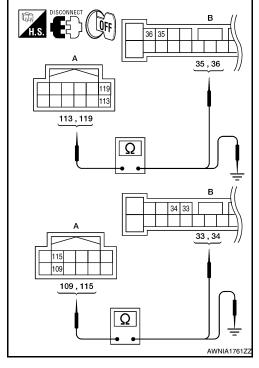
- Disconnect AV control unit connector M157 and BOSE speaker amp. connector B109.
- 2. Check continuity between AV control unit harness connector M157 (A) and BOSE speaker amp. harness connector B109 (B).

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	113		35	
M157	119	B109	36	Yes
	109	D109	33	165
	115		34	

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

	Α		Continuity	
Connector	Terminal	_	Continuity	
	113			
N457	119	Ground	Nie	
M157	109	Giouria	No	
	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]

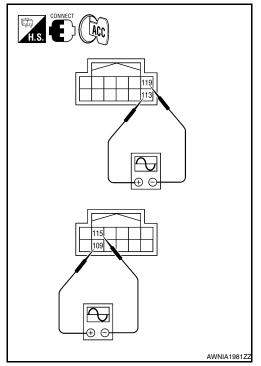
- 1. Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	113	119		
M157	109	115	Receive audio sig- nal	(V) 1 0 -1 1 ms

# Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>. "Removal and Installation".

NO >> Replace AV control unit. Refer to <u>AV-322, "Removal and Installation"</u>.



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# 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

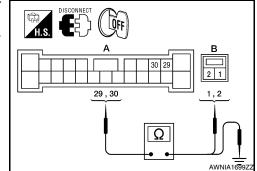
INFOID:0000000005530236

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).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B109	29	M130	1	Yes
D109	30	IVITOU	2	165



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

	Α		Continuity
Connector	Terminal		Continuity
B109	29	Ground	No
B109	30	Ground	INO

#### Are continuity test results as specified?

YES >> GO TO 2.

NO

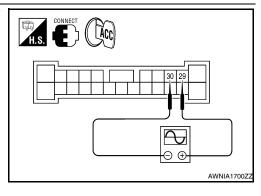
>> • Check connector housings for disconnected or loose terminals.

· 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	Term	Terminals		Reference
Connector	(+)	(-)	Condition	signal
B109	29	30	Receive audio sig- nal	(V) 1 0 -1 1 ms



Is the audio signal voltage reading as specified?

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# < COMPONENT DIAGNOSIS >

YES >> Replace center speaker. Refer to AV-165. "Removal and Installation".

NO >> GO TO 3.

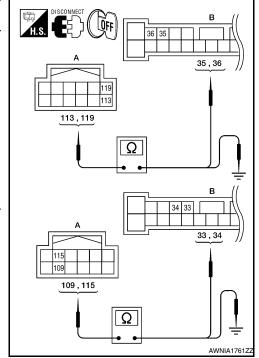
# 3. HARNESS CHECK

- 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	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	113		35	
14457	119	D100	36	Yes
M157	109	B109	33	ies
	115		34	

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

	A		Continuity
Connector	Terminal	_	Continuity
	113		
M157	119	Ground	No
WITO	109	Giodila	INO
	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

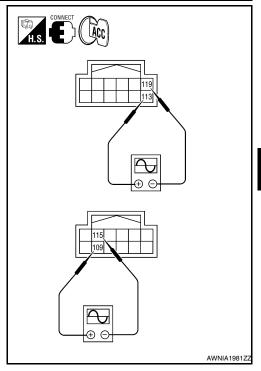
- Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

(+) (-) Signal  113 119  Receive audio signal  (V)  109 115 Receive audio signal	Connector	Term	ninals	Condition	Reference
M157  Receive audio signal  109  115  Receive audio signal  1  1  1  1  1  1  1  1  1  1  1  1  1	Connector	(+)	(-)	Condition	signal
M157  109  115  Receive audio signal  1 0 11 1 ms		113	119		
	M157	109	115	audio sig-	1 0 -1 1 ms

#### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>, <u>"Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to AV-322, "Removal and Installation".



INFOID:0000000005530238

# REAR DOOR SPEAKER

Description INFOID:0000000005530237

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

Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

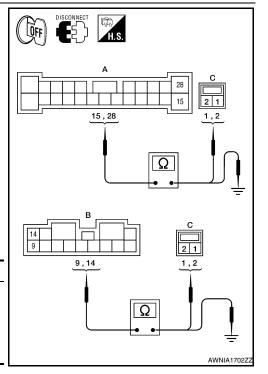
# 1. HARNESS CHECK

- 1. Disconnect BOSE speaker amp. connectors B109, B110 and suspect speaker connector.
- 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		
A. B109	28			Yes	
B: B110	9	C: D302	2	103	
	14	C. D302	1		

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

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



#### Are the continuity test results as specified?

YES >> GO TO 2. NO >> • Check c

>> • 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]

 $\oplus$ 

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

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
A: B109	28	15		
B: B110	14	9	Receive audio sig- nal	(V) 1 0 -1 1 ms 3

# Are audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to <u>AV-332, "Removal and Installation"</u>.

NO >> GO TO 3.

# 3. HARNESS CHECK

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

A		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	112	118 23	24	
M157	118		23	Voc
W157	108	B109	26	Yes
	114		25	

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

	А		Continuity	
Connector	Terminal	_	Continuity	
	112	Ground	No	
M157	118			
IVI 157	108	Giouna	NO	
	114			

# 

# Are the continuity test results as specified?

YES >> GO TO 4.

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

Repair harness or connector.

# 4.REAR DOOR SPEAKER SIGNAL CHECK

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# **REAR DOOR SPEAKER**

# < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

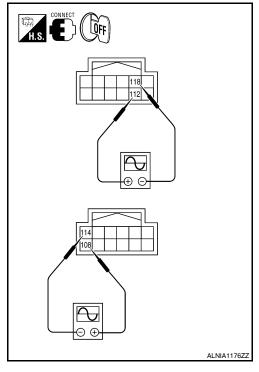
- 1. Connect AV control unit connector M157 and BOSE speaker amp. connector B109.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	112	118		
M157	108	114	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E

# Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-334</u>, <u>"Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to <u>AV-322, "Removal and Installation"</u>.



# **SUBWOOFER**

**Description** 

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

# 1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B110 and suspect rear subwoofer connector.

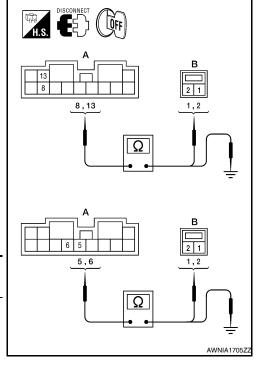
Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

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

A		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	13	D106	1	
B110	8	B106	2	Yes
	5	B107	1	165
	6	D107	2	

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

	A		Continuity	
Connector	Terminal	_	Continuity	
	13			
B110	8	Ground	No	
	5	Ground	140	
	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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Revision: November 2009 AV-261 2010 Maxima

[Acc]

# < COMPONENT DIAGNOSIS >

- 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	Tern	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	13	8		
B110	5	6	Receive audio signal	(V) 1 0 -1 1 ms

# Is the audio signal voltage as specified?

YES >> Replace suspect rear subwoofer. Refer to <u>AV-168</u>. "<u>Removal and Installation"</u>.

NO >> GO TO 3.

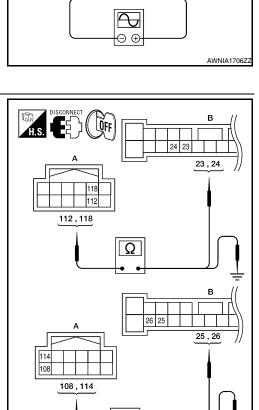
# 3. HARNESS CHECK

- 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).

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	112	118 23	24	
M157	118		23	Yes
WIIST	108	B109	26	165
	114		25	

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

	Α		Continuity	
Connector	Terminal	_	Continuity	
	112	Ground	No	
M157	118			
IVI 157	108	Giouna	INO	
	114			



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# 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]

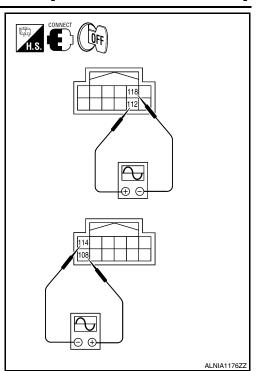
- 1. Connect AV control unit connector M157 and BOSE speaker amp. connector B109.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	112	118		
M157	108	114	Receive audio sig- nal	1 0 -1 1 ms SKIA0177E

# Is the audio signal voltage as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>, <u>"Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to <u>AV-322, "Removal and Installation"</u>.



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INFOID:0000000005530242

# AMP ON SIGNAL CIRCUIT

Description INFOID:0000000005530241

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

Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

# 1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

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

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

#### Is inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

# 2.CHECK AMP ON SIGNAL (AV CONTROL UNIT)

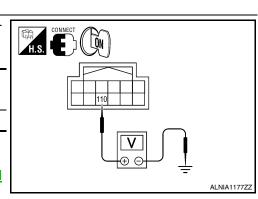
Check voltage between AV control unit harness connector M157 terminal 110 and ground.

(+)		(-)	Voltage (Approx.)	
Connector	Terminal	(-)	voltage (Approx.)	
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

Description INFOID:0000000005530243

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.

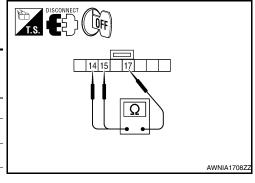
Diagnosis Procedure

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.

Terr	minal	Signal name	Condition	Resistance (Ω) (Approx.)
		Enter	Depress ENTER switch.	2023
		Voice recognition	Depress 🌾 switch.	723
14		Menu (down)	Depress ∇ switch.	321
	17	Menu (up)	Depress △ switch.	121
	17	Source	Depress SOURCE switch.	0
		Menu back	Depress the back switch.	723
15		Phone	Depress 🗸 switch.	321
.0		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.
- Check continuity between AV control unit harness connector M152 (A) and spiral cable harness connector M30 (B).

	Α		В				Continuity
С	Connector	Terminal	Connector Terminal		Continuity		
		6		24			
	M152	15	M30	33	Yes		
		16		31			

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

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	A		Continuity	
Connector	Terminal	_	Continuity	
	6			
M152	15	Ground	No	
	16			

# Are the continuity results as specified?

YES >> GO TO 3.

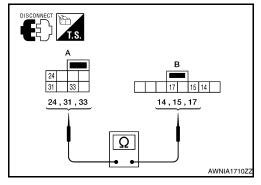
NO >> Repair harness.

# 3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M88.

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

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



# Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to <u>SR-8</u>, "Removal and Installation".

# COMMUNICATION SIGNAL CIRCUIT SATELLITE RADIO TUNER

# SATELLITE RADIO TUNER: Description

INFOID:0000000005530245

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

# SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:0000000005530246

Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

# 1. CHECK HARNESS - 1

1. Turn ignition switch OFF.

- 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	В		Continuity
Connector	Terminal	Connector Terminal		Continuity
B111	28	M153	28	Yes

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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

 Check continuity between satellite radio tuner (factory installed) harness connector B111 (A) terminal 29 and AV control unit harness connector M153 (B) terminal 29.

Α		В		Continuity
Connector	Terminal	Connector Terminal		Continuity
B111	29	M153	29	Yes

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

H.S. DISCONNECT OFF
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	A		Continuity	
Connector	Terminal		Continuity	
B111	29	Ground	No	

#### Are continuity results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

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# 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	В		Continuity
Connector	Terminal	Connector Terminal		Continuity
B111	30	M153	30	Yes

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

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	A		Continuity	
Connector Terminal			Continuity	
B111	30	Ground	No	

# Are continuity results as specified?

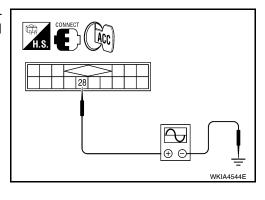
YES >> GO TO 4.

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.
- Check signal between satellite radio tuner (factory installed) harness connector B111 terminal 28 and ground with CONSULT-III or oscilloscope.

(+)		()	Poforonce signal		
Connector	Terminal	(-)	Reference signal		
B111	28	Ground	(V) 15 10 5 0 *** 20ms SKIB3825E		



#### Are voltage readings as specified?

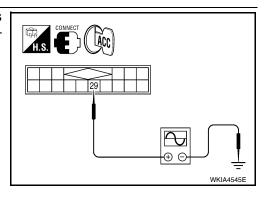
YES >> GO TO 5.

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	(-)	Reference signal			
B111	29	Ground	(V) 15 10 5 0 ** 20ms SKIB3824E			



# **COMMUNICATION SIGNAL CIRCUIT**

# < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY]

# Are the voltage readings as specified?

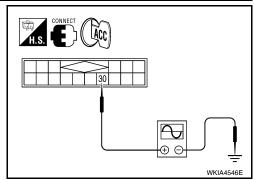
YES >> GO TO 6.

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.

(+)		()	Peteronee signal	
Connector	Terminal	(-)	Reference signal	
B111	30	Ground	(V) 15 10 5 0 ***10ms SKIB3826E	



# 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 SATELLITE RADIO TUNER

# SATELLITE RADIO TUNER: Description

INFOID:0000000005530247

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:0000000005530248

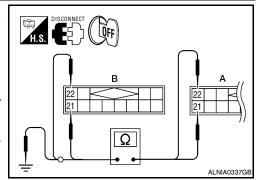
Regarding Wiring Diagram information, refer to AV-281, "Wiring Diagram".

#### 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	1	E	Continuity	
Connector	Terminal	Connector Terminal		
B111	21	M153	21	Yes
БП	22	WITOS	22	165



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

	Α		Continuity
Connector	Terminal	_	Continuity
B111	21	Ground	No
ын	22	Giouna	140

#### Are continuity results as specified?

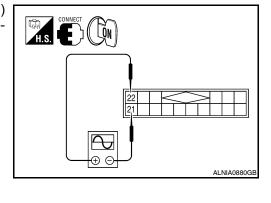
YES >> GO TO 2.

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.
- Check signal between satellite radio tuner (factory installed) connector B111 terminals 21 and 22 with CONSULT-III or oscilloscope.

(+)		(+) (-) Refere		Reference signal
Connector	Connector Term			
B111	22	21	(V) 1 0 -1 + 2ms SKIB3609E	



#### Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-322, "Removal and Installation".

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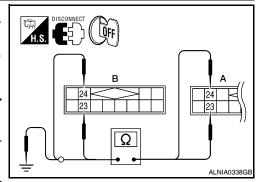
NO >> Replace satellite radio tuner. Refer to AV-335, "Removal and Installation".

#### 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		E	Continuity	
Connector	Terminal	Connector Terminal		Continuity
B111	23	M153	23	Yes
ыш	24	IVITOS	24	165



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

	A		Continuity	
Connector Terminal		_	Continuity	
B111	23	Ground No	No	
БП	24	Giodila	INO	

#### Are continuity results as specified?

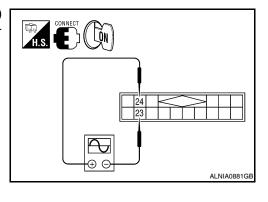
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RIGHT CHANNEL AUDIO SIGNAL

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

(+)		(-)	Reference signal
Connector Terminal		ninal	
B111	24	23	(V) 1 0 -1 + 2ms SKIB3609E



#### 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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Revision: November 2009 AV-271 2010 Maxima

# 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

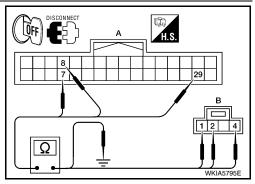
INFOID:0000000005530250

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).

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



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

	A		Continuity		
Connector	Terminal				
	7				
B131	8	Ground	No		
	29				

# Are the continuity test results as specified?

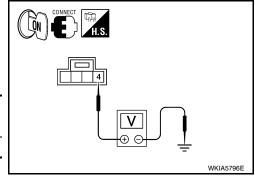
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK MICROPHONE POWER SUPPLY

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

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



#### Is voltage reading approx. 5 volts?

YES >> GO TO 3.

NO >> Replace Bluetooth control unit. Refer to <a href="AV-677">AV-677</a>. "Removal and Installation".

# 3.CHECK MICROPHONE SIGNAL

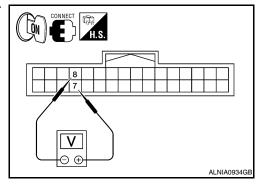
# **MICROPHONE SIGNAL CIRCUIT**

# < COMPONENT DIAGNOSIS >

# [BOSE W/ COLOR DISPLAY]

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

Connector	(+)	(-)	Reference signal				
Connector	Terminal	Terminal					
			While talking into microphone				
B131	7	8	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0 + 2ms				



# Are voltage readings as specified?

>> Replace Bluetooth control unit. Refer to <u>AV-677, "Removal and Installation"</u>. >> Replace microphone. Refer to <u>AV-675, "Removal and Installation"</u>. YES

NO

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# **ECU DIAGNOSIS**

# AV CONTROL UNIT

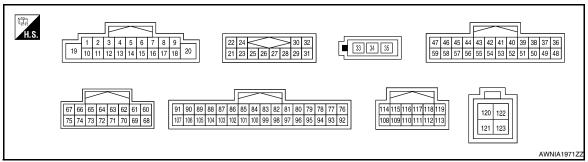
Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

CONSULT-III data monitor item

Display Item	Dis- play	Vehicle status	Remarks				
VHCL SPD SIG	ON	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is no				
VHOL SED SIG	OFF	Vehicle speed =0 km/h (0 MPH)	mal.				
PKB SIG	ON	Parking brake is applied.	Changes in indication may be delayed. This is nor-				
FRB 3IG	OFF	Parking brake is released.	mal.				
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON .					
ILLUM SIG	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.					
IGN SIG	ON	Ignition switch ON					
IGIN SIG	OFF	Ignition switch in ACC position	_				
	ON	Selector lever in R position	Changes in indication may be delayed. This is nor-				
REV SIG	OFF	Selector lever in any position other than R	mal.				

# **TERMINAL LAYOUT**



# PHYSICAL VALUES

	minal color)	Description			Condition	Reference value (Approx.)		
+	_	Signal name	Input/ Output		Condition			
					Depress ENTER switch.	2023Ω		
		Steering switch signal A	Input	Ignition switch	Depress √₂ switch.	723Ω		
6 (W/G)	15 (L/B)				Depress ∇ switch.	321Ω		
					Depress △ switch.	121Ω		
					Depress SOURCE switch.	0Ω		
7 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage		

# **AV CONTROL UNIT**

# < ECU DIAGNOSIS >

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
9	Ground	Illumination signal	Innut	OFF	Lighting switch is OFF.	0V
(R/L)	Ground	iliumination signal	Input	OFF	Lighting switch is ON.	Battery voltage
					Depress the back switch.	723Ω
16	15	Steering switch signal B	Input	Ignition switch	Depress 🗸 switch.	321Ω
(GR/L)	(L/B)	Occorning Switch signal b	mpat	ON	Depress VOL up switch.	121Ω
					Depress VOL down switch.	Ω0
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	(V) 1 0 -1 → + 2ms SKIB3609E
24 (BR/L)	23 (Y/G)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected	(V) 1 0 -1 + 2ms SKIB3609E
25	_	Shield	_	_	_	<u> </u>
26	_	Shield	_	_	_	_
28 (R)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	(V) 10 0
29 (B)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	-10 + 10ms   SKIA9299J
				ON		-10 + 1ms SKIA9300J

	minal color)	Description			Condition	Reference value			
+	_	Signal name	Input/ Output		Condition	(Approx.)			
30 (G)	Ground	Communication signal (CONT→SAT)	Output	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 + 1ms SKIA9301J			
34 (B)	_	Antenna main	_	_	_	_			
35 (B)	_	Antenna power	_	_	_	_			
36 (W)	Ground	AUX image signal	Output	Ignition switch ON	When AUX mode is selected	0. 4 0 -0. 4 -0. 4 40μs			
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.	(V) 0. 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
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.	(V) 0. 4 0 -0. 4 -0. 4 SKIB2236J			
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.	(V) 0. 4 0 -0. 4			

# **AV CONTROL UNIT**

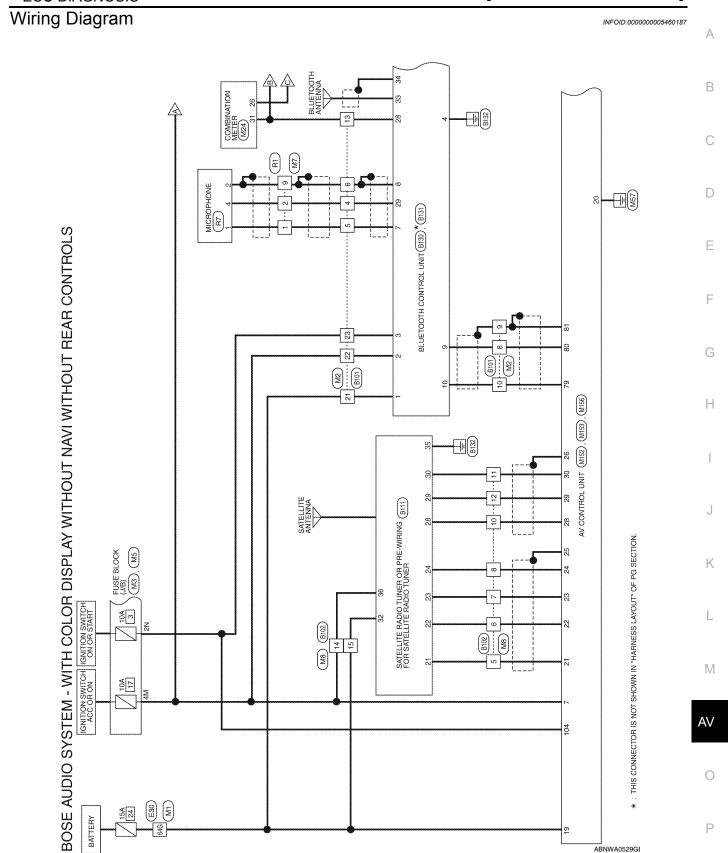
Terminal Description (Wire color)		Description			Condition	Reference value		
+	_	Signal name	Input/ Output		Condition	(Approx.)		
41 (G)	Ground	RGB synchronizing signal	Output	Ignition switch ON	_	(V) 4 0 → 20 µs SKIB3603E		
42	_	RGB synchronizing ground	_	Ignition switch ON	vitch — 0V			
					RGB image	5V		
43 (B) Ground		RGB area (YS) signal	Output	Ignition switch ON	AUX image	(V) 6 4 2 0 → +200 µ s PKIB4948J		
44 (BR)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display- brightness	(V) 6 4 2 0		
45 (R)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON		(V) 4 0 → 20µs SKIB3601E		
46 (LG)	Ground	Signal ground	_	Ignition switch	_	0V		
47 (O)	Ground	Signal VCC	Output	Ignition switch ACC	_	9V		
49	_	Shield	_	_	_	_		
50	_	Shield	_	_	<del>-</del>	<del>-</del>		
55 56 (Y)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display-brightness	(V) 6 4 1		

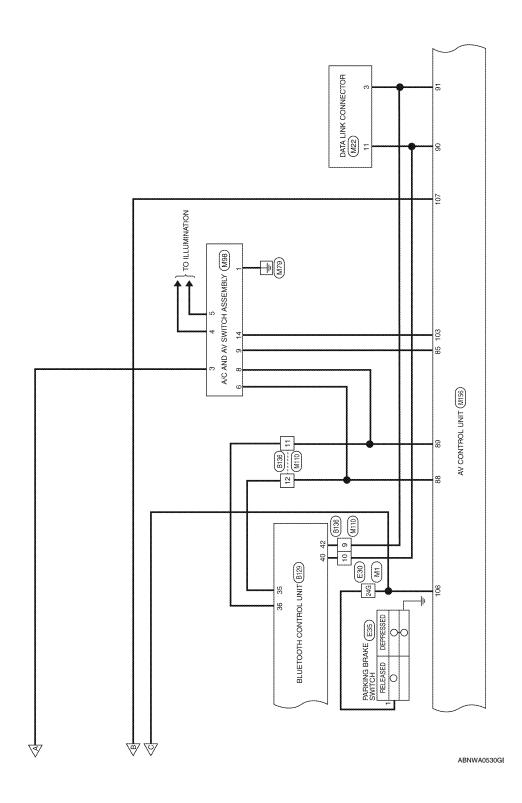
	minal color)	Description			Condition	Reference value			
+	_	Signal name	Input/ Output		Condition	(Approx.)			
57 (W)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch On	_	(V) 4 0 ••44ms skib3598E			
58 (BR)	Ground	Inverter ground	_	Ignition switch ON	_	0V			
59 (Y)	Ground	Inverter VCC	Output	Ignition switch ACC	_	9V			
65 (W)	Ground	Rear view camera video in (+)	Input	Ignition switch ON	With rear view camera ON	(V) 0. 4 0 -0. 4 *** 40µs			
66 (LG)	74 (V)	Aux image signal	Input	Ignition switch ON	When aux mode is selected	(V) 0. 4 0 -0. 4 -0. 4 -0. 8 SKIB2251J			
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/adjust- ment mode, and then Voice Microphone Test by select- ing "Voice Microphone Test" on Handsfree Micro- phone screen.	(V) 1 0 -1 + 2ms SKIB3609E			
81	_	Shield	_	_	_	<u> </u>			
85 (BR)	Ground	Ground	_	Ignition switch ON	_	0V			
86 (L)	_	CAN-H	Input/ Output	_	_	_			
87 (P)	_	CAN-L	Input/ Output	_	_	_			

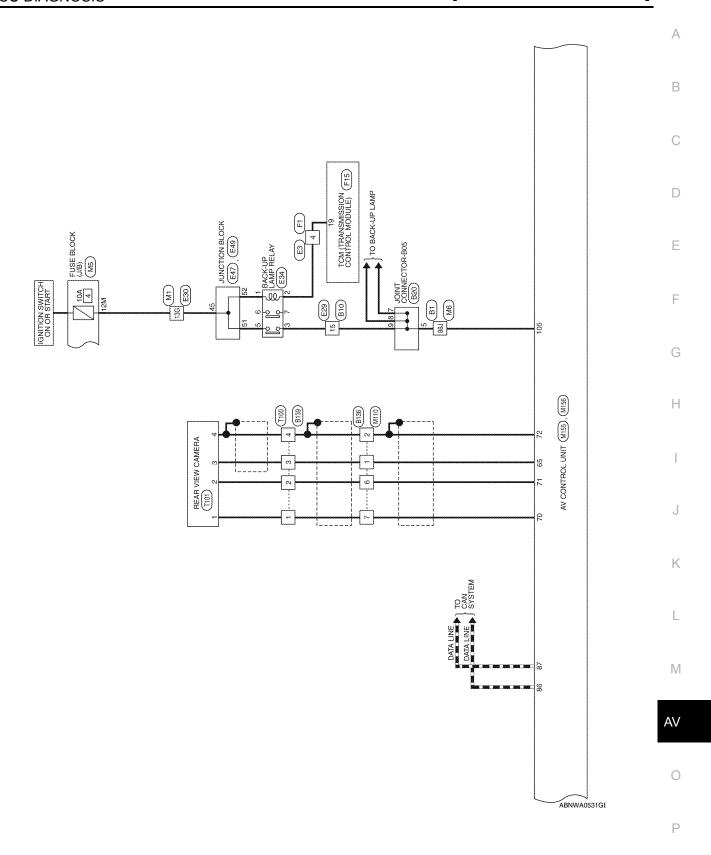
# **AV CONTROL UNIT**

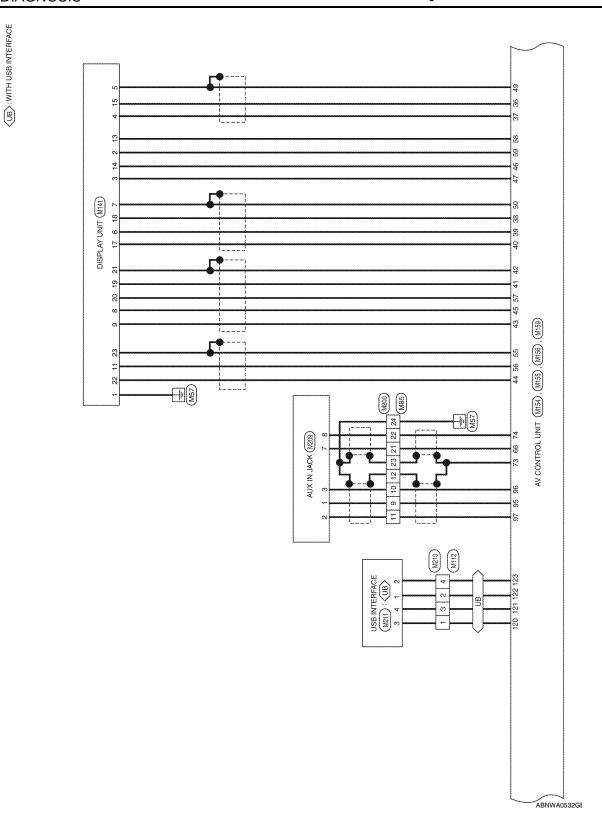
	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
88 (L)	_	AV communication signal 1 (H)	Input/ Output	_	_	_
89 (P)	_	AV communication signal 1 (L)	Input/ Output	_	_	_
90 (R)	_	AV communication signal 2 (H)	Input/ Output	_	_	_
91 (G)	_	AV communication signal 2 (L)	Input/ Output	_	_	_
95 (B)	97 (R)	AUX audio signal RH	Input	Ignition switch ON	When AUX mode is selected	(V) 1 0 -1 + + 2ms SKIB3609E
96 (W)	97 (R)	AUX audio signal LH	Input	Ignition switch ON	When AUX mode is selected	(V) 1 0 -1 + 2ms SKIB3609E
103 (SB)	Ground	CD eject signal	Input	_	Pressing the eject switch	0V
				Ignition	Except for above	3.3V
104 (G)	Ground	Ignition signal	Input	switch ON	_	Battery voltage
105	Ground	Reverse signal	Input	Ignition switch	R position	Battery voltage
(P/B)	Ground	Reverse signal	iriput	ON	Other than R position	0V
106	Ground	Parking brake signal	Input	Ignition switch	Parking brake ON	0V
(G/R)	2.34114			ON	Parking brake OFF	Battery voltage
107 (V/W)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 6 4 2 0 + 20ms SKIA6649J
108 (V)	114 (LG)	Rear RH pre-amp. sound signal	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E

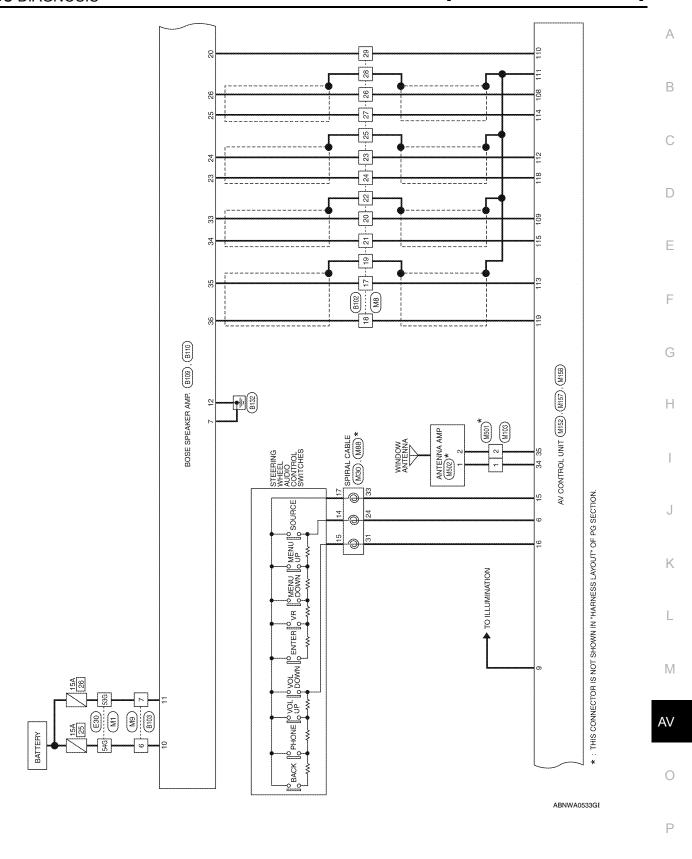
	minal	Description				
(Wire	color)		Input/		Condition	Reference value (Approx.)
	_	Signal name	Output			_
109 (B)	115 (W)	Front RH pre-amp. sound signal	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
110 (B/P)	Ground	Amp. ON signal	Output	Ignition switch ON		Battery voltage
111	_	Shield	_	_	_	_
112 (W/R)	118 (W/L)	Rear LH pre-amp. sound signal	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
113 (G)	119 (R)	Front LH pre-amp. sound signal	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
120 (B)	_	USB ground	_	_	_	_
121 (W)	_	USB D-	_	_	_	_
122 (R)	_	V BUS signal	_	_	_	_
123 (G)	_	USB D+	_	_	_	_

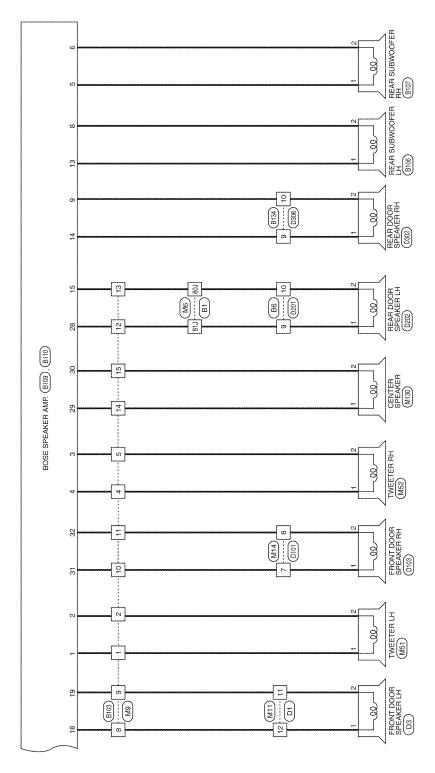












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# BOSE AUDIO SYSTEM CONNECTORS - WITH COLOR DISPLAY WITHOUT NAVI WITHOUT REAR CONTROLS

		ı	7					,	,	,			,	,	,	,
	WIRE TO WIRE	WHITE		8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13		Signal Name	1	g	1	ŀ	ì	ì	ı	1	ı	ş
. M2	1	l		11 10 9 23 22 21		Color of Wire	α	٦	SHIELD	BR	SHIELD	<b>&gt;</b>	W/A	Y/R	V/Y	g
Connector No.	Connector Name	Connector Color		H.S. 24		Terminal No. Wire	4	ಬ	9	æ	6	10	13	21	22	23
					7											
	D															

Signal Name	;		ı	ł	ł	
Color of Wire	0	G/R	B/R	BR	Y/R	
Terminal No.	13G	24G	53G	54G	64G	

Connector No. M1 Connector Name WIRE TO WIRE Connector Color WHITE	170   160   150   140   170   140   170   140   170   140   170   140   170   140   170   140   170   140   170   140   170   140   170   140   170   140   170

Connector No.	). M5		
Connector Name	L	FUSE BLOCK (J/B)	
Connector Color WHITE	olor WHI	Ш	
所 H.S.	5M 4M [		
Terminal No.	Color of Wire	Signal Name	
4M	٨/٨	I	
121	C	-	

Connector No.	. M3	
Connector Name		FUSE BLOCK (J/B)
Connector Color WHITE	lor WHIT	ш
明.S.	3N 8N 7N 6	3N
Terminal No.	Color of Wire	Signal Name
NS NS	O	F

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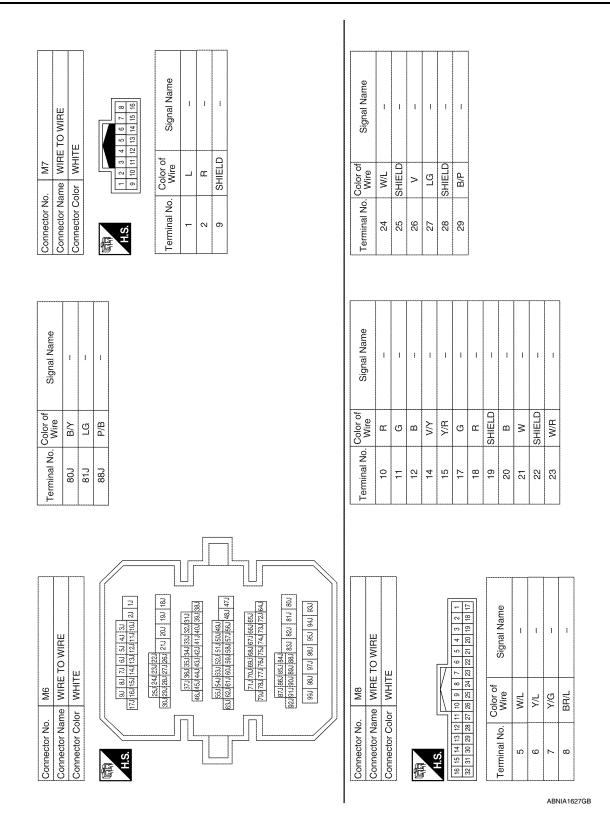
K

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AUDIO STRG SW GND

33

8P/R OUT

W/\

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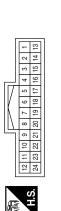
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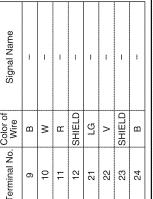
Connector No	Wo		ON rotocogo	C)		000	Connector No	M14	
Connector Name WIRE TO WIRE	me WIR	RE TO WIRE	Connector N	<u>e</u>	: TO WIRE	වි   වි	Connector Name		WIRE TO WIRE
Connector Color	lor BRC	BROWN	Connector Color	Solor WHITE	Ш	Cou	Connector Color	or WHITE	J.1
H.S.	7 6 5 4 3 12 11 10	5 12 11 10 9 8	H.S.	8 9 10 11 12	1 12 13 14 15 16	E T	H.S.	1 2 5 6 7 8	8 0 0
Terminal No.	Color of Wire	Signal Name	Tarminal No	Color of	Signal Mama	Terr	Terminal No	Color of	Sional Name
-	re E	1000	201111111111111111111111111111111111111		Orginal Manie		1	Wire	200
2	B∕∕	ı	1-	B/W	1			H !	
4	9	1	12	_	-		ω	B/R	j
2	GR/L	1							
9	BR	1							
7	B/R	I							
8		ı							
ō	B/W	nes.							
10	ВВ	-							
11	B/B								
12	57	ı							
13	В∕У	ı							
41	B/P								
15	O/B	**							
herecons									
Connector No.	. M22		Connector No.	No. M24		Ö	Connector No.	. M30	
Connector Name		DATA LINK CONNECTOR	Connector Name		COMBINATION METER	Ö	Connector Name		SPIRAL CABLE
Connector Color	olor WHITE	TE	Connector Color	Solor WHITE	巴	Cor	Connector Color	lor GRAY	
			#						
H.S.	1 2 3	9 10 11 12 13 14 15 16 1	H.S.				H.S.	24 25 26 27 31 32 33 34	33 34
	30,000		2 3 4	о 8 8	10 11 12 13 14 15 16 17 18	[8] \$	Tominol No	Color of	Omol Momo
Terminal No.	Wire	Signal Name	21 22 23 24 3	25 26 27 28 29	30 31 32 33 34 35 36 37 38	39 40	minai No.	Wire	olgnar Name
3	ဗ	M CAN L		Color of			24	W/G	AUDIO STRG SW RFMOTE A
#	Œ	MCANH	i erminal No.	. Wire	Signal Name				
			26	G/R	PKB		33	GR/L	AUDIO STRG SW REMOTE B
			31	W/>	8P/R OUT				

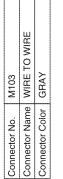
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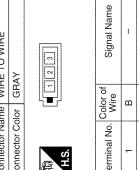




Signal Name	ţ	one .	ana a	I	I	ı	***	ı	
Color of Wire	В	×	Œ	SHIELD	re	^	SHIELD	В	
Terminal No. Wire	O	10	<del>.</del>	12	21	22	23	24	

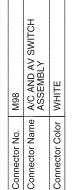


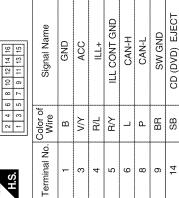






Terminal No. Color of Wire 1 B 2 B	Sig		
Terminal No.	Color of Wire	ω	83
	Terminal No.	-	2





Connector No.	M52
Connector Name	TWEETE AUDIO 8
Connector Color	BROWN



Color of Wire	ᇭ	GR/L
Terminal No.	-	2

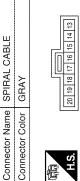
Signal Name

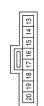
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***	TWEETER LH (WITH BOSE AUDIO SYSTEM)	BROWN		Signal Name	I	
. M51			2 1	Color of Wire	re	λα
Connector No.	Connector Name	Connector Color	原和 H.S.	Terminal No.	-	c

Terminal No. **~~** C/I





Signal Name	REMOTE A	REMOTE B	GND
Color of Wire	Μ	٦	BR
Terminal No. Wire	14	15	17



Connector No.



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M130	CENTER SPEAKER	BROWN		f Signal Name	1	ı							
Connector No. M	g	Connector Color BF	原 用.S.	Terminal No. Wire	1 B/P	2 0/B							
	E TO WIRE	λħ	J.		Omej V	Olyman Ivanie	ŧ	1	-	1			
Connector No.   M112	Connector Name WIRE TO WIRE	Connector Color GRAY		9	Torming! No Color of	Wire Wire	- B	2 H	м 8	4 G			
0			12 1 1 1 0 0 1 1 1 0 0 1 1 1 1 0 0 1 1 1 1 1 1 0 0 1		Signal Name	-	1				1		ı
No. M110	Name WIRE TO WIRE	Color WHITE	8 7 6 5 4 13 1	30	No. Wire	M	SHIELD	N/G		g	œ	a.	٦

Terminal No. Wire	Color of Wire	Signal Name
18	≥	В
19	g	RGB SYNC
20	8	۸b
21	SHIELD	RGB SYNC GND
22	BR	DISP ITM
23	SHIELD	BUS GND
24	ı	ı

Terminal No. Wire	Color of Wire	Signal Name
5	SHIELD	COMP IN SHIELD
9	ш	9
7	SHIELD	RGB GND
89	æ	Н
6	В	YS
10	-	and the same of th
11	Å	IT DISP
12	-	in the second
13	ВЯ	INV GND
14	ยา	SIG GND
15	Μ	COMP IN+
16	1	1
17	8	ж

Connector No.	M141	41
Connector Name		DISPLAY UNIT (WITH COLOR DISPLAY WITHOUT NAVI)
Connector Color	├	WHITE
12 H.S.	11 10 9 8 23 22 21 20	8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13
Terminal No. Wire	Color of Wire	Signal Name
-	В	GND
2	>	INV VCC
က	0	SIG VCC
4	В	COMP IN-

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MATHER CONTROLL WITT	Connector No.	M152	T.		olor of	O. S.	Connector No.	o. M153		
MHTE	<del></del>	AV CONTROL UNIT (WITHOUT NAVI AND			Wire	Oignal Name	Connector Na		ONTROL UNIT HOUT NAVI AND	T
MHTE     MHTE		REAR CONTROLS)			-	****			R CONTROLS)	
15   4   5   1   1   2   1   2   2   2   3   4   5   1   1   2   3   4   5   1   1   2   3   4   5   1   1   2   3   4   5   1   1   2   3   4   5   1   1   2   3   4   2   3   4   2   3   3   4   2   3   4   2   3   4   4   2   4   4   4   4   4   4   4		WHITE	1 4		ā	CINO Mo Sato	Connector C		ш	
1			91		SR/L	STRG SW B	E	22 24	30	
19   V/R   BAT   Terminal No.   Color of   Signal Name		3 4 5 6 7 8 9	17		1	1	SI	23 25	26 27 28 29	
Ferminal No.   Color of Signal Name   19   Y/R   BAT   Emminal No.   Color of Signal Name   20   B   GND   21   Wire   22   Y/L   23   Y/G   24   BR/L   24   BR/L   24   BR/L   24   BR/L   25   BR/L   24   24   24   24   24   24   24   2	유	12 13 14 15 16 17 18	18	_	ı	***				
	Color Win		19		Y/R	BAT	Terminal No.		Signal Name	
	1	and the state of t	2		ב	Q.B	21	W/L	NBUS LH-	T
		ı					22	Y/L	NBUS LH+	T
		ı					23	Y/G	NBUS RH-	Γ
	'	***					24	BR/L	NBUS RH+	
	1	***					25	SHIELD	NBUS SHIELD	
MISA	M/K	STRG SW					26	SHIELD	DATA GND	
Label   Labe	S						27	1	I	
ILL		744					28	α	REQI(TO HU)	Ι
Signal Name	<u>R</u>						29	В	RX(TO HU)	
Figure   F	1	1					30	g	TX(FROM HU)	
Note   Part	1	***					31	ı	ı	
M154         Terminal No. Wire         Color of signal Name         Signal Name         Terminal No. Wire         Color of wire         Signal Name         Terminal No. Wire         Color of wire         Wire         V         SHIELD         VS         SHIELD         V         SHIELD         V         SHIELD         COMP OUT SHIE	1	-					32	1	-	
AV CONTROL UNIT   AV CONTROL UNIT   AV CONTROL OL NIT   AV CONTROL S    AV CONTROL S    AV CONTROL S    AV CONTROL S    AV COMP OUT +   50   SHIELD   COMP OUT SHIELD   COMP OUT SHIELD     AV COMP OUT +   50   SHIELD   COMP OUT SHIELD   COMP OUT SHIELD   COMP OUT SHIELD   COMP OUT SHIELD   COMP		M154	Termina		olor of	Signal Name	Terminal No.		Signal Name	<u> </u>
WHITE		AV CONTHOL UNIT	42		HELD	RGB SYNC GND	55	SHIELD	SHIELD	
WTILE   WALLE   WALL		A HALL	43		8	γS	56	>	IT DISP	
A   A   A   A   A   A   A   A   A   A		WHILE	44		BB	DISP IT	22	W	ΛV	
A			45		œ	<u></u>	58	BR	INV GND	
Color of   Signal Name	46 45 4	40 39 38	46		LG	SIG GND	29	>	INV VCC	
Color of Wire         Signal Name         48            Wire         49         SHIELD           W         50         SHIELD           W         51            R         G         52            R         G         53            B         F         54	6 26 86	54 53 52 51 50	47		0	SIG VCC				
W COMPOUT. 51 - 1	Color		48		ı	1				
COMPOUT. 50 SHIELD 50 COMPOUT. 51 - 51 - 6 - 6 52 - 6 53 - 6 54 -	× ×		49		Q I	COMP OUT SHIELD				
B 51 - C C C C C C C C C C C C C C C C C C	:   cc	COMP OUT.	20		밀	RGB GND				
G 52 R 53		8	51		1					
83 - 1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2	: α	) (C	52		1	1				
	_ a	2 0	53		,	Ann				
_	Δ (	C	54		,	1				

ABNIA1631GB

Signal Name		AUX AUDIO RH+	AUX AUDIO LH+	AUX GND	ı	**	ı	1	***	CN(DVD) EJECT	IGN	REVERSE SIG	PKB SIG	SPEED 8P
Color of Wire	ı	ш	8	Œ	1	1	1	ı	1	SB	ŋ	P/B	G/R	W/V
Terminal No.	94	95	96	97	86	66	100	101	102	103	104	105	106	107

Signal Name	VOICE SHIELD	ı	ı	and the same of th	SW GND	CAN-H	CAN-L	M-CAN H	M-CAN L	M CAN2 L	M CAN2 H	ı	ı
Color of Wire	SHIELD	ı	ı	ı	BR	٦	α.		d.	æ	G	-	-
Terminal No. Wire	81	82	83	84	85	98	87	88	89	06	91	92	93

No. M156	Name (WITHOUT NAVI AND REAR CONTROLS)	Color WHITE	187   186   185   184   183   282   181   180   779   778   777   776   778	No. Wire Signal Name	1
No.	r Name	r Color	8 86 8	No. Co.	
Connector	Connector	Connector	H.S. H.S. 190 89 88	Terminal I	9/
	Connector No. M156	l g	or ne	M156 AV CONTROL UNIT REAR CONTROLS) Or WHITE    WHITE	M156   AV CONTROL UNIT   AV CONTROL UNIT   AV   CONTROLS)   Or   WHITE   WHITE     WHITE   Signal Nam

AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)	WHITE	65 64 68 62 61 60 73 72 71 70 69 68	of Signal Name	ı	1	ı	I	1	COMP2 IN+	COMP1 IN+	
		74	olor	1	ı	ı	I	I	≥	దె	
Connector Name	Connector Color	原本 H.S. 67	Terminal No. Wire	09	61	62	63	64	65	99	

COMP1 IN SHIELD COMP2 GND

SHIELD

72 73 74 75

COMP1 IN-

>

RV CAM SIG

CAM GND

V/G

2 69 69

SHIELD

Signal Name

Terminal No. Wire

M155

Connector No.

Connector No	84456	9
Connector Name	<del>g</del>	AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)
Connector Color		WHITE
E		
91 90 88 87 87 87 100 100 100 100 100 100 100 100 100 10	86 85 84 8	85 82 81 80 79 78 77 76 99 98 97 96 95 94 93 92
Terminal No.	Color of Wire	Signal Name
9/	ı	1
22	ı	
78	ı	·
79	>	TEL VOICE(TO IT)-
80	BB	TEL VOICE(TO IT)+
	***************************************	

**AV-293** 2010 Maxima Revision: November 2009

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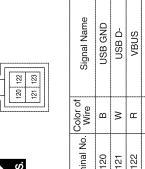
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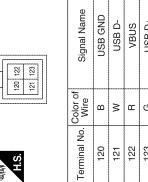
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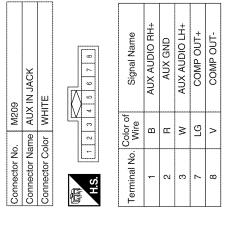
ABNIA1632GB

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

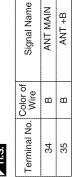




Signal Name	USB GND	-O BSN	VBUS	USB D+
Color of Wire	В	Μ	ж	G
Terminal No.	120	121	122	123

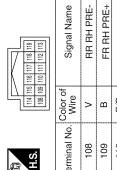


Connector No.	M158
Connector Name	AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)
Connector Color GRAY	GRAY
	[33] [34] [35]



Signal Name	1		Ī	*
Color of Wire	PC	>	SHIELD	GR
Terminal No. Wire	21	22	23	24

M157	AV CONTROL UNIT (WITHOUT NAVI AND REAR CONTROLS)	or WHITE
Connector No.	Connector Name	Connector Color



Signal Name	AR RH PRE-	FR RH PRE+	AMP ON	SHIELD	RR LH PRE+	FR LH PRE+	RR RH PRE-	FR RH PRE-	1	ı	RR LH PRE-	FR LH PRE-
Color of Wire	>	В	B/P	SHIELD	W/R	G	LG	≯	ı	1	W/L	æ
Terminal No.	108	109	110	#	112	113	114	115	116	117	118	119

Connector No.		M200
Connector Name	ļ	WIRE TO WIRE
Connector Color		WHITE
•		
H.S.	2 3 4 14 15 16	5 6 7 8 9 10 11 12 17 18 19 20 21 22 23 24
Terminal No.	Color of Wire	Signal Name
6	മ	1
10	Α	ı
=	œ	1
12	SHIELD	1
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Connector No. M501	Connector Name WIRE TO WIRE	Connector Color GRAY	H.S.	Torming   Color of   Signal Mana		m -	22				
211	SB INTERFACE	REN	0 4		Signal Name		VBUS	USB D+	0.00	USB GIND	USB D-
Connector No. M211	Connector Name USB INTERFACE	Connector Color   GREEN	H.S.		Terminal No Color of	Wire Wire	æ	0		3	4 W
0	E TO WIRE	λ:	2 4 0			Signal Name			ı	ţ	12
Connector No. M210	Connector Name WIRE TO WIRE	Connector Color GRAY	H.S.		ao volo	Terminal No. Wire	C	+	Z	w 8	

Ď.	M502	Connector No. E3	E3		Connector No.   E29	E25	
Jame	AMP.	Connector Name WIRE TO WIRE	e WIR	E TO WIRE	Connector Nan	me WIF	RE TO WIRE
Solor	r GRAY	Connector Color WHITE	WHI	丑	Connector Color WHITE	or WH	TE
		S'H	8 9 2 3 10 10 1	1   2   3	H.S.	7 6 5 14 16 15 14	13 12 11 10 9 8
		Torminal No Color of	olor of	Signal Namo	Terminal No Color of	Color of	Signal Name
ပိ		- cilling \$0	Wire	0.00.00	2	Wire	
>	Wire Signal Name	4	Œ	ı	15	≩	
	1						
	1						

72	ANTENNA AMP.	44		Signal Name	ŧ	1
. M502		lor GRAY		Color of Wire	В	В
Connector No.	Connector Name	Connector Color	所 H.S.	Terminal No.		2

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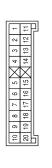
M

IMP RELAY							Signal Name		j	1	ı					3LOCK			Signal Name	
No. E34 Name BACK-UP LAMP RELAY	Color BLUE		3		2 2		Color of Wire	0	œ	W	re			F	No. E49		Color BROWN	54 53 52 51	Color of Wire	97
Connector No.	Connector Color		E	E.S.			Terminal No.	-	2	ဧ	22				Connector No.	Connector	Connector Color	E SH	Terminal No.	51
Signal Name	ŀ	3		1												JUNCTION BLOCK	ш	41	Signal Name	i.
Color of Wire	BR	۵	GR S	H H	>									ŀ	$\neg$		or WHITE	42 74 43	Color of Wire	BB
Š.	13G	24G	53G	54G	64G										Connector No.	Connector Name	Connector Color		Terminal No.	45
					15G 16G 17G	206   216   226   236   246   256   266		486 496 506	51G 52G 53G 54G 57G 57G 58G	200	66G 67G 68G 69G 70G 71G 72G	]				ESWITCH				

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a a B a B a B a B a B a B a B a B a B a	В
BB6 WIRE TO WIRE WHITE  WHITE  Tof Signal Name e  Signal Name	С
	D
Connector No. Connector Name Connector Name Connector Color 10 9 L 10 0 0	Е
	F
PANSMISSION OL MODULE) OL MODULE) OL MODULE) Signal Name  Signal Name	G
E15  TCM (TRANSMISSION CONTROL MODULE)  BLACK  BLACK  Signal Signal Signal Name  ref  Ref  Signal Name  Ref  Signal Name  Tof  Tof  Signal Name  Tof  Tof  Signal Name  Tof  Tof  Signal Name  Tof  Tof  Tof  Signal Name  Tof  Tof  Tof  Signal Name  Tof  Tof  Tof  Tof  Tof  Tof  Tof  To	Н
	I
Connector No. Color Terminal No. WW 80J 81J 1 88J	J
	K
WIRE  Signal Name  Signal Name	L
120   12   12   12   12   12   13   13   14   14   14   14   14   14	M
No.   F1   Name   WIRE	AV
Connector No. Connector No. Connector No. Connector No. Connector No. Connector Name Connector Name Connector Name Connector No.  A 4 G A 6 G A 6 G A 6 G A 6 G A 7 G A	0
ABNIA1636GB	Р

Connector No. Connector Name	Connector No. B20 Connector Name JOINT CONNECTOR-B05
Connector Color	BLUE





		WIRE TO WIRE	WHITE	3	Signal Name	ł
-	. B10			8 7 8	Color of Wire	>
	Connector No.	Connector Name	Connector Color	扇 H.S.	Terminal No. Wire	15
				-		

Signal Name	and the same of th	I	ł	I	
Color of Wire	^	^	>	۸	
Terminal No. Wire	5	7	80	6	

Signal Name	***	1	I
Color of Wire	>	GR	0
Terminal No.	21	22	23

Connector No.	. B101	-
Connector Name		WIRE TO WIRE
Connector Color		WHITE
H.S.	1 2 3 4 13 14 15 16	4         5         6         7         8         9         10         11         12           16         17         18         19         20         21         22         23         24
Terminal No.	Color of Wire	Signal Name
4	Œ	ı
5		j
9	SHIELD	1
æ	ВВ	I
0	SHIELD	1
10	>	1

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ВB

B103 WIRE TO WIRE BROWN	12 13 14 15 16	Signal Name	a.	**			1	ı	***		I		awan	enn	1	and a
e le	1 2 3	Color of Wire	FIG	>	<sub>o</sub>	*	SB	GR	3	В	œ	BR	g	1	^	a.
Connector No. Connector Name Connector Color	H.S.	Terminal No.	,	2	4	5	9	7	80	თ	10	11	12	13	14	15

,		,		•	,	,	,			,					
Signal Name	Anne	I	1	***	E	Į	1	1	-	ana.	1	7	ema.		•
Color of Wire	GR	a.	W/R	B/B	SHIELD	W/L	GR/V	SHIELD	ВВ	Υ	SHIELD	^	16	SHIELD	SB
Terminal No.	14	15	17	18	19	20	21	22	23	24	25	26	27	28	29

Connector No.		B102
Connector Name	ļ	WIRE TO WIRE
Connector Color		WHITE
檀		
H.S.		7
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. Wire	Color o Wire	f Signal Name
5	BB	ı
9	8	I
7	>	Ę
8	മ	ı
10	œ	1
11		1
12	>	ı

	REAR SUBWOOFER RH	ш		Signal Name	ı	•
B107		or WHITE	2	Color of Wire	α	BR
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No.	-	2

Connector Name REAR SUBWOOFER LH Connector Color WHITE  H.S.	Connector No.	. B106	
	Connector Na		SUBWOOFER LH
Color of Wire	Connector Co	llor WHIT	m
Color of Wire L	H.S.	2	
C	Terminal No.	Color of Wire	Signal Name
2			ı
	2	۵	1

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Revision: November 2009 AV-299 2010 Maxima

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Connector No.	. B110	0	
Connector Name	<u> </u>	BOSE SPEAKER AMP.	
Connector Color	ļ	BROWN	
山山 H.S.	14 13 1	12   11   10   10   10   10   10   10	
Terminal No. Wire	Color of Wire	Signal Name	
,	re	FR TWDR LH+ OUT	
2	>	FR TWDR LH- OUT	
(	7.8.4	11.10	

Terminal No.	Color of Wire	Signal Name
<b>,</b>	rg	FR TWDR LH+ OUT
2	^	FR TWDR LH- OUT
ო	3	FR TWDR RH- OUT
4	Ø	FR TWDR RH+ OUT
5	Œ	RH WOOFER+ OUT
9	ВВ	RH WOOFER- OUT
7	В	GND
8	Ь	LH WOOFER- OUT
6	0	RR DOOR RH- OUT
10	SB	BAT
11	GR	BAT
12	В	GND
13	L	LH WOOFER+ OUT
14	re	RR DOOR RH+ OUT

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

	Signal Name	SAT LCH (-)	SAT LCH (+)	SAT RCH (-)	SAT RCH(+)	REQ1 (SAT->COI	TXD (SAT->CON	RXD (COMB->S/	BAT	HARN EARTH	ACC
-	Color of Wire	BR	Μ	>	В	ш	>	_	۵.	œ	GR
	Terminal No. Wire	21	22	23	24	28	29	30	32	35	36
,											

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



Signal Name	RR DOOR LH- OUT	FR DOOR LH+ OUT	FR DOOR LH- OUT	AMP ON	RR LH-IN (WITH COLOR DISPLAY)	RR LH+IN (WITH COLOR DISPLAY)
Color of Wire	٦	Μ	В	SB	>	BR
Terminal No.	15	18	19	20	23	24

Connector No.	B111
Connector Name	SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER
Connector Color WHITE	WHITE
22 24 26 21 23 25 H S	22 24 26



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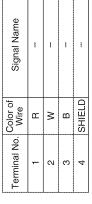
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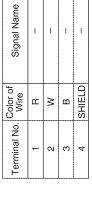
														Owen Ferring	olgnal Name	AUDIO OUT (+)	AUDIO OUT (-)	1	=		9		SPEED	MIC POWER							
														Color of	Wire	1	ı	ı	1	1	ı	1	BB	Œ							
														- Control of the Cont		27	22	23	24	25	56	27	28	59							
BLUETOOTH CONTROL				Signal Name	1	ı								Signal Name	dia india	1	MIC IN +	MIC IN -	AUDIO OUT (+)	AUDIO OUT (-)	1		and the same of th		1		ı	1		1	
BLUETOO1	BLACK		34 33															2													
Connector No.	Connector Color		ν <u>;</u>	Terminal No. Wire		34 B								Terminal No Color of	Wir	9	7 L	8 SHIELD	9 BR	10 Y	1	12	13	14	15	16 –	- 17	18	- 61	20	
					<u>o</u>											Oldr				I		[33]	31	]	Ф.						
BLUETOOTH CONTRI	Connector Name (WITH COLOH DISPLAY, WITHOUT REAR CONTROLS)	WHITE	37 78 41	36 38 40 42	of Signal Name	CAN H1	CAN L1		ı	1	CAN H2	ı	CAN L2	B131	LUETOOTH CONTR	UNIT (WITH BOSE AUDIO	YSIEM)	WHITE				22 24 26 28	12	1	e Signal Name	(+B)		IGN		1	
No.	Name         			8 8	do. Color of Wire		۵.	ı	ı	1	ш	ı	ຶ່ວ			· Name U						10 12 14 16 18 20	9 11 13	Color	No. Wire	>	GR	0	<u>a</u>	1	
Connector No.	Connector	Connector Color	唇	Ϋ́.	Terminal No.	35	36	37	38	39	40	41	42	Connector No.		Connector Name		Connector Color		E	H.S.	2 4 6 8			Terminal No. Wire	-	2	8	4	5	

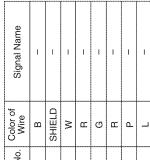
Revision: November 2009 AV-301 2010 Maxima

***************************************	Connector No. B139	Connector Name WIRE TO WIRE	Connector Color   WHITE
	B136	WIRE TO WIRE	1 1
	Connector No.		Connector Color WHITE

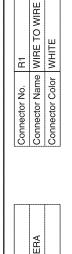
Signal Name	ł	I	ł	ı
Color of Wire	Œ	Μ	ω	SHIELD
Terminal No. Wire		2	က	4







4 5 6 7 8 12 13 14 15 16	Signal Name	-	1	·	ı	1	ione	***	
9 10 11	Color of Wire	В	SHIELD	W	В	g	Я	Ъ	نــ
H.S.	Terminal No.		2	9	7	6	10	Ţ.	12



T101

Connector No.

