

SECTION **AV**

AUDIO, VISUAL & NAVIGATION SYSTEM

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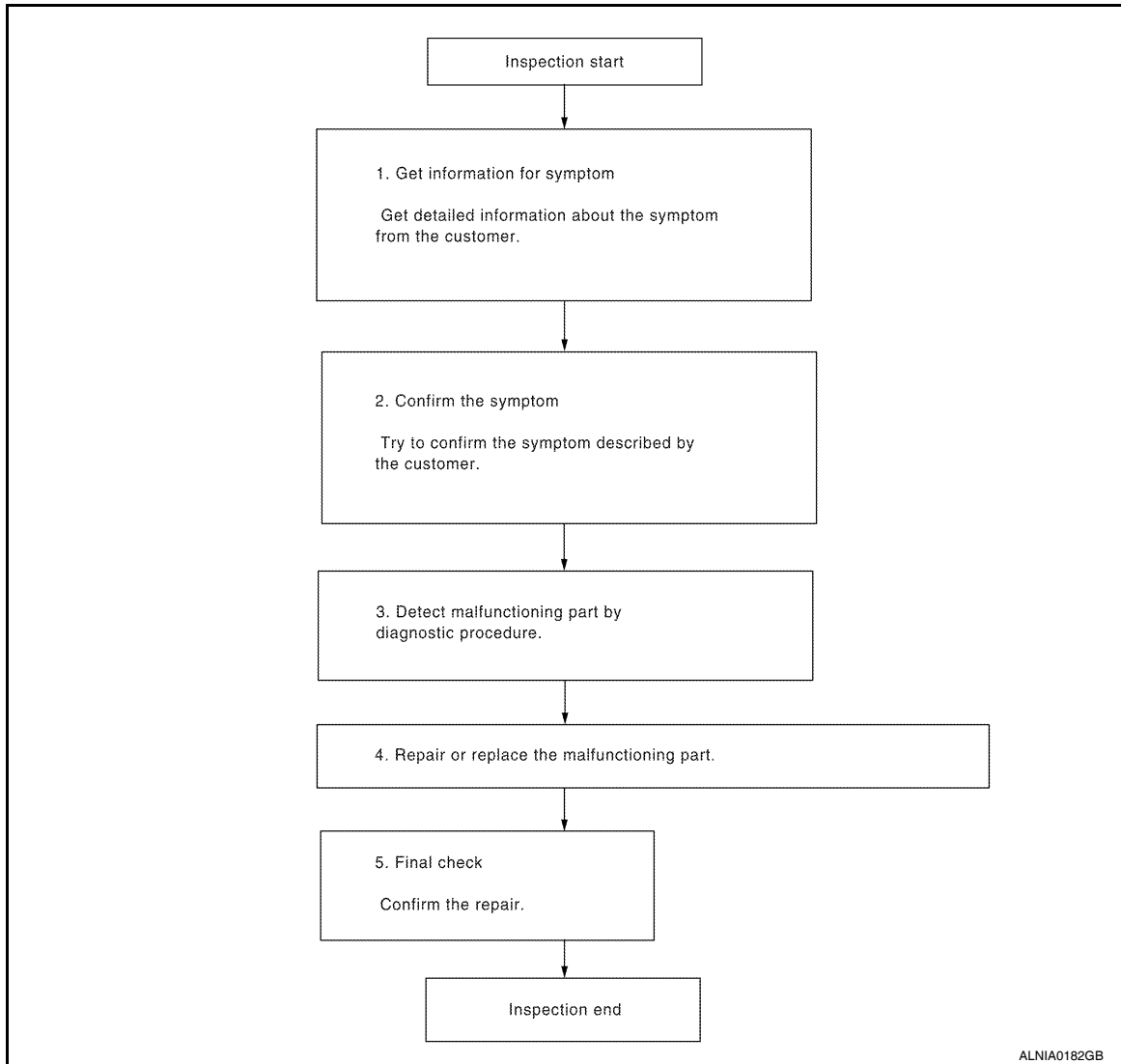
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000005438633

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.

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[BASE AUDIO]

Is malfunctioning part detected?

YES >> GO TO 4

NO >> GO TO 2

4.REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 5

5.FINAL CHECK

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

Has the symptom been repaired?

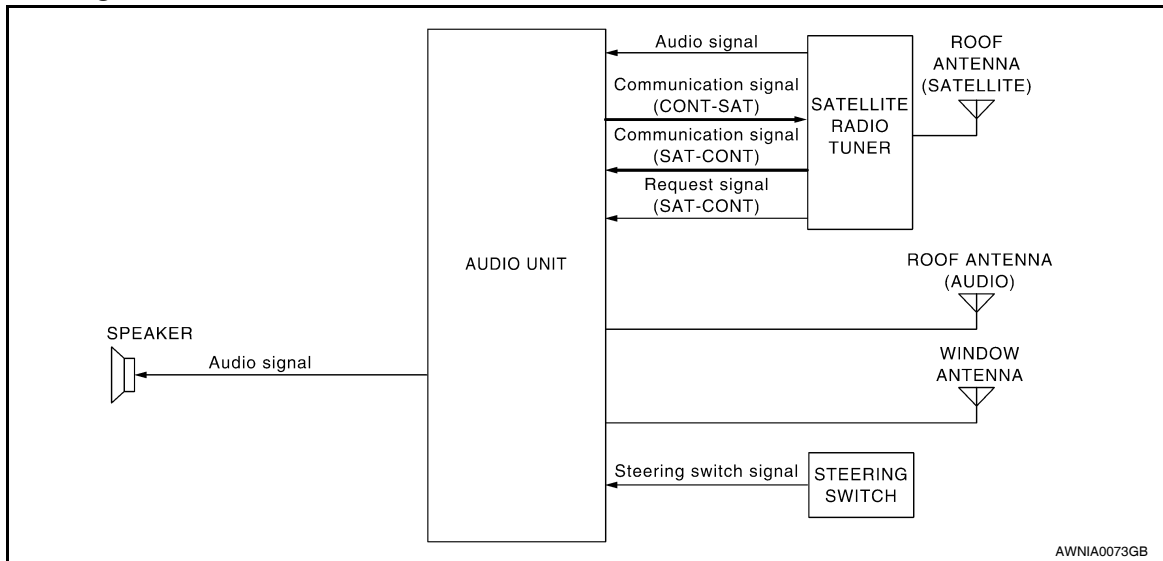
YES >> Inspection End.

NO >> GO TO 2

FUNCTION DIAGNOSIS

AUDIO SYSTEM

System Diagram



System Description

INFOID:000000005438635

AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Window antenna
- Roof antenna (audio)
- Steering wheel audio control switches (if equipped)
- Front door speakers
- Tweeters
- Rear speakers

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

SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components

- Roof antenna (satellite)
- Satellite radio tuner

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

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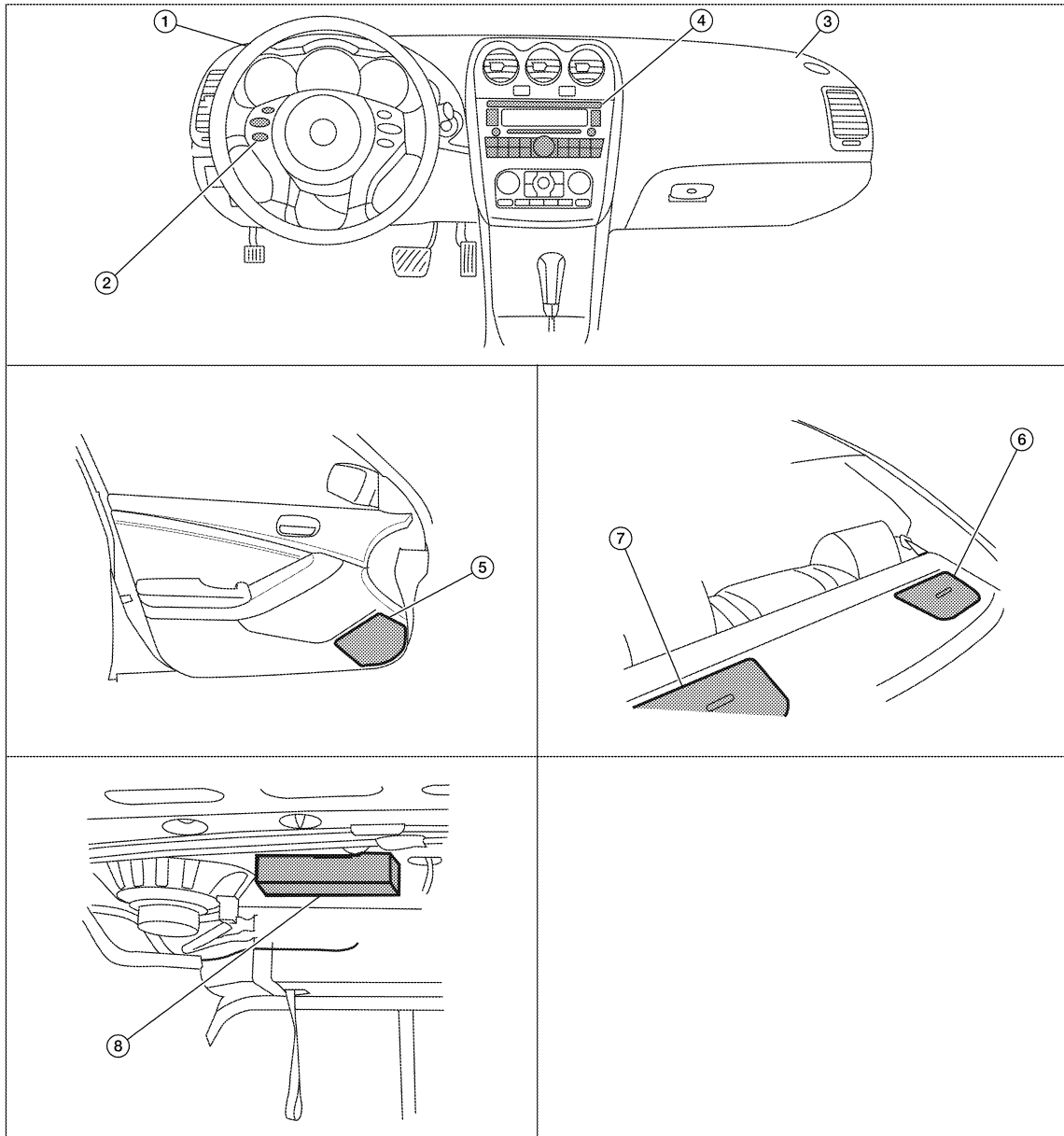
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

Component Parts Location

INFOID:000000005438636



AWNIA0074GB

- | | | |
|------------------------------|--|------------------------|
| 1. Tweeter LH M51 | 2. Steering wheel audio control switches (if equipped) | 3. Tweeter RH M52 |
| 4. Audio unit M43, M81, M117 | 5. Front door speaker LH D3
RH D103 | 6. Rear speaker RH B44 |
| 7. Rear speaker LH B26 | 8. Satellite radio tuner B123, B133 (with satellite radio tuner) | |

Component Description

INFOID:000000005438637

Part name	Description
Audio unit	Controls audio system and satellite radio system functions
Steering wheel audio control switches (if equipped)	<ul style="list-style-type: none"> Each audio operation can be operated Steering switch signal (operation signal) is output to AV control unit

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

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

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DIAGNOSIS SYSTEM (AUDIO UNIT)

Diagnosis Description

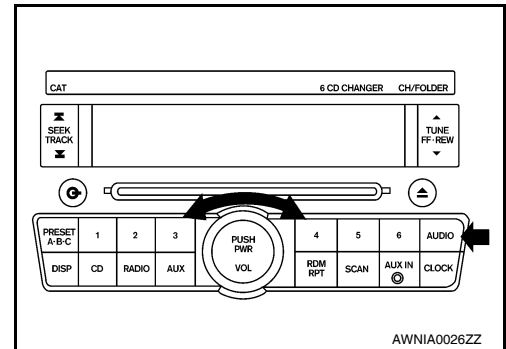
INFOID:000000005438638

Self-diagnosis mode can check the following items.

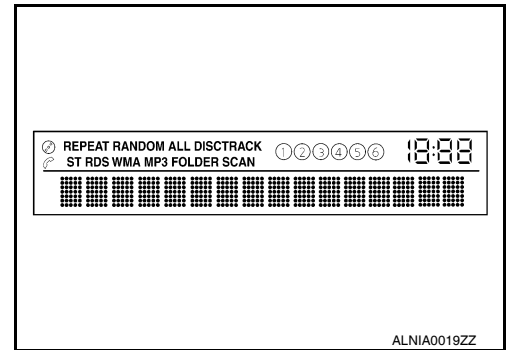
- Audio unit hardware/software versions
- Continuity of each speaker channel
- Continuity of each audio unit switch

OPERATION PROCEDURE

1. Turn ignition switch to the ACC position.
2. Turn the audio unit off.
3. While pressing the “AUDIO” button, turn the volume control dial clockwise or counterclockwise 30 clicks or more. When the self-diagnosis mode is started, a short beep will be heard.

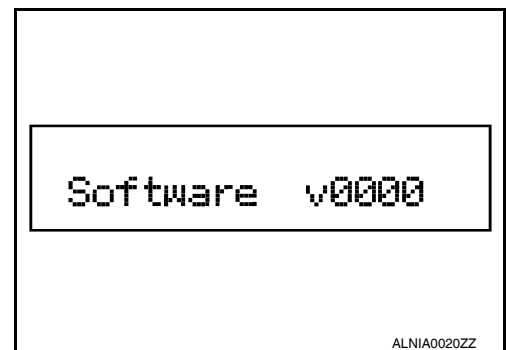


4. Initially, all display segments will be illuminated.



Version Check

1. Press the “AUDIO” switch to enter version diagnostics. “Software” (audio software version) is displayed.



DIAGNOSIS SYSTEM (AUDIO UNIT)

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

2. Press the "AUDIO" switch again to display the "Hardware" (audio hardware version).



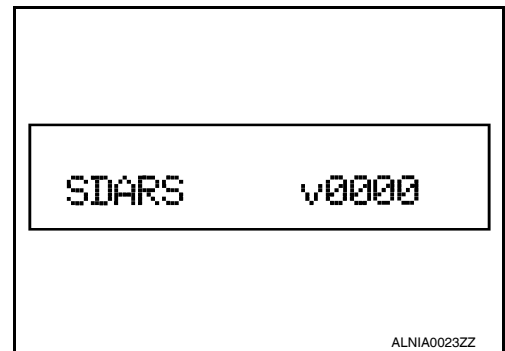
A
B
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3. Press the "AUDIO" switch again to display the "CD Mech" (CD mechanism version).



E
F
G

4. Press the "AUDIO" switch again to display the "SDARS" (satellite radio version).



H
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K

Channel Check Diagnostics

When all segments are illuminated, press the "TUNE" up switch to enter channel check diagnostics. The self-diagnostic function will then send a tone to each channel (FL, RL, RR, FR) for 1 second.



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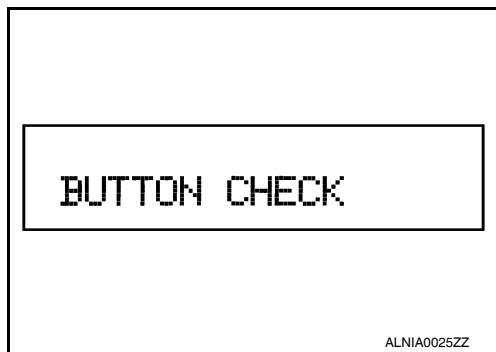
Button Check Diagnostics

DIAGNOSIS SYSTEM (AUDIO UNIT)

< FUNCTION DIAGNOSIS >

[BASE AUDIO]

When all segments are illuminated, press the "TUNE" down switch to enter button check diagnostics. When each audio unit switch is pressed, a tone will sound and the switch name will be displayed.



COMPONENT DIAGNOSIS

**POWER SUPPLY AND GROUND CIRCUIT
AUDIO UNIT**

AUDIO UNIT : Diagnosis Procedure

INFOID:000000005438639

Regarding Wiring Diagram information, refer to [AV-35, "Wiring Diagram"](#).

1.CHECK FUSES

Check that the following fuses are not blown.

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

Are the fuses OK?

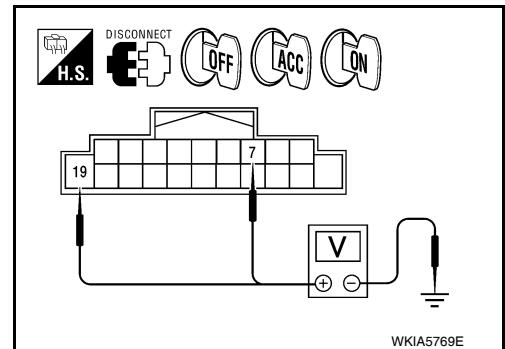
YES >> GO TO 2

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 M43.
2. Check voltage between the audio unit connector M43 and ground.

Unit	Terminal No.		OFF	ACC	ON	
	(+)					
	Connector	Terminal				
Audio unit	M43	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.

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000005438640

Regarding Wiring Diagram information, refer to [AV-35, "Wiring Diagram"](#).

1.CHECK FUSES

Check that the following fuses are not blown.

A
B
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AV
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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

Unit	Terminals	Signal name	Fuse No.
Satellite radio tuner (factory installed)	32	Battery power	24
	36	Ignition switch ACC or ON	19

Are the fuses OK?

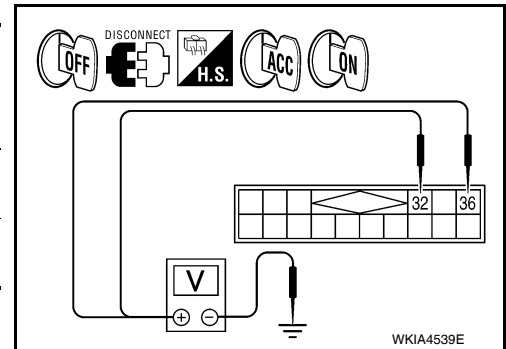
YES >> GO TO 2

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

2. POWER SUPPLY CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B123.
3. Check voltage between the satellite radio tuner (factory installed) and ground.

Unit	Terminal No.		OFF	ACC	ON	
	(+)					(-)
	Connector	Terminal				
Satellite radio tuner (factory installed)	B123	32	Ground	Battery voltage	Battery voltage	
		36	Ground	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

Inspect satellite radio tuner (factory installed) case ground.

Does case ground pass inspection?

YES >> Inspection End.

NO >> Repair satellite radio tuner (factory installed) case ground.

FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

FRONT DOOR SPEAKER

Description

INFOID:000000005438641

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

Diagnosis Procedure

INFOID:000000005438642

Regarding Wiring Diagram information, refer to [AV-35, "Wiring Diagram"](#).

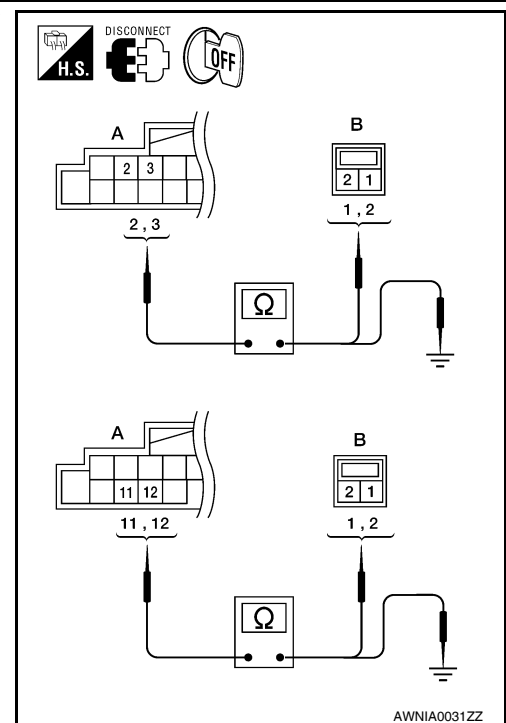
1. HARNESS CHECK

1. Disconnect audio unit connector M43 (A) and suspect speaker connector (B).
2. Check continuity between audio unit harness connector M43 (A) terminal and suspect speaker harness connector (B) terminal.

Terminals				Continuity
Audio unit		Speaker		
Connector	Terminal	Connector	Terminal	
A: M43	2	B: D3	1	Yes
	3		2	
	11	B: D103	1	
	12		2	

3. Check continuity between audio unit harness connector M43 (A) terminal and ground.

Terminals				Continuity
Audio unit		—		
Connector	Terminal			
A: M43	2	Ground		No
	3			
	11			
	12			



Are continuity results as specified?

YES >> GO TO 2

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

2. FRONT SPEAKER SIGNAL CHECK

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

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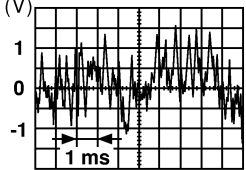
AV

FRONT DOOR SPEAKER

[BASE AUDIO]

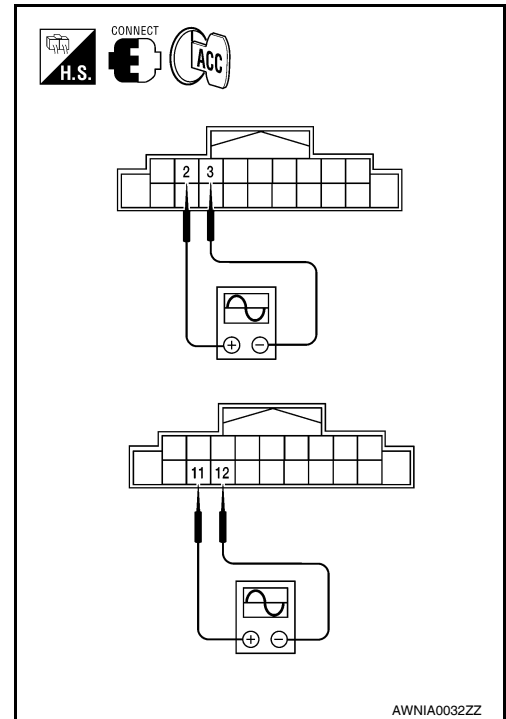
< COMPONENT DIAGNOSIS >

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

Terminals				Condi- tion	Reference signal
(+)		(-)			
Con- nec- tor	Termi- nal	Con- nec- tor	Termi- nal		
M43	2	M43	3	Receive audio signal	 <p>SKIA0177E</p>
	11		12		

Is the audio signal voltage as specified?

- YES >> Replace speaker. Refer to [AV-50, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-48, "Removal and Installation"](#).



TWEETER

Description

INFOID:000000005438643

The audio unit sends audio signals to the tweeters using the tweeter circuits.

Diagnosis Procedure

INFOID:000000005438644

Regarding Wiring Diagram information, refer to [AV-35, "Wiring Diagram"](#).

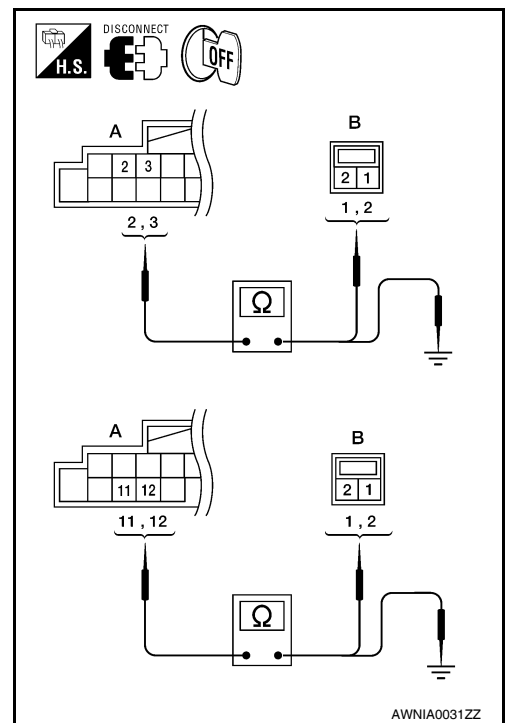
1. HARNESS CHECK

1. Disconnect audio unit connector M43 (A) and suspect tweeter connector (B).
2. Check continuity between audio unit harness connector M43 (A) and suspect tweeter harness connector (B).

Terminals				Continuity
Audio unit		Tweeter		
Connector	Terminal	Connector	Terminal	
A: M43	2	B: M51	1	Yes
	3		2	
	11	B: M52	1	
	12		2	

3. Check continuity between audio unit harness connector M43 (A) and ground.

Terminals				Continuity
Audio unit		—		
Connector	Terminal			
A: M43	2	Ground		No
	3			
	11			
	12			



Are the continuity results as specified?

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

2. TWEETER SIGNAL CHECK

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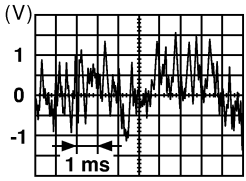
AV

TWEETER

< COMPONENT DIAGNOSIS >

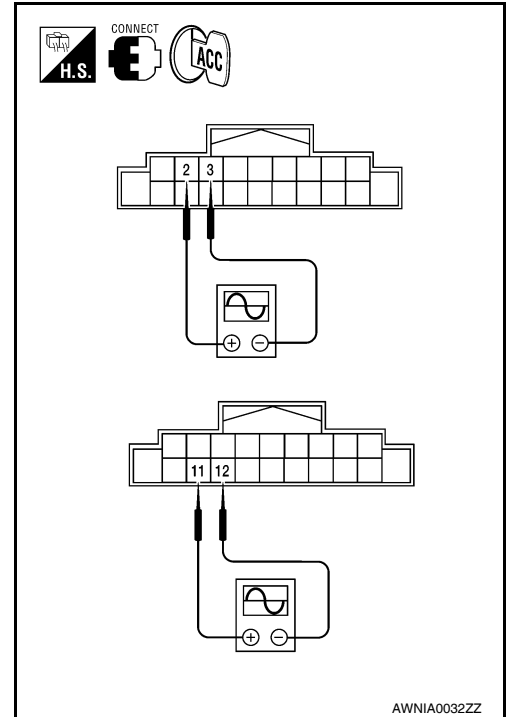
[BASE AUDIO]

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.