Signal Name	ı	I	B
Color of Wire	7	æ	SHIELD
Terminal No.		2	6

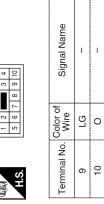
	***************************************
Connector Name	Connector Name REAR VIEW CAMI
Connector Color	WHITE
(南) H.S.	1 2 3 4



Signal Name	CAMERA ON	GND	COMP+	COMP-
Color of Wire	Œ	Μ	മ	GR
Terminal No.	-	2	ღ	4

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

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Signal Name	į	1	i	ı
Color of Wire	ш	W	В	SHIELD
Terminal No.	-	2	3	4

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ector No.	R7	Connector No.	5		Connector No.	83	
tor Name	nector Name MICROPHONE	Connector Name WIRE TO WIRE	me WIRE T	O WIRE	Connector Na	me FRONT	Connector Name FRONT DOOR SPEAKER LH
nector Color WHITE	WHITE	Connector Color WHITE	or WHITE		Connector Color WHITE	or WHITE	
	1 2 3 4		6 5 5 4 5 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6	4 4 3 2 2 0 0 0 1			
		K.S.		0.111	oj H	7	
ninal No. Wire	of Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
	MIC SIG	=	0		<b>-</b>	FG	ı
2 SHIELD	LD MIC GEN	12	P		2	0	ł
Œ	MIC VCC	4					

Connector No. D101	). D101		Connector No. D103	D103	Ö	Sonnector No. D201	D201	
Connector Na	Connector Name WIRE TO WIRE		Connector Name	Connector Name FRONT DOOR SPEAKER RH		Connector Name WIRE TO WIRE	WIRE TO	WIRE
Connector Color WHITE	Nor WHITE		Connector Color WHITE	WHITE	Col	Connector Color WHITE	WHITE	
H.S.	10 9 8 7 6 5 1		H.S.			H.S.	10 9 8 7	P   P   P   P   P   P   P   P   P   P
Color of						-	_	
Terminal No.	Wire Signal Name	Name	Terminal No. Color of	olor of Signal Name	,	Ferminal No.   Color of Wire	olor of Wire	Signal Name
7	- 51	,					2 (	
o	c		-	Indiana		6	5]	
ю						40	_	1

Signal Name	ı	ı
Color of Wire	p <sub>T</sub>	0
Terminal No. Wire	7	8

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	TO WIRE	111	Q   Z   Z   Z   Z   Z   Z   Z   Z   Z	Signal Name	1	1
D306	e WIRE	WHIT	4 01 8 8	Color of Wire	re	C
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No.	6	10

Connector No.	D302	
Connector Name		REAR DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	olor BROWN	۷N
H.S.	2 1	
Terminal No.	Color of Wire	Signal Name
-	re	nan.
2	0	*

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	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	AV-232, "Description"

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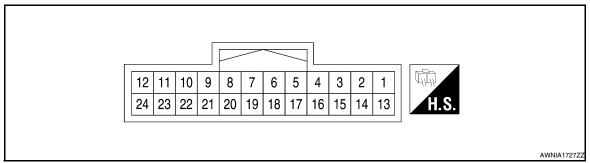
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# **DISPLAY UNIT**

Reference Value

## **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
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.	(V) 0. 4 0 -0. 4	
7	_	Shield	_	_	_	_	
8 (R)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	_	(V) 4 0 → 20µs SKIB3601E	

## **DISPLAY UNIT**

# [BOSE W/ COLOR DISPLAY]

Terminal (Wire color)		Description			Condition	Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
					At RGB image displayed	5V
9 (B)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At rear view camera image displayed	(V) 6 4 2 0 + + 200 μ s PKIB4948J
11 (Y)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display- brightness	(V) 6 4 2 0 + 1ms
13 (BR)	Ground	Inverter ground	_	Ignition switch ON	_	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	(V) 0. 4 0 -0. 4 +40μs SKIB2251J
17 (B)	Ground	RGB signal (R: red)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4 → 40μs SKIB2238J
18 (W)	Ground	RGB signal (B: blue)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.4 0

< ECU I	DIAGNO	OSIS >	וט	SPLAY		OSE W/ COLOR DISPLAY]
	minal color)	Description		Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)
19 (G)	Ground	RGB synchronizing signal	Input	Ignition switch ON		(V) 4 0 → + 20 µs SKIB3603E
20 (W)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch On		(V) 4 0 → 44ms SKIB3598E
21	_	Shield	_	_	_	_
22 (BR)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display- brightness	(V) 6 4 2 0  +-1ms  PKIB5039J
23	_	Shield	_	_	_	_

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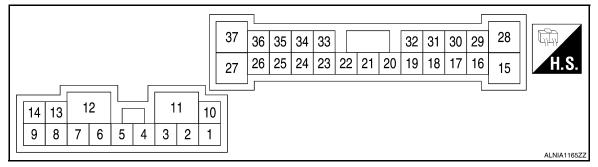
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# **BOSE SPEAKER AMP**

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal color)	Description				Reference value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
1 (LG)	2 (V)	Audio signal tweeter LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 ++2ms SKIB3609E	
4 (G)	3 (W)	Audio signal tweeter RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
5 (R)	6 (BR)	Audio signal subwoofer RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms 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 W/ COLOR DISPLAY]

Terminal (Wire color)		Description			Condition	Reference value
+	-	Signal name	Input/ Output	Condition		(Approx.)
13 (L)	8 (P)	Audio signal subwoofer LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 *** 2ms SKIB3609E
14 (LG)	9 (O)	Audio signal rear door RH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 → 2ms SKiB3609E
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	(V) 1 0 -1 + 2ms SKIB3609E
26 (V)	25 (LG)	Audio signal rear RH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 ** 2ms SKIB3609E
28 (G)	15 (L)	Audio signal rear door LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
29 (V)	30 (P)	Audio signal center speak- er	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E

#### **BOSE SPEAKER AMP**

#### < ECU DIAGNOSIS >

# [BOSE W/ COLOR DISPLAY]

Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
33 (W/L)	34 (GR/V)	Audio signal front RH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 + 2ms SKIB3609E	
35 (W/R)	36 (B/R)	Audio signal front LH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 + 2ms SKIB3609E	

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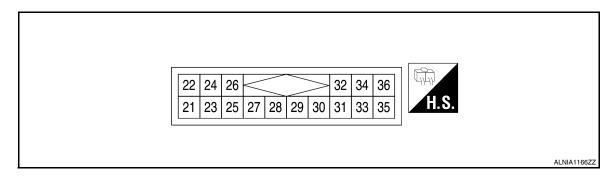
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# SATELLITE RADIO TUNER

Reference Value



#### PHYSICAL VALUES

Tern	ninal	Description				Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
22 (W)	21 (BR)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	(V) 1 0 -1 + 2ms SKIB3609E	
24 (B)	23 (Y)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	(V) 1 0 -1 *** 2ms SKIB3609E	
28 (R)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 → +10ms SKIA9299J	
29 (V)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	10 0 -10 -10 -10 -10	

#### **SATELLITE RADIO TUNER**

#### < ECU DIAGNOSIS >

# [BOSE W/ COLOR DISPLAY]

Terminal		Description				Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
30 (L)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 + 1ms SKIA9301J	
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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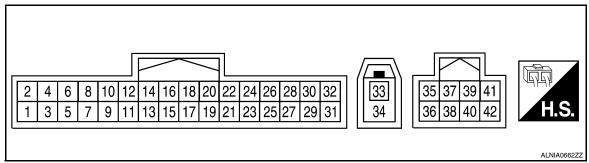
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# **BLUETOOTH CONTROL UNIT**

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	ninal color)	Description		Condition		Reference value	
+	_	Signal name	Input/ output		Condition	(Approx.)	
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	(V) 1 0 -1 + 2ms SKIB3609E	
28 (BR)	Ground	Vehicle speed sig- nal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 15 10 + + 20ms PKIA1935E	
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
+	_	Signal name	Input/ output	Condition		(Approx.)
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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# SYMPTOM DIAGNOSIS

# **AUDIO SYSTEM**

Symptom Table

INFOID:0000000005460195

## **AUDIO SYSTEM**

Symptom	Possible cause	Reference page
Inoperative	AV control unit power circuit     AV control unit	AV-234, "AV     CONTROL UNIT:     Diagnosis Procedure"     AV-322
Steering switch does not operate	Steering switch     AV control unit	• AV-265. "Diagnosis Procedure" • AV-322
All speakers do not sound	<ul> <li>AV control unit</li> <li>AV control unit power circuit</li> <li>BOSE speaker amp. ON signal</li> <li>BOSE speaker amp. power/ground circuit</li> <li>BOSE speaker amp.</li> </ul>	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> <li>Front door speaker</li> <li>Tweeter</li> <li>Center speaker</li> <li>Rear door speaker</li> <li>Subwoofer</li> </ul>	AV-250, "Diagnosis Procedure"     AV-253, "Diagnosis Procedure"     AV-256, "Diagnosis Procedure"     AV-258, "Diagnosis Procedure"     AV-258, "Diagnosis Procedure"     AV-261, "Diagnosis Procedure"

## CD

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

# SATELLITE RADIO

#### **AUDIO SYSTEM**

### < SYMPTOM DIAGNOSIS >

# [BOSE W/ COLOR DISPLAY]

Symptom	Possible cause	Reference page
Inoperative	Satellite radio tuner power or ground circuit     Satellite radio tuner communication circuit     Satellite radio tuner	AV-238, "SATEL- LITE RADIO TUNER: Diagno- sis Procedure"     AV-267, "SATEL- LITE RADIO TUNER: Diagno- sis Procedure"     AV-335, "Removal and Installation"
Right or left channel does not sound	<ul> <li>Satellite radio tuner right channel audio signal circuit</li> <li>Satellite radio tuner left channel audio signal circuit</li> <li>Satellite radio tuner</li> </ul>	AV-270, "SATEL- LITE RADIO TUNER: Diagno- sis Procedure"     AV-270, "SATEL- LITE RADIO TUNER: Diagno- sis Procedure"     AV-335, "Removal and Installation"

## HANDS-FREE PHONE

Symptom	Possible cause	Reference page
Inoperative	Bluetooth control unit power and ground circuit     Bluetooth control unit	AV-240. "BLUE-TOOTH CON-TROL UNIT:     Diagnosis Procedure"     AV-344
Steering switch does not operate	Steering switch     Bluetooth control unit	• <u>AV-337</u> • <u>AV-344</u>
Voice activated control does not operate	<ul><li> Microphone</li><li> Steering switch</li><li> Bluetooth control unit</li></ul>	• <u>AV-342</u> • <u>AV-337</u> • <u>AV-344</u>

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**AV-317** Revision: November 2009 2010 Maxima

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#### NORMAL OPERATING CONDITION

[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

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

# **PRECAUTION**

#### **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRF-TFNSIONER"

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:0000000005885978

#### 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.
- Perform the necessary repair operation.

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**AV-319** Revision: November 2009 2010 Maxima

#### **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 >

## [BOSE W/ COLOR DISPLAY]

# **PREPARATION**

# **PREPARATION**

# **Commercial Service Tools**

Tool name	Descript	ion
	Loosenir	ng bolts and nuts
Power tool		
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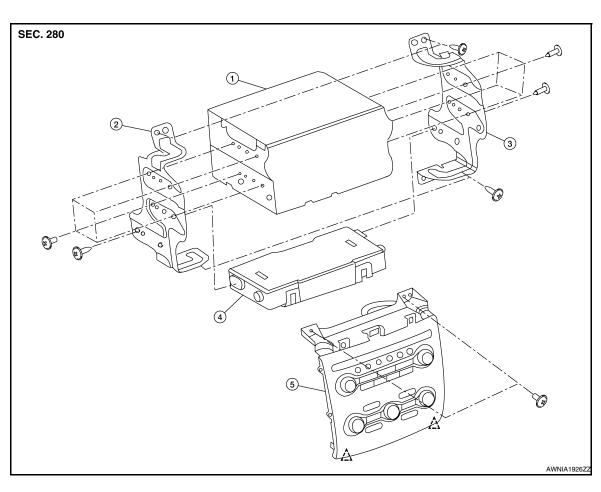
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# **ON-VEHICLE REPAIR**

# AV CONTROL UNIT

#### Removal and Installation



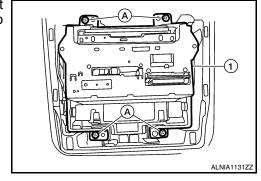
- 1. Audio unit
- A/C auto amp.

- Audio unit bracket LH
- assembly attached)
- Audio unit bracket RH

#### **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).



#### **AV CONTROL UNIT**

#### < ON-VEHICLE REPAIR >

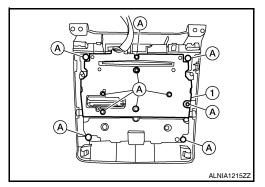
[BOSE W/ COLOR DISPLAY]

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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[BOSE W/ COLOR DISPLAY]

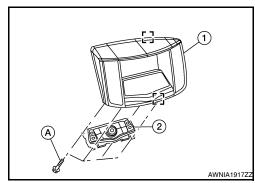
# **MULTIFUNCTION SWITCH**

# Removal and Installation

#### INFOID:0000000005522943

#### **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

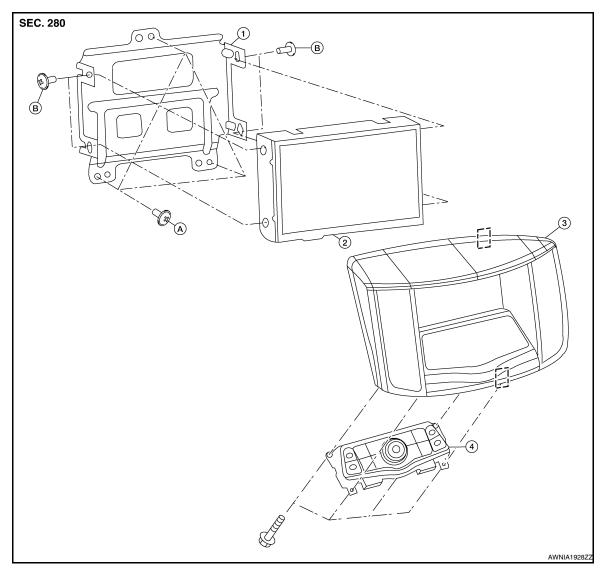


#### **INSTALLATION**

Installation is in the reverse order of removal.

### **AUDIO DISPLAY UNIT**

### Removal and Installation

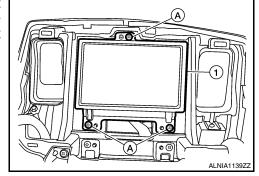


- 1. Audio display unit bracket
- 4. Multifunction switch
- Metal Clip

- 2. Audio display unit
- A. Audio display unit bracket screws
- Cluster lid D
- B. Audio display unit screws

### **REMOVAL**

- Remove the cluster lid D. Refer to <u>IP-12, "Removal and Installation"</u>.
- 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**

### **USB CONNECTOR**

### < ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY]

# **USB CONNECTOR**

### Removal and Installation

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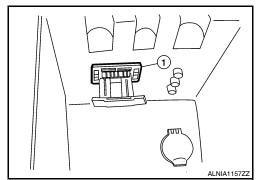
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### **REMOVAL**

- 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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[BOSE W/ COLOR DISPLAY]

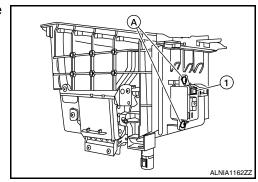
## **AUXILIARY INPUT JACKS**

### Removal and Installation

#### INFOID:0000000005460204

### **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**

### **FRONT TWEETER**

### < ON-VEHICLE REPAIR >

### [BOSE W/ COLOR DISPLAY]

## FRONT TWEETER

### Removal and Installation

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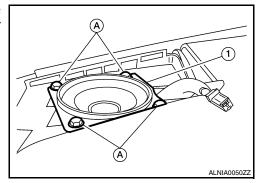
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#### **REMOVAL**

- 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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[BOSE W/ COLOR DISPLAY]

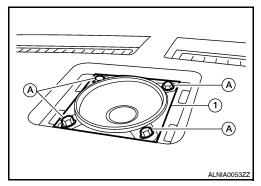
## **CENTER SPEAKER**

### Removal and Installation

#### INFOID:0000000005460206

### **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**

## FRONT DOOR SPEAKER

### Removal and Installation

INFOID:0000000005460207

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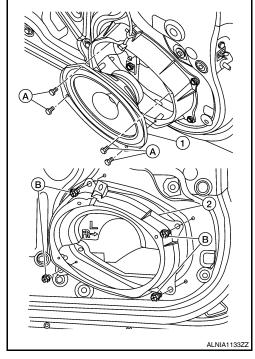
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#### **REMOVAL**

- 1. Remove the front door finisher. Refer to <a href="INT-18">INT-18</a>, "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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[BOSE W/ COLOR DISPLAY]

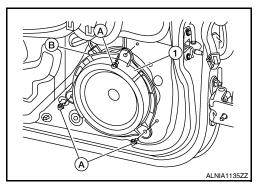
### **REAR DOOR SPEAKER**

### Removal and Installation

#### INFOID:0000000005460208

### **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**

### [BOSE W/ COLOR DISPLAY]

### **SUBWOOFER**

### Removal and Installation

INFOID:0000000005460209

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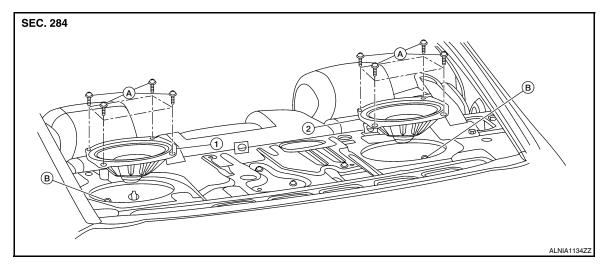
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Subwoofer LH

2. Subwoofer RH

A. Subwoofer screws

B. Subwoofer connectors

#### **REMOVAL**

- 1. Remove the rear parcel shelf finisher. Refer to <a href="INT-26">INT-26</a>, "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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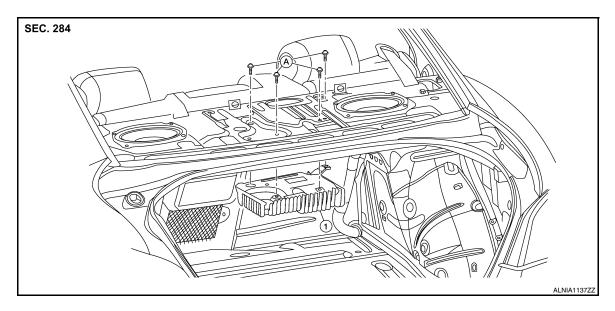
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### **BOSE SPEAKER AMP**

### Removal and Installation

INFOID:0000000005460210



1. Bose speaker amp.

A. Screws

#### **REMOVAL**

- 1. Disconnect the battery negative terminal.
- 2. Remove the rear parcel shelf. Refer to <a href="INT-26">INT-26</a>, "Removal and Installation".
- 3. Remove the Bose speaker amp. screws.
- 4. Remove the trunk upper finisher. Refer to <a href="INT-35">INT-35</a>, "Exploded View".
- 5. Disconnect the Bose speaker amp. connectors and remove the Bose speaker amp.

#### **INSTALLATION**

### SATELLITE RADIO TUNER

### < ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY]

### SATELLITE RADIO TUNER

### Removal and Installation

INFOID:0000000005460211

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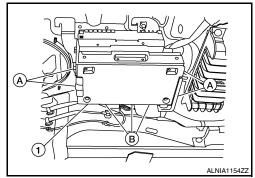
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#### **REMOVAL**

- 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 <a href="INT-26">INT-26</a>, "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**

[BOSE W/ COLOR DISPLAY]

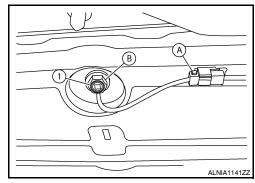
## SATELLITE RADIO ANTENNA

### Removal and Installation

#### INFOID:0000000005460212

### **REMOVAL**

- 1. Lower the headliner at the rear. Refer to <a href="INT-32">INT-32</a>, "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**

### STEERING SWITCH

### < ON-VEHICLE REPAIR >

### [BOSE W/ COLOR DISPLAY]

## STEERING SWITCH

### Removal and Installation

INFOID:0000000005460213

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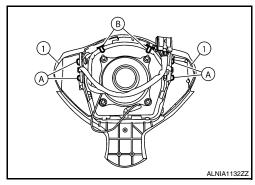
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#### **REMOVAL**

- 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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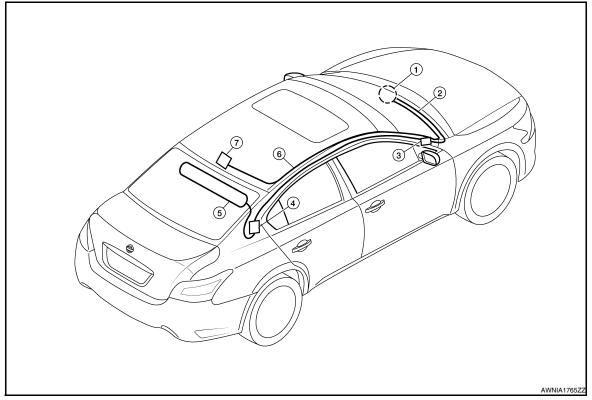
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## **AUDIO ANTENNA**

### Location of Antenna





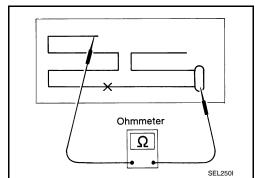
- 1. AV control unit
- 4. Antenna amp.
- 7. Satellite radio antenna
- 2. AV control unit antenna feeder
- 5. Window antenna
- 3. In-line connectors M103, M501
- 5. Satellite radio antenna feeder

### Window Antenna Repair

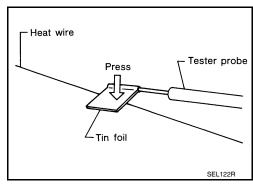
#### INFOID:0000000005460215

### **ELEMENT CHECK**

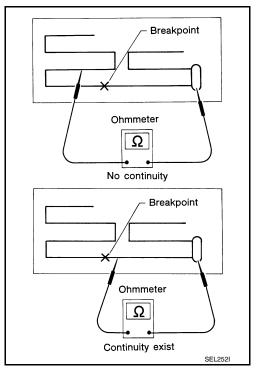
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



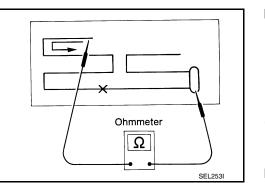
 When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



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



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



#### REPAIR EQUIPMENT

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

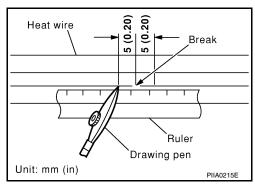
#### REPAIRING PROCEDURE

- 1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
- 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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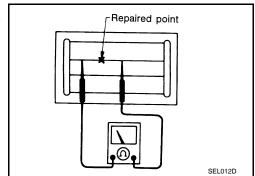
### **AUDIO ANTENNA**

### < ON-VEHICLE REPAIR >

### [BOSE W/ COLOR DISPLAY]

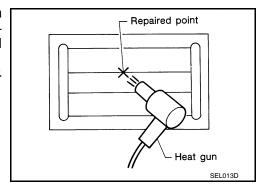
After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

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.

### Removal and Installation

#### INFOID:0000000005460216

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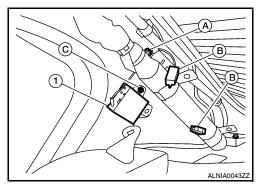
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#### **REMOVAL**

- 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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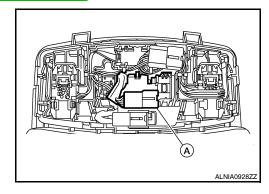
### **MICROPHONE**

### Removal and Installation

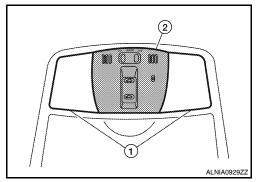
INFOID:0000000005460218

### **REMOVAL**

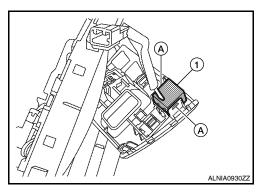
- 1. Remove the map lamp assembly. Refer to <a href="INL-97">INL-97</a>, "Removal and Installation".
- 2. Detach the microphone connector (A).



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**

## TEL ANTENNA

### Removal and Installation

INFOID:0000000005460219

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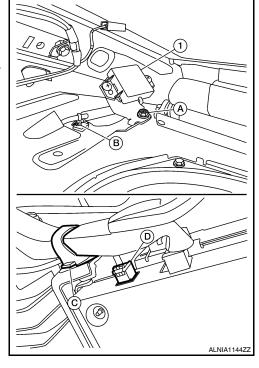
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#### **REMOVAL**

- 1. Remove the rear parcel shelf. Refer to <a href="INT-26">INT-26</a>, "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.

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### **BLUETOOTH CONTROL UNIT**

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR DISPLAY]

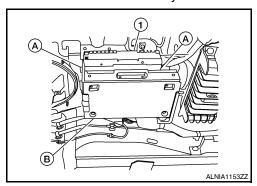
### **BLUETOOTH CONTROL UNIT**

### 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 <a href="INT-26">INT-26</a>, "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).



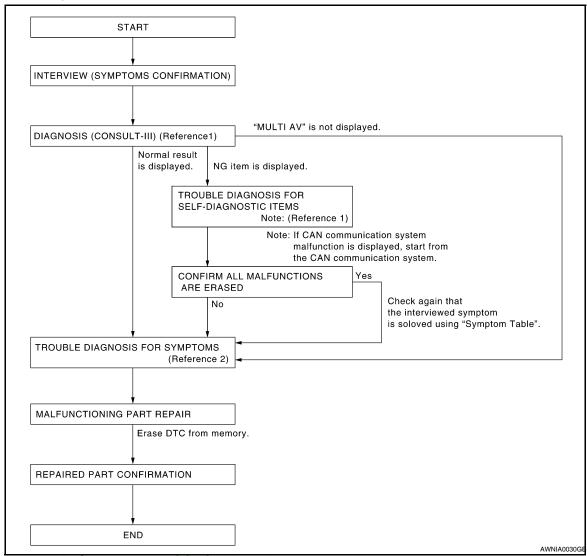
#### **INSTALLATION**

# **BASIC INSPECTION**

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

#### **OVERALL SEQUENCE**



- Reference 1... Refer to <u>AV-376, "CONSULT III Function (MULTI AV)"</u>.
- 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)

- 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.
- 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 DISPLAY W/ NAVI]

### Is any DTC No. displayed?

YES >> GO TO 3.

NO >> GO TO 4.

# $3. \mathrm{CHECK}$ SELF-DIAGNOSIS RESULTS (CONSULT-III)

- 1. Check the DTC No. indicated in the self-diagnosis results.
- Perform the relevant diagnosis referring to the DTC No. list. Refer to <u>AV-467, "DTC Index"</u>.

#### NOTE:

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

>> GO TO 5.

## 4. PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to <u>AV-474, "Symptom Table"</u>.

>> GO TO 5.

### 5. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

#### NOTE:

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

>> GO TO 6.

### 6. CHECK AFTER REPAIR

- 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**

### [BOSE W/ COLOR DISPLAY W/ NAVI] < BASIC INSPECTION > INSPECTION AND ADJUSTMENT Α ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description INFOID:0000000005522978 BEFORE REPLACEMENT When replacing AV control unit, save or print current vehicle specification with CONSULT-III configuration before replacement. AFTER REPLACEMENT D **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. Е Configuration is different for each vehicle model. Confirm configuration of each vehicle model. ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement INFOID:0000000005522979 1. SAVING VEHICLE SPECIFICATION (P)-CONSULT-III Configuration Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to AV-347, "CONFIG-URATION (AV CONTROL UNIT): Description". Н 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. K $oldsymbol{3}.$ WRITING VEHICLE SPECIFICATION (P)-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". M >> GO TO 4. 4.OPERATION CHECK ΑV

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

• Since vehicle specifications are not included in the AV control unit after replacement, it is required to write vehicle specifications with CONSULT-III.

INFOID:0000000005522980

· Configuration has three functions as follows.

Revision: November 2009 AV-347 2010 Maxima

### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

#### [BOSE W/ COLOR DISPLAY W/ NAVI]

Function	Description
READ CONFIGURATION	<ul> <li>Reads the vehicle configuration of current AV control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
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:0000000005522981

### 1. WRITING MODE SELECTION

(E) 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"

(E) CONSULT-III Configuration

Perform "WRITE CONFIGURATION-Config file".

>> WORK END

# ${f 3.}$ PERFORM "WRITE CONFIGURATION-MANUAL SELECTION"

(E) 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:0000000005522982

#### CAUTION

Check vehicle specifications before servicing.

MANUAL SETTING ITEM		Note	
Items	Setting value	Note	
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 S	ETTING ITEM	Noto	_	
Items	Setting value	Note		
4WAS	WITHOUT	_	-	
	WITH	_	=	
	BASE	_	_	
SOUND SYSTEM	BOSE	_	-	
ANITENINA TVOE	ROD TYPE	_	=	
ANTENNA TYPE	LONG TYPE	_	=	
DUAL-ZONE AUTO	WITHOUT	_	=	
TEMP	WITH	_	_	
DVD DLAY FUNCTION	WITHOUT	_	_	
DVD PLAY FUNCTION	WITH	_	=	
	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)	-	
BODY TYPE	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	_	

# **FUNCTION DIAGNOSIS**

## **AUDIO SYSTEM**

System Diagram

INFOID:0000000005522983 Communication signal (CONT-DISP) CAN communication DISPLAY UNIT Communication signal (DISP-CONT) Vehicle speed signal parking brake signal reverse signal CAMERA Satellite IMAGE CAMERA ON REAR VIEW antenna SIGNAL CAMERA SAT audio signal **GPS** AUX antenna AUX audio signal JACK GPS signal USB INTERFACE **USB HARNESS SPEAKER** BOSE Sound signal SPEAKER AMP. Window AV CONTROL Sound signal antenna SUBWOOFER UNIT AM/FM signal ANTENNA Antenna amp on signal AMP. AV communication A/C AND AV SWITCH ASSEMBLY STERRING WHEEL Steering switch signal BLUETOOTH AUDIO CONTROL ANTENNA **SWITCHES** TEL voice signal MICROPHONE

**System Description** 

INFOID:0000000005522984

AWNIA1938GE

### 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 subwoof-

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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**AV-351** 2010 Maxima Revision: November 2009

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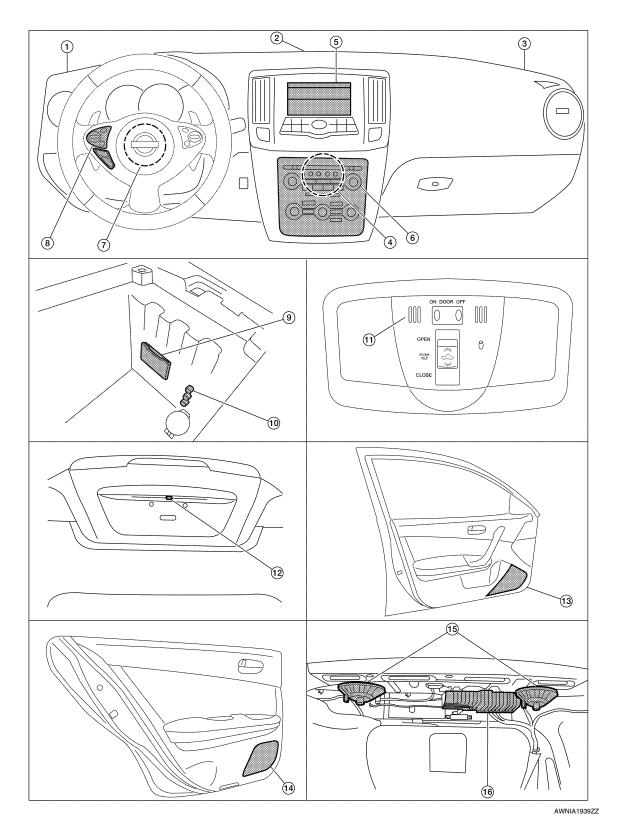
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## **Component Parts Location**

INFOID:0000000005522985



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

### **AUDIO SYSTEM**

### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

- Steering angle sensor M53 (located in steering column behind spiral ca-
- 13. Front door speaker LH D3 RH D103

10. Aux in jack M209

Steering wheel audio control switch- 9. 8.

11. Microphone R7

LH D202

RH D302

14. Rear door speaker

- USB interface M211(view in center console)
- 12. Rear view camera T101
- 15. Rear subwoofers (view under rear parcel shelf) **LH B106 RH B107**

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16. BOSE speaker amp B109, B110

## Component Description

INFOID:0000000005522986

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><li>Audio operation can be operated.</li><li>Steering switch signal is output to AV control unit.</li></ul>		
Front door speakers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds.</li></ul>		
Tweeters	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sounds.</li></ul>		
Center speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sounds.</li></ul>		
Rear door speakers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds.</li></ul>		
Rear subwoofers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs low range sounds.</li></ul>		
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.		

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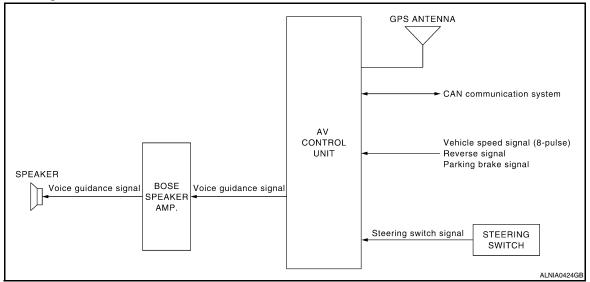
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**AV-353** Revision: November 2009 2010 Maxima

### NAVIGATION SYSTEM

### System Diagram

INFOID:0000000005522987



### System Description

INFOID:0000000005522988

#### NOTE:

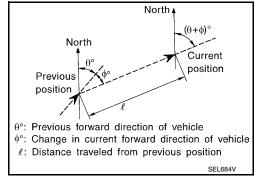
Refer to NAVI System Owner's Manual for system operation.

The navigation system periodically calculates the vehicle's current position according to the following three signals: Travel distance of the vehicle as determined by the vehicle speed sensor, turning angle of the vehicle as determined by the gyroscope (angular velocity sensor), and the direction of vehicle travel as determined by the GPS antenna (GPS information).

The current position of the vehicle is then identified by comparing the calculated vehicle position with map data read from the map data, which is stored in the hard disk drive (HDD)(map-matching), and indicated on the screen with a current-location mark.

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

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



#### TRAVEL DISTANCE

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

#### TRAVEL DIRECTION

Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). As the gyroscope and GPS antenna have both merit and demerit, input signals from them are prioritized in each situation. However, this order of priority may change in accordance with more detailed travel conditions so that the travel direction is detected more accurately.

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

#### MAP-MATCHING

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

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

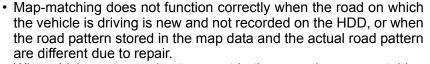
#### **CAUTION:**

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

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

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

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



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

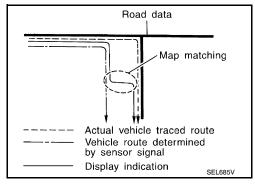
Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the HDD is limited. Therefore, when there is an excessive gap between the current vehicle position and the position on the map, correction by map-matching is not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

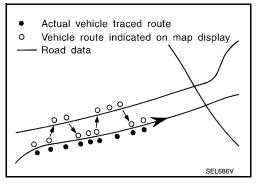
### GPS (GLOBAL POSITIONING SYSTEM)

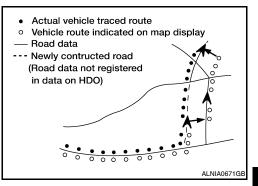
GPS (Global Positioning System) has been developed and controlled by the US Department of Defense. The system utilizes GPS satellite (NAVSTAR), sending out radio waves while flying on an orbit around the earth at the height of approx. 21,000 km (13,000 mi).

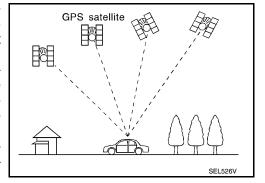
The GPS receiver calculates the vehicle's position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves received from four or more GPS satellites (three-dimensional positioning). If radio waves were received only from three GPS satellites, the GPS receiver calculates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

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2010 Maxima

### **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.

## **Component Parts Location**

INFOID:0000000005528985

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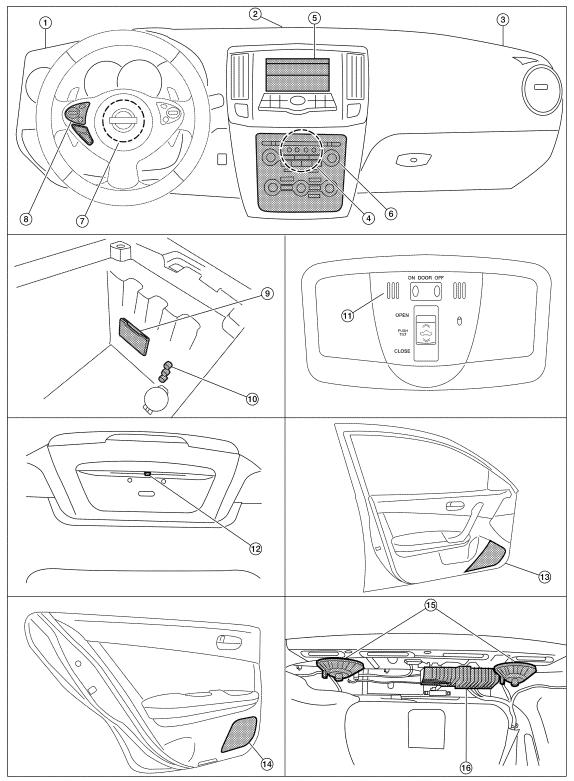
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AWNIA1939ZZ

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

### **NAVIGATION SYSTEM**

### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

- Steering angle sensor M53 (located in steering column behind spiral cable)
- 10. Aux in jack M209
- 13. Front door speaker LH D3 RH D103
- 8. Steering wheel audio control switch- 9.
  - USB interface M211(view in center console)

- 11. Microphone R7
- Rear door speaker
   LH D202
   RH D302
- 12. Rear view camera T101
- 15. Rear subwoofers (view under rear parcel shelf)LH B106RH B107

16. BOSE speaker amp B109, B110

### **Component Description**

INFOID:0000000005522990

Part name	Description
AV control unit	<ul> <li>Controls each operation of the navigation system</li> <li>HDD is built in</li> <li>Voice guidance signal is output to BOSE speaker amp.</li> </ul>
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> <li>Each operation of navigation system can be performed</li> <li>Switch operating signal is output to AV control unit</li> </ul>
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

INFOID:0000000005522991 -Reverse signal ΑV Camera image signal Camera ON signal CONTROL DISPLAY REAR VIEW UNIT UNIT CAMERA STEERING Steering angle signal (CAN Communication) ANGLE SENSOR AWNIA1921G

# **System Description**

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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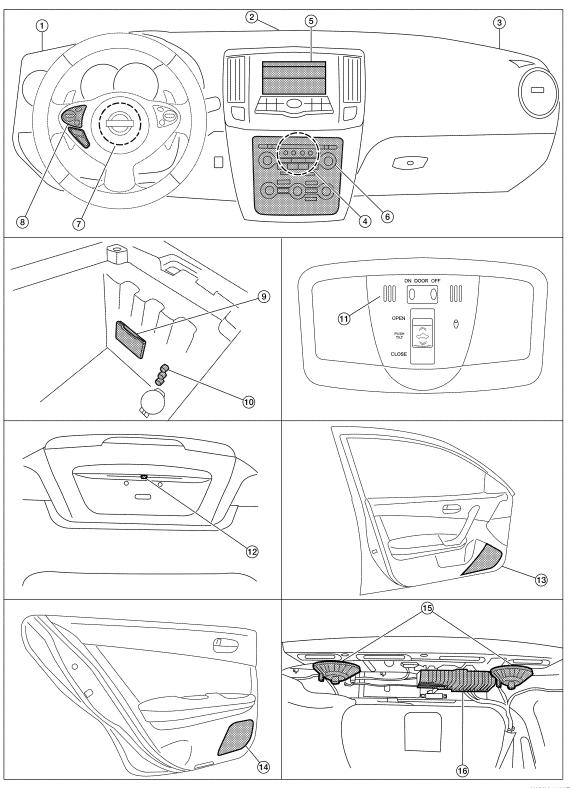
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## **Component Parts Location**

INFOID:0000000005528986



AWNIA1939ZZ

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

### **REAR VIEW MONITOR SYSTEM**

### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

- Steering angle sensor M53 (located in steering column behind spiral ca-
- 13. Front door speaker LH D3 RH D103

10. Aux in jack M209

Steering wheel audio control switch- 9. 8.

11. Microphone R7

LH D202

RH D302

14. Rear door speaker

- USB interface M211(view in center console)
- 12. Rear view camera T101
- 15. Rear subwoofers (view under rear parcel shelf) **LH B106 RH B107**

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16. BOSE speaker amp B109, B110

## Component Description

INFOID:0000000005522994

Part name	Description
AV control unit	Receives reverse signal from back-up lamp relay     Receives steering angle sensor signal     Sends camera ON signal to rear view camera
Rear view camera	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

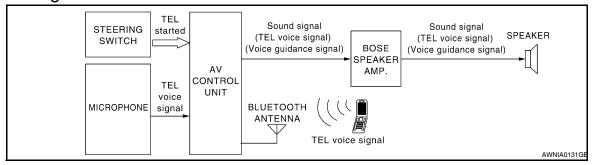
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# HANDS-FREE PHONE SYSTEM

### System Diagram

INFOID:0000000005522995



## System Description

INFOID:0000000005522996

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.

## **Component Parts Location**

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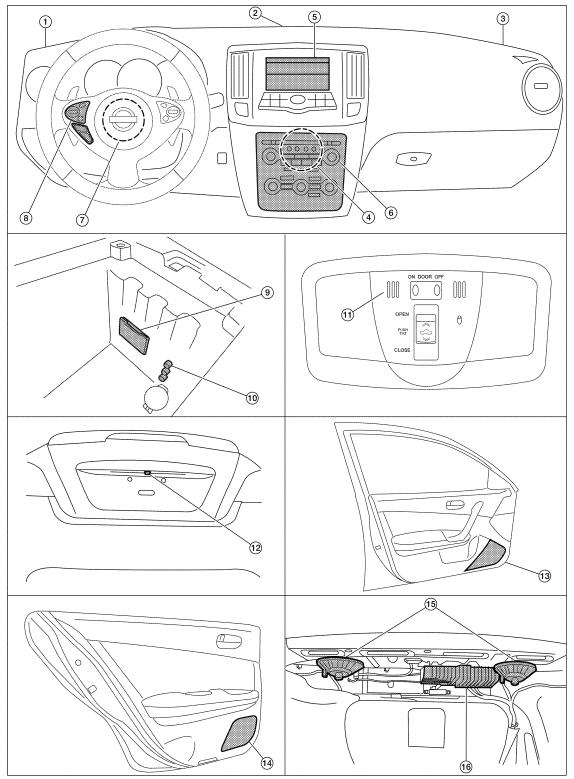
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AWNIA1939ZZ

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

### HANDS-FREE PHONE SYSTEM

#### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

- Steering angle sensor M53 (located in steering column behind spiral cable)
- 10. Aux in jack M209
- 13. Front door speaker LH D3 RH D103
- 8. Steering wheel audio control switch- 9.
  - USB interface M211(view in center console)

- 11. Microphone R7
- Rear door speaker
   LH D202
   RH D302
- 12. Rear view camera T101
- 15. Rear subwoofers (view under rear parcel shelf)LH B106RH B107

16. BOSE speaker amp B109, B110

## **Component Description**

INFOID:0000000005522998

Part name	Description	
AV control unit	<ul> <li>Receives telephone voice signal from antenna and microphone</li> <li>Sends telephone voice and voice guidance signals to the speakers</li> </ul>	
BOSE speaker amp.	<ul> <li>Receives audio signals from the AV control unit</li> <li>Outputs amplified audio signals to the speakers.</li> </ul>	
Front door speaker		
Front tweeter	Receives telephone voice and voice guidance signals from the AV control unit through the BOSE speaker amp.	
Center speaker	anough the Beel opeanor amp.	
Steering wheel audio control switches	<ul><li>Start a voice recognition session</li><li>Answer and end telephone calls</li><li>Adjust the volume level</li></ul>	
Microphone	Sends voice signals to AV control unit	
Bluetooth antenna	Sends telephone voice signal to AV control unit	

< FUNCTION DIAGNOSIS >

**IBOSE W/ COLOR DISPLAY W/ NAVII** 

## 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

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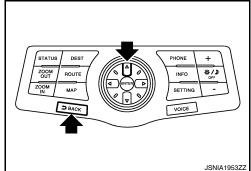
#### MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

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

#### Self-diagnosis Mode

- Press the "BACK" switch and the "UP" switch of the 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

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

**AV-365** Revision: November 2009 2010 Maxima

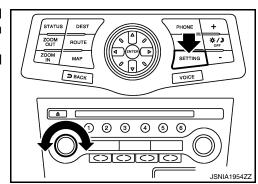
#### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

	Mode		Description	
	Display Diagnosis		The following check functions are available: color tone check by color bar display, light and shade check by gray scale display, 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.	
		Steering Angle Adjustment	When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted.	
	Navigation	Speed Calibration	When there is a difference between the current location mark and the actual location, it can be adjusted.	
		XM 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		-	
Confirmation/ Adjustment	Vehicle CAN Diagnosis		The transmitting/receiving of CAN communication can be monitored.	
.,	AV COMM Diagnosis		The communication condition of each unit of Multi AV system can be monitored.	
	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 NavTraffic	Change Channel	
		XM NavWeather	Any necessary channels required to receive traffic information from the satellite radio system can be set.	
XM	XM CGS	Change Application ID  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

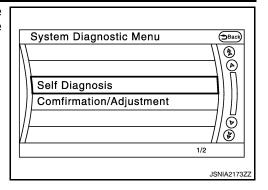
- 1. Start the engine.
- 2. Turn the audio system OFF.
- 3. While pressing the "SETTING" button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)
  - Shifting from current screen to previous screen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



#### < FUNCTION DIAGNOSIS >

#### [BOSE W/ COLOR DISPLAY W/ NAVI]

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



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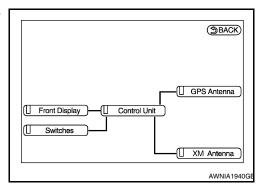
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#### SELF-DIAGNOSIS MODE

- 1. 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.

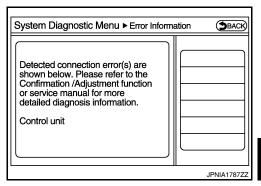
Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction Note	Red	Green



#### 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.

#### < FUNCTION DIAGNOSIS >

#### [BOSE W/ COLOR DISPLAY W/ NAVI]

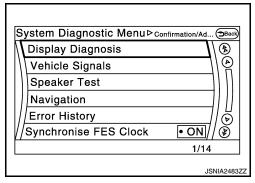
Screen switch	Description	Possible malfunction location / Action to take
Control unit	Malfunction is detected in AV control unit power supply and ground circuits.	Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.

#### 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

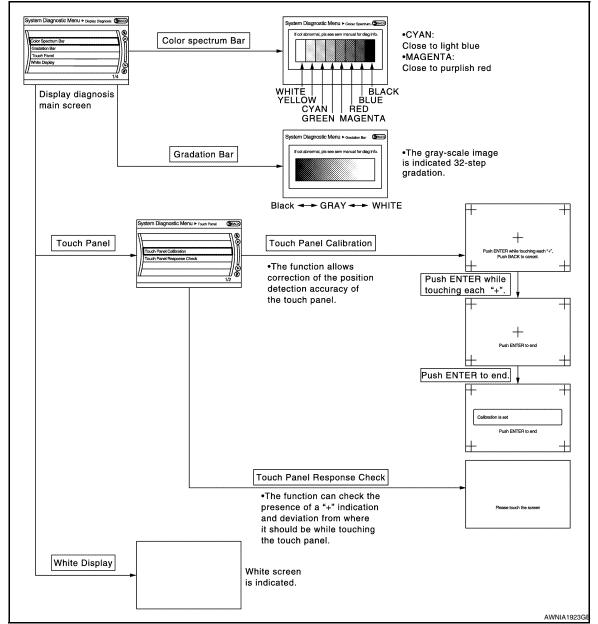
- 1. Start the diagnosis function and select "Confirmation/Adjustment". The confirmation/adjustment mode indicates where each item can be checked or adjusted.
- 2. Select each switch on the "Confirmation/Adjustment Mode" screen to display the relevant trouble diagnosis screen. Press the "Back" switch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



### < FUNCTION DIAGNOSIS >

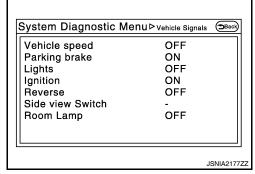
### [BOSE W/ COLOR DISPLAY W/ NAVI]

### Display Diagnosis



#### Vehicle Signals

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



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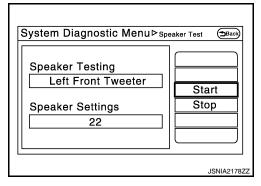
#### < FUNCTION DIAGNOSIS >

#### [BOSE W/ COLOR DISPLAY W/ NAVI]

Diagnosis item	Display	Vehicle status	Remarks	
Vahiala anaad	ON	Vehicle speed > 0 km/h (0 MPH)		
Vehicle speed	OFF	Vehicle speed = 0 km/h (0 MPH)	Changes in indication may be deleved. This is normal	
Davidson hande	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal	
Parking brake	OFF	Parking brake is released.		
Lighto	ON	Light switch ON		
Lights	OFF	Light switch OFF	_	
lanition	ON	Ignition switch ON		
Ignition	OFF	Ignition switch in ACC position	_	
Reverse	ON	Shift the selector lever to "R" position	Changes in indication may be delayed. This is normal.	
Neverse	OFF	Shift the selector lever other than "R" position	Onanges in indication may be delayed. This is hollifal.	
Side view Switch	_	_	This item is displayed, but cannot be monitored.	
Room Lamp	OFF	_	This item is displayed, but not used.	

#### Speaker Test

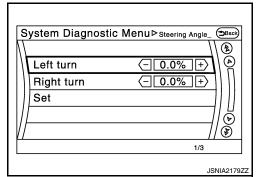
Select "SPEAKER DIAGNOSIS" to display the Speaker Diagnosis screen. Press "Start" to generate a test tone in a speaker. Press "Start" to generate a test tone in the next speaker. Press "Stop" to stop the test tones.



#### Navigation

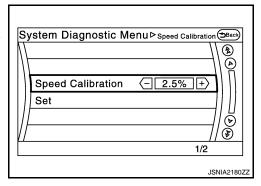
#### STEERING ANGLE ADJUSTMENT

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.



#### < FUNCTION DIAGNOSIS >

#### [BOSE W/ COLOR DISPLAY W/ NAVI]

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#### **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.

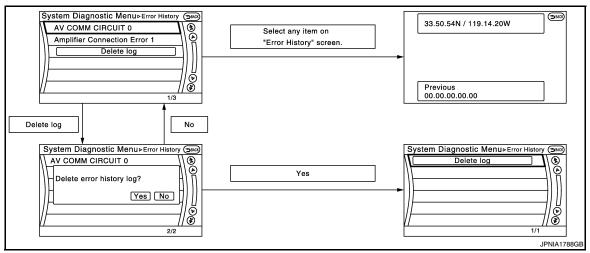
#### Count up method A

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



#### Error item

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results.  Refer to AV-376, "CONSULT - III Function (MULTI AV)".

### < 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		
Connection Of Gyro		Devile as the AV assetuel weit if the resulting
Connection of G Sensor		Replace the AV control unit if the malfunction occurs constantly.
CAN Controller Memory Error	A)/ control unit molf motion is detected	
Bluetooth Module Connection Error	AV control unit malfunction is detected.	
Sub CPU Connection Error		
iPod authentification chip error		
Audio connection error		
DSP Connection Error		If a disc can be played, then there is a
DSP Communication Error	AV control unit malfunction is detected.	<ul> <li>possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>
HDD Connection Error		<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>
HDD Read Error		
HDD Write Error	AV control unit malfunction is detected.	
HDD Communication Error		
HDD Access Error		
GPS Communication Error		An intermittent error caused by strong radio
GPS ROM Error		interference may be detected unless any symptom (GPS reception error, etc.) occurs.
GPS RAM Error	GPS malfunction is detected.	
GPS RTC Error		Replace the AV control unit if the malfunction occurs constantly.
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> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>
Front Display Connection Error	When either one of the following items is detected: Display unit power supply and ground circuits malfunction is detected. Malfunction is detected in communication circuits between AV control unit and display unit. Malfunction is detected in communication signal between AV control unit and display unit.	<ul> <li>Display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and display unit.</li> </ul>
USB electric current Error	Detection of over current in USB interface.	Check USB harness between the AV control unit and USB interface.

#### < FUNCTION DIAGNOSIS >

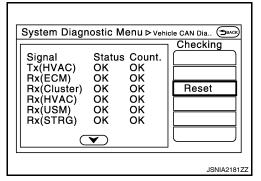
#### [BOSE W/ COLOR DISPLAY W/ NAVI]

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.
AV COMM CIRCUIT     Switches Connection Error	When either one of the following items are detected:  Multifunction switch power supply and ground circuits are malfunctioning.  AV communication circuits between AV control unit and multifunction switch are malfunctioning.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>

#### 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



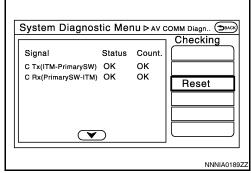
#### NOTE:

"???" 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

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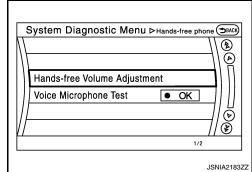
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#### < FUNCTION DIAGNOSIS >

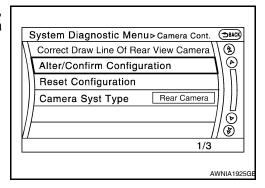
#### [BOSE W/ COLOR DISPLAY W/ NAVI]

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



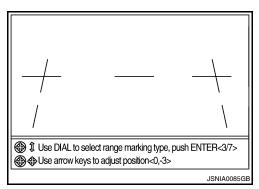
#### Camera

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 rearview 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

#### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

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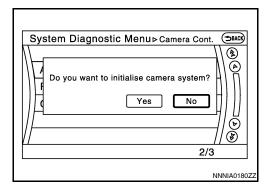
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Setting item	Setting	Setting item	Setting
Rear L/R Angle	0.0000000	Overall Height	0.0000000
Rear Up/Dn Angle	0.0000000	Side L/R Angle	0.0000000
Rear Roll Angle	0.0000000	Side Up/Dn Angle	0.0000000
Bumper Rear Dist.	0.0000000	Side Roll Angle	0.0000000
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	_	_

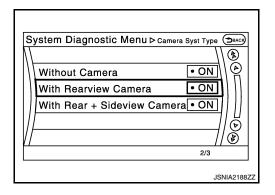
Reset Configuration

Configuration stored in the AV control unit can be initialized.



Camera Syst Type

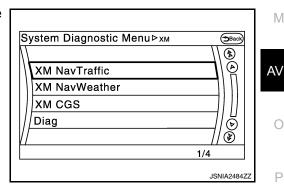
Type of camera system is selectable.



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.

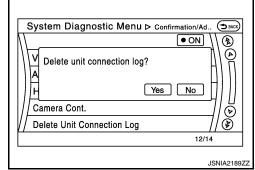


**Delete Unit Connection Log** 

#### < 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.)

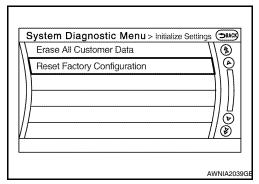


#### Initialize Settings

"Erase All Customer Data" and "Reset Factory Configuration" are possible.

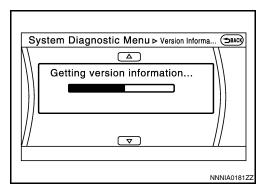
#### **CAUTION:**

- 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:0000000005523001

#### 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> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing AV control unit.</li> </ul>

#### **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**

#### < FUNCTION DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

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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]		
GYRO NO CONN [U1201]		Replace the AV control unit if the malfunc-
G-SENSOR NO CONN [U1202]		tion occurs constantly.
CAN CONT [U1216]	AV control unit malfunction is detected.	
BLUETOOTH MODULE [U1217]	Av control unit manufiction is detected.	
SUB CPU CONN [U1228]		
iPod CERTIFICATION [U1229]		
Built-in AUDIO CONN [U122E]		
HDD CONN [U1218]		If the music box function has no mal-
HDD READ [U1219]		functions, then there is a possibility of
HDD WRITE [U121A]	AV control unit malfunction is detected.	the detection of a temporary malfunction.
HDD COMM [U121B]		Replace the AV control unit if the mal-
HDD ACCESS [U121C]		function occurs constantly.
GPS COMM [U1204]		An intermittent error caused by strong ra-
GPS ROM [U1205]		dio interference may be detected unless any symptom (GPS reception error, etc.)
GPS RAM [U1206]	GPS malfunction is detected.	occurs.
GPS RTC [U1207]		Replace the AV control unit if the malfunction occurs constantly.
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DSP CONN [U121D]		If a disc can be played, then there is a
DSP COMM [U121E]	AV control unit malfunction is detected.	possibility of the detection of a temporary malfunction.  Replace the AV control unit if the malfunction occurs constantly.
DVD COMM [U1227]	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>
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.

#### < 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: Display unit power supply and ground circuits malfunction is detected. Communication circuits between AV control unit and display unit.	<ul> <li>Display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and AV display unit.</li> </ul>
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 connecter.	Check USB harness between the AV control unit and USB connector.
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	<ul> <li>When either one of the following items are detected:</li> <li>Multifunction switch power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between AV control unit and multifunction switch are malfunctioning.</li> </ul>	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>

### **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	
VILICI, CDD CIC	On	Vehicle speed >0 km/h (0 MPH)		
VHCL SPD SIG	Off	Vehicle speed =0 km/h (0 MPH)	Changes in indication may be delayed. This is	
PKB SIG	On	Parking brake is applied.	normal.	
PND SIG	Off	Parking brake is released.		
ILLUM SIG	On	Block the light beam from the auto light optical sensor when the light SW is ON.		
ILLUM SIG	Off	Expose the auto light optical sensor to light when the light SW is OFF or ON.		
IGN SIG	On	Ignition switch ON		
IGN SIG	Off	Ignition switch in ACC position		
	On	Selector lever in R position	Changes in indication way he deleved. This is	
REV SIG	Off	Selector lever in any position other than R	<ul> <li>Changes in indication may be delayed. This normal.</li> </ul>	
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.

### < FUNCTION DIAGNOSIS >

## [BOSE W/ COLOR DISPLAY W/ NAVI]

Item to be selected	Description
VHCL SPD SIG	
PKB SIG	
ILLUM SIG	1
IGN SIG	The same as when "ALL SIGNALS" is selected.
REV SIG	
SIDE VIEW SW	
ROOM LAMP	

### **CONFIGURATION**

Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	<ul> <li>Reads the vehicle configuration of current AV control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
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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#### **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

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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:0000000005523004

### 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 >

[BOSÉ W/ COLOR DISPLAY W/ NAVI]

# U1010 CONTROL UNIT (CAN)

DTC Logic

## DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

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 mal- function 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

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 mal- function occurs constantly. Refer to AV-487. "Removal and Installation".

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## **U1202 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

## **U1202 AV CONTROL UNIT**

DTC Logic

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 mal- function 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

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

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 <u>AV-487</u>, "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

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:0000000005523012

# 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

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

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 <u>AV-487, "Removal and Installation"</u>.

NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

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### **U1207 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

## **U1207 AV CONTROL UNIT**

DTC Logic

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:0000000005523016

# 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

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 mal- function occurs constantly. Refer to AV-487, "Removal and Installation".

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## **U1217 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

## **U1217 AV CONTROL UNIT**

DTC Logic

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 mal- function 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".</li> </ul>

## Diagnosis Procedure

INFOID:0000000005523020

## 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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### **U1219 AV CONTROL UNIT**

[BOSE W/ COLOR DISPLAY W/ NAVI]

## **U1219 AV CONTROL UNIT**

DTC Logic

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".</li> </ul>

## Diagnosis Procedure

INFOID:0000000005523022

## 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".</li> </ul>

## Diagnosis Procedure

INFOID:0000000005523024

## 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".</li> </ul>

## Diagnosis Procedure

INFOID:0000000005523026

## 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".</li> </ul>

## Diagnosis Procedure

INFOID:0000000005523028

# 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121D	DSP CONN [U121D]	AV control unit malfunction is detected.	<ul> <li>If a disc can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".</li> </ul>

## Diagnosis Procedure

INFOID:0000000005523030

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:0000000005523031

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	AV control unit malfunction is detected.	<ul> <li>If a disc can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005523032 1. CHECK PLAYBACK OF A DISK (CD)

### Can a disk (CD) be played?

YES >> Malfunction may be detected intermittently.

>> Replace AV control unit. Refer to AV-487, "Removal and Installation". NO

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# **U1225 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

### **U1225 AV CONTROL UNIT**

DTC Logic

### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1227	DVD COMM [U1227]	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-487. "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005523035

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

### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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 <u>AV-487</u> , "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

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:0000000005523039

# 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 <u>AV-348</u>, "CONFIGURATION (<u>AV CONTROL UNIT</u>): Special Repair Requirement".

### **U122E AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

# **U122E AV CONTROL UNIT**

DTC Logic

### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

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:0000000005523042

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 <a href="https://example.com/BRC-8">BRC-8</a>, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION: Special Repair Requirement".

### [BOSE W/ COLOR DISPLAY W/ NAVI]

### U1243 DISPLAY UNIT

**DTC Logic** INFOID:0000000005523043

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:  display unit power supply and ground circuit malfunction is detected.  communication circuit between AV control unit and display unit.	<ul> <li>Display unit power supply and ground circuit.</li> <li>Communication circuit between AV control unit and display unit.</li> </ul>

### Diagnosis Procedure

INFOID:0000000005523044

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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.

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M142	9	M163	61	Yes
W142	10	WITOS	45	165

Check continuity between display unit harness connector M142 (A) terminals 9, 10 and ground.

OFF CSCONNECT H.S.	
A 10 9	B 45 61
9,10	45,61
	$\overline{\Omega}$
	AWNIA 1935 GE

	A		Continuity	
Connector	Connector Terminal		Continuity	
M142	9	Ground	No	
101142	10	Ground		

### 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.

**AV-405** Revision: November 2009 2010 Maxima

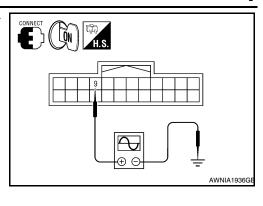
### **U1243 DISPLAY UNIT**

### < COMPONENT DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

Check signal between display unit harness connector M142 terminal 9 and ground with an oscilloscope or CONSULT-III.

(+)		()	Reference signal	
Connector	Terminal	(-)	Reference signal	
M142	9	Ground	(V) 6 4 2 0 + 1ms PKIB5039J	



### Are voltage readings as specified?

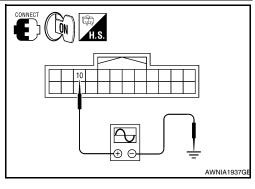
YES >> GO TO 4.

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	(-)	Reference signal	
M142	10	Ground	(V) 6 4 2 0 ****1ms	



### Are voltage readings as specified?

YES >> Inspection End.

NO >> Replace display unit. Refer to AV-490, "Removal and Installation".

### [BOSE W/ COLOR DISPLAY W/ NAVI]

### U1244 GPS ANTENNA

DTC Logic

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:0000000005523046

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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

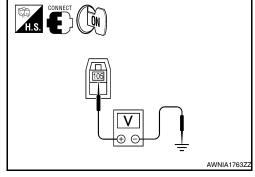
- 1. Turn ignition switch ON.
- Check voltage between AV control unit connector M165 terminal 105 and ground.

(-	+)	(-)	Voltage (Approx.)	
Connector	Terminal	(-)		
M165	105	Ground	5V	

### Is the voltage reading as specified?

YES >> Replace GPS antenna. Refer to <u>AV-501, "Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to AV-487, "Removal and Installation".



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Revision: November 2009 AV-407 2010 Maxima

### **U1263 USB**

### [BOSE W/ COLOR DISPLAY W/ NAVI]

### **U1263 USB**

DTC Logic

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:0000000005523048

# 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**

[BOSE W/ COLOR DISPLAY W/ NAVI]

### **U1300 AV COMM CIRCUIT**

Description INFOID:0000000005523049

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	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	<ul> <li>When either one of the following items are detected:</li> <li>Multifunction switch power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between AV control unit and multifunction switch are malfunctioning.</li> </ul>	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>

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### **U1310 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

# U1310 AV CONTROL UNIT

DTC Logic

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 mal- function occurs constantly. Refer to AV-487, "Removal and Installation".

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR DISPLAY W/ NAVI]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

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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.
	19	Battery power	24
AV control unit	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 M160 and M163.

Check voltage between the AV control unit connectors M160 and M163 and ground.

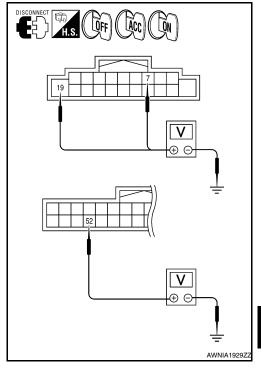
(+)		()	OFF	ACC	ON
Connector	Terminal	(-)	OH	ACC	ON
M160	7	Ground	0V	Battery voltage	Battery voltage
	19	Ground	Battery voltage	Battery voltage	Battery voltage
M163	52	Ground	0V	0V	Battery voltage

### 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

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### < COMPONENT DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

1. Turn ignition switch OFF.

 Check continuity between AV control unit harness connector M160 and ground.

	(+)	(-)	Continuity	
Connector	Connector Terminal		Continuity	
M160	20	Ground	Yes	

# DISCONNECT H.S. AWNIA1990ZZ

### Are the continuity results as specified?

YES >> Inspection End.

NO >> Repair AV control unit ground.