Terminals				Condi- tion	Reference signal
(+) (+)		(-) (-)			
Con- nec- tor	Termi- nal	Con- nec- tor	Termi- nal		
M43	2	M43	3	Receive audio signal	 <p>SKIA0177E</p>
	11	M43	12		

Is the audio signal voltage as specified?

- YES >> Replace tweeter. Refer to [AV-50. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-48. "Removal and Installation"](#).



REAR SPEAKER

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

REAR SPEAKER

Description

INFOID:000000005438645

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

Diagnosis Procedure

INFOID:000000005438646

Regarding Wiring Diagram information, refer to [AV-35, "Wiring Diagram"](#).

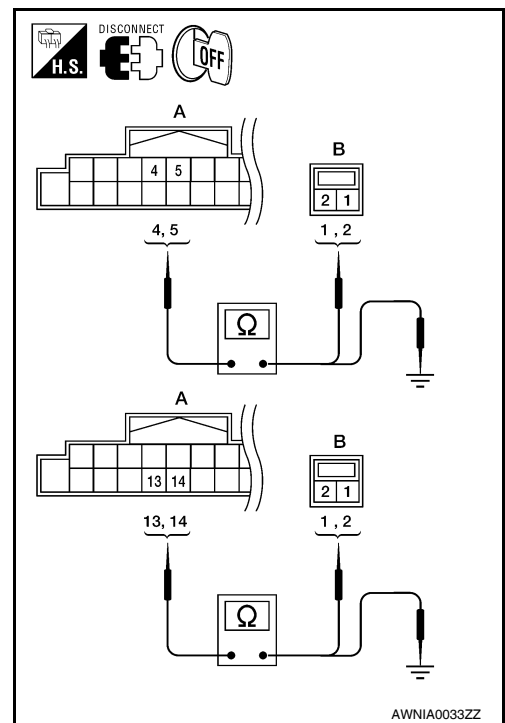
1. HARNESS CHECK

1. Disconnect audio unit connector M43 (A) and suspect speaker connector.
2. Check continuity between audio unit harness connector M43 (A) and suspect speaker harness connector (B).

Terminals				Continuity
Audio unit		Speaker		
Connector	Terminal	Connector	Terminal	
A: M43	4	B: B26	1	Yes
	5		2	
	13	B: B44	1	
	14		2	

3. Check continuity between audio unit harness connector M43 (A) and ground.

Terminals				Continuity
Audio unit		—		
Connector	Terminal			
A: M43	4	Ground		No
	5			
	13			
	14			



Are the continuity results as specified?

YES >> GO TO 2

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

• Repair harness or connector.

2. REAR SPEAKER SIGNAL CHECK

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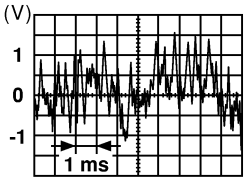
AV

REAR SPEAKER

[BASE AUDIO]

< COMPONENT DIAGNOSIS >

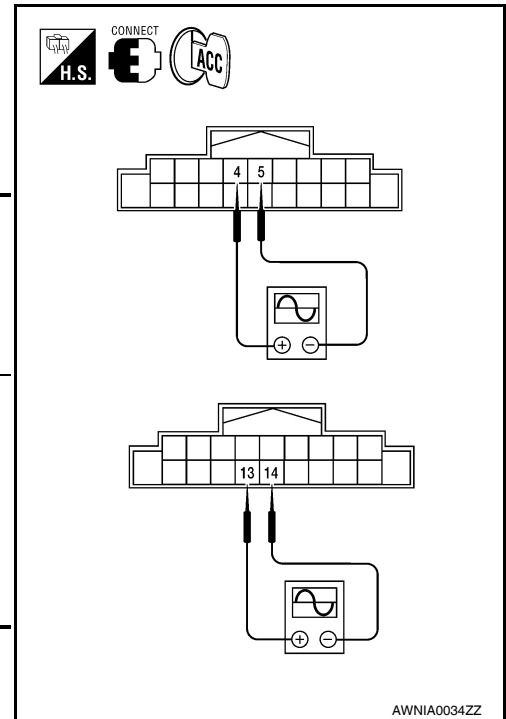
1. Connect audio unit connector and rear speaker connector.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Terminals				Condi- tion	Reference signal
(+) Terminal		(-) Terminal			
Con- nector	Termi- nal	Con- nector	Terminal		
M43	4	M43	5	Receive audio signal	
	13		14		

SKIA0177E

Is the audio signal voltage as specified?

- YES >> Replace rear speaker. Refer to [AV-51, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-48, "Removal and Installation"](#).



STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

STEERING SWITCH

Description

INFOID:000000005438647

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

Diagnosis Procedure

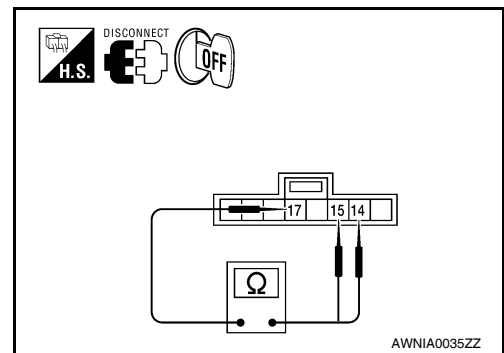
INFOID:000000005438648

Regarding Wiring Diagram information, refer to [AV-35, "Wiring Diagram"](#).

1. CHECK STEERING SWITCH RESISTANCE

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

Terminal	Signal name	Condition	Resistance (Ω) (Approx.)	
15	17	Seek (down)	Depress (station) down switch.	165
		Volume (down)	Depress volume down switch.	487
14	17	Seek (up)	Depress (station) up switch.	165
		Source	Depress source switch.	0
		Volume (up)	Depress volume up switch.	487



Do the steering switches check OK?

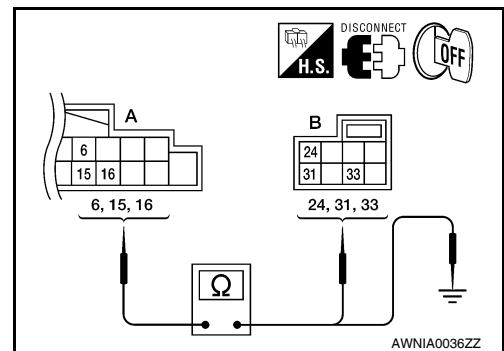
YES >> GO TO 2

NO >> Replace steering switch. Refer to [AV-56, "Removal and Installation"](#).

2. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M43 (A) and spiral cable connector M30 (B).
3. Check continuity between spiral cable harness connector M30 (B) and audio unit harness connector M43 (A).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M43	6	M30	24	Yes
	16		31	
	15		33	



4. Check continuity between audio unit connector M43 (A) and ground.

A		—	Continuity
Connector	Terminal		
M43	6	Ground	No
	15		
	16		

Are the continuity results as specified?

YES >> GO TO 3

NO >> Repair harness.

STEERING SWITCH

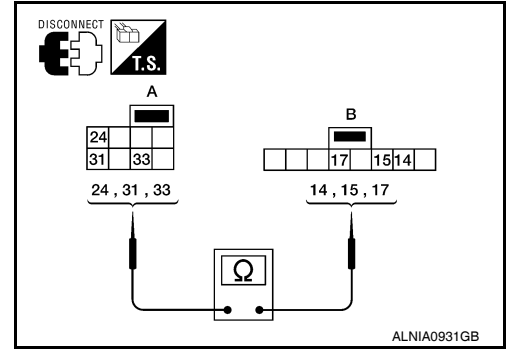
< COMPONENT DIAGNOSIS >

[BASE AUDIO]

3. SPIRAL CABLE CHECK

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

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



Does the spiral cable check OK?

- YES >> Inspection End.
NO >> Replace spiral cable. Refer to [SR-7, "Removal and Installation"](#).

COMMUNICATION SIGNAL CIRCUIT SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000005438649

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

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000005438650

Regarding Wiring Diagram information, refer to [AV-35, "Wiring Diagram"](#).

1. CHECK HARNESS - 1

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B123 and audio unit connector M117.
3. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 28 and audio unit harness connector M117 (B) terminal 38.

Continuity should exist.

4. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 28 and ground.

Continuity should not exist.

Are continuity results as specified?

YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK HARNESS - 2

1. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 29 and audio unit harness connector M117 (B) terminal 39.

Continuity should exist.

2. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 29 and ground.

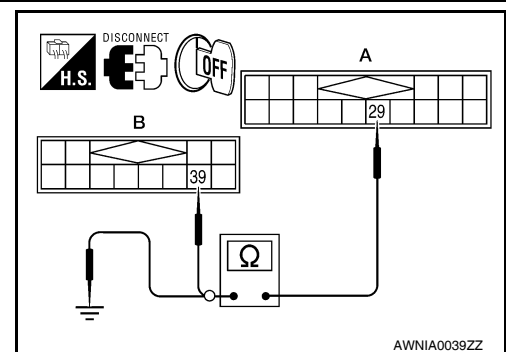
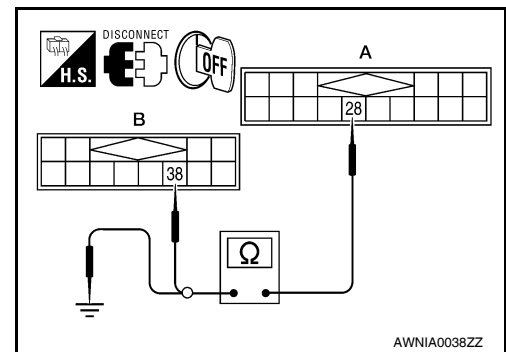
Continuity should not exist.

Are continuity results as specified?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK HARNESS - 3



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COMMUNICATION SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

1. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 30 and audio unit harness connector M117 (B) terminal 40.

Continuity should exist.

2. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 30 and ground.

Continuity should not exist.

Are continuity results as specified?

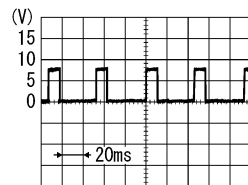
YES >> GO TO 4

NO >> Repair harness or connector.

4. CHECK REQ1 SIGNAL

1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
2. Turn ignition switch to ACC
3. Check signal between satellite radio tuner (factory installed) harness connector B123 terminal 28 and ground with CONSULT-III or oscilloscope.

28 - Ground



SKIB3825E

Are voltage readings as specified?

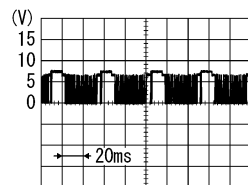
YES >> GO TO 5

NO >> Replace audio unit. Refer to [AV-48, "Removal and Installation"](#).

5. CHECK TXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector B123 terminal 29 and ground with CONSULT-III or oscilloscope.

29 - Ground



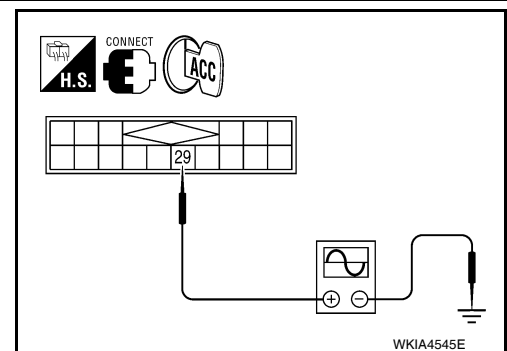
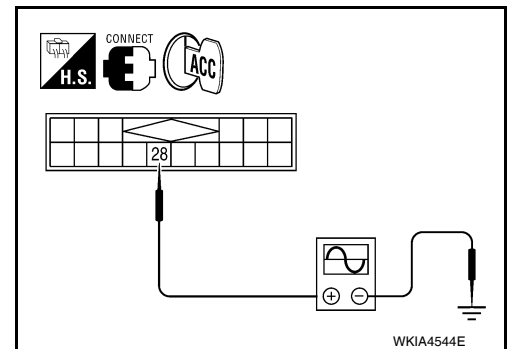
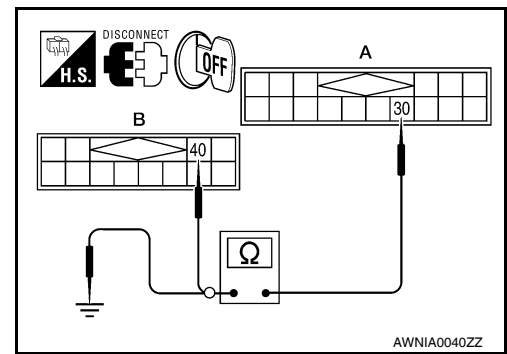
SKIB3824E

Are the voltage readings as specified?

YES >> GO TO 6

NO >> Replace satellite radio tuner.

6. CHECK RXD SIGNAL



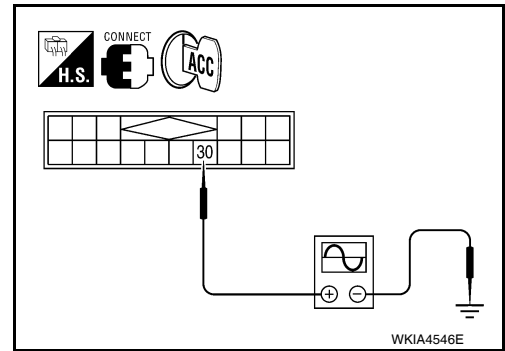
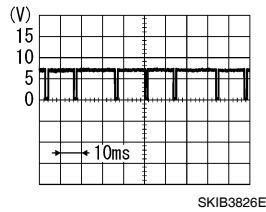
COMMUNICATION SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

Check signal between satellite radio tuner (factory installed) harness connector B123 terminal 30 and ground with CONSULT-III or oscilloscope.

30 - Ground



Are the voltage readings as specified?

- YES >> Replace satellite radio tuner.
- NO >> Replace audio unit. Refer to [AV-48, "Removal and Installation"](#).

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SOUND SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BASE AUDIO]

SOUND SIGNAL CIRCUIT SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000005438651

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:000000005438652

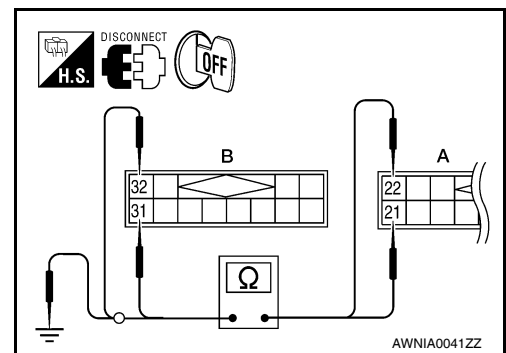
Regarding Wiring Diagram information, refer to [AV-35, "Wiring Diagram"](#).

LEFT CHANNEL

1. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B123 (A) and audio unit connector M117 (B).
3. Check continuity between satellite radio tuner (factory installed) and audio unit.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B123	21	M117	31	Yes
	22		32	



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

A		—	Continuity
Connector	Terminal		
B123	21	Ground	No
	22		

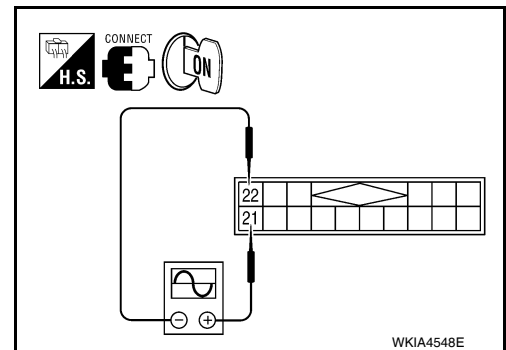
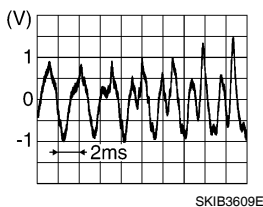
Are continuity results as specified?

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

2. CHECK LEFT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and audio unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector B123 terminals 21 and 22 with CONSULT-III or oscilloscope.

21 - 22



Are voltage readings as specified?

- YES >> Replace audio unit. Refer to [AV-48, "Removal and Installation"](#).
NO >> Replace satellite radio tuner. Refer to [AV-150, "Removal and Installation"](#).

SOUND SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

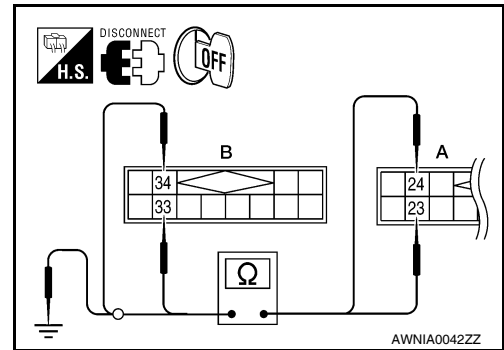
[BASE AUDIO]

RIGHT CHANNEL

1. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B123 (A) and audio unit connector M117 (B).
3. Check continuity between satellite radio tuner (factory installed) and audio unit.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B123	23	M117	33	Yes
	24		34	



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

A		—	Continuity
Connector	Terminal		
B123	23	Ground	No
	24		

Are continuity results as specified?

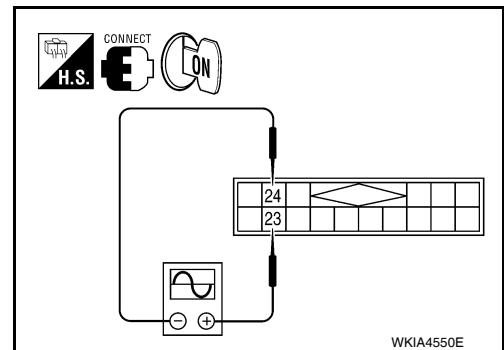
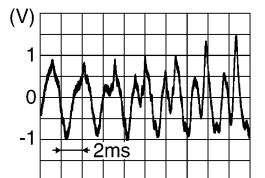
YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and audio unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector B123 terminals 23 and 24 with CONSULT-III or oscilloscope.

23 - 24



Are voltage readings as specified?

YES >> Replace audio unit. Refer to [AV-48, "Removal and Installation"](#).

NO >> Replace satellite radio tuner. Refer to [AV-150, "Removal and Installation"](#).

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AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

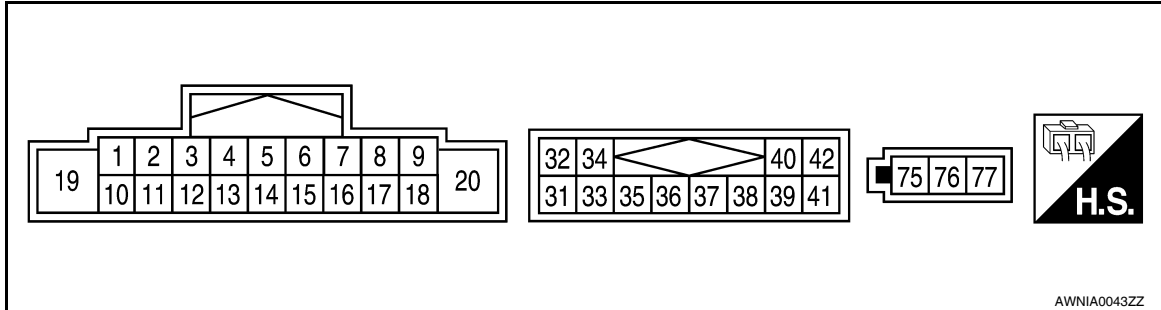
ECU DIAGNOSIS

AUDIO UNIT

Reference Value

INFOID:000000005438653

TERMINAL LAYOUT



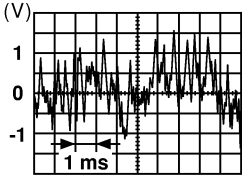
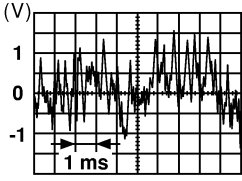
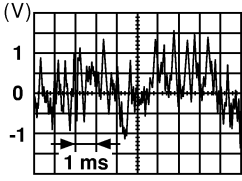
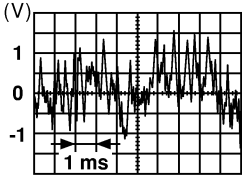
PHYSICAL VALUES

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value
+	-			Ignition switch	Operation	
2 (W)	3 (B)	Audio sound signal front LH	Output	ON	Receive audio sig- nal	<p style="text-align: right; font-size: small;">SKIA0177E</p>
4 (O/B)	5 (W/R)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	<p style="text-align: right; font-size: small;">SKIA0177E</p>
6 (W/G)	Ground	Remote con- trol A	Input	ON	Press SOURCE switch	Approx. 0.0V
					Press SEEK UP switch	Approx. 0.75V
					Press VOL UP switch	Approx. 2.0V
					Except for above	Approx. 5.0V
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

AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value
+	-			Ignition switch	Operation	
11 (G/W)	12 (BR)	Audio sound signal front RH	Output	ON	Receive audio sig- nal	 <small>SKIA0177E</small>
13 (L)	14 (B/W)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	 <small>SKIA0177E</small>
15 (L/B)	-	Remote con- trol ground	Input	-	-	-
16 (GR/L)	Ground	Remote con- trol B	Input	ON	Press SEEK DOWN switch	Approx. 0.75V
					Press VOL DOWN switch	Approx. 2.0V
					Except for above	Approx. 5.0V
19 (Y/R)	Ground	Battery power	Input	-	-	Battery voltage
32 (Y/L)	31 (G/B)	Audio left channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	 <small>SKIA0177E</small>
34 (BR/W)	33 (Y/G)	Audio right channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	 <small>SKIA0177E</small>

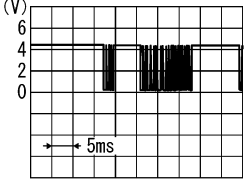
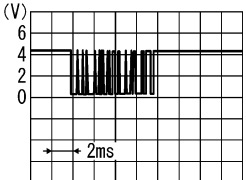
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AUDIO UNIT

< ECU DIAGNOSIS >

[BASE AUDIO]

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value
+	-			Ignition switch	Operation	
38 (R)	Ground	Satellite radio tuner request to audio unit	Input	ON	Turn audio unit ON	5V
39 (G)	Ground	Audio RX	Input		Operate audio vol- ume	 <p style="text-align: right; font-size: small;">SKIA4403E</p>
40 (B)	Ground	Audio TX	Output		Operate audio vol- ume	 <p style="text-align: right; font-size: small;">SKIA4402E</p>
75 (B)	Ground	Amp power supply	Output	ON	Turn audio unit ON	Battery voltage
76 (B)	Ground	Main antenna	Input	ON	Turn audio unit ON	-

SATELLITE RADIO TUNER

< ECU DIAGNOSIS >

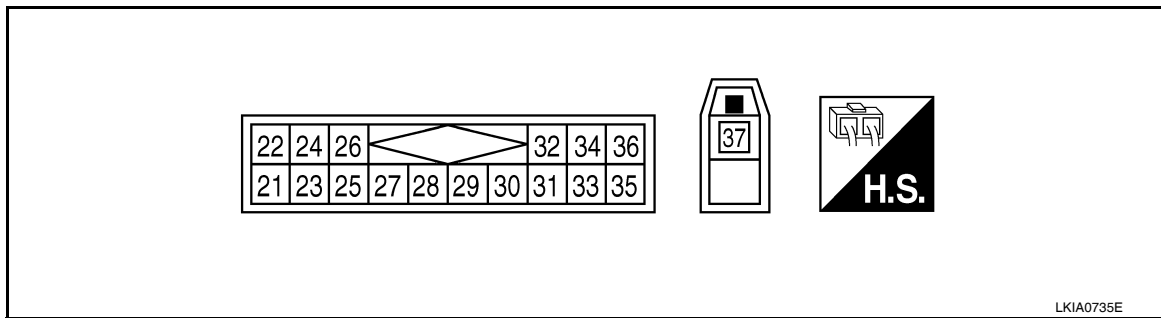
[BASE AUDIO]

SATELLITE RADIO TUNER

Reference Value

INFOID:000000005438655

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Item	Signal input/ output	Condition		Voltage (approx.)
+	-			Ignition switch	Operation	
22 (Y/L)	21 (W/L)	Audio signal LH	Output	ON	Receive audio signal.	<p>SKIB3609E</p>
24 (BR/L)	23 (Y/G)	Audio signal RH	Output	ON	Receive audio signal.	<p>SKIB3609E</p>
28 (R/L)	Ground	REQ1 (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	<p>SKIB3825E</p>
29 (R/W)	Ground	Communication signal (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	<p>SKIB3824E</p>

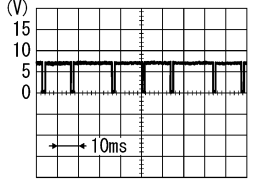
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SATELLITE RADIO TUNER

< ECU DIAGNOSIS >

[BASE AUDIO]