DISPLAY UNIT

**DISPLAY UNIT: Diagnosis Procedure** 

INFOID:0000000005523052

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	
Display Offic	23	Ignition switch ACC or ON	17	

### Are the fuses OK?

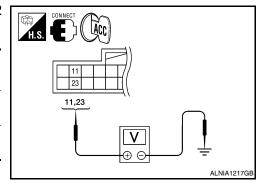
YES >> GO TO 2.

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	(-)	OH	AOO	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.

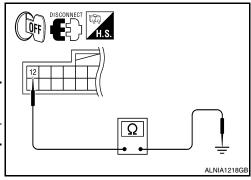
# 3. CHECK GROUND CIRCUIT

### < 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	(-)	Continuity
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

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	(-)	OH	ACC	ON
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.

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

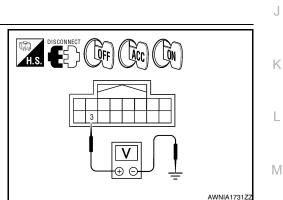
(	+)	(-)	Continuity
Connector	Terminal	(-)	Continuity
M98	1	Ground	Yes

### Are the continuity results as specified?

YES >> Inspection End.

NO >> Repair A/C and AV switch assembly ground.

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### **BOSE SPEAKER AMP**

**BOSE SPEAKER AMP: Diagnosis Procedure** 

INFOID:0000000005523054

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
BOSE speaker amp.	10	Battery power	25

### Are the fuses OK?

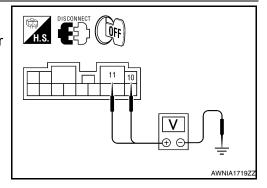
YES >> GO TO 2.

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	(-)	voitage (approx.)
B110	10	Ground	Battery voltage
ВПО	11	Giodila	Battery voltage



### Is battery voltage present?

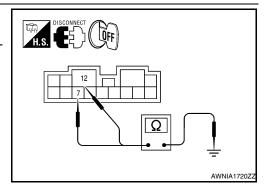
YES >> GO TO 3.

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

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BOSE speaker amp. connector.
- Check continuity between BOSE speaker amp. harness connector B110 terminal 7,12 and ground.

(+)		(-)	Continuity
Connector	Terminal	(-)	Continuity
B110	7	Ground	Yes
БПО	12	Giodila	163



INFOID:0000000005523055

### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

REAR VIEW CAMERA

REAR VIEW CAMERA: Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-447, "Wiring Diagram".

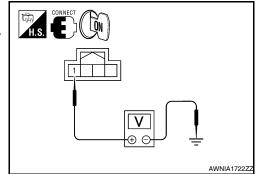
### < COMPONENT DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

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

- 1. Turn ignition switch ON.
- Shift transmission into Reverse.
- Check voltage between rear view camera harness connector T101 and ground.

(	(+)		Transmission	Value (Approx.)
Connector	Terminal	(-)	position	value (Approx.)
T101	1	Ground	Reverse	6V



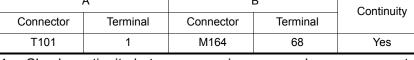
### Is voltage reading approximately 6 volts?

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

# 2.check power supply circuit (continuity)

- Turn ignition switch OFF.
- Disconnect rear view camera and AV control unit connectors.
- Check continuity between rear view camera harness connector T101 (A) terminal 1 and AV control unit harness connector M164 (B) terminal 68.

-	A		В	
Connector	Terminal	Connector	Terminal	Continuity
T101	1	M164	68	Yes



Check continuity between rear view camera harness connector T101 (A) terminal 1 and ground.

Α			Continuity
Connector	Terminal	_	Continuity
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)

- Connect rear view camera control unit harness connector.
- 2. Turn ignition switch ON.
- Check voltage between AV control unit harness connector M164 and ground.

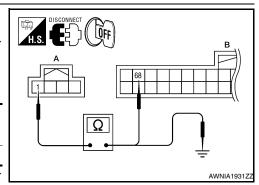
(+	(+)		Transmission	Value (Approx.)
Connector	Terminal	(-)	position	value (Approx.)
M164	68	Ground	Reverse	6V

### 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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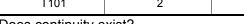
ΑV

### < COMPONENT DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

- Turn ignition switch OFF.
- Disconnect rear view camera harness connector.
- Check continuity between rear view camera harness connector T101 terminal 2 and ground.

Connector	Terminal	_	Continuity
T101	2	Ground	Yes



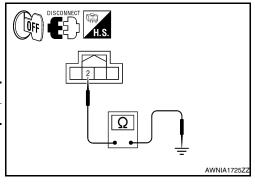
### Does continuity exist?

YES >> Inspection End.

>> Repair harness or connector. NO

### MICROPHONE

### MICROPHONE: Diagnosis Procedure



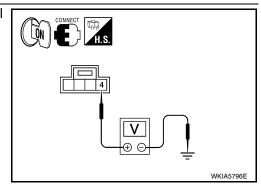
INFOID:0000000005523057

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.

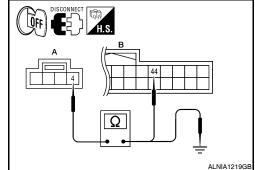
NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

- Turn ignition switch OFF.
- 2. Disconnect microphone and AV control unit harness connectors.
- Check continuity between microphone harness connector R7 (A) terminal 4 and AV control unit harness connector M163 (B) terminal 44.

Α			В	Continuity
Connector	Terminal	Connector Terminal		Continuity
R7	4	M163	44	Yes

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



Α		_	Continuity	
Connector	Terminal		Continuity	
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

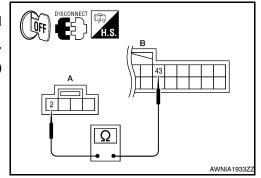
### < COMPONENT DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

- 1. Turn ignition switch OFF.
- 2. Disconnect microphone harness connector R7 and AV control unit harness connector M163.
- Check continuity between microphone harness connector R7

   (A) terminal 2 and AV control unit harness connector M163 (B) terminal 43.

А			В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
R7	2	M163	43	Yes



### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

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INFOID:000000005523059

### RGB DIGITAL IMAGE SIGNAL CIRCUIT

Description INFOID.0000000005523058

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

### Diagnosis Procedure

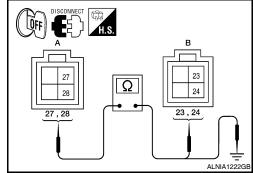
Regarding Wiring Diagram information, refer to AV-487, "Removal and Installation".

# 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.
- Check continuity between display unit harness connector M151

   (A) terminals 27, 28 and AV control unit harness connector M161 (B) terminals 23 and 24.

А			В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M151	27	M161	23	Yes
IVITOT	28	IVITOT	24	165



4. Check continuity between display unit harness connector M151 (A) terminals 27, 28 and ground.

	А		Continuity	
Connector	Terminal	_	Continuity	
M151	27	Ground	No	
WITST	28	Giodila	140	

### Are continuity results as specified?

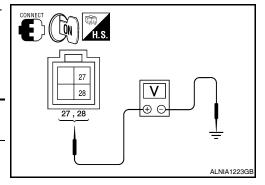
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB DIGITAL IMAGE SIGNAL

- 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
Connector	Terminal	(-)	Condition	(Approx.)l
	27		Not con-	4.01/
M151	28	Ground	nected connector	1.3 V



### 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]

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INFOID:0000000005523061

### COMPOSITE IMAGE SIGNAL CIRCUIT

**Description** 

AV control unit transmits the playback DVD image signal and AUX image signal to the display unit.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-447, "Wiring Diagram".

# $1. \\ \text{CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT}$

- 1. Turn ignition switch OFF.
- 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	[	В	Continuity
	Connector	Terminal	Connector	Terminal	Continuity
	M163	40	M142	18	Yes

 Check continuity between AV control unit connector M163 (A) terminal 40 and ground.

DISCONNECT 11.S.  A  40  118	
Ω	NIA1224GB

Α			Continuity	
Connector	Terminal		Continuity	
M163	40	Ground	No	

### Are continuity results as specified?

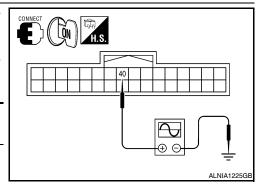
YES >> GO TO 2.

NO >> Repair harness or connector.

### 2. CHECK AUX COMPOSITE SIGNAL

- Connect AV control unit connector M163 and display unit connector M142.
- 2. Turn ignition switch ON.
- Check signal between AV control unit harness connector M163 terminal 40 and ground.

(+)		(-) Condition		Deference signal	
Connector	Terminal	(-)	Condition	Reference signal	
M163	40	Ground	At DVD image is displayedl	(V) 0. 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	



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".

Revision: November 2009 AV-419 2010 Maxima

### **AUX IMAGE SIGNAL CIRCUIT**

Description INFOID:0000000005523062

- 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

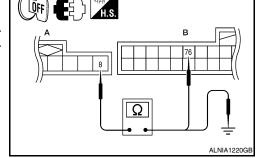
INFOID:0000000005523063

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.
- Check continuity between auxiliary input jack harness connector M209 (A) terminal 8 and AV control unit harness connector M164 (B) terminal 76.

	A		В	Continuity
Connector	Terminal	Connector Terminal		Continuity
M209	8	M164	76	Yes



 Check continuity between auxiliary input jack harness connector M209 (A) terminal 8 and ground.

A			Continuity
Connector	Terminal		Continuity
M209	8	Ground	No

### Is the inspection result normal?

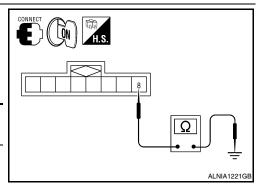
YES >> GO TO 2.

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.

Connector	+) Terminal	(-)	Condition	Reference signal
M209	8	Ground	Receive audio sig- nal	(V) 0. 4 0 -0. 4 + 40μs SKIB2236J



### 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

Description INFOID:0000000005523064

The eject signal is output to AV control unit when the eject switch of A/C and AV switch assembly is pressed.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-447, "Wiring Diagram".

# 1. CHECK CONTINUITY DISK EJECT SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect A/C and AV switch assembly connector M98 and AV control unit connector M164.
- Check continuity between A/C and AV switch assembly connector tor M98 (A) terminal 14 and AV control unit harness connector M164 (B) terminal 82.

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M98	14	M164	82	Yes

4. Check continuity between A/C and AV switch assembly connector M98 (A) terminal 14 and ground.

	Α		Continuity
Connector	Terminal		Continuity
M98	14	Ground	No

### Are continuity results as specified?

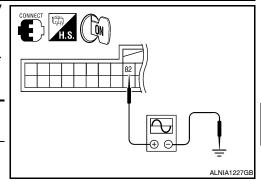
YES >> GO TO 2.

NO >> Repair harness or connector.

### 2. CHECK AV CONTROL UNIT VOLTAGE

- Connect A/C and AV switch assembly connector M98 and AV control unit connector M164.
- Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector M164 terminal 82 and ground.

(-	+)	(-)	Condition	Voltage	
Connector	Terminal	(-)	Condition	(Approx.)	
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 <u>AV-487</u>, "Removal and Installation".

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### 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:0000000005523067

Regarding Wiring Diagram information, refer to AV-447, "Wiring Diagram".

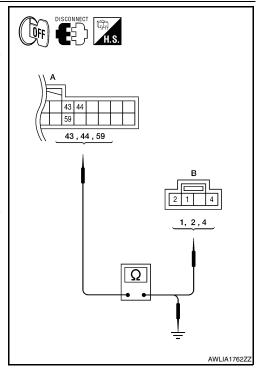
# 1. CHECK HARNESS BETWEEN AV CONTROL UNIT AND MICROPHONE

- 1. Turn ignition switch OFF.
- 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		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	59		1	
M163	43	R7	2	Yes
	44		4	

4. Check continuity between AV control unit harness connector M163 (A) and ground.

Α			Continuity
Connector	Terminal	_	Continuity
	44		
M163	43	43 Ground	
	59		
A (1		r: 10	



### 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.
- Check voltage between microphone harness connector R7 terminal 4 and ground.

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

# CONNECT IN.S. WKIA5796E

### Is voltage reading approx. 5 volts?

YES >> GO TO 3.

NO >> Replace AV control unit. Refer to AV-487, "Removal and Installation".

### 3.CHECK MICROPHONE SIGNAL

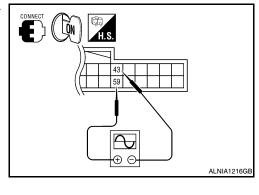
### MICROPHONE SIGNAL CIRCUIT

### < COMPONENT DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

Check signal between AV control unit harness connector M163 terminals 43 and 59.

Connector (+) (-) Terminal Terminal  While speaking into MIC  (V) 2.5 2.0 1.5 1.0 0.5				
Terminal   While speaking into MIC   (V)   2.5   2.0   1.5   1.5   1.0   0.5   1.0   0.5   1.0	Connector	(+)	(-)	Reference signal
M163 59 43 (V) 2.5 2.0 1.5 1.0 0.5	Connector	Terminal	Terminal	Neterence signal
0 + 2ms PKIB5037J	M163	59	43	(V) 2. 5 2. 0 1. 5 1. 0 0. 5



### Are voltage readings as specified?

YES >> Replace AV control unit. Refer to <u>AV-487</u>, "Removal and Installation".

NO >> Replace microphone. Refer to AV-507, "Removal and Installation".

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### AMP ON SIGNAL CIRCUIT

Description INFOID:0000000005523068

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:0000000005523069

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	(-)	voltage (Approx.)
B109	20	Ground	Battery voltage

# CONNECT HS. AWNIA1707ZZ

### Is inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

# $2.\mathsf{CHECK}$ AMP ON SIGNAL (AV CONTROL UNIT)

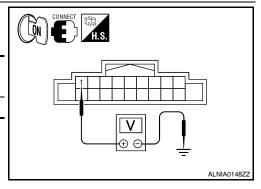
Check voltage between AV control unit harness connector M160 terminal 1 and ground.

(+)		(-)	Voltage (Approx.)	
Connector	Terminal	(-)	voltage (Approx.)	
M160	1	Ground	Battery voltage	

### Is inspection result normal?

YES >> Repair harness or connector.

NO >> Replace AV control unit. Refer to <u>AV-487, "Removal and Installation"</u>.



### FRONT DOOR SPEAKER

Description INFOID:0000000005523070

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:0000000005523071

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Regarding Wiring Diagram information, refer to AV-447, "Wiring Diagram".

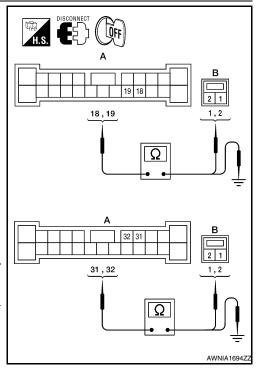
# 1. HARNESS CHECK

- 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).

Α		В		Continuity
Connector	Terminal	Connector	Terminal	
	18	D3	1	
B109	19	D3	2	Yes
	31	D103	1	165
	32	D103	2	

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

Α		_	Continuity	
Connector	Terminal	_	Continuity	
	18		No	
B109	19	Ground		
D109	31	Gloulia		
	32			



### Are continuity test results as specified?

YES >> GO TO 2.

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

· Repair harness or connector.

# 2.front door speaker signal check

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- 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.

Connec-	Terminal		Condition	Reference	
tor	(+)	(-)	Condition	signal	
	18	19			
B109	31	32	Receive audio sig- nal	1 0 -1 1 ms 3 3KA0177E	

### Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to <u>AV-496, "Removal and Installation"</u>.

NO >> GO TO 3.

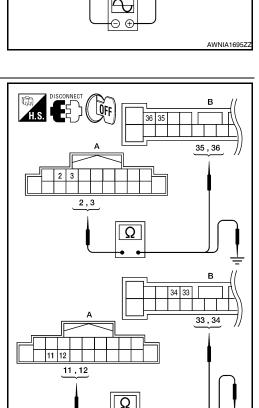
# 3. HARNESS CHECK

- 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).

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M160	2	B109	35	Yes
	3		36	
	11	D109	33	
	12		34	

Check continuity between AV control unit harness connector M160 (A) and ground.

	Α		Continuity	
Connector	Terminal		Continuity	
	2	Ground	No	
M160	3			
IVI 16U	11	Ground	No	
	12			



AWNIA1696Z

### 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

### < 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	Tern	ninals	Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	2	3			
M160	11	12	Receive audio sig- nal	(V) 1 0 -1 1 ms	

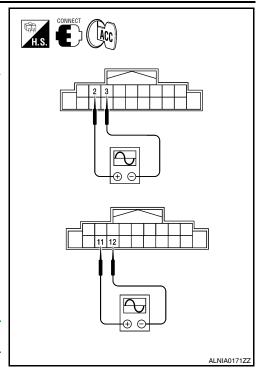
### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-499.</u>

"Removal and Installation".

NO >> Replace AV control unit. Refer to AV-487, "Removal and

>> Replace AV control unit. Refer to <u>AV-487, "Removal and Installation"</u>.



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### **TWEETER**

Description INFOID:0000000005523072

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:0000000005523073

Regarding Wiring Diagram information, refer to AV-447, "Wiring Diagram".

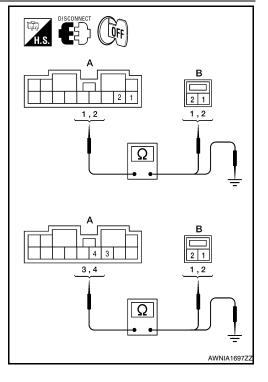
### 1. HARNESS CHECK

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

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	1	M51	1	
B110	2	IVIOI	2	Yes
	4	M52	1	163
	3	M52	2	

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

Α	_	Continuity
Terminal		Continuity
1		No
2	Ground	
4		
3		
	Terminal  1  2  4	Terminal  1 2 Ground



### 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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- 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	Tern	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	1	2		
B110	4	3	Receive audio sig- nal	(V) 1 0 -1 1 ms

### Are the audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to <u>AV-494, "Removal and Installation"</u>.

NO >> GO TO 3.

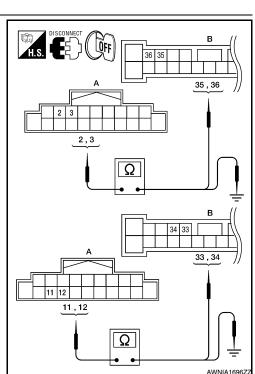
# 3. HARNESS CHECK

- 1. Disconnect AV control unit connector M160 and BOSE speaker amp. connector B109.
- Check continuity between AV control unit harness connector M160 (A) and BOSE speaker amp. harness connector B109 (B).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M160	2		35	Yes
	3	B109	36	
	11	D 109	33	
	12		34	

3. Check continuity between AV control unit harness connector M160 (A) and ground.

	А		Continuity	
Connector	Terminal		Continuity	
	2		No	
M160	3	Ground		
WITOO	11	Ground	NO	
	12			



### Are continuity test results as specified?

YES >> GO TO 4.

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

Repair harness or connector.

### 4.TWEETER SIGNAL CHECK

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### **TWEETER**

### < COMPONENT DIAGNOSIS >

### [BOSE W/ COLOR DISPLAY W/ NAVI]

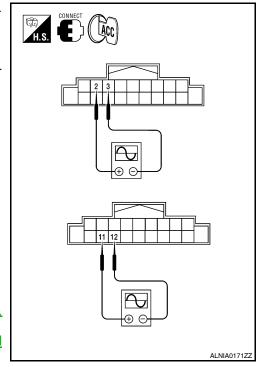
- 1. Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	2	3			
M160	11	12	Receive audio sig- nal	1 0 -1 1 ms	

### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-499</u>. "Removal and Installation".

NO >> Replace AV control unit. Refer to <u>AV-487, "Removal and Installation"</u>.



### **CENTER SPEAKER**

Description

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

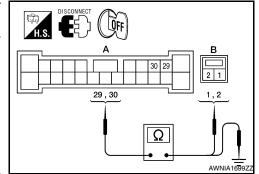
Regarding Wiring Diagram information, refer to AV-447, "Wiring Diagram".

### 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).

	Α		В	
Connector	Terminal	Connector Terminal		Continuity
B109	29	M130	1	Yes
D109	30	IVITOU	2	165

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



[BOSE W/ COLOR DISPLAY W/ NAVI]

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	Α	_	Continuity	
Connector	Terminal			
B109	29	Ground	No	
B109	30	Ground		

### 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
Connector	(+)	(-)	Condition	signal
B109	29	30	Receive audio sig- nal	(V) 1 0 -1 1 ms

AWNIA17002

Is the audio signal voltage reading as specified?

### < COMPONENT DIAGNOSIS >

YES >> Replace center speaker. Refer to AV-495. "Removal and Installation".

NO >> GO TO 3.

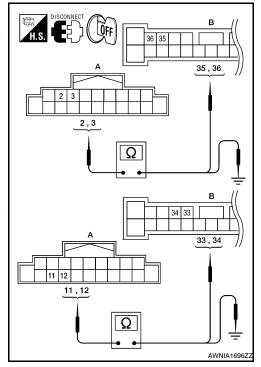
# 3. HARNESS CHECK

- 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).

А		В		Continuity
Connector	Terminal	Connector Termina		Continuity
M160	2	B109	35	Yes
	3		36	
	11		33	
	12		34	

Check continuity between AV control unit harness connector M160 (A) and ground.

	A	_	Continuity
Connector	Terminal		
M160	2		No
	3	Ground	
	11	Giouna	INO
	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

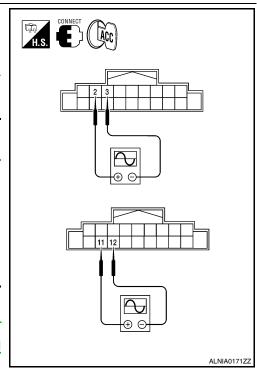
- Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

0	Terr		0 1717	Reference	
Connector	(+)	(+) (-) Condition	signal		
	2	3			
M160	11	12	Receive audio sig- nal	1 0 -1 1 ms SKIA0177E	

### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-499</u>, "Removal and Installation".

NO >> Replace AV control unit. Refer to <u>AV-487, "Removal and Installation"</u>.



## REAR DOOR SPEAKER

**Description** 

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

Regarding Wiring Diagram information, refer to AV-447, "Wiring Diagram".

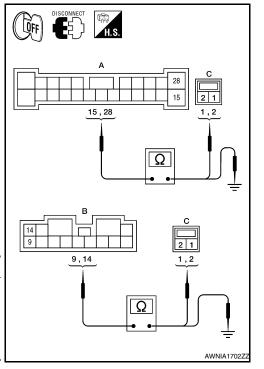
# 1. HARNESS CHECK

- 1. Disconnect BOSE speaker amp. connectors B109, B110 and suspect speaker connector.
- 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		
A. D109	28	0. 0202	1	Yes	
B: B110	9	C: D302	2	165	
	14	C. D302	1		

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

Connector	Terminal	-	Continuity	
A: B109	15	Ground		
A. B109	28		No	
B: B110	9	Giodila		
	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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Revision: November 2009 AV-433 2010 Maxima

- 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	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
A: B109	28	15		
B: B110	14	9	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E

## Are audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to <u>AV-497</u>, "Removal and Installation".

NO >> GO TO 3.

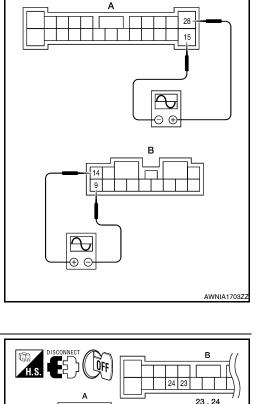
# 3. HARNESS CHECK

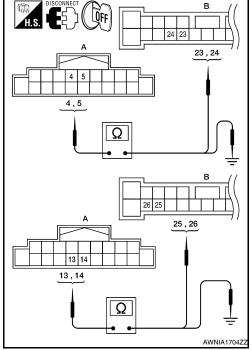
- Disconnect AV control unit connector M160 and BOSE speaker amp. connector B109.
- Check continuity between AV control unit harness connector M160 (A) and BOSE speaker amp. harness connector B109 (B).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	4		24	
M160	5	B109	23	Yes
	13	6109	26	165
	14		25	

Check continuity between AV control unit harness connector M160 (A) and ground.

	А		Continuity
Connector	Terminal	_	Continuity
	4		No
M160	5	Ground	
WITOO	13	Ground	
	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**

## < COMPONENT DIAGNOSIS >

## [BOSE W/ COLOR DISPLAY W/ NAVI]

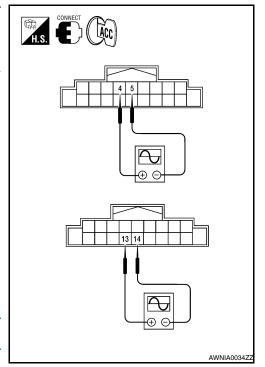
- 1. Connect AV control unit connector M160 and BOSE speaker amp. connector B109.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	4	5		
M160	13	14	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E

## Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-499</u>, <u>"Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to <u>AV-487, "Removal and Installation"</u>.



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## **SUBWOOFER**

Description INFOID:0000000005522078

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:0000000005523079

Regarding Wiring Diagram information, refer to AV-447, "Wiring Diagram".

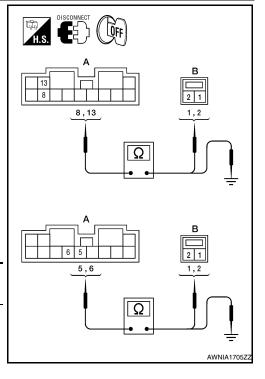
# 1. HARNESS CHECK

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

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	13	D400	1	
B110	8	B106	2	Yes
	5	B107	1	165
	6	D 107	2	

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

	A	_	Continuity	
Connector	Terminal		Continuity	
	13		No	
B110	8	Ground		
БПО	5	Glound		
	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

(ACC) H.S.

- Connect BOSE speaker amp. connector B110 and suspect rear subwoofer connector.
- 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	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	13	8		
B110	5	6	Receive au- dio signal	(V) 1 0 -1 1 ms

## Is the audio signal voltage as specified?

>> Replace suspect rear subwoofer. Refer to AV-498. "Removal and Installation".

>> GO TO 3. NO

# 3. HARNESS CHECK

- 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).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	4 24			
M160	5	B109	23	Yes
WITOU	13	D 109	26	165
	14		25	

Check continuity between AV control unit harness connector M160 (A) terminal and ground.

	А	_	Continuity
Connector	Terminal		Continuity
	4	Ground	No
M160	5		
WHOO	13	Giouna	INO
	14		

# 23 , 24 4,5 Ω 26 25 25, 26 13 14 13,14 Ω AWNIA1704Z

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## Are continuity test results as specified?

YES >> GO TO 4.

Revision: November 2009

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

**AV-437** 

· Repair harness or connector.

## 4.REAR SUBWOOFER SIGNAL CHECK

2010 Maxima

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## **SUBWOOFER**

## < COMPONENT DIAGNOSIS >

## [BOSE W/ COLOR DISPLAY W/ NAVI]

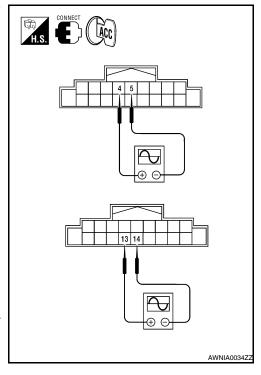
- 1. Connect AV control unit connector M160 and BOSE speaker amp. connector B109.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	4	5		
M160	13	14	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E

## Is the audio signal voltage as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-499</u>, <u>"Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to <u>AV-487, "Removal and Installation"</u>.



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INFOID:0000000005523081

## STEERING SWITCH

**Description** 

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.

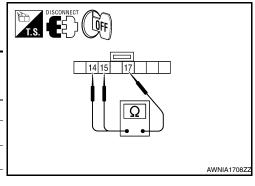
Diagnosis Procedure

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.

Terr	minal	Signal name	Condition	Resistance $(\Omega)$ (Approx.)
		Enter	Depress ENTER switch.	2023
		Voice recognition	Depress 🌾 switch.	723
14		Menu (down)	Depress ∇ switch.	321
	17	Menu (up)	Depress △ switch.	121
	17	Source	Depress SOURCE switch.	0
		Menu back	Depress the back switch.	723
15		Phone	Depress 🗸 switch.	321
.0		Volume (up)	Depress VOL up switch.	121
		Volume (down)	Depress VOL down switch.	0



Do the steering wheel audio control switches check OK?

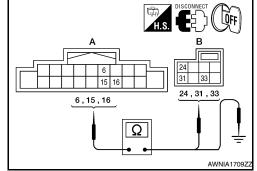
YES >> GO TO 2.

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.
- Check continuity between AV control unit harness connector M160 (A) and spiral cable harness connector M30 (B).

	Д	1		В	Continuity	
	Connector	Connector Terminal		Terminal	Continuity	
•		6		24		
	M160	15	M30	33	Yes	
		16		31		



3. Check continuity between AV switch connector M160 (A) and ground.

	A		Continuity	
Connector	Terminal	_	Continuity	
	6			
M160	15	Ground	No	
	16			

## Are the continuity results as specified?

YES >> GO TO 3.

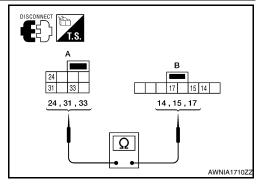
NO >> Repair harness.

# 3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M88.

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

	Α		В	Q 11 11	
Connector	Terminal	Connector	Terminal	Continuity	
	24		14		
M30	31	M88	15	Yes	
	33		17		



## Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to <u>SR-8</u>, "Removal and Installation".

## [BOSE W/ COLOR DISPLAY W/ NAVI]

# **ECU DIAGNOSIS**

# AV CONTROL UNIT

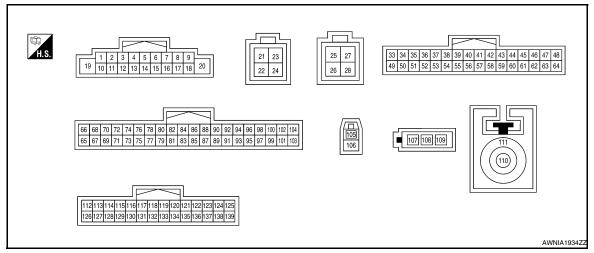
Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

CONSULT-III data monitor item

Display Item	Dis- play	Vehicle status	Remarks	
VHCL SPD SIG	ON	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is	
VIICE OF DISIO	OFF	Vehicle speed =0 km/h (0 MPH)	normal.	
PKB SIG	ON	Parking brake is applied.	Changes in indication may be delayed. This is	
FRB SIG	OFF	Parking brake is released.	normal.	
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON.	_	
ILLUW 31G	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.		
IGN SIG	ON	Ignition switch ON		
IGN SIG	OFF	Ignition switch in ACC position	_	
	ON	Selector lever in R position	Changes in indication may be delayed. This is	
REV SIG	OFF Selector lever in any position other than R		normal.	

## **TERMINAL LAYOUT**



## PHYSICAL VALUES

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Terminal (Wire color)		Description			Condition	Reference value		
+	_	Signal name	Input/ Output	Condition		(Approx.)		
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	(V) 1 0 -1 + 2ms SKIB3609E		
4 (W/R)	5 (W/L)	Pre-amp. audio signal rear LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E		
					Depress ENTER switch.	2023Ω		
			Input			Ignition	Depress 啶 switch.	723Ω
6 (W/G)	15 (L/B)	Steering switch signal A		switch OFF	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		
		Chiald			Lighting switch is ON	Battery voltage		
10	_	Shield	_		_	_		
11 (B)	12 (W)	Pre-amp. audio signal front RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E		
13 (V)	14 (LG)	Audio signal rear RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + + 2ms SKIB3609E		
15 (L/B)	Ground	Steering switch signal ground	-	Ignition switch ON	_	0V		

# [BOSE W/ COLOR DISPLAY W/ NAVI]

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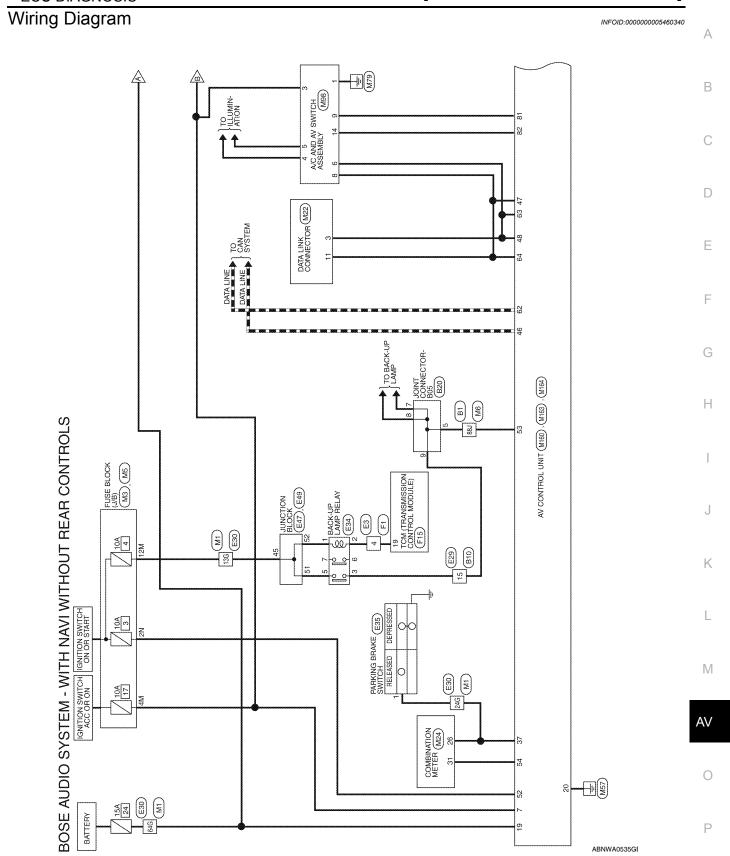
Terminal (Wire color)		Description			Condition	Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
					Depress the back switch.	723Ω
16	15	Steering switch signal B	Input	Ignition switch	Depress 🗸 switch.	321Ω
(GR/L)	(L/B)			ON	Depress VOL up switch.	121Ω
					Depress VOL down switch.	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				Ignition	Parking brake is ON.	5.0 V
(G/R)	Ground	Parking brake signal	Input	switch ON	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.	0. 4 0 -0. 4 -0. 4 40μs
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.	(V) 6 4 2 0 **1ms
46 (P)	_	CAN-L	Input/ Output	_	_	_

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Terminal Description		Condition		Reference value			
+	_	Signal name Input/ Output		Signal name Input/		(Approx.)	
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	Lighting switch is OFF. Lighting switch is ON.	0 V 12.0 V	
52 (G)	Ground	Ignition signal	Input	OFF Ignition switch ON	—	Battery voltage	
53	Cround	Deverse signal	lmm: it	Ignition	R position	12.0 V	
(P/B)	Ground	Reverse signal	Input	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 approx. 40 km/h (25 MPH)	NOTE:  Maximum voltage may be 12.0 V due to specifications (connected units).  (V) 6 4 2 0  *** *20ms  SKIA6649J	
55	_	Shield	_		_	_	
56 (B)	Ground	Composite synchronizing signal	Output	Ignition switch ON	_	(V) 6 4 2 0 20 \( \mu \) SKIA0187E	
59 (L)	Ground	Microphone signal	Input	Ignition switch ON	Give a voice	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0 + 2ms	
60	_	Shield	_	_	_	_	
61 (BR)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0  +-1ms  PKIB5039J	
62 (L)	_	CAN-H	Input/ Output	_	_	_	
63 (L)	_	AV communication signal (H)	Input/ Output	_	_	_	

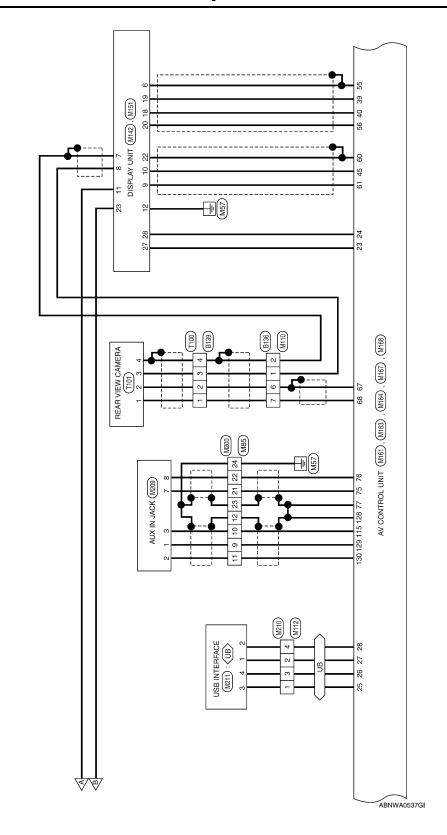
Terminal (Wire color) Description		Description		Condition		Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
64 (L)	_	AV communication signal (H)	Input/ Output	_	_	_
67 (W)	Ground	Rear view camera ground	_	Ignition switch ON	_	0 V
68 (R)	Ground	Camera ON signal	Output	Ignition switch	R position.  Other than R position.	6.0 V 0 V
75 (V)	Ground	AUX image signal ground	_	ON Ignition switch ON	——————————————————————————————————————	0 V
76 (V)	75 (LG)	AUX image signal	Input	Ignition switch ON	At AUX image is displayed.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4
77	_	Shield	_	_	_	_
81 (BR)	Ground	Switch ground	_	Ignition switch ON	_	0 V
82	81	Diele eie et eienel	la a cat	Ignition	Pressing the eject switch.	0 V
(SB)	(BR)	Disk eject signal	Input	switch ON	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 selected.	(V) 1 0 -1 ** 2ms SKIB3609E

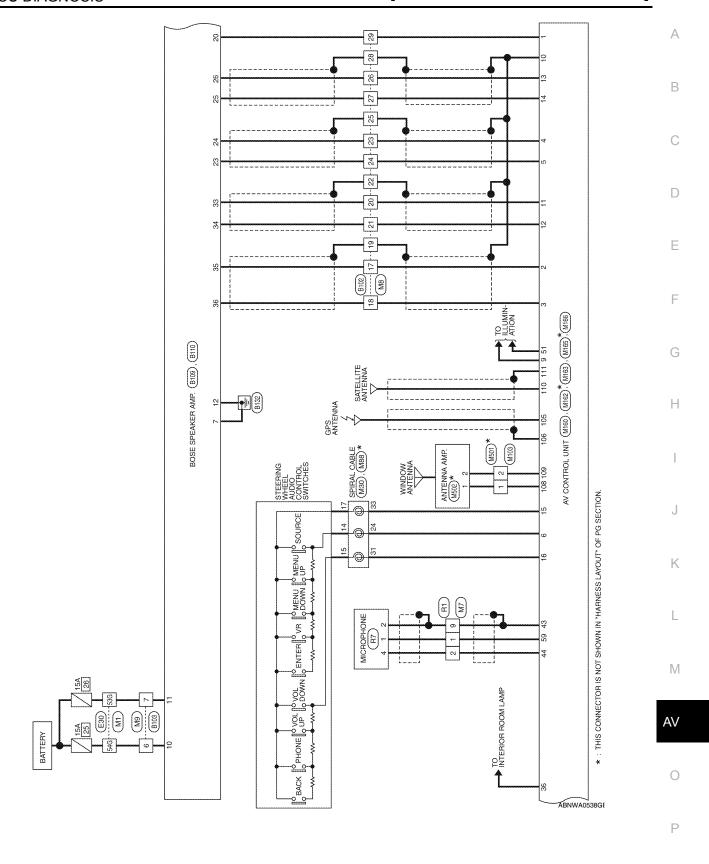
## < ECU DIAGNOSIS >

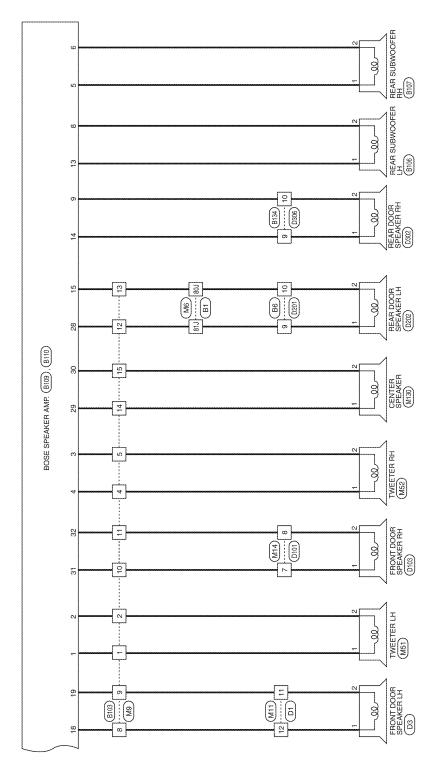
Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
128	_	Shield	_	_	_	_	
129 (B)	130 (R)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E	



(UB): WITH USB INTERFACE







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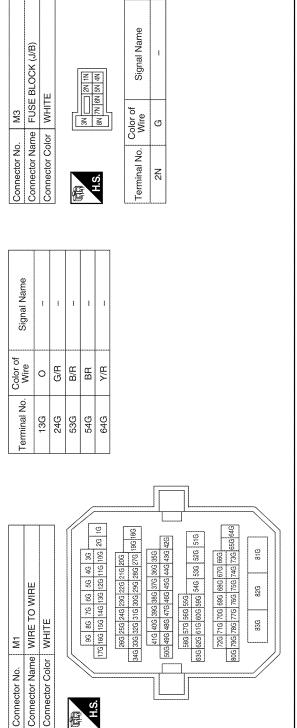
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# BOSE AUDIO SYSTEM CONNECTORS - WITH NAVI WITHOUT REAR CONTROLS

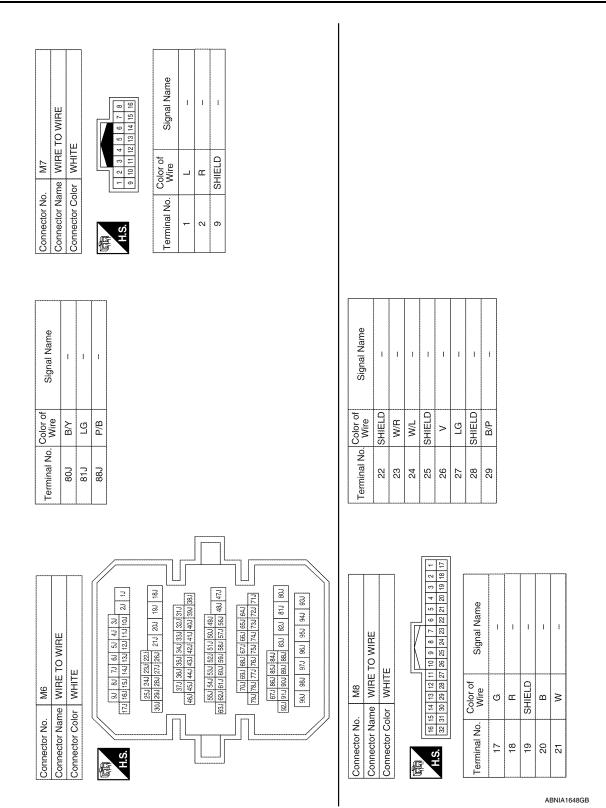


		FUSE BLOCK (J/B)	旦	2M   4M	Signal Name	ı	
20.4	Ω 2		WHITE	5M 4M [	Color of Wire	٨٨	c
	اہ	ame	Sor		ŏ-		
	Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	4M	1088

Signal Name	ı	1	
Color of Wire	٨٧	0	
Terminal No.	4M	12M	

ABNIA1647GB

**AV-451** Revision: November 2009 2010 Maxima



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Connector No.	 M11	
Connector Name		WIRE TO WIRE
Connector Color	olor WHITE	卫
H.S.	8 9 10	11 12 13 14 15 16
Terminal No.	Color of Wire	Signal Name
<del>;-</del>	B/W	1
12		

	,			γ	,		,
Signal Name	-		1	I	1	8	èses
Color of Wire	B/W	BR	B/R	re	В/Υ	В/Р	O/B
Terminal No. Wire	6	10	11	12	13	14	15

Connector No.	i i	M9	***************************************
Connector Name	ame	N N	WIRE TO WIRE
Connector Color	jō	BRC	BROWN
		2	3 2
H.S.	16 15	14 13	12 11 10 9 8
Terminal No.	Color of Wire	r of	Signal Name
-	2	(5	1885
2	B∕	>	Ē
4	9	0	Ī
5	GR/L	7	Į
9	BR	m	I
7	B/R	æ	I
8	1		ŀ

Connector No. M24 Connector Name COMBINATION METER Connector Color WHITE	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Terminal No.   Color of   Signal Name	26 G/R PKB	TIO 0/00 WWW 150	Connector No. Connector Colc Connector Colc Connector Colc Connector Colc Connector Colc Connector Colc Connector No. Connector		FE
--	---	---------------------------------------	------------	------------------	---	--	----

	DATA LINK CONNECTOR	ш	10 11 12 13 14 15 16	Signal Name	M CAN L	M CAN H
. M22		lor WHITE	9 10	Color of Wire	5	æ
Connector No.	Connector Name	Connector Color	原动 H.S.	Terminal No.	3	11

Connector No.	M14	
Connector Name	L	WIRE TO WIRE
Connector Color	ilor WHITE	ш
H.S.	1 2 8 6 7 8	3 10
Terminal No.	Color of Wire	Signal Name
7	ВВ	I
8	B/R	ı

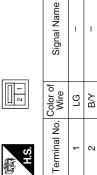
ABNIA1649GB

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

TWEETER RH (WITH BOSE AUDIO SYSTEM)	BROWN		Signal Name	ı	_
		2	Color of Wire	9	GB/L
ame	olo				۳
or Name	or Color		ė Ž		

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



Connector No.	M30	
Connector Name	ne SPIRA	SPIRAL CABLE
tor Colo	Connector Color GRAY	
	24 25 26 27 31 32 33 34	33 28 27
Terminal No.	Color of Wire	Signal Name
24	M/G	AUDIO STRG SW REMOTE A
31	GR/L	AUDIO STRG SW REMOTE B
33	L/B	AUDIO STRG SW GND

			1				_					
	A/C AND AV SWITCH ASSEMBLY	WHITE	6 8 10 12 14 16 5 7 9 11 13 15 15 15 15 15 15 15 15 15 15 15 15 15	Signal Name	GND	ACC	ILL+	ILL CONT GND	CAN-H	CAN-L	SW GND	CD (DVD) EJECT
M98			4 60	Color of Wire	В	٨/٨	R/L	R/Υ	_	Ь	BB	SB
Connector No.	Connector Name	Connector Color	昏 H.S.	Terminal No.	-	3	4	2	9	8	6	14

RAL CABLE	AY	18 17 16 15 14 13	Signal Name	REMOTE A	REMOTE B	CNE
		20 19	Solor of Wire	>	٦	BB
Connector Nar	Connector Col	所 H.S.	Terminal No.	14	15	17
	Connector Name SPIRAL CABLE			SPIRAL C GRAY 20 19 18 17	AAY 18 17 18 17 17 18 18 17 18 18 17 18 18 17 18 18 18 18 18 18 18 18 18 18 18 18 18	AAY

_													
	WIRE TO WIRE	WHITE	[	8         7         6         5         4         3         2         1           20         19         18         17         16         15         14         13	Signal Name	1	1	_	-	_	-	_	1
			Ш	11 10 9 23 22 21 2	Color of Wire	В	Μ	В	SHIELD	^	Λ	SHIELD	В
	Connector Name	Connector Color	E	<b>%</b>	Terminal No.	6	10	11	12	21	22	23	24

ABNIA1650GB

Connector No. M85

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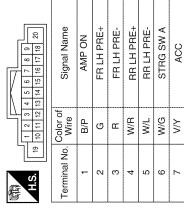
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ABNIA1651GB

M112 WIRE TO WIRE GRAY	Signal Name	i	Signal Name +B GND	1 1 1 1	FRONT COMP+ FRONT COMP-	SHIELD ACC	1		
L	Color of Wire B B	ŋ	Color of Wire Y/R	1 1 1 1	ı œ ≥ c	SHIELD SHIELD	-		
Connector No. Connector Name Connector Color	Terminal No.	4	Terminal No.	15 15 16	71 81 61 62	20 22 23	24		
M110 WIRE TO WIRE WHITE  7 6 5 4 3 2 1 1 15 14 13 12 11 10 9	Signal Name		M142 DISPLAY UNIT (WITH COLOR DISPLAY AND NAVI) WHITE	1 0 10 10 11 11 11 11 11 11 11 11 11 11	Signal Name	1 1 1 1	FRONT COMP SHIELD R CAMERA COMP.	R CAMERA COMP+ DISP IT	
8 6	No. Wire W SHIELD V/G		r No. M142 r Name DISPLAY DISPLAY	12 11 10 9 8 7 24 22 22 21 20 19	No. Wire	1 1 1	SHIELD	8 BB >	
Connector No. Connector Name Connector Color H.S.	Terminal No.	7	Connector No. Connector Name Connector Color	所 H.S.	Terminal No.	01 w 4 m	9 7	8 6 0	
Connector No. M103 Connector Name WIRE TO WIRE Connector Color GRAY  M.S.	Terminal No. Wire Signal Name  1 B		Connector No. M130 Connector Name CENTER SPEAKER Connector Color BROWN	H.S. Color of Signal Name	Wire B/P O/B				

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Connector No.	M160
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	WHITE









Signal Nam	1	Î	FRONT GVI	FRONT GVI
Color of Wire	ı	i	ш	Μ
Terminal No.	25	56	27	28



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Sign		
Color of Wire	Ω	В
Terminal No.	110	

Connector No. M161  AV CONTROL UNIT Connector Name (WITH NAVI WITHOUT REAR CONTROLS) Connector Color GREEN	
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Signal Name	ı		GVIF +	GVIF -
Color of Wire	1	1	Œ	8
Terminal No.	21	22	23	24

ABNIA1652GB

Signal Name	NSI	REVERSE SIG	SPEED 8P	NAVI COMP1 SHIELD	NAVI COMP1 SYNC	_	-	MIC SIG	SHIELD	DISP IT	CAN-H	M-CAN H	M-CAN H TRM
Color of Wire	ŋ	P/B	W/N	SHIELD	В	ı	ı	_	SHIELD	BR	_	٦	٦
Terminal No. Wire	52	53	54	55	99	25	58	59	09	61	62	63	64

Signal Name	NAVI COMP 1+	NAVI COMP 1-	I	I	MIC GND	MIC VCC	IT DISP	CAN-L	M-CAN L	M-CAN L TRM	ı	ı	MR OUTPUT
Color of Wire	>	æ	-	ı	SHIELD	Я	>	Ь	Ъ	۵	1	1	B/L
Terminal No. Wire	39	40	41	42	43	44	45	46	47	48	49	50	51

Connector No.		M163	
Connector Na	me ()	Connector Name (WITH NAV! WITHOUT REAR CONTROLS)	
Connector Color		WHITE	
.S.	34 35 36 50 51 52	35 36 37 38 39 40 41 42 43 44 45 46 47 48 81 51 52 53 54 55 56 57 58 59 60 61 62 63 64	
Terminal No.	Color of Wire	of Signal Name	
33	1	ı	
34	1	ı	
35	ı	ı	
36	P/W	, ROOM LAMP	
37	G/R	PKB SIG	
38	1	ı	

Signal Name	1	1	ı	ı	ı	ı	1	-	ı	-	1	_	ı	1	1	ı
Color of Wire	_	ı	ı	ı	ı	ı	ı	-	ı	-	-	1	1	-	1	ı
Terminal No.	68	06	91	92	93	94	92	96	26	86	66	100	101	102	103	104

Signal Name	1	I	I	AUX VIDEO -	AUX VIDEO +	VIDEO SHIELD	ı	I	I	SW GND	CD (DVD) EJECT	1	I	1	_	ı	ı
Color of Wire	ı	ı	-	>	ГG	SHIELD	ı	-	-	BR	SB	1	_	1	_	_	_
Terminal No.	72	73	74	75	9/	22	78	62	80	81	82	83	84	85	98	87	88

		Г	=	=	1
			₽	103	
			102	101	
			100	99	
			86	97	
			96	92	
			8	93	
			95	91	
			8	88	
_		117	88	87	
S		l IV	98	82	
Ō		\	84	83	
岜			82	81	
<u>N</u>			80	79	
REAR CONTROLS)	l		78	77	
#	≝		9/	75	
Μ̈́	₹		74	73	
ш_	>		72	7	
	ctor Color WHITE		66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100 102	67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99 101 103	
	Įğ		89	29	
	٦		99	92	
	님용				_

7	2	(			1	1.5
Connector No.	Z S	o.		_	M164	
Connector Name	o. Z	an	e e	4 OH	AV CO (WITH REAR	
Connector Color	o C	8	>	_	WHITE	
NATA A	66 68 70 72 74 76	8	2	72	74	
Ę	10	į	9	7	9	

Signal Name	-	1	CAMERA GND	CAMERA V+	I	ı	ı
Color of Wire	ı	I	8	Ж	ı	١.	ı
Terminal No. Color of Wire	92	99	29	89	69	70	71

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Revision: November 2009 AV-457 2010 Maxima

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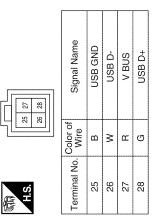
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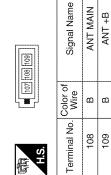
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Connector No.	M167
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	GREEN



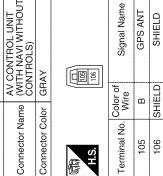
Signal Name	3		E	ŧ	1		I	ŀ
Color of Wire	ļ	ı	ı	ı	ı	1	ı	ı
Terminal No. Wire	132	133	134	135	136	137	138	139

Connector No.	M166
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	GRAY



Signal Name	1	ļ	ŀ	ţ	1	**	l	l	1	AUX SHIELD	AUX AUDIO RH+	AUX GND	1
Color of Wire	ı	1	1	ı	ı	1	1	ı	ł	SHIELD	а	ш	ı
Terminal No.	119	120	121	122	123	124	125	126	127	128	129	130	131

Connector No.	M165
Connector Name	AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color	GRAY



Connector No.		M168
Connector Name		AV CONTROL UNIT (WITH NAVI WITHOUT REAR CONTROLS)
Connector Color		WHITE
H.S. 12861	13114115	112[113 114 115 116 117 118 119 120 121 122 123 124 125  126 127 128 128 130 132 132 133 136 135 136 137 138 139
Terminal No.	Color of Wire	Signal Name
112	ı	-
113	1	ı
114	ı	1
115	≥	AUX AUDIO LH+
116	í	1
117	1	ł
118	ı	-
		,

ABNIA1654GB

Connector No.	No. M200	00	Connector No.		M209	Conr	Connector No.	Σ	210
Connector N	Jame WiF	Connector Name WIRE TO WIRE	Connecto	r Name	Connector Name   AUX IN JACK	Conr	Connector Name WIRE TO WIRE	e WIRE	TO WIRE
Connector Color WHITE	Color WH	116	Connecto	Connector Color WHITE	VHITE	Conr	Connector Color GRAY	r GRAY	
H.S.	2 3 4 5 14 15 16 17	6 7 8 9 10 11 12 18 19 20 21 22 23 24	京 H.S.	1 2 3	2 5 7 7 8 7 7 8 9 7 7 9 9 9 9 9 9 9 9 9 9 9	H.S.	ь	+ 8 4	2 4 4
	Color of		Terminal No. Color of	No. Color	of Signal Name				a
erminal No. Wire	. Wire	Signal Name	-	VVIIE		T	Torming No Color of	olor of	Omol Plomo
6	В	· ·		20	AUX AUUIO HH+	<u> </u>	III III	Wire	oighal Naithe
- P	M	1	2	Œ	AUX GND			മ	I
2 ;	: [		<u>ო</u>	≯	AUX AUDIO LH+		2	æ	ŀ
	r			-	-		+		
12	SHIELD	i	~   "	2 2	+		0	3	1
21	97	***************************************	∞	>	COMP OUI-		4	5	ı
22	>								
23	SHIELD	1							
24	GR	1							

12	ENNA AMP.	٨Ł	12	Signal N	1	1
M502	ne ANT	or GR/		Color of Wire	В	ω
Connector No.	Connector Name   ANTENNA AMP.	Connector Color GRAY	原动 H.S.	Terminal No. Wire	-	2
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		f	·	,
	£ 1 3			Signal Name	-	ı
01	RE TO WIRE	tΑΥ	2 3			
Sonnector No.   M501	Connector Name WIRE TO WIRE	Connector Color GRAY	123	Terminal No.   Color of   Sign	В	В

		10151
Connector Name	ame	USB INTERFACE
Connector Color	Slor	GREEN
原列 H.S.		2 4
Terminal No.	Color of Wire	of Signal Name
<b>,</b>	œ	VBUS
2	១	+G BSD
8	82	OND BSO
4	3	USB D-

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Revision: November 2009 AV-459 2010 Maxima

M211

Connector No.

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BACK-UP LAMP RELAY BLUE    Signal Name	
	57
tor No.	5

		WIRE TO WIRE	WHITE		4 3 2	13 12 11 10 9 8	Signal Name	1		Signal Name	1	-		i i	
t	.   E29				S	16 15 14	Color of Wire	×		Color of Wire	BR	a.	GR	BR	
	Connector No.	Connector Name	Connector Color	***************************************		H.S.	Terminal No.	15		Terminal No.	13G	24G	53G	54G	

Signal Name

Color of Wire

Terminal No.

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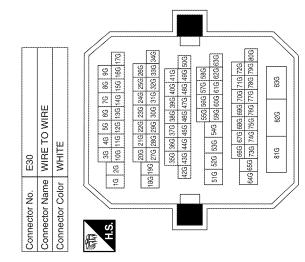
Connector Name WIRE TO WIRE

Е3

Connector No.

WHITE

Connector Color



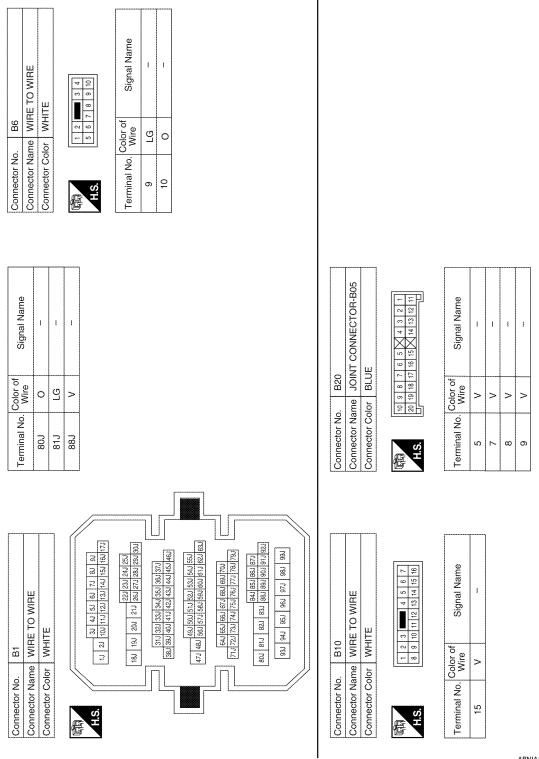
ABNIA1656GB

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Connector No. F15  Connector Name TCM (TRANSMISSION CONNECTOR BLACK  Sonnector Color BLACK  Size 28 38 38 37 38 39 40 47 48 112 12 28 28 28 28 28 28 39 48 48 112 12 13 14 15 16 17 18 19 20 43 44 11 2 3 4 5 6 7 8 9 10 41 42						
0 2 8 8 2 7	Connector No. F15	CONTROL MODULE)	BLACK	35 36 37 38 39 40 47 25 26 27 28 29 30 45	13 14 15 16 17 18 19 20 43 3 4 5 6 7 8 9 10 41	

С  $\mathsf{D}$ Е F REV LAMP RLY G Signal Name Н Terminal No. Wire Κ M ABNIA1657GB Р



ABNIA1658GB

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33	WIRE TO WIRE	BROWN		4 5 6 7	11 12 13 14 15 16	Signal Name		i i	ann.	I	and the same of th	te.	I	I	***	nea.	ì	1	I	le .
B103				1 2 3	8 9 10	Color of Wire	ല	>	១	×	SB	GR	≥	В	œ	BR	Ö		>	۵
Connector No.	Connector Name	Connector Color		僵	HS	Terminal No.	-	2	4	5	9	7	æ	6	10	11	12	13	14	15

Signal Name	I	ŀ	ł	1	1	Ĭ
Color of Wire	>	SHIELD	>	5	SHIELD	SB
Terminal No. Wire	24	25	26	27	28	29

B102	me WIRE TO WIRE	or WHITE	6 7 8 9 10 11 12 13 14 15 16 22 23 24 25 26 27 28 29 30 31 32	Color of Signal Name	W/R	B/B -	SHIELD -		GR/V -	SHED	
-			23 24 25 24 25	Color of Wire	W/R	B/B	SHIELD	W/L	GR/V	SHIELD	
Connector No.	Connector Name	Connector Color	H.S. 17 18 19 20 21 2	Terminal No. Wire	17	18	19	20	21	22	

Connector No.	). B107	
Connector Name		REAR SUBWOOFER RH
Connector Color	olor WHITE	Ш
H.S.	2	
Terminal No.	Color of Wire	Signal Name
	Œ	ı
2	BB	•

Connector Name   REAR SUBWOOFER LH	Connector No.	. B106	
WHITE 2 1	Connector Na		R SUBWOOFER LH
Color of Wire L	Connector Co		m
Color of Wire L	H.S.		
S	Terminal No.	Color of Wire	Signal Name
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-	2	Ф	ı

Revision: November 2009 AV-463 2010 Maxima

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FR DOOR RH+ OUT FR DOOR RH- OUT

> BB W/L

32

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Signal Name

Color of Wire

Terminal No.



Signal Name	FR TWDR LH+ OUT	FR TWDR LH- OUT	FR TWDR RH- OUT	FR TWDR RH+ OUT	RH WOOFER+ OUT	RH WOOFER- OUT	GND	LH WOOFER- OUT	RR DOOR RH- OUT	BAT	BAT	GND	LH WOOFER+ OUT	RR DOOR RH+ OUT
Color of Wire	P.C	>	Μ	Ō	œ	ВВ	8	۵	0	SB	GR	82	J	ГG
Terminal No.	-	2	က	4	5	9	2	æ	6	10	11	12	13	14

		Signal Name
2		Color of Wire
<u>+</u>		Terminal No.

Sig					
Wire	Α	SHIELD	N/G		
Terminal No.	-	2	9	7	
		1			





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Connector No.	B109
Connector Name	ш.
Connector Color	BROWN
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FR LH+IN (WITH COLOR DISPLAY) (WITH COLOR DISPLAY)

35

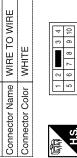
B/R

36

FR RH-IN (WITH COLOR DISPLAY) FR RH+IN (WITH COLOR DISPLAY)

34

Signal Name	RR DOOR LH- OUT	FR DOOR LH+ OUT	FR DOOR LH- OUT	AMP ON	RR LH-IN (WITH COLOR DISPLAY)	RR LH+IN (WITH COLOR DISPLAY)	RR RH-IN (WITH COLOR DISPLAY)	RR RH+IN (WITH COLOR DISPLAY)	RR DOOR LH+ OUT	INST CTR TWDR+ OUT	INST CTR TWDR- OUT
Color of Wire		*	æ	SB	>	HH.	ยา	>	ŋ	>	۵
Terminal No.	15	48	19	20	23	24	25	26	28	29	30



B134

Connector No.





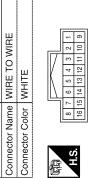
Signal N	ł	1	
Color of Wire	5	0	
Terminal No.	6	10	

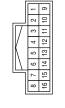
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	Connector Name REAR VIEW CAMERA	m	<del> </del>	Signal Name	CAMERA ON	GND	COMP+	COMP-
T101	ne REAR	or WHITI	-	Color of Wire	æ	×	В	GB
Connector No.   T101	Connector Nan	Connector Color WHITE	原 H.S.	Terminal No. Wire	-	2	3	4
	WIRE			Signal Name	ı	ŀ	ana.	1
T100	e WIRE TO	WHITE	4 3 2 1	Color of Wire	Œ	Μ	മ	SHIELD
Connector No.   T100	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No.	1	2	က	4
Connecto	Connecto	Connecto	S'H	Name Terminal	-	2	8	
B139	Connector Name WIRE TO WIRE	инте	23 4	Signal	1	1	ı	-
	≥ ≥	Connector Color WHITE		Terminal No. Wire	_	N/G	3	CHIE
Connector No. B	Jan	121		0	1			3

	·	r	ı		······	······
	TO WIRE	LII	000000000000000000000000000000000000000	Signal Name	į	l
D1	me WIRE	lor WHIT	6 5 4 15 14 13 12	Color of Wire	0	re
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	斯 H.S.	Terminal No.	11	12

R7 MICROPHONE WHITE	2 3 4 4	Signal Name	MIC SIG	MIC GEN	OUN OW
		Color of Wire		SHIELD	α
Connector No. Connector Name Connector Color	H.S.	Terminal No. Wire	*	N	4





Signal		,	
Color of Wire	ب	œ	SHIELD
Terminal No.	-	2	6

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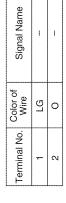
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Connector No.