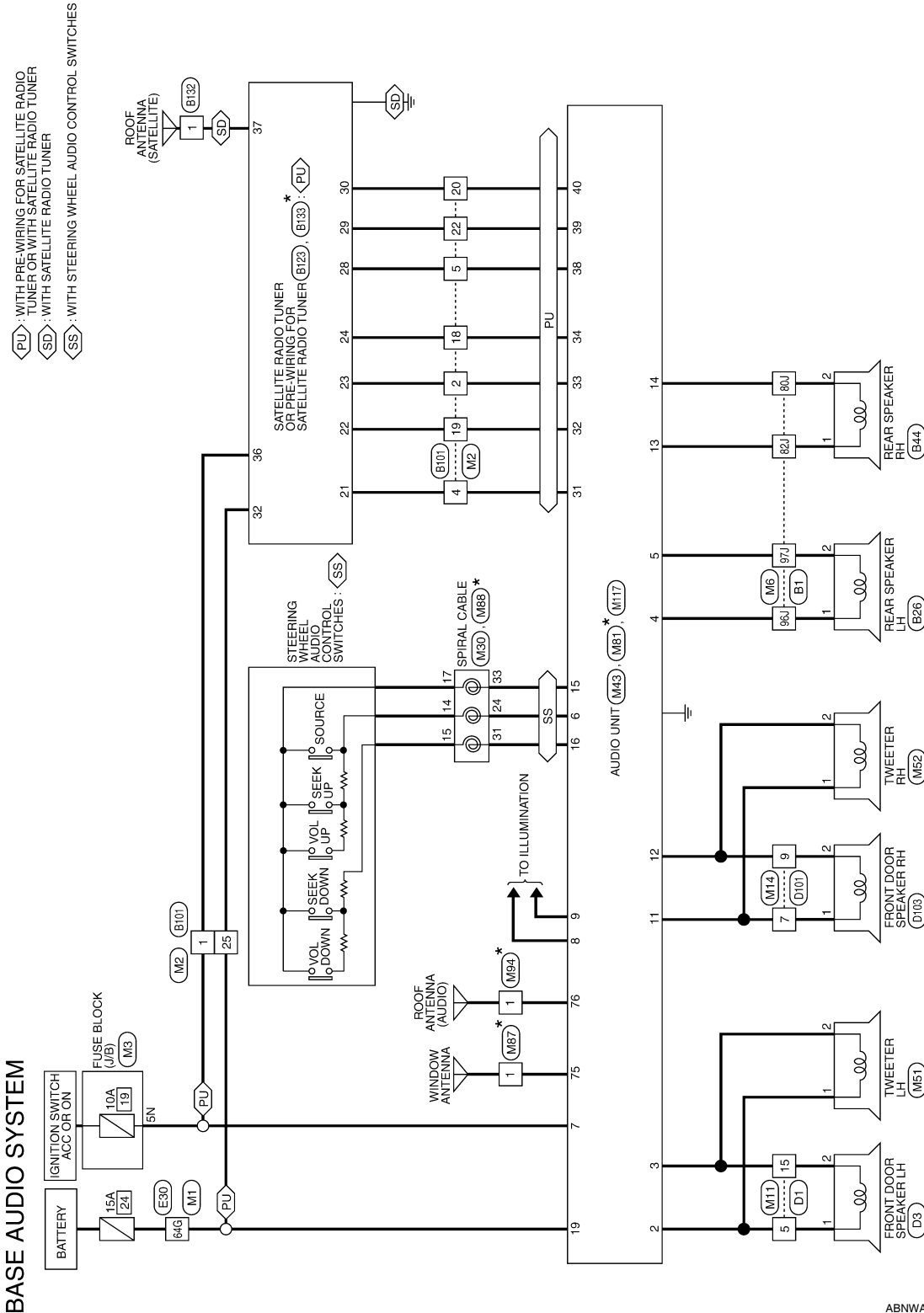
Terminal (Wire color)		Item	Signal input/ output	Condition		Voltage (approx.)
+	-			Ignition switch	Operation	
30 (B)	Ground	Communication signal (AUDIO-SAT)	Input	ON	Set to the satellite radio mode	 <p style="text-align: right; font-size: small;">SKIB3826E</p>
32 (V or Y/R)	Ground	Battery power supply	Input	OFF	-	Battery voltage
36 (SB or GR/W)		ACC power supply		ACC		
37 (B)		Antenna signal		-		

WIRING DIAGRAM

BASE AUDIO SYSTEM

Wiring Diagram

INFOID:000000005804717



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

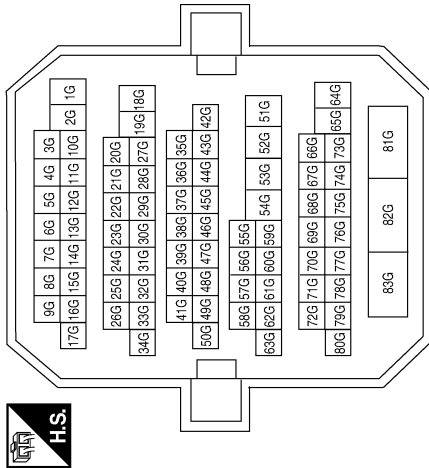
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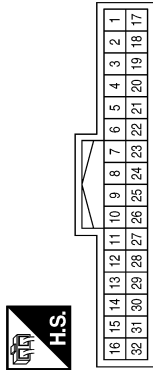
BASE AUDIO SYSTEM CONNECTORS

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



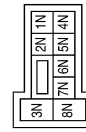
Terminal No.	Color of Wire	Signal Name
64G	Y/R	-

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



Terminal No.	Color of Wire	Signal Name
1	V/Y	-
2	Y/G	-
4	G/B	-
5	R	-
18	BR/W	-
19	Y/L	-
20	B	-
22	G	-
25	Y/R	-

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



Terminal No.	Color of Wire	Signal Name
5N	V/Y	-

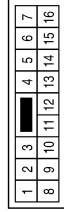
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BASE AUDIO SYSTEM

< WIRING DIAGRAM >

[BASE AUDIO]

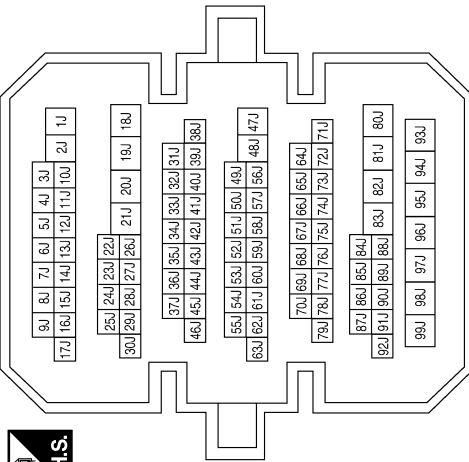
Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
80J	B/W	-
82J	L	-
96J	O/B	-
97J	W/R	-

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

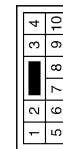


Connector No.	M30
Connector Name	SPIRAL CABLE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	W/G	AUDIO_STRG_SW_REMOTE_A
31	GR/L	AUDIO_STRG_SW_REMOTE_B
33	L/B	AUDIO_STRG_SW_GND

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



Terminal No.	Color of Wire	Signal Name
7	G/W	-
9	BR	-

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BASE AUDIO SYSTEM

< WIRING DIAGRAM >

[BASE AUDIO]

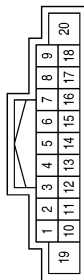
Connector No.	M51
Connector Name	TWEETER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	W	-(WITH BASE AUDIO SYSTEM)
2	B	-(WITH BASE AUDIO SYSTEM)

Terminal No.	Color of Wire	Signal Name
6	W/G	STRG_SW_A
7	V/Y	ACC
8	R/Y	ILL_CONT_OUT
9	R/L	TAIL/ILL_RLY
10	-	-
11	G/W	FR SP RH (+)
12	BR	FR SP RH (-)
13	L	RR SP RH (+)
14	B/W	RR SP RH (-)
15	L/B	STRG_SW_GND
16	GR/L	STRG_SW_B
17	-	-
18	-	-
19	Y/R	BAT
20	-	-

Connector No.	M43
Connector Name	AUDIO UNIT (BASE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	W	FR SP LH (+)
3	B	FR SP LH (-)
4	O/B	RR SP LH (+)
5	W/R	RR SP LH (-)

Connector No.	M87
Connector Name	WINDOW ANTENNA
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M81
Connector Name	AUDIO UNIT (BASE AUDIO SYSTEM)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
75	B	AMP POWER SUPPLY
76	B	MAIN ANTENNA
77	-	-

Connector No.	M52
Connector Name	TWEETER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G/W	-(WITH BASE AUDIO SYSTEM)
2	BR	-(WITH BASE AUDIO SYSTEM)

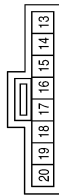
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BASE AUDIO SYSTEM

< WIRING DIAGRAM >

[BASE AUDIO]

Connector No.	M88
Connector Name	SPIRAL CABLE
Connector Color	GRAY



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

Connector No.	M94
Connector Name	ROOF ANTENNA (AUDIO)
Connector Color	WHITE



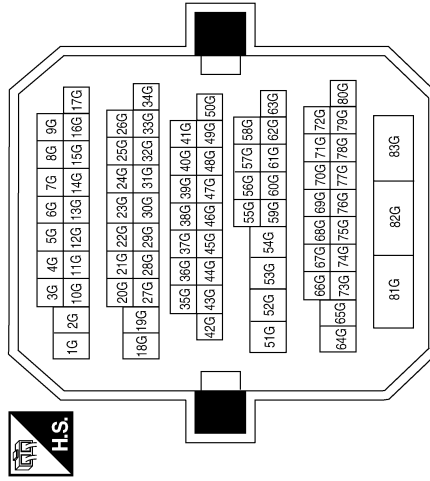
Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M117
Connector Name	AUDIO UNIT (BASE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
31	G/B	SAT LH INPUT (-)
32	Y/L	SAT LH INPUT (+)
33	Y/G	SAT RH INPUT (-)
34	BR/W	SAT RH INPUT (+)
35	-	-
36	-	-
37	R	-
38	G	RFQ1 (SAT TO COMBI)
39	B	RX (SAT TO COMBI)
40	-	TX (COMBI TO SAT)
41	-	-
42	-	-

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



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

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BASE AUDIO SYSTEM

< WIRING DIAGRAM >

[BASE AUDIO]

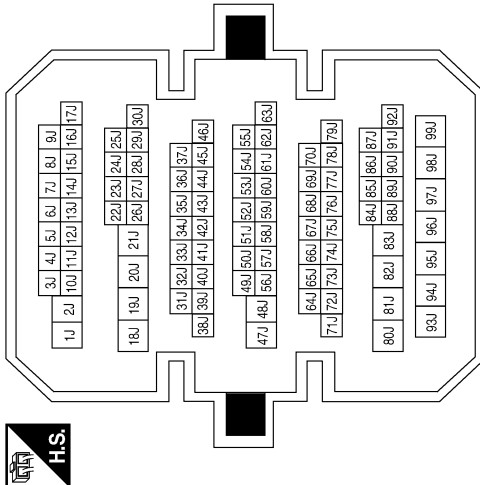
Connector No.	B26
Connector Name	REAR SPEAKER LH (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	BR or O/B	-
2	LG or W/R	-

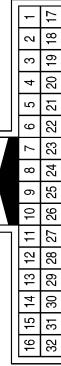
Terminal No.	Color of Wire	Signal Name
80J	BR or B/W	-
82J	P or L	-
96J	BR or O/B	-
97J	LG or W/R	-

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



Terminal No.	Color of Wire	Signal Name
1	SB or GR/W	-
2	Y/G	-
4	W/L	-
5	R/L	-
18	BR/L	-
19	Y/L	-
20	B	-
22	R/W	-
25	V or Y/R	-

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



Connector No.	B44
Connector Name	REAR SPEAKER RH (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE



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

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BASE AUDIO SYSTEM

< WIRING DIAGRAM >

[BASE AUDIO]

Connector No.	B132
Connector Name	ROOF ANTENNA (SATELLITE)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	-

Terminal No.	Color of Wire	Signal Name
21	W/L	SAT_LCH (-)
22	Y/L	SAT_LCH (+)
23	Y/G	SAT_RCH (-)
24	BR/L	SAT_RCH (+)
25	-	-
26	-	-
27	-	-
28	R/L	EC1 (SAT-COMBI)
29	R/W	TXD (SAT_COMBI)
30	B	RXD (COMBI_SAT)
31	-	-
32	V or Y/R	BAT
33	-	-
34	-	-
35	-	-
36	SB or GR/W	ACC

Connector No.	B123
Connector Name	SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER
Connector Color	WHITE

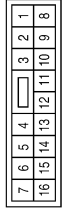


Connector No.	D3
Connector Name	FRONT DOOR SPEAKER LH
Connector Color	WHITE



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

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



Terminal No.	Color of Wire	Signal Name
5	O or W	-
15	LG or B	-

Connector No.	B133
Connector Name	SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER
Connector Color	VIOLET



Terminal No.	Color of Wire	Signal Name
37	B	ANTENNA SIGNAL

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
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BASE AUDIO SYSTEM

< WIRING DIAGRAM >


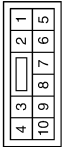
[BASE AUDIO]

Connector No.	D103
Connector Name	FRONT DOOR SPEAKER RH (WITH BASE AUDIO SYSTEM)
Connector Color	BROWN

Terminal No.	Color of Wire	Signal Name
1	L or G/W	-
2	LG or BR	-

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

Terminal No.	Color of Wire	Signal Name
7	L or G/W	-
9	LG or BR	-

ABNIA2429GB

AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[BASE AUDIO]

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

AUDIO UNIT

AUDIO UNIT : Symptom Table

INFOID:000000005438656

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">Audio unit power circuitAudio unit	<ul style="list-style-type: none">AV-15AV-48
Steering wheel audio control switches (if equipped) do not operate	<ul style="list-style-type: none">Steering wheel audio control switchesAudio unit	<ul style="list-style-type: none">AV-23AV-48
All speakers do not sound	<ul style="list-style-type: none">Audio unit power circuitAudio unit	<ul style="list-style-type: none">AV-15AV-48
One or several speakers do not sound	<ul style="list-style-type: none">Front door speakerTweeterRear speaker	<ul style="list-style-type: none">AV-17AV-19AV-21

CD

CD : Symptom Table

INFOID:000000005438657

Symptom	Possible cause	Reference page
CD cannot be inserted.	Audio unit	AV-48
CD cannot be ejected.		
The CD cannot be played.		
The sound skips, stops suddenly, or is distorted.		

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Symptom Table

INFOID:000000005438658

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">Satellite radio tuner power or ground circuitSatellite radio tuner communication circuitSatellite radio tuner	<ul style="list-style-type: none">AV-15AV-25AV-150
Right or left channel does not sound	<ul style="list-style-type: none">Satellite radio tuner right channel audio signal circuitSatellite radio tuner left channel audio signal circuitSatellite radio tuner	<ul style="list-style-type: none">AV-28AV-28AV-150

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BASE AUDIO]

NORMAL OPERATING CONDITION

Description

INFOID:000000005438659

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

NOISE

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

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

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

NOTE:

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

Type of Noise and Possible Cause

Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	<ul style="list-style-type: none"> • Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		<ul style="list-style-type: none"> • Fuel pump condenser
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	<ul style="list-style-type: none"> • Relay malfunction, audio unit malfunction
	The noise occurs when various motors are operating.	<ul style="list-style-type: none"> • Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		<ul style="list-style-type: none"> • Rear defogger coil malfunction • Open circuit in printed heater • Poor ground of antenna feeder line
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		<ul style="list-style-type: none"> • Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

PRECAUTION

PRECAUTIONS

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

INFOID:000000005818885

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.

Precaution for Trouble Diagnosis

INFOID:000000005438662

AV COMMUNICATION SYSTEM

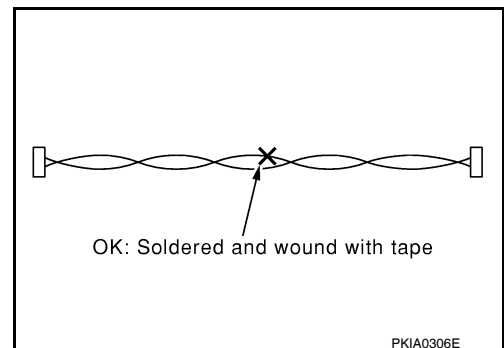
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

INFOID:000000005438663

AV COMMUNICATION SYSTEM

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

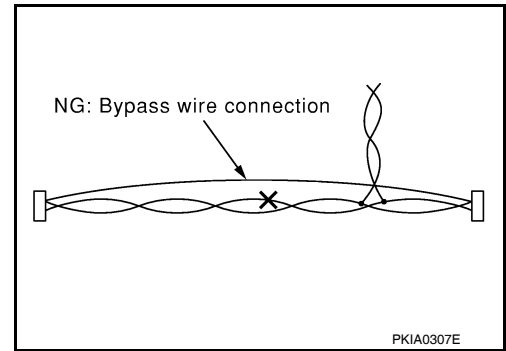


PRECAUTIONS

< PRECAUTION >

[BASE AUDIO]

- Do not perform bypass wire connections for the repair parts. (The spliced wire will become separated and the characteristics of twisted line will be lost.)



PREPARATION

< PREPARATION >

[BASE AUDIO]

PREPARATION

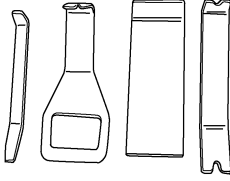
PREPARATION

Special Service Tools

INFOID:000000005818886

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

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

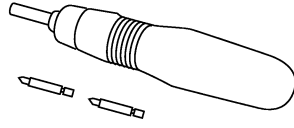


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Commercial Service Tools

INFOID:000000005438664

Tool name	Description
Power tool	Loosening bolts and nuts



PBIC0191E

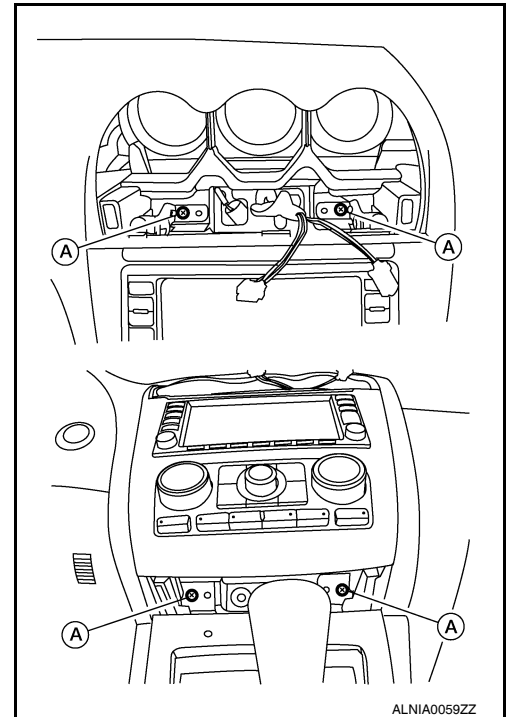
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ON-VEHICLE REPAIR**AUDIO UNIT****Removal and Installation**

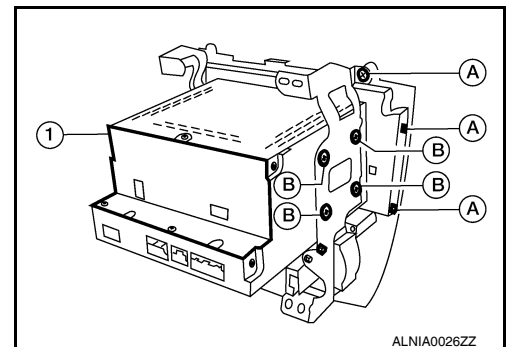
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REMOVAL

1. Disconnect the 12-volt battery negative terminal.
2. Remove the center ventilator grilles. Refer to [VTL-24. "CENTER VENTILATOR GRILLES : Removal and Installation"](#).
3. Remove the storage bin. Refer to [IP-14. "Removal and Installation"](#).
4. Remove the cluster lid D. Refer to [IP-11. "Removal and Installation"](#).
5. Remove the audio unit upper and lower screws (A).



6. Pull out the audio control unit assembly, disconnect the audio control unit connectors.
7. Disconnect the front air control unit connector.
8. Remove the cluster lid C screws (A), then remove the audio unit screws (B) and the audio unit (1).



9. Remove the audio unit bracket screws, then remove the front air control unit screws and remove the audio unit brackets.

INSTALLATION

Installation is in the reverse order of removal.

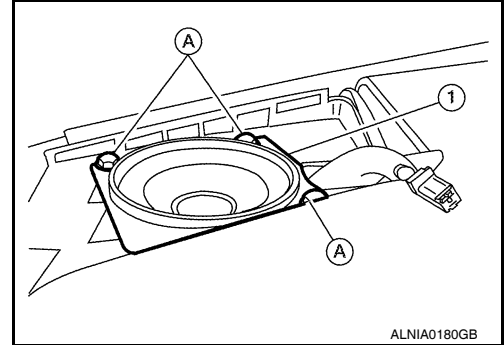
TWEETER

Removal and Installation

INFOID:000000005438666

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-26, "Removal and Installation"](#).
2. Remove tweeter speaker grille. Refer to [IP-11, "Removal and Installation"](#).
3. Remove the tweeter speaker screws (A), disconnect the tweeter speaker connector and remove the tweeter speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

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FRONT DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BASE AUDIO]

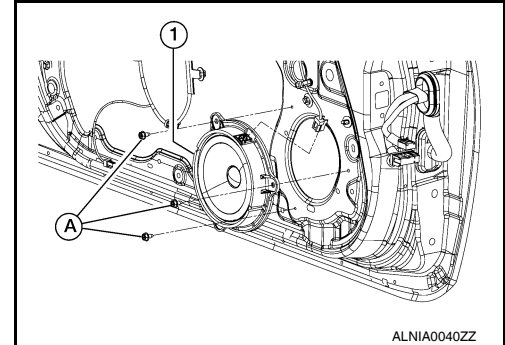
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000005438667

REMOVAL

1. Remove the front door finisher. Refer to [INT-13, "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).



INSTALLATION

Installation is in the reverse order of removal.

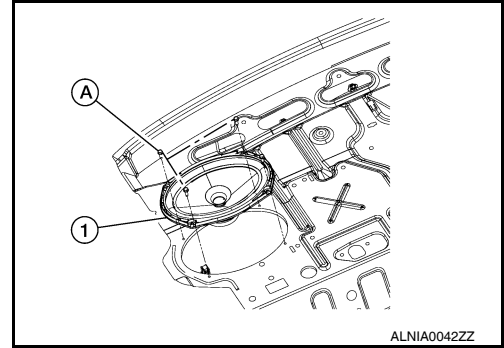
REAR SPEAKER

Removal and Installation

INFOID:000000005438668

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-22. "Removal and Installation"](#).
2. Remove the rear speaker screws (A), then disconnect the rear speaker connector and remove the rear speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

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AUDIO ANTENNA

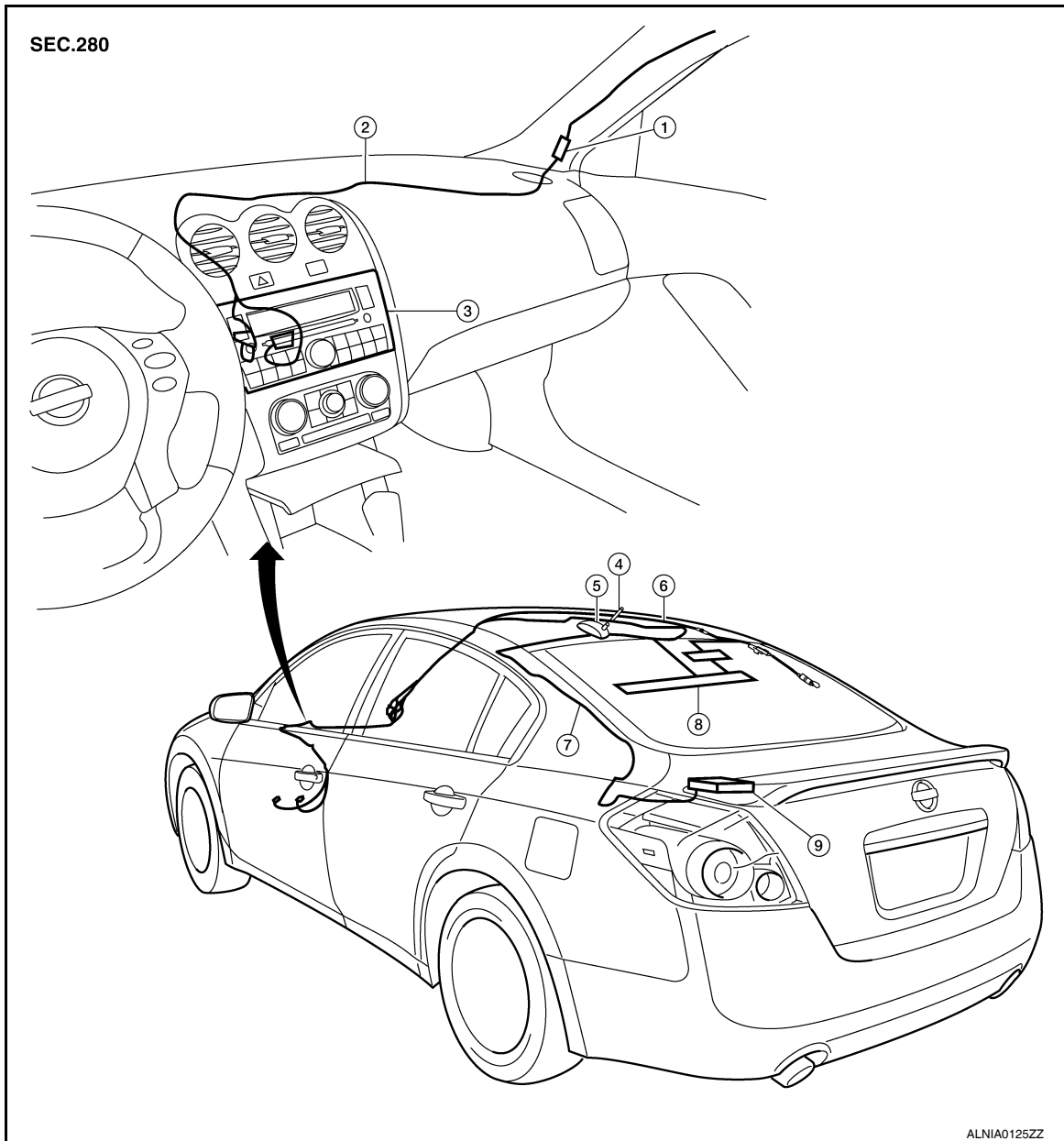
< ON-VEHICLE REPAIR >

[BASE AUDIO]

AUDIO ANTENNA

Location of Antennas

INFOID:000000005438670



- | | | |
|---------------------------------|-----------------------|-----------------------------------|
| 1. Audio unit harness connector | 2. Audio unit harness | 3. Audio unit |
| 4. Roof antenna rod | 5. Roof antenna base | 6. Antenna feeder (to audio unit) |
| 7. Satellite feeder | 8. Window antenna | 9. Satellite radio tuner |

Roof Antenna

INFOID:000000005438671

REMOVAL AND INSTALLATION

Removal

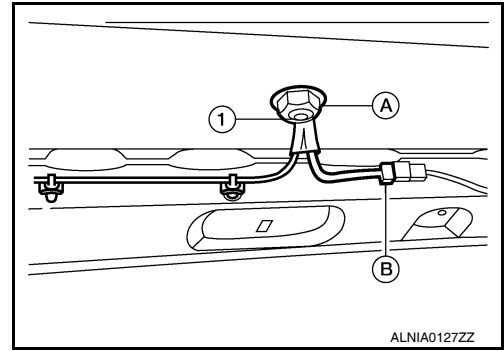
1. Remove the rear parcel shelf finisher. Refer to [INT-22, "Removal and Installation"](#).
2. Remove the rear assist grips. Refer to [INT-26, "Removal and Installation"](#).
3. Pull down headlining (rear) and obtain space work between roof and headlining.