Connector No.	Connector No. D103
	10 000 000 H
Connector Name   F	Connector Name FRON! DOOR SPEAKER HE
Connector Color WHITE	olor WHITE
	, consideration de la cons

	Signal Name	į	•
2	Color of Wire	LG	C
<b>്</b> ഗ്	ninal No.		c



Signal Name	ł		
Color of Wire	LG	0	
Terminal No.	***	2	

Connector No.	D302
Connector Name	REAR DOOR SPEA (WITH BOSE AUDIC SYSTEM)
Connector Color BROWN	BROWN

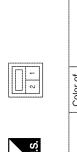
Connector Name		REAR DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color BROWN	olor BROV	Z
S.H.S.	2 -	
Terminal No.	Color of Wire	Signal Name
-	rg	ı
٥	С	ı

	WIRE TO WIRE	£U)	U   U   U   U   U   U   U   U   U   U	Signal Name	ı	
D101	e WIRE	r WHIT	8 6 9 8	Color of Wire	LG	(
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No.	7	•

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

Signal Name	I		
Color of Wire	57	0	
Terminal No.		2	

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



Signal Name	ij	l
Color of Wire	LG	0
Terminal No.	<b>*</b>	2

Connector No.	D201
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE
	4 3 7 2 1

0 2 2 1	Signal Name	ı	1
4 01	Color of Wire	1G	0
H.S.	Terminal No.	6	10
	•		•

ABNIA1662GB

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

Signal Name	I	ı
Color of Wire	LG	0
Terminal No.	6	10

**DTC Index** 

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

Α

В

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ABNIA1663GB

INFOID:0000000005524528

## < ECU DIAGNOSIS >

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	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	AV-409, "Description"	

## **DISPLAY UNIT**

# [BOSE W/ COLOR DISPLAY W/ NAVI]

# **DISPLAY UNIT**

Reference Value

#### INFOID:0000000005524529

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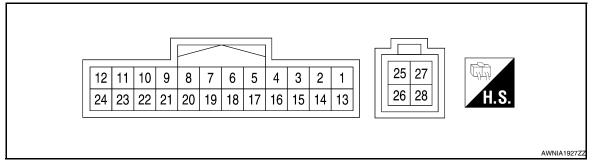
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## **TERMINAL LAYOUT**



## PHYSICAL VALUES

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

# **DISPLAY UNIT**

# [BOSE W/ COLOR DISPLAY W/ NAVI]

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
18 (R)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4	
19 (W)	Ground	Composite image ground	_	Ignition switch ON	_	0V	
20 (B)	Ground	Composite synchronizing signal	Input	Ignition switch ON	_	(V) 4 0 → 20 µs SKIB3603E	
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**

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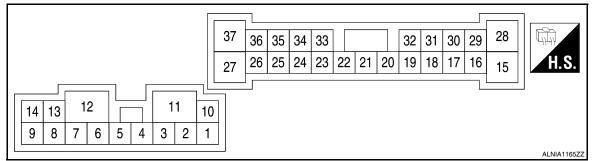
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# **BOSE SPEAKER AMP**

Reference Value

## **TERMINAL LAYOUT**



## PHYSICAL VALUES

		I					
	minal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
1 (LG)	2 (V)	Audio signal tweeter LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
4 (G)	3 (W)	Audio signal tweeter RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 ** 2ms SKIB3609E	
5 (R)	6 (BR)	Audio signal subwoofer LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms 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 W/ COLOR DISPLAY W/ NAVI]

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
13 (L)	8 (P)	Audio signal subwoofer LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
14 (LG)	9 (O)	Audio signal rear door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
18 (W)	19 (B)	Audio signal front door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
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	(V) 1 0 -1 + 2ms SKIB3609E
26 (V)	25 (LG)	Audio signal rear RH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 + 2ms SKIB3609E
28 (G)	15 (L)	Audio signal rear door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E

# **BOSE SPEAKER AMP**

	minal e color)	Description			Condition	Reference value	Δ
+	_	Signal name	Input/ Output		Condition	(Approx.)	
29 (V)	30 (P)	Audio signal center speak- er	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	С
31 (R)	32 (BR)	Audio signal front door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	E
33 (W/L)	34 (GR/V)	Audio signal front RH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 **2ms SKIB3609E	G
35 (W/R)	36 (B/R)	Audio signal rear LH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 + 2ms SKIB3609E	J

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# SYMPTOM DIAGNOSIS

# **MULTI AV SYSTEM SYMPTOMS**

Symptom Table

#### RELATED TO NAVIGATION

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
	All switches cannot be operated.     "MULTI AV" is displayed on system selection screen when the CONSULT-III is started.	<ul> <li>Multifunction switch power supply and ground circuit. Refer to <u>AV-439</u>, "<u>Diagnosis Procedure</u>".</li> <li>AV communication circuit between AV control unit and multifunction switch. Perform CONSULT-III self-diagnosis. Refer to <u>AV-376</u>, "CONSULT - III Function (MULTI AV)".</li> </ul>
Multifunction switch and preset switch operation does not work.	All switches cannot be operated.     "MULTI AV" is not displayed on system selection screen when the CONSULT-III is initialized.	AV control unit power supply and ground circuit malfunction. Refer to AV-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 abnor-	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis.  Refer to AV-376, "CONSULT - III Function (MULTI AV)".
mal.	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<sup>™</sup> enabled) and Bluetooth<sup>™</sup> 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<sup>™</sup> 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<sup>™</sup> Communication

If cellular phone and AV control unit cannot be connected with Bluetooth $^{\text{TM}}$  communication, following procedure allows the technician to judge which device has malfunction.

- 1. Turn ON cellular phone, not connecting Bluetooth  $^{\mathsf{TM}}$  communication.
- 2. Start CONSULT-III, then start Windows<sup>®</sup>.
- 3. Set CONSULT-III near a cellular phone.

## **MULTI AV SYSTEM SYMPTOMS**

#### < SYMPTOM DIAGNOSIS >

#### [BOSE W/ COLOR DISPLAY W/ NAVI]

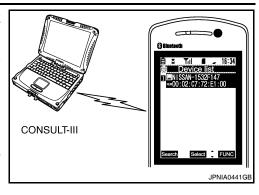
4. When operated Bluetooth<sup>™</sup> registration by cellular phone, check if CONSULT-III<sup>\*</sup> would be displayed on the device name. (If other Bluetooth<sup>™</sup> device is located near cellular phone, a name of the device would be displayed also.)
NOTE:

\*:Displayed device name is "NISSAN-\*\*\*\*\*\*."

- If no device name is displayed, cellular phone is malfunctioning. Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal<sup>\*</sup>. 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<sup>™</sup> in different ways. Phones on Supported Phone List are tested and any minor exceptions are listed.



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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> <li>Hands-free phone operation can be made, but the communication cannot be established.</li> <li>Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.</li> </ul>	AV control unit malfunction.  Replace AV control unit. Refer to AV-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-	Sound operation function is normal.	AV control unit malfunction.  Replace AV control unit. Refer to AV-487, "Removal and Installation".
free phone communication.	Sound operation function does not work.	Microphone signal circuit malfunction.  Refer to AV-422, "Diagnosis Procedure".
	The retractable hard top is fully closed. The voice recognition cannot be controlled.	Roof status signal circuit malfunction.
The system cannot be operated.	<ul> <li>The retractable hard top is fully closed.</li> <li>The voice recognition can be controlled.</li> <li>Steering switch's "VOL UP", "VOL DOWN", "&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"&gt;"</li></ul>	Steering switch malfunction.
	<ul> <li>The retractable hard top is fully closed.</li> <li>The voice recognition can be controlled.</li> <li>Steering switch's ", "VOL UP", "VOL DOWN", " switches do not work.</li> </ul>	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.

Refer to AV-439, "Diagnosis Procedure".

## 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	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".
is displayed.	Voice does not sound at "Voice Micro- phone Test" of Confirmation/Adjustment mode.	Microphone circuit malfunction. Refer to AV-422, "Diagnosis Procedure".
The voice cannot be controlled	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.
(Voice control screen is not dis played).	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".
	No sound from all speakers.	Amp. ON signal circuit.     BOSE amp. power supply and ground circuit.     Refer to AV-414, "BOSE SPEAKER AMP: Diagnosis Procedure".
Audio sound is not heard.	There is no sound from the woofer.	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.
	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-376, "CONSULT - III Function (MULTI AV)".
Satellite radio is not received.	There is no malfunction in the CON-SULT-III self-diagnosis result.	<ol> <li>Perform the following inspection procedure.</li> <li>Check satellite radio antenna mounting nut for looseness.</li> <li>Visually check for satellite radio antenna feeder.</li> <li>Replace the satellite radio antenna.         Refer to AV-500, "Removal and Installation".     </li> <li>Refer to AV-487, "Removal and Installation".</li> </ol>
AM/FM radio is not received.	Other audio sounds are normal.	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 <sup>®</sup> or USB memory can not be recognized.	_	<ul><li> USB harness malfunction.</li><li> USB connector malfunction.</li></ul>

 $i Pod^{\scriptsize{\$}}$  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.  • 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)".
Addio Sourid is flot fledid.	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

Revision: November 2009

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".

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#### NOTE:

For Navigation system operation information, refer to Navigation system Owner's Manual.

## **BASIC OPERATIONS**

Symptom	Possible cause	Possible solution
	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.
No image is displayed.	The display is turned off.	Press "崇/ <b>』</b> -" 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 quidance is available. Or	The volume is not set correctly, or it is turned off.	Adjust the volume of voice guidance.
No voice guidance is available. Or The volume is too high or too low.	Voice guidance is not provided for certain streets (roads displayed in gray).	This is not a malfunction.
No map is displayed on the screen.	A screen other than map screen is displayed.	Press "MAP".
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 interior of the vehicle is too noisy.	Close the windows or have other occupants quiet.
	The volume of your voice is too low.	Speak louder.
	The volume if your voice is too loud.	Speak softer.
	Your pronunciation is unclear.	Speak clearly.
The system does not recognize your com- mand. or	You are speaking before the voice recognition is ready	Press and release "v\sum_v\subsetex" switch on the steering switch, and speak a command after the tone sounds.
The system recognizes your command incorrectly	8 seconds or more have passed after you pressed and released "w≨" switch on the steering switch.	Make sure to speak a command within 8 seconds after you press and release ""½" 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.

#### < 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	
	1. Ensure that the command format is valid.	
Displays "COMMAND NOT DEC	2. Speak clearly without pausing between words and at a level appropriate to the ambient noise level.	
Displays "COMMAND NOT REC- OGNIZED" or the system fails to in- terpret the command correctly.	3. Ensure that the ambient noise level is not excessive, for example, windows open or defrost on. <b>NOTE:</b> If it is too noisy to use the phone, it is likely that voice commands will not be recognized.	
	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.	
the wrong voicetag	2. Replace one of the voicetags being confused with a different voicetag.	

#### Related to Telephone

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

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

Symptom	Solution	
	Ensure that the command is valid.	
	2. Ensure that the command is spoken after the tone.	
	3. Speak clearly without pausing between words and at level appropriate to the ambient noise level in the vehicle.	
System fails to interpret the command correctly.	4. Ensure that the ambient noise level is not excessive (for example, windows open or defroster on).  NOTE:  If it is too noisy to use the phone, it is likely that the voice commands will 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  1. Ensure that the phone book entry name requested matches what was orican be confirmed by using the "List Names" command.		
the wrong voicetag	2. Replace one of the names being confused with a new name.	

#### RELATED TO AUDIO

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

#### NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA, 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.

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## [BOSE W/ COLOR DISPLAY W/ NAVI]

Symptom	Cause and Counter measure	
	Check if the CD was inserted correctly.	
	Check if the CD is scratched or dirty.	
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.	
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.	
Cannot play	If there is a mixture of music CD files (CD-DA data) and MP3/WMA/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.	
	Check if the finalization process, such as session close and disc close, is done for the disc.	
	Check if the CD is protected by copyright.	
Poor sound quality	Check if the CD is scratched or dirty.	
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA/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.
	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 can not be played	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.

## < SYMPTOM DIAGNOSIS >

# [BOSE W/ COLOR DISPLAY W/ NAVI]

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Symptom	Possible cause	Possible solution	
Interruption during play- back or flicker in the dis- play	Check that the DVD has no scratches and dirt.  Errors may not be corrected depending 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.	
Subtilies not snown	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	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.	
set subtitle or in set lan- guage)	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 <sup>™</sup> .	This is because the quantity of the displayed information is reduced so that the screen does not become too crowded. There is also a chance that names of the roads may be displayed multiple times, and the names appearing on the screen may be different because of a processing procedure.	This is not a malfunction.
The vehicle icon is not displayed in	The 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 correct position.	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is traveling on a new road, the vehicle icon is located on another road nearby.	Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available.	Updated road information will be included in the next version of the map data.
The screen does not switch to the night screen even after turning on the headlights.	The daytime screen was set the last time the headlights were turned on.	Set the screen to the night screen mode using <day night=""> when you turn on the headlights.</day>
The map does not scroll even when the vehicle is moving.	The current location map screen is not displayed.	Press "MAP".
The vehicle icon is not displayed.	The current location map screen is not displayed.	Press "MAP".

Revision: November 2009 AV-481 2010 Maxima

# [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 calculation has not yet been performed.	Set the destination and perform route calculation.
Route information is not dis-	You are not driving on the suggested route.	Drive on the suggested route.
played.	Route guidance is set to off.	Turn on route guidance.
	Route information is not provided for certain types of roads (roads displayed in gray).	This is not a malfunction.
The auto reroute calculation (or detour calculation) suggests the same route as the one previously suggested.	Route calculations took priority conditions into consideration, but the same route was calculated.	This is not a malfunction.
A waypoint cannot be added.	Five waypoints are already set on the route, including ones that you have already passed.	A maximum of 5 waypoints can be set on the route. If you want to go to 6 or more waypoints, perform route calcu- lations multiple times as necessary.
	Roads near the destination cannot be calculated.	Reset the destination to a main or ordinary road, and recalculate the route.
	The starting point and destination are too close.	Set a more distant destination.
The suggested route is not displayed.	The starting point and destination are too far away.	Divide your trip by selecting one or two intermediate destinations, and perform route calculations multiple times.
	There are time restricted roads (by the day of the week, by time) near the current vehicle location or destination.	Set [Use Time Restricted Roads] to off.
The part of the route that you have already passed is deleted.	A route is managed by sections between waypoints. If you passed the first waypoint, the section between the starting point and the waypoint is deleted. (It may not be deleted depending on the area.)	This is not a malfunction.
An indirect route is suggested	If there are restrictions (such as one-way streets) on roads close to the starting point or destination, the system may suggest an indirect route.	Adjust the location of the starting of the starting point or destination.
An indirect route is suggested.	The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets (gray roads.)	Reset the destination to a main or or- dinary 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

Possible cause

## < SYMPTOM DIAGNOSIS >

Symptom

# [BOSE W/ COLOR DISPLAY W/ NAVI]

Possible solution

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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.
	l l	,
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 fol- low the instructions on road for detour when necessary. If the road closure is for certain, use detour function and set the de- tour distance to avoid the closed road sec- tion.

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# **PRECAUTION**

## **PRECAUTIONS**

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

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

#### 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

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.)
- 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]

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

# Precaution for Trouble Diagnosis

#### INFOID: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:0000000005460350

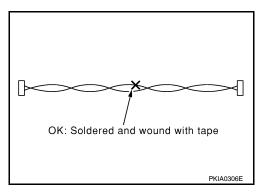
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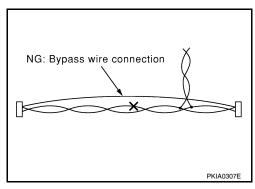
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#### AV COMMUNICATION SYSTEM

 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.)



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## **PREPARATION**

< PREPARATION >

[BOSE W/ COLOR DISPLAY W/ NAVI]

# **PREPARATION**

# **PREPARATION**

# **Commercial Service Tools**

INFOID:0000000005460351

Tool name		Description
Power tool		Loosening bolts and nuts
	PBIC0191E	

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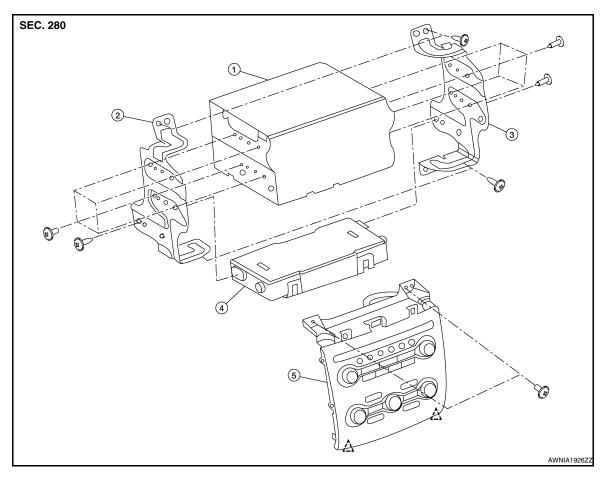
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# **ON-VEHICLE REPAIR**

# AV CONTROL UNIT

Removal and Installation



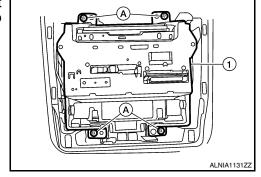
- 1. Audio unit
- 4. A/C auto amp.

- 2. Audio unit bracket LH
- Cluster lid C (with A/C and AV switch assembly attached)
- 3. Audio unit bracket RH
- ^ Clips

#### **AUDIO UNIT**

#### Removal

- 1. Disconnect the battery negative terminal.
- 2. Remove the cluster lid D. Refer to <a href="IP-12">IP-12</a>, "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**

## < ON-VEHICLE REPAIR >

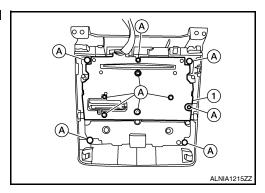
[BOSE W/ COLOR DISPLAY W/ NAVI]

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 <a href="#IP-12">IP-12</a>, "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**

[BOSE W/ COLOR DISPLAY W/ NAVI]

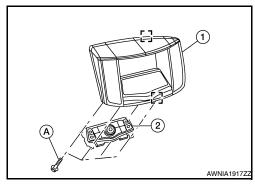
# **MULTIFUNCTION SWITCH**

# Removal and Installation

## I and installation

## **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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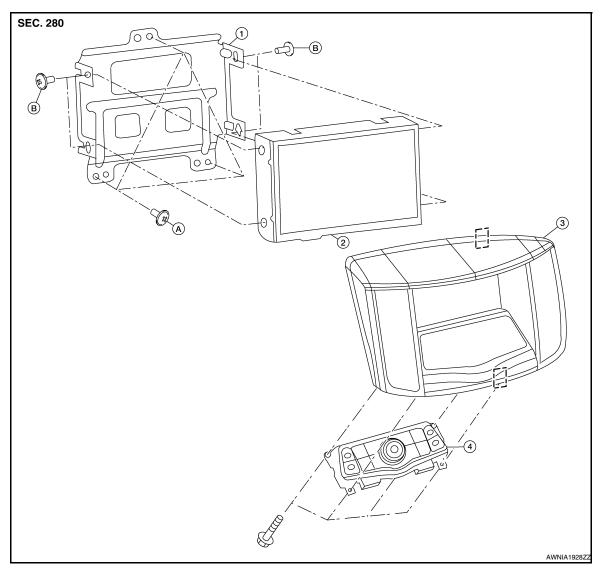
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# **AUDIO DISPLAY UNIT**

## Removal and Installation

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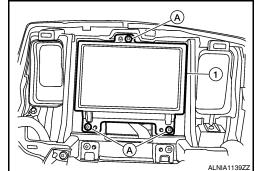


- 1. Audio display unit bracket
- 4. Multifunction switch
- [ ] Metal Clip

- 2. Audio display unit
- A. Audio display unit bracket screws
- 3. Cluster lid D
- B. Audio display unit screws

## **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 remplay unit brackets.	move the audio display unit from the audio dis-
INSTALLATION Installation is in the reverse order of removal.	
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# [BOSE W/ COLOR DISPLAY W/ NAVI]

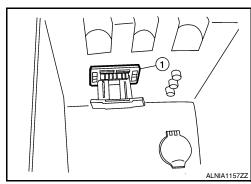
# **USB CONNECTOR**

# Removal and Installation

#### INFOID:0000000005460355

## **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

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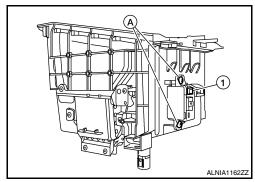
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## **REMOVAL**

- 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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## [BOSE W/ COLOR DISPLAY W/ NAVI]

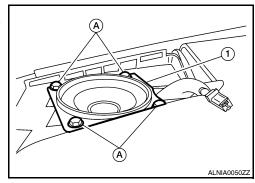
# FRONT TWEETER

## Removal and Installation

#### INFOID:0000000005460357

## **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

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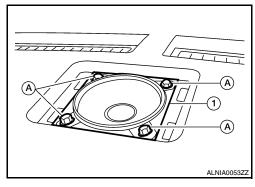
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#### **REMOVAL**

- 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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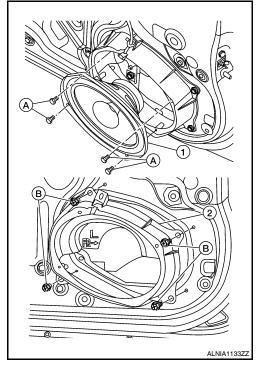
# FRONT DOOR SPEAKER

## Removal and Installation

#### INFOID:0000000005460359

#### **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**

[BOSE W/ COLOR DISPLAY W/ NAVI]

# **REAR DOOR SPEAKER**

# Removal and Installation

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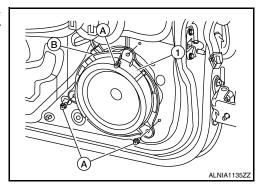
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#### **REMOVAL**

- 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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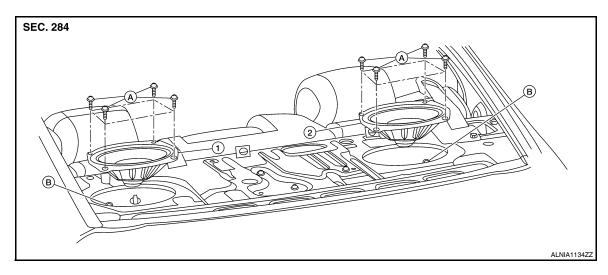
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# **SUBWOOFER**

## Removal and Installation

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Subwoofer LH

2. Subwoofer RH

A. Subwoofer screws

B. Subwoofer connectors

#### **REMOVAL**

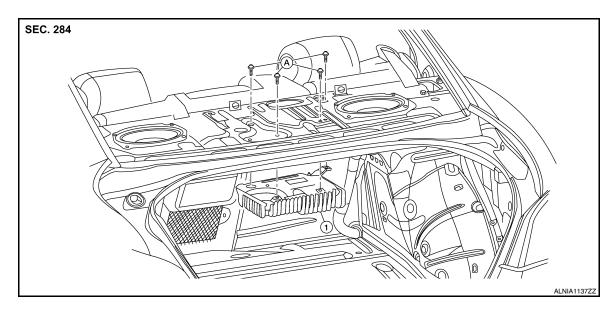
- 1. Remove the rear parcel shelf finisher. Refer to <a href="INT-26">INT-26</a>, "Removal and Installation".
- 2. Remove the subwoofer screws, then pull out the subwoofer, disconnect the subwoofer connector and remove the subwoofer.

## **INSTALLATION**

Installation is in the reverse order of removal.

# **BOSE SPEAKER AMP**

## Removal and Installation



Bose speaker amp.

#### A. Screws

#### **REMOVAL**

- 1. Disconnect the battery negative terminal.
- 2. Remove the rear parcel shelf. Refer to <a href="INT-26">INT-26</a>, "Removal and Installation".
- 3. Remove the Bose speaker amp. screws.
- 4. Remove the trunk upper finisher. Refer to <a href="INT-35">INT-35</a>, "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]

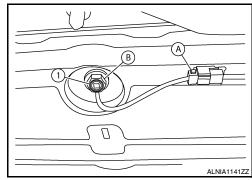
# SATELLITE RADIO ANTENNA

## Removal and Installation

#### INFOID:0000000005460363

## **REMOVAL**

- 1. Lower the headliner at the rear. Refer to <a href="INT-32">INT-32</a>, "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**

## Removal and Installation

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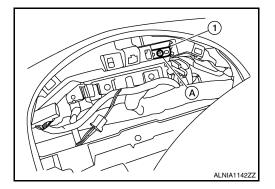
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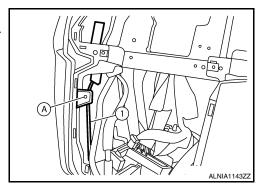
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#### **REMOVAL**

- 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

## [BOSE W/ COLOR DISPLAY W/ NAVI]

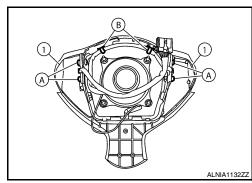
# STEERING SWITCH

## Removal and Installation

#### INFOID:0000000005460365

#### **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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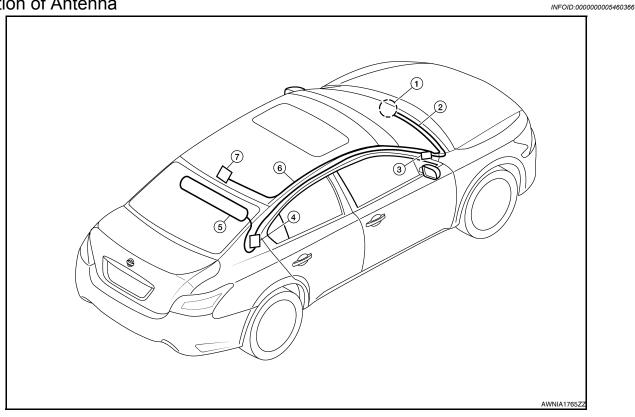
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# **AUDIO ANTENNA**

# Location of Antenna

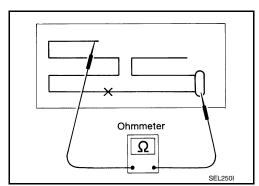


- AV control unit
- 4. Antenna amp.
- 7. Satellite radio antenna
- 2. AV control unit antenna feeder
- 5. Window antenna
- 3. In-line connectors M103, M501
- S. Satellite radio antenna feeder

# Window Antenna Repair

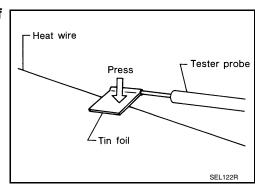
## **ELEMENT CHECK**

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



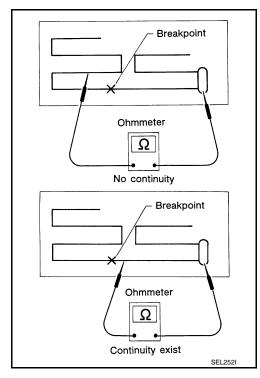
INFOID:0000000005460367

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

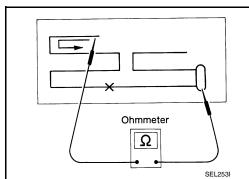


Revision: November 2009 AV-503 2010 Maxima

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



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



#### REPAIR EQUIPMENT

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

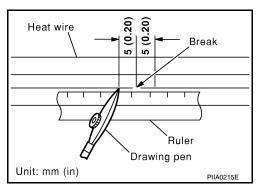
## REPAIRING PROCEDURE

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

#### NOTE:

Shake silver composition container before use.

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



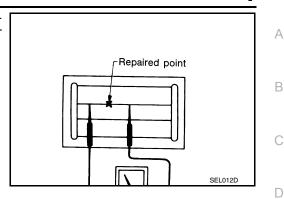
#### **AUDIO ANTENNA**

#### < ON-VEHICLE REPAIR >

#### [BOSE W/ COLOR DISPLAY W/ NAVI]

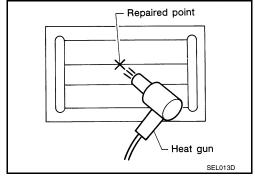
4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet.

If a heat gun is not available, let the repaired area dry for 24 hours.



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#### [BOSE W/ COLOR DISPLAY W/ NAVI]

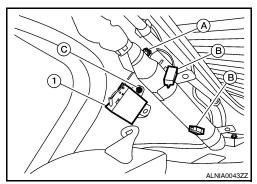
# ANTENNA AMP.

## Removal and Installation

#### INFOID:0000000005460368

#### **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:0000000005460370

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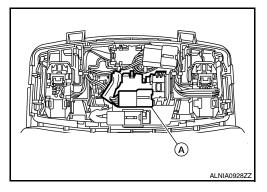
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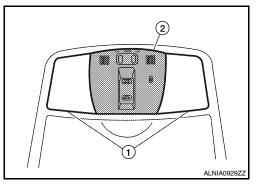
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#### **REMOVAL**

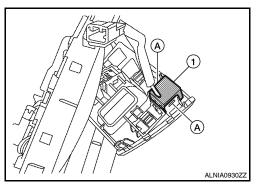
- 1. Remove the map lamp assembly. Refer to <a href="INL-97">INL-97</a>, "Removal and Installation".
- 2. Detach the microphone connector (A).



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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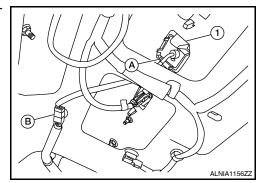
# **REAR VIEW CAMERA**

## Removal and Installation

INFOID:0000000005460371

#### **REMOVAL**

- 1. Remove the license plate finisher. Refer to EXL-177, "Removal and Installation".
- 2. Remove trunk lid finisher. Refer to <a href="INT-35">INT-35</a>, "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**

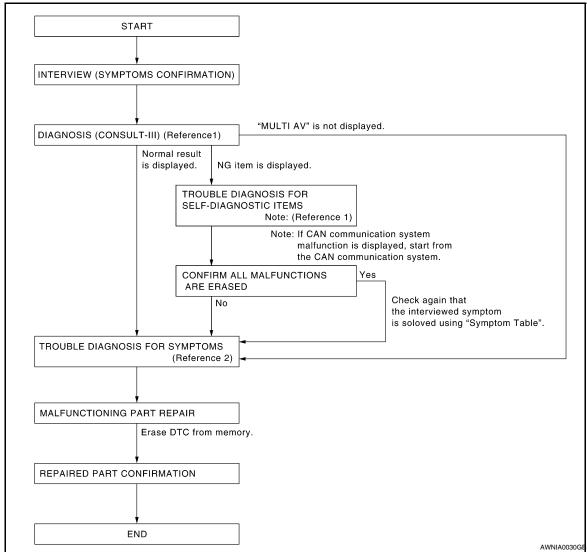
For adjustment on the rear view camera, refer to <u>DLK-9</u>. "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: Special Repair Requirement".

# **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

#### **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)

- Connect CONSULT-III and perform "SELF-DIAGNOSIS" for "MULTI AV".
  - 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

# $3. {\sf CHECK}$ SELF-DIAGNOSIS RESULTS (CONSULT-III)

- 1. Check the DTC No. indicated in the self-diagnosis results.
- Perform the relevant diagnosis referring to the DTC No. list. Refer to <u>AV-637, "DTC Index"</u>.

#### NOTE:

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

>> GO TO 5

# 4. PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to <u>AV-649, "Symptom Table"</u>.

>> GO TO 5

# 5. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

#### NOTE:

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

>> GO TO 6

# 6. CHECK AFTER REPAIR

- 1. Perform self-diagnosis for "MULTI AV" with CONSULT-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 ADJUST	_
MENT	Б
REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUST- MENT: Description	В
Adjust the center position of the possible route line of the rear view monitor if it is shifted.	С
REAR VIEW MONITOR POSSIBLE ROUTE LINE CENTER POSITION ADJUST- MENT : Special Repair Requirement	n D
1.STEERING OPERATION	_
Steer the steering wheel to the leftmost and rightmost positions.	- E
>> GO TO 2 2.DRIVING	F
Drive the vehicle straight ahead 100 m (328.1 ft) or more at a speed of 30 km/h (18.6 MPH) or more.	G
>> END ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT	
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description	Н
INFOID:00000000558932	8
BEFORE REPLACEMENT	1
When replacing AV control unit, save or print current vehicle specification with CONSULT-III configuration before replacement.	l J
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.	K
• Configuration is different for each vehicle model. Confirm configuration of each vehicle model.	L
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Re-	
quirement	
1.SAVING VEHICLE SPECIFICATION	-
	AV
If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection".	0
>> GO TO 2.	Р
2.REPLACE AV CONTROL UNIT	Г

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

Revision: November 2009 AV-511 2010 Maxima

#### **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 <u>AV-512</u>, "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:0000000005589330

- 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> <li>Reads the vehicle configuration of current AV control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
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:0000000005589331

# 1. WRITING MODE SELECTION

(P)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"

(P)CONSULT-III Configuration

Perform "WRITE CONFIGURATION-Config file".

#### >> WORK END

# 3. PERFORM "WRITE CONFIGURATION-MANUAL SELECTION"

#### (P)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:0000000005589332

#### **CAUTION:**

# **INSPECTION AND ADJUSTMENT**

# < BASIC INSPECTION >

# [BOSE W/ COLOR W/ RR CTL]

# Check vehicle specifications before servicing.

MANUAL SETTING ITEM		Note	
Items	Setting value	Note	
STEERING	LHD	_	
STEERING	RHD	_	
GRADE	MODE 1	BASE	
GRADE	MODE 2	OTHER	
ENGINE TYPE	NORMAL	_	
LINGINE TIFE	HYBRID	_	
BODY TYPE	NORMAL	NORMAL	
BODT TIPE	CONV	CONVERTIBLE	
	NONE/AVM	NONE or AVM	
CAMERA SYSTEM	REAR	REAR CAMERA	
	REAR + SIDE	REAR + SIDE CAMERA	
4WAS	WITHOUT	_	
4VVA3	WITH	_	
SOUND SYSTEM	BASE	_	
300ND 3131EW	BOSE	_	
ANTENNA TYPE	ROD TYPE	_	
ANTENNA TIPE	LONG TYPE	_	
DUAL-ZONE AUTO	WITHOUT	_	
TEMP	WITH	_	
DVD DLAV ELINGTION	WITHOUT	_	
DVD PLAY FUNCTION	WITH	_	

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# **INSPECTION AND ADJUSTMENT**

[BOSE W/ COLOR W/ RR CTL]

MANUAL SETTING ITEM		- Note	
Items	Setting value	Note	
	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)	
BODY TYPE	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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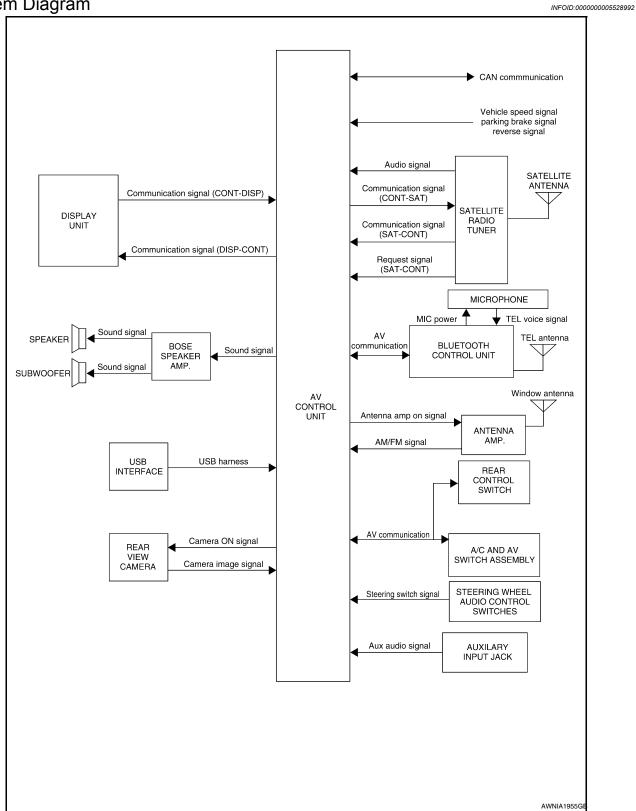
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# **FUNCTION DIAGNOSIS**

# **AUDIO SYSTEM**

System Diagram



**System Description** 

INFOID:0000000005528993

#### **AUDIO SYSTEM**

#### < FUNCTION DIAGNOSIS >

[BOSE W/ COLOR 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 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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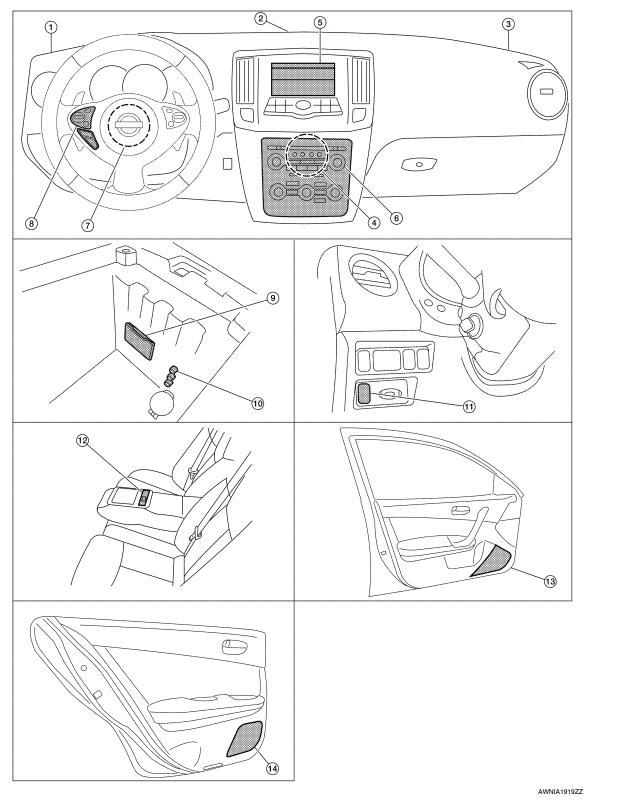
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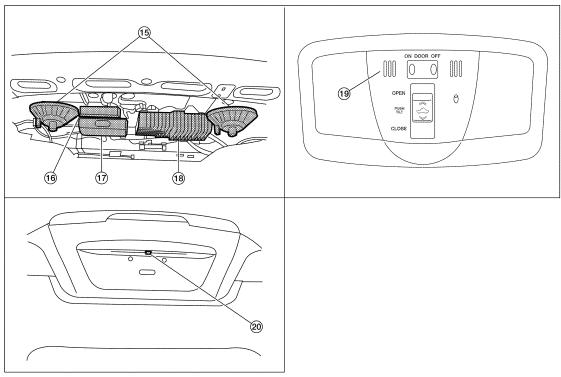
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# Component Parts Location



Revision: November 2009 AV-517 2010 Maxima



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- 1. Tweeter LH M51
- AV control unit M42, M43, M44, M45, 5. M46, M47, M48, M111 (located behind A/C and AV switch assembly)
- Steering angle sensor M53 (located in steering column behind spiral cable)
- 10. Aux jack M209
- 13. Front door speaker LH D3 RH D103
- 16. Satellite radio tuner B111
- 19. Microphone R7

- 2. Center speaker M130
- . Display unit M141
- Steering wheel audio control switches
- 11. Rear control cancel switch M89
- Rear door speaker LH D202 RH D302
- 17. Bluetooth control unit B128, B130, B131
- 20. Rear view camera T101

- 3. Tweeter RH M52
- 6. A/C and AV switch assembly M98
- 9. USB Interface M211 (view in center console)
- 12. Rear control switch B402, B403, B404
- Rear subwoofers (view under rear parcel shelf)
   LH B106
   RH B107
- 18. BOSE speaker amp B109, B110

# Component Description

INFOID:0000000005528995

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><li>Audio operation can be operated</li><li>Steering switch signal is output to AV control unit</li></ul>
Front door speakers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Tweeters	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sounds</li></ul>

# **AUDIO SYSTEM**

# < FUNCTION DIAGNOSIS >

# [BOSE W/ COLOR W/ RR CTL]

Part name	Description
Center speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sounds</li></ul>
Rear door speakers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Rear subwoofer	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs low range sounds</li></ul>
Satellite radio tuner	<ul><li>Receives radio signals from satellite antenna</li><li>Sends audio signals to AV control unit</li></ul>
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.

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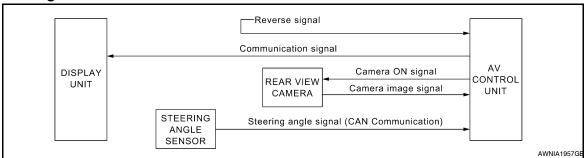
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# **REAR VIEW MONITOR SYSTEM**

# System Diagram

INFOID:0000000005528996



# **System Description**

INFOID:0000000005528997

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.

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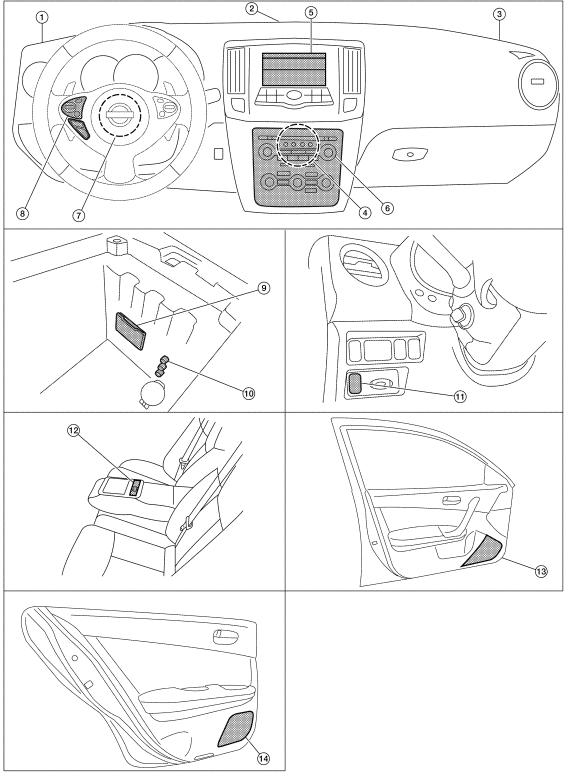
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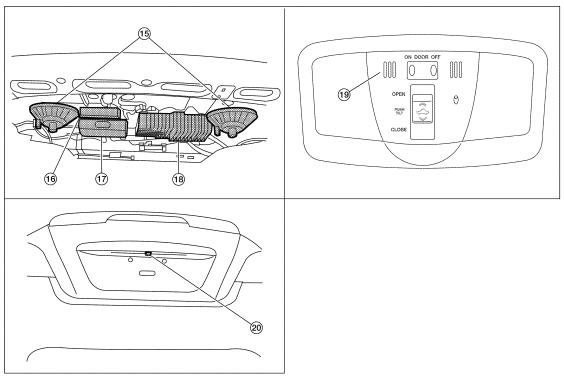
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# Component Parts Location



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- Tweeter LH M51
- AV control unit M42, M43, M44, M45, 5. M46, M47, M48, M111 (located behind A/C and AV switch assembly)
- Steering angle sensor M53 (located in steering column behind spiral cable)
- 10. Aux jack M209
- 13. Front door speaker LH D3 RH D103
- 16. Satellite radio tuner B111
- 19. Microphone R7

- 2. Center speaker M130
- . Display unit M141
- . Steering wheel audio control switches
- 11. Rear control cancel switch M89
- Rear door speaker
   LH D202
   RH D302
- 17. Bluetooth control unit B128, B130, B131
- 20. Rear view camera T101

- 3. Tweeter RH M52
- 6. A/C and AV switch assembly M98
- USB Interface M211 (view in center console)
- 12. Rear control switch B402, B403, B404
- Rear subwoofers (view under rear parcel shelf)
   LH B106
   RH B107
- 18. BOSE speaker amp B109, B110

# Component Description

INFOID:0000000005528999

Part name	Description
AV control unit	<ul> <li>Sends camera ON signal to the rear view camera</li> <li>Receives camera image signal from the rear view camera</li> <li>Sends image signal to the display unit</li> </ul>
Rear view camera	<ul> <li>Receives camera ON signal from the AV control unit</li> <li>Sends image signal to the AV control unit</li> </ul>
Steering angle sensor	Sends steering angle information to the AV control unit via CAN communication

# HANDS-FREE PHONE SYSTEM

### System Diagram

INFOID:0000000005529000

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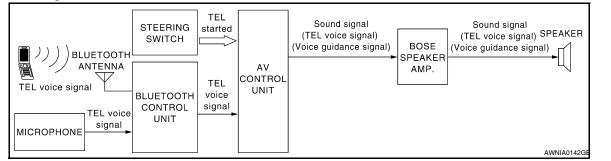
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# System Description

INFOID:0000000005529001

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.

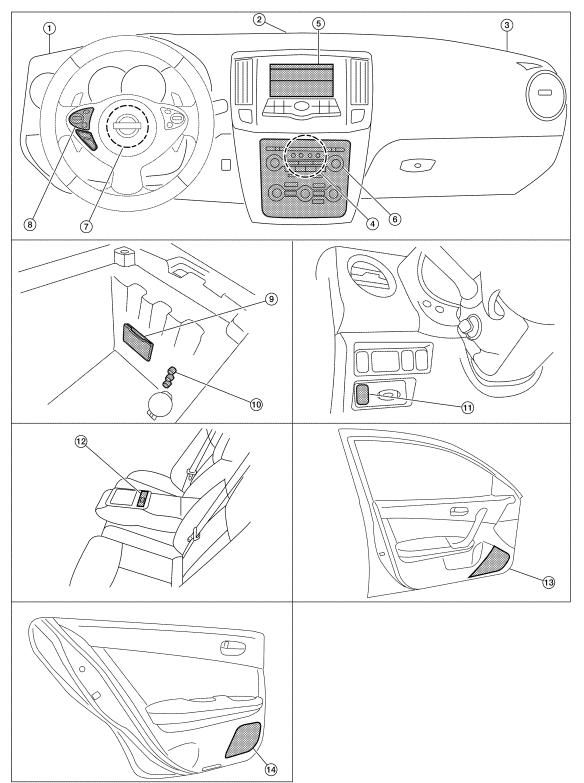
#### AV CONTROL UNIT

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.

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# **Component Parts Location**

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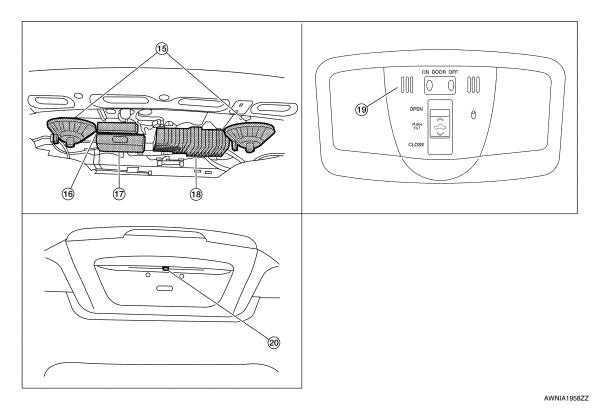
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- Tweeter LH M51
- AV control unit M42, M43, M44, M45, 5. M46, M47, M48, M111 (located behind A/C and AV switch assembly)
- Steering angle sensor M53 (located in steering column behind spiral cable)
- 10. Aux jack M209
- 13. Front door speaker LH D3 RH D103
- 16. Satellite radio tuner B111
- 19. Microphone R7

- Center speaker M130
- 5. Display unit M141
- Steering wheel audio control switches
- 11. Rear control cancel switch M89
- 14. Rear door speaker LH D202 RH D302
- 17. Bluetooth control unit B128, B130, B131
- 20. Rear view camera T101

- . Tweeter RH M52
- 6. A/C and AV switch assembly M98
- USB Interface M211 (view in center console)
- 12. Rear control switch B402, B403, B404
- Rear subwoofers (view under rear parcel shelf)
   LH B106
   RH B107
- 18. BOSE speaker amp B109, B110

# Component Description

INFOID:0000000005529003

Part name	Description
AV control unit	Receives telephone voice signal from Bluetooth control unit     Sends telephone voice and voice guidance signals to the speakers
BOSE speaker amp.	<ul> <li>Recieves audio signals from the AV control unit</li> <li>Outputs amplified audio signals to the speakers.</li> </ul>
Front door speaker	
Front tweeter	Receives telephone voice and voice guidance signals from the AV control unit
Center speaker	
Steering wheel audio control switches	<ul><li>Start a voice recognition session</li><li>Answer and end telephone calls</li><li>Adjust the volume level</li></ul>

# **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

< FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

# DIAGNOSIS SYSTEM (AV CONTROL UNIT)

# Diagnosis Description

INFOID:000000005529004

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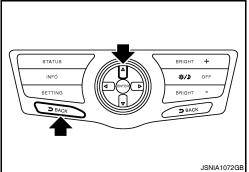
#### MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

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

#### Self-Diagnosis Mode

- Press the BACK switch and the 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

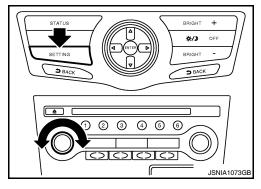
Mode	Description
Self-Diagnosis	<ul><li>AV control unit diagnosis</li><li>Perform the connection diagnosis between each of the units.</li></ul>

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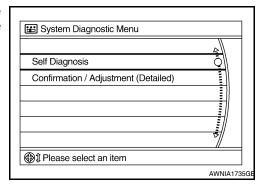
	Mode	Description	
	Display Diagnosis	The confirmation of the tint with the color spectrum bar display and shading of color with the gradation bar display can be performed.	
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse.	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



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

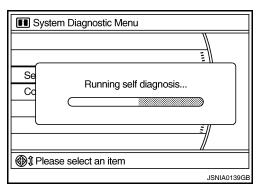


#### **SELF-DIAGNOSIS MODE**

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



#### < FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

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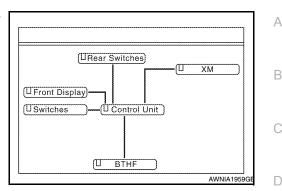
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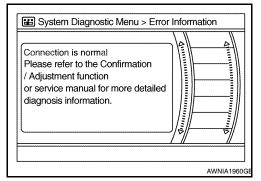
2. Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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.



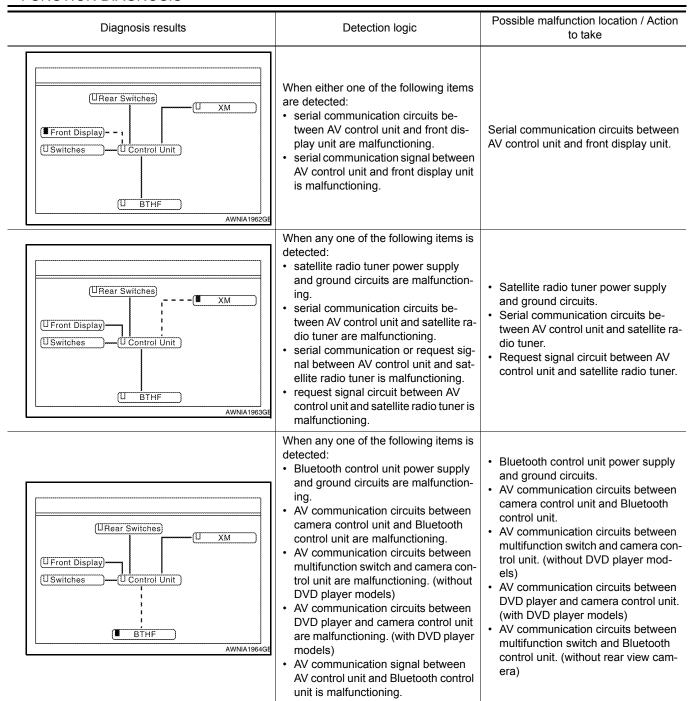
#### **SELF-DIAGNOSIS RESULTS**

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

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

Self-diagnosis Result Chart

Diagnosis results	Detection logic	Possible malfunction location / Action to take	i
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"	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



#### NOTE:

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

#### CONFIRMATION/ADJUSTMENT MODE

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

#### < FUNCTION DIAGNOSIS >

#### [BOSE W/ COLOR W/ RR CTL]

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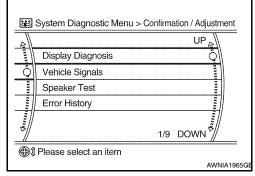
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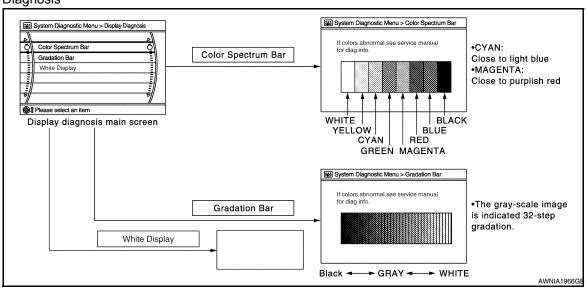
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 Select each switch on the "Confirmation/Adjustment Mode" screen to display the relevant trouble diagnosis screen. Press the RETURN switch to return to the initial Confirmation/Adjustment Mode screen.



#### **Display Diagnosis**



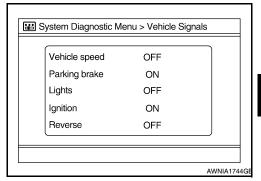
The tint of the color bar indication is as per the following list if RGB image signal error is detected.

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.
verlicie speed	ON	Vehicle speed = 0 km/h (0 MPH)	
Parking brake	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.
raiking blake	OFF	Parking brake is released.	

Revision: November 2009 AV-531 2010 Maxima

#### < FUNCTION DIAGNOSIS >

#### [BOSE W/ COLOR W/ RR CTL]

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

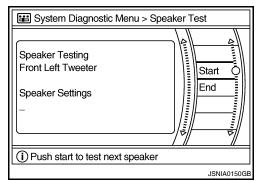
#### Speaker Test

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

#### NOTE:

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

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



#### Climate Control

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.

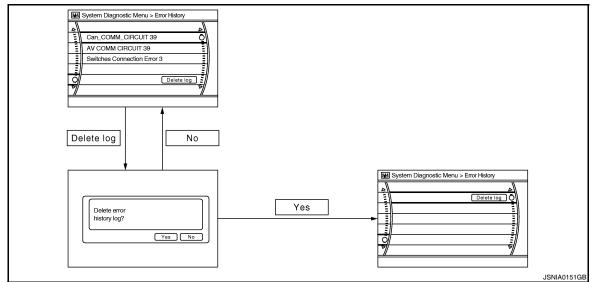
#### Count up method B

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

#### < 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.		
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	Replace the AV control unit.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.		
CAN Controller Memory Error	Av control unit manufiction is detected.		
Front Display Connection Error	When ane one of the following items is detected:  • 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> <li>Front display unit power supply and ground circuits.</li> <li>Serial communication circuits between AV control unit and front display unit.</li> </ul>	

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#### < FUNCTION DIAGNOSIS >

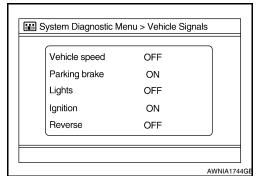
#### [BOSE W/ COLOR W/ RR CTL]

Error item	Description	Possible malfunction factor/Action to take
SAT Connection Error	<ul> <li>When any one of the following items is detected:</li> <li>satellite radio tuner power supply and ground circuits are malfunctioning.</li> <li>serial communication circuits between AV control unit and satellite radio tuner are malfunctioning.</li> <li>serial communication or request signal between AV control unit and satellite radio tuner is malfunctioning.</li> <li>request signal circuit between AV control unit and satellite radio tuner is malfunctioning.</li> </ul>	<ul> <li>Satellite radio tuner power supply and ground circuits.</li> <li>Serial communication circuits between AV control unit and satellite radio tuner.</li> <li>Request signal circuit between AV control unit and satellite radio tuner.</li> </ul>
AV COMM CIRCUIT     Switches Connection Error	<ul> <li>When any one of the following items is detected:</li> <li>multifunction switch power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between AV control unit and multifunction switch are malfunctioning.</li> <li>AV communication signal between AV control unit and multifunction switch is malfunctioning.</li> </ul>	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>

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

ADJUST OFFSET OF REAR VIEW CAMERA

#### < FUNCTION DIAGNOSIS >

#### [BOSE W/ COLOR W/ RR CTL]

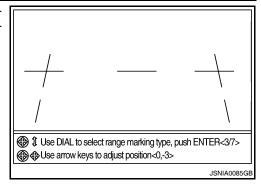
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Use this mode to adjust the guide line display position of the rearview monitor if necessary after removing the rear view monitor camera.



#### 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.

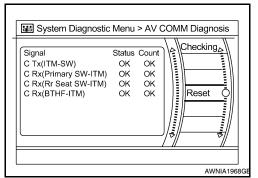
Items	Display (Current)	Malfunction counter (Past)
Tx (HVAC)	OK / UNKWN	OK / 0 - 39
Rx (ECM)	OK / UNKWN	OK / 0 - 39
Rx (Cluster)	OK / UNKWN	OK / 0 - 39
Rx (HVAC)	OK / UNKWN	OK / 0 - 39
Rx (USM)	OK / UNKWN	OK / 0 - 39
Rx (STRG)	OK / UNKWN	OK / 0 - 39

#### System Diagnostic Menu > Vehicle CAN... (SBACK) Checking Status Count Rx(ECM) OK OK Rx(Cluster) OK OK Rx(HVAC) OK OK Reset Rx(USM) OK OK Rx(STRG) OK OK AWNIA1967G

#### **AV COMM Diagnosis**

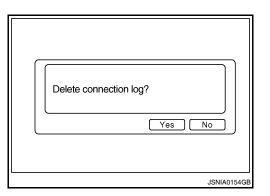
- Displays the communication status between AV control unit (master unit) and each unit.
- The error counter displays "OK" if any malfunction was not detected in the past and displays "0" if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle.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



#### < FUNCTION DIAGNOSIS >

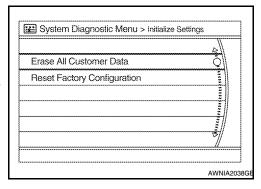
[BOSE W/ COLOR W/ RR CTL]

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:0000000005529005

#### 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> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing AV control unit.</li> </ul>	

#### **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".

#### < 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.		
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.		
Cont Unit [U1200]		Replace the AV control unit if the malfunc-	
CAN CONT [U1216]		tion occurs constantly.	
SUB CPU CONN [U1228]	AV control unit malfunction is detected.		
iPod CERTIFICATION [U1229]			
Built-in AUDIO CONN [U122E]			
HDD CONN [U1218]		If the music box function has no mal-	
HDD READ [U1219]		functions, then there is a possibility of the detection of a temporary malfunc-	
HDD WRITE [U121A]	AV control unit malfunction is detected.		
HDD COMM [U121B]		tion. Replace the AV control unit if the mal-	
HDD ACCESS [U121C]		function occurs constantly.	
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.	
DSP CONN [U121D]		If a disc can be played, then there is a	
DSP COMM [U121E]	AV control unit malfunction is detected.	<ul><li>possibility of the detection of a temporary malfunction.</li><li>Replace the AV control unit if the malfunction occurs constantly.</li></ul>	
DVD COMM [U1227]	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>	
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: Display unit power supply and ground circuits malfunction is detected. Communication circuits between AV control unit and display unit.	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 mal- function occurs constantly.	
USB OVERCURRENT [U1263]	Detection of over current in USB connecter.	Check USB harness between the AV control unit and USB connector.	
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items are detected:  Multifunction switch power supply and ground circuits are malfunctioning.  AV communication circuits between AV control unit and multifunction switch are malfunctioning.	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.

#### < 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)	
	Off	Vehicle speed =0 km/h (0 MPH)	Changes in indication may be delayed. This is
PKB SIG	On	Parking brake is applied.	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 deleved. This is
	Off	Selector lever in any position other than R	Changes in indication may be delayed. This is normal.

#### SELECTION FROM MENU

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

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

#### **CONFIGURATION**

Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	<ul> <li>Reads the vehicle configuration of current AV control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
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]

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INFOID:0000000005529006

# DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

# **Diagnosis Description**

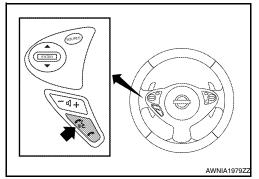
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

#### BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

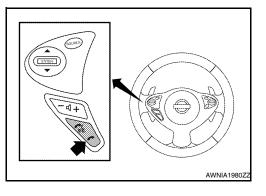
- · Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- · Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

#### OPERATION PROCEDURE

- 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.



- 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 <u>AV-539</u>, "Work Flow".
- 7. After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails, refer to AV-539, "Work Flow".



Work Flow

Failure Message	Action	
"Internal failure"	Replace Bluetooth control unit. Refer to AV-85. "Removal and Installation".	
"Bluetooth antenna open"	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 Instal lation".	
"Phone/End for the Hands Free System is stuck"		
"Microphone test" (failed interactive test)	<ol> <li>Inspect harness between Bluetooth control unit and microphone.</li> <li>Replace microphone. Refer to <u>AV-83</u>. "Removal and Installation".</li> </ol>	

Revision: November 2009 AV-539 2010 Maxima

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

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

# COMPONENT DIAGNOSIS

#### U1000 CAN COMM CIRCUIT

Description INFOID:0000000005529008

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

#### DTC DETECTION LOGIC

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

# Diagnosis Procedure

INFOID:0000000005529010

# 1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 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:0000000005529011

Initial diagnosis of AV control unit.

DTC Logic

#### DTC DETECTION LOGIC

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

# Diagnosis Procedure

# 1. REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit. Refer to AV-322, "Removal and Installation".

>> Inspection End.

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#### **U1200 AV CONTROL UNIT**

#### [BOSE W/ COLOR W/ RR CTL]

# **U1200 AV CONTROL UNIT**

Description INFOID:0000000005529014

Replace the AV control unit if this DTC is displayed. Refer to AV-322, "Removal and Installation".

Part name	Description	
AV CONTROL UNIT	<ul> <li>It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>AV control unit includes audio function and vehicle information function.</li> <li>It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>	

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
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:0000000005529016

Replace the AV control unit if this DTC is displayed. Refer to AV-322. "Removal and Installation".

Part name	Description
AV CONTROL UNIT	<ul> <li>It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>AV control unit includes audio function and vehicle information function.</li> <li>It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1216	CAN CONT [U1216]	Internal malfunction of AV control unit (CAN controller) is detected.	Replace AV control unit. Refer to AV-322, "Removal and Installation".

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#### **U1218 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

# **U1218 AV CONTROL UNIT**

DTC Logic

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005530064

# 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005530066

# 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005530068

# 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005530070

# 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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#### **U121C AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

#### **U121C AV CONTROL UNIT**

DTC Logic

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005530072

# 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121D	DSP CONN [U121D]	AV control unit malfunction is detected.	<ul> <li>If a disc can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005530074

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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#### **U121E AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

# **U121E AV CONTROL UNIT**

DTC Logic

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	AV control unit malfunction is detected.	<ul> <li>If a disc can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005530076

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

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

DTC	Display contents of CONSULT-III	DTC detection condition Possible malfunction fac	
U1227	DVD COMM [U1227]	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-654, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005530079

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

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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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#### **U1229 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

# **U1229 AV CONTROL UNIT**

DTC Logic

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

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:0000000005530083

# 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 <u>AV-681, "CONFIGURATION (AV CONTROL UNIT): Special Repair Requirement"</u>.

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#### **U122E AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

# **U122E AV CONTROL UNIT**

DTC Logic

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

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:0000000005530086

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 <a href="https://example.com/BRC-8">BRC-8</a>, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION: Special Repair Requirement".

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#### U1243 DISPLAY UNIT

Description INFOID:0000000005529018

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

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition Possible causes	
U1243	FRONT DISP CONN [U1243]	<ul> <li>Display unit power supply and ground circuit malfunction is detected.</li> <li>Malfunction is detected on communication circuit between display unit and AV control unit.</li> <li>Malfunction is detected on communication signal between display unit and AV control unit.</li> </ul>	Display unit power supply and ground circuit.     Communication circuit between display unit and AV control unit.