AUDIO ANTENNA

< ON-VEHICLE REPAIR >

[BASE AUDIO]

4. Remove the roof antenna nut (A), then disconnect the antenna feeder connector (B) and remove the antenna feeder (1) from the roof.
5. Detach the antenna feeder harness wire clips, then disconnect the antenna feeder harness wire end and feed the antenna feeder harness through the roof to remove the roof antenna base.



Installation

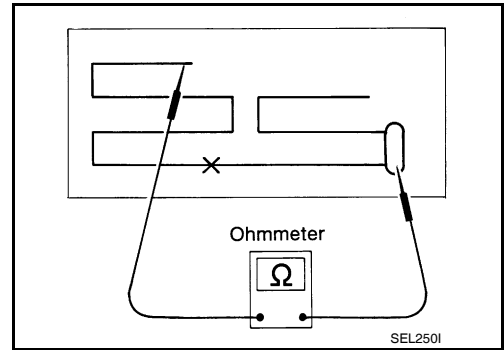
Installation is in the reverse order of removal.

Window Antenna Repair

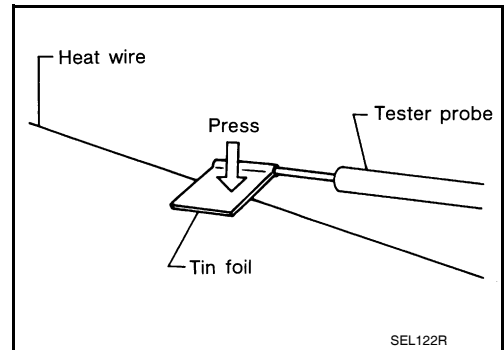
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ELEMENT CHECK

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



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



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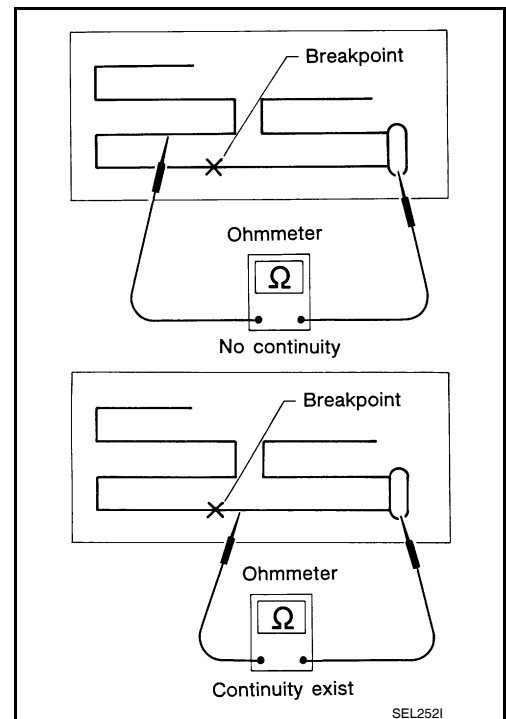
AV

AUDIO ANTENNA

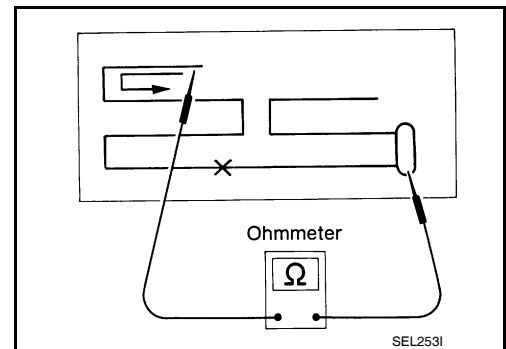
< ON-VEHICLE REPAIR >

[BASE AUDIO]

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



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

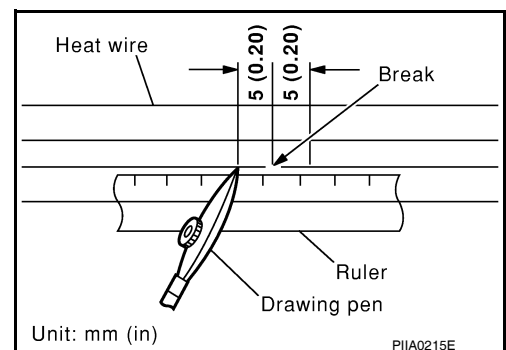


REPAIR EQUIPMENT

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

REPAIRING PROCEDURE

- Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
- Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
- Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.

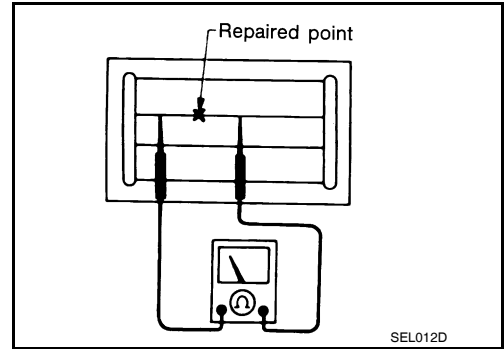


AUDIO ANTENNA

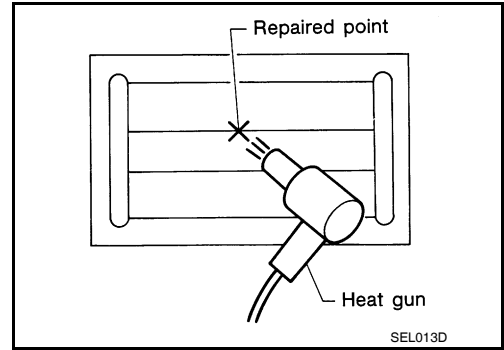
< ON-VEHICLE REPAIR >

[BASE AUDIO]

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



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



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STEERING SWITCH

< ON-VEHICLE REPAIR >

[BASE AUDIO]

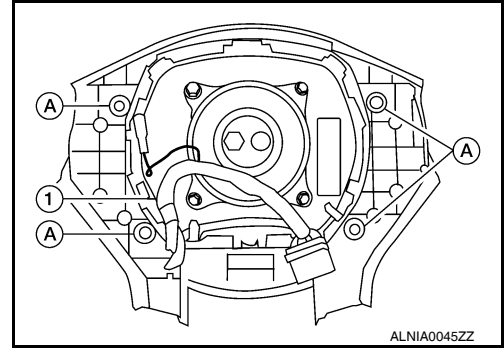
STEERING SWITCH

Removal and Installation

INFOID:000000005438673

REMOVAL

1. Remove the driver airbag module. Refer to [SR-4, "Removal and Installation"](#).
2. Remove the steering wheel switch assembly screws (A), then remove the steering wheel switches (1).



INSTALLATION

Installation is in the reverse order of removal.

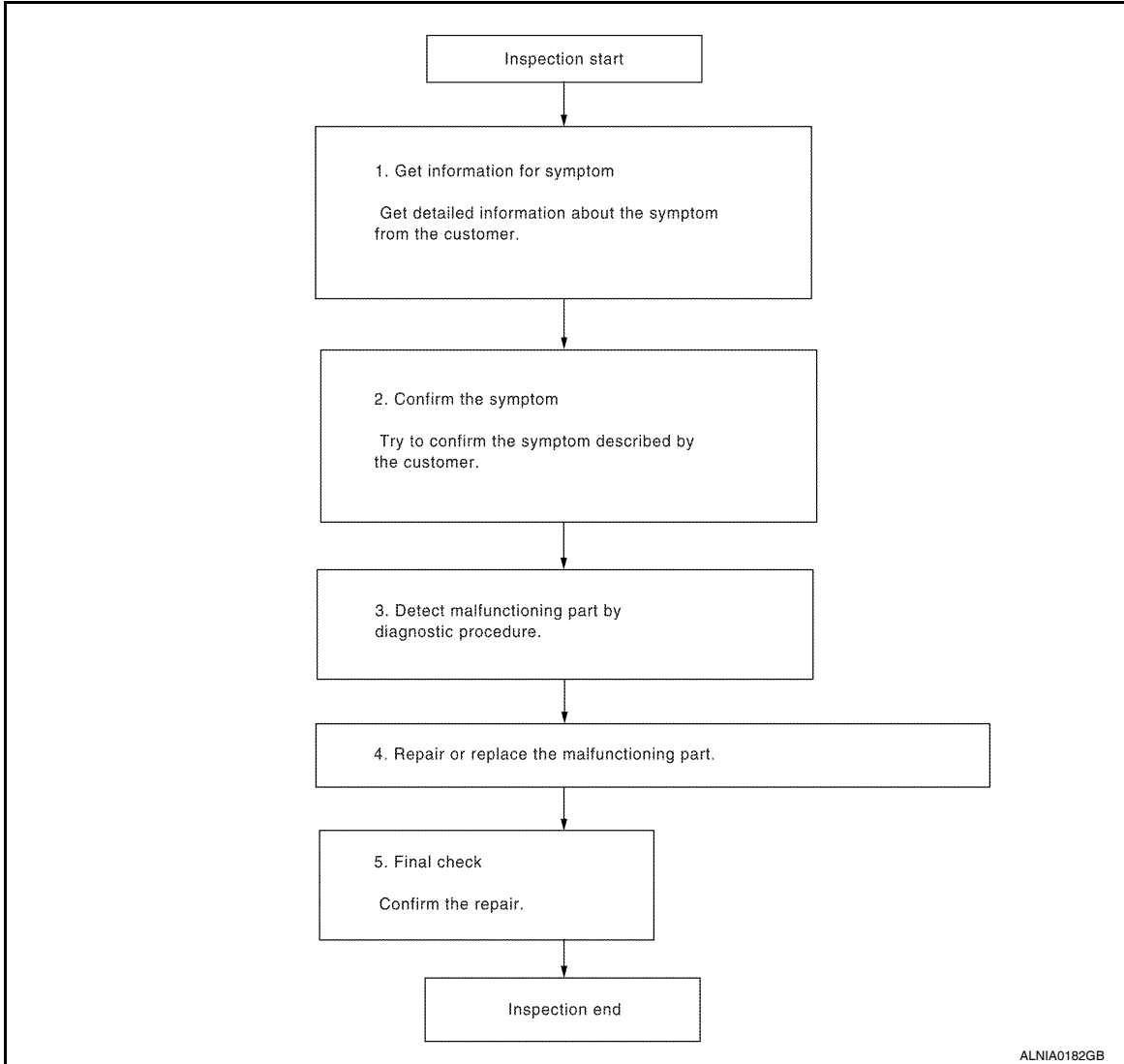
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000005786500

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.

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DIAGNOSIS AND REPAIR WORKFLOW

[BOSE AUDIO WITHOUT NAVIGATION]

< BASIC INSPECTION >

Is malfunctioning part detected?

YES >> GO TO 4

NO >> GO TO 2

4.REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 5

5.FINAL CHECK

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

Was the repair confirmed?

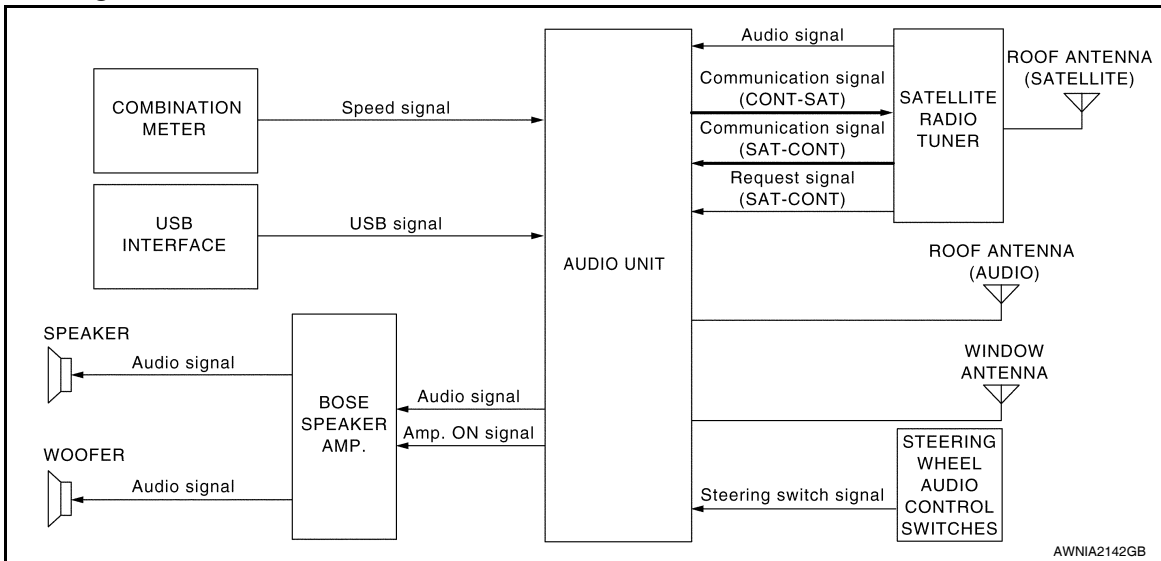
YES >> Inspection End.

NO >> GO TO 2

FUNCTION DIAGNOSIS

AUDIO SYSTEM

System Diagram



System Description

INFOID:000000005803208

AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- BOSE speaker amp.
- Window antenna
- Roof antenna (audio)
- 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 roof antenna (audio) and the window antenna. The audio 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

- Roof antenna (satellite)
- Satellite radio tuner

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

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

SPEED SENSITIVE VOLUME SYSTEM

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

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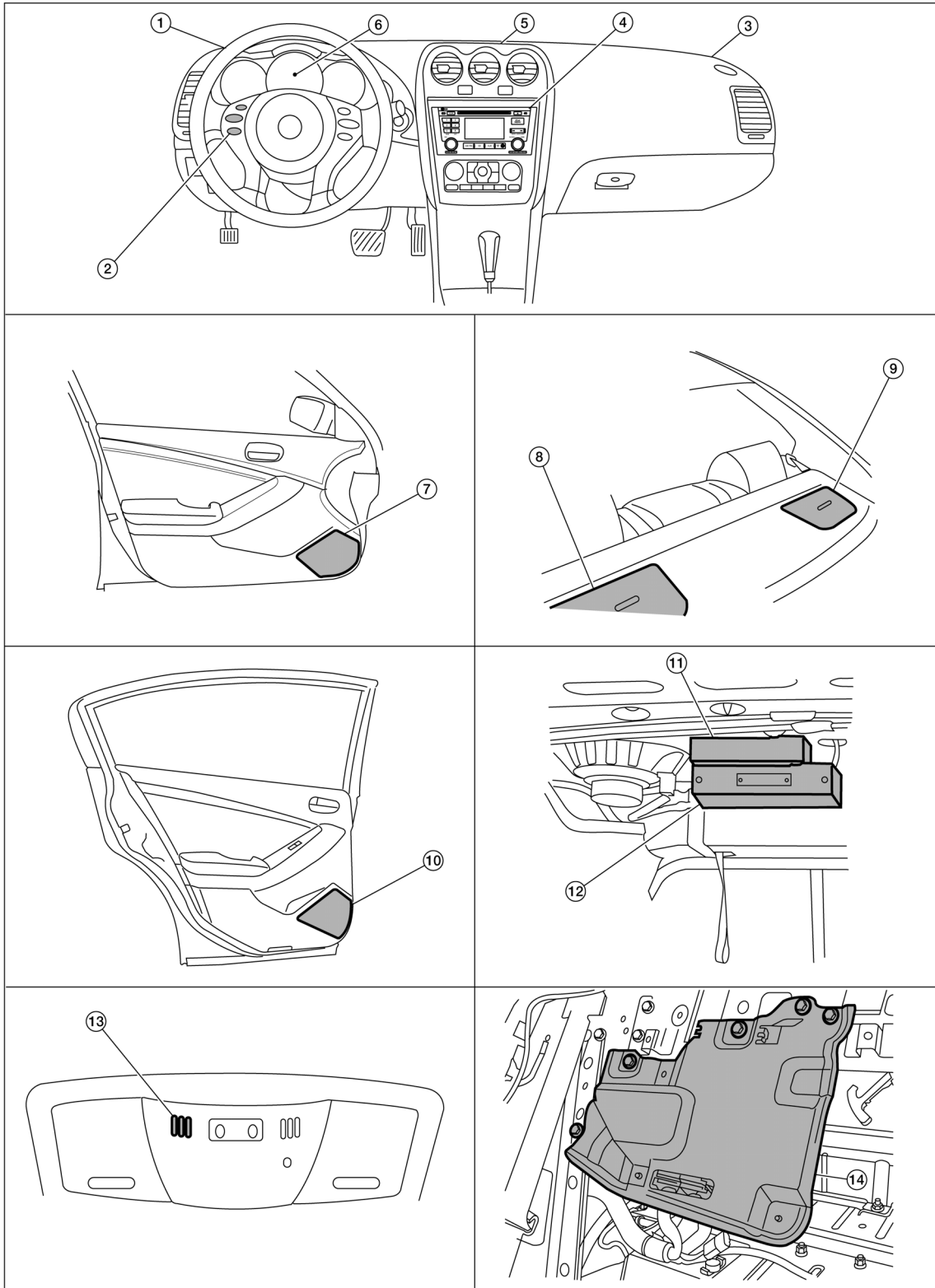
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

Component Parts Location

INFOID:000000005786507

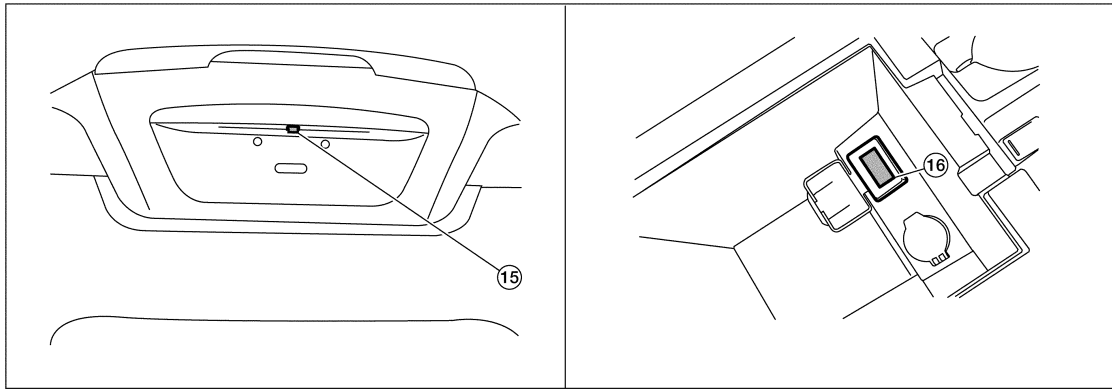


AWNIA2140ZZ

AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]



AWNIA2141ZZ

- | | | |
|---|--|--|
| 1. Tweeter LH M51 | 2. Steering wheel audio control switches | 3. Tweeter RH M52 |
| 4. Audio unit M44, M45, M46, M47, M96, M97 | 5. Center speaker M151 | 6. Combination meter M24 |
| 7. Front door speaker
LH D22
RH D122 | 8. Rear subwoofer LH B120 | 9. Rear subwoofer RH B124 |
| 10. Rear door speaker
LH D202
RH D302 | 11. Satellite radio tuner B123, B133
(viewed under parcel shelf near rear speaker LH) | 12. Bluetooth control unit B125, B126, B139 (viewed under parcel shelf near rear speaker LH) |
| 13. Microphone R7 | 14. BOSE speaker amp. B121, B122 (view with rear seat back removed) | 15. Rear view camera B35 |
| 16. USB interface M205 | | |

Component Description

INFOID:000000005786508

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

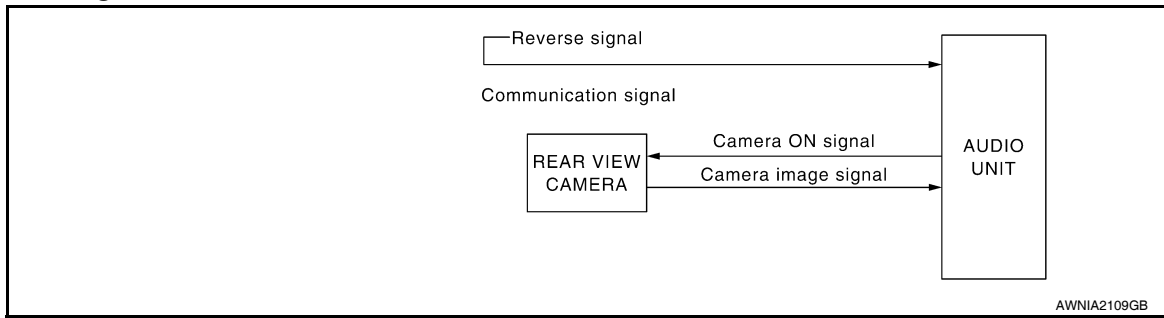
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

REAR VIEW MONITOR SYSTEM

System Diagram



System Description

INFOID:000000005786510

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

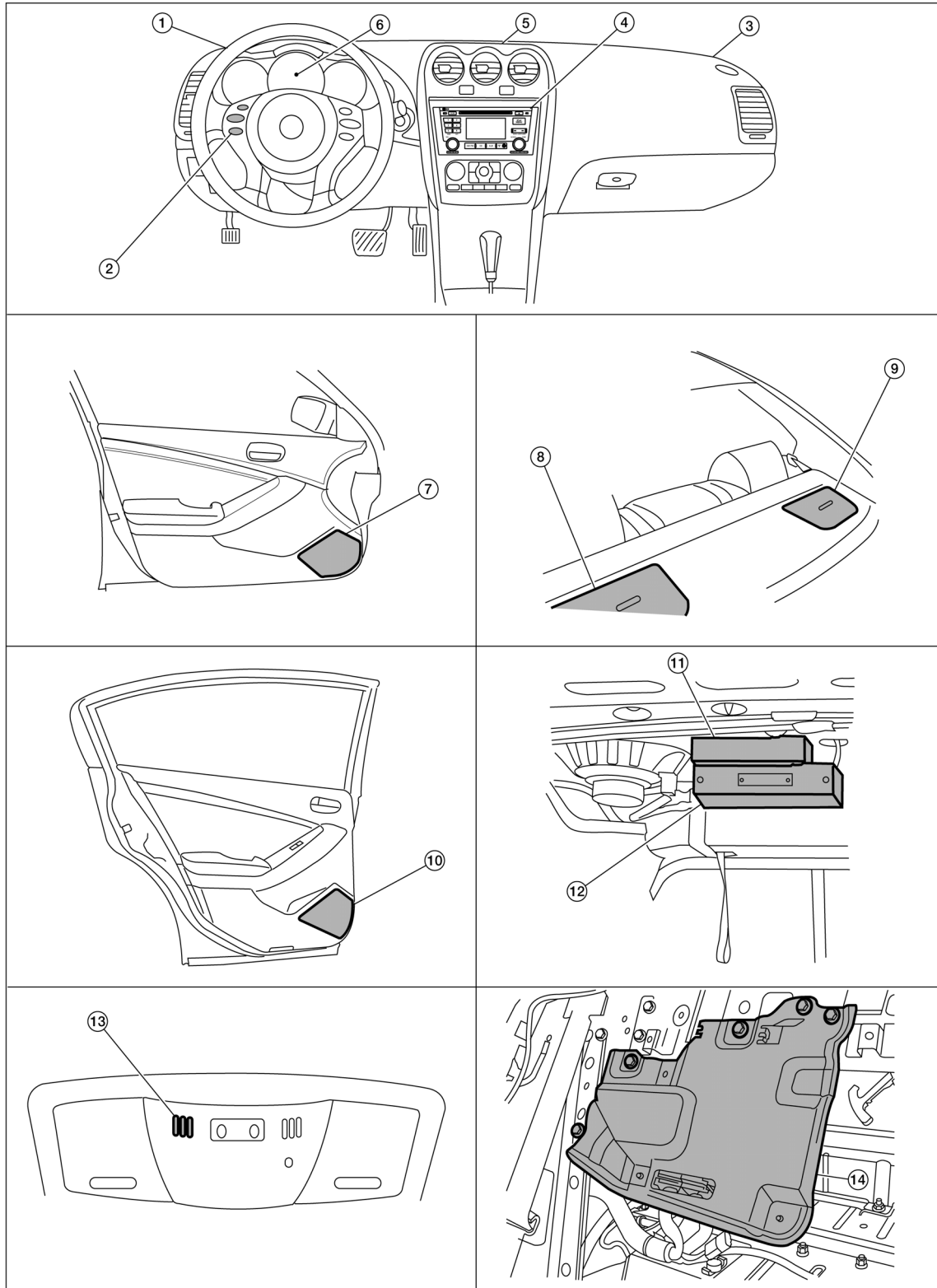
REAR VIEW MONITOR SYSTEM

[BOSE AUDIO WITHOUT NAVIGATION]

< FUNCTION DIAGNOSIS >

Component Parts Location

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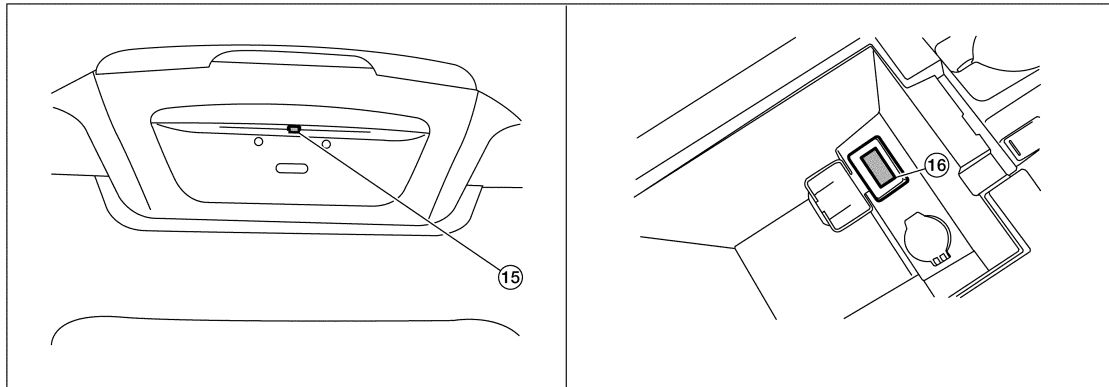
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REAR VIEW MONITOR SYSTEM