#### Diagnosis Procedure

INFOID:0000000005529020

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 <u>AV-566, "DISPLAY UNIT : Diagnosis Procedure"</u>. <u>Is inspection result OK?</u>

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

# 2.CHECK CONTINUITY OF COMMUNICATION CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect display unit connector and AV control unit connector.
- Check continuity between display unit harness connector M141

   (A) terminals 11, 22 and AV control unit harness connector M44
   (B) terminals 56, 44.

A		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M141	11	M44	56	Yes
IVI 14 1	22	10144	44	165

Check continuity between display unit harness connector M141
 (A) terminals 11, 22 and ground.

	А		Continuity
Connector	Terminal	_	Continuity
M141	11	Ground	No
IVI 14 I	22	Ground	INO

#### Are continuity results as specified?

YES >> GO TO 3.

H.S. DISCONNECT OFF	
A 11 22 22	B 44 556
11,22	44,56
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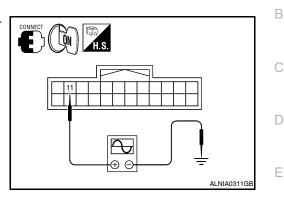
#### < COMPONENT DIAGNOSIS >

NO >> Repair harness or connector.

# $3. \mathsf{CHECK}$ 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 oscilliscope or CONSULT-III.

(+)		(-)	Reference signal
Connector	Terminal	(-)	Reference signal
M141	11	Ground	(V) 6 4 2 0 • • • 1 ms



#### Are voltage readings as specified?

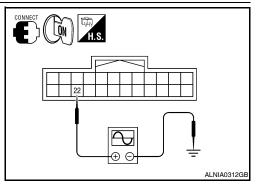
YES >> GO TO 4.

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 oscilliscope or CONSULT-III.

Connector	+) Terminal	(-)	Reference signal
M141	22	Ground	(V) 6 4 2 0 • • • 1 ms



#### Are voltage readings as specified?

YES >> Inspection End.

NO >> Replace display unit. Refer to AV-325, "Removal and Installation".

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#### **U1263 USB**

#### [BOSE W/ COLOR W/ RR CTL]

#### **U1263 USB**

DTC Logic

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:0000000005530088

# 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]

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

Description INFOID:0000000005529024

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

DTC Logic

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

#### Diagnosis Procedure

INFOID:0000000005529026

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 <u>AV-569</u>, "<u>SATELLITE RADIO TUNER</u>: <u>Diagnosis Procedure</u>".

Is the inspection result normal?

YES >> GO TO 2.

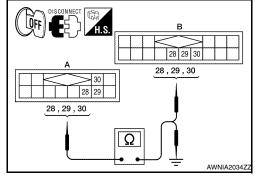
NO >> Repair malfunctioning parts.

# 2.check continuity communication circuit and request signal circuit

1. Turn ignition switch OFF.

- 2. Disconnect AV control unit connector M43 and satellite radio tuner connector B111.
- 3. Check continuity between AV control unit harness connector M43 (A) and satellite radio tuner harness connector B111 (B).

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	А		В		Continuity
	Connector	Terminals	Connector	Terminals	Continuity
-		28		28	
	M43	29	B111	29	Yes
		30		30	



4. Check continuity between AV control unit harness connector M43 (A) and ground.

Α		_	Continuity
Connector	Terminals		Continuity

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

#### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

	28		
M43	29	Ground	No
	30		

#### Is the inspection result normal?

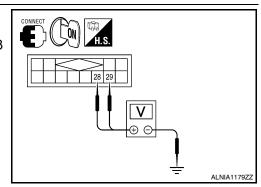
YES >> GO TO 3.

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	(–)	(Approx.)
M43	28	Ground 7.0V	7.0V
IVI43	29	Giodila	7.00



#### Is the inspection result normal?

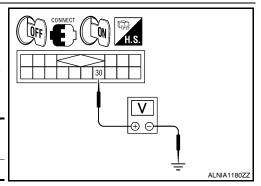
YES >> GO TO 4.

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.
- Connect satellite radio tuner.
- 4. Turn ignition switch ON.
- Check voltage between satellite radio tuner harness connector terminal ground.

(-	+)		Voltage
Connector	Terminal	(–)	(Approx.)
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**

[BOSE W/ COLOR W/ RR CTL]

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

**Description** 

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	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	<ul> <li>When either one of the following items are detected:</li> <li>A/C and AV switch assembly power supply and ground circuits are malfunctioning.</li> <li>AV communication circuits between AV control unit and A/C and AV switch assembly are malfunctioning.</li> <li>AV communication signal between AV control unit and A/C and AV switch assembly is malfunctioning.</li> </ul>	<ul> <li>A/C and AV switch assembly power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and A/C and AV switch assembly.</li> </ul>

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#### **U1310 AV CONTROL UNIT**

[BOSE W/ COLOR W/ RR CTL]

#### **U1310 AV CONTROL UNIT**

Description INFOID:0000000005529028

Replace the AV control unit if this DTC is displayed. Refer to <u>AV-565, "AV CONTROL UNIT : Diagnosis Procedure"</u>.

Part name	Description
AV CONTROL UNIT	<ul> <li>It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit.</li> <li>AV control unit includes audio function and vehicle information function.</li> <li>It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function.</li> <li>It inputs the automatic brightness ON/OFF signals that are required for the display dimming control.</li> <li>It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).</li> </ul>

DTC Logic

DTC	Display contents of CONSULT-III	DTC Detection Condition	Action to take
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit. Refer to AV-322, "Removal and Installation".

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000005529030

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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.
	19	Battery power	24
AV control unit	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

Disconnect AV control unit connectors M42 and M46.

Check voltage between the AV control unit connectors M42 and M46 and ground.

(+)		()	(-) OFF		ON
Connector	Terminal	(-)	OH	ACC	ON
M42	7	Ground	0V	Battery voltage	Battery voltage
IVITZ	19	Ground	Battery voltage	Battery voltage	Battery voltage
M46	104	Ground	0V	0V	Battery voltage

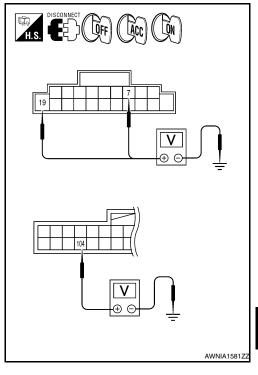
#### Are the voltage results as specified?

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-565** Revision: November 2009 2010 Maxima

#### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

- 1. Turn ignition switch OFF.
- 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**

DISCONNECT H.S.

H.S.

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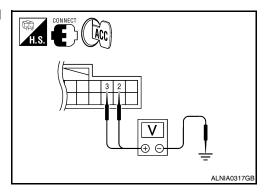
INFOID:0000000005529031

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	(-)	value (Approx.)
M141	2	Ground	9V
IVI 14 I	3	Giouria	90



#### Does specified voltage exist?

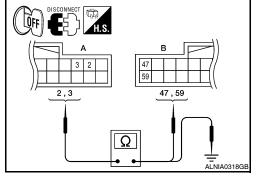
YES >> GO TO 3.

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.
- Check continuity between the display unit harness connector M141 (A) and the AV control unit connector M44 (B).

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M141	2	M44	59	Yes
IVIITI	3	101	47	163



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

Α			Continuity	
Connector	Terminal	_	Continuity	
M141	2	Ground	No	
101 14 1	3	Giouna	INO	

#### Are continuity results as specified?

- YES >> Check AV control unit power and ground supply. Refer to <u>AV-565, "AV CONTROL UNIT : Diagnosis Procedure".</u>
- NO >> Repair harness or connector.

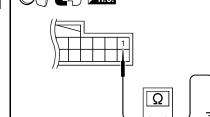
#### < COMPONENT DIAGNOSIS >

[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



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#### 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

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.
- Check voltage between the A/C and AV switch assembly connector M98 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal	(-)	OH	700	ON
M98	3	Ground	0V	Battery voltage	Battery voltage

# H.S. CE OFF (ACC) CON AWNIA1718ZZ

#### 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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Revision: November 2009 AV-567 2010 Maxima

#### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

Turn ignition switch OFF.

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

Connector	Terminal	_	Continuity
M98	1	Ground	Yes

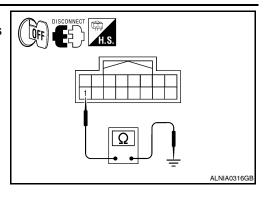
#### Are the continuity results as specified?

YES >> Inspection End.

NO >> Repair harness or ground.

#### **BOSE SPEAKER AMP**

#### **BOSE SPEAKER AMP: Diagnosis Procedure**



INFOID:0000000005529033

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	Pattony nower	26
DOOL Speaker allip.	10	Battery power	25

#### Are the fuses OK?

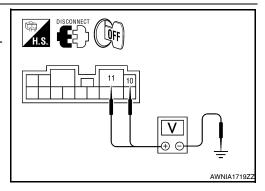
YES >> GO TO 2.

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

# 2.CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect BOSE speaker amp. connector.
- Check voltage between BOSE speaker amp. harness connector B110 terminal 10, 11 and ground.

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



#### Is battery voltage present?

YES >> GO TO 3.

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

# 3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect BOSE speaker amp. connector. 2.
- Check continuity between BOSE speaker amp. harness connector B110 terminal 7,12 and ground.

(+)		(-)	Continuity
Connector	Terminal	(-)	Continuity
B110	7	Ground	Yes
D110	12	Giodila	105

# Does continuity exist?

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#### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

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YES >> Inspection End.

NO >> Repair harness or connector.

#### SATELLITE RADIO TUNER

#### SATELLITE RADIO TUNER: Diagnosis Procedure

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 in-	32	Battery power	24
stalled)	36	Ignition switch ACC or ON	17

#### Are the fuses OK?

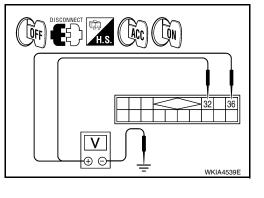
YES >> GO TO 2.

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

# 2. POWER SUPPLY CIRCUIT CHECK

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

(	+)	(-)	OFF	ACC	ON
Connector	Terminal	(-)	011	ACC	
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.

 Check continuity between satellite radio tuner (factory installed) harness connector and ground.

Connector	Terminal	_	Continuity
B111	35	Ground	Yes

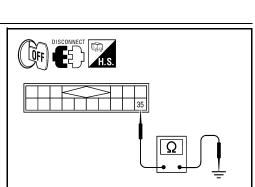
#### Does continuity exist?

YES >> Inspection End.

NO >> Repair satellite radio tuner (factory installed) harness or connector.

#### REAR VIEW CAMERA

REAR VIEW CAMERA : Diagnosis Procedure



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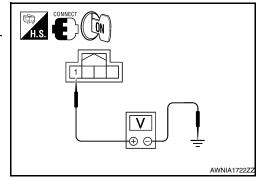
#### < COMPONENT DIAGNOSIS >

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

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

- Turn ignition switch ON.
- Shift transmission into Reverse.
- Check voltage between rear view camera harness connector T101 and ground.

-	(+)	(-)	Transmission	Value (Approx.)
Connector	Terminal	(-)	position	value (Approx.)
T101	1	Ground	Reverse	6V



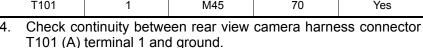
#### Is voltage reading approximately 6 volts?

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

# 2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

- Turn ignition switch OFF.
- Disconnect rear view camera and AV control unit connectors.
- Check continuity between rear view camera harness connector T101 (A) terminal 1 and AV control unit harness connector M45 (B) terminal 70.

Α			Continuity	
Connector	Terminal	Connector	Terminal	Continuity
T101	1	M45	70	Yes



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	A		Continuity
Connector	Terminal	_	Continuity
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.
- Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector M45 and ground.

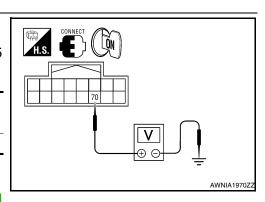
(+	+)	(-)	Transmission	Value (Approx.)
Connector	Terminal	(-)	position	value (Approx.)
M45	70	Ground	Reverse	6V

#### 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



#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ RR CTL]

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- Turn ignition switch OFF.
- Disconnect rear view camera harness connector.
- Check continuity between rear view camera harness connector T101 terminal 2 and ground.

_	Connector	Terminal	_	Continuity
	T101	2	Ground	Yes

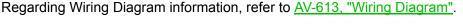
## Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

#### BLUETOOTH CONTROL UNIT

#### BLUETOOTH CONTROL UNIT: Diagnosis Procedure



#### 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	Value (Approx.)
Connector	Terminal	(-)	position	value (Approx.)
	1		OFF	
B131	2	Ground	ACC	Battery voltage
	3		ON	

# Is battery voltage present as specified?

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

# 3. CHECK GROUND CIRCUIT

>> GO TO 3.

YES

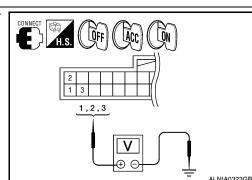
- Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit connector.
- Check continuity between Bluetooth control unit harness connector B131 and ground.

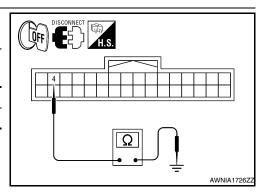
Connector.	Terminal	_	Continuity
B131	4	Ground	Yes

#### Are continuity results as sepcified?

YES >> Inspection End.

NO >> Repair harness or connector.





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**AV-571** Revision: November 2009 2010 Maxima

#### **REAR CONTROL SWITCH**

#### REAR CONTROL SWITCH: Diagnosis Procedure

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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.
- Check voltage between the rear audio remote control unit connector B402 and ground.

(	+)	(-)	(-) Voltage (Approx.)	
Connector	Terminal	(-)	voltage (Approx.)	
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

- Turn ignition switch OFF.
- 2. Check continuity between rear control switch harness connector B402 and ground.

(	+)	(-)	Continuity
Connector	Terminal (-)		Continuity
B402	4	Ground	Yes

# DISCONNECT OFF

#### Are the continuity results as specified?

YES >> Inspection End.

NO >> Repair harness or connector.

**MICROPHONE** 

#### MICROPHONE: Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

# 1. CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ RR CTL]

- Turn ignition switch ON.
- Check voltage between microphone harness connector R7 terminal 4 and ground.

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

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#### Is approximately 5V present?

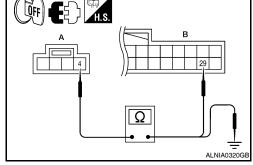
YES >> GO TO 4.

NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

- 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.

	А		В	
Connector	Terminal	Connector	Terminal	Continuity
R7	4	B131	29	Yes



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

Α			Continuity
Connector	Terminal		Continuity
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.
- Check voltage between Bluetooth control unit harness connector B131 terminal 29 and ground.

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

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#### Is approximately 5V present?

YES >> Go to 4.

NO >> Replace Bluetooth control unit. Refer to AV-677, "Removal and Installation".

#### 4. CHECK GROUND CIRCUIT

**AV-573** 2010 Maxima Revision: November 2009

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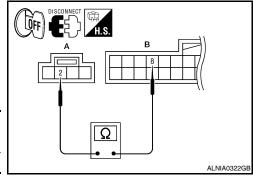
#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ RR CTL]

- 1. Turn ignition switch OFF.
- 2. Disconnect microphone harness connector R7 and Bluetooth control unit harness connector B131.
- Check continuity between microphone harness connector R7

   (A) terminal 2 and Bluetooth control unit harness connector B131 (B) terminal 8.

	4	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
R7	2	B131	8	Yes



#### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

# RGB (R: RED) SIGNAL CIRCUIT

**Description** 

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

## Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect display unit connector M141 and AV control unit connector M44.
- Check continuity between display unit harness connector M141

   (A) terminal 17 and AV control unit harness connector M44 (B) terminal 40.

А		В		Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	17	M44	40	Yes

 Check continuity between display unit harness connector M141 (A) terminal 17 and ground.

	A		Continuity
Connector	Terminal	_	Continuity
M141	17	Ground	No

#### Are the continuity results as specified?

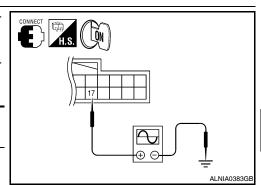
YES >> GO TO 2.

NO >> Repair harness or connector.

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

- Connect display unit connector M141 and AV control unit connector M44.
- Turn ignition switch ON.
- Check signal between display unit harness connector M141 terminal 17 and ground.

(+)		(-)	Condition	Reference signal	
Connector	Terminal	(-)	Condition	Neierence signal	
M141	17	Ground	Receive audio sig- nal	(V) 0. 4 0 -0. 4 → 40µs SKIB2238J	



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

Description INFOID:0000000005529041

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

#### Diagnosis Procedure

INFOID:0000000005529042

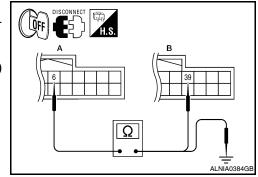
Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect display unit connector M141 and AV control unit connector M44.
- Check continuity between display unit harness connector M141

   (A) terminal 6 and AV control unit harness connector M44 (B) terminal 39.

А			В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M141	6	M44	39	Yes



Check continuity between display unit harness connector M141

 (A) terminal 6 and ground.

	4	_	Continuity	
Connector	Terminal			
M141	6	Ground	No	

#### Are the continuity results as specified?

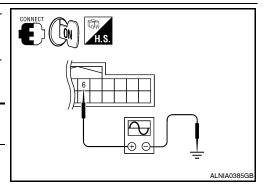
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB (G: GREEN) SIGNAL

- Connect display unit connector M141 and AV control unit connector M44.
- Turn ignition switch ON.
- Check signal between display unit harness connector M141 terminal 6 and ground.

(+)		(-)	Condition	Reference signal	
Connector	Terminal	(-)	Condition	reference signal	
M141	6	Ground	Receive audio sig- nal	(V) 0. 4 0 -0. 4 + 40 \(\mu\)s SKIB2236J	



#### 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

Description INFOID:0000000005529043

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

#### Diagnosis Procedure

INFOID:0000000005529044

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

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

- Turn ignition switch OFF.
- Disconnect display unit connector M141 and AV control unit connector M44.
- Check continuity between display unit harness connector M141 (A) terminal 18 and AV control unit harness connector M44 (B) terminal 38.

	A	В		Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	18	M44	38	Yes

Check continuity between display unit harness connector M141 (A) terminal 18 and ground.

	A		Continuity
Connector	Terminal	_	Continuity
M141	18	Ground	No

#### Are continuity results as specified?

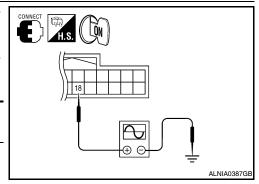
YES >> GO TO 2.

NO >> Repair harness or connector.

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

- Connect display unit connector M141 and AV control unit connector M44.
- Turn ignition switch ON.
- Check signal between display unit harness connector M141 terminal 18 and ground.

(+)		(-)	Condition	Reference signal
Connector	Terminal	(-)	Condition	rtelefelice signal
M141	18	Ground	Receive audio sig- nal	(V) 0. 4 0
•				



#### Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-325, "Removal and Installation".

>> Replace AV control unit. Refer to AV-322, "Removal and Installation". NO

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2010 Maxima

#### **RGB SYNCHRONIZING SIGNAL CIRCUIT**

Description INFOID:0000000005529045

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

#### Diagnosis Procedure

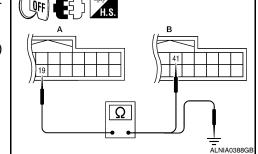
INFOID:0000000005529046

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

# 1. CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect display unit connector M141 and AV control unit connector M44.
- Check continuity between display unit harness connector M141
   (A) terminal 19 and AV control unit harness connector M44 (B) terminal 41.

Α			В	Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	19	M44	41	Yes



 Check continuity between display unit harness connector M141 (A) terminal 19 and ground.

	4	_	Continuity
Connector	Connector Terminal		Continuity
M141	19	Ground	No

#### Are continuity results as specified?

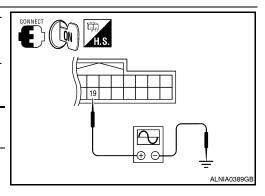
YES >> GO TO 2.

NO >> Repair harness or connector.

#### 2.CHECK RGB SYNCHRONIZING SIGNAL

- 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	. ,		G	
M141	19	Ground	Receive audio sig- nal	(V) + + 20 µs SKIB3603E	



#### 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

**Description** 

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

Diagnosis Procedure

INFOID:0000000005529048

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect display unit connector M141 and AV control unit connector M44.
- Check continuity between display unit harness connector M141
   (A) terminal 9 and AV control unit harness connector M44 (B) terminal 43.

А			В	Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	9	M44	43	Yes

Check continuity between display unit harness connector M141

 (A) terminal 9 and ground.

Α			Continuity
Connector	Terminal	_	Continuity
M141	9	Ground	No

#### Are continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

#### 2.CHECK RGB SYNCHRONIZING SIGNAL

- Connect display unit connector M141 and AV control unit connector M44.
- Turn ignition switch ON.
- 3. Check signal between display unit harness connector M141 terminal 9 and ground.

(-	+)	(-)	Condition	Reference signal
Connector	Terminal	(-)	Condition	reference signal
M141	9	Ground	Receive audio sig- nal	(V) 6 4 2 0 → ← 200 µ S PKIB4948J

# CONNECT ALNIA0391GB

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

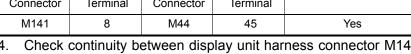
INFOID:0000000005529050

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

# $1.\mathsf{check}$ continuity horizontal synchronizing (HP) signal circuit

- Turn ignition switch OFF.
- Disconnect display unit connector M141 and AV control unit con-
- 3. Check continuity between display unit harness connector M141 (A) terminal 8 and AV control unit harness connector M44 (B) terminal 45.

А			В	Continuity
Connector	Terminal	Connector Terminal		Continuity
M141	8	M44	45	Yes



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

-	A	_	Continuity	
Connector	Terminal	_	Continuity	
M141	8	Ground	No	

#### Are continuity results as specified?

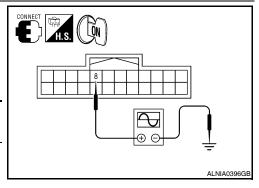
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

- Connect display unit connector M141 and AV control unit connector M44.
- Turn ignition switch ON.
- Check signal between display unit harness connector M141 terminal 8 and ground.

(+)		(-) Condition		Reference signal	
Connector	Terminal	(-)	Condition	reference signal	
M141	8	Ground	Receive audio sig- nal	(V) + + 20µs 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 W/ RR CTL]

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INFOID:0000000005529052

# VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description

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

Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect display unit connector M141 and AV control unit connector M44.
- Check continuity between display unit harness connector M141

   (A) terminal 20 and AV control unit harness connector M44 (B) terminal 57.

А			В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M141	20	M44	57	Yes

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

	A		Continuity	
Connector	Terminal	_	Continuity	
M141	20	Ground	No	

#### Are continuity results as specified?

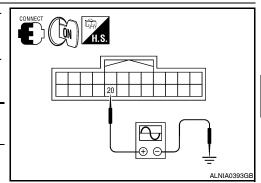
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

- 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	(-)	Condition	ixeletetice signal	
M141	20	Ground	Receive audio sig- nal	(V) 4 0 ++4ms SKIB3598E	



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Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-322, "Removal and Installation".

NO >> Replace display unit. Refer to <a href="AV-325">AV-325</a>, "Removal and Installation".

Revision: November 2009 AV-581 2010 Maxima

INFOID:0000000005529054

#### FRONT DOOR SPEAKER

**Description** 

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

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

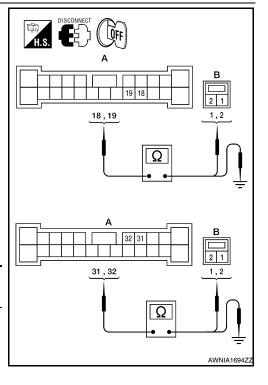
#### 1. HARNESS CHECK

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

Α		В		Continuity	
Connector	Terminal	Connector	Terminal		
	18	D3	D2	1	
B109	19		2	Yes	
B109	31		1	165	
	32	D103	2		

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

	Α	В	Continuity	
Connector	Terminal	٥		
	18			
B109	19	Ground	No	
	31	Giodila		
	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

#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ RR CTL]

- 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.

Connec-	Terminal		Condition	Reference	
tor	(+)	(-)	Condition	signal	
	18	19			
B109	31	32	Receive audio sig- nal	1 0 -1 1 ms skiao177E	

#### Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to <u>AV-331, "Removal and Installation"</u>.

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	В		Continuity
Connector	Terminal	Connector Terminal		Continuity
	113	B109	35	
M47	119		36	Yes
IVI4 <i>1</i>	109		33	res
	115		34	

3. Check continuity between AV control unit harness connector M47 (A) and ground.

	Α		Continuity	
Connector	Terminal			
	113			
N447	119	Crownd	No	
M47	109	Ground	No	
	115			

# A 35, 36 A 35, 36 A 35, 36 A 36, 36 A 36, 36 A 37 A 38 A 3

#### Are continuity test results as specified?

YES >> GO TO 4.

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

· Repair harness or connector.

#### 4.FRONT DOOR SPEAKER SIGNAL CHECK

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#### FRONT DOOR SPEAKER

#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ RR CTL]

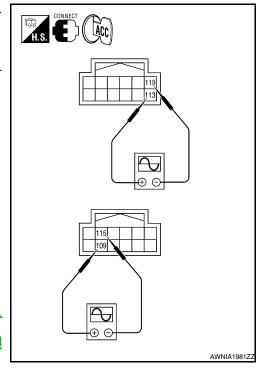
- 1. Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference	
Connector	(+)			signal	
	113	119			
M47	109	115	Receive audio sig- nal	(V) 1 0 -1 1 ms	

#### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-334</u>, <u>"Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to <u>AV-322, "Removal and Installation"</u>.



#### [BOSE W/ COLOR W/ RR CTL]

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INFOID:0000000005529056

#### **TWEETER**

Description INFOID:0000000005529055

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

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

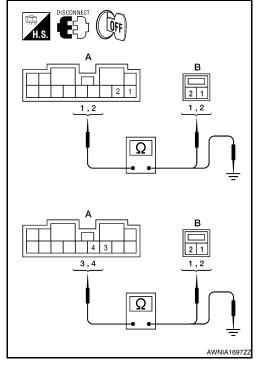
# 1. HARNESS CHECK

- 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).

Α			В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	1	M51	ME4 1	
B110	2	IVIOI	2	Yes
	4	M52	1	163
	3	IVIOZ	2	

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

	Α		Continuity
Connector	Terminal		
	1		No
B110	2	Ground	
БПО	4	Giodila	
	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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#### < 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	Term	ninals	Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	1	2			
B110	4	3	Receive audio sig- nal	1 0 -1 1 ms SKIA0177E	

#### Are the audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to <u>AV-164, "Removal and Installation"</u>.

NO >> GO TO 3.

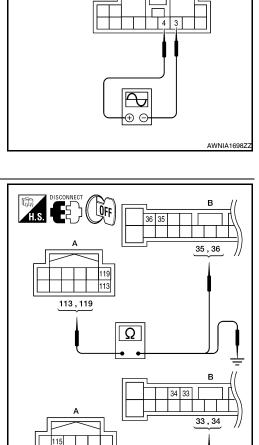
# 3. HARNESS CHECK

- 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		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	113		35	
M47	119	B109	36	Yes
	109	D109	33	165
	115		34	

Check continuity between AV control unit harness connector M47 (A) and ground.

		1		
	Α		Continuity	
Connector	nnector Terminal		Continuity	
-	113			
M47	119	Ground	No	
IVI47	109			
	115			



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#### 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]

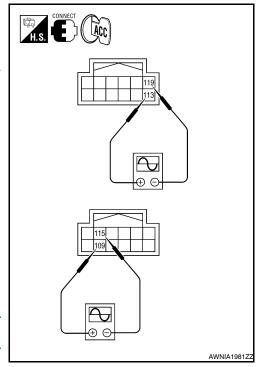
- 1. Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	113	119			
M47	109	115	Receive audio sig- nal	(V) 1 0 -1 1 ms	

#### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>. "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-654, "Removal and Installation".



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INFOID:0000000005529058

#### 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.

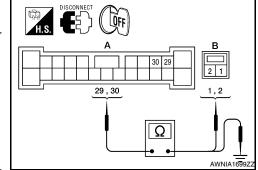
#### Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

#### 1. HARNESS CHECK

- 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		В		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B109	29	M130	1	Yes	
D109	30	IVITOU	2	165	



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

	Α		Continuity
Connector	Terminal		Continuity
B109	29	Ground	No
ь 109	30	Ground	No

#### Are continuity test results as specified?

YES >> GO TO 2.

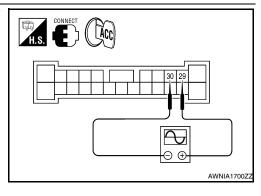
NO

- >> 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	
Connector	(+)	(-)	Condition	signal	
B109	29	30	Receive audio sig- nal	(V) 1 0 -1 1 ms	



Is the audio signal voltage reading as specified?

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#### < COMPONENT DIAGNOSIS >

YES >> Replace center speaker. Refer to AV-165. "Removal and Installation".

NO >> GO TO 3.

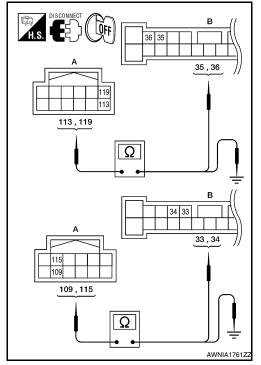
#### 3. HARNESS CHECK

- 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).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	113		35	
M47	119	B109	36	Yes
	109	פטום	33	
	115		34	

3. Check continuity between AV control unit harness connector M47 (A) and ground.

	A		Continuity
Connector	Terminal	_	Continuity
	113		
M47	119	Ground	No
	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

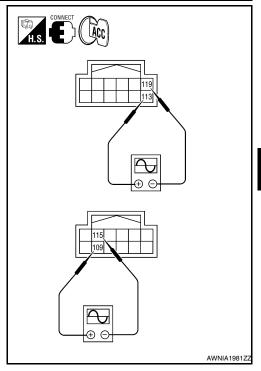
- Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

(+) (-) Solidion signal  113 119  Receive audio signal  109 115 Receive audio signal	Connector	Terminals		Condition	Reference	
M47  109  115  Receive audio signal  1	Connector	(+)	(-)	Condition	signal	
M47  109  115  Receive audio signal  1  1  1  1  1  1  1  1  1  1  1  1  1		113	119			
	M47	109	115	audio sig-	1 0 -1 1 ms	

#### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>, <u>"Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to <u>AV-654</u>, "<u>Removal and Installation</u>".



#### REAR DOOR SPEAKER

**Description** 

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:0000000005529060

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

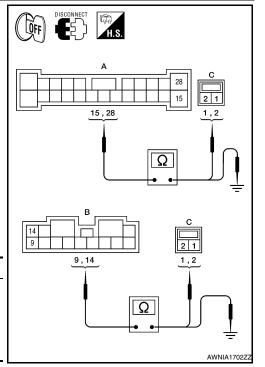
#### 1. HARNESS CHECK

- 1. Disconnect BOSE speaker amp. connectors B109, B110 and suspect speaker connector.
- 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	
A. D109	28			Yes
B: B110	9	C: D302	2	103
D. D110	14	G. D302	1	

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

Connector	Terminal	-	Continuity	
A: B109	15			
A. B109	28	Ground	No	
B: B110	9	Giodila		
В. В ПО	14			



#### Are the continuity test results as specified?

YES >> GO TO 2. NO >> • Check c

>> • 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 W/ RR CTL]

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

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
A: B109	28	15		
B: B110	14	9	Receive audio sig- nal	(V) 1 0 -1 1 ms

#### Are audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to <u>AV-332, "Removal and Installation"</u>.

NO >> GO TO 3.

#### 3. HARNESS CHECK

- Disconnect AV control unit connector M47 and BOSE speaker amp. connector B109.
- Check continuity between AV control unit harness connector M47 (A) and BOSE speaker amp. harness connector B109 (B).

A		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	112		24	
M47	118	P100	23	Voc
	108	B109	26	Yes
	114		25	

Check continuity between AV control unit harness connector M47 (A) and ground.

	А	_	Continuity
Connector	Terminal		
	112	Ground	No
M47	118		
IVI47	108		
	114		

# A 23, 24 A 23, 24 A 23, 24 A 25, 26 A 25, 26 A 25, 26

#### Are the continuity test results as specified?

YES >> GO TO 4.

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

• Repair harness or connector.

#### 4. REAR DOOR SPEAKER SIGNAL CHECK

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#### REAR DOOR SPEAKER

#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ RR CTL]

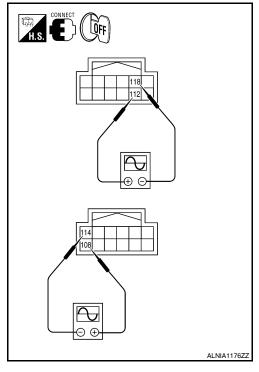
- 1. Connect AV control unit connector M47 and BOSE speaker amp. connector B109.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference	
Connector	(+)	(-)	signal		
	112	118			
M47	108	114	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E	

#### Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-334</u>, <u>"Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to <u>AV-322, "Removal and Installation"</u>.



#### **SUBWOOFER**

Description INFOID:0000000005529061

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

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

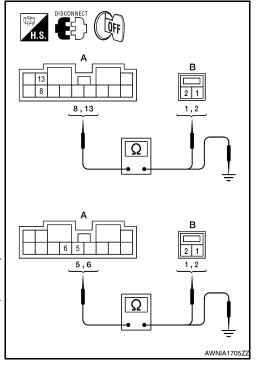
# 1. HARNESS CHECK

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

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	13	B106	1	
B110	8	D 100	2	Yes
	5	B107	1	103
	6	B107	2	

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

	A	_	Continuity	
Connector	Terminal		Continuity	
B110	13	Ground	No	
	8			
	5	Ground		
	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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#### < COMPONENT DIAGNOSIS >

- 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	Tern	ninals	Condition Reference		
Connector	(+)	(-)	Condition	signal	
	13	8			
B110	5	6	Receive audio signal	(V) 1 0 -1 1 ms	

#### Is the audio signal voltage as specified?

YES >> Replace suspect rear subwoofer. Refer to <u>AV-168</u>. "<u>Removal and Installation"</u>.

NO >> GO TO 3.

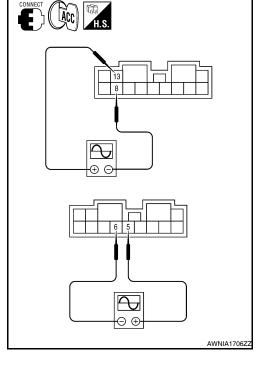
# 3. HARNESS CHECK

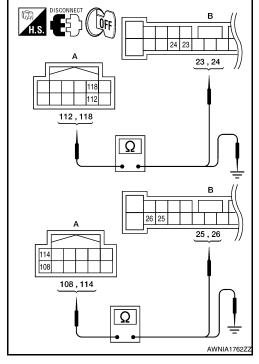
- 1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B109.
- 2. Check continuity between AV control unit harness connector M47 (A) and BOSE speaker amp. harness connector B109 (B).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	112		24	
M47	118	B109	23	Yes
IVI <del>4</del> /	108	D109	26	165
	114		25	

Check continuity between AV control unit harness connector M47 (A) terminal and ground.

	A		
Connector	Terminal	_	Continuity
	112	Ground	No
N47	118		
M47	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]

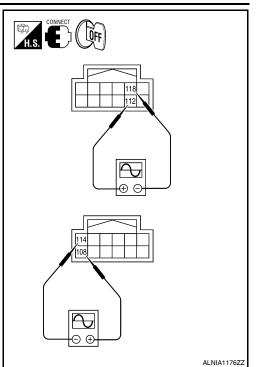
- 1. Connect AV control unit connector M47 and BOSE speaker amp. connector B109.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	112	118		
M47	108	114	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E

#### Is the audio signal voltage as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>, <u>"Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to <u>AV-654, "Removal and Installation"</u>.



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#### AMP ON SIGNAL CIRCUIT

Description INFOID:0000000005529063

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

Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

# 1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

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

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

#### Is inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

# 2.CHECK AMP ON SIGNAL (AV CONTROL UNIT)

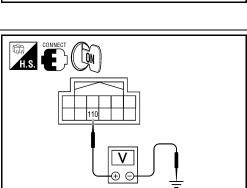
Check voltage between AV control unit harness connector M47 terminal 110 and ground.

(	+)	(-)	Voltage (Approx.)	
Connector	Terminal	(-)	voitage (Approx.)	
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".



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INFOID:0000000005529066

#### STEERING SWITCH

Description INFOID:0000000005529065

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.

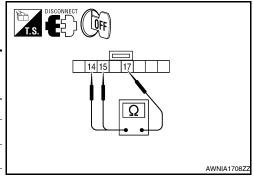
Diagnosis Procedure

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.)
		Enter	Depress ENTER switch.	2023
		Voice recognition	Depress 🌾 switch.	723
14		Menu (down)	Depress ∇ switch.	321
	17	Menu (up)	Depress △ switch.	121
	17	Source	Depress SOURCE switch.	0
		Menu back	Depress the back switch.	723
15		Phone	Depress 🗸 switch.	321
.0		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

- Disconnect AV control unit connector M42 and spiral cable connector M30.
- Check continuity between AV control unit harness connector M42 (A) and spiral cable harness connector M30 (B).

Α	1		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	6		24	
M42	15	M30	33	Yes
	16		31	

A B 24 31 , 33 33 24 , 31 , 33 4 AWNIA1709ZZ

3. Check continuity between AV switch connector M42 (A) and ground.

	A		Continuity
Connector	Terminal	_	
	6		
M42	15	Ground	No
	16		

#### Are the continuity results as specified?

YES >> GO TO 3.

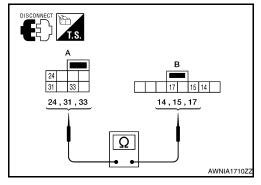
NO >> Repair harness.

# 3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M88.

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

-					
		A	В		Continuity
	Connector	Terminal	Connector	Terminal	Continuity
•		24		14	
	M30	31	M88	15	Yes
		33		17	



#### Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to <u>SR-8</u>, "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:0000000005529067

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

#### SATELLITE RADIO TUNER: Diagnosis Procedure

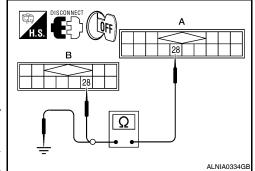
INFOID:0000000005529068

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		Continuity	
Connector	Terminal	Connector	Terminal	Continuity
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			Continuity
B111	28	Ground	No

#### Are continuity results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

#### 2.CHECK HARNESS - 2

 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		Continuity	
Connector	Terminal	Connector	Terminal	Continuity
B111	29	M43	29	Yes

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

H.S. DISCONNECT OFF
29
<u>Ω</u>
ALNIA0657GB

,	A		Continuity	
Connector Terminal			Continuity	
B111	29	Ground	No	

#### Are continuity results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

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# $\overline{3}$ .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		Continuity	
Connector Terminal		Connector	Terminal	Continuity
B111	30	M43	30	Yes

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

	H.S. OISCONNECT OFF
	В
	30
L	ALNIA0658GB

	A	_	Continuity	
Connector	Terminal			
B111	30	Ground	No	

#### Are continuity results as specified?

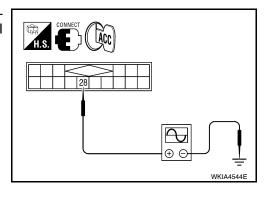
YES >> GO TO 4.

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	(-)	Reference signal	
B111	28	Ground	(V) 15 10 5 0 *** 20ms SKIB3825E	



#### Are voltage readings as specified?

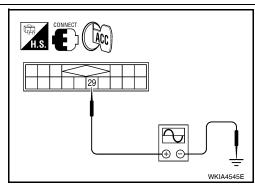
YES >> GO TO 5.

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	(-)	reference signal
B111	29	Ground	(V) 15 10 5 0 **-20ms



#### **COMMUNICATION SIGNAL CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

#### Are the voltage readings as specified?

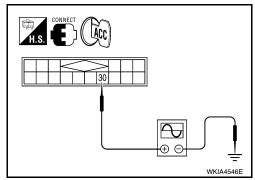
YES >> GO TO 6.

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	(-)	Reference Signal	
B111	30	Ground	(V) 15 10 5 • + 10ms SKIB3826E	



#### 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 SATELLITE RADIO TUNER

#### SATELLITE RADIO TUNER: Description

INFOID:0000000005529069

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:0000000005529070

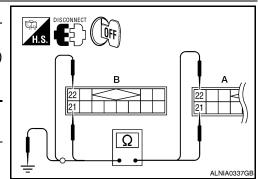
Regarding Wiring Diagram information, refer to AV-613, "Wiring Diagram".

#### LEFT CHANNEL

# 1. CHECK HARNESS

- Turn ignition switch OFF.
- 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).

P	1	Е	3	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B111	21	M43	21	Yes
БП	22	10143	22	165



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

	Α		Continuity
Connector	Terminal	_	Continuity
B111	21	Ground	No
DIII	22	Ground	140

#### Are continuity results as specified?

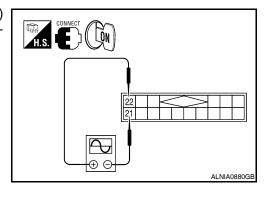
YES >> GO TO 2.

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.
- Check signal between satellite radio tuner (factory installed) connector B111 terminals 21 and 22 with CONSULT-III or oscilloscope.

(-	(+) (-)		Reference signal
Connector	Terr	minal	
B111	22	21	(V) 1 0 -1 + 2ms SKIB3609E



#### Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-322, "Removal and Installation".

#### **SOUND SIGNAL CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ RR CTL]

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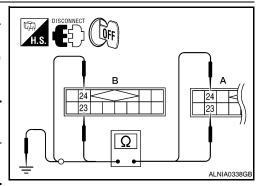
NO >> Replace satellite radio tuner. Refer to AV-335, "Removal and Installation".

#### 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).

	\	Е	3	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B111	23	M43	23	Yes
BIII	24	10143	24	163



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

,	A		Continuity
Connector	Terminal	_	Continuity
B111	23	Ground	No
БП	24	Giodila	INO

#### Are continuity results as specified?

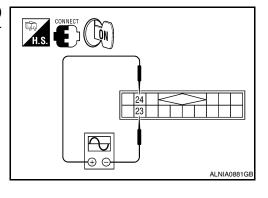
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RIGHT CHANNEL AUDIO SIGNAL

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

(+) (-)		(-)	Reference signal
Connector	Terr	ninal	
B111	24	23	(V) 1 0 -1 + 2ms SKIB3609E



#### 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

Description INFOID.000000005529071

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

#### Diagnosis Procedure

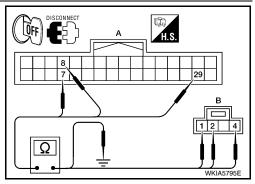
INFOID:0000000005529072

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).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	7		1	
B131	8	R7	2	Yes
	29		4	



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

Α		_	Continuity
Connector Terminal			
	7		
B131	8	Ground	No
	29		

#### Are the continuity test results as specified?

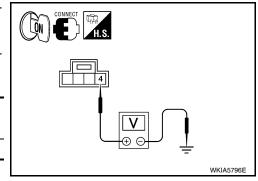
YES >> GO TO 2.

NO >> Repair harness or connector.

# 2. CHECK MICROPHONE POWER SUPPLY

- Connect Bluetooth control unit connector and microphone connector.
- 2. Turn ignition switch ON.
- 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

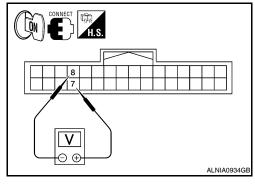
#### MICROPHONE SIGNAL CIRCUIT

#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ RR CTL]

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

Connector	(+)	(-)	Reference signal	
Connector	Terminal	Terminal	reference signal	
			While talking into microphone	
B131	7	8	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0 + 2ms	



#### Are voltage readings as specified?

>> Replace Bluetooth control unit. Refer to <u>AV-677, "Removal and Installation"</u>. >> Replace microphone. Refer to <u>AV-675, "Removal and Installation"</u>. YES

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# **ECU DIAGNOSIS**

#### AV CONTROL UNIT

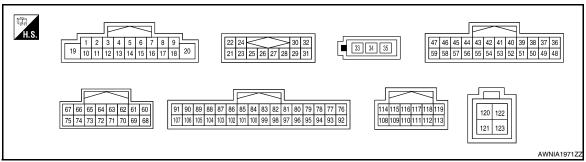
Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

CONSULT-III data monitor item

Display 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 nor-	
VHOL SED SIG	OFF	Vehicle speed =0 km/h (0 MPH)	mal.	
PKB SIG	ON	Parking brake is applied.	Changes in indication may be delayed. This is nor-	
FND SIG	OFF	Parking brake is released.	mal.	
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON .		
ILLUM SIG	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.		
IGN SIG	ON	Ignition switch ON		
IGN SIG	OFF	Ignition switch in ACC position	_	
	ON	Selector lever in R position	Changes in indication may be delayed. This is nor-	
REV SIG	OFF Selector lever in any position other than R		mal.	

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
					Depress ENTER switch.	2023Ω	
		Steering switch signal A	Input	Ignition switch OFF	Depress 🌾 switch.	$723\Omega$	
6 (W/G)	15 (L/B)				Depress ∇ switch.	321Ω	
					Depress △ switch.	121Ω	
					Depress SOURCE switch.	Ω	
7 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	

#### **AV CONTROL UNIT**

	minal color)	Description		Condition		Reference value	
+	_	Signal name	Input/ Output			(Approx.)	
9	Ground	Illumination signal	Input	OFF	Lighting switch is OFF.	0V	
(R/L)	Giodila	iliumiliation signal	IIIput	OH	Lighting switch is ON.	Battery voltage	
					Depress the back switch.	723Ω	
16	15	Steering switch signal B	Input	Ignition switch	Depress 🗸 switch.	321Ω	
(GR/L)	(L/B)	Occerning Switch Signal D	IIIput	ON	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	(V) 1 0 -1 + 2ms SKIB3609E	
24 (BR/L)	23 (Y/G)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected	(V) 1 0 -1 ** 2ms SKIB3609E	
25	_	Shield	_		_	_	
26	_	Shield	_		_	_	
28 (R)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 ***10ms SKIA9299J	
29 (B)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	10 0 -10 **1ms	

	minal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
30 (G)	Ground	Communication signal (CONT→SAT)	Output	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 ++1ms SKIA9301J	
34 (B)	_	Antenna main	_	_	_	_	
35 (B)		Antenna power		_	_	_	
36 (W)	Ground	AUX image signal	Output	Ignition switch ON	When AUX mode is selected	(V) 0. 4 0 0 −0. 4 → 40µs	
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.	(V) 0. 4 0	
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.	(V) 0. 4 0 -0. 4 → 40μs SKiB2236J	
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.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 8 -0. 8 -0. 8 -0. 8 -0. 8 -0. 10 -0.	

#### **AV CONTROL UNIT**

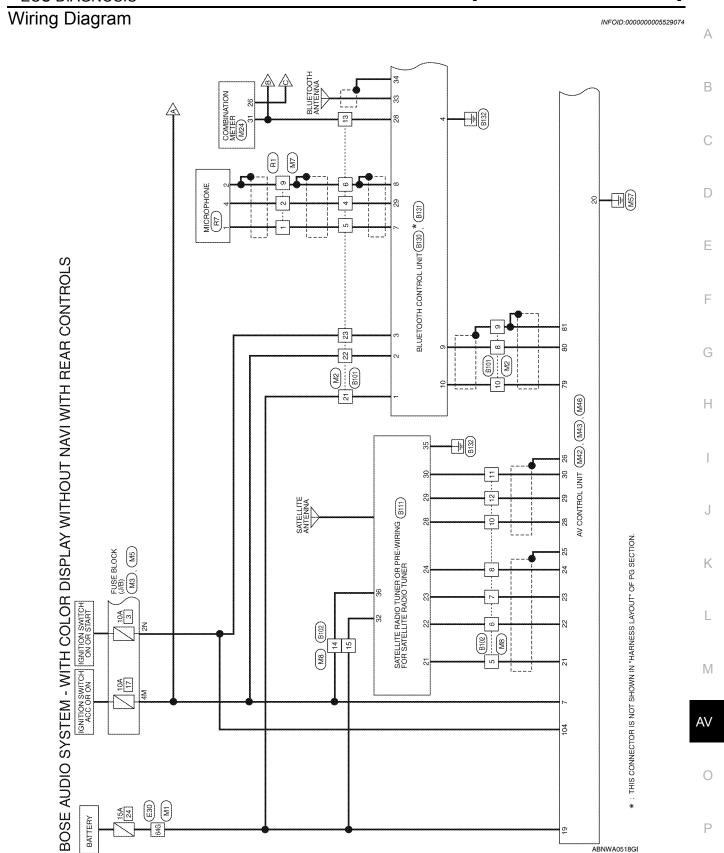
	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
41 (G)	Ground	RGB synchronizing signal	Output	Ignition switch ON	_	(V) 4 0 → 20 µs SKIB3603E
42	_	RGB synchronizing ground	_	Ignition switch ON	_	0V
					RGB image	5V
43 (B)	Ground	RGB area (YS) signal	Output	Ignition switch ON	AUX image	(V) 6 4 2 0 → 200 µ s PKIB4948J
44 (BR)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display- brightness	(V) 6 4 2 0
45 (R)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON	_	(V) 4 0 → 20µs SKIB3601E
46 (LG)	Ground	Signal ground	_	Ignition switch	_	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	(V) 6 4 2 0 +-1ms

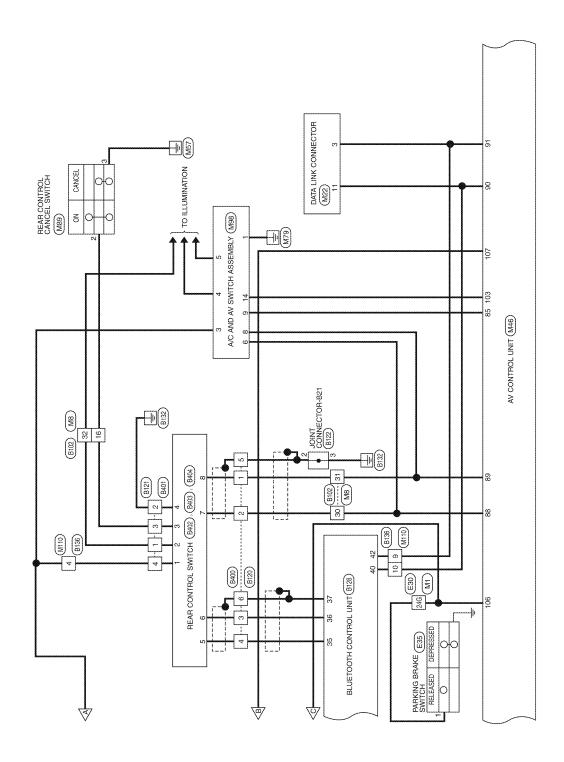
	minal color)	Description				Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
57 (W)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch On	_	(V) 4 0 → 4 4ms SKIB3598E
58 (BR)	Ground	Inverter ground	_	Ignition switch ON	_	0V
59 (Y)	Ground	Inverter VCC	Output	Ignition switch ACC	_	9V
65 (W)	Ground	Rear view camera video in (+)	Input	Ignition switch ON	With rear view camera ON	(V) 0.4 0 -0.4 +40µs SKIB2251J
66 (LG)	74 (V)	Aux image signal	Input	Ignition switch ON	When aux mode is selected	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
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/adjust- ment mode, and then Voice Microphone Test by select- ing "Voice Microphone Test" on Handsfree Micro- phone screen.	(V) 1 0 -1 + 2ms SKIB3609E
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**

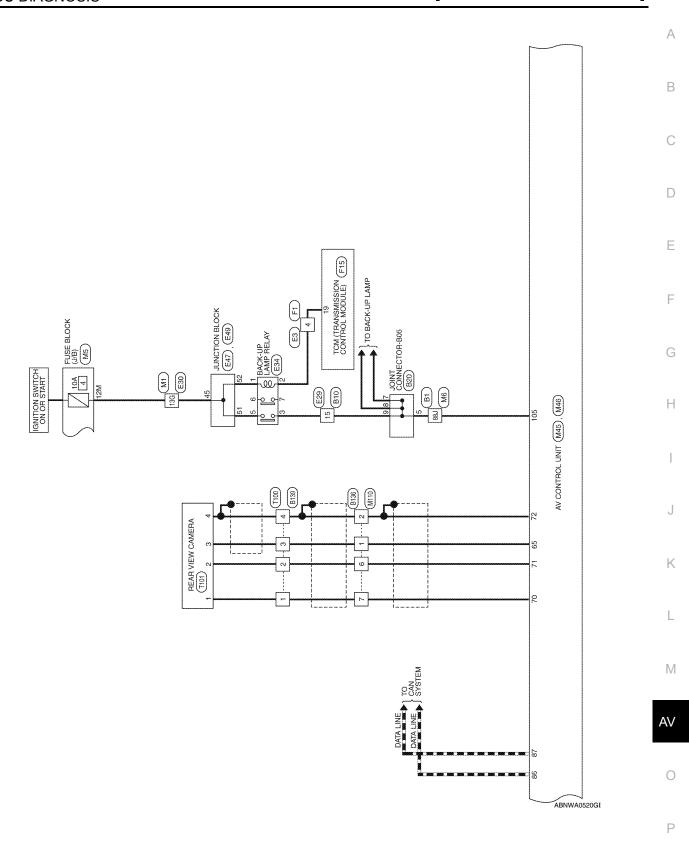
LOO DIAGNOOIO >							
	minal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
88 (L)	_	AV communication signal 1 (H)	Input/ Output	_	_	_	
89 (P)	_	AV communication signal 1 (L)	Input/ Output	_	_	_	
90 (R)	_	AV communication signal 2 (H)	Input/ Output	_	_	_	
91 (G)	_	AV communication signal 2 (L)	Input/ Output	_	<u> </u>	_	
95 (B)	97 (R)	AUX audio signal RH	Input	Ignition switch ON	When AUX mode is selected	(V) 1 0 -1 → 2ms SKIB3609E	
96 (W)	97 (R)	AUX audio signal LH	Input	Ignition switch ON	When AUX mode is selected	(V) 1 0 -1 + 2ms SKIB3609E	
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	<u> </u>	Battery voltage	
105	Ground	Reverse signal	Input	Ignition switch	R position	Battery voltage	
(P/B)	Ground	Reverse signal	Input	ON	Other than R position	0V	
106	Ground	Parking brake signal	Input	Ignition switch	Parking brake ON	0V	
(G/R)		g		ON	Parking brake OFF	Battery voltage	
107 (V/W)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 6 4 2 0 * + 20ms SKIA6649J	
108 (V)	114 (LG)	Rear RH pre-amp. sound signal	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	

	minal color)	Description		ut/ put		Reference value
+	_	Signal name	Input/ Output			(Approx.)
109 (B)	115 (W)	Front RH pre-amp. sound signal	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
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	(V) 1 0 -1 + 2ms SKIB3609E
113 (G)	119 (R)	Front LH pre-amp. sound signal	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
120 (B)	_	USB ground	_	_	_	_
121 (W)	_	USB D-	_	_	_	_
122 (R)	_	V BUS signal	_	_	_	_
123 (G)	_	USB D+	_	_	_	_

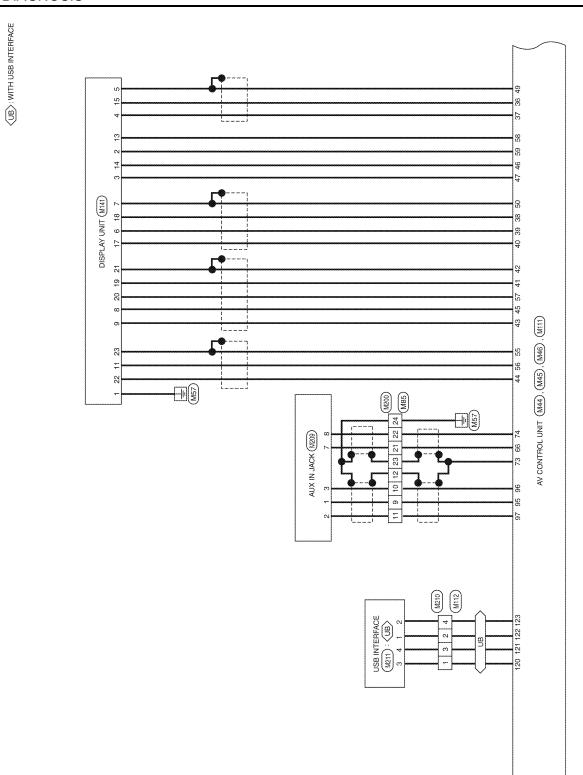


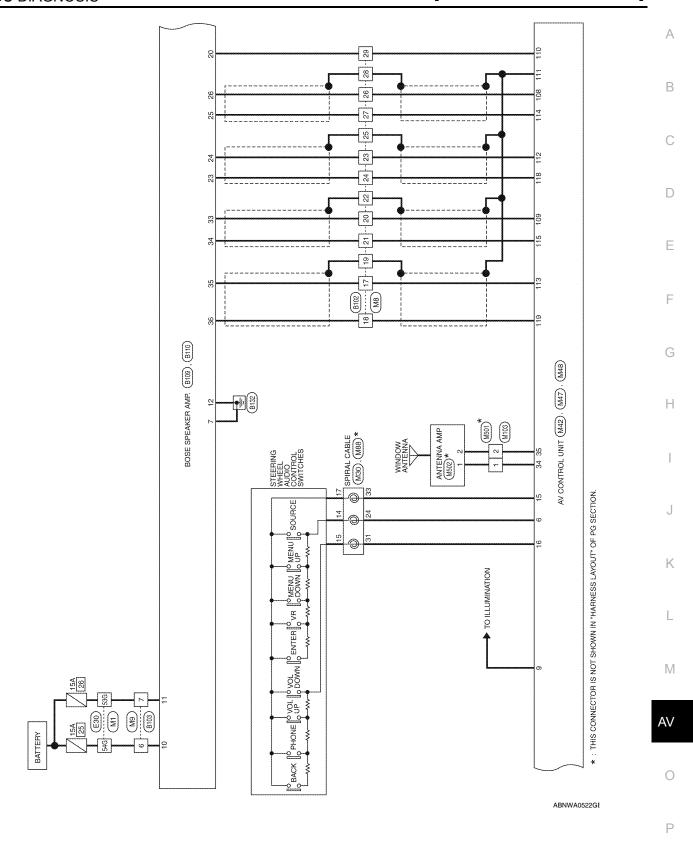


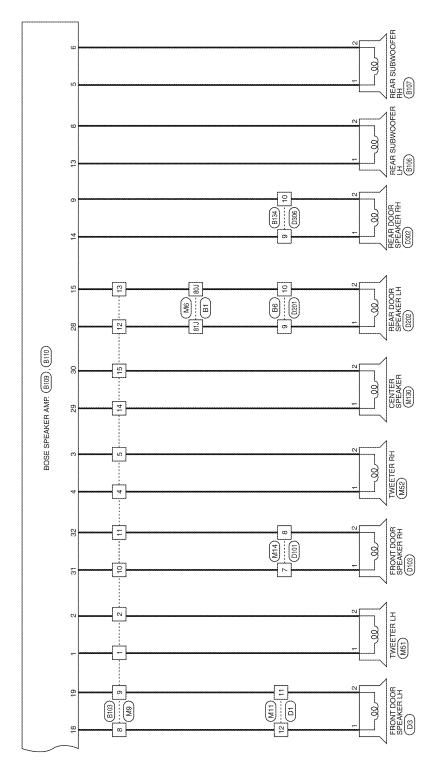
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ABNWA0527GE

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

Connector Name WIRE TO WIRE

Connector Color WHITE

 		Т	7				Г		Γ	Ι						
	WIRE TO WIRE	WHITE		6 5 4 3	20 19 18 17 16 15 14 13	Signal Name	1	4	į	I	1	l	ł	l	I	ı
. M2		1		12 11 10 9	24 23 22 21 20 19	Color of Wire	œ		SHIELD	ВВ	SHIELD	>	W/N	Y/R	λ/λ	ŋ
Connector No.	Connector Name	Connector Color		ď		Terminal No. Wire	4	က	9	æ	6	10	£	21	22	23
Signal Name	2002	ı	1	*	**											

minal No. Wire Signal Name  13G O 24G G/R 53G B/R 54G BR 64G V/R	o N	Oolor of Wire O G/R B/R BR	Signal Name
--	-----	----------------------------	-------------

/				
96 86 76 66 56 46 36 16 175 166 156 116 106 26 16	266 256 246 236 226 216 206 346 336 326 316 306 296 286 276 196 196	41G 40G 98G 98G 97G 98G 95G     50G 49G 48G 47G 46G 45G 44G 43G 42G     50G 49G 48G 47G 86G 55G     50G 57G 56G 55G     60G 67G 67G 56G 55G     60G 67G 67G 67G 57G 67G 57G 97G 97G 97G 97G 97G 97G 97G 97G 97G 9	7226 7716 7706 6936 6936 6756 6636 8006 7906 7706 7706 7706 7706 7706 6706 6	836 826 816

M5	FUSE BLOCK (J/B)	WHITE	SM 4M	Color of Signal Name	NV	
Connector No.	Connector Name	Connector Color WHITE	S.H	Terminal No. W	4M	1284

Connector No.	. M3	
Connector Name		FUSE BLOCK (J/B)
Connector Color	lor WHITE	Д.
崎 H.S.	3N 7N 6	3N
Terminal No.	Color of Wire	Signal Name
NS.	ŋ	I

3N	Color of Wire	g	
H.S.	Terminal No.	SN	

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**AV-619** 2010 Maxima Revision: November 2009

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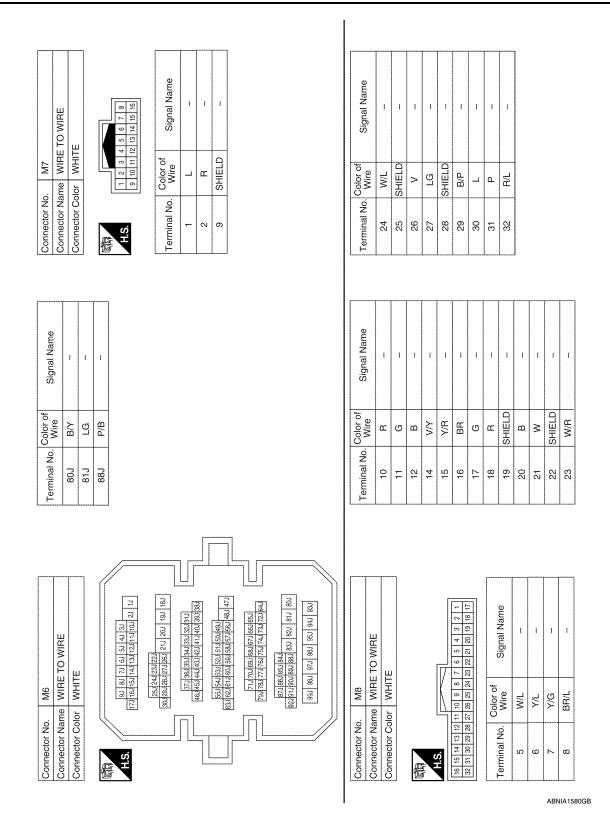
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M30   SPIRAL CABLE     SPIRAL SIGN     SPIRAL CABLE     SPIRAL SIGN     SPIRAL					ne	s SW A	s SW B	S.W
ector No. M30 ector Name SPIRA ector Color GRAY all		IL CABLE		33 34	Signal Nan	AUDIO STRO REMOTE	AUDIO STRG REMOTE	AUDIO STRC GND
ector No.			or GRAY	24 25	Color of Wire	W/G	GR/L	L/B
Conne Conne Termii	Connector No.	Connector Name	Connector Cole	H.S.	Terminal No.	24	31	33

			19 20 39 40			
×t*	COMBINATION METER	WHITE	9 10 11 12 13 14 15 16 17 18	Signal Name	PKB	8P/R OUT
M24	1	<b>├</b>	6 7 8 8 26 27 28 2	Color of Wire	G/R	W//
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	26	31

					ſ	
	Sonnector Name DATA LINK CONNECTOR	TE	11 12 13 14 15 16 3 4 5 6 7 8	Signal Name	M CAN L	M CAN H
. M22	me DAT	lor WH	9 10 1	Color of Wire	တ	œ
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No.	က	=