[BOSE AUDIO WITHOUT NAVIGATION]

< FUNCTION DIAGNOSIS >



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- | | | |
|---|--|--|
| 1. Tweeter LH M51 | 2. Steering wheel audio control switches | 3. Tweeter RH M52 |
| 4. Audio unit M44, M45, M46, M47, M96, M97 | 5. Center speaker M151 | 6. Combination meter M24 |
| 7. Front door speaker
LH D22
RH D122 | 8. Rear subwoofer LH B120 | 9. Rear subwoofer RH B124 |
| 10. Rear door speaker
LH D202
RH D302 | 11. Satellite radio tuner B123, B133
(viewed under parcel shelf near rear speaker LH) | 12. Bluetooth control unit B125, B126, B139 (viewed under parcel shelf near rear speaker LH) |
| 13. Microphone R7 | 14. BOSE speaker amp. B121, B122 (view with rear seat back removed) | 15. Rear view camera B35 |
| 16. USB interface M205 | | |

Component Description

INFOID:000000005786513

Part name	Description
Audio unit	<ul style="list-style-type: none"> Sends camera ON signal to the rear view camera Receives camera image signal from the rear view camera Displays camera image
Rear view camera	<ul style="list-style-type: none"> Receives camera ON signal from the audio unit Sends image signal to the audio unit

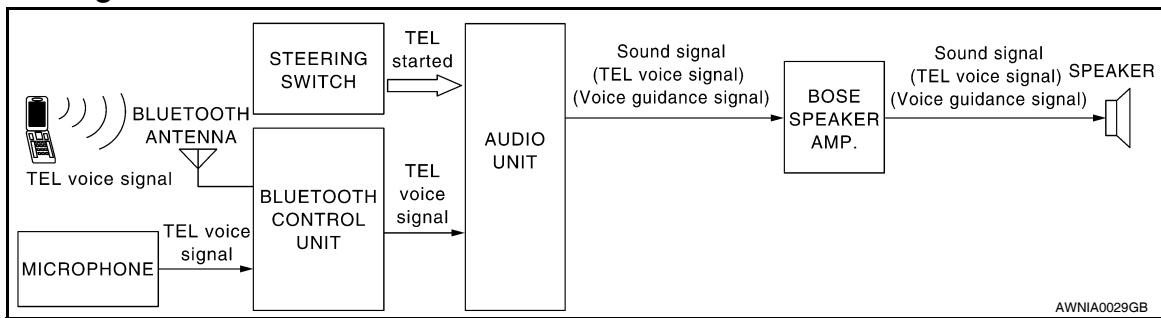
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

HANDS-FREE PHONE SYSTEM

System Diagram



System Description

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

NOTE:

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

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

BLUETOOTH CONTROL UNIT

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

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

MICROPHONE

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

AUDIO UNIT

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

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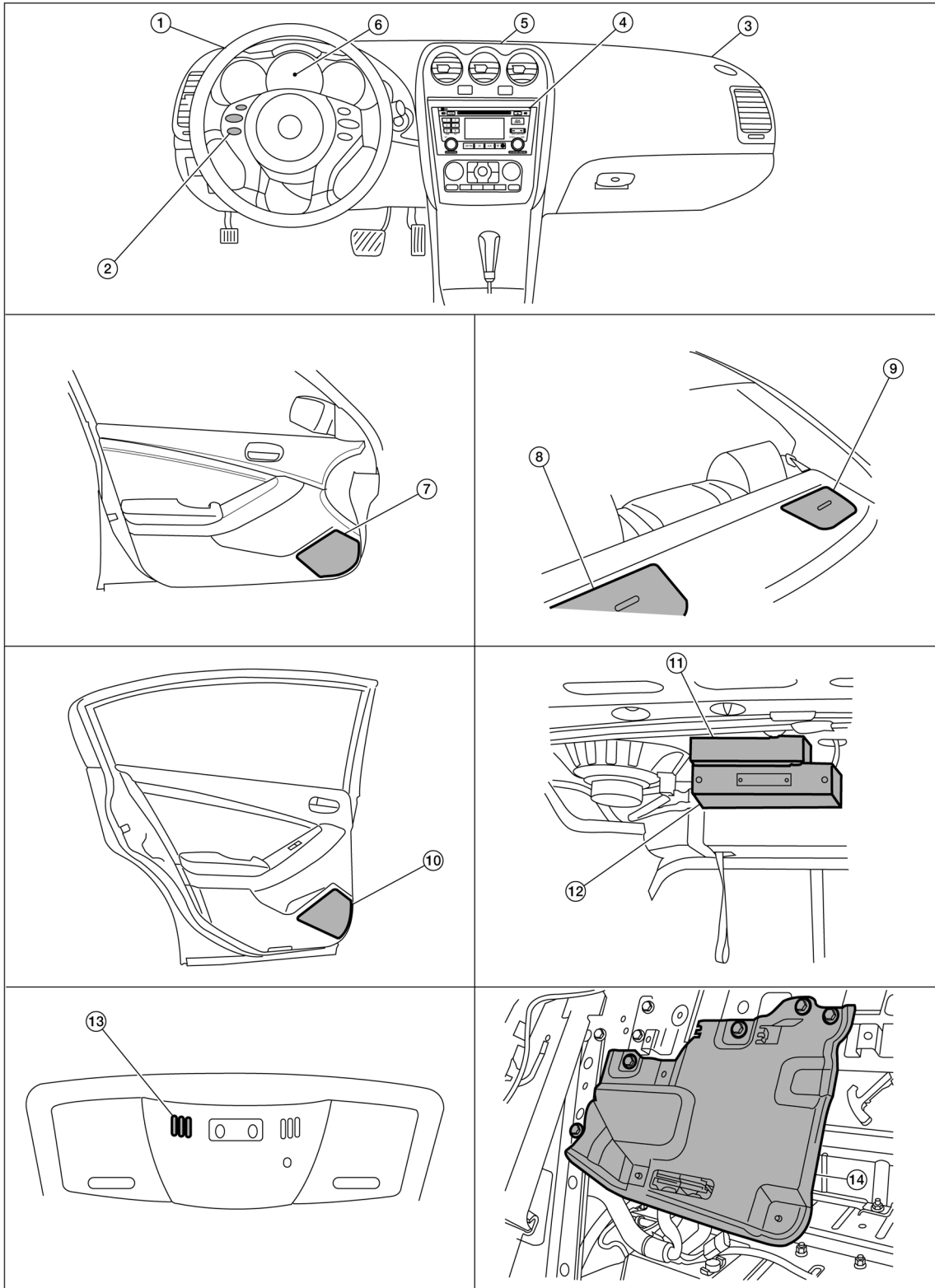
HANDS-FREE PHONE SYSTEM

[BOSE AUDIO WITHOUT NAVIGATION]

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000005803206

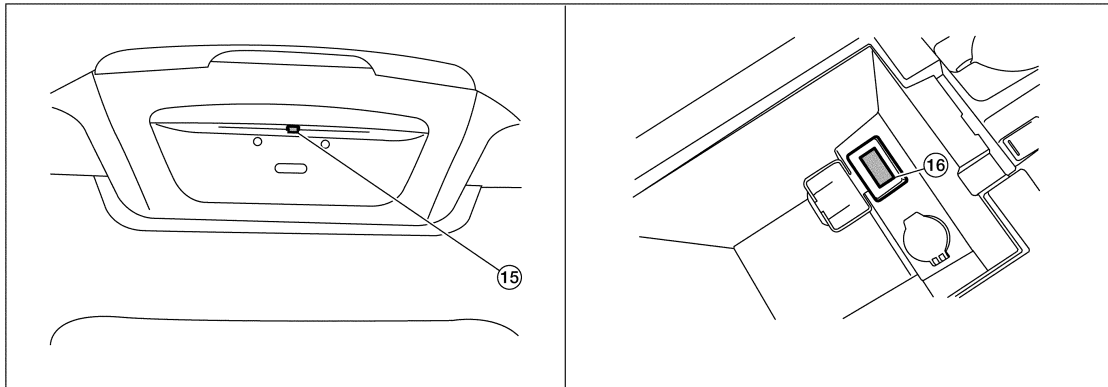


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HANDS-FREE PHONE SYSTEM

[BOSE AUDIO WITHOUT NAVIGATION]

< FUNCTION DIAGNOSIS >



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- | | | |
|---|--|--|
| 1. Tweeter LH M51 | 2. Steering wheel audio control switches | 3. Tweeter RH M52 |
| 4. Audio unit M44, M45, M46, M47, M96, M97 | 5. Center speaker M151 | 6. Combination meter M24 |
| 7. Front door speaker
LH D22
RH D122 | 8. Rear subwoofer LH B120 | 9. Rear subwoofer RH B124 |
| 10. Rear door speaker
LH D202
RH D302 | 11. Satellite radio tuner B123, B133
(viewed under parcel shelf near rear speaker LH) | 12. Bluetooth control unit B125, B126, B139 (viewed under parcel shelf near rear speaker LH) |
| 13. Microphone R7 | 14. BOSE speaker amp. B121, B122 (view with rear seat back removed) | 15. Rear view camera B35 |
| 16. USB interface M205 | | |

Component Description

INFOID:000000005786521

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

DIAGNOSIS SYSTEM (AUDIO UNIT)

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

DIAGNOSIS SYSTEM (AUDIO UNIT)

Diagnosis Description

INFOID:000000005786522

ON BOARD DIAGNOSIS

Description

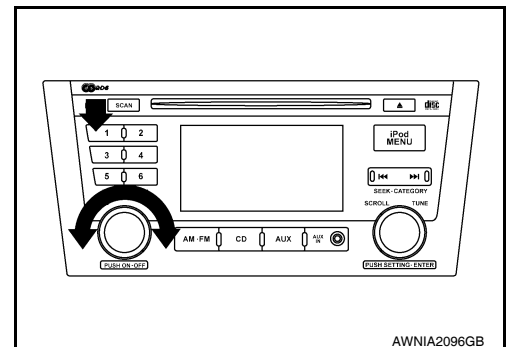
- The trouble diagnosis function has a self-diagnosis mode for conducting trouble diagnosis automatically and a confirmation/adjustment mode for operating manually.
- Self-diagnosis mode performs the audio unit diagnosis and the connection diagnosis between each of the units that make up the system,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

On Board Diagnosis Item

Mode	Description	
Self-Diagnosis	<ul style="list-style-type: none">• audio unit diagnosis• Perform the connection diagnosis between each of the units.	
Confirmation/ Adjustment	Display Diagnosis	The confirmation of the tint with the color spectrum bar display and shading of color with the gradation bar display can be performed.
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, lights, reverse and EQ pin.
	Speaker Test	The connection of a speaker can be confirmed by test tone.
	Error History (Detailed)	System malfunctions and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.
	Camera System	The guiding line position that overlaps rear view camera image can be adjusted.
	AV COMM Diagnosis	The communication condition of each unit can be monitored.
	Delete Unit Connection Log	Erase the connection history of unit and error history
	Initialize Settings	Initializes the audio unit memory.

STARTING PROCEDURE

1. Start the engine.
2. Turn the audio system OFF.
3. While pressing the number 1 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.)
 - Use the SCROLL button to go up and down the menu screen.
 - Push the enter button to select an item on the menu screen.

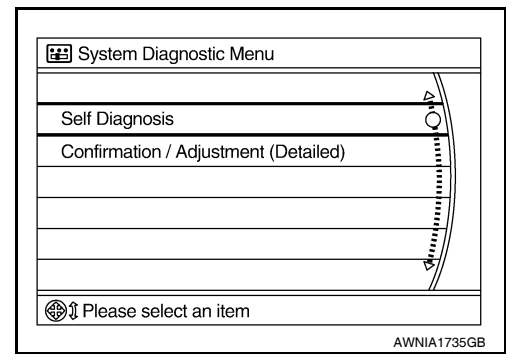


DIAGNOSIS SYSTEM (AUDIO UNIT)

[BOSE AUDIO WITHOUT NAVIGATION]

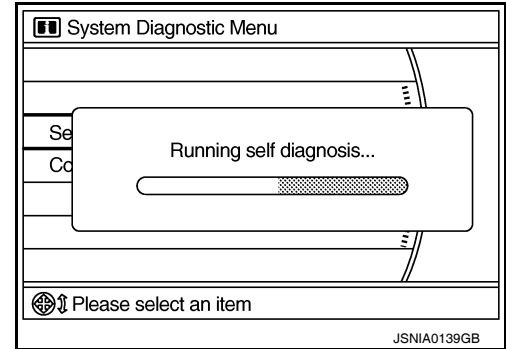
< FUNCTION DIAGNOSIS >

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



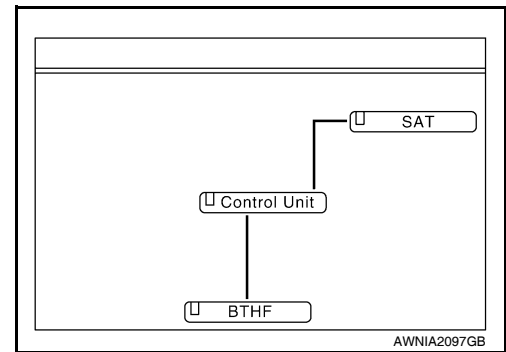
SELF-DIAGNOSIS MODE

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



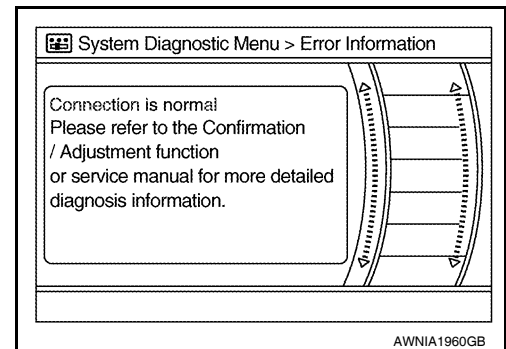
- Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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



NOTE:

- Only the control unit (audio unit) is displayed in red.
- Replace audio unit if "Self-Diagnosis did not run because of a control unit malfunction" is indicated. The symptom is audio 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:

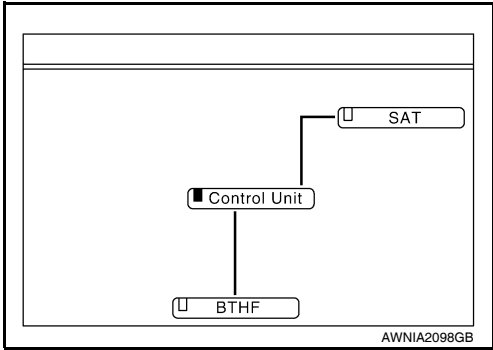
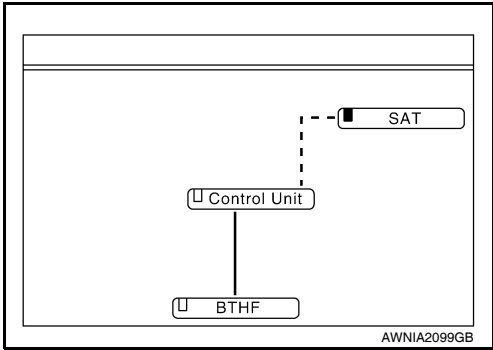
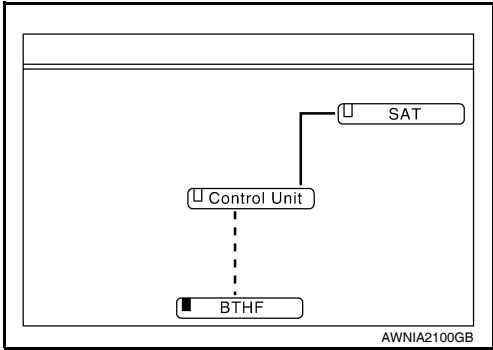
DIAGNOSIS SYSTEM (AUDIO UNIT)

[BOSE AUDIO WITHOUT NAVIGATION]

< FUNCTION DIAGNOSIS >

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 audio unit and multifunction switch.

Self-diagnosis Result Chart

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

NOTE:

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

CONFIRMATION/ADJUSTMENT MODE

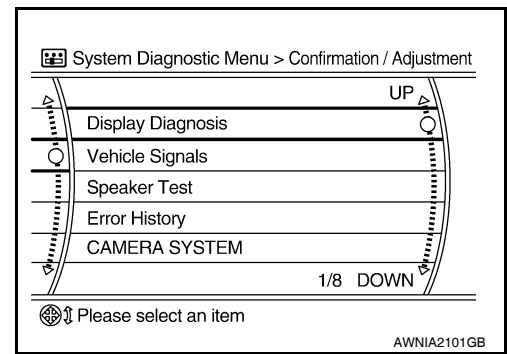
1. Start the diagnosis function and select “Confirmation/Adjustment”. The confirmation/adjustment mode indicates where each item can be checked or adjusted.

DIAGNOSIS SYSTEM (AUDIO UNIT)

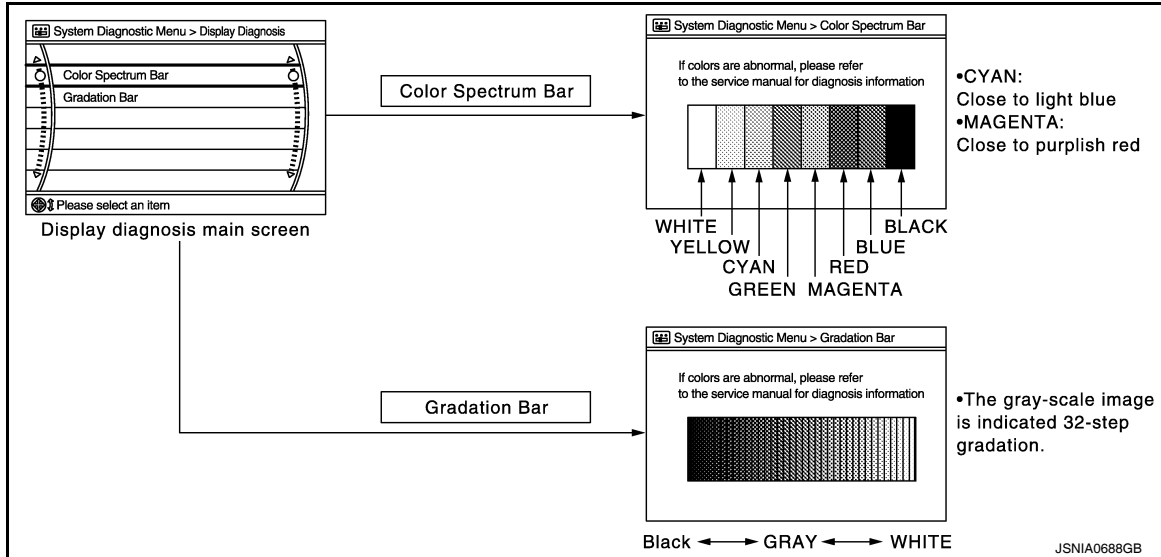
[BOSE AUDIO WITHOUT NAVIGATION]

< FUNCTION DIAGNOSIS >

- Select each switch on the “Confirmation/Adjustment Mode” screen to display the relevant trouble diagnosis screen. Press the RETURN switch to return to the initial Confirmation/Adjustment Mode screen.



Display Diagnosis

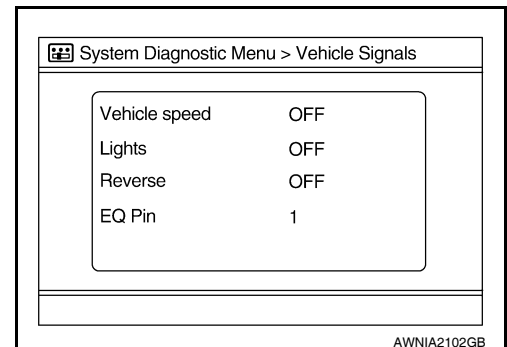


The tint of the color bar indication is as per the following list if RGB image signal error is detected.

- R (red) signal error** : Light blue (Cyan) tint
- G (green) signal error** : Purple (Magenta) tint
- B (blue) signal error** : Yellow tint

Vehicle Signals

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



Diagnosis item	Display	Vehicle status	Remarks
Vehicle speed	ON	Vehicle speed > 0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.
		Vehicle speed = 0 km/h (0 MPH)	
Lights	ON	Light switch ON	—
	OFF	Light switch OFF	

DIAGNOSIS SYSTEM (AUDIO UNIT)

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

Diagnosis item	Display	Vehicle status	Remarks
Reverse	ON	Shift the selector lever to the "R" position	Changes in indication may be delayed. This is normal.
	OFF	Shift the selector lever to a position other than the "R" position	
EQ pin	1	—	—

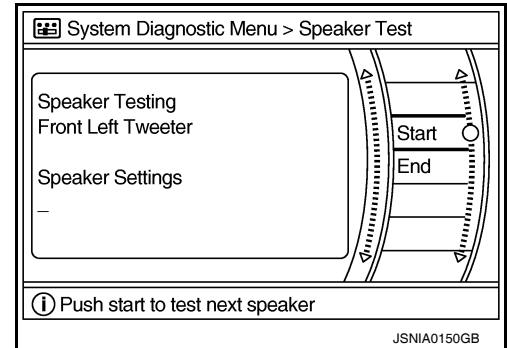
Speaker Test

Select "SPEAKER TEST" to display the Speaker Testing 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



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.

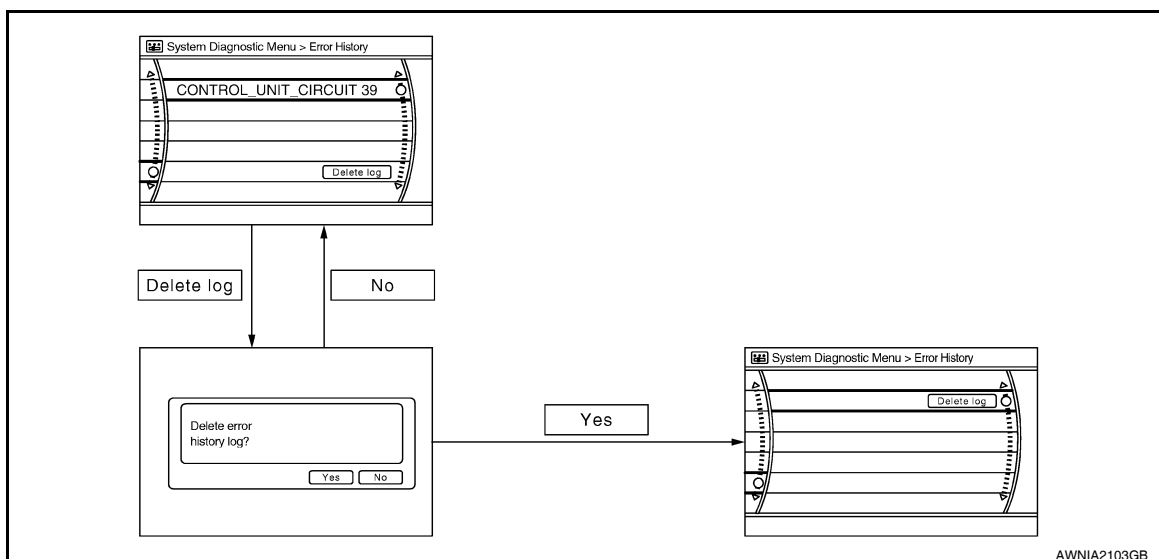
Count up method A

- 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.

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.

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



DIAGNOSIS SYSTEM (AUDIO UNIT)

[BOSE AUDIO WITHOUT NAVIGATION]

< FUNCTION DIAGNOSIS >

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.

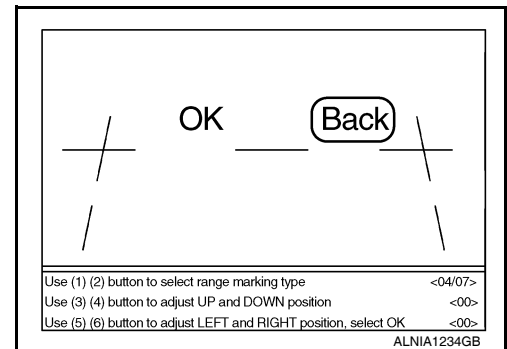
Error item	Description	Possible malfunction factor/Action to take
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	audio unit malfunction is detected.	
SAT Connection Error	<p>When any one of the following items is detected:</p> <ul style="list-style-type: none"> • satellite radio tuner power supply and ground circuits are malfunctioning. • serial communication circuits between audio unit and satellite radio tuner are malfunctioning. • serial communication or request signal between audio unit and satellite radio tuner is malfunctioning. • request signal circuit between audio unit and satellite radio tuner is malfunctioning. 	<ul style="list-style-type: none"> • Satellite radio tuner power supply and ground circuits. • Serial communication circuits between audio unit and satellite radio tuner. • Request signal circuit between audio unit and satellite radio tuner.

Camera System

The function of “Adjust Offset of Rear View Camera” is available.

ADJUST OFFSET OF REAR VIEW CAMERA

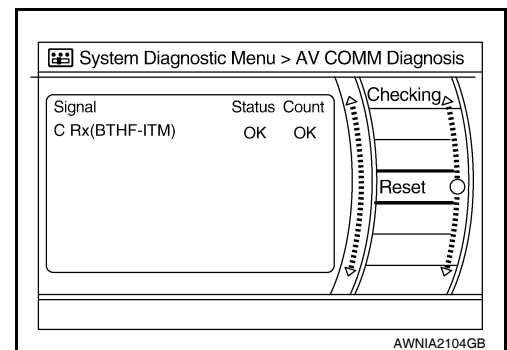
Use this mode to adjust the guide line display position of the rear-view monitor if necessary after removing the rear view monitor camera.