ABNIA1581GB

Revision: November 2009 AV-621 2010 Maxima

	AV CONTROL UNIT (WITHOUT NAV! WITH REAR CONTROLS)		7 28 29 31	Signal Name	NBUS LH-	NBUS LH+	NBUS RH-	NBUS RH+	NBUS SHIELD	DATA GND	***	REQI(TO HU)	RX(TO HU)	TX(FROM HU)	ı	
M43		or WHITE	22 24	Color of Wire	M/L	Y/L	Y/G	BR/L	SHIELD	SHIELD	•	Œ	В	ر ق	I	-
Connector No.	Connector Name	Connector Color	画 H.S.	Terminal No.	21	22	23	24	25	26 8	27	28	59	30	31	

Terminal No. Wire	Color of Wire	Signal Name
55	SHIELD	SHELD
56	٨	IT DISP
57	*	ΛP
58	ВВ	INV GND
59	<b>&gt;</b>	INV VCC

Signal Name	ana	∄				1	I	STRG SW GND	STRG SW B	j	I	BAT	GND	
Color of Wire	1	R/L	ı	ı	ı	ı	ı	L/B	GR/L	ı	1	Y/R	В	
Terminal No.	80	6	10	11	12	13	14	15	16	17	18	19	20	

Signal Name	RGB SYNC GND	YS	DISP IT	랖	SIG GND	SIG VCC	ı	COMP OUT SHIELD	RGB GND	I	ı	l	**
Color of Wire	SHIELD	8	ВВ	α	LG	0	-	SHIELD	SHIELD	1	ı	-	ı
Terminal No. Wire	42	43	44	45	46	47	48	49	50	51	52	53	54

5	AV CONTROL UNIT (WITHOUT NAV! WITH REAR CONTROLS)	WHITE	4 5 6 7 8 9	13 14 15 16 17 1	Signal Name	ı	ana a	**	l		STRG SW A	ACC
M42			7 6	12	Color of Wire	ı	ı	ı	1	ı	M/G	٨/٨
Connector No.	Connector Name	Connector Color		H.S.	Terminal No. Wire		2	3	4	5	9	7

MAA	AV CONTROL UNIT (WITHOUT NAVI WITH REAR CONTROLS)	WHITE		43     42     41     40     39     38     37     36       55     54     53     52     51     50     49     48	Signal Name	COMP OUT+	COMP OUT-	æ	5	Œ	BGB SVNC
-		├	-	46 45 44 43 58 57 56 55	Color of Wire	≶	മ	8	œ	മ	c
Connector No	Connector Name	Connector Color		S <sub>2</sub>	Terminal No.	36	37	38	39	40	41

ABNIA1582GB

Signal Name	ı	RV CAM SIG	CAM GND	COMP2 GND	COMP1 IN SHIELD	COMP1 IN-	ana.
Color of Wire	ı	ب	V/G	SHIELD	SHIELD	^	ı
Terminal No. Wire	69	70	71	72	22	74	75

Signal Name	1	I	ı	1	ı	COMP2 IN+	COMP1 IN+	ł	I
Color of Wire	ı	į	ı	ı	ı	Μ	n D	ı	ı
Terminal No. Wire	09	61	62	63	64	99	99	29	89

Connector No.	M45
Connector Name	AV CONTROL UNIT (WITHOUT NAVI WITH REAR CONTROLS)
Connector Color WHITE	WHITE
H.S. 67 66	75 66 65 64 63 62 61 60 75 74 73 72 77 70 69 68

Signal Name	ı	AUX AUDIO RH+	AUX AUDIO LH+	AUX GND	I	nam	I	ı	ı	CN(DVD) EJECT	IGN	REVERSE SIG	PKB SIG	SPEED 8P
Color of Wire	ı	В	3	œ	ı	ı	1	1	ı	SB	g	P/B	G/R	V/W
Terminal No. Wire	94	95	96	97	86	66	100	101	102	103	104	105	106	107

Signal Name	VOICE SHIELD	ı	1	ı	SW GND	CAN-H	CAN-L	M-CAN H	M-CAN L	M CAN2 H	M CAN2 L	*	1
Color of Wire	SHIELD	ı	ı	ı	ВВ	۳	a.		۵	Œ	Ø	ı	1
Terminal No.	81	82	83	84	85	98	87	88	68	06	91	92	93

Connector No.	M46	9
Connector Name		AV CONTROL UNIT (WITHOUT NAV! WITH REAR CONTROLS)
Connector Color		WHITE
H.S.		17
91 90 89 88 87 8 107 106 105 104 103 11	102 101 100	83 82 81 80 79 78 77 76 99 98 97 96 95 94 93 92
Terminal No.	Color of Wire	Signal Name
76	1	and the state of t
7.7	1	
78	ı	1
62	>-	TEL VOICE(TO IT)-
80	ВВ	TEL VOICE(TO IT)+

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Connector No.		M51
Connector Name		TWEETER LH (WITH BOSE AUDIO SYSTEM)
Connector Color		BROWN
H.S.	2 1	
Terminal No. Wire	Color o Wire	f Signal Name
-	១	1
c	a >	***

ŧ	1		Signal Name	1881	ŧ	1	1	1	I	ł
<u></u>	Β/Y		Color of Wire	В	W	Œ	SHIELD	FG	۸	SHIELD
	2		Terminal No.	0	10	=	12	21	22	23

Connector No.	M48
Connector Name	AV CONTROL UNIT (WITHOUT NAVI WITH REAR CONTROLS)
Connector Color GRAY	GRAY
H.S.	[33[44]33]
Terminal No Color of	or of Signal Name

				,	,	
7.7.7.7.7.7	ANT +B			WIRE TO WIRE	WHITE	8 7 6 5 4 3 2 1 20 19 18 17 18 17 18 14 13
α	В		. M85	<b> </b>		11 10 9 8
345	35		Connector No.	Connector Name	Connector Color	(12) 12 12 12 12 12 12 12 12 12 12 12 12 12

Г																
7	AV CONTROL UNIT (WITHOUT NAV! WITH REAR CONTROLS)	WHITE	116 117 118 119	Signal Name	RR RH PRE-	FR RH PRE+	AMP ON	SHIELD	RR LH PRE+	FR LH PRE+	AR AH PRE-	FR RH PRE-		ana a	RR LH PRE-	FR LH PRE-
. M47			114 115	Color of Wire	>	മ	B/P	SHIELD	W/R	Ø	re	Μ	1	ı	M/L	Œ
Connector No.	Connector Name	Connector Color	斯 H.S.	Terminal No.	108	109	110	111	112	113	114	115	116	117	118	119

	BOSE			۵		
2	TWEETER RH (WITH BOSE AUDIO SYSTEM)	BROWN		Signal Name	ı	ı
. M52			2	Color of Wire	9	GR/L
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No. Wire		2
						^ P

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	Connector Color WHITE	Terminal No.   Color of   Signal Name     1	A B C D
	Connector Color WHITE	Terminal No.   Color of   Signal Name   2   BR	F G H
Connector No. M88  Connector Name SPIRAL CABLE  Connector Color GRAY	H.S. [2019]18 17 16 15 14 13	Terminal No.   Color of   Signal Name   14   W   REMOTE A   15   L   REMOTE B   17   BR   GND	K L M

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Connector No. M130
Connector Name CENTER SPEAKER
Connector Color BROWN

,		,	,			,	,
Signal Name	В	RGB SYNC	۷P	RGB SYNC GND	DISP ITM	BUS GND	ee.
Color of Wire	Α	ග	3	SHIELD	BR	SHIELD	•
Terminal No. Wire	18	19	20	21	22	23	24

,				-														
	Signal Name	ı	I		Signal Name	COMP IN SHIELD	9	RGB GND	HP	YS		IT DISP	I	INV GND	SIG GND	COMP IN+		Œ
	Color of Wire	B/P	O/B		Color of Wire	SHIELD	æ	SHIELD	В	В	ł	>	ı	ВВ	16	W	-	В
(南) H.S.	Terminal No.		2		Terminal No.	5	9	2	8	6	10	11	12	13	14	15	16	17

12	WIRE TO WIRE	47		Signal Name	***	***		***
. M112		lor GRAY	0 4 0	Color of Wire	а	œ	×	ŋ
Connector No.	Connector Name	Connector Color	H.S.	Terminal No. Wire	-	2	က	4

DISPLAY UNIT (WITH COLOR DISPLAY WITHOUT COLOR DISPLAY WITHOUT WAVI)   MAVI)   MAVI)	Connector No.	. M141	H
1 0 8 1	Connector Na		PLAY UNIT (WITH OR DISPLAY WITHOUT (1)
20 19 18	Connector Co	lor WH	<b>=</b>
	Š. 24 12	22 21	7 6 5 4 3
m ≻ O m	Terminal No.	Color of Wire	Signal Name
> O @	-	В	GND
0 8	2	>	INV VCC
80	က	0	SIG VCC
	4	В	COMP IN-

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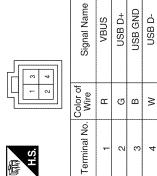
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Connector No.   M209	Connector No. M210	Connector Name WIRE TO WIRE	Connector Color GRAY	Ø	0 6	Terminal No. Wire Signal Name		n		3 W ==	B +		
O WIRE  Signal Nan	M209			S. 4 5 7 8 7 8 8 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9		AUX AUDIO RH+	B ALX GND		> _	2 3	> >		
S E S S S S S S S S S S S S S S S S S S	Connector No. M200	ne WIRE TO WIRE	Connector Color WHITE	3 4 5 6 7 8 9 10 11 15 16 17 18 19 20 21 22 23	Terminal No. Wire Signal Name				SHIELD -			SHIELD -	

110	501	Connector No.	M502	Zi.	
-	IRE TO WIRE	Connector Name ANTENNA AMP.	le ANT	NTENNA AMP.	
100	AAY	Connector Color   GRAY	or GR/	<del>/</del> /	
1 111		画 H.S.	1 2		
Non I	Signal Name	Terminal No. Wire	Solor of Wire	Signal Name	
	anne	*	В	1	
	ı	a	В	1	

Connector No.	Connector Name WIF	Connector Color GR	H.S.	Colo	lerminal No. Wire		(	
M211	USB INTERFACE	GREEN	2 4 3		or of Signal Name		۶ VBUS	
Connector No.	Connector Name USB INTERFACE	Connector Color   GREEN	所 H.S.		Terminal No. 1065	I A A	<u>a</u>	

Connector No. | M211

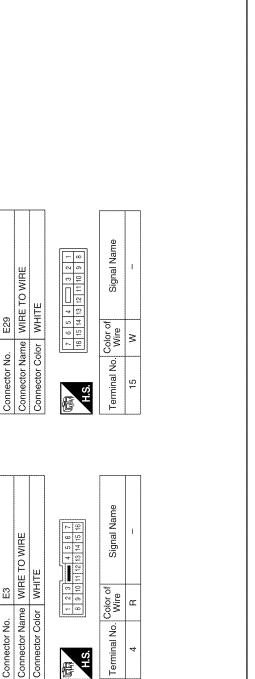


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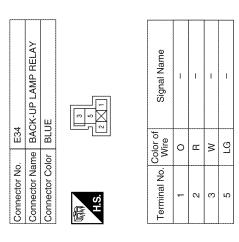
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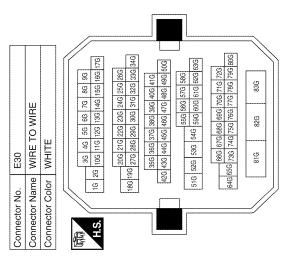
Connector No.



Terminal No.



Signal Name	Ē	I	1	ı	
Color of Wire	ВВ	O.	GR	BR	>
Terminal No.	13G	24G	53G	54G	64G



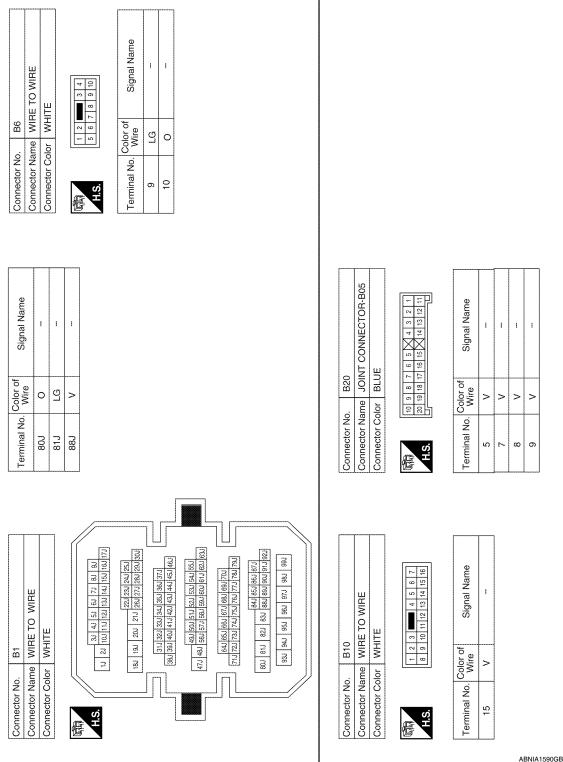
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BROWN BROWN  BROWN  Signal Name  Fe Signal Name  Fe Signal Name	В
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	D
Connector No. Connector Name Connector Color Ferminal No. WW	Е
	F
Signal Name	G
T T T T T T T T T T T T T T T T T T T	Н
	I
Connector No.  Connector Name Connector Color  Terminal No.  Connector Name Connector Name Connector Color  Terminal No.  Termin	J
	K
Signal Name  Signal Name  WIRE  Signal Name  Signal Name	L
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mector No mector No minal No mector Co S.	
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Revision: November 2009 AV-629 2010 Maxima



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Connector Maine	WHILE	Connector Name		- O Wine	41	4	GR	and a
	311114	Connector Color	N WELLE	2 E	-	15	۵	ŀ
					16	9	0	1
1 2 3	4 5 6 7 8 9 10 11 12	NATION OF THE PROPERTY OF THE			17	7	W/R	•
13 14 15	16 17 18 19 20 21 22 23	Z.E.			18	8	B/R	ı
Color		n 5	6 7 8 9 1	10 11 12 13 14 15 16	19		SHIELD	ı
Terminal No. Wire	e Signal Name	12 02 61 91	62 64 69	7   70   73   30   31	20	0	W/L	1
4 R	***	O	Color of	O Company of Miles Company	21		GR/V	4
5	an.	l erminal No.	Wire	Signal Name	22		SHIELD	ase
6 SHIELD	-	ß	ВВ	1	23	3	BR	ı
8 BR	-	9	3	-	24	4	>-	ł
9 SHIELD	- 0	7	>	I	25		SHIELD	1
10 Y	i e	8	മ	1	26	9	>	1
13 BR	and a	10	œ	q	27	7	9	F
21 V	- mar	-		**	28		SHIELD	ı
22 GR		12	>	ì	29		SB	***
23 0	an .				30	0	Œ	***
					31	ļ	0	
					32	2	۵	ł
Connector No.	B103	Terminal No.	Color of	Signal Name	Connector No.	tor No.	LL	
Connector Name	WIRE TO WIRE		MARIE		Connec	Connector Name		REAR SUBWOOFER LH
Connector Color	BROWN	∞	≥	I	Connec	Connector Color	WHITE	151
		თ —	<u> </u>	ı				
	7 2 2 7	10	œ	I	E			
- &	10 11 12 13 14 15	7-	ВВ	1	U I		2 1	1
Ć.		12	g	ana				7]
Terminal No. Wire	of Signal Name	13	۔			-	olor of	
-		14	>	ı	Terminal No.		Wire	Signal Name
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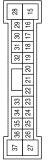
Revision: November 2009 AV-631 2010 Maxima

Signal Name	RR RH-IN (WITH COLOR DISPLAY)	RR RH+IN (WITH COLOR DISPLAY)	RR DOOR LH+ OUT	INST CTR TWDR+ OUT	INST CTR TWDR- OUT	FR DOOR RH+ OUT	FR DOOR RH- OUT	FR RH+IN (WITH COLOR DISPLAY)	FR RH-IN (WITH COLOR DISPLAY)	FR LH+IN (WITH COLOR DISPLAY)	FR LH-IN (WITH COLOR DISPLAY)
Color of Wire	91	>	ŋ	>	a.	α	BR	M/L	GR/V	W/R	B/B
Terminal No.	25	26	28	29	30	31	32	33	34	32	36

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

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

Connector Color



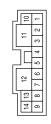
Color of

Signal Name	I	ŀ
Color of Wire	œ	BR
Terminal No.		2

Signal Name	RR DOOR LH- OUT	FR DOOR LH+ OUT	FR DOOR LH- OUT	AMP ON	RR LH-IN (WITH COLOR DISPLAY)	RR LH+IN (WITH COLOR DISPLAY)	
Color of Wire		M	В	SB	<b>&gt;</b>	BR	
Terminal No. Wire	15	18	19	20	23	24	

Signal Name	GND	LH WOOFER- OUT	RR DOOR RH- OUT	BAT	BAT	GND	LH WOOFER+ OUT	RR DOOR RH+ OUT
Color of Wire	В	Ь	0	SB	GR	В		re
Terminal No. Wire	7	8	6	10	11	12	13	14

Connector No.	B110
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN
14 13	13 12 11 10



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Signal Name	FR TWDR LH+ OUT	FR TWDR LH- OUT	FR TWDR RH- OUT	FR TWDR RH+ OUT	RH WOOFER+ OUT	RH WOOFER- OUT
Color of Wire	re	>	Α	9	œ	ВВ
Terminal No. Wire	-	2	ဗ	4	5	9

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1		WIRE TO WIRE	ITE		321	Signal Name	1	ı	1	1
-	ם בי		or WHITE		4	Color of Wire	▄	В	0	>
Old rotton	COLINECTOI INC.	Connector Name	Connector Color		H.S.	Terminal No. Wire	-	2	က	4
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Connector No.		B120
Connector Name		WIRE TO WIRE
Connector Color		GRAY
昼		
H.S.	6	5 1
Terminal No.	Color of Wire	Signal Name
-	G	ı
2	н	ı
ဗ	Ы	ı
4	٦	1
5	SHIELD	-
9	SHIELD	- (

	SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER	TE	27 28 29 30 31 33 35		Signal Name	SAT LCH (-)	SAT LCH (+)	SAT RCH (-)	SAT RCH(+)	REQ1 (SAT->COMB)	TXD (SAT->COMB)	RXD (COMB->SAT)	BAT	HARN EARTH	ACC
. B111		lor WHITE	22 24 26 21 23 25 2	Join of the second	Wire	BB	8	>	В	В	>	Γ	۵	B	GR
Connector No.	Connector Name	Connector Color	是 H.S.		Terminal No.	21	22	23	24	28	29	30	32	35	36

Signal Name	1	-	CAN H2	ı	CAN L2
Color of Wire	ı	_	В	1	G
Terminal No. Wire	38	68	40	41	42

80	BLUETOOTH CONTROL UNIT (WITH COLOR DISPL. AND REAR CONTROLS)	正	337 39 41 33 40 42	Signal Name	CAN H1	CAN L1	CAN SHIELD 1	ı
. B128		lor WHITE	38 37	Color of Wire	٦	Д	SHIELD	1
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	35	36	37	38

2	JOINT CONNECTOR-B21	ПЕ		Signal Name	_	1
. B122		lor   WH	0 4 3 2 1	Color of Wire	SHIELD	В
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No. Wire	2	3

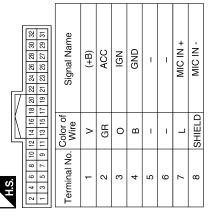
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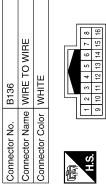
Revision: November 2009 AV-633 2010 Maxima

Signal Name	AUDIO OUT (+)	AUDIO OUT (-)	I	I	I	I	ı	-	1	-	I	_	_	_	=	-	I	_	_	SPEED	MIC POWER
Color of Wire	BR	>	ı	1	ı	ı	1	1	1	-	1	1	_	1	-	-	1	-	1	BR	н
Terminal No.	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

Signal Name	_	ı	ı	_	_	_	-
Color of Wire	M	SHIELD	>	W	В	9	В
Terminal No.	1	2	4	9	2	6	10

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

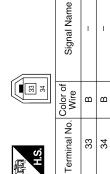








Connector No.	B130
Connector Name	Connector Name   BLUETOOTH CONTROL
	UNIT
Connector Color	BLACK



4	WIRE TO WIRE	ПЕ	7 7 8 8 3 4 4 9 10	Signal Name	ı	1
B134	_	or WHITE	5 6 7	Color of Wire	LG	0
Connector No.	Connector Name	Connector Color	闻 H.S.	Terminal No. Wire	6	10

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Connector No.         B400         Connector No.         B401           Connector Name         WIRE TO WIRE	Connector Color   GRAY   Connector Color   WHITE	H.S. [12] 34 H.S. [12] 4	Terminal No. Color of Signal Name Terminal No. Wire Signal Name	1 G - 1 R/L -	2 B - 1	3 BR -	4 L - 4 V/Y	5 SHIELD -	C
B139 WIRE TO WIRE	WHITE	2 3 4	r of Signal Name				1		
	Connector Color	H.S.	Terminal No. Wire	τ Π	2 W	3 B	4 SHIELD		

	Connector Name   REAR CONTROL SWITCH			Signal Name	**	
B404	ne REAR	or GRAY		Color of Wire	Œ	ŋ
Connector No.	Connector Nar	Connector Color	所 H.S.	Terminal No.	7	8

	REAR CONTROL SWITCH	ш		Signal Name	I	ı
. B403	<u></u>	lor WHIT		Color of Wire	_j	Δ.
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No.	2	9

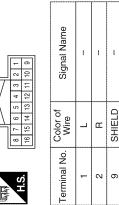
Connector No.	). B402	7.
Connector Name		REAR CONTROL SWITCH
Connector Color	olor WHITE	TE
南 H.S.		4
Terminal No.	Color of Wire	Signal Name
-	٨/٨	ı
2	R/L	1
3	BR	ı
4	В	ı

Color of Wire	λ/Λ	R/L	BR	В
Terminal No.		2	3	4

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Connector No.	<b>R</b>
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	Connector Color WHITE





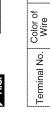


Connector Name WIRE TO WIRE

T100

Connector No.





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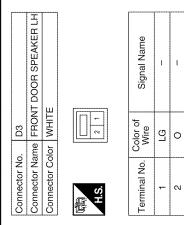
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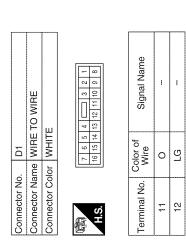
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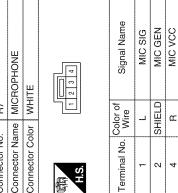
Signal Name

Connector Color WHITE	olor WHITI	818
赋制 H.S.	4 3 2	
Terminal No.	Color of Wire	Signal Name
-	œ	ı
2	Μ	ľ
ო	മ	ı
4	SHIELD	1









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	А
Signal Name  Signal Name  Signal Name	В
	С
Connector No.   D201	D
Connector No. Connector No. Connector No. Connector No. Connector No. Connector No. Terminal No. 9 9 10 10	Е
	F
Connector No. D103  Connector Color WHITE  Connector Color of WHITE  Terminal No. Wire Signal Name  1 LG	G
P103 PHONT DOOF WHITE Or of fire Signature BROWN Or of Signature Carroll Or of Signature Signatu	Н
No. D103  No. D103  No. Color of Color of WHITE  Color BROW  No. D302  Color of Wire  LG  O  O  O  O  O  O  O  O  O  O  O  O  O	I
Connector No. D103 Connector Name FRONT Connector Color WHITE  1 LG 2 O  Connector Name Wire 1 LG 2 O  Connector Name Wire SYSTE Connector Color of WITH  Connector Name Wire 1 LG 2 O  Terminal No. Wire 1 LG 2 O	J
	K
D101 WHRE TO WIRE WHITE  WHITE  O	L
Connector No.  Connector Color  Connector Color  A.S.  Connector No.	AV
Connector No Conne	0
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ndex	

DTC Index

Self-diagnosis results display item

# **AV CONTROL UNIT**

# < ECU DIAGNOSIS >

# [BOSE W/ COLOR W/ RR CTL]

200 211 (0110010		
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	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	AV-563, "Description"

### **DISPLAY UNIT**

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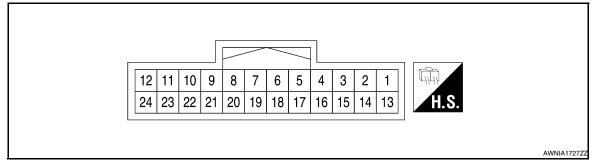
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# **DISPLAY UNIT**

Reference Value

### TERMINAL LAYOUT



### PHYSICAL VALUES

	minal e color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
1 (B)	Ground	Ground	_	Ignition switch ON	_	0V	
2 (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.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4	
7	_	Shield		_	_	_	
8 (R)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	_	(V) 4 0 → 20µs SKIB3601E	

Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
					At RGB image displayed	5V	
9 (B)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At rear view camera image displayed	(V) 6 4 2 0 → + 200 \(\mu\) S PKIB4948J	
11 (Y)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display- brightness	(V) 6 4 2 0 • • • 1ms	
13 (BR)	Ground	Inverter ground	_	Ignition switch ON	_	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	(V) 0. 4 0 0 -0. 4 → 40μs SKIB2251J	
17 (B)	Ground	RGB signal (R: red)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4 -0. 8 -0. 8 -	
18 (W)	Ground	RGB signal (B: blue)	Input	Ignition switch ON	Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	(V) 0.4 0.4 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1	

### **DISPLAY UNIT**

### < ECU DIAGNOSIS >

# [BOSE W/ COLOR W/ RR CTL]

Terminal Description		Description			Condition	Reference value	Α
+	_	Signal name	Input/ Output		Condition	(Approx.)	
19 (G)	Ground	RGB synchronizing signal	Input	Ignition switch ON	_	(V) 4 0	В
						\$\frac{1}{20\tilde{\psi}\sqrt{\psi}}\$\$ SKIB3603E	D
20 (W)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch On	_	(V) 4 0 + 4ms SKIB3598E	E
21	_	Shield	_	_	_	_	G
22 (BR)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display- brightness	(V) 6 4 2 0  +-1ms  PKIB5039J	Н
23	_	Shield	_	_	_	_	

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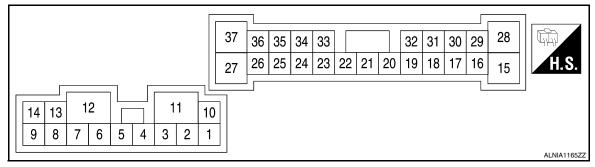
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# BOSE SPEAKER AMP

Reference Value

### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
1 (LG)	2 (V)	Audio signal tweeter LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
4 (G)	3 (W)	Audio signal tweeter RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
5 (R)	6 (BR)	Audio signal subwoofer RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms 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**

# [BOSE W/ COLOR W/ RR CTL]

	minal e color)	Description		Condition		Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
13 (L)	8 (P)	Audio signal subwoofer LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
14 (LG)	9 (O)	Audio signal rear door RH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 ** 2ms SKIB3609E	
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	(V) 1 0 -1 → 2ms SKIB3609E	
26 (V)	25 (LG)	Audio signal rear RH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 → 2ms SKIB3609E	
28 (G)	15 (L)	Audio signal rear door LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	
29 (V)	30 (P)	Audio signal center speak- er	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E	

# **BOSE SPEAKER AMP**

### < ECU DIAGNOSIS >

# [BOSE W/ COLOR W/ RR CTL]

Terminal (Wire color)		Description		Condition		Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
33 (W/L)	34 (GR/V)	Audio signal front RH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 → 2ms SKIB3609E	
35 (W/R)	36 (B/R)	Audio signal front LH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 → 2ms SKIB3609E	

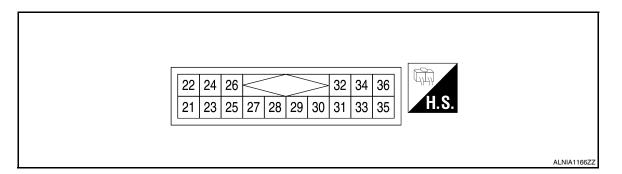
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# **SATELLITE RADIO TUNER**

Reference Value



### PHYSICAL VALUES

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

# **SATELLITE RADIO TUNER**

### < ECU DIAGNOSIS >

# [BOSE W/ COLOR W/ RR CTL]

Tern	ninal	Description			Reference value (Approx.)	
+	_	Signal name	Input/ Output	Condition		
30 (L)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	(V) 10 0 -10 + 1ms SKIA9301J
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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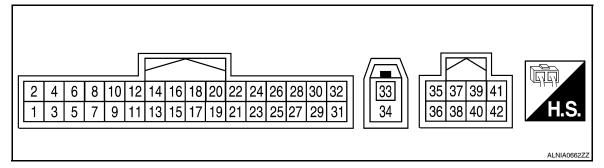
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# **BLUETOOTH CONTROL UNIT**

Reference Value

### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	ninal color)	Description		0 111		Reference value	
+	-	Signal name	Input/ output		Condition	(Approx.)	
1 (V)	Ground	Battery power	Input	_	1	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	(V) 1 0 -1 + 2ms SKIB3609E	
28 (BR)	Ground	Vehicle speed sig- nal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 15 10 10 + 20ms PKIA1935E	
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	
+	_	Signal name	Input/ output	Condition		(Approx.)	
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

## **AUDIO SYSTEM**

Symptom	Possible cause	Reference page
Inoperative	AV control unit power circuit     AV control unit	• <u>AV-565</u> • <u>AV-322</u>
Steering switch does not operate	Steering switch     AV control unit	• <u>AV-597</u> • <u>AV-322</u>
All speakers do not sound	<ul> <li>AV control unit</li> <li>AV control unit power circuit</li> <li>BOSE speaker amp. ON signal</li> <li>BOSE speaker amp. power/ground circuit</li> <li>BOSE speaker amp.</li> </ul>	<ul> <li>AV-322</li> <li>AV-565</li> <li>AV-596</li> <li>AV-568</li> <li>AV-334</li> </ul>
One or several speakers do not sound	<ul><li>Front door speaker</li><li>Tweeter</li><li>Center speaker</li><li>Rear door speaker</li><li>Subwoofer</li></ul>	<ul> <li>AV-582</li> <li>AV-585</li> <li>AV-588</li> <li>AV-590</li> <li>AV-593</li> </ul>

## CD

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

## SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	Satellite radio tuner power or ground circuit     Satellite radio tuner communication circuit     Satellite radio tuner	• <u>AV-569</u> • <u>AV-599</u> • <u>AV-335</u>
Right or left channel does not sound	Satellite radio tuner right channel audio signal circuit     Satellite radio tuner left channel audio signal circuit     Satellite radio tuner	

## HANDS-FREE PHONE

Symptom	Possible cause	Reference page
Inoperative	Bluetooth control unit power and ground circuit     Bluetooth control unit	• <u>AV-571</u> • <u>AV-344</u>
Steering switch does not operate	Steering switch     Bluetooth control unit	• <u>AV-337</u> • <u>AV-344</u>
Voice activated control does not operate	Microphone     Steering switch     Bluetooth control unit	<ul><li>AV-342</li><li>AV-337</li><li>AV-344</li></ul>

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### NORMAL OPERATING CONDITION

[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.		<ul><li>Rear defogger coil malfunction</li><li>Open circuit in printed heater</li><li>Poor ground of antenna feeder line</li></ul>
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		<ul> <li>Ground wire of body parts</li> <li>Ground due to improper part installation</li> <li>Wiring connections or a short circuit</li> </ul>

# **PRECAUTION**

## **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRF-TFNSIONER"

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:0000000005885980

#### 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.
- Perform the necessary repair operation.

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## **PRECAUTIONS**

#### < PRECAUTION >

#### [BOSE W/ COLOR W/ RR CTL]

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

## **Precaution for Trouble Diagnosis**

INFOID:0000000005522916

### AV COMMUNICATION SYSTEM

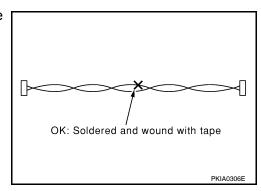
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

## Precaution for Harness Repair

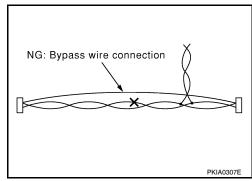
INFOID:0000000005522917

#### 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/ RR CTL]

# **PREPARATION**

## **PREPARATION**

## **Commercial Service Tools**

Tool name		Description
		Loosening bolts and nuts
Power tool		
	PBIC0191E	

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INFOID:0000000005522918

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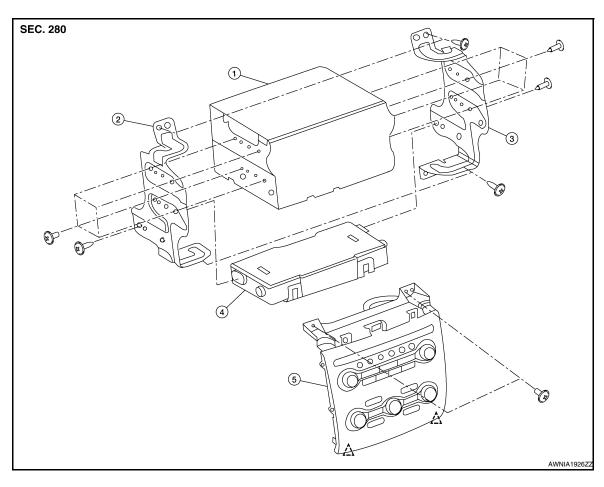
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INFOID:0000000005522919

# **ON-VEHICLE REPAIR**

## AV CONTROL UNIT

### Removal and Installation



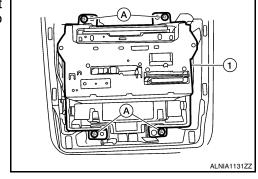
- 1. Audio unit
- A/C auto amp.

- Audio unit bracket LH
- assembly attached)
- Audio unit bracket RH

#### **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).



## **AV CONTROL UNIT**

### < ON-VEHICLE REPAIR >

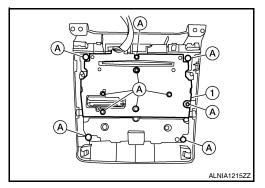
[BOSE W/ COLOR W/ RR CTL]

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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## **MULTIFUNCTION SWITCH**

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

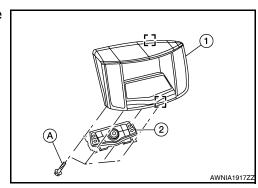
## **MULTIFUNCTION SWITCH**

## Removal and Installation

#### INFOID:0000000005522920

## **REMOVAL**

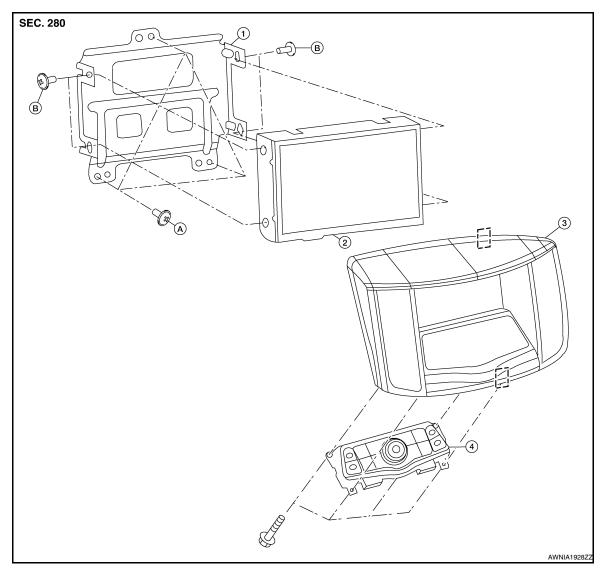
- 1. Remove cluster lid D. Refer to IP-11, "Exploded View".
- 2. Remove the four multifunction switch screws (A) and remove the multifunction switch (2) from cluster lid D (1).
  - [ ]: metal clip



### **INSTALLATION**

## **AUDIO DISPLAY UNIT**

## Removal and Installation

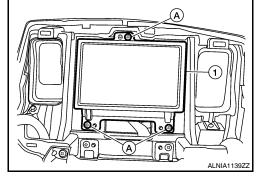


- 1. Audio display unit bracket
- 4. Multifunction switch
- [ ] Metal Clip

- 2. Audio display unit
- A. Audio display unit bracket screws
- Cluster lid D
- B. Audio display unit screws

## **REMOVAL**

- Remove the cluster lid D. Refer to <u>IP-12, "Removal and Installation"</u>.
- 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/ 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**

## **USB CONNECTOR**

### < ON-VEHICLE REPAIR >

## [BOSE W/ COLOR W/ RR CTL]

## **USB CONNECTOR**

## Removal and Installation

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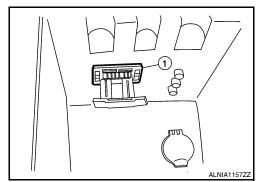
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## **REMOVAL**

- 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**

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[BOSE W/ COLOR W/ RR CTL]

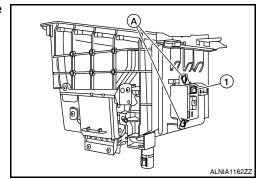
## **AUXILIARY INPUT JACKS**

## Removal and Installation

#### INFOID:0000000005522923

## **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**

## **FRONT TWEETER**

### < ON-VEHICLE REPAIR >

## [BOSE W/ COLOR W/ RR CTL]

## FRONT TWEETER

## Removal and Installation

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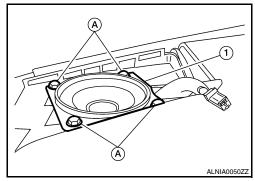
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#### **REMOVAL**

- 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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[BOSE W/ COLOR W/ RR CTL]

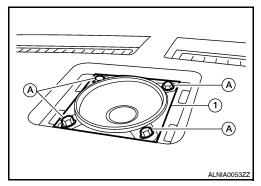
## **CENTER SPEAKER**

## Removal and Installation

#### INFOID:0000000005522925

### **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**

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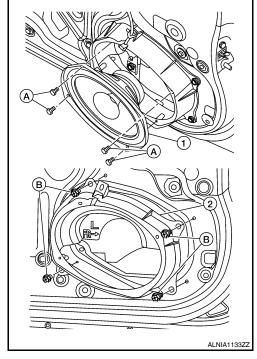
INFOID:0000000005522926

## FRONT DOOR SPEAKER

## Removal and Installation

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/ RR CTL]

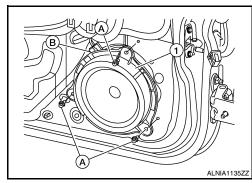
## **REAR DOOR SPEAKER**

## Removal and Installation

#### INFOID:0000000005522927

#### **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**

## [BOSE W/ COLOR W/ RR CTL]

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INFOID:0000000005522928

## **SUBWOOFER**

## Removal and Installation

SEC. 284

Subwoofer LH

2. Subwoofer RH

A. Subwoofer screws

B. Subwoofer connectors

### **REMOVAL**

- 1. Remove the rear parcel shelf finisher. Refer to <a href="INT-26">INT-26</a>, "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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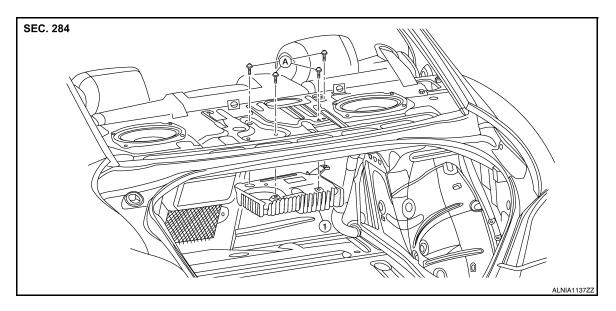
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## **BOSE SPEAKER AMP**

## Removal and Installation





1. Bose speaker amp.

A. Screws

### **REMOVAL**

- 1. Disconnect the battery negative terminal.
- 2. Remove the rear parcel shelf. Refer to <a href="INT-26">INT-26</a>, "Removal and Installation".
- 3. Remove the Bose speaker amp. screws.
- 4. Remove the trunk upper finisher. Refer to <a href="INT-35">INT-35</a>, "Exploded View".
- 5. Disconnect the Bose speaker amp. connectors and remove the Bose speaker amp.

#### **INSTALLATION**

## SATELLITE RADIO TUNER

### < ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

## SATELLITE RADIO TUNER

## Removal and Installation

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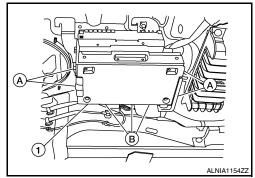
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#### **REMOVAL**

- 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 <a href="INT-26">INT-26</a>, "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 W/ RR CTL]

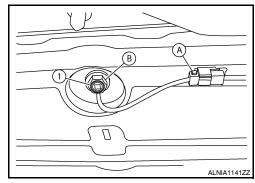
## SATELLITE RADIO ANTENNA

## Removal and Installation

#### INFOID:0000000005522930

### **REMOVAL**

- 1. Lower the headliner at the rear. Refer to <a href="INT-32">INT-32</a>, "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**

## **STEERING SWITCH**

### < ON-VEHICLE REPAIR >

## [BOSE W/ COLOR W/ RR CTL]

## STEERING SWITCH

## Removal and Installation

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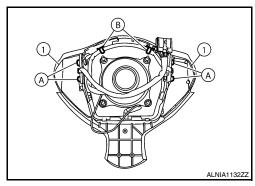
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#### **REMOVAL**

- 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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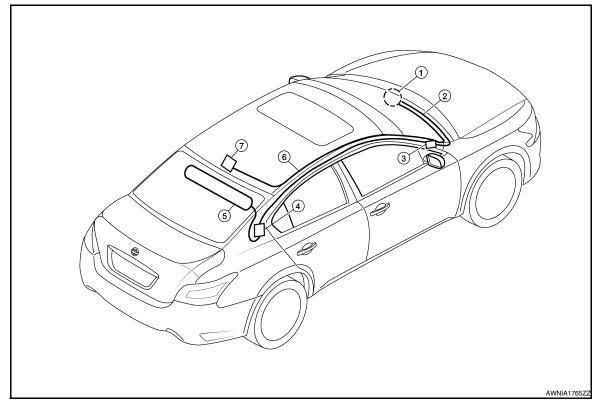
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## **AUDIO ANTENNA**

## Location of Antenna



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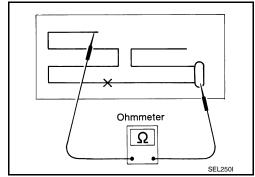


- 1. AV control unit
- 4. Antenna amp.
- 7. Satellite radio antenna
- 2. AV control unit antenna feeder
- 5. Window antenna
- 3. In-line connectors M103, M501
- 6. Satellite radio antenna feeder

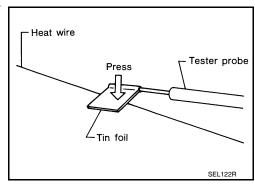
## Window Antenna Repair

### **ELEMENT CHECK**

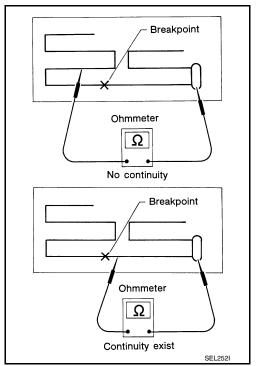
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



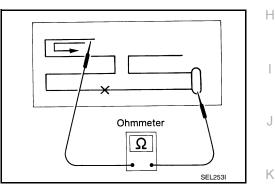
 When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



2. 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

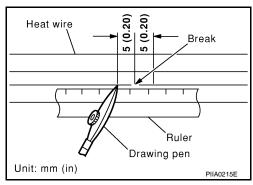
#### REPAIRING PROCEDURE

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

#### NOTE:

Shake silver composition container before use.

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



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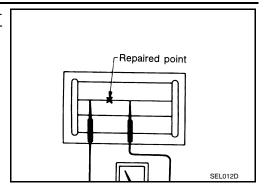
## **AUDIO ANTENNA**

### < ON-VEHICLE REPAIR >

#### [BOSE W/ COLOR W/ RR CTL]

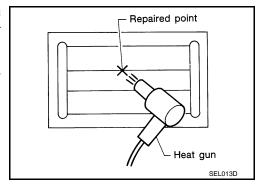
After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

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:0000000005522935

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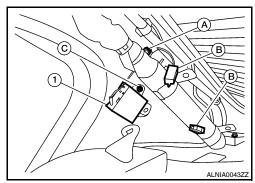
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#### **REMOVAL**

- 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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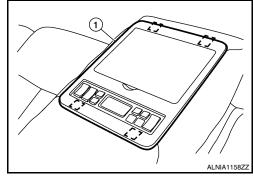
## REAR AUDIO REMOTE CONTROL UNIT

## Removal and Installation

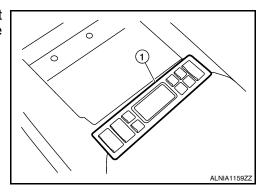
#### **REMOVAL**

- 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**

## **MICROPHONE**

## Removal and Installation

INFOID:0000000005522936

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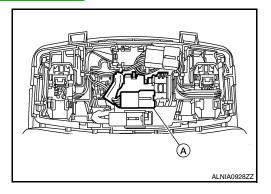
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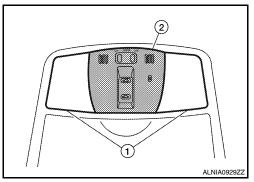
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## **REMOVAL**

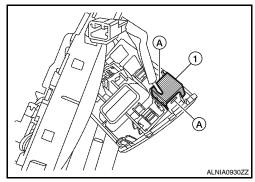
- 1. Remove the map lamp assembly. Refer to <a href="INL-97">INL-97</a>, "Removal and Installation".
- 2. Detach the microphone connector (A).



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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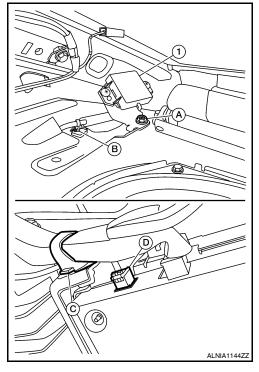
## TEL ANTENNA

## Removal and Installation

#### INFOID:0000000005522941

#### **REMOVAL**

- 1. Remove the rear parcel shelf. Refer to <a href="INT-26">INT-26</a>, "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**

## **BLUETOOTH CONTROL UNIT**

### < ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ RR CTL]

## **BLUETOOTH CONTROL UNIT**

## Removal and Installation

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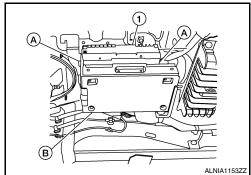
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#### **REMOVAL**

- 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 <a href="INT-26">INT-26</a>, "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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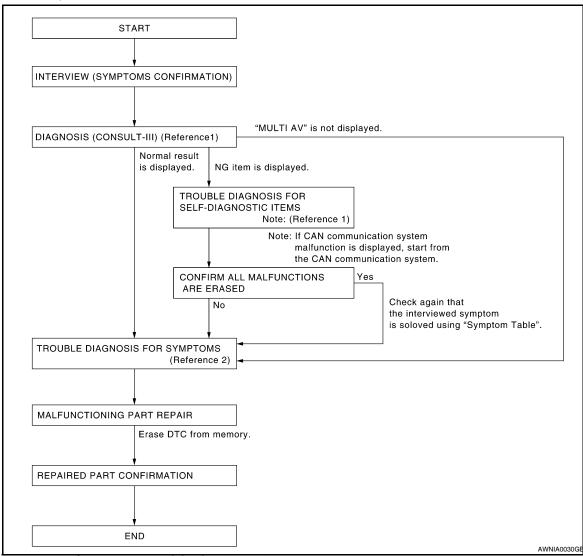
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## **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

#### **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)

Connect CONSULT-III and perform "SELF-DIAGNOSIS" for "MULTI AV".

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 [BOSE W/ COLOR W/ NAVI W/RR CTL] < BASIC INSPECTION > Is any DTC No. displayed? Α YES >> GO TO 3. NO >> GO TO 4. $3. {\sf CHECK}$ SELF-DIAGNOSIS RESULTS (CONSULT-III) Check the DTC No. indicated in the self-diagnosis results. Perform the relevant diagnosis referring to the DTC No. list. Refer to AV-804, "DTC Index". 2. NOTE: Start with the diagnosis for the CAN communication system if "CAN COMM CIRCUIT [U1000] or CONTROL UNIT (CAN) [U1010]" is displayed. D >> 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. F ${f 5}.$ 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. Н >> GO TO 6. **6.**CHECK AFTER REPAIR Perform self-diagnosis for "MULTI AV" with CONSULT-III after repairing or replacing the malfunctioning Check if any DTC No. is displayed in the self-diagnosis results. Is any DTC No. displayed?

YES >> GO TO 3.

1ES >> GO 10 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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### 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:0000000005522895

#### 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

## 1. SAVING VEHICLE SPECIFICATION

### (E)-CONSULT-III Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>AV-680, "CONFIGURATION (AV CONTROL UNIT): Description"</u>.

#### 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

#### P-CONSULT-III Configuration

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to <u>AV-681</u>, "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:0000000005522892

- 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]

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< BASIC INSPECTION >	[BOSE W/ COLOR W/ NAVI W/KK CTL]
Function	Description
READ CONFIGURATION	<ul><li>Reads the vehicle configuration of current AV control unit.</li><li>Saves the read vehicle configuration.</li></ul>
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:00000000552288
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 F	ILE"
©CONSULT-III Configuration Perform "WRITE CONFIGURATION-Config file".	
>> WORK END	
3. PERFORM "WRITE CONFIGURATION-MANUAL S	SELECTION"
©CONSULT-III Configuration	to write vehicle specifications into the AV control unit
<u> </u>	, , , , , , , , , , , , , , , , , , ,
>> GO TO 4.	
f 4.0PERATION CHECK	
Check that the operation of the AV control unit and clines) are normal.	amera images (fixed guide lines and predictive course
>> WORK END	
CONFIGURATION (AV CONTROL UNIT) :	: Configuration List
CAUTION:	
Check vehicle specifications before servicing.	
MANUAL SETTING ITEM	

MANUAL SETTING ITEM		Note	
Items	Setting value	Note	
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	

Revision: November 2009 AV-681 2010 Maxima

## **INSPECTION AND ADJUSTMENT**

## < BASIC INSPECTION >

MANUAL SETTING ITEM		Nista
Items	Setting value	Note
4WAS	WITHOUT	_
	WITH	_
OOLIND OVOTEM	BASE	_
SOUND SYSTEM	BOSE	_
ANTENNA TYPE	ROD TYPE	_
ANTENNA TIPE	LONG TYPE	_
DUAL-ZONE AUTO	WITHOUT	_
TEMP	WITH	_
DVD DLAV EUNCTION	WITHOUT	_
DVD PLAY FUNCTION	WITH	_
	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)
BODY TYPE	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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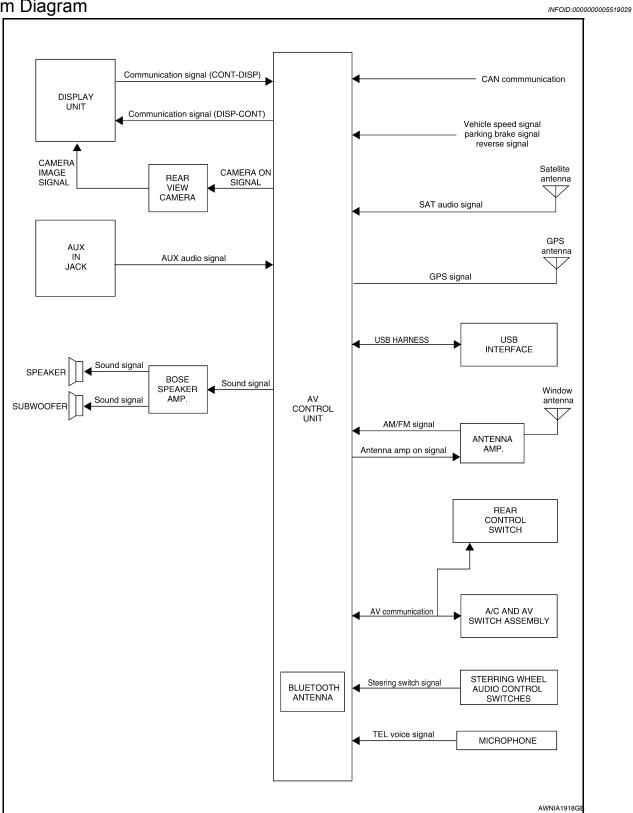
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# **FUNCTION DIAGNOSIS**

## **AUDIO SYSTEM**

System Diagram



**System Description** 

INFOID:0000000005519030

### **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.

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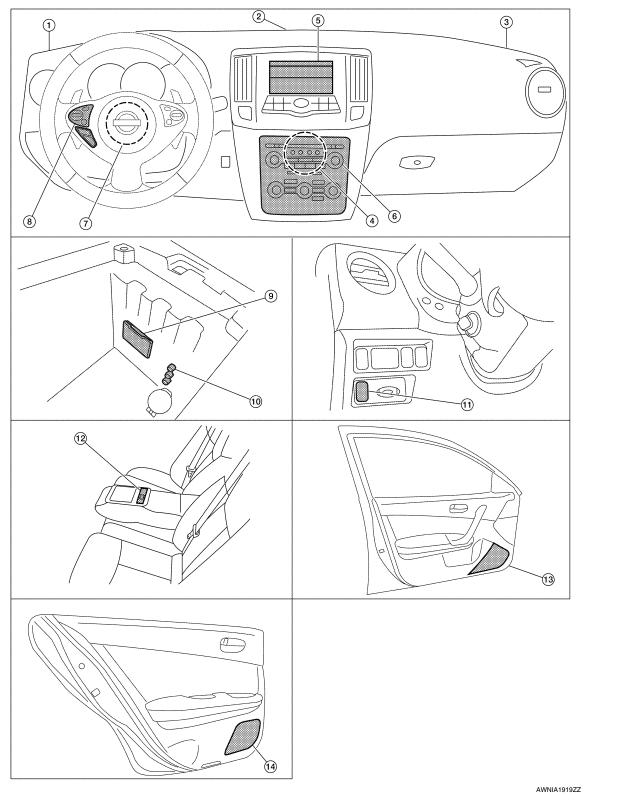
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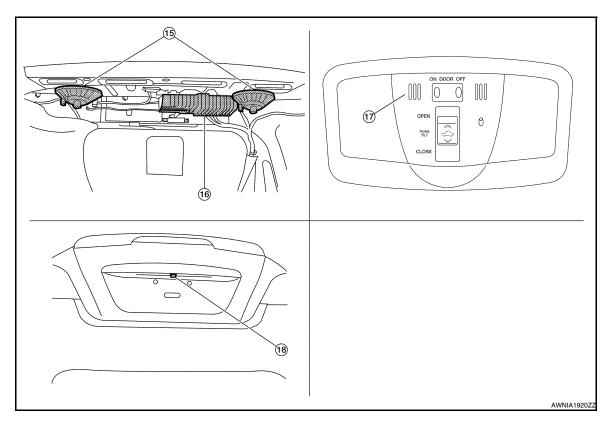
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# Component Parts Location



Revision: November 2009 AV-685 2010 Maxima



- 1. Tweeter LH M51
- AV control unit M131, M134, M136, M137, M139, M145, M146, M148, M149 (located behind A/C and AV switch assembly)
- Steering angle sensor M53 (located in steering column behind spiral cable)
- 10. Aux in jack M209
- 13. Front door speaker LH D3 RH D103
- 16. BOSE speaker amp B109, B110

- 2. Center speaker M130
- 5. Display unit M142, M151
- 3. Tweeter RH M52
- 6. A/C and AV switch assembly M98
- . Steering wheel audio control switch- 9.
- 11. Rear control cancel switch M89
- Rear door speaker
   LH D202
   RH D302
- 17. Microphone R7

- USB interface M211(view in center console)
- 12. Rear control switch B402, B403, B404
- 15. Rear subwoofers (view under rear parcel shelf)LH B106RH B107
- 18. Rear view camera T101

## **Component Description**

INFOID:0000000005519032

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><li>Audio operation can be operated.</li><li>Steering switch signal is output to AV control unit.</li></ul>	
Front door speakers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds.</li></ul>	
Tweeters	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sounds.</li></ul>	

### **AUDIO SYSTEM**

## < FUNCTION DIAGNOSIS >

## [BOSE W/ COLOR W/ NAVI W/RR CTL]

Part name	Description	
Center speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sounds.</li></ul>	
Rear door speakers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds.</li></ul>	
Rear subwoofers	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs low range sounds.</li></ul>	
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.	

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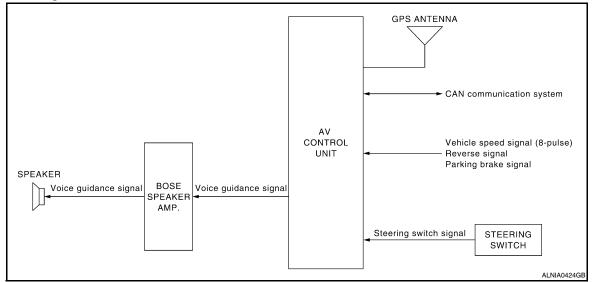
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### NAVIGATION SYSTEM

## System Diagram

INFOID:0000000005519033



## System Description

INFOID:0000000005519034

#### NOTE:

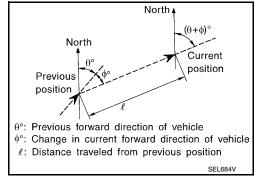
Refer to NAVI System Owner's Manual for system operation.

The navigation system periodically calculates the vehicle's current position according to the following three signals: Travel distance of the vehicle as determined by the vehicle speed sensor, turning angle of the vehicle as determined by the gyroscope (angular velocity sensor), and the direction of vehicle travel as determined by the GPS antenna (GPS information).

The current position of the vehicle is then identified by comparing the calculated vehicle position with map data read from the map data, which is stored in the hard disk drive (HDD)(map-matching), and indicated on the screen with a current-location mark.

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

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



### TRAVEL DISTANCE

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

#### TRAVEL DIRECTION

Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). As the gyroscope and GPS antenna have both merit and demerit, input signals from them are prioritized in each situation. However, this order of priority may change in accordance with more detailed travel conditions so that the travel direction is detected more accurately.

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

#### MAP-MATCHING

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

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

#### **CAUTION:**

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

 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.

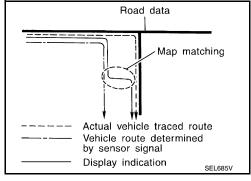
- Map-matching does not function correctly when the road on which the vehicle is driving is new and not recorded on the HDD, or when the road pattern stored in the map data and the actual road pattern are different due to repair.
  - When driving on a road not present in the map, the map-matching function 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.

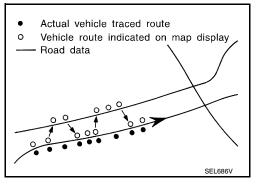
### GPS (GLOBAL POSITIONING SYSTEM)

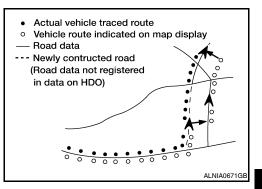
GPS (Global Positioning System) has been developed and controlled by the US Department of Defense. The system utilizes GPS satellite (NAVSTAR), sending out radio waves while flying on an orbit around the earth at the height of approx. 21,000 km (13,000 mi).

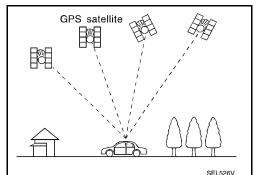
The GPS receiver calculates the vehicle's position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves received from four or more GPS satellites (three-dimensional positioning). If radio waves were received only from three GPS satellites, the GPS receiver calculates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

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### **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.