AV COMM Diagnosis

- Displays the communication status between audio 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 Rx(BTHF-ITM)	OK / UNKWN	OK / 0 - 39



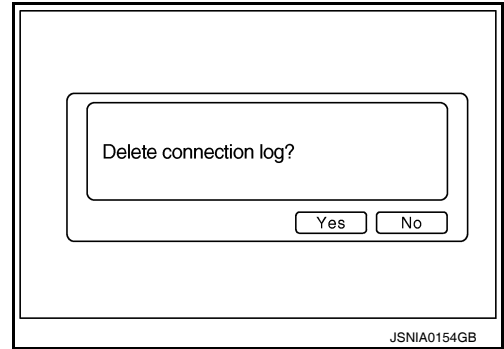
Delete Unit Connection Log

DIAGNOSIS SYSTEM (AUDIO UNIT)

[BOSE AUDIO WITHOUT NAVIGATION]

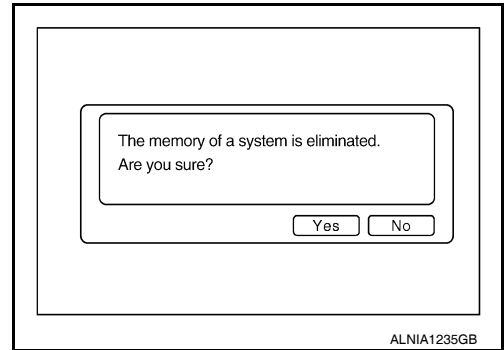
< FUNCTION DIAGNOSIS >

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



Initialize Settings

Eliminates the memory settings of audio system.



DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

Diagnosis Description

INFOID:000000005786523

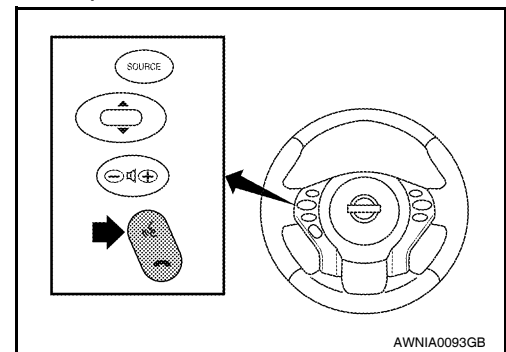
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

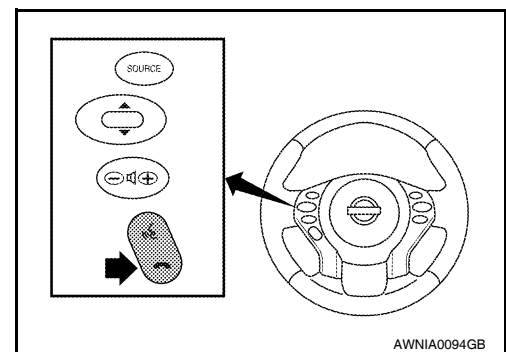
- Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

OPERATION PROCEDURE

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



4. While the prompt is playing, press and hold the steering wheel audio control switch END button until you hear the “Diagnostics mode” prompt. The Bluetooth system will sound a 5 second beep.
5. While the beep is sounding, press and hold the steering wheel audio control switch END button again until you hear prompts.
6. The Bluetooth system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician. Refer to [AV-75, "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-75, "Work Flow"](#).
8. Self-diagnosis mode is complete when the voice prompt says “All diagnostic functions completed”.



Work Flow

INFOID:000000005786524

Failure Message	Action
“Internal failure”	Replace Bluetooth control unit. Refer to AV-158, "Removal and Installation" .
“Bluetooth antenna open”	<ol style="list-style-type: none"> 1. Inspect harness connection. 2. Replace Bluetooth antenna. Refer to AV-157, "Removal and Installation".
“Bluetooth antenna shorted”	
“Phone/Send for Hands Free System is stuck”	Check steering wheel audio control switches. Refer to AV-98, "Diagnosis Procedure" .
“Phone/End for the Hands Free System is stuck”	
“Microphone test” (failed interactive test)	<ol style="list-style-type: none"> 1. Inspect harness between Bluetooth control unit and microphone. 2. Replace microphone. Refer to AV-156, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:000000005803196

Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

1. CHECK FUSES

Check that the following fuses are not blown.

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

Are the fuses OK?

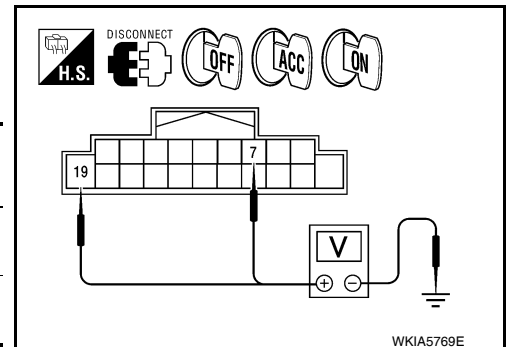
YES >> GO TO 2

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 M44.
2. Check voltage between the audio unit connector M44 and ground.

(+) Connector		Terminal	(-)	OFF	ACC	ON
Connector	Terminal					
M44		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. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect audio unit connectors M44 and M45.
3. Check continuity between audio unit harness connectors M44, M45 and ground.

(+) Connector		Terminal	(-)	Continuity
Connector	Terminal			
M44		20	Ground	Yes
M45		27		
		40		

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

BOSE SPEAKER AMP

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:000000005786533

Regarding Wiring Diagram information, refer to [AV-118. "Wiring Diagram"](#).

1. CHECK FUSE

Check for blown fuses.

Unit	Terminals	Signal name	Fuse No.
BOSE speaker amp.	50	Battery power	25
	51		26

Are the fuses OK?

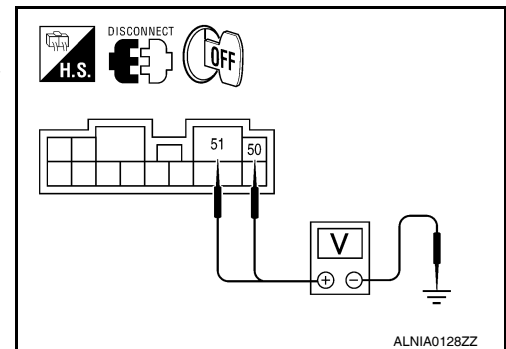
YES >> GO TO 2

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

2. CHECK POWER SUPPLY CIRCUIT

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

(+)		(-)	Voltage (approx.)
Connector	Terminal		
B122	50	Ground	Battery voltage
	51		



Is battery voltage present?

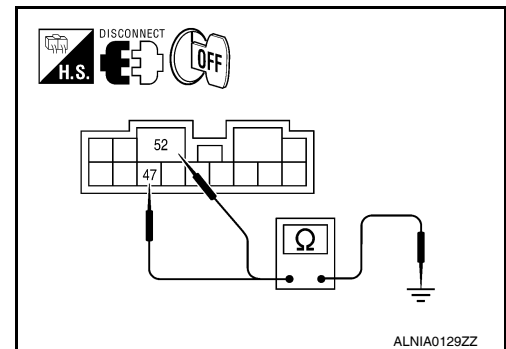
YES >> GO TO 3

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

3. CHECK GROUND CIRCUIT

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

(+)		(-)	Continuity
Connector	Terminal		
B122	47	Ground	Yes
	52		



Does continuity exist?

YES >> INSPECTION END.

NO >> Repair harness or connector.

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000005786534

Regarding Wiring Diagram information, refer to [AV-118. "Wiring Diagram"](#).

1. CHECK FUSES

Check that the following fuses are not blown.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

Unit	Terminals	Signal name	Fuse No.
Satellite radio tuner (factory installed)	32	Battery power	24
	36	Ignition switch ACC or ON	19

Are the fuses OK?

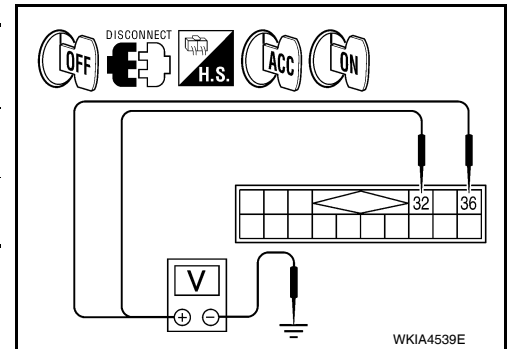
YES >> GO TO 2

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

2. POWER SUPPLY CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B123.
3. Check voltage between the satellite radio tuner (factory installed) and ground.

(+) Connector		Terminal	(-)	OFF	ACC	ON
B123	32					
	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

Inspect satellite radio tuner (factory installed) case ground.

Does case ground pass inspection?

YES >> Inspection End.

NO >> Repair satellite radio tuner (factory installed) case ground.

REAR VIEW CAMERA

REAR VIEW CAMERA : Diagnosis Procedure

INFOID:000000005786535

Regarding Wiring Diagram information, refer to [AV-118. "Wiring Diagram"](#).

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

1. Turn ignition switch ON.
2. Shift transmission into Reverse.
3. Check voltage between rear view camera harness connector B35 and ground.

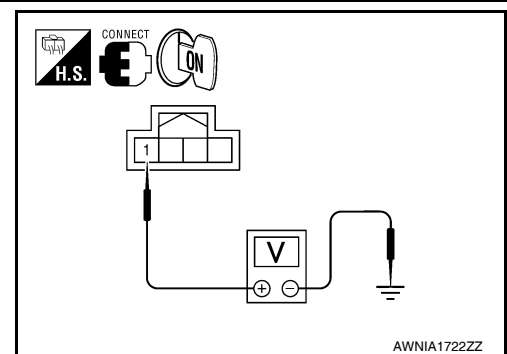
(+) Connector		Terminal	(-)	Transmission position	Value (Approx.)
B35	1				

Is voltage reading approximately 6 volts?

YES >> GO TO 4.

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)



POWER SUPPLY AND GROUND CIRCUIT

[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect rear view camera and audio unit connectors.
3. Check continuity between rear view camera harness connector B35 (A) terminal 1 and audio unit harness connector M45 (B) terminal 70.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B35	1	M45	34	Yes

4. Check continuity between rear view camera harness connector B35 (A) terminal 1 and ground.

A		—	Continuity
Connector	Terminal		
B35	1	Ground	No

Are continuity test results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK POWER SUPPLY CIRCUIT (AUDIO UNIT SIDE)

1. Connect rear view camera harness connector.
2. Turn ignition switch ON.
3. Check voltage between audio unit harness connector M45 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
M45	34	Ground	Reverse	6V

Is voltage reading approximately 6 volts?

YES >> Inspection End.

NO >> Replace audio unit. Refer to [AV-142, "Removal and Installation"](#).

4. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera harness connector.
3. Check continuity between rear view camera harness connector B35 terminal 2 and ground.

Connector	Terminal	—	Continuity
B35	2	Ground	Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

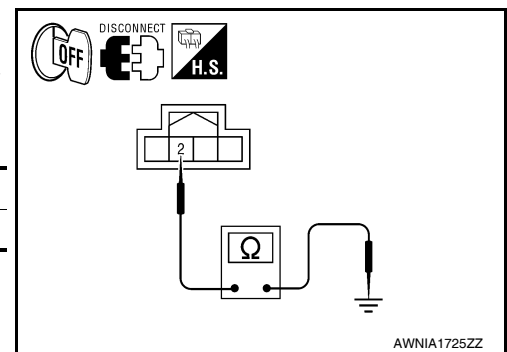
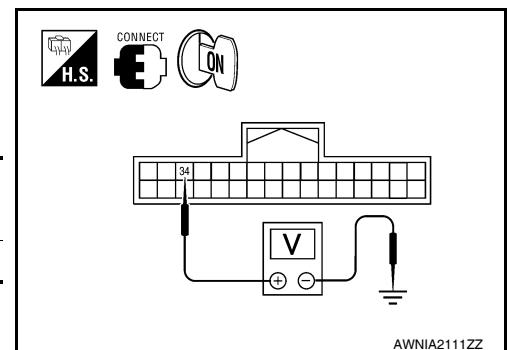
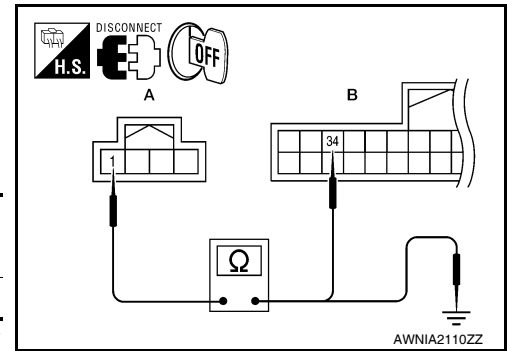
BLUETOOTH CONTROL UNIT

BLUETOOTH CONTROL UNIT : Diagnosis Procedure

INFOID:000000005786536

Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

1. CHECK FUSE



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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

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

Power source	Fuse No.
Battery	24
Ignition switch ACC or ON	19
Ignition switch ON or START	3

Are the fuses OK?

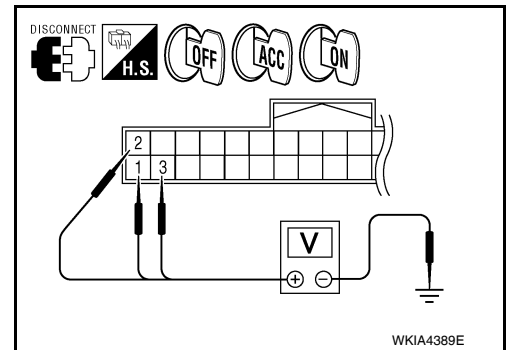
YES >> GO TO 2

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between Bluetooth control unit harness connector and ground.

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



Are the voltage results as specified?

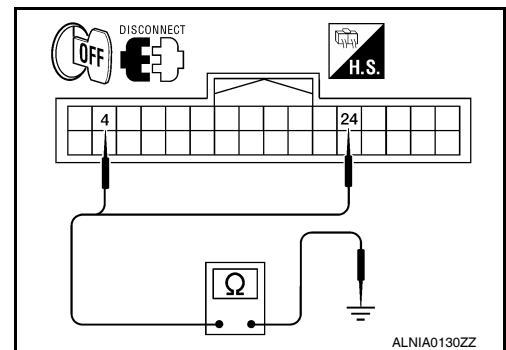
YES >> GO TO 3

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

3.CHECK GROUND CIRCUIT

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

(+)		(-)	Continuity
Connector	Terminal		
B126	4	Ground	Yes
	24		



Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

MICROPHONE

MICROPHONE : Diagnosis Procedure

INFOID:000000005786537

Regarding Wiring Diagram information, refer to [AV-118. "Wiring Diagram"](#).

1.CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

POWER SUPPLY AND GROUND CIRCUIT

[BOSE AUDIO WITHOUT NAVIGATION]

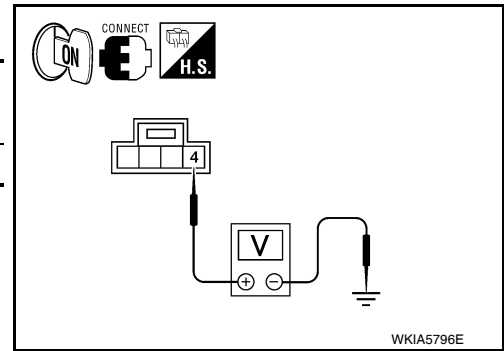
< COMPONENT DIAGNOSIS >

Check voltage between microphone harness connector and ground.

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

Is proper voltage present?

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



2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

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

Signal name	Continuity
Microphone VCC signal	Continuity should exist.

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

Signal name	Continuity
Microphone VCC signal	Continuity should not exist.

Are continuity results as specified?

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

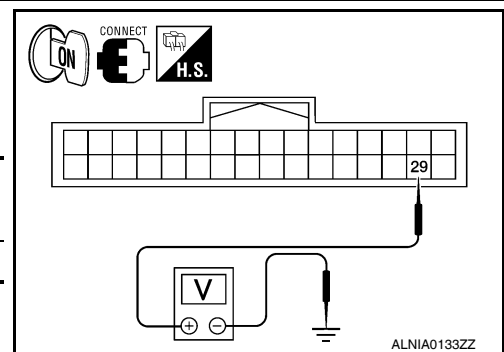
3.CHECK POWER SUPPLY CIRCUIT (BLUETOOTH CONTROL UNIT SIDE)

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

(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
B126	29	Ground	ON	5V

Is proper voltage present?

- YES >> Inspection End.
- NO >> Replace Bluetooth control unit. Refer to [AV-158](#), "[Removal and Installation](#)".



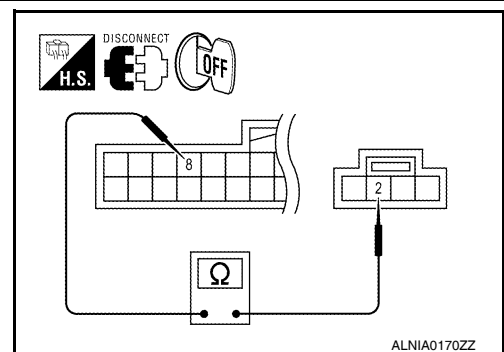
4.CHECK GROUND CIRCUIT

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

Signal name	Continuity
Microphone ground	Continuity should exist.

Is continuity present?

- YES >> Inspection End.



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AV

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

NO >> Repair harness or connector.

FRONT DOOR SPEAKER

[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

FRONT DOOR SPEAKER

Description

INFOID:000000005786540

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

Diagnosis Procedure

INFOID:000000005803197

Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

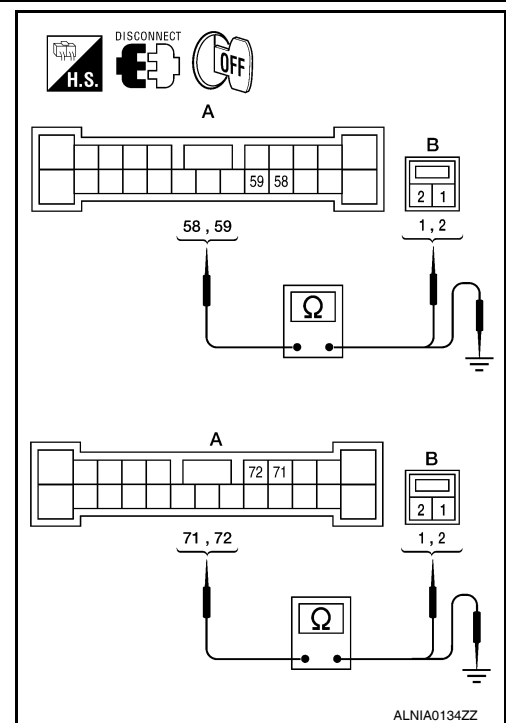
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B121 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connector B121 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B121	58	D22	1	Yes
	59		2	
	71	D122	1	
	72		2	

3. Check continuity between BOSE speaker amp. harness connector B121 (A) and ground.

A		B	Continuity
Connector	Terminal		
B121	58	Ground	No
	59		
	71		
	72		



Are continuity test results as specified?

YES >> GO TO 2

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

2. FRONT DOOR SPEAKER SIGNAL CHECK

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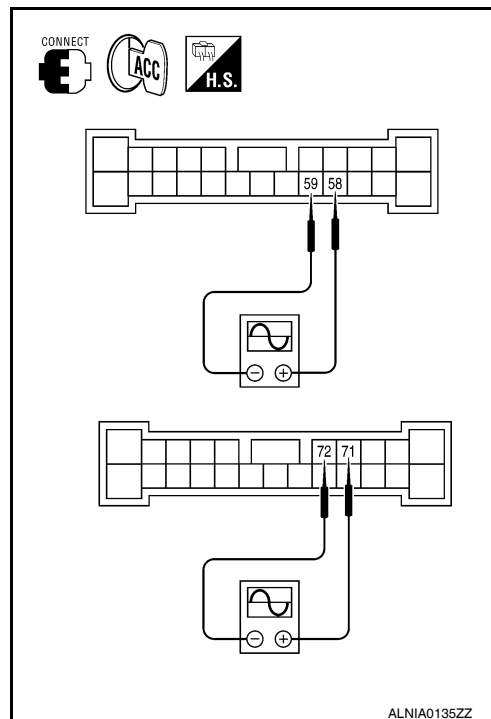
FRONT DOOR SPEAKER

[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connector B121 and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between BOSE speaker amp. harness connector B121 terminals with CONSULT-III or oscilloscope.

Connector	Terminal		Condition	Reference signal
	(+)	(-)		
B121	58	59	Receive audio signal	
	71	72		



Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to [AV-147. "Removal and Installation"](#).

NO >> GO TO 3

3. HARNESS CHECK

1. Disconnect audio unit connector M46 and BOSE speaker amp. connector B121.
2. Check continuity between audio unit harness connector M46 (A) and BOSE speaker amp. harness connector B121 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M46	53	B121	76	Yes
	57		74	
	59		75	
	63		73	

3. Check continuity between audio unit harness connector M46 (A) and ground.

A		—	Continuity
Connector	Terminal		
M46	53	Ground	No
	57		
	59		
	63		

Are continuity test results as specified?

YES >> GO TO 4

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

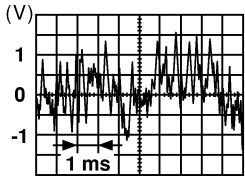
4. FRONT DOOR SPEAKER SIGNAL CHECK

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

FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M46	59	53	Receive audio signal	
	63	57		

SKIA0177E

Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to [AV-143. "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-142. "Removal and Installation"](#).

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AV

TWEETER

Description

INFOID:000000005786544

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 tweeters using the audio signal circuits.

Diagnosis Procedure

INFOID:000000005803198

Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

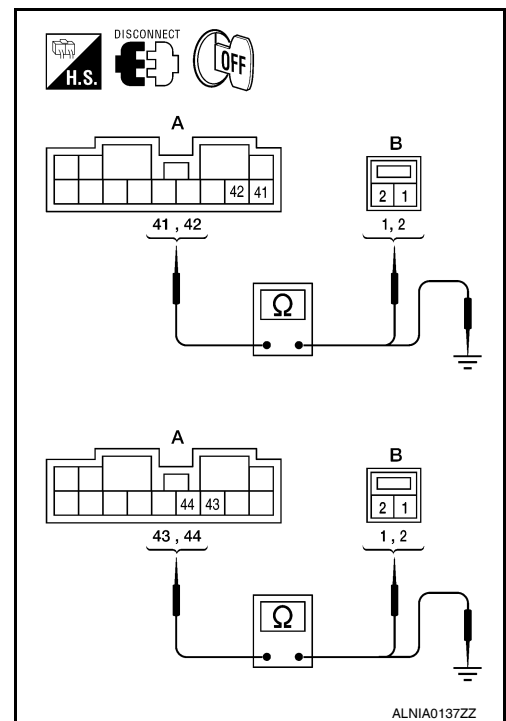
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B122 and suspect tweeter connector.
2. Check continuity between BOSE speaker amp. harness connector B122 (A) and suspect tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B122	41	M51	1	Yes
	42		2	
	44	M52	1	
	43		2	

3. Check continuity between BOSE speaker amp. harness connector B122 (A) and ground.

A		—	Continuity
Connector	Terminal		
B122	41	Ground	No
	42		
	44		
	43		



Are continuity test results as specified?

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

2. TWEETER SIGNAL CHECK

TWEETER

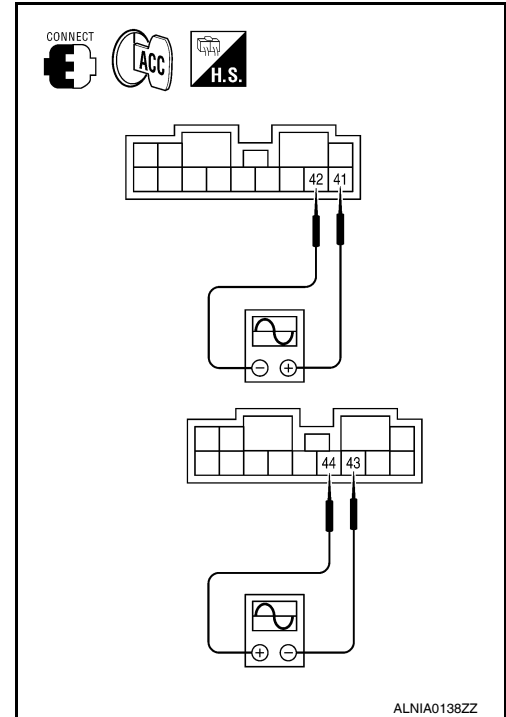
[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connector B122 and suspect tweeter connector.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between BOSE speaker amp. harness connector B122 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B122	41	42	Receive audio signal	
	44	43		

SKIA0177E



Are the audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to [AV-145, "Removal and Installation"](#).

NO >> GO TO 3

3. HARNESS CHECK

1. Disconnect audio unit connector M46 and BOSE speaker amp. connector B121.
2. Check continuity between audio unit harness connector M46 (A) and BOSE speaker amp. harness connector B121 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M46	53	B121	76	Yes
	57		74	
	59		75	
	63		73	

3. Check continuity between audio unit harness connector M46 (A) and ground.

A		—	Continuity
Connector	Terminal		
M46	53	Ground	No
	57		
	59		
	63		

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

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

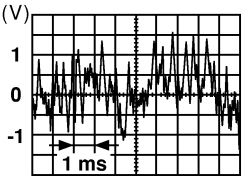
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TWEETER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M46	59	53	Receive audio signal	
	63	57		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-143, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-142, "Removal and Installation"](#).

CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

CENTER SPEAKER

Description

INFOID:000000005786546

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

Diagnosis Procedure

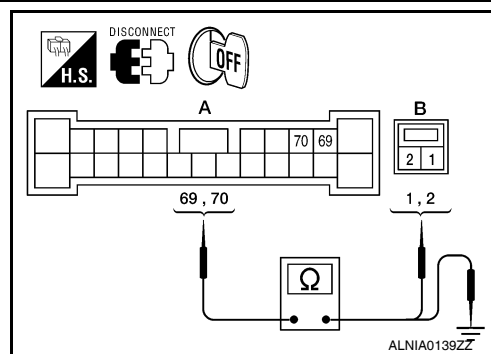
INFOID:000000005803199

Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B121 and center speaker connector M151.
2. Check continuity between BOSE speaker amp. harness connector B121 (A) and center speaker harness connector M151 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B121	69	M151	1	Yes
	70		2	



3. Check continuity between BOSE speaker amp. harness connector B121 (A) and ground.

A		—	Continuity
Connector	Terminal		
B121	69	Ground	No
	70		

Are continuity test results as specified?

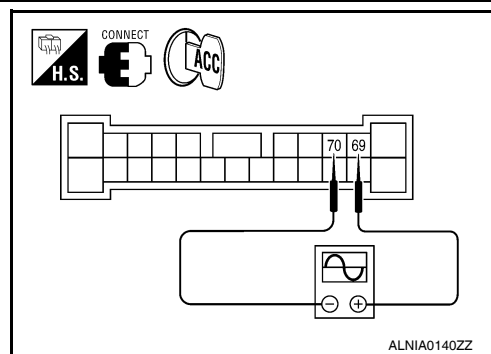
YES >> GO TO 2

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

2. CENTER SPEAKER SIGNAL CHECK

1. Connect BOSE speaker amp. connector B121 and center speaker connector.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between BOSE speaker amp. harness connector B121 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B121	69	70	Receive audio signal	<p>SKIA0177E</p>



Is the audio signal voltage reading as specified?

CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

YES >> Replace center speaker. Refer to [AV-146, "Removal and Installation"](#).

NO >> GO TO 3

3. HARNESS CHECK

1. Disconnect audio unit connector M46 and BOSE speaker amp. connector B121.
2. Check continuity between audio unit harness connector M46 (A) and BOSE speaker amp. harness connector B121 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M46	53	B121	76	Yes
	57		74	
	59		75	
	632		73	

3. Check continuity between audio unit harness connector M46 (A) and ground.

A		—	Continuity
Connector	Terminal		
M46	53	Ground	No
	57		
	59		
	63		

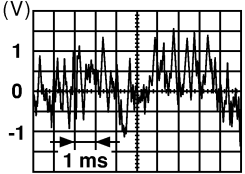
Are continuity test results as specified?

YES >> GO TO 4

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

4. CENTER SPEAKER SIGNAL CHECK

1. Connect audio unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push "POWER" switch.
4. Check the signal between audio unit harness connector M46 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M46	59	53	Receive audio signal	
	63	57		

Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to [AV-143, "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-142, "Removal and Installation"](#).

REAR DOOR SPEAKER

[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

REAR DOOR SPEAKER

Description

INFOID:000000005803200

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

Diagnosis Procedure

INFOID:000000005803201

Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

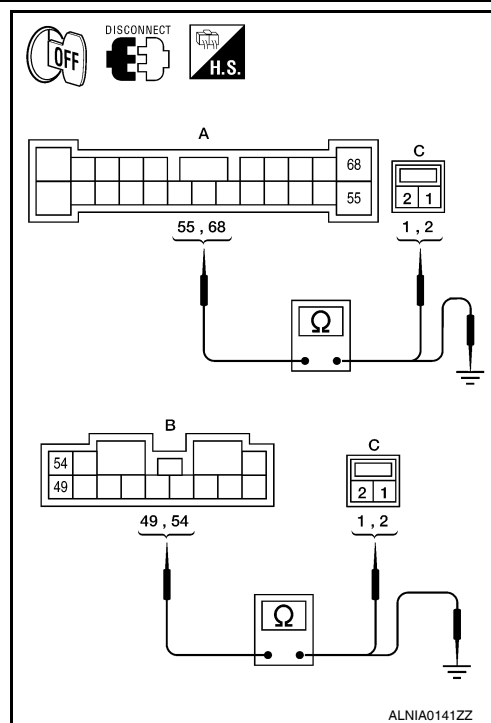
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connectors B121, B122 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connectors B121 (A) and B122 (B) and suspect speaker harness connector (C).

Connector	Terminal	Connector	Terminal	Continuity
A: B121	55	C: D202	2	Yes
	68		1	
B: B122	49	C: D302	2	
	54		1	

3. Check continuity between BOSE speaker amp. harness connectors B121 (A) and B122 (B) and ground.

Connector	Terminal	-	Continuity
A: B121	55	Ground	No
	68		
B: B122	49		
	54		



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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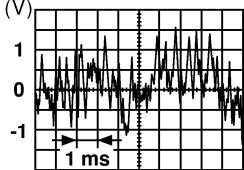
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REAR DOOR SPEAKER

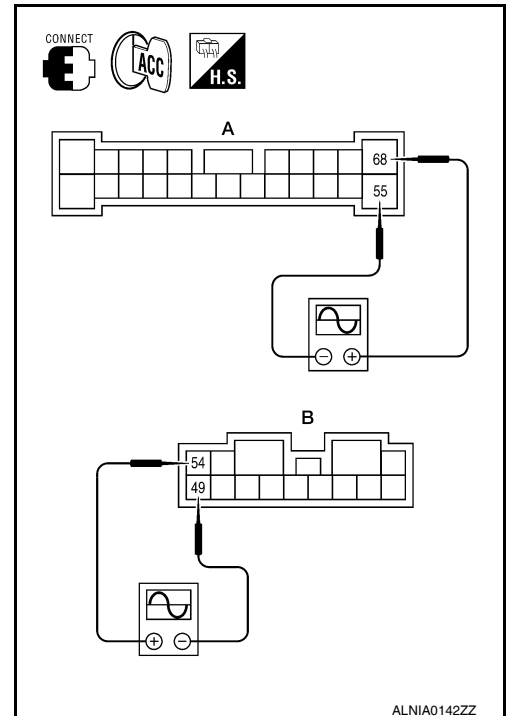
[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connectors and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between BOSE speaker amp. harness connectors B121 (A) and B122 (B) terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
A: B121	68	55	Receive audio signal	
B: B122	54	49		

SKIA0177E



Are audio signal voltage readings as specified?

- YES >> Replace suspect speaker. Refer to [AV-148, "Removal and Installation"](#).
- NO >> GO TO 3

3. HARNESS CHECK

1. Disconnect audio unit connector M46 and BOSE speaker amp. connector B121.
2. Check continuity between audio unit harness connector M46 (A) and BOSE speaker amp. harness connector B121 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M46	54	B121	63	Yes
	58		65	
	60		64	
	64		66	

3. Check continuity between audio unit harness connector M46 (A) and ground.

A		—	Continuity
Connector	Terminal		
M46	54	Ground	No
	58		
	60		
	64		

Are the continuity test results as specified?

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

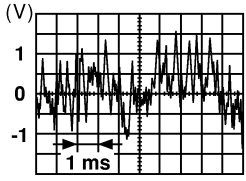
4. REAR DOOR SPEAKER SIGNAL CHECK

1. Connect audio unit connector M46 and BOSE speaker amp. connector B121.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between audio unit harness connector M46 terminals with CONSULT-III or oscilloscope.

REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M46	60	54	Receive audio signal	
	64	58		

Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to [AV-143. "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-142. "Removal and Installation"](#).

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SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

SUBWOOFER

Description

INFOID:000000005786554

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:000000005803202

Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

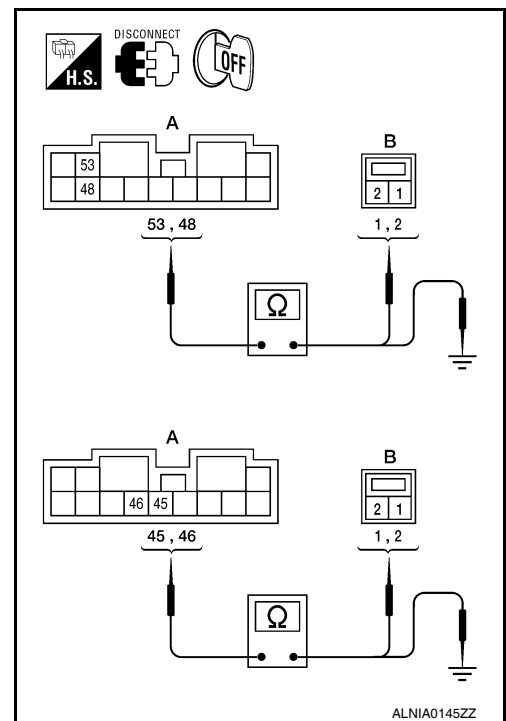
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B122 and suspect rear subwoofer connector.
2. Check continuity between BOSE speaker amp. harness connector B122 (A) and suspect rear subwoofer harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B122	53	B120	1	Yes
	48		2	
	45	B124	1	
	46		2	

3. Check continuity between BOSE speaker amp. harness connector B122 (A) and ground.

A		—	Continuity
Connector	Terminal		
B122	53	Ground	No
	48		
	45		
	46		



Are the continuity test results as specified?

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

2. REAR SUBWOOFER SIGNAL CHECK

SUBWOOFER

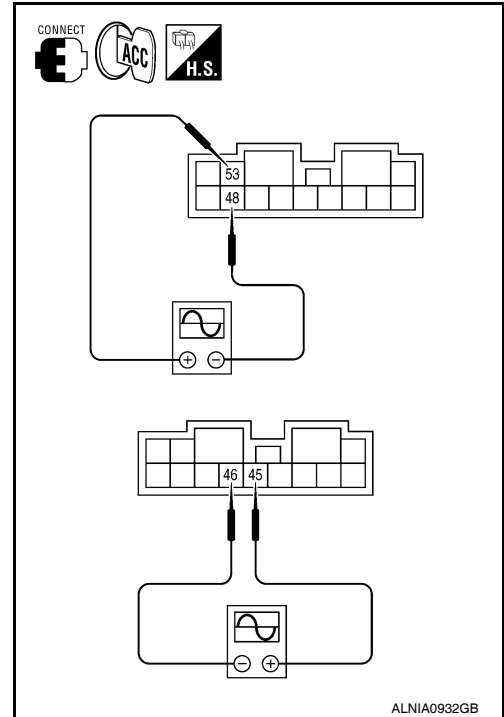
[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connector B122 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 B122 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B122	53	48	Receive audio signal	
	45	46		

SKIA0177E



Is the audio signal voltage as specified?

YES >> Replace suspect rear subwoofer. Refer to [AV-149](#), "[Removal and Installation](#)".

NO >> GO TO 3

3. HARNESS CHECK

1. Disconnect audio unit connector M46 and BOSE speaker amp. connector B121.
2. Check continuity between audio unit harness connector M46 (A) and BOSE speaker amp. harness connector B121 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M46	54	B121	63	Yes
	58		65	
	60		64	
	64		66	

3. Check continuity between audio unit harness connector M46 (A) and ground.

A		—	Continuity
Connector	Terminal		
M46	54	Ground	No
	58		
	60		
	64		

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

1. Connect audio unit connector M46 and BOSE speaker amp. connector B121.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between audio unit harness connector M46 terminals with CONSULT-III or oscilloscope.

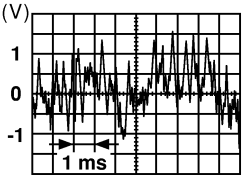
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SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M46	60	54	Receive audio signal	
	64	58		

Is the audio signal voltage as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-143, "Removal and Installation"](#).
NO >> Replace audio unit. Refer to [AV-142, "Removal and Installation"](#).

AMP ON SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

AMP ON SIGNAL CIRCUIT

Description

INFOID:000000005786556

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

Diagnosis Procedure

INFOID:000000005786557

Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

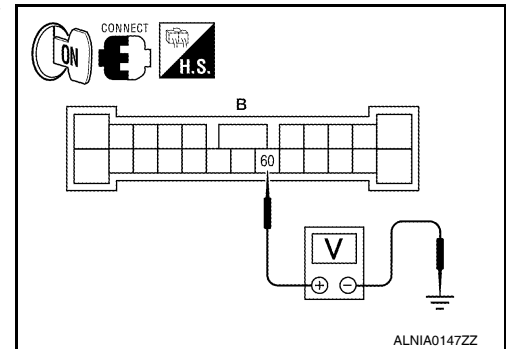
1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

1. Turn audio system ON.
2. Check voltage between BOSE speaker amp. harness connector B121 terminal 60 and ground.

60 - Ground : More than approx. 6.5V

Is voltage greater than 6.5V?

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



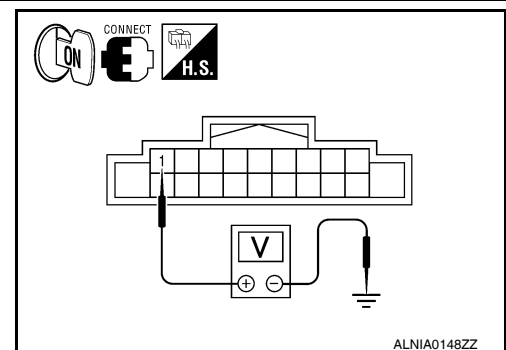
2. CHECK AMP ON SIGNAL (AUDIO UNIT)

Check voltage between audio unit harness connector M44 or M132 terminal 1 and ground.

1 - Ground : More than approx. 6.5V

Is voltage greater than 6.5V?

- YES >> Repair harness or connector.
NO >> Replace audio unit. Refer to [AV-142, "Removal and Installation"](#).



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STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

STEERING SWITCH

Description

INFOID:000000005786561

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

Diagnosis Procedure

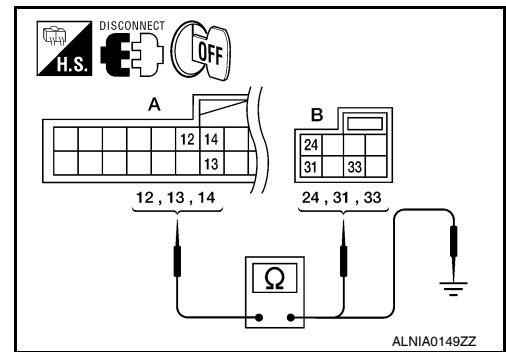
INFOID:000000005786562

Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

1. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit connector B126 and spiral cable connector M30.
3. Check continuity between Bluetooth control unit connector B126 (A) terminals and spiral cable connector M30 (B) terminals.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B126	12	M30	24	Yes
	13		31	
	14		33	



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

A		-	Continuity
Connector	Terminal		
B126	12	Ground	No
	13		
	14		

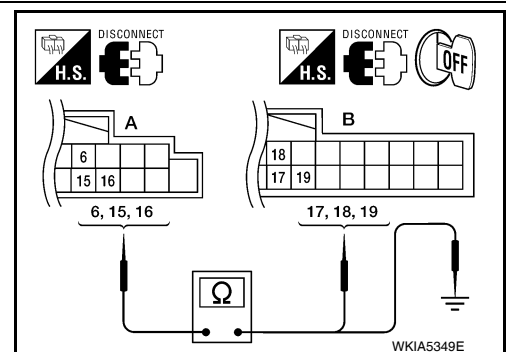
Are the continuity test results as specified?

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

2. CHECK HARNESS

1. Disconnect audio unit connector.
2. Check continuity between audio unit connector M44 (A) terminals and Bluetooth control unit connector B126 (B) terminals.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M44	6	B126	17	Yes
	15		19	
	16		18	



Are the continuity test results as specified?

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

3. SPIRAL CABLE CHECK

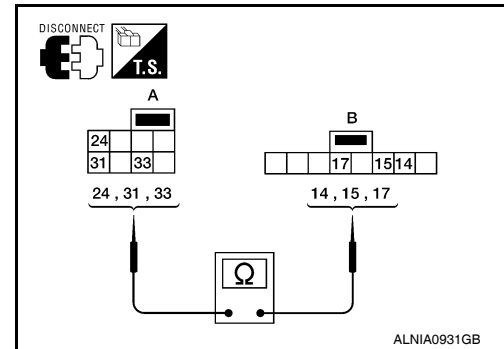
STEERING SWITCH

[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

1. Disconnect spiral cable connector M88.
2. Check continuity between spiral cable harness connector M30 and M88.

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



Are the continuity test results as specified?

YES >> GO TO 4

NO >> Replace spiral cable. Refer to [SR-7, "Removal and Installation"](#).

4. CHECK STEERING SWITCH

Check steering switch. Refer to [AV-99, "Component Inspection"](#).

Does the steering switch pass inspection?

YES >> Replace Bluetooth control unit. Refer to [AV-158, "Removal and Installation"](#)

NO >> Replace steering switch. Refer to [AV-151, "Removal and Installation"](#).

Component Inspection

INFOID:000000005786563

Measure the resistance between the steering switch connector terminals 14 to 17 and 15 to 17.

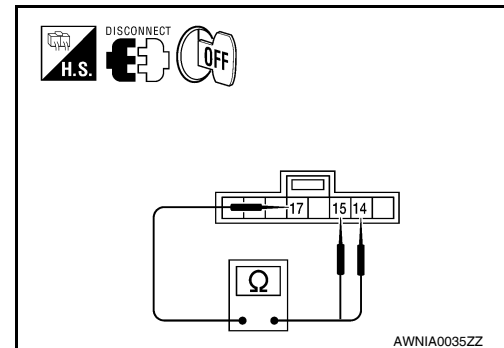
Standard

Between terminals 14 and 17

- switch ON : 0 Ω
- SEEK UP switch ON : 108 – 112 Ω
- SEEK DOWN switch ON : 323 – 337 Ω

Between terminals 15 and 17

- VOL DOWN switch ON : 0 Ω
- VOL UP switch ON : 108 – 112 Ω
- switch ON : 323 – 337 Ω
- SOURCE switch ON : 990 – 1030 Ω



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COMMUNICATION SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

COMMUNICATION SIGNAL CIRCUIT

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000005786566

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

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000005786567

Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

1.CHECK HARNESS - 1

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B123 and audio unit connector M47.
3. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 28 and audio unit harness connector M47 (B) terminal 72.

Continuity should exist.

4. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 28 and ground.

Continuity should not exist.

Are continuity results as specified?

YES >> GO TO 2

NO >> Repair harness or connector.

2.CHECK HARNESS - 2

1. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 29 and audio unit harness connector M47 (B) terminal 73.

Continuity should exist.

2. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 29 and ground.

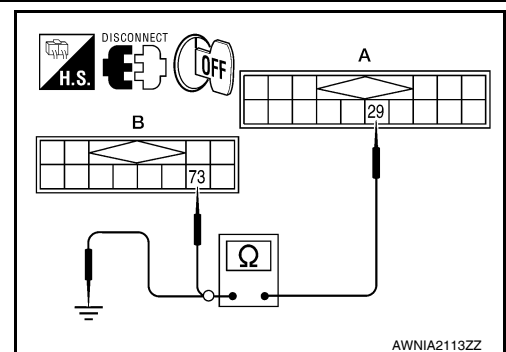
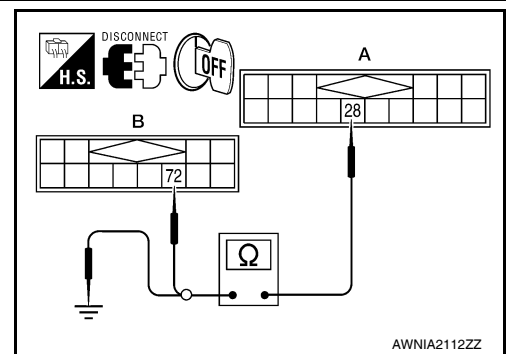
Continuity should not exist.

Are continuity results as specified?

YES >> GO TO 3

NO >> Repair harness or connector.

3.CHECK HARNESS - 3



COMMUNICATION SIGNAL CIRCUIT

[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

1. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 30 and audio unit harness connector M47 (B) terminal 74.

Continuity should exist.

2. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 30 and ground.

Continuity should not exist.

Are continuity results as specified?

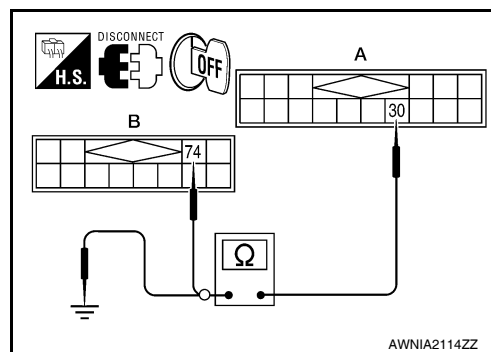
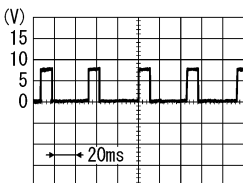
YES >> GO TO 4

NO >> Repair harness or connector.

4. CHECK REQ1 SIGNAL

1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
2. Turn ignition switch to ACC
3. Check signal between satellite radio tuner (factory installed) harness connector B123 terminal 28 and ground with CONSULT-III or oscilloscope.

28 - Ground



Are voltage readings as specified?

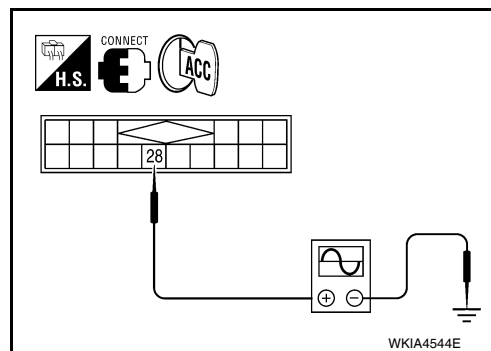
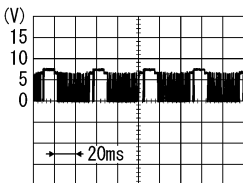
YES >> GO TO 5

NO >> Replace audio unit. Refer to [AV-142. "Removal and Installation"](#).

5. CHECK TXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector B123 terminal 29 and ground with CONSULT-III or oscilloscope.

29 - Ground



Are the voltage readings as specified?

YES >> GO TO 6

NO >> Replace satellite radio tuner. Refer to [AV-150. "Removal and Installation"](#).

6. CHECK RXD SIGNAL

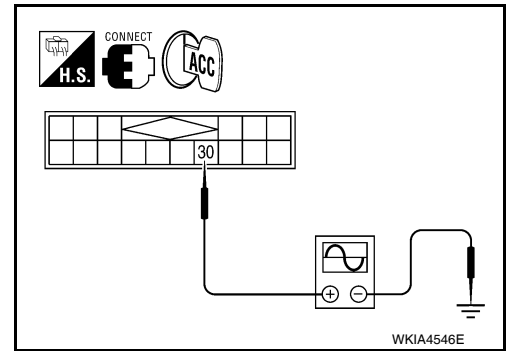
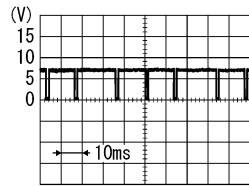
COMMUNICATION SIGNAL CIRCUIT

[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

Check signal between satellite radio tuner (factory installed) harness connector B123 terminal 30 and ground with CONSULT-III or oscilloscope.

30 - Ground



Are the voltage readings as specified?

YES >> Replace satellite radio tuner. Refer to [AV-150, "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-142, "Removal and Installation"](#).

SOUND SIGNAL CIRCUIT

[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

SOUND SIGNAL CIRCUIT SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:000000005786570

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:000000005786571

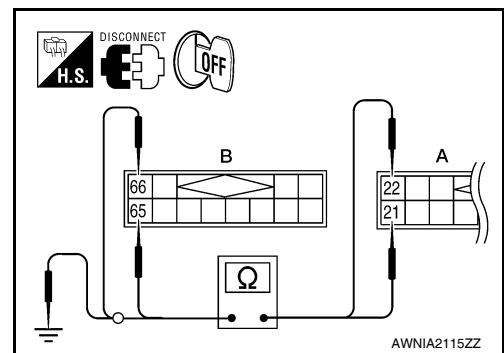
Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

LEFT CHANNEL

1. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B123 and audio unit connector M47.
3. Check continuity between satellite radio tuner (factory installed) connector B123 (A) and audio unit connector M47 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B123	21	M47	65	Yes
	22		66	



4. Check continuity between satellite radio tuner (factory installed) connector B123 (A) and ground.

A		—	Continuity
Connector	Terminal		
B123	21	Ground	No
	22		

Are continuity results as specified?

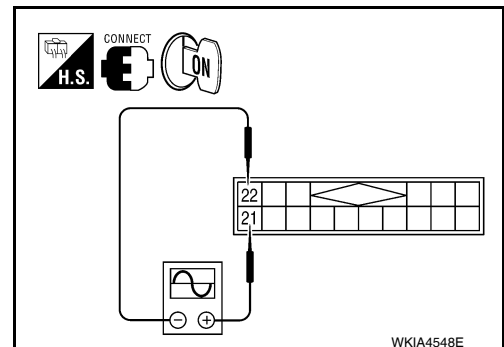
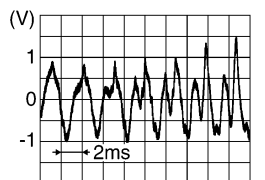
YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK LEFT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and audio unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector B123 terminals 21 and 22 with CONSULT-III or oscilloscope.

21 - 22



Are voltage readings as specified?

YES >> Replace audio unit. Refer to [AV-142, "Removal and Installation"](#).

NO >> Replace satellite radio tuner. Refer to [AV-150, "Removal and Installation"](#).

SOUND SIGNAL CIRCUIT

[BOSE AUDIO WITHOUT NAVIGATION]

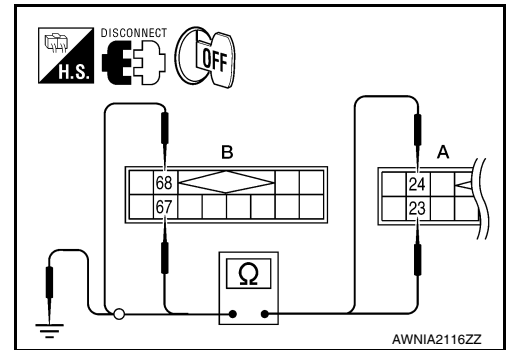
< COMPONENT DIAGNOSIS >

RIGHT CHANNEL

1. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector B123 and audio unit connector M47.
3. Check continuity between satellite radio tuner (factory installed) connector B123 (A) and audio unit connector M47 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B123	23	M47	67	Yes
	24		68	



4. Check continuity between satellite radio tuner (factory installed) connector B123 (A) and ground.

A		—	Continuity
Connector	Terminal		
B123	23	Ground	No
	24		

Are continuity results as specified?

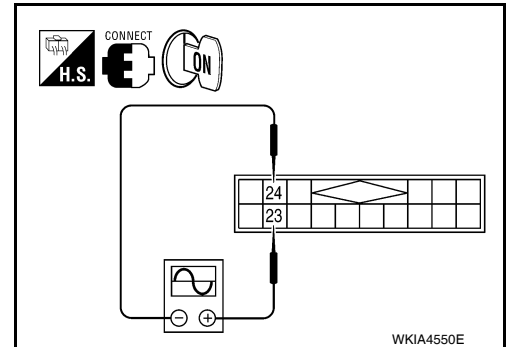
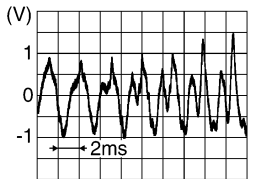
YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and audio unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector B123 terminals 23 and 24 with CONSULT-III or oscilloscope.