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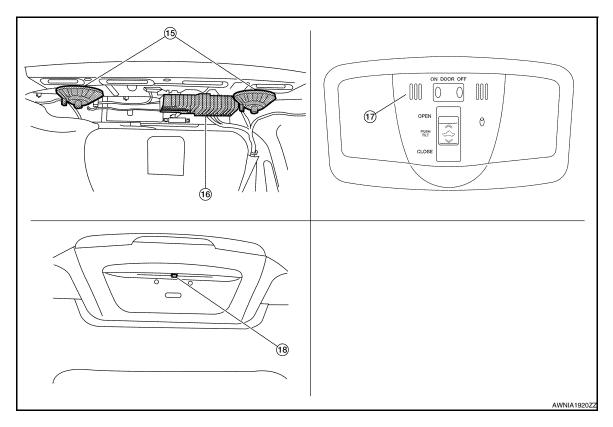
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# Component Parts Location



- 1. Tweeter LH M51
- AV control unit M131, M134, M136, M137, M139, M145, M146, M148, M149 (located behind A/C and AV switch assembly)
- Steering angle sensor M53 (located in steering column behind spiral cable)
- 10. Aux in jack M209
- 13. Front door speaker LH D3 RH D103
- 16. BOSE speaker amp B109, B110

- 2. Center speaker M130
- 5. Display unit M142, M151
- 3. Tweeter RH M52
- 6. A/C and AV switch assembly M98
- . Steering wheel audio control switch- 9.
- 11. Rear control cancel switch M89
- 14. Rear door speaker LH D202 RH D302
- 17. Microphone R7

- USB interface M211(view in center console)
- 12. Rear control switch B402, B403, B404
- 15. Rear subwoofers (view under rear parcel shelf)LH B106RH B107
- 18. Rear view camera T101

## **Component Description**

INFOID:0000000005519036

Part name	Description	
AV control unit	<ul> <li>Controls each operation of the navigation system</li> <li>HDD is built in</li> <li>Voice guidance signal is output to BOSE speaker amp.</li> </ul>	
BOSE speaker amp.	Voice guidance signal is input from AV control unit, and it is output to speaker	
Tweeter	Voice guidance signal from BOSE speaker amp. is output.	
Steering wheel audio control switches	<ul> <li>Each operation of navigation system can be performed</li> <li>Switch operating signal is output to AV control unit</li> </ul>	
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

INFOID:0000000005519037 -Reverse signal ΑV Camera image signal Camera ON signal CONTROL DISPLAY REAR VIEW UNIT UNIT CAMERA STEERING Steering angle signal (CAN Communication) ANGLE SENSOR AWNIA1921G

## **System Description**

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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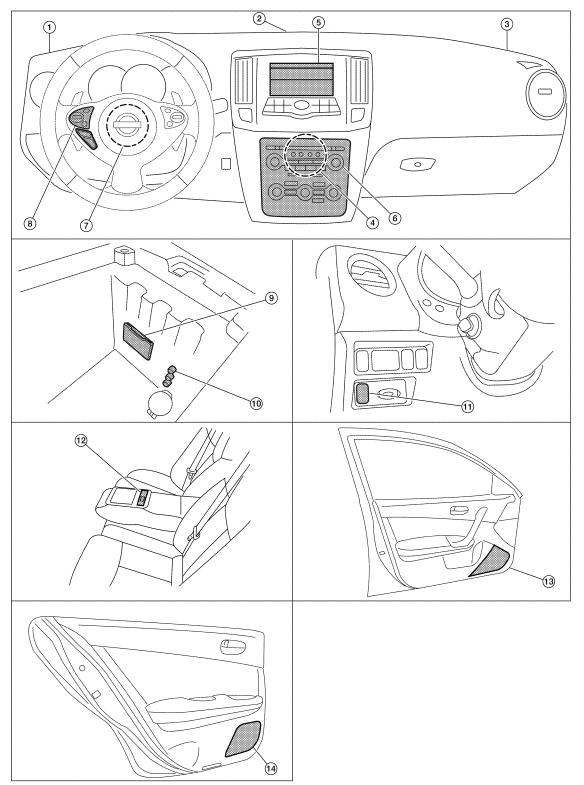
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# **Component Parts Location**

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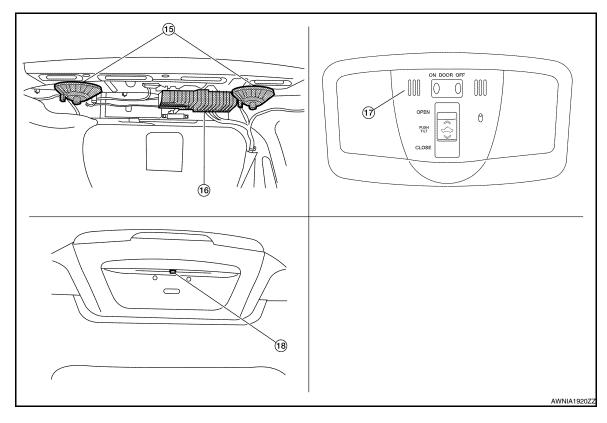
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- 1. Tweeter LH M51
- AV control unit M131, M134, M136, M137, M139, M145, M146, M148, M149 (located behind A/C and AV switch assembly)
- Steering angle sensor M53 (located in steering column behind spiral cable)
- 10. Aux in jack M209
- 13. Front door speaker LH D3 RH D103
- 16. BOSE speaker amp B109, B110

- 2. Center speaker M130
- 5. Display unit M142, M151
- Steering wheel audio control switches
- 11. Rear control cancel switch M89
- 14. Rear door speaker LH D202 RH D302
- 17. Microphone R7

- 3. Tweeter RH M52
- 6. A/C and AV switch assembly M98
- USB interface M211(view in center console)
- 12. Rear control switch B402, B403, B404
- Rear subwoofers (view under rear parcel shelf)
   LH B106
   RH B107
- 18. Rear view camera T101

## Component Description

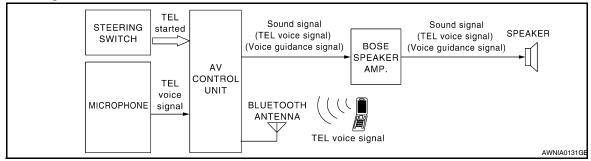
INFOID:0000000005519040

Part name	Description
AV control unit	<ul> <li>Receives reverse signal from back-up lamp relay</li> <li>Receives steering angle sensor signal</li> <li>Sends camera ON signal to rear view camera</li> </ul>
Rear view camera	<ul> <li>Receives camera ON signal from the AV control unit</li> <li>Sends image signal to the display unit</li> </ul>
Steering angle sensor	Sends steering angle information to the AV control unit via CAN communication

# HANDS-FREE PHONE SYSTEM

### System Diagram

INFOID:0000000005519041



## System Description

INFOID:0000000005519042

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

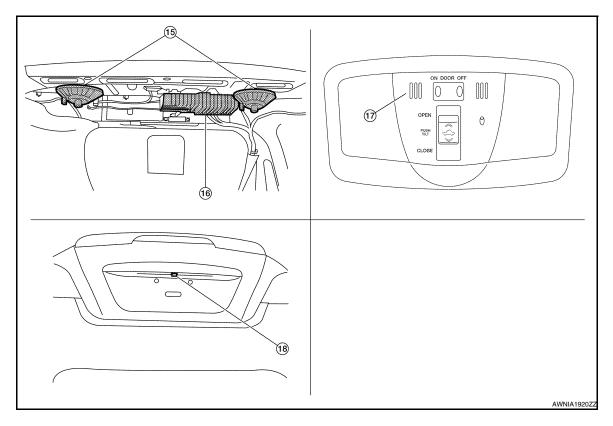
# [BOSE W/ COLOR W/ NAVI W/RR CTL] < FUNCTION DIAGNOSIS > **Component Parts Location** INFOID:0000000005519043 Α 2 (5) 1 В 0 $\mathsf{D}$ Е 8 4 7 F G Н 11) 12

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- 1. Tweeter LH M51
- AV control unit M131, M134, M136, M137, M139, M145, M146, M148, M149 (located behind A/C and AV switch assembly)
- Steering angle sensor M53 (located in steering column behind spiral cable)
- 10. Aux in jack M209
- 13. Front door speaker LH D3 RH D103
- 16. BOSE speaker amp B109, B110

- 2. Center speaker M130
- 5. Display unit M142, M151
- Tweeter RH M52
- 6. A/C and AV switch assembly M98
- . Steering wheel audio control switch- 9.
- 11. Rear control cancel switch M89
- 14. Rear door speaker LH D202 RH D302
- 17. Microphone R7

- USB interface M211(view in center console)
- 12. Rear control switch B402, B403, B404
- 15. Rear subwoofers (view under rear parcel shelf)LH B106RH B107
- 18. Rear view camera T101

## **Component Description**

INFOID:0000000005519044

Part name	Description	
AV control unit	<ul> <li>Receives telephone voice signal from antenna and microphone</li> <li>Sends telephone voice and voice guidance signals to the speakers</li> </ul>	
BOSE speaker amp.	<ul><li>Receives audio signals from the AV control unit</li><li>Outputs amplified audio signals to the speakers.</li></ul>	
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	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	

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< 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

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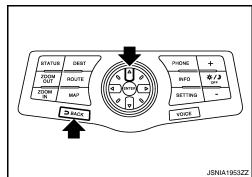
### MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

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

#### Self-diagnosis Mode

- Press the "BACK" switch and the "UP" switch of the 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> <li>AV control unit diagnosis.</li> <li>Diagnoses the connections across system components, between AV control unit and GPS antenna.</li> </ul>	

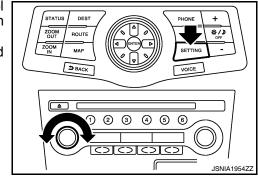
### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

Mode			Description	
	Display Diagnosis		The following check functions are available: color tone check by color bar display, light and shade check by gray scale display, 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.	
		Steering Angle Ad- justment	When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted.	
	Navigation	Speed Calibration	When there is a difference between the current location mark and the actual location, it can be adjusted.	
		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	-	
Confirmation/ Adjustment	Vehicle CAN Diagnosis		The transmitting/receiving of CAN communication can be monitored.	
	AV COMM Diagnos	sis	The communication condition of each unit of Multi AV system can be monitored.	
	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 NavTraffic	Change Channel	
		XM NavWeather	Any necessary channels required to receive traffic information from the satellite radio system can be set.	
	XM	XM CGS	Change Application ID  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.
- 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.



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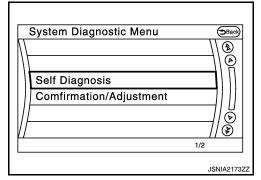
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### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

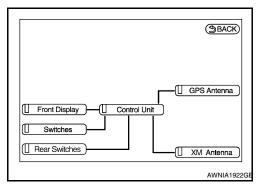
 The trouble diagnosis initial screen is displayed, and then the items of "Self Diagnosis" and "Confirmation/Adjustment" can be selected.



#### 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.

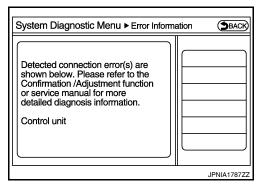
Diagnosis results	Unit	Connec- tion line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction Note	Red	Green



#### 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.

### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

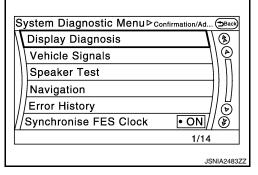
Screen switch	Description	Possible malfunction location / Action to take
Control unit	Malfunction is detected in AV control unit power supply and ground circuits.	Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.

#### 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.
- 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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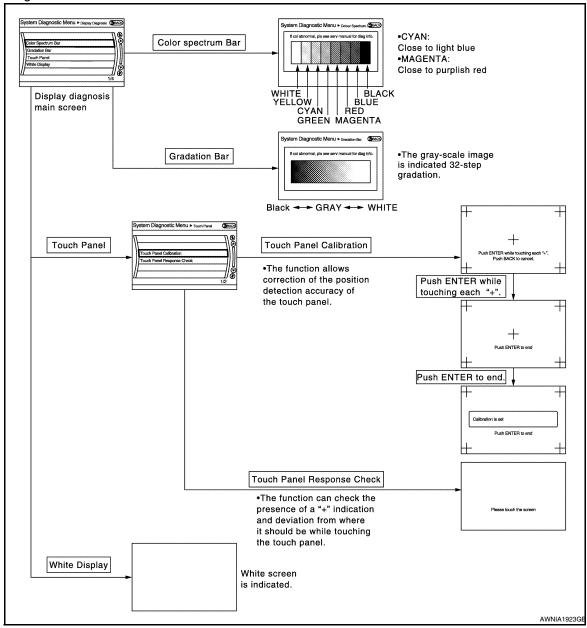
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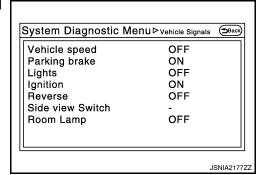
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### Display Diagnosis



#### Vehicle Signals

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



### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

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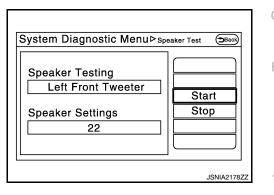
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Diagnosis item	Display	Vehicle status	Remarks	
Vahiala anaad	ON	Vehicle speed > 0 km/h (0 MPH)		
Vehicle speed	OFF			
Dayleing broke	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.	
Parking brake	OFF	Parking brake is released.		
l inhto	ON	Light switch ON		
Lights	OFF	Light switch OFF	<del>_</del>	
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.	
Reveise	OFF	Shift the selector lever other than "R" position	Ghanges in indication may be delayed. This is normal.	
Side view Switch	_	_	This item is displayed, but cannot be monitored.	
Room Lamp	OFF	_	This item is displayed, but not used.	

#### Speaker Test

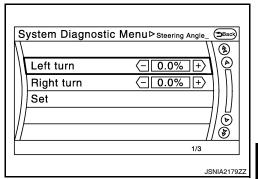
Select "SPEAKER DIAGNOSIS" to display the Speaker Diagnosis screen. Press "Start" to generate a test tone in a speaker. Press "Start" to generate a test tone in the next speaker. Press "Stop" to stop the test tones.



#### Navigation

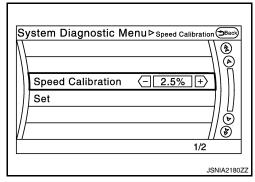
### STEERING ANGLE ADJUSTMENT

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.



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#### < FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

#### **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.

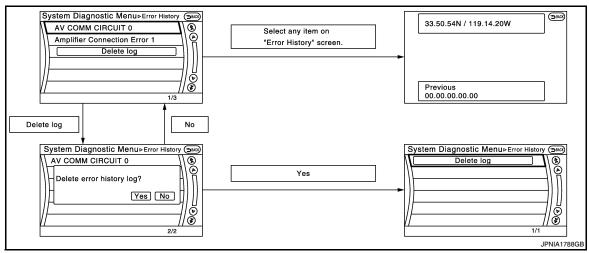
#### Count up method A

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



### Error item

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results.  Refer to AV-711, "CONSULT - III Function (MULTI AV)".

### < 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.	
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit		
Connection Of Gyro		Replace the AV control unit if the malfunc-
Connection of G Sensor		tion occurs constantly.
CAN Controller Memory Error	AV central unit malfunction is detected	
Bluetooth Module Connection Error	AV control unit malfunction is detected.	
Sub CPU Connection Error		
iPod authentification chip error		
Audio connection error		
DSP Connection Error		If a disc can be played, then there is a
DSP Communication Error	AV control unit malfunction is detected.	<ul> <li>possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>
HDD Connection Error		
HDD Read Error		If the music box function has no malfunc- tions, then there is a possibility of the de-
HDD Write Error	AV control unit malfunction is detected.	tection of a temporary malfunction.
HDD Communication Error		Replace the AV control unit if the mal- function accura constantly.
HDD Access Error		function occurs constantly.
GPS Communication Error		An intermittent error caused by strong radio
GPS ROM Error		interference may be detected unless any
GPS RAM Error	GPS malfunction is detected.	symptom (GPS reception error, etc.) occurs.
GPS RTC Error		Replace the AV control unit if the malfunction occurs constantly.
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> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>
Front Display Connection Error	<ul> <li>When either one of the following items is detected:</li> <li>Display unit power supply and ground circuits malfunction is detected.</li> <li>Malfunction is detected in communication circuits between AV control unit and display unit.</li> <li>Malfunction is detected in communication signal between AV control unit and display unit.</li> </ul>	<ul> <li>Display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and display unit.</li> </ul>
USB electric current Error	Detection of over current in USB interface.	Check USB harness between the AV control unit and USB interface.

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#### < FUNCTION DIAGNOSIS >

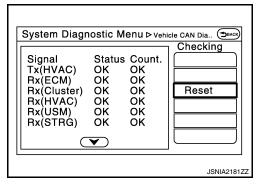
### [BOSE W/ COLOR W/ NAVI W/RR CTL]

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.
AV COMM CIRCUIT     Switches Connection Error	When either one of the following items are detected:  Multifunction switch power supply and ground circuits are malfunctioning.  AV communication circuits between AV control unit and multifunction switch are malfunctioning.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>

### 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



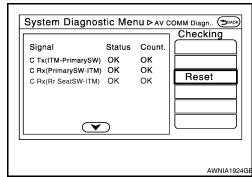
#### NOTE:

"???" 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
C Rx(RrSeatSW–ITM)	OK / ???	OK / 0 – 39



### NOTE:

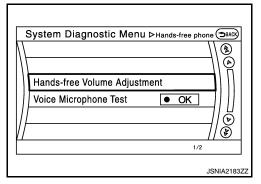
"???" indicates UNKWN

Hands-Free Phone

### < FUNCTION DIAGNOSIS >

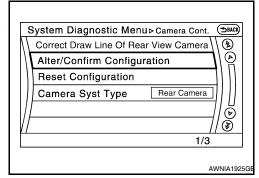
### [BOSE W/ COLOR W/ NAVI W/RR CTL]

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



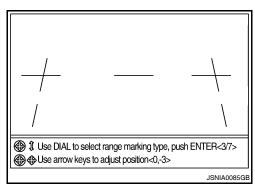
#### Camera

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 rearview 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

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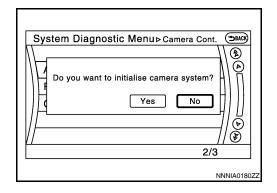
### < FUNCTION DIAGNOSIS >

## [BOSE W/ COLOR W/ NAVI W/RR CTL]

Setting item	Setting	Setting item	Setting
Rear L/R Angle	0.0000000	Overall Height	0.000000
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	0.000000
Steer. Max Angle	0.0000000	Total Width	0.0000000
Min. Turning Red.	0.0000000	_	_

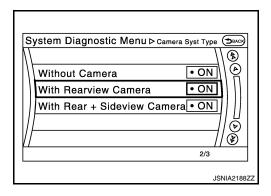
**Reset Configuration** 

Configuration stored in the AV control unit can be initialized.



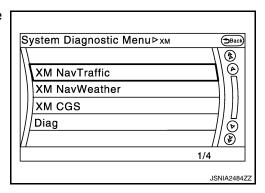
Camera Syst Type

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.

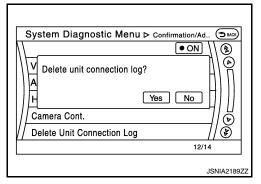


**Delete Unit Connection Log** 

### < FUNCTION DIAGNOSIS >

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

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



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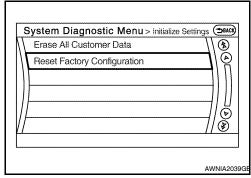
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#### Initialize Settings

"Erase All Customer Data" and "Reset Factory Configuration" are possible.

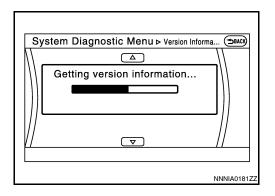
#### **CAUTION:**

- 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.



INFOID:000000005519251

## CONSULT - III Function (MULTI AV)

#### 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> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing AV control unit.</li> </ul>	

#### **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**

### < 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.	
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	
Cont Unit [U1200]		
GYRO NO CONN [U1201]		Replace the AV control unit if the malfunc-
G-SENSOR NO CONN [U1202]		tion occurs constantly.
CAN CONT [U1216]	AV control unit malfunction is detected.	
BLUETOOTH MODULE [U1217]	Av control unit manunction is detected.	
SUB CPU CONN [U1228]		
iPod CERTIFICATION [U1229]		
Built-in AUDIO CONN [U122E]		
HDD CONN [U1218]		<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>
HDD READ [U1219]		
HDD WRITE [U121A]	AV control unit malfunction is detected.	
HDD COMM [U121B]		
HDD ACCESS [U121C]		
GPS COMM [U1204]		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 malfunction is detected.	
GPS RTC [U1207]		
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DSP CONN [U121D]		If a disc can be played, then there is a
DSP COMM [U121E]	AV control unit malfunction is detected.	possibility of the detection of a temporary malfunction.  Replace the AV control unit if the malfunction occurs constantly.
DVD COMM [U1227]	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>
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.

### < 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: Display unit power supply and ground circuits malfunction is detected. Communication circuits between AV control unit and display unit.	<ul> <li>Display unit power supply and ground circuits.</li> <li>Communication circuits between AV control unit and AV display unit.</li> </ul>
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 connecter.	Check USB harness between the AV control unit and USB connector.
AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items are detected:  Multifunction switch power supply and ground circuits are malfunctioning.  AV communication circuits between AV control unit and multifunction switch are malfunctioning.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>

### **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)		
VIICE SPD SIG	Off	Vehicle speed =0 km/h (0 MPH)	Changes in indication may be delayed. This is	
PKB SIG	On	Parking brake is applied.	normal.	
FRB SIG	Off	Parking brake is released.		
ILLUM SIG	On	Block the light beam from the auto light optical sensor when the light SW is ON.		
ILLOW SIG	Off	Expose the auto light optical sensor to light when the light SW is OFF or ON.	_	
IGN SIG	On	Ignition switch ON		
IGN SIG	Off	Ignition switch in ACC position		
	On	Selector lever in R position	Changes in indication may be delayed. This is	
REV SIG	Off	Selector lever in any position other than R	normal.	
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.

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### < FUNCTION DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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

### CONFIGURATION

Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	<ul> <li>Reads the vehicle configuration of current AV control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
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:0000000005522882

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

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 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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INFOID:0000000005522884

AV

# **U1010 CONTROL UNIT (CAN)**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

# U1010 CONTROL UNIT (CAN)

DTC Logic

## DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

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 mal- function occurs constantly. Refer to AV-824, "Removal and Installation".

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## **U1201 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

# **U1201 AV CONTROL UNIT**

DTC Logic

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 mal- function 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

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 mal- function occurs constantly. Refer to AV-824, "Removal and Installation".

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### **U1204 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

## **U1204 AV CONTROL UNIT**

DTC Logic

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:0000000005519184

# 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

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

# 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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#### **U1206 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

#### **U1206 AV CONTROL UNIT**

DTC Logic

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:0000000005519188

# 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

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

# 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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#### **U1216 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

# **U1216 AV CONTROL UNIT**

DTC Logic

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 mal- function 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

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 mal- function occurs constantly. Refer to AV-824, "Removal and Installation".

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#### **U1218 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

#### **U1218 AV CONTROL UNIT**

DTC Logic

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005519194

#### 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005519196

# 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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#### **U121A AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

#### **U121A AV CONTROL UNIT**

DTC Logic

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	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:0000000005519198

# 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".</li> </ul>

#### **Diagnosis Procedure**

INFOID:0000000005519200

# 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005519202

#### 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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121D	DSP CONN [U121D]	AV control unit malfunction is detected.	<ul> <li>If a disc can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824. "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005519204

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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#### **U121E AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

#### **U121E AV CONTROL UNIT**

DTC Logic

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	AV control unit malfunction is detected.	<ul> <li>If a disc can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005519206

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

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1227	DVD COMM [U1227]	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-824, "Removal and Installation".</li> </ul>

# Diagnosis Procedure

INFOID:0000000005519209

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

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

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:0000000005519213

# 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 <u>AV-681</u>, "CONFIGURATION (<u>AV CONTROL UNIT</u>): Special Repair Requirement".

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#### **U122E AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

# **U122E AV CONTROL UNIT**

DTC Logic

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-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

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:0000000005519216

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 <a href="https://example.com/BRC-8">BRC-8</a>, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION: Special Repair Requirement".

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#### U1243 DISPLAY UNIT

DTC Logic

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:  display unit power supply and ground circuit malfunction is detected.  communication circuit between AV control unit and display unit.	<ul> <li>Display unit power supply and ground circuit.</li> <li>Communication circuit between AV control unit and display unit.</li> </ul>

#### Diagnosis Procedure

INFOID:0000000005519218

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 <u>AV-747, "DISPLAY UNIT : Diagnosis Procedure"</u>. <u>Is inspection result OK?</u>

YES >> GO TO 2.

NO >> Repair malfunctioning parts.

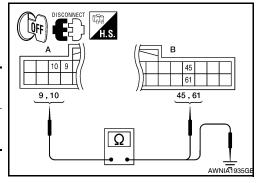
# 2. CHECK CONTINUITY OF COMMUNICATION CIRCUIT

- 1. Turn ignition switch OFF.
- 2. 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	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M142	9	M137	61	Yes
IVI 142	10	IVI 137	45	165

 Check continuity between display unit harness connector M142 (A) terminals 9, 10 and ground.



	A		Continuity	
Connector Terminal		_	Continuity	
M142	9	Ground	No	
IVI 142	10	Glound	INO	

#### 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.

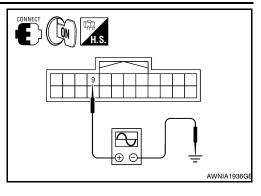
#### **U1243 DISPLAY UNIT**

#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ NAVI W/RR CTL]

3. Check signal between display unit harness connector M142 terminal 9 and ground with an oscilloscope or CONSULT-III.

(+)		(-)	Reference signal	
Connector	Terminal	(-)	Reference signal	
M142	9	Ground	(V) 6 4 2 0 +-1ms PKIB5039J	



#### Are voltage readings as specified?

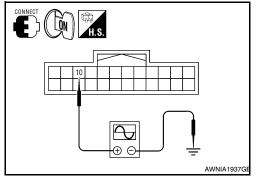
YES >> GO TO 4.

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	. ,	<u> </u>
M142	10	Ground	(V) 6 4 2 0 ***-1ms



#### 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

DTC Logic

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:0000000005522944

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?

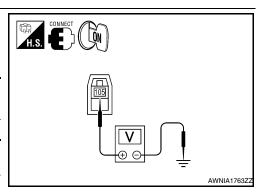
YES >> GO TO 2.

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	(-)	voltage (Approx.)	
M145	105	Ground	5V	



#### Is the voltage reading as specified?

YES >> Replace GPS antenna. Refer to <u>AV-501, "Removal and Installation"</u>.

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

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:0000000005519222

# 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**

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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

Description INFOID:0000000005519223

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	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	When either one of the following items are detected:  Multifunction switch power supply and ground circuits are malfunctioning.  AV communication circuits between AV control unit and multifunction switch are malfunctioning.	<ul> <li>Multifunction switch power supply and ground circuits.</li> <li>AV communication circuits between AV control unit and multifunction switch.</li> </ul>

#### **U1310 AV CONTROL UNIT**

< COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ NAVI W/RR CTL]

# **U1310 AV CONTROL UNIT**

DTC Logic

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 mal- function occurs constantly. Refer to AV-824, "Removal and Installation".

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< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

# POWER SUPPLY AND GROUND CIRCUIT AV CONTROL UNIT

AV CONTROL UNIT: Diagnosis Procedure

INFOID:0000000005522945

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.
	19	Battery power	24
AV control unit	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.
- Check voltage between the AV control unit connectors M131 and M137 and ground.

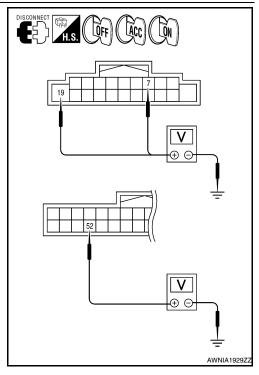
(+)		()	OFF	ACC	ON
Connector	Terminal	(-)	OH	ACC	ON
M131	7	Ground	0V	Battery voltage	Battery voltage
	19	Ground	Battery voltage	Battery voltage	Battery voltage
M137	52	Ground	0V	0V	Battery voltage

#### Are the voltage results as specified?

YES >> GO TO 3.

NO >> Check

- >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.



# 3. GROUND CIRCUIT CHECK

#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ NAVI W/RR CTL]

1. Turn ignition switch OFF.

Check continuity between AV control unit harness connector M131 and ground.

	(+)	(-)	Continuity	
Connector	Terminal	(-)	Continuity	
M131	20	Ground	Yes	

# DISCONNECT H.S. AWNIA 1930ZZ

#### Are the continuity results as specified?

YES >> Inspection End.

NO >> Repair AV control unit ground.

DISPLAY UNIT

#### **DISPLAY UNIT: Diagnosis Procedure**

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
Display Offic	23	Ignition switch ACC or ON	17

#### Are the fuses OK?

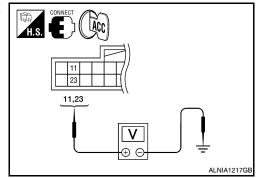
YES >> GO TO 2.

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	(-)	011	7,00	ON
M142	11	Ground	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

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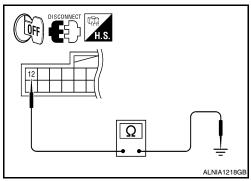
ΑV

#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ NAVI W/RR CTL]

- 1. Turn ignition switch OFF.
- 2. Disconnect display unit connector.
- 3. Check continuity between display unit harness connector M142 and ground.

(+)		(-)	Continuity	
Connector	Terminal	(-)	Continuity	
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:0000000005522947

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.
- Check voltage between the A/C and AV switch assembly connector M98 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal	(-)	OH	700	ON
M98	3	Ground	0V	Battery voltage	Battery voltage

# DISCONNECT COFF CACC CON AWNIA1731ZZ

#### 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

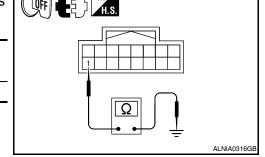
- 1. Turn ignition switch OFF.
- 2. Check continuity between A/C and AV switch assembly harness connector M98 and ground.

	+)	(-)	Continuity	
Connector	Terminal	(-)	Continuity	
M98	1	Ground	Yes	

#### Are the continuity results as specified?

YES >> Inspection End.

NO >> Repair A/C and AV switch assembly ground.



< COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

#### **BOSE SPEAKER AMP**

#### BOSE SPEAKER AMP: Diagnosis Procedure

INFOID:0000000005522948

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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	Rattery power	26
BOOL speaker allip.	10	Battery power	25

#### Are the fuses OK?

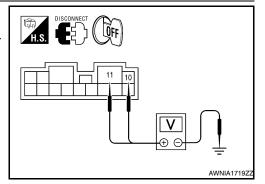
YES >> GO TO 2.

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

# 2.CHECK POWER SUPPLY CIRCUIT

- 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.

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



#### Is battery voltage present?

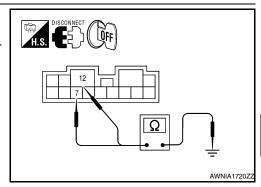
YES >> GO TO 3.

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

# 3.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect BOSE speaker amp. connector.
- Check continuity between BOSE speaker amp. harness connector B110 terminal 7,12 and ground.

(+)		Continuity	
Terminal	(-)	Continuity	
7	Ground	Yes	
12	Ground	165	
	Terminal 7	Terminal (-)  7 Ground	



#### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

#### REAR VIEW CAMERA

### REAR VIEW CAMERA: Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-447, "Wiring Diagram".

**AV-749** 2010 Maxima Revision: November 2009

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INFOID:0000000005522950

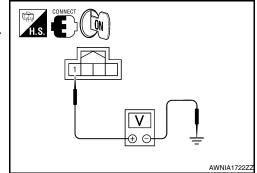
#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ NAVI W/RR CTL]

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

- 1. Turn ignition switch ON.
- Shift transmission into Reverse.
- Check voltage between rear view camera harness connector T101 and ground.

	(+)	(-)	Transmission	Value (Approx.)
Connector	Terminal	(-)	position	value (Approx.)
T101	1	Ground	Reverse	6V



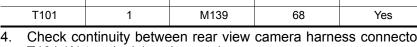
#### Is voltage reading approximately 6 volts?

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

# 2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

- Turn ignition switch OFF.
- Disconnect rear view camera and AV control unit connectors.
- Check continuity between rear view camera harness connector T101 (A) terminal 1 and AV control unit harness connector M139 (B) terminal 68.

	A		В	
Connector	Terminal	Connector	Terminal	Continuity
T101	1	M139	68	Yes



H.S. DISCONNECT OFF
A 68
AWNIA1931ZZ

4.	Check continuity between rear view camera harness connector
	T101 (A) terminal 1 and ground.

	A		Continuity	
Connector	Terminal	_	Continuity	
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)

- Connect rear view camera control unit harness connector.
- 2. Turn ignition switch ON.
- Check voltage between AV control unit harness connector M139 and ground.

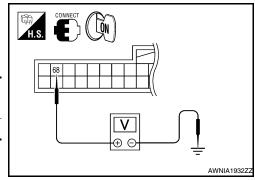
(+)		(-)	Transmission	Value (Approx.)
Connector	Terminal	(-)	position	value (Approx.)
M139	68	Ground	Reverse	6V

#### Is voltage reading approximately 6 volts?

YES >> Inspection End.

NO >> Replace AV control unit. Refer to AV-824, "Removal and Installation".





#### < COMPONENT DIAGNOSIS >

#### [BOSE W/ COLOR W/ NAVI W/RR CTL]

QFF)

- 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.
- Check voltage between the rear audio remote control unit connector B402 and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal	(-)	voltage (Approx.)
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

- Turn ignition switch OFF.
- 2. Check continuity between rear control switch harness connector B402 and ground.

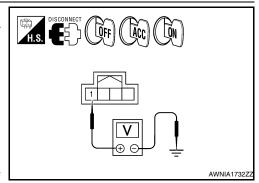
(	+)	()	Continuity
Connector	Terminal	(-)	Continuity
B402	4	Ground	Yes

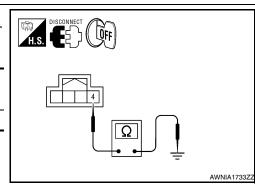
#### Are the continuity results as specified?

YES >> Inspection End.

NO >> Repair harness or connector.

#### MICROPHONE





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MICROPHONE: Diagnosis Procedure

INFOID:0000000005522952

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	(-)	value (Applox.)	
R7	4	Ground	5V	

# CONNECT H.S.

#### Is approximately 5V present?

YES >> GO TO 3.

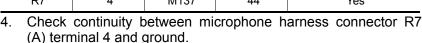
NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

- Turn ignition switch OFF.
- 2. 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.

А		В		Continuity
Connector	Terminal	Connector Terminal		Continuity
R7	4	M137	44	Yes



,	DISCONNECT H.S.
,	A (B
	44
'	ALNIA1219GB

	A		Continuity
Connector	Terminal	_	Continuity
R7	4	Ground	No

#### Are the continuity test results as specified?

YES >> Replace the AV control unit. Refer to AV-487, "Removal and Installation".

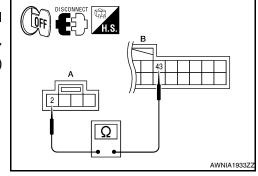
NO >> Repair harness or connector.

# 3.CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. 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.

	А		В	Continuity	
Connector	Terminal	Connector Terminal		Continuity	
R7	2	M137	43	Yes	
<u> </u>					



#### 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]

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INFOID:0000000005519231

#### RGB DIGITAL IMAGE SIGNAL CIRCUIT

Description INFOID:000000005519230

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

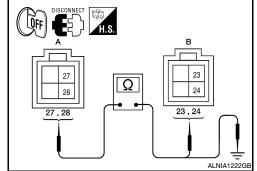
Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-782, "Wiring Diagram".

# 1. CHECK CONTINUITY RGB DIGITAL IMAGE SIGNAL CIRCUIT

- 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	В		Continuity
Connector	Terminal	Connector Terminal		Continuity
M151	27	M134	23	Yes
IVITOT	28	IVI 134	24	165



Check continuity between display unit harness connector M151 (A) terminals 27, 28 and ground.

A			Continuity	
Connector	Terminal		Continuity	
M151	27	Ground	No	
WITST	28	Giouria	INO	

#### Are continuity results as specified?

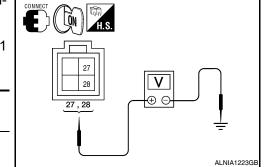
YFS >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK RGB DIGITAL IMAGE SIGNAL

- Connect display unit connector M151 and AV control unit connector M134.
- Turn ignition switch ON. 2.
- Check voltage between display unit harness connector M151 terminals 27, 28 and ground.

٠	(	+)	(-) Condition		Voltage
	Connector	Terminal	(-)	Condition	(Approx.)l
	M454	27	0	Not con-	4.01/
_	M151	28	Ground	nected connector	1.3 V



#### 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".

**AV-753** Revision: November 2009 2010 Maxima

#### 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:0000000005519233

Regarding Wiring Diagram information, refer to AV-782, "Wiring Diagram".

# 1. CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect AV control unit connector M137 and display unit connector M142.
- Check continuity between AV control unit connector M137 (A) terminal 40 and display unit connector M142 (B) terminal 18.

A		В		Continuity
Connector	Terminal	Connector Terminal		Continuity
M137	40	M142	18	Yes

 Check continuity between AV control unit connector M137 (A) terminal 40 and ground.

DISCONNECT H.S.  A  40  B  18
Ω

	A		Continuity	
Connector Terminal			Continuity	
M137	40	Ground	No	

#### Are continuity results as specified?

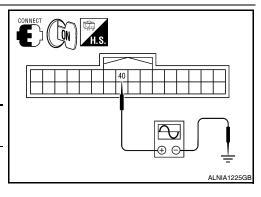
YES >> GO TO 2.

NO >> Repair harness or connector.

#### 2.CHECK AUX COMPOSITE SIGNAL

- Connect AV control unit connector M137 and display unit connector M142.
- 2. Turn ignition switch ON.
- Check signal between AV control unit harness connector M137 terminal 40 and ground.

(+)		(-)	Condition	Reference signal	
Connector	Terminal	(-) Condition		Neierence signal	
M137	40	Ground	At DVD image is displayedl	(V) 0. 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	



#### 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**

[BOSE W/ COLOR W/ NAVI W/RR CTL]

#### < COMPONENT DIAGNOSIS >

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

Description INFOID:0000000005519234

- 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:0000000005519235

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Regarding Wiring Diagram information, refer to AV-782, "Wiring Diagram".

# 1. CHECK CONTINUITY AUX IMAGE SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect auxiliary input jack connector M209 and AV control unit connector M139.
- Check continuity between auxiliary input jack harness connector M209 (A) terminal 8 and AV control unit harness connector M139 (B) terminal 76.

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M209	8	M139	76	Yes

 Check continuity between auxiliary input jack harness connector M209 (A) terminal 8 and ground.

,	A		Continuity	
Connector	Terminal	_	Continuity	
M209	8	Ground	No	

#### Is the inspection result normal?

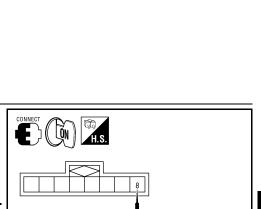
YES >> GO TO 2.

NO >> Repair harness or connector.

#### 2.CHECK AUX IMAGE SIGNAL

- Connect auxiliary input jack connector M209 and AV control unit connector M139.
- 2. Turn ignition switch ON.
- Check signal between auxiliary input jack connector M209 terminal 8 and ground.

(+)		(-)	Condition	Reference signal
Connector	Terminal	( )		
M209	8	Ground	Receive audio sig- nal	(V) 0. 4 0 -0. 4 + 40 \(\mu\)s SKIB2236J



#### 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.

INFOID:000000005519237

#### DISK EJECT SIGNAL CIRCUIT

Description INFOID:0000000005519236

The eject signal is output to AV control unit when the eject switch of A/C and AV switch assembly is pressed.

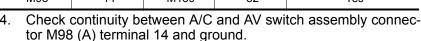
Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-782, "Wiring Diagram".

# 1. CHECK CONTINUITY DISK EJECT SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect A/C and AV switch assembly connector M98 and AV control unit connector M139.
- Check continuity between A/C and AV switch assembly connector tor M98 (A) terminal 14 and AV control unit harness connector M139 (B) terminal 82.

	A		В	Continuity
Connector	Terminal	Connector Terminal		Continuity
M98	14	M139	82	Yes



	A	_	Continuity
Connector	Terminal		
M98	14	Ground	No

#### Are continuity results as specified?

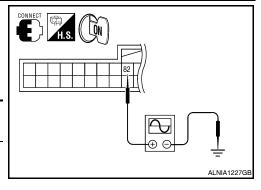
YES >> GO TO 2.

NO >> Repair harness or connector.

#### 2. CHECK AV CONTROL UNIT VOLTAGE

- Connect A/C and AV switch assembly connector M98 and AV control unit connector M139.
- Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector M139 terminal 82 and ground.

(+)		()	Condition	Voltage
Connector	Terminal	(-)	Condition	(Approx.)
	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

Description INFOID:0000000005522909

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

Diagnosis Procedure INFOID:0000000005522910

Regarding Wiring Diagram information, refer to AV-782, "Wiring Diagram".

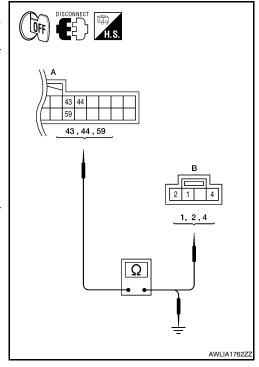
# 1. CHECK HARNESS BETWEEN AV CONTROL UNIT AND MICROPHONE

- Turn ignition switch OFF.
- Disconnect AV control unit connector and microphone connec-
- Check continuity between AV control unit harness connector M137 (A) and microphone harness connector R7 (B).

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	59		1	
M137	43	R7	2	Yes
	44		4	

Check continuity between AV control unit harness connector M137 (A) and ground.

	А		Continuity
Connector	Terminal	_	Continuity
	44		
M137	43	Ground	No
	59		
A (1 (1		C 10	



### Are the continuity test results as specified?

YES >> GO TO 2.

NO >> Repair harness or connector.

# 2.CHECK MICROPHONE POWER SUPPLY

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

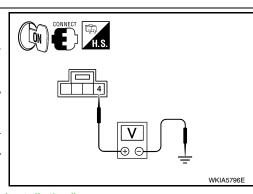
(-	+)	(-)	Voltage (approx)
Connector	Terminal	(-)	voltage (approx)
R7	4	Ground	5V

### 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



**AV-757** Revision: November 2009 2010 Maxima

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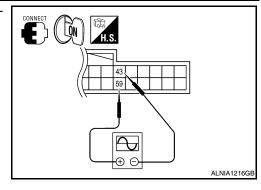
# **MICROPHONE SIGNAL CIRCUIT**

### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

Check signal between AV control unit harness connector M137 terminals 43 and 59.

Connector	(+)	(-)	Peference signal	
Connector	Terminal	Terminal	Reference signal	
M137	59	43	While speaking into MIC  (V) 2.5 2.0 1.5 1.0 0.5 0 PKIB5037J	
M137			(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0	



### Are voltage readings as specified?

>> Replace AV control unit. Refer to <u>AV-824, "Removal and Installation"</u>. >> Replace microphone. Refer to <u>AV-845, "Removal and Installation"</u>. YES

NO

# **AMP ON SIGNAL CIRCUIT**

Description INFOID:0000000005519135

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

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	(-)	voltage (Approx.)
B109	20	Ground	Battery voltage

### Is inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

# $2. {\sf CHECK\ AMP\ ON\ SIGNAL\ (AV\ CONTROL\ UNIT)}$

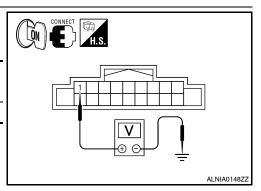
Check voltage between AV control unit harness connector M131 terminal 1 and ground.

(+)		(-)	Voltage (Approx.)	
Connector	Terminal	(-)	voltage (Approx.)	
M131	1	Ground	Battery voltage	

### Is inspection result normal?

YES >> Repair harness or connector.

NO >> Replace AV control unit. Refer to <u>AV-824</u>, "<u>Removal and Installation</u>".



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Revision: November 2009 AV-759 2010 Maxima

### FRONT DOOR SPEAKER

Description INFOID:0000000005519125

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:0000000005519126

Regarding Wiring Diagram information, refer to AV-782, "Wiring Diagram".

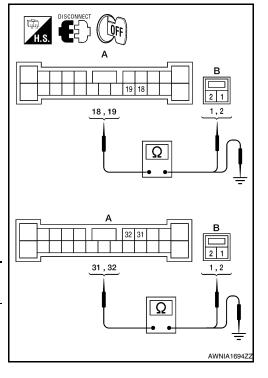
### 1. HARNESS CHECK

- 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).

	Α		В	
Connector	Terminal	Connector	Terminal	
	18	D3	1	
B109	19	D3	2	Yes
	31	D103	1	165
	32		2	

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

Α		_	Continuity	
Connector	Terminal	_	Continuity	
	18			
B109	19	Ground	No	
D109	31	Giodila		
	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

### < COMPONENT DIAGNOSIS >

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

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- 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.

Connec-	Terr	minal	Condition	Reference signal	
tor	tor (+) (-)	(-)	Condition		
	18	19			
B109	31	32	Receive audio sig- nal	1 0 -1 1 ms 3 3KA0177E	

### Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to <u>AV-833, "Removal and Installation"</u>.

NO >> GO TO 3.

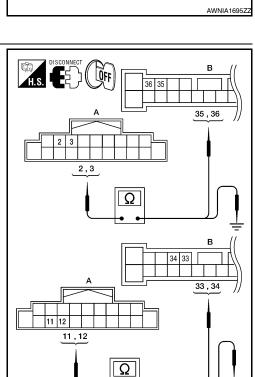
### 3. HARNESS CHECK

- 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).

Α		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2		35	
M131	3	B109	36	Yes
	11		33	res
	12		34	

3. Check continuity between AV control unit harness connector M131 (A) and ground.

	А		Continuity	
Connector	Terminal		Continuity	
	2	Ground	No	
M131	3			
WITST	11	Giouna		
	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

Revision: November 2009 AV-761 2010 Maxima

### FRONT DOOR SPEAKER

### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

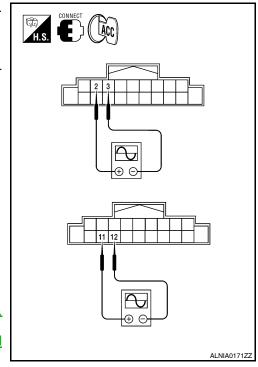
- 1. Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Tern	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	2	3		
M131	11	12	Receive audio sig- nal	(V) 1 0 -1 1 ms

### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-836.</u> "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-824, "Removal and Installation".



### **TWEETER**

Description INFOID:0000000005519127

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

Regarding Wiring Diagram information, refer to AV-782, "Wiring Diagram".

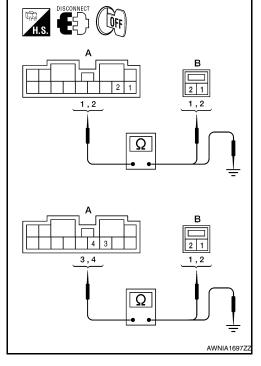
# 1. HARNESS CHECK

- 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).

	А		В	
Connector	Terminal	Connector	Terminal	Continuity
	1	M51	1	
B110	2	IVIOT	2	Yes
	4	M52	1	163
	3	IVIOZ	2	

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

	Α		Continuity	
Connector	Terminal		Continuity	
	1		No	
B110	2	Ground		
БПО	4	Giodila		
	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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- 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	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	1	2		
B110	4	3	Receive audio sig- nal	1 0 -1 1 ms SKIA0177E

### Are the audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to <u>AV-164, "Removal and Installation"</u>.

NO >> GO TO 3.

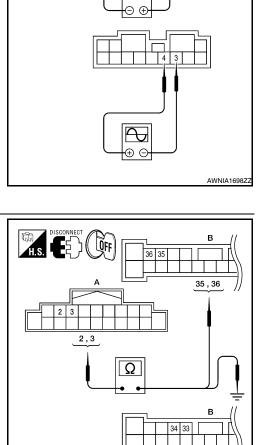
# 3. HARNESS CHECK

- 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		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2		35	
M131	3	B109	36	Yes
	11		33	165
	12		34	

Check continuity between AV control unit harness connector M131 (A) and ground.

	Α		Continuity
Connector	Terminal	_	Continuity
	2		
M131	3	Cround	Na
IVITST	11	Ground	No
	12		



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### 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/ NAVI W/RR CTL]

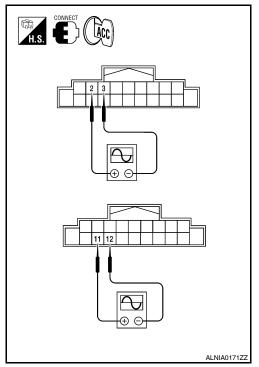
- 1. Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	2	3		
M131	11	12	Receive audio sig- nal	(V) 1 0 -1 1 ms

### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>. "Removal and Installation".

NO >> Replace AV control unit. Refer to <u>AV-824, "Removal and Installation"</u>.



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INFOID:0000000005519130

### **CENTER SPEAKER**

Description INFOID:0000000005519129

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.

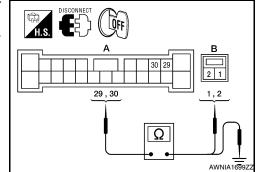
### Diagnosis Procedure

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).

	А		В	
Connector	Terminal	Connector	Terminal	Continuity
B109	29	M130	1	Yes
B109	30	IVITO	2	163



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

	Α		Continuity	
Connector	Terminal		Continuity	
B109	29	Ground	No	
B109	30	Ground	INO	

### Are continuity test results as specified?

YES >> GO TO 2.

NO

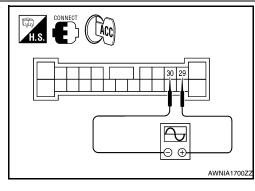
>> • Check connector housings for disconnected or loose terminals.

· 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
Connector	(+)	(-)	Condition	signal
B109	29	30	Receive audio sig- nal	(V) 1 0 -1 1 ms



Is the audio signal voltage reading as specified?

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### < COMPONENT DIAGNOSIS >

YES >> Replace center speaker. Refer to AV-165, "Removal and Installation".

NO >> GO TO 3.

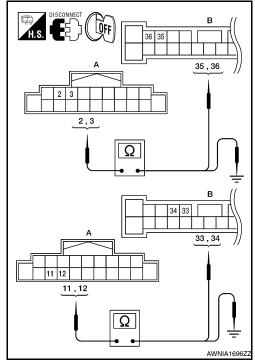
# 3. HARNESS CHECK

- 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	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2		35	
M131	3	B109	36	Yes
	11		33	res
	12		34	

3. Check continuity between AV control unit harness connector M131 (A) and ground.

	A		Continuity	
Connector	Terminal	_	Continuity	
	2			
M131	3	Ground	No	
WITST	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

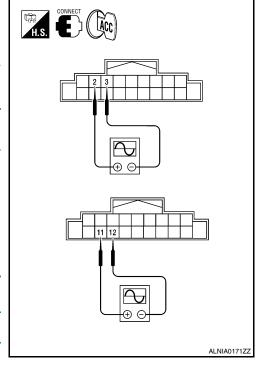
- Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	2	3			
M131	11	12	Receive audio sig- nal	1 0 -1 1 ms 1 SKIA0177E	

### Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>, <u>"Removal and Installation"</u>.

NO >> Replace AV control unit. Refer to <u>AV-824</u>, "<u>Removal and Installation</u>".



### REAR DOOR SPEAKER

Description INFOID:0000000005519131

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

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Regarding Wiring Diagram information, refer to AV-782, "Wiring Diagram".

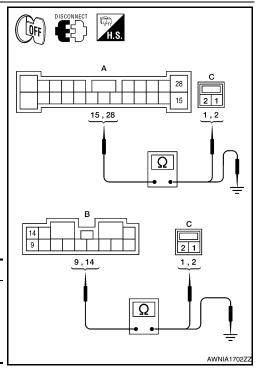
### 1. HARNESS CHECK

- 1. Disconnect BOSE speaker amp. connectors B109, B110 and suspect speaker connector.
- 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		
A. D109	28			Yes	
B: B110	9	C: D302	2	103	
	14	C. D302	1		

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

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



### Are the continuity test results as specified?

YES >> GO TO 2. NO >> • Check c

>> • 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 W/ NAVI W/RR CTL]

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

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
A: B109	28	15		
B: B110	14	9	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E

### Are audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to <u>AV-834, "Removal and Installation"</u>.

NO >> GO TO 3.

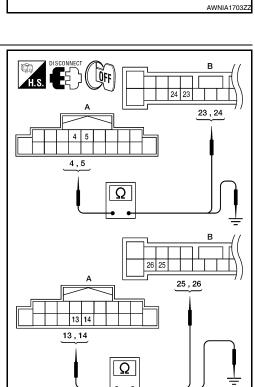
### 3. HARNESS CHECK

- Disconnect AV control unit connector M131 and BOSE speaker amp. connector B109.
- Check continuity between AV control unit harness connector M131 (A) and BOSE speaker amp. harness connector B109 (B).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	4		24	
M131	5	D400	23	Yes
	13	B109	26	ies
	14	•	25	

Check continuity between AV control unit harness connector M131 (A) and ground.

	Α		Continuity	
Connector	Terminal	_	Continuity	
	4			
M131	5	Ground	No	
WITST	13	Giouna	INO	
	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

Revision: November 2009 AV-769 2010 Maxima

### **REAR DOOR SPEAKER**

### < COMPONENT DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

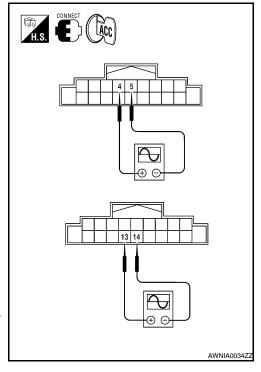
- 1. Connect AV control unit connector M131 and BOSE speaker amp. connector B109.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	4	5		
M131	13	14	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E

### Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-836.</u> "Removal and Installation".

NO >> Replace AV control unit. Refer to <u>AV-824, "Removal and Installation"</u>.



### [BOSE W/ COLOR W/ NAVI W/RR CTL]

### **SUBWOOFER**

Description INFOID:0000000005519133

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

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Regarding Wiring Diagram information, refer to AV-782, "Wiring Diagram".

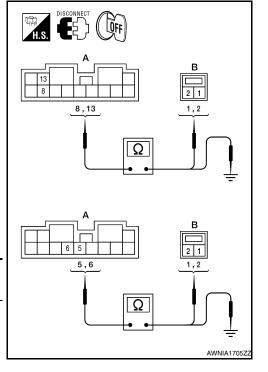
# 1. HARNESS CHECK

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

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	13	D106	1	
B110	8	B106	2	Yes
	5	B107	1	165
	6	D107	2	

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

	A		Continuity	
Connector	Terminal		Continuity	
	13		No	
B110	8	Ground		
	5	Giodila		
	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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- 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	Tern	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	13	8		
B110	5	6	Receive audio signal	(V) 1 0 -1 1 ms

### Is the audio signal voltage as specified?

YES >> Replace suspect rear subwoofer. Refer to <u>AV-168</u>. "<u>Removal and Installation"</u>.

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		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	4	4 24 5 B109	24	
M131	5		23	Yes
	13	D109	26	165
	14		25	

Check continuity between AV control unit harness connector M131 (A) terminal and ground.

	Α		Continuity
Connector	Terminal	_	Continuity
	4		No
M404	5	Cround	
M131	13	Ground	No
	14		

# A 23, 24 A 23, 24 A 23, 24 A 23, 24 A 25, 26 A 25, 26

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### 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/ NAVI W/RR CTL]

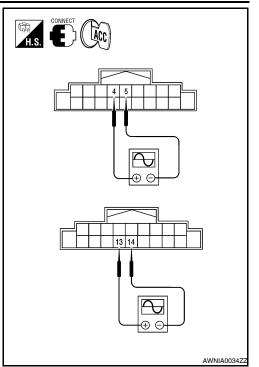
- 1. Connect AV control unit connector M131 and BOSE speaker amp. connector B109.
- 2. Turn ignition switch to ACC.
- 3. Push POWER switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	4	5		
M131	13	14	Receive audio sig- nal	1 0 -1 1 ms SKIA0177E

### Is the audio signal voltage as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-169</u>, "Removal and Installation".

NO >> Replace AV control unit. Refer to <u>AV-824, "Removal and Installation"</u>.



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### STEERING SWITCH

Description INFOID:0000000005519137

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

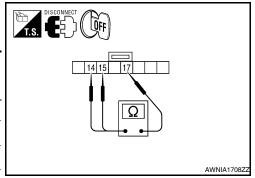
INFOID:0000000005519138

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.

Terr	minal	Signal name	Condition	Resistance (Ω) (Approx.)
		Enter	Depress ENTER switch.	2023
		Voice recognition	Depress ູ√∠ switch.	723
14	17	Menu (down)	Depress ∇ switch.	321
		Menu (up)	Depress △ switch.	121
		Source	Depress SOURCE switch.	0
		Menu back	Depress the back switch.	723
15	17	Phone	Depress 🗸 switch.	321
.0		Volume (up)	Depress VOL up switch.	121
		Volume (down)	Depress VOL down switch.	0



### Do the steering wheel audio control switches check OK?

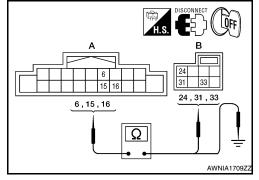
YES >> GO TO 2.

NO >> Replace steering wheel audio control switch. Refer to AV-839, "Removal and Installation".

### 2. CHECK HARNESS

- Disconnect AV control unit connector M131 and spiral cable connector M30.
- Check continuity between AV control unit harness connector M131 (A) and spiral cable harness connector M30 (B).

-						
	А	1		В	Continuity	
	Connector	Terminal	Connector	Terminal	Continuity	
		6		24		
	M131	15	M30	33	Yes	
		16		31		



3. Check continuity between AV switch connector M131 (A) and ground.

### STEERING SWITCH

	A		Continuity
Connector	Terminal		Continuity
	6		
M131	15	Ground	No
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### Are the continuity results as specified?

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YES >> GO TO 3.

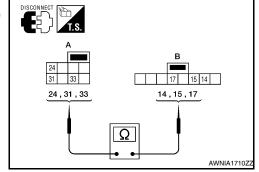
NO >> Repair harness.

# 3. SPIRAL CABLE CHECK

Disconnect spiral cable connector M88.

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

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



[BOSE W/ COLOR W/ NAVI W/RR CTL]

### Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to SR-8, "Removal and Installation".

# **ECU DIAGNOSIS**

### AV CONTROL UNIT

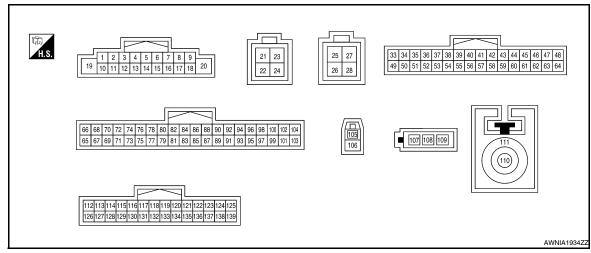
Reference Value

### VALUES ON THE DIAGNOSIS TOOL

CONSULT-III data monitor item

Display Item	Dis- play	Vehicle status	Remarks
VHCL SPD SIG	ON	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is
VIICE OF DISIG	OFF	Vehicle speed =0 km/h (0 MPH)	normal.
PKB SIG  ON Parking brake is applied.  OFF Parking brake is released.		Changes in indication may be delayed. This is	
FRB 3IG	OFF Parking brake is released.  Block the light beam from the auto		normal.
ILLUM SIG	ON Block the light beam from the auto light optical sensor when the light SW is ON.		
ILLUM SIG	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.	_
IGN SIG	ON	Ignition switch ON	
IGIN SIG	OFF	Ignition switch in ACC position	_
	ON	Selector lever in R position	Changes in indication may be delayed. This is
REV SIG	OFF	Selector lever in any position other than R	normal.

### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
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	(V) 1 0 -1 + 2ms SKIB3609E
4 (W/R)	5 (W/L)	Pre-amp. audio signal rear LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
					Depress ENTER switch.	2023Ω
				Ignition	Depress "∠ switch.	723Ω
	15 (L/B)	Steering switch signal A	Input	switch	Depress ∇ switch.	321Ω
,				OFF	Depress △ switch.	121Ω
					Depress SOURCE switch.	0Ω
7 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
9	Ground	Illumination signal	Input	OFF	Lighting switch is OFF	0V
(R/L)	Orouna	-	трас	011	Lighting switch is ON	Battery voltage
10	_	Shield	_	_	_	_
11 (B)	12 (W)	Pre-amp. audio signal front RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
13 (V)	14 (LG)	Audio signal rear RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + + 2ms SKIB3609E
15 (L/B)	Ground	Steering switch signal ground	_	Ignition switch ON	_	0V

### < ECU DIAGNOSIS >

	minal color)	Description		Condition		Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
				Depress the back switch.		723Ω
16	15	Steering switch signal B	Input	Ignition switch	Depress 🗸 switch.	321Ω
(GR/L)	(L/B)	3	· ·	ON	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	0	Dedition had a six and	1	Ignition	Parking brake is ON.	5.0 V
(G/R)	Ground	Parking brake signal	Input	switch ON	Parking brake is OFF.	0 V
39 (W)	Ground	Composite image ground	_	lgnition switch ON	_	0 V
40 (R)	Ground	Composite image signal	Output	Ignition switch ON	At DVD image is displayed.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
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.	(V) 6 4 2 0 
46 (P)	_	CAN-L	Input/ Output	_	_	_

< ECU DIAGNOSIS >

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

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	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
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 12.0 V
52 (G)	Ground	Ignition signal	ignal Input		Lighting switch is ON.  —	Battery voltage
53 (D/B)	Ground	Reverse signal	Input	ON Ignition switch	R position	12.0 V
(P/B)			P	ON	Other than R position	0 V
54 (V/W)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE:  Maximum voltage may be 12.0 V due to specifications (connected units).  (V) 6 4 2 0 +-20ms SKIA6649J
55	_	Shield	_	_	_	_
56 (B)	Ground	Composite synchronizing signal	Output	Ignition switch ON	_	(V) 6 4 2 0 20 μs SKIA0187E
59 (L)	Ground	Microphone signal	Input	Ignition switch ON	Give a voice	(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0 + 2ms
60	_	Shield	_	_	_	_
61 (BR)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	(V) 6 4 2 0 +1ms
62 (L)	_	CAN-H	Input/ Output	_	_	_
63 (L)	_	AV communication signal (H)	Input/ Output	_	_	_

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

Terminal (Wire color)		Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
64 (L)	_	AV communication signal (H)	Input/ Output	_	_	_
67 (W)	Ground	Rear view camera ground	_	Ignition switch ON	_	0 V
68	Ground	Camera ON signal	Output	Ignition switch	R position.	6.0 V
(R)		3		ON	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.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
77	_	Shield	_	_	_	_
81 (BR)	Ground	Switch ground	_	Ignition switch ON	_	0 V
82	81			Ignition	Pressing the eject switch.	0 V
(SB)	(BR)	Disk eject signal	Input	switch ON	Except for above.	5.0 V
105 (B)	_	GPS antenna signal	_	_	_	_
106		Shield	_	_	_	
108 (B)	_	Amplified window antenna signal	Input	_	_	1
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 selected.	(V) 1 0 -1 → 2ms SKIB3609E

### < ECU DIAGNOSIS >

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

	minal color)	Description			Condition Reference val		
+	_	Signal name	Input/ Output		Condition	(Approx.)	
128	_	Shield	_	_	_	_	
129 (B)	130 (R)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is selected.	(V) 1 0 -1 ** 2ms SKIB3609E	

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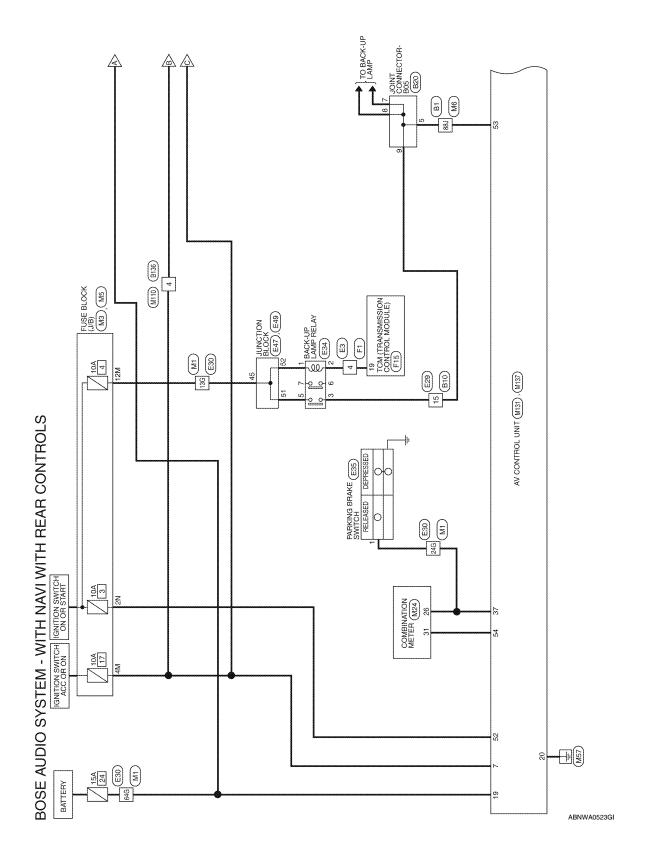
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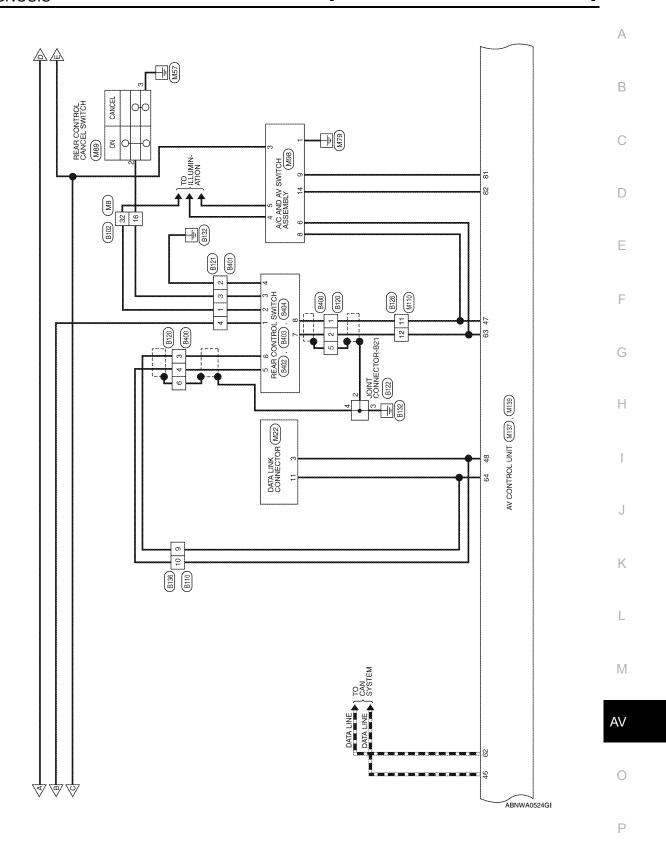
٩V

C

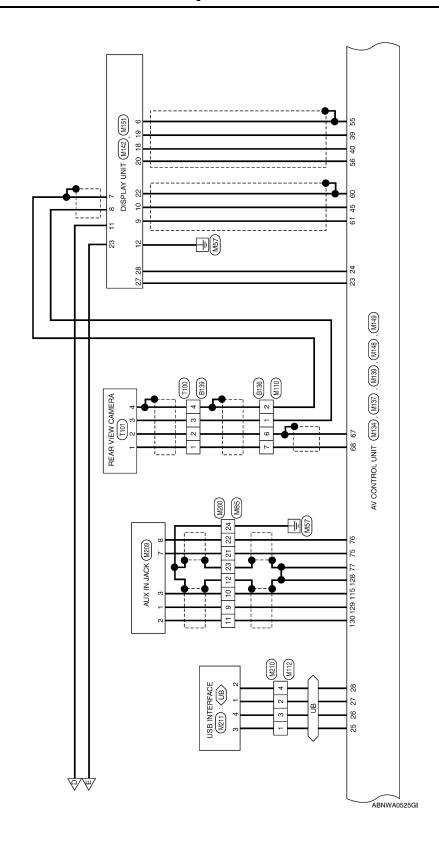
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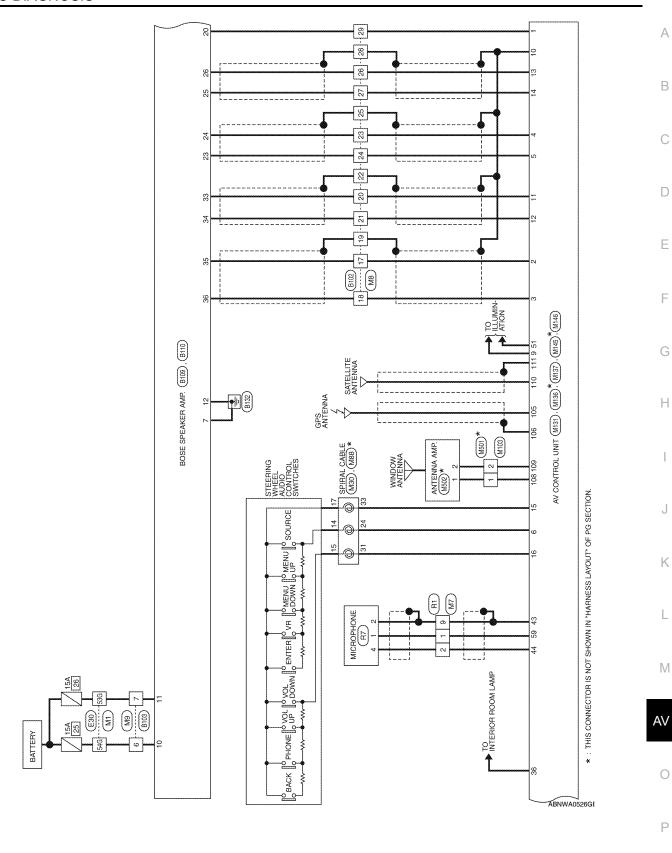
Wiring Diagram

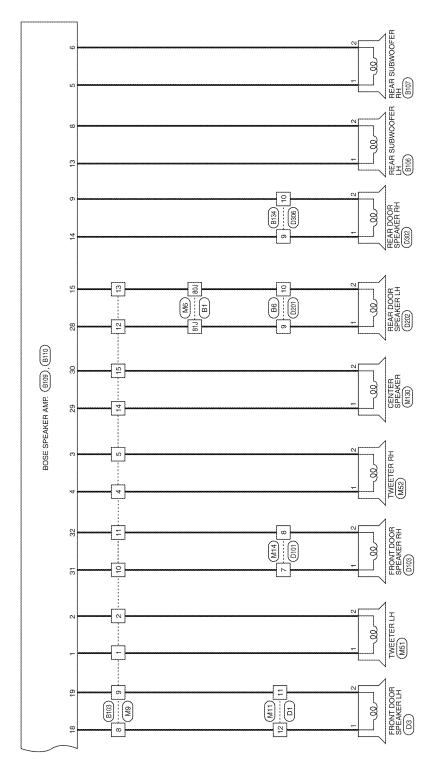












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	Toriminal Mo	Color of	Olympia Momo	Connector No.   M3
Connector Name WIRE TO WIRE	1 6111111111111111111111111111111111111		Olyliai Ivallie	Connector Name FLISE BLOCK (J/B)
Connector Color WHITE	13G	0	I	
	24G	G/R	**	
	53G	B/R	***	
96 86 76 66 56 46	54G	BR	ì	
176 166 156 146 136 126 116	64G	Y/R	3	1.5.
340  350  320  310  300  230  230  270  190  190  190  190  190  190  190  19				Terminal No. Color of Signal Name 2N G

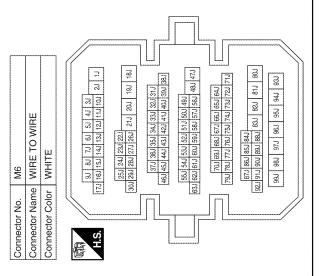
Connector No. M5  Connector Name FUSE BLOCK (J/B)  Connector Color WHITE  Signal Mame  Terminal No. Color of Signal Name  4M V/Y		<b></b>								
nnector No. M5 nnector Name FUSE nnector Color WHIT SMAM COLOR OF WHIT MINIOR COLOR OF WIRE AM V/Y		BLOCK (J/B)	ш	3M 2M 1M	9M 8M 7M 6M		Signal Name		I	
nnnector No. nnnector Colc nnnector Colc nnnector Colc nnnector Colc A.S. 4.M.		ne FUSE	or WHIT	5M 4M	12M 11M 10M		Color of Wire	***************************************		C
	Connector No.	Connector Nan	Connector Cold	管	H.S.		Terminal No.		M4	8 40 7

ABNIA1600GB

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M7	WIRE TO WIRE	WHITE	2 3 4 5 6 7 8	Color of Signal Name	1	1	SHIELD -
Connector No.	Connector Name	Connector Color	所 H.S.	Terminal No.		2	6

Signal Name	Ĭ	1	1	
Color of Wire	В/Υ	re	P/B	
Terminal No. Wire	807	81J	88J	



Signal Name	and the same of th		ı	ı		ı	I	ı	
Color of Wire	SHIELD	W/R	W/L	SHIELD	>	re	SHIELD	В/Р	B/L
Terminal No. Wire	22	23	24	25	26	27	28	29	32

	MRE		9 8 7 6 5 4 3 2 1	Signal Name			***	ı	ı	ı
M8	ne WIRE TO WIRE	or WHITE	14 13 12 11 10 30 29 28 27 26	Color of Wire	BR	ŋ	Œ	SHIELD	æ	×
Connector No.	Connector Name	Connector Color	16 15 H.S. 32 31	Terminal No.	16	17	18	19	20	21

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	Connector No. M11	Connector Name WIRE TO WIRE	Connector Color WHITE	1         2         3         1         4         5         6         7           8         9         10         11         12         13         14         15         16	nal No.	1 B/W	-
***************************************	Connect	Connect	Connect	H.S.	Terminal No.	Ξ	12

,	,				,		,
Signal Name	1	1	I	Ī	ş	ł	ann a
Color of Wire	B/W	BB	B/R	re	В/Υ	В/Р	O/B
Terminal No. Wire	0	10	11	12	13	14	15

Connector No.	Ċ	₩	
Connector Name	sme	N N	WIRE TO WIRE
Connector Color	jo	BRC	BROWN
		3	3 2
H.S.	15	14 13	1 1 10 9 8
Terminal No.	Color of Wire	re of	Signal Name
-	9	(D	I
2	Β/	>-	E
4	0/1	C	ł
5	GR/L	7	1
9	BR	œ	I
7	B/R	æ	I
8	1		ŀ
***************************************			

ctor No. M24	ctor Name   COMBINATION METER	ctor Color WHITE	2 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 35 34 25 36 37 38 39 40	lal No. Wire Signal Name	G/R PKB	V/W 8P/R OUT
Connector No.	Connector Name	Connector Color	22 22	Terminal No.	26	31

	DATA LINK CONNECTOR	ш	0 11 12 13 14 15 16	Signal Name	M CAN L	M CAN H	
. M22		lor WHITE	9 10	Color of Wire	9	œ	
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	3	11	

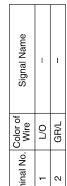
	WIRE TO WIRE	m	9 10	Signal Name	ı	3
M14		lor WHITE	5 6 7 8	Color of Wire	ВВ	B/R
Connector No.	Connector Name	Connector Color	南南 H.S.	Terminal No.	7	8

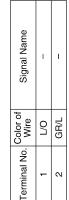
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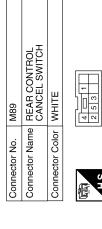
Revision: November 2009 AV-789 2010 Maxima

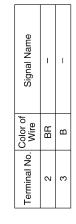
Connector No.	M52
Connector Name	TWEETER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



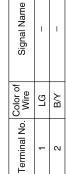


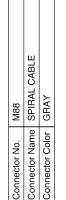




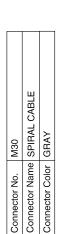








of Signal Nam	REMOTE A	REMOTE	GND
Color of Wire	≥	٦	BR
Terminal No.	14	15	17



Connector No.

TWEETER LH (WITH BOSE AUDIO SYSTEM)

Connector Name

M51

Connector No.

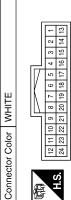
BROWN

Connector Color





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

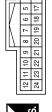


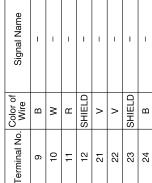
WIRE TO WIRE

Connector Name

M85

Connector No.





ABNIA1603GB

Connector No.		M103
Connector Name	L	WIRE TO WIRE
Connector Color		GRAY
H.S.		123
Terminal No. Wire	Color o Wire	Signal Name
	മ	1
2	മ	-

		,						
Signal Name	GND	ACC	ILL+	ILL CONT GND	CAN-H	CAN-L	SW GND	CD (DVD) EJECT
Color of Wire	В	λ/Λ	R/L	Ρ/Υ		Ф	BR	SB
Terminal No.		8	4	5	9	8	6	14

Connector No.	ž	M98					
Connector Name		A/C AND A\ ASSEMBLY	ZA	A H	S >	A/C AND AV SWITCH ASSEMBLY	F
Connector Color WHITE	⋛	듶	ш				
	_	$\Pi$	IN.	W	17		
0	4	9	80	9	12	8 10 12 14 16	
2	6	3 5	7	0	=	7 9 11 13 15	

	12	WIRE TO WIRE	GRAY	2 4 0	Signal Name	<b>S</b>	-	I	1
	M112		ļ		Color of Wire	а	œ	×	Ç
	Connector No.	Connector Name	Connector Color	H.S.	Terminal No. Wire	<b>,</b>	2	ဧ	_

Signal Name	1	I	1	1
Color of Wire	ŋ	ш	а	7
Terminal No. Wire	6	10	F	12

Connector No.	). M110	10
Connector Name		WIRE TO WIRE
Connector Color		WHITE
H.S.	8 7 6 16 15 14	1 18 12 11 10 9
Terminal No.	Color of Wire	Signal Name
-	×	I
2	SHIELD	1
_	22	

5 4 3 2 1	13 12 11 10 9		Signal Nam	I	1	Ì	I	1
9	7		Ö .		Ω.			
7	16 15 14		5.5	≥	ᇳ	λ/Λ	V/G	
80	=	IJ	Color of Wire	_	SHIELD	>	>	
SE			Terminal No.	-	2	4	9	7

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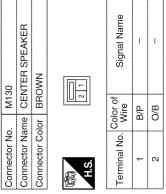
Н

Signal Name	킈	SHIELD	FR RH PRE+	FR RH PRE-	RR RH PRE+	AR AH PRE-	STRG SW GND	STRG SW B	la.	-	BAT	GND
Color of Wire	H/L	SHIELD	В	8	>	re	L/B	GR/L	ı	ı	Y/R	В
Terminal No.	6	10	1	12	13	14	15	16	17	18	19	20

Connector No.	M131
Connector Name	AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)
Connector Color WHITE	WHITE



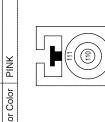
0 0 0	10 11 12 13 14 15 16 17 18 20	Signal Name	NO AMA	+384 H1 84	FR LH PRE-	RR LH PRE+	RR LH PRE-	STRG SW A	ACC
2 2	10 11 12	Color of Wire	B/P	В	æ	W/R	M/L	W/G	λ/\
SH		Terminal No.	<b>,</b>	2	8	4	2	9	7





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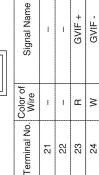




Signal	•		
Color of Wire	В	В	
Terminal No.	110	<u></u>	

Connector No. M134	Connector Name (WITH NAVI AND REAR CONTROLS)	Connector Color   GREEN	
Conne	Conne	Conne	





ABNIA1605GB

Signal Name	IGN	REVERSE SIG	SPEED 8P	NAVI COMP1 SHIELD	NAVI COMP1 SYNC	_	_	MIC SIG	SHIELD	DISP IT	CAN-H	M-CAN H	M-CAN H TRM
Color of Wire	G	P/B	W/N	SHIELD	В	_	-	٦	SHIELD	BR	_	٦	_
Terminal No. Wire	52	53	54	55	99	29	89	59	09	61	62	63	64

Signal Name	NAVI COMP 1+	NAVI COMP 1-	ı	1	MIC GND	MIC VCC	IT DISP	CAN-L	M-CAN L	M-CAN L TRM	I	ı	MR OUTPUT
Color of Wire	8	Œ	ı	I	SHIELD	ш	>	Ф	Д	Ь	-	ı	R/L
Terminal No.	39	40	41	42	43	44	45	46	47	48	49	20	51

Connector No.	M137
Connector Name	AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)
Connector Color WHITE	WHITE

47 48	63 64	١.							
37 38 39 40 41 42 43 44 45 46 4	52 53 54 55 56 57 58 59 60 61 62 6		Signal Name	_	ı	1	ROOM LAMP	PKB SIG	1
34 35 36 3	50 51 52		Color of Wire	1	ı	ı	Υ	G/R	ı
88	49		Terminal No. Color of Wire	88	34	35	98	37	38

Signal Name	ı	ı	ı	ı	ı	1	ı	ı	_	_	ı	_	_	-	_	1
Color of Wire	1	ı	1	ı	1	-	1	1	_	-	1	ı	-	ı	-	1
Terminal No. Wire	68	06	91	92	93	94	92	96	97	86	66	100	101	102	103	104

Signal Name	1	ı	I	AUX VIDEO-	AUX VIDEO+	VIDEO SHIELD	I	ı	1	SW GND	CD (DVD) EJECT	I	I	ı	1	ı	I
Color of Wire	1	1	1	LG	>	SHIELD	1	1	1	BB	SB	1	1	1	1	_	ı
Terminal No. Wire	72	73	74	75	9/	77	78	62	80	81	82	83	84	85	98	87	88

Connector No.	r No.	M139	69													
Connector Name	r Name	AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)	용돈	₽₹Ē	S. X.	AN	N N	_≒	Œ,							
Connector Color WHITE	r Color	M	≝													
E						\		l 17			1					
H.S.	66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100 102	72 74	1 9/	8,8	8 8	8	88	88	96	92	94	96	86	001	700	104
	65 67 69 71 73 75 75 77 89 81 83 85 87 89 91 93 95 97 99 101 103	71 73	75 7	7 7	9 81	83	82	87	89	91	93	35	97	99	101	103
																ı

Signal Name	1	ı	CAMERA GND	CAMERA V+	ı	-	ı
Color of Wire	I	ı	W	В	-	_	1
Terminal No. Wire	99	99	29	89	69	20	71

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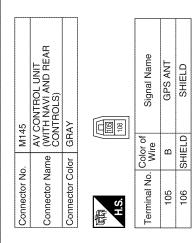
е					MP+	MP-	SYNC				
Signal Name	1	1	ı	1	FRONT COMP+	FRONT COMP-	FRONT COMP SYNC	ı	SHIELD	ACC	ı
Color of Wire	ı	1	ı	ı	Œ	8	œ	ı	SHIELD	λ	
Terminal No. Wire	14	15	16	17	18	19	20	21	22	23	24

Signal Name	II.	1	FRONT COMP SHIELD	R CAMERA COMP-	R CAMERA COMP+	DISP IT	IT DISP	+B	GND	I
Color of Wire	ı	ı	SHIELD	SHIELD	В	BR	>	Y/R	В	ı
Terminal No. Wire	4	5	9	7	æ	6	10	11	12	13

Connector No. M142	Connector Name DISPLAY UNIT (WITH COLOR DISPLAY AND NAV!)	Connector Color WHITE	1.S. [12   11   10   9   8   7   6   5   4   3   2   1	Terminaf No.   Color of   Signal Name   Wire	1	1	1
Conne	Conne	Conne	H.S.	Termin	1	CVI	e.

AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS) GREEN  GREEN  Signal Name  USB GND  USB D-  V BUS  V BUS	
M148 WVITH N CONTR	
Connector No. Connector Name Connector Color H.S. H.S. 25 26 27	

Connector No.	. M146	46
Connector Name		AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)
Connector Color	lor GRAY	IAY
原南 H.S.	107	[103]
Terminal No. Wire	Color of Wire	Signal Name
108	В	ANT MAIN
109	α	ANT +B



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Signal Name	***	1	ı	ı	1	1	I	ŧ
Color of Wire	1	1	1	ı	ı	1	1	ı
Terminal No. Wire	132	133	134	135	136	137	138	139

Signal Name	7	I	I	ı	ı	ı	ı	1	ı	AUX SHIELD	AUX AUDIO RH+	AUX GND	ł
Color of Wire	1	1	ı	ı	1	-	ı	i	-	SHIELD	ш	ш	1
Terminal No. Wire	119	120	121	122	123	124	125	126	127	128	129	130	131

No. M149  Name NAVI AN Color WHITE Color WHITE Color of Wire  No. Color of Wire  W W		AV CONTROL UNIT (WITH NAVI AND REAR CONTROLS)		112[113[114[115]116[117[118]119[120]121[122[123[124[125] 126[127]128[129]130[131[132[133]134[135[136]137]138[139]	Signal Name	ı	ı	ı	AUX AUDIO LH+	ı	I	ş
Name Color (Color Mathematical Color Mathematical C	M149	AV CON NAVI AN CONTRO	WHITE	1115116117111	or of fire		-			1	1	1
	Connector No.	Connector Name	Connector Color	112113114	Terminal No. W				_	-	-	

			8	Signal Name	AUX AUDIO RH+	AUX GND	AUX AUDIO LH+	COMP OUT+	71 70 0100
M209	AUX IN JACK	WHITE	2 4 6 7 7		AUX A	AU	AUX A		ر
<u> </u>	<u> </u>		2	Color of Wire	8	Œ	≥	9	>
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.		2	3	7	α

Connector No.	). M200	00
Connector Name		WIRE TO WIRE
Connector Color	-	WHITE
H.S.	2 3 4 5 14 15 16 17	6 7 8 9 10 11 12 18 19 20 21 22 23 24
Terminal No.	Color of Wire	Signal Name
6	മ	ļ
10	≯	ana.
<del>*</del>	α	I
12	SHIELD	1
21	ยา	1
22	>	1
23	SHIELD	ŀ
24	GR	ı

51	DISPLAY UNIT (WITH COLOR DISPLAY AND NAVI)	GREEN	22 ZZ Z	Signal Name	ł		FRONT GVIF+	FRONT GVIF-	
M151			25 25	Color of Wire	ı	ı	ы	≯	
Connector No.	Connector Name	Connector Color	南南 H.S.	Terminal No.	25	26	27	28	

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	Connector Name WIRE TO WIRE	>		Signal Name	>	ı	an.			
M501	WIRE	GRA		olor of	2 2	ω	8			
Connector No.	ector Name	Connector Color GRAY		Color of Julian No. 1462	+		2			
Conne	Conne	Conne	H.S.	Termi						
							1	I		·····
211	Connector Name USB INTERFACE	REN	E 4			oigilal Naille	VBUS	USB D+	USB GND	USB D-
M211	me US	or GF			Color of	Wire	В	Ø	മ	×
Connector No.	Connector Na	Connector Color GREEN	可 H.S.		Color of	ellilla NO.	-	2	3	4
,										
110	Connector Name WIRE TO WIRE	<b>ЗА</b> Ү	1 + © 0		G S	oighal Maine		ı	1	PPE
M210	me WII	or GR	71111	1	Solor of	Wire	В	œ	≥	ß
Connector No.	connector Nar	Connector Color GRAY	南 H.S.		Terminol N. Color of	dilling No.	-	5	3	4

	Connector No.	E3		Connector No. E29	Jo. E2	6
IA AMP.	Connector Name WIRE TO WIRE	ıme WIRE	: TO WIRE	Connector N	lame Wi	RE TO WIRE
	Connector Color WHITE	lor WHIT	m	Connector C	Color WI	Connector Color WHITE
	H.S.	8 9 10 11	2   3	H.S.	7 6 5 14 15 14	7 6 5 4 3 2 1 16 15 14 13 12 11 10 9 8
	Terminal No Color of	Color of	Signal Name	Terminal No Color of	Color of	Signal Name
Signal Name		Wire	2000		Wire	
	4	<u>ac</u>	ı	15	≷	1
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Connector Name ANTENNA AMP.
Connector Color GRAY

Connector No.

Color of Wire

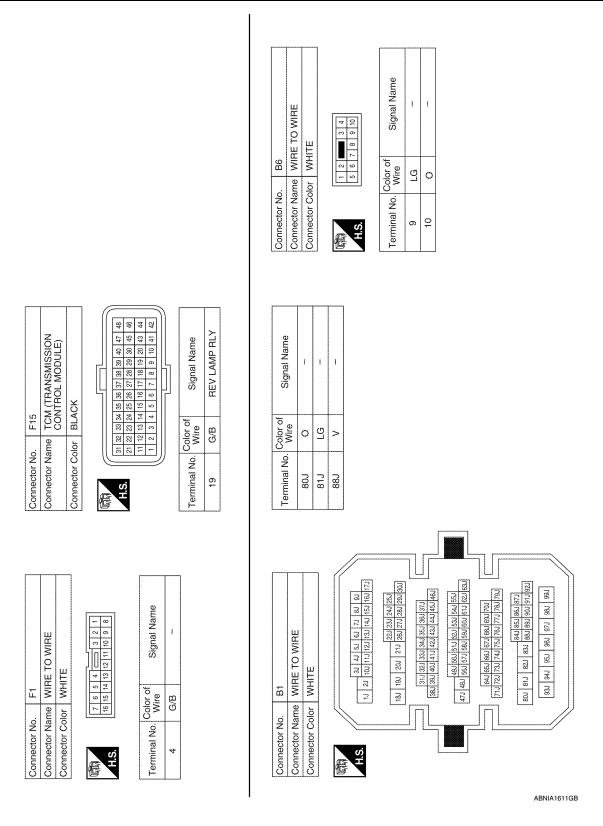
Terminal No.

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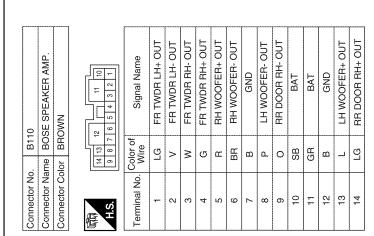
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		А
LAMP RELAY Signal Name	N BLOCK Signal Name	В
W. W	1 101 1	С
10 = 10 1E   < 191	1	D
Connector No. Connector Name Connector Color  H.S.  Terminal No. W 3	Connector No. Connector Name Connector Color H.S.  Terminal No. W 51 L 52 C	Е
		F
Signal Name	JK Name	G
	JUNCTION BLOCK WHITE    Columbia   Columbia	Н
do. Wire BR BR BR BR BR CAR CAR CAR CAR CAR CAR CAR CAR CAR CA		I
Terminal No. 13G 24G 53G 64G	Connector No. Connector Name Connector Color H.S.  Terminal No. W  45 E	J
		К
E30   WIRE TO WIRE   State   State	E35 BLACK  I Signal Name e	L
10 20 100 116 120 130 140 150 160 160 170 180 180 180 190 116 120 130 130 130 130 130 130 130 130 130 13	E35 BLACK Ir of Signa	M
No. E30 Name WiRE T Color WHITE  Color WHITE  386 486 486 886 886 886 886 886 886 886 8		AV
Connector No. Connector Name Connector Color H.S. 166	Connector No. Connector No. H.S. Terminal No. W	0
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		A
	B103 	С
	B103   B103   B103   B104   B103   B103   B103   B103   B104   B104	D
	Connector No.  Connector Name Connector Name Connector Color  H.S.  1  1  1  2  2  4  4  4  1  10  8  8  7  9  9  11  11  E  12  13  13	E
		F
BLUE  BLUE    8   7   6   5   4   3   2   1	Signal Name	G
0. B20 ame JOINT CONN olor BLUE   10   8   7   6   5       20   13   17   15   15     20   20   3   20     20   3   4   5       20   4   5   5     20   5   5   5     20   7   5   5     20   7   5   5     20   7   5   5     20   7   5   5     20   7   7     20   7   7     20		Н
	Color of Wire SHIELD SHIELD SB SB SB P P P P P P P P P P P P P P P	I
Connector No. Connector Cold Connector Cold A.S. Terminal No. 7 7 9 9	Terminal No. 24 25 26 26 29 29 32 32	J
		K
WIRE  4 5 6 7  2 13 14 15 16  Signat Name	O WIRE    1   12   13   14   15   16	L
3 3 1 1 E 1 O 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 TTE TO 11 11 11 11 11 11 11 11 11 11 11 11 11	M
		AV
Connector No. Connector Color H.S. Terminal No. Wil	Connector No.  Connector No.  Connector No.  H.S.  1 2 3 4 5 6 7 7 12 12 12 12 12 12 12 12 12 12 12 12 12	0
	ABNIA1612GB	Р

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	ER RH			lame		
B107	REAR SUBWOOFER RH	WHITE		of Signal Name	I	-
	L			Color of Wire	Œ	g
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	<b>*</b>	٥

I	1		Signal Name	FR DOOR RH+ OUT	FR DOOR RH- OUT	FR RH+IN (WITH COLOR DISPLAY)	FR RH-IN (WITH COLOR DISPLAY)	FR LH+IN (WITH COLOR DISPLAY)	FR LH-IN (WITH COLOR DISPLAY)
r	BR		Color of Wire	Œ	BR	W/L	GR/V	W/R	B/B
-	2		Terminal No. Wire	31	32	33	34	35	36
		I							

Connector No.	). B106	
Connector Name	L	REAR SUBWOOFER LH
Connector Color	ilor WHITE	ш
斯斯 H.S.		
Terminal No.	Color of Wire	Signal Name
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2	۵	1
		7

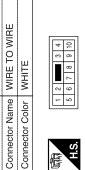
Connector No.	-	68
Connector Name		BOSE SPEAKER AMP.
Connector Color		BROWN
á	[c	
31 1.S	36 35 34 26 25 24	33 22 21 20 19 18 17 16 15
	<u> </u>	
Terminal No.	Color of Wire	Signal Name
15		RR DOOR LH- OUT
18	×	FR DOOR LH+ OUT
19	മ	FR DOOR LH- OUT
20	SB	AMP ON
23	>-	RR LH-IN (WITH COLOR DISPLAY)
24	BR	RR LH+IN (WITH COLOR DISPLAY)
25	ยา	RR RH-IN (WITH COLOR DISPLAY)
26	>	RR RH+IN (WITH COLOR DISPLAY)
28	g	RR DOOR LH+ OUT
58	>	INST CTR TWDR+ OUT
30	۵	INST CTR TWDR- OUT
	-	

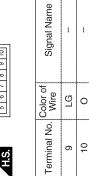
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No. B122	Connector Name JOINT CONNECTOR-B21	Connector Color WHITE			Terminal No. Color of Signal Name	SHIELD	п	- GTHELD			
Connector No.	Connector	Connector (		H.S.	Terminal N	2	8	4			
21	Connector Name WIRE TO WIRE	HITE		3 2 1	Signal Name	1	1	1	ı		
). B121	ame Wi	olor W		4	Color o Wire	۵.	Ω	0	>		
Connector No.	Connector Na	Connector Color WHITE	唇	H.S.	Terminal No. Wire	-	2	က	4		
***************************************	ш		ŗ		al Name	Į	oo a	ı	1	ı	-
B120	WIRE TO WIRE	GRAY		6 5	lor of Signal	9	Œ	a.	T	IELD	SHIELD
rector No.	ector Name	nector Color GRAY		4	ninal No. Wire	9	Œ	α.	7	SHIELD	u U

Signal Name	İ	ŀ	ì	ł	
Color of Wire	Д	_	G	Œ	SB
Terminal No.	6	10	#	12	16

	WIRE TO WIRE	111	4 5 6 7 8 12 13 14 15 16	Signal Name	ı	1	ı	1	
B136	WIRE	WHITE	1 2 3 9 10 11	Color of Wire	Μ	SHIELD	>-	N/G	
	ame .	9	[]			တ			-
Connector No	Connector Name	Connector Color	明.S.	Terminal No.	-	2	4	9	





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Connector No.

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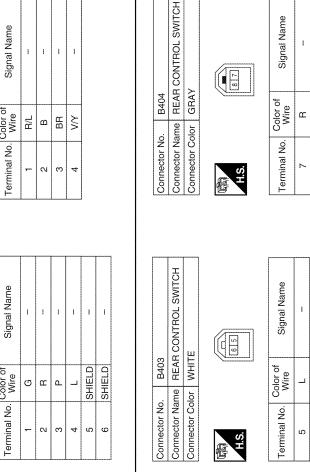
Connector Name WIRE TO WIRE

B400

Connector No.

Connector Color GRAY

		<b>,</b>					<b>,</b>	<b>,</b>		
-	WIRE TO WIRE	卫	ſ	4		Signal Name	***	ı	name .	I
	ø	or WHI		2 3		Color of Wire	B/L	а	ВВ	22
Connector No.	Connector Name	Connector Color WHITE			E Si	Terminal No. Wire	-	2	ო	Ţ
					_					
						dame				



Ο.	WIRE TO WIRE	ΠE	3 4	Signal Name	ţ	1	
B139		Jr WH	1 2	Solor of Wire	1	N/G	Μ
Connector No.	Connector Name	Connector Color WHITE	闻 H.S.	Terminal No. Wire	<b>,</b>	2	ဇ

SHIELD

	REAR CONTROL SWITCH	ÍП	2 3 4	Signal Name	ł	ŧ		-
B402		or WHITE		Color of Wire	٨/٧	R/L	ВЯ	а
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No.	-	2	က	4

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Connector No.	T101		Connector No.	Œ.	
onnector Nai	ne REAR	Connector Name REAR VIEW CAMERA	Connector Name WIRE TO WIRE	me WIRE	ro wire
Connector Color WHITE	or WHITE	E 4 5	Connector Color WHITE	lor WHITE	
H.S.	2 -	4	原 用.S.	16 17 6 5 7 6 5 7 14 13 14 14 13 14 14 14 14 14 14 14 14 14 14 14 14 14	4 5 1 3 2 1 1 0 0 1
Terminal No.	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
	Œ	CAMERA ON	-	١	1
2	M	GND	CV	Œ	
က	В	COMP+	5	SHIELD	***
4	GR	COMP.	ļ.		

	玉					
	Connector Name   FRONT DOOR SPEAKER LH			Signal Name	3	ě
D3	e FRONT	WHITE	2 1	Color of Wire	re	0
Connector No. D3	Connector Nam	Connector Color WHITE	H.S.	Terminal No.   Color of Wire	-	2
					1	T
	TO WIRE	8.15	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Signal Name	1	1
5	ne WIRE	or WHITE	6 5 4 3 12 11 10	Color of Wire	0	57
Connector No. D1	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Wire	=	12
	ı					
25	or Name MICROPHONE	VHITE	1 2 3 4	of Signal Name	MIC SIG	D MIC GEN
or No.   R7	Name	or Color WHITE	d	No. Wire	_	SHIELD
jor	Ö	ō		Z		

T100	Connector Name WIRE TO WIRE	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



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H.S.

Terminal No.	Color of Wire	Sign
<b>,</b>	J	Z
2	SHIELD	Ĭ
4	ш	ž

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Connector No. D103	D103		Connector No.	lo.   D201	
ector Nam	e FRONT	Connector Name FRONT DOOR SPEAKER RH	Connector	Connector Name WIRE TO WIRE	TO WIRE
Connector Color WHITE	r WHITE		Connector (	Connector Color WHITE	ш
H.S.			H.S.	4 01 8 6 9	2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Terminal No.   Color of Wire	Solor of Wire	Signal Name	Terminal No	Ferminal No.   Color of Wire	Signal Name
-	re	ı	0	97	I
2	0	***	10	0	ter

		1		,		r	
	TO WIRE		7 6 5 1		Signal Name	ı	
D306	ne WIRE		10 9 8		Color of Wire	re	0
Connector No.	Connector Name WIRE TO WIRE Connector Color WHITE		H.S.		Terminal No. Wire	0	10
	Γ		1				
	Name (WITH BOSE AUDIO	, NA			Signal Name	I	1
D302	ne (WITH	Color BROWN	2 1		Color of Wire	EG.	0
Š	Nar	00			<u></u>	·	<del> </del>

Connector No.	D101	
Connector Name WIRE TO WIRE	me WIRE	TO WIRE
Connector Color WHITE	lor WHIT	ш
南 H.S.	10 9 8	0   1   1   1   1   1   1   1   1   1
Terminal No.	Color of Wire	Signal Name
7	re	ı
α	c	-

Connector No.	). D202	
Connector Name		REAR DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	olor BROWN	Ş
原 H.S.		
Terminal No.	Color of Wire	Signal Name
-	n	ł
2	0	***

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DTC Index

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

# **AV CONTROL UNIT**

### < ECU DIAGNOSIS >

# [BOSE W/ COLOR W/ NAVI W/RR CTL]

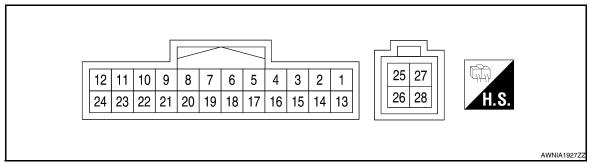
DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-715, "Diagnosis Procedure"
U1010	CONTROL UNIT (CAN) [1010]	AV-716, "DTC Logic"
U1200	Cont Unit [U1200]	AV-717, "DTC Logic"
U1201	GYRO NO CONN [U1201]	AV-718, "DTC Logic"
U1202	G-SENSOR NO CONN [U1202]	AV-719, "DTC Logic"
U1204	GPS COMM [U1204]	AV-720, "Diagnosis Procedure"
U1205	GPS ROM [U1205]	AV-721, "Diagnosis Procedure"
U1206	GPS RAM [U1206]	AV-722, "Diagnosis Procedure"
U1207	GPS RTC [U1207]	AV-723, "Diagnosis Procedure"
U1216	CAN CONT [U1216]	AV-724, "DTC Logic"
U1217	BLUETOOTH MODULE [U1217]	AV-725, "DTC Logic"
U1218	HDD CONN [U1218]	AV-726, "Diagnosis Procedure"
U1219	HDD READ [U1219]	AV-727, "Diagnosis Procedure"
U121A	HDD WRITE [U121A]	AV-728, "Diagnosis Procedure"
U121B	HDD COMM [U121B]	AV-729, "Diagnosis Procedure"
U121C	HDD ACCESS [U121C]	AV-730, "Diagnosis Procedure"
U121D	DSP CONN [U121D]	AV-731, "Diagnosis Procedure"
U121E	DSP COMM [U121E]	AV-732, "Diagnosis Procedure"
U1225	USB CONTROLLER [U1225]	AV-733, "DTC Logic"
U1227	DVD COMM [U1227]	AV-734, "Diagnosis Procedure"
U1228	SUB CPU CONN [U1228]	AV-735, "DTC Logic"
U1229	iPod CERTIFICATION [U1229]	AV-736, "DTC Logic"
U122A	CONFIG UNFINISH [U122A]	AV-737, "Diagnosis Procedure"
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"
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"
U1300 U1240	AV COMM CIRCUIT [U1300]     SWITCH CONN [U1240]	AV-744, "Description"

ΑV

# **DISPLAY UNIT**

Reference Value

### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
6	_	Shield	_	_	_	_
7	_	Shield	_		_	_
8 (B)	Ground	Rear view camera image signal	Input	Ignition switch ON	At rear view camera image is displayed.	(V) 0. 4 0 -0. 4 -0. 4 -0. 4 -0. 4 -0. 4
9 (BR)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display- brightness.	(V) 6 4 2 0 
10 (Y)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display- brightness.	(V) 6 4 2 0 ••••1ms
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]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
18 (R)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	(V) 0. 4 0 -0. 4 +40μs SKIB2251J
19 (W)	Ground	Composite image ground	_	Ignition switch ON	_	0V
20 (B)	Ground	Composite synchronizing signal	Input	Ignition switch ON		(V) 4 0 + 20 \(\mu\)s SKIB3603E
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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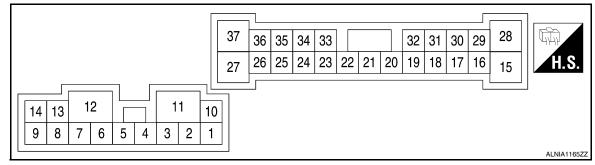
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# **BOSE SPEAKER AMP**

Reference Value

### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (LG)	2 (V)	Audio signal tweeter LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
4 (G)	3 (W)	Audio signal tweeter RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 +2ms SKIB3609E
5 (R)	6 (BR)	Audio signal subwoofer LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms 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**

# [BOSE W/ COLOR W/ NAVI W/RR CTL]

	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
13 (L)	8 (P)	Audio signal subwoofer LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
14 (LG)	9 (O)	Audio signal rear door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 → + 2ms SKIB3609E
18 (W)	19 (B)	Audio signal front door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 * 2ms SKIB3609E
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	(V) 1 0 -1 *** 2ms SKIB3609E
26 (V)	25 (LG)	Audio signal rear RH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 + 2ms SKIB3609E
28 (G)	15 (L)	Audio signal rear door speaker LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 ** 2ms SKIB3609E

### **BOSE SPEAKER AMP**

# [BOSE W/ COLOR W/ NAVI W/RR CTL]

Terminal (Wire color)		Description		Condition		Reference value
+	_	Signal name	Input/ Output	Condition		(Approx.)
29 (V)	30 (P)	Audio signal center speak- er	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
31 (R)	32 (BR)	Audio signal front door speaker RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 + 2ms SKIB3609E
33 (W/L)	34 (GR/V)	Audio signal front RH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 → 2ms SKIB3609E
35 (W/R)	36 (B/R)	Audio signal rear LH	Input	Ignition switch ON	Audio input	(V) 1 0 -1 + 2ms SKIB3609E

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

# SYMPTOM DIAGNOSIS

### MULTI AV SYSTEM SYMPTOMS

Symptom Table

#### RELATED TO NAVIGATION

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
	All switches cannot be operated.     "MULTI AV" is displayed on system selection screen when the CONSULT-III is started.	<ul> <li>Multifunction switch power supply and ground circuit. Refer to <u>AV-774</u>, "<u>Diagnosis Procedure</u>".</li> <li>AV communication circuit between AV control unit and multifunction switch. Perform CONSULT-III self-diagnosis. Refer to <u>AV-711</u>, "CONSULT - III Function (MULTI AV)".</li> </ul>
Multifunction switch and preset switch operation does not work.	All switches cannot be operated.     "MULTI AV" is not displayed on system selection screen when the CONSULT-III is initialized.	AV control unit power supply and ground circuit malfunction. Refer to AV-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 abnor-	There is malfunction in the CONSULT-III self-diagnosis result.	Perform detected DTC self-diagnosis.  Refer to AV-711. "CONSULT - III Function (MULTI AV)".
mal.	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<sup>™</sup> enabled) and Bluetooth<sup>™</sup> 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<sup>™</sup> 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<sup>™</sup> 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<sup>™</sup> communication.
- Start CONSULT-III, then start Windows®.
- Set CONSULT-III near a cellular phone.

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#### < SYMPTOM DIAGNOSIS >

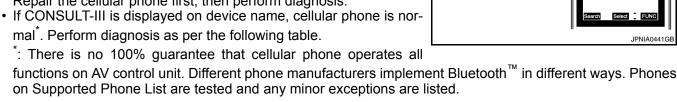
Trouble Diagnosis Chart by Symptom

#### [BOSE W/ COLOR W/ NAVI W/RR CTL]

CONSULT-III

- When operated Bluetooth<sup>™</sup> registration by cellular phone, check if CONSULT-III\* would be displayed on the device name. (If other Bluetooth<sup>™</sup> device is located near cellular phone, a name of the device would be displayed also.) NOTE:
  - \*:Displayed device name is "NISSAN-\*\*\*\*\*\*."
- · If no device name is displayed, cellular phone is malfunctioning. Repair the cellular phone first, then perform diagnosis.
- mal\*. Perform diagnosis as per the following table.

on Supported Phone List are tested and any minor exceptions are listed.



#### Symptoms Check items Probable malfunction location Does not recognize cellular AV control unit malfunction. phone connection. (no connec-Repeat the registration of cellular phone. Replace AV control unit. Refer to AV-824, "Removal and tion is displayed on the display Installation". at the guide.) · Hands-free phone operation can be made, but the communication cannot be established. AV control unit malfunction. Hands-free phone cannot be Hands-free phone operation can be Replace AV control unit. Refer to AV-824, "Removal and established. performed, however, voice between Installation". each other cannot be heard during the conversation. Check the "microphone speaker" in In-AV control unit malfunction. The other party's voice cannot Replace AV control unit. Refer to AV-824, "Removal and spection & Adjustment Mode if sound is be heard by hands-free phone. heard. Installation". AV control unit malfunction. Replace AV control unit. Refer to AV-824, "Removal and Sound operation function is normal. Originating sound is not heard Installation". by the other party with handsfree phone communication. Microphone signal circuit malfunction. Sound operation function does not work. Refer to AV-757, "Diagnosis Procedure". · The retractable hard top is fully closed. · The voice recognition cannot be con-Roof status signal circuit malfunction. trolled. The retractable hard top is fully closed. The voice recognition can be controlled. Steering switch's "VOL UP", "VOL Steering switch malfunction. DOWN", "" switch works, but " " it The system cannot be operatdoes not work. ed. · The retractable hard top is fully closed. · The voice recognition can be controlled. Steering switch signal B circuit malfunction. Steering switch's " ", "VOL UP", "VOL Refer to AV-774, "Diagnosis Procedure". DOWN", "" switches do not work. Steering switch ground circuit malfunction. All steering switches do not work. 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.

### < SYMPTOM DIAGNOSIS >

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

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#### 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	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".
is displayed.	Voice does not sound at "Voice Micro- phone Test" of Confirmation/Adjustment mode.	Microphone circuit malfunction. Refer to AV-757, "Diagnosis Procedure".
The voice cannot be controlled	Steering switch's "SOURCE", "MENU UP", "MENU DOWN", "ENTER" switch works, but "ó" does not work.     Hands-free phone system can be operated.	Steering switch malfunction.
(Voice control screen is not displayed).	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".
	No sound from all speakers.	Amp. ON signal circuit.     BOSE amp. power supply and ground circuit.     Refer to AV-749, "BOSE SPEAKER AMP: Diagnosis Procedure".
Audio sound is not heard.	There is no sound from the woofer.	<ul> <li>Woofer amp. power supply and ground circuit. Refer to AV-749, "BOSE SPEAKER AMP: Diagnosis Procedure".</li> <li>Sound signal woofer circuit between BOSE amp. and woofer.</li> <li>Woofer amp. ON signal circuit between BOSE amp. and woofer.</li> </ul>
	There is sound only from specific places (RH front, RH rear, LH front and LH rear).	Sound signal circuit of suspect system.
	There is malfunction in the CONSULT-III self-diagnosis result.	Perform CONSULT-III self-diagnosis. Refer to AV-711, "CONSULT - III Function (MULTI AV)".
Satellite radio is not received.	There is no malfunction in the CON-SULT-III self-diagnosis result.	Perform the following inspection procedure.  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".  Refer to AV-824, "Removal and Installation".
AM/FM radio is not received.	Other audio sounds are normal.	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

#### < SYMPTOM DIAGNOSIS >

# [BOSE W/ COLOR W/ NAVI W/RR CTL]

Symptoms	Check items	Possible malfunction location / Action to take
iPod <sup>®</sup> or USB memory can not be recognized.	_	USB harness malfunction.     USB connector malfunction.

 $iPod^{\circledR}$  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.  • 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)".
Addio Sodila is flot fleata.	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", "v  7, "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	DVD image is displayed.	AUX image signal circuit malfunction. Refer to AV-755, "Diagnosis Procedure".
AUX mode is selected.	DVD image is not displayed.	Composite image signal circuit malfunction. Refer to AV-754, "Diagnosis Procedure".

< SYMPTOM DIAGNOSIS >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

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# NORMAL OPERATING CONDITION

**Description** 

#### NOTE:

For Navigation system operation information, refer to Navigation system Owner's Manual.

#### **BASIC OPERATIONS**

Symptom	Possible cause	Possible solution
	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.
No image is displayed.	The display is turned off.	Press "☀/ <b>→</b> " 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 not set correctly, or it is turned off.	Adjust the volume of voice guidance.
The volume is too high or too low.	Voice guidance is not provided for certain streets (roads displayed in gray).	This is not a malfunction.
No map is displayed on the screen.	A screen other than map screen is displayed.	Press "MAP".
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 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.
ne system does not cognize your com- and.	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.
ne system recognizes our command incor- ctly	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 "ູ√չ" 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.

#### < 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		
	Ensure that the command format is valid.		
Displays "COMMAND NOT REC-	2. Speak clearly without pausing between words and at a level appropriate to the ambient noise level.		
OGNIZED" or the system fails to interpret the command correctly.	3. Ensure that the ambient noise level is not excessive, for example, windows open or defrost on. <b>NOTE:</b> If it is too noisy to use the phone, it is likely that voice commands will not be recognized.		
	4. If optional words of the command have been omitted, then command should be tried with these in place.		
The system consistently selects the wrong voicetag	1. Ensure that the voicetag requested matches what was originally stored. This can be confirmed by giving the "Addressbook" Directory or Phone Directory command.		
the wrong voicetag	2. Replace one of the voicetags being confused with a different voicetag.		

#### Related to Telephone

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

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

Symptom	Solution	
System fails to interpret the command correctly.	Ensure that the command is valid.	
	2. Ensure that the command is spoken after the tone.	
	3. Speak clearly without pausing between words and at level appropriate to the ambient noise level in the vehicle.	
	4. Ensure that the ambient noise level is not excessive (for example, windows open or defroster on).  NOTE:  If it is too noisy to use the phone, it is likely that the voice commands will 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	Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the "List Names" command.	
the wrong voicetag	2. Replace one of the names being confused with a new name.	

#### **RELATED TO AUDIO**

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

#### NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA, 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.

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

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Symptom	Cause and Counter measure	
	Check if the CD was inserted correctly.	
	Check if the CD is scratched or dirty.	
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.	
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.	
Cannot play	If there is a mixture of music CD files (CD-DA data) and MP3/WMA/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.	
	Check if the finalization process, such as session close and disc close, is done for the disc.	
	Check if the CD is protected by copyright.	
Poor sound quality	Check if the CD is scratched or dirty.	
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA/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.

### < SYMPTOM DIAGNOSIS >

# [BOSE W/ COLOR W/ NAVI W/RR CTL]

Symptom	Possible cause	Possible solution
Interruption during play- back or flicker in the dis- play	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.
Subtitles flot shown	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 <sup>™</sup> .	This is because the quantity of the displayed information is reduced so that the screen does not become too crowded. There is also a chance that names of the roads may be displayed multiple times, and the names appearing on the screen may be different because of a processing procedure.	This is not a malfunction.
The vehicle icon is not displayed in the correct position.	The vehicle was transported after the ignition switch was pressed off, for example, by a ferry or car transporter.	Drive the vehicle for a while on a road where GPS signals can be received.
	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is traveling on a new road, the vehicle icon is located on another road nearby.	Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available.	Updated road information will be included in the next version of the map data.
The screen does not switch to the night screen even after turning on the headlights.	The daytime screen was set the last time the headlights were turned on.	Set the screen to the night screen mode using <day night=""> when you turn on the headlights.</day>
The map does not scroll even when the vehicle is moving.	The current location map screen is not displayed.	Press "MAP".
The vehicle icon is not displayed.	The current location map screen is not displayed.	Press "MAP".

### < SYMPTOM DIAGNOSIS >

# [BOSE W/ COLOR W/ NAVI W/RR CTL]

Symptom	Possible cause	Possible solution
The location of the vehicle icon i misaligned from the actual positi	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 approximat 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 the next version of the map data.
RELATED TO ROUTE C	LCULATION AND VISUAL GUIDANCE	Ē
Symptom	Possible cause	Possible solution
Waypoints are not included in the auto reroute calculation.	Naypoints that you have already passed are not incluing the auto reroute calculation.	uded in If you want to go to that waypoint again, you need to edit the route.
	Route calculation has not yet been performed.	Set the destination and perform rou calculation.
Route information is not dis-	You are not driving on the suggested route.	Drive on the suggested route.
played.	Route guidance is set to off.	Turn on route guidance.
	Route information is not provided for certain types of (roads displayed in gray).	f roads 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 considation, but the same route was calculated.	der- This is not a malfunction.
A waypoint cannot be added.	Five waypoints are already set on the route, including that you have already passed.	g ones A maximum of 5 waypoints can be so on the route. If you want to go to 6 more waypoints, perform route calculations multiple times as necessary
	Roads near the destination cannot be calculated.	Reset the destination to a main or dinary road, and recalculate the rou
	The starting point and destination are too close.	Set a more distant destination.
The suggested route is not displayed.	The starting point and destination are too far away.	Divide your trip by selecting one or t intermediate destinations, and perform route calculations multiple tim
	There are time restricted roads (by the day of the we ime) near the current vehicle location or destination.	
The part of the route that you have already passed is deleted.	A route is managed by sections between waypoints. bassed the first waypoint, the section between the stopoint and the waypoint is deleted. (It may not be delebending on the area.)	arting This is not a malfunction
An indirect route is suggested.	f there are restrictions (such as one-way streets) on close to the starting point or destination, the system is suggest an indirect route.	
	The system may suggest an indirect route because realculation does not take into consideration some are such as narrow streets (gray roads.)	
The landmark information does not correspond to the actual information.	This may be caused by insufficient or incorrect map of	data. Updated information will be include 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 ions.	Set the starting point, waypoints ar destination on a main road, and perform route calculation.

RELATED TO VOICE GUIDANCE

### < 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.

# **PRECAUTION**

### **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRF-TFNSIONER"

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:0000000005885981

#### 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.
- Perform the necessary repair operation.

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### **PRECAUTIONS**

#### < PRECAUTION >

#### [BOSE W/ COLOR W/ NAVI W/RR CTL]

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

### **Precaution for Trouble Diagnosis**

INFOID:0000000005519151

#### AV COMMUNICATION SYSTEM

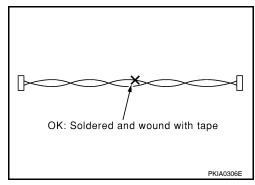
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

### Precaution for Harness Repair

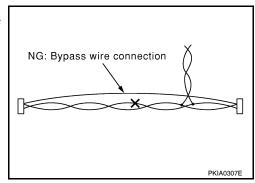
INFOID:0000000005519152

#### 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**

Tool name		Description
		Loosening bolts and nuts
Power tool		
	PBIC0191E	

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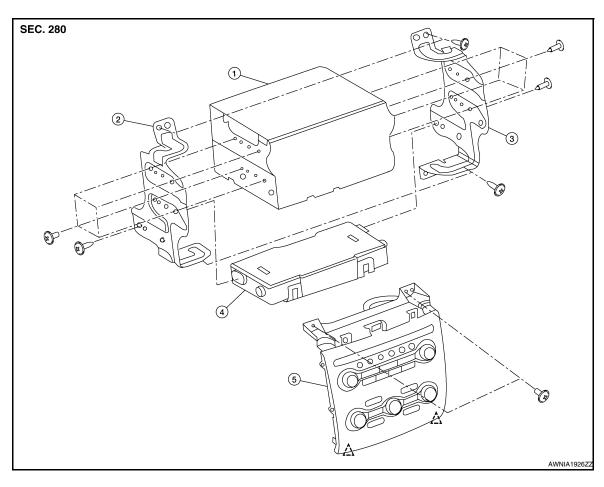
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INFOID:0000000005522953

# **ON-VEHICLE REPAIR**

# AV CONTROL UNIT

### Removal and Installation



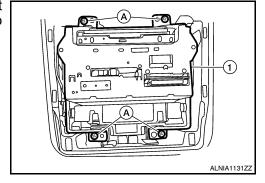
- 1. Audio unit
- A/C auto amp.

- Audio unit bracket LH
- assembly attached)
- Audio unit bracket RH

#### **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).



### **AV CONTROL UNIT**

#### < ON-VEHICLE REPAIR >

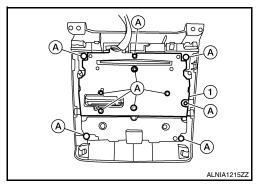
[BOSE W/ COLOR W/ NAVI W/RR CTL]

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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### **MULTIFUNCTION SWITCH**

< ON-VEHICLE REPAIR >

[BOSE W/ COLOR W/ NAVI W/RR CTL]

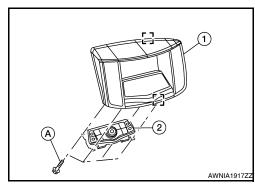
# **MULTIFUNCTION SWITCH**

# Removal and Installation

#### INFOID:0000000005522954

### **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

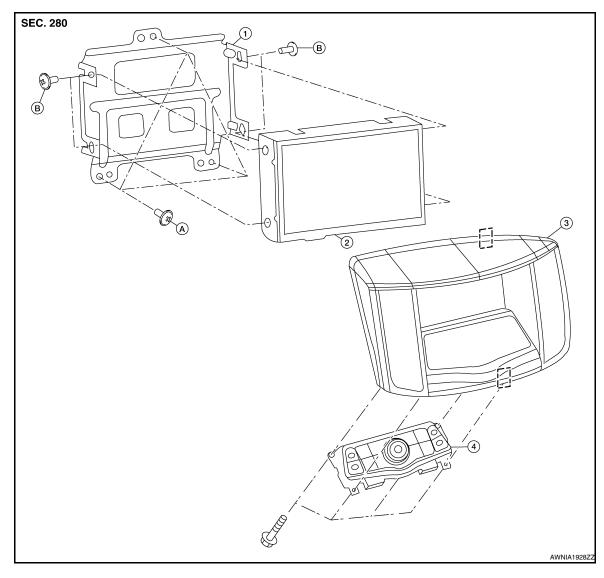


#### **INSTALLATION**

Installation is in the reverse order of removal.

# **AUDIO DISPLAY UNIT**

#### Removal and Installation

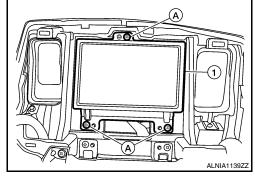


- 1. Audio display unit bracket
- 4. Multifunction switch
- [ ] Metal Clip

- 2. Audio display unit
- A. Audio display unit bracket screws
- 3. Cluster lid D
- B. Audio display unit screws

### **REMOVAL**

- Remove the cluster lid D. Refer to <u>IP-12, "Removal and Installation"</u>.
- 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]

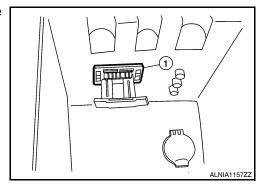
## **USB CONNECTOR**

### Removal and Installation

#### INFOID:0000000005522956

### **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**

[BOSE W/ COLOR W/ NAVI W/RR CTL]

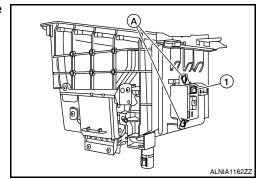
### **AUXILIARY INPUT JACKS**

### Removal and Installation

#### INFOID:0000000005522957

### **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**

### **FRONT TWEETER**

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

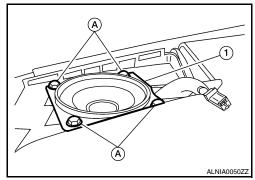
### **FRONT TWEETER**

### Removal and Installation

INFOID:0000000005522958

#### **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]

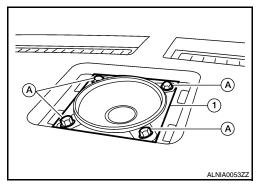
### **CENTER SPEAKER**

### Removal and Installation

#### INFOID:0000000005522959

#### **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).



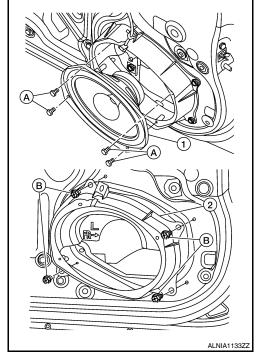
#### **INSTALLATION**

### FRONT DOOR SPEAKER

### Removal and Installation

REMOVAL

- 1. Remove the front door finisher. Refer to <a href="INT-18">INT-18</a>, "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**

[BOSE W/ COLOR W/ NAVI W/RR CTL]

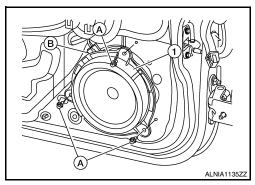
### **REAR DOOR SPEAKER**

### Removal and Installation

#### INFOID:0000000005522961

#### **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).

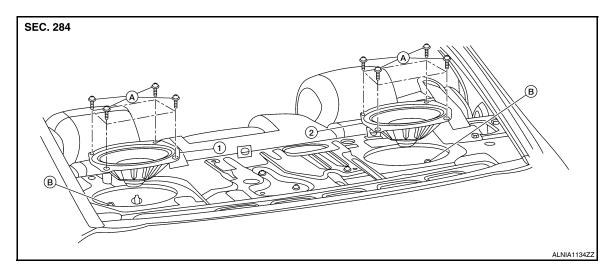


#### **INSTALLATION**

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

### **SUBWOOFER**

### Removal and Installation



Subwoofer LH

2. Subwoofer RH

A. Subwoofer screws

B. Subwoofer connectors

#### **REMOVAL**

- 1. Remove the rear parcel shelf finisher. Refer to <a href="INT-26">INT-26</a>, "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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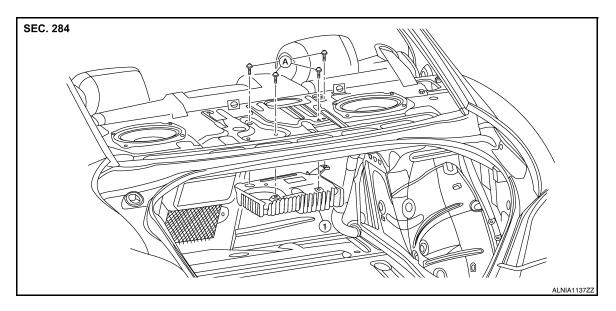
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### **BOSE SPEAKER AMP**

### Removal and Installation

INFOID:0000000005522963



1. Bose speaker amp.

A. Screws

#### **REMOVAL**

- 1. Disconnect the battery negative terminal.
- 2. Remove the rear parcel shelf. Refer to <a href="INT-26">INT-26</a>, "Removal and Installation".
- 3. Remove the Bose speaker amp. screws.
- 4. Remove the trunk upper finisher. Refer to <a href="INT-35">INT-35</a>, "Exploded View".
- 5. Disconnect the Bose speaker amp. connectors and remove the Bose speaker amp.

#### **INSTALLATION**

### **SATELLITE RADIO ANTENNA**

< ON-VEHICLE REPAIR >

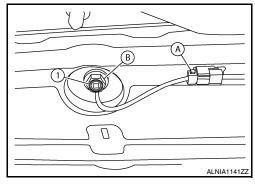
[BOSE W/ COLOR W/ NAVI W/RR CTL]

### SATELLITE RADIO ANTENNA

### Removal and Installation

# 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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### [BOSE W/ COLOR W/ NAVI W/RR CTL]

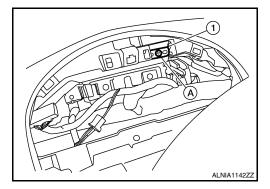
### **GPS ANTENNA**

### Removal and Installation

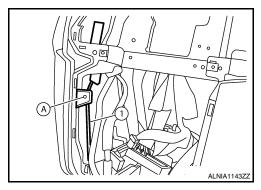
#### INFOID:0000000005522965

#### **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**

### STEERING SWITCH

#### < ON-VEHICLE REPAIR >

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

### STEERING SWITCH

### Removal and Installation

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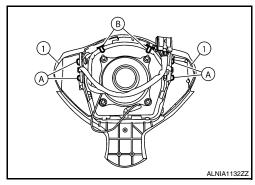
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#### **REMOVAL**

- 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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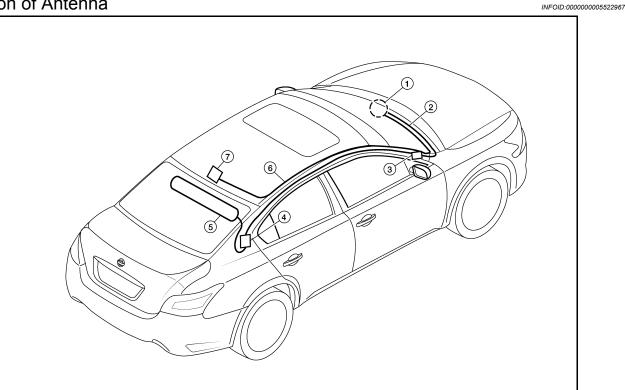
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### **AUDIO ANTENNA**

### Location of Antenna

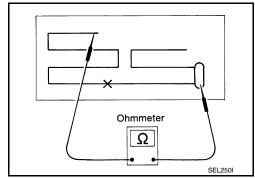


- AV control unit
- Antenna amp.
- 7. Satellite radio antenna
- 2. AV control unit antenna feeder
- 5. Window antenna
- 3. In-line connectors M103, M501
- Satellite radio antenna feeder

### Window Antenna Repair

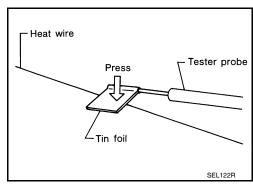
#### **ELEMENT CHECK**

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

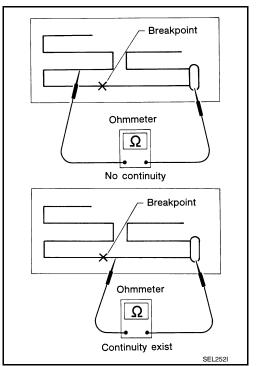


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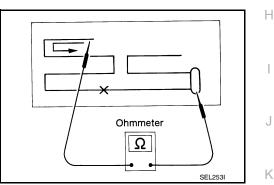
 When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



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



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

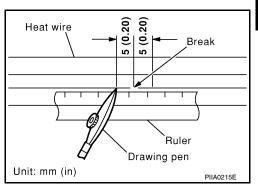
#### REPAIRING PROCEDURE

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

#### NOTE:

Shake silver composition container before use.

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



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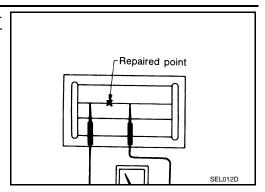
### **AUDIO ANTENNA**

#### < ON-VEHICLE REPAIR >

#### [BOSE W/ COLOR W/ NAVI W/RR CTL]

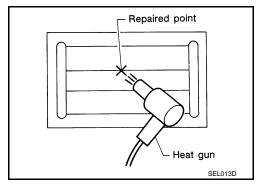
After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

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

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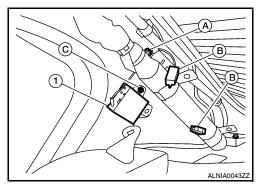
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#### **REMOVAL**

- 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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### REAR AUDIO REMOTE CONTROL UNIT

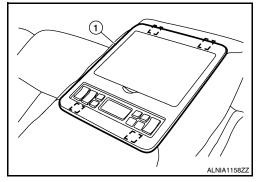
### Removal and Installation

#### INFOID:0000000005522973

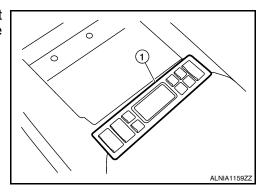
#### **REMOVAL**

- 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**

### [BOSE W/ COLOR W/ NAVI W/RR CTL]

### **MICROPHONE**

### Removal and Installation

#### INFOID:0000000005522970

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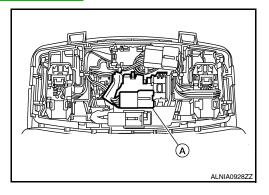
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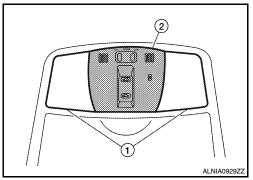
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#### **REMOVAL**

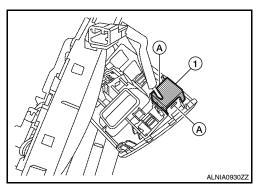
- 1. Remove the map lamp assembly. Refer to <a href="INL-97">INL-97</a>, "Removal and Installation".
- 2. Detach the microphone connector (A).



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**

[BOSE W/ COLOR W/ NAVI W/RR CTL]

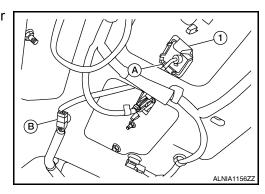
### **REAR VIEW CAMERA**

### Removal and Installation

INFOID:0000000005522971

#### **REMOVAL**

- 1. Remove the license plate finisher. Refer to EXL-177, "Removal and Installation".
- 2. Remove trunk lid finisher. Refer to <a href="INT-35">INT-35</a>, "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:0000000005522972

#### **REAR VIEW CAMERA**

For adjustment on the rear view camera, refer to <u>DLK-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: Special Repair Requirement".