23 - 24



Are voltage readings as specified?

YES >> Replace audio unit. Refer to [AV-142, "Removal and Installation"](#).

NO >> Replace satellite radio tuner. Refer to [AV-150, "Removal and Installation"](#).

MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000005786574

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

Diagnosis Procedure

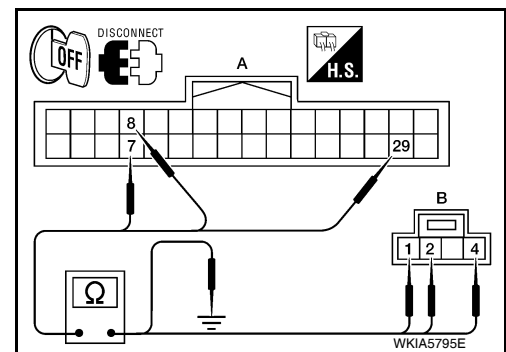
INFOID:000000005786575

Regarding Wiring Diagram information, refer to [AV-118, "Wiring Diagram"](#).

1. CHECK HARNESS BETWEEN BLUETOOTH CONTROL UNIT AND MICROPHONE

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

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



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

A		—	Continuity
Connector	Terminal		
B126	7	Ground	No
	8		
	29		

Are the continuity test results as specified?

YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK MICROPHONE POWER SUPPLY

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

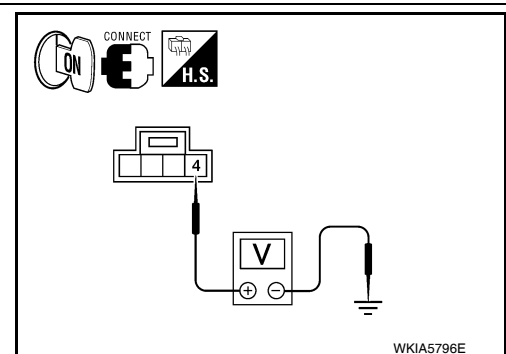
4 - Ground : Approx. 5V

Is voltage reading approx. 5 volts?

YES >> GO TO 3

NO >> Replace Bluetooth control unit. Refer to [AV-158, "Removal and Installation"](#).

3. CHECK MICROPHONE SIGNAL



MICROPHONE SIGNAL CIRCUIT

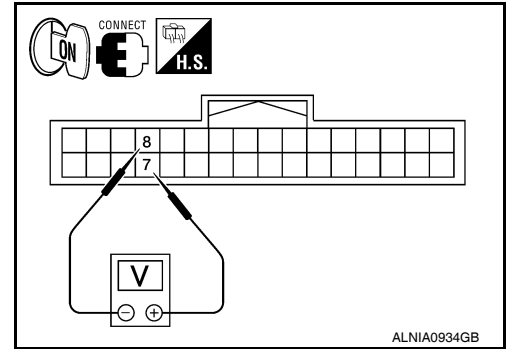
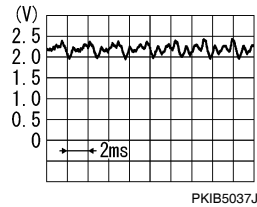
[BOSE AUDIO WITHOUT NAVIGATION]

< COMPONENT DIAGNOSIS >

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

7 - 8:

When giving a voice



Are voltage readings as specified?

- YES >> Replace Bluetooth control unit. Refer to [AV-158. "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-156. "Removal and Installation"](#).

AUDIO UNIT

[BOSE AUDIO WITHOUT NAVIGATION]

< ECU DIAGNOSIS >

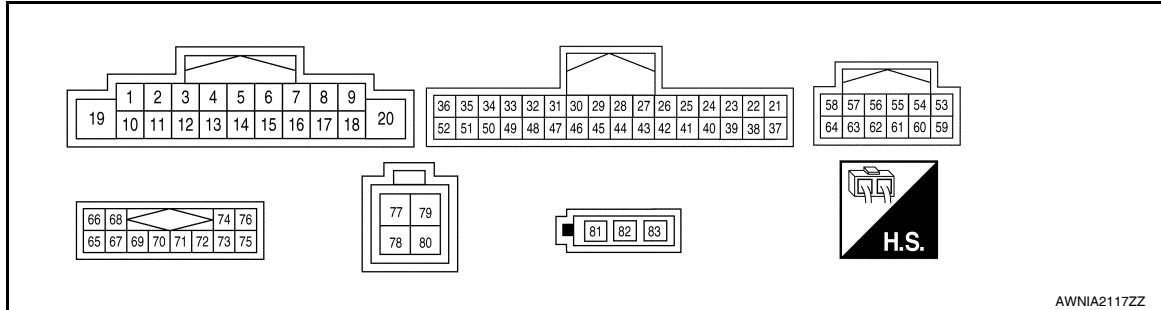
ECU DIAGNOSIS

AUDIO UNIT

Reference Value

INFOID:000000005786577

TERMINAL LAYOUT



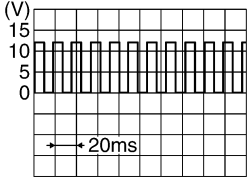
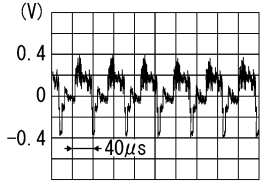
PHYSICAL VALUES

Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value
+	-			Ignition switch	Operation	
1 (B/P)	Ground	Amp. ON sig- nal	Output	ON	-	More than approx. 6.5V
6 (W/G)	Ground	Remote con- trol A	Input	ON	Press SEEK DOWN switch.	0.7 V
					Press SEEK UP switch.	1.3 V
					Press switch.	2.0 V
					Except for above.	3.3 V
7 (V/Y)	Ground	ACC signal	Input	ON	Ignition switch ACC or ON	Battery voltage
8 (R/Y)	-	Illumination control ground	Input	-	-	-
9 (R/L)	Ground	Illumination signal	Input	OFF	Lighting switch is OFF	0V
					Lighting switch is ON	Battery voltage
15 (L/B)	-	Remote con- trol ground	Input	-	-	-
16 (GR/L)	Ground	Remote con- trol B	Input	ON	Press SOURCE switch.	0 V
					Press switch.	0.7 V
					Press VOL UP switch.	1.3 V
					Press VOL DOWN switch	2 V
					Except for above.	3.3 V

AUDIO UNIT

< ECU DIAGNOSIS >

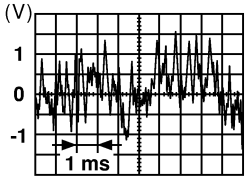
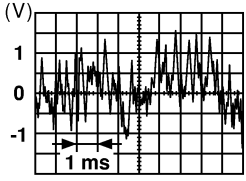
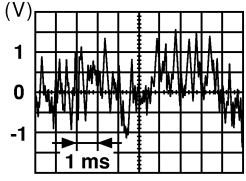
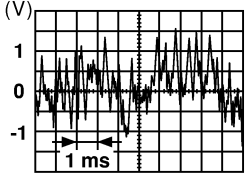
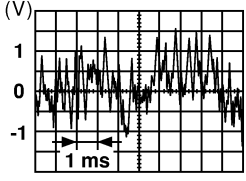
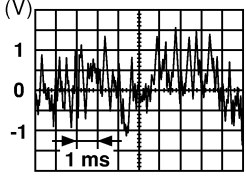
[BOSE AUDIO WITHOUT NAVIGATION]

Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value
+	-			Ignition switch	Operation	
18 (V/W)	Ground	Vehicle speed signal (8- pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	 <p style="text-align: right; font-size: small;">PKIA1935E</p>
19 (Y/R)	Ground	Battery power	Input	-	-	Battery voltage
20 (B)	-	Ground	-	-	-	-
25 (BR)	24 (Y)	Telephone au- dio in	-	-	-	-
26	-	Tel. Shield	-	-	-	Approx. 0V
27 (B)	-	Ground	-	-	-	-
28 (B/R)	-	M-CAN A+	-	-	-	-
29 (BR)	-	M-CAN A-	-	-	-	-
30	-	Shield	-	-	-	Approx. 0V
31 (B/R)	-	M-CAN B+	-	-	-	-
32 (W/R)	-	M-CAN B-	-	-	-	-
33 (B)	Ground	RV_CAM_GN D	-	-	-	-
34 (GR)	Ground	RV_CAM_SIG	Output	Ignition switch ACC	Shift selector is in R position	6V
35 (Y)	Ground	Rear view camera video in (+)	Input	Ignition switch ON	With rear view camera ON	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
36	-	Shield	-	-	-	-
40 (B)	-	Ground	-	-	-	-
41 (R/W)	Ground	Telephone ON signal	Input	ON	-	-
50 (P/B)	Ground	Reverse sig- nal	Input	Ignition switch ON	R position	Battery voltage
					Other than R posi- tion	0V
55	-	Shield	-	-	-	Approx. 0V

AUDIO UNIT

[BOSE AUDIO WITHOUT NAVIGATION]

< ECU DIAGNOSIS >

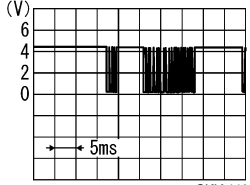
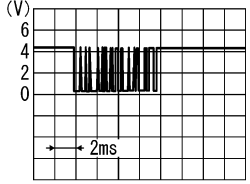
Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value
+	-			Ignition switch	Operation	
59 (G)	53 (R)	Audio sound signal front LH	Output	ON	Receive audio sig- nal	 SKIA0177E
60 (GR/V)	54 (W/L)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	 SKIA0177E
61	-	Shield	-	-	-	Approx. 0V
63 (B)	57 (W)	Audio sound signal front RH	Output	ON	Receive audio sig- nal	 SKIA0177E
64 (V)	58 (LG)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	 SKIA0177E
66 (Y/L)	65 (G/B)	Audio left channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	 SKIA0177E
68 (BR/W)	67 (Y/G)	Audio right channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	 SKIA0177E
69	-	Shield	-	-	-	Approx. 0V
70	-	Shield	-	-	-	Approx. 0V

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AUDIO UNIT

< ECU DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

Terminal (Wire color)		Item	Signal in- put/out- put	Condition		Reference value
+	-			Ignition switch	Operation	
72 (R)	Ground	Satellite radio tuner request to audio unit	Input	ON	Turn audio unit ON	5V
73 (G)	Ground	Audio RX	Input		Operate audio vol- ume	 SKIA4403E
74 (B)	Ground	Audio TX	Output		Operate audio vol- ume	 SKIA4402E
77 (B)	—	USB ground	—	—	—	—
78 (W)	—	USB D-	—	—	—	—
79 (R)	—	V BUS signal	—	—	—	—
80 (G)	—	USB D+	—	—	—	—
81 (B)	Ground	Window an- tenna	Input	ON	Turn audio unit ON	-
82 (B)	Ground	Roof antenna	Input	ON	Turn audio unit ON	-

BOSE SPEAKER AMP

[BOSE AUDIO WITHOUT NAVIGATION]

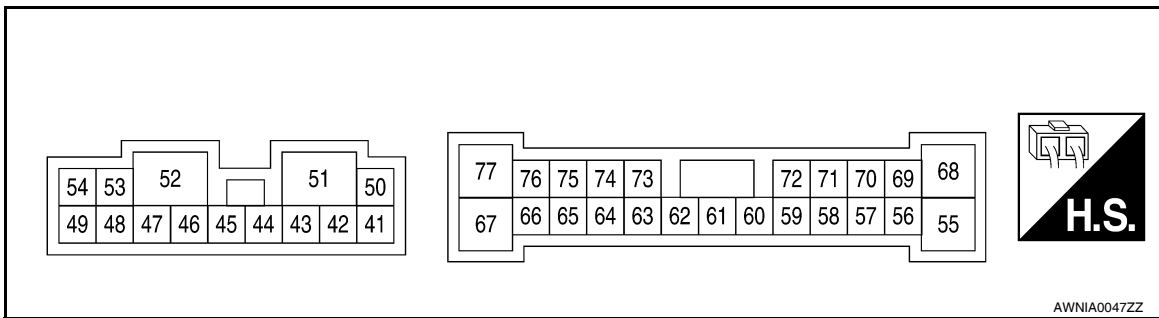
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BOSE SPEAKER AMP

Reference Value

INFOID:000000005786578

TERMINAL LAYOUT



PHYSICAL VALUES

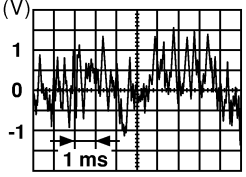
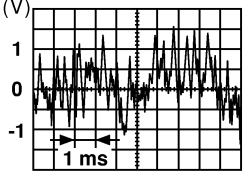
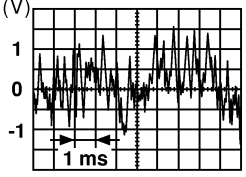
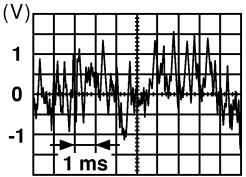
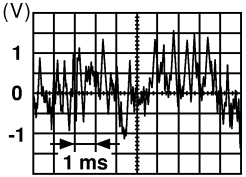
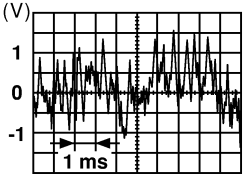
Terminal (wire color)		Item	Signal input/output	Condition		Reference value
+	-			Ignition switch	Operation	
41 (LG)	42 (V or B/Y)	Front tweeter LH	Output	ON	Receive audio signal	<p>SKIA0177E</p>
44 (BR or L/O)	43 (GR or GR/L)	Front tweeter RH	Output	ON	Receive audio signal	<p>SKIA0177E</p>
45 (O or BR/W)	46 (SB or BR)	Subwoofer RH	Output	ON	Receive audio signal	<p>SKIA0177E</p>
47 (B)	Ground	Ground	-	ON	-	-
50 (SB or BR)	Ground	Battery	Input	-	-	Battery voltage
51 (G or B/R)						
52 (B)	Ground	Ground	-	ON	-	-

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BOSE SPEAKER AMP

[BOSE AUDIO WITHOUT NAVIGATION]

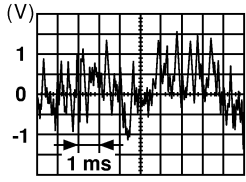
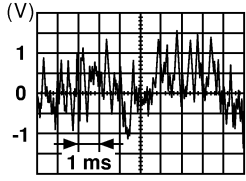
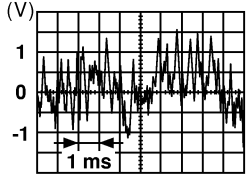
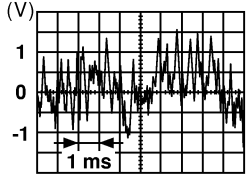
< ECU DIAGNOSIS >

Terminal (wire color)		Item	Signal in- put/out- put	Condition		Reference value
+	-			Ignition switch	Operation	
53 (W or W/B)	48 (L or G/B)	Subwoofer LH	Output	ON	Receive audio sig- nal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
54 (V or L)	49 (P or B/W)	Rear tweeter RH	Output	ON	Receive audio sig- nal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
58 (W)	59 (B)	Door speaker LH	Output	ON	Receive audio sig- nal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
60 (G or B/P)	Ground	Amp. ON signal	Input	ON	-	More than approx. 6.5V
64 (BR)	63 (Y)	Audio sound sig- nal rear LH	Input	ON	Receive audio sig- nal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
66 (LG)	65 (V)	Audio sound sig- nal rear RH	Input	ON	Receive audio sig- nal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
68 (L or R/G)	55 (R or BR/B)	Rear tweeter LH	Output	ON	Receive audio sig- nal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>

BOSE SPEAKER AMP

[BOSE AUDIO WITHOUT NAVIGATION]

< ECU DIAGNOSIS >

Terminal (wire color)		Item	Signal in- put/out- put	Condition		Reference value
+	-			Ignition switch	Operation	
69 (P or B/P)	70 (V)	Center speaker	Output	ON	Receive audio sig- nal	 <p>SKIA0177E</p>
71 (O or G/W)	72 (SB or BR)	Door speaker RH	Output	ON	Receive audio sig- nal	 <p>SKIA0177E</p>
73 (W/L)	74 (GR/V)	Audio sound sig- nal front RH	Input	ON	Receive audio sig- nal	 <p>SKIA0177E</p>
75 (W/R)	76 (B/R)	Audio sound sig- nal front LH	Input	ON	Receive audio sig- nal	 <p>SKIA0177E</p>

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SATELLITE RADIO TUNER

[BOSE AUDIO WITHOUT NAVIGATION]

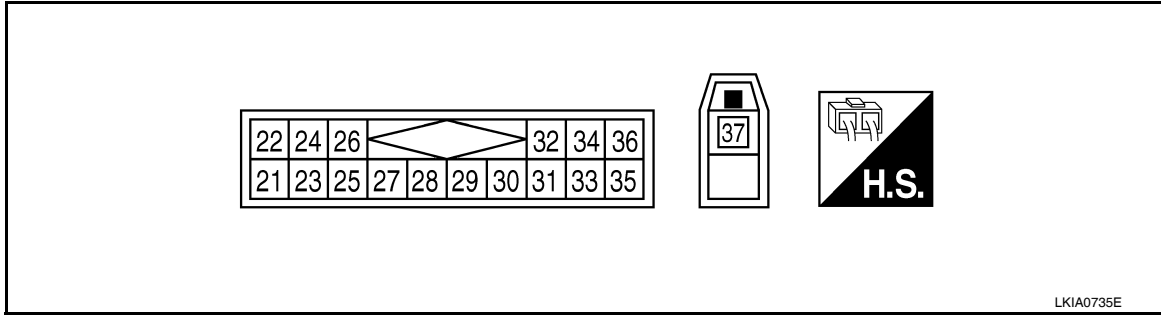
< ECU DIAGNOSIS >

SATELLITE RADIO TUNER

Reference Value

INFOID:000000005786580

TERMINAL LAYOUT



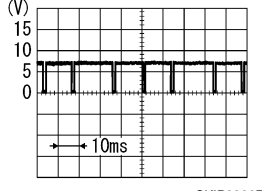
PHYSICAL VALUES

Terminal (Wire color)		Item	Signal input/ output	Condition		Voltage (approx.)
+	-			Ignition switch	Operation	
22 (Y/L)	21 (W/L)	Audio signal LH	Output	ON	Receive audio signal.	<p>SKIB3609E</p>
24 (BR/L)	23 (Y/G)	Audio signal RH	Output	ON	Receive audio signal.	<p>SKIB3609E</p>
25	-	Shield	-	-	-	-
26	-	Shield	-	-	-	-
28 (R/L)	Ground	REQ1 (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	<p>SKIB3825E</p>
29 (R/W)	Ground	Communication signal (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	<p>SKIB3824E</p>

SATELLITE RADIO TUNER

[BOSE AUDIO WITHOUT NAVIGATION]

< ECU DIAGNOSIS >

Terminal (Wire color)		Item	Signal input/ output	Condition		Voltage (approx.)
+	-			Ignition switch	Operation	
30 (B)	Ground	Communication signal (AUDIO-SAT)	Input	ON	Set to the satellite radio mode	
32 (V or Y/R)	Ground	Battery power supply	Input	OFF	-	Battery voltage
36 (SB or GR/W)		ACC power supply		ACC		
37 (B)		Antenna signal		-		

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BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS >

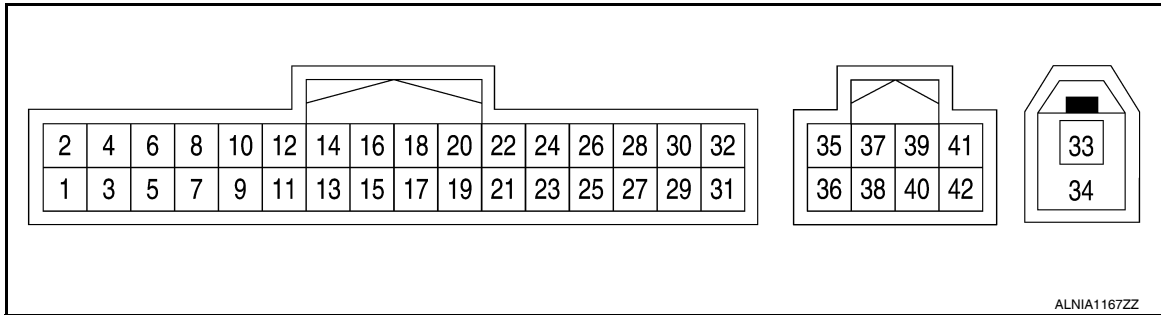
[BOSE AUDIO WITHOUT NAVIGATION]

BLUETOOTH CONTROL UNIT

Reference Value

INFOID:000000005786581

TERMINAL LAYOUT



PHYSICAL VALUES

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

BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
13 (GR/L)	Ground	Remote con- trol switch 2	Input	ACC/ON	Press SOURCE switch.	0 V
					Press switch.	0.7 V
					Press VOL UP switch.	1.3 V
					Press VOL DOWN switch	2 V
					Except for above.	3.3 V
14 (L/B or L/W)	-	Remote con- trol ground	Input	-	-	-
17 (W/G)	Ground	Steering switch 1	Output	ACC/ON	Press SEEK DOWN switch.	0.7 V
					Press SEEK UP switch.	1.3 V
					Pressing switch.	2.0 V
					Except for above.	3.3 V
18 (GR/L or W)	Ground	Steering switch 2	Output	ACC/ON	Press SOURCE switch.	0 V
					Press switch.	0.7 V
					Press VOL UP switch.	1.3 V
					Press VOL DOWN switch	2 V
					Except for above.	3.3 V
19 (L/B)	Ground	Steering switch ground	Output	-	-	-
22 (B or B/W)	-	Ground	-	-	-	-
23 (B)	-	Ground	-	-	-	-
28 (P or V/W)	-	Vehicle speed signal (8- pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	
29 (R/L)	Ground	Microphone power	Output	-	-	-
33 (B)	-	Bluetooth an- tenna	-	-	-	-
34	-	Shield	-	-	-	-
35 (L)	-	M-CAN (+)	-	-	-	-
36 (P)	-	M-CAN (-)	-	-	-	-
37	-	Shield ground	-	-	-	-

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BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

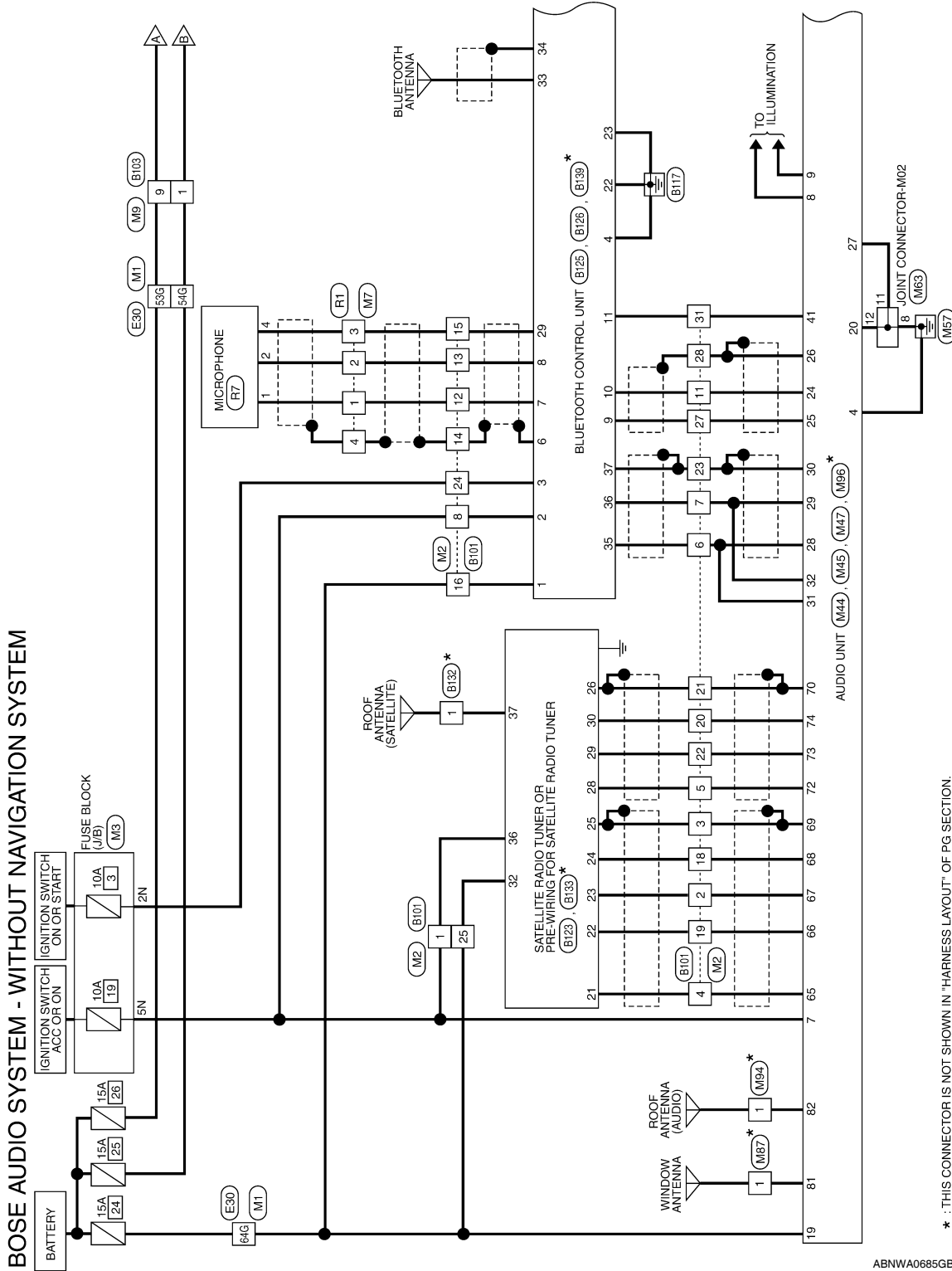
< WIRING DIAGRAM >

WIRING DIAGRAM

BOSE AUDIO WITHOUT NAVIGATION

Wiring Diagram

INFOID:000000005804716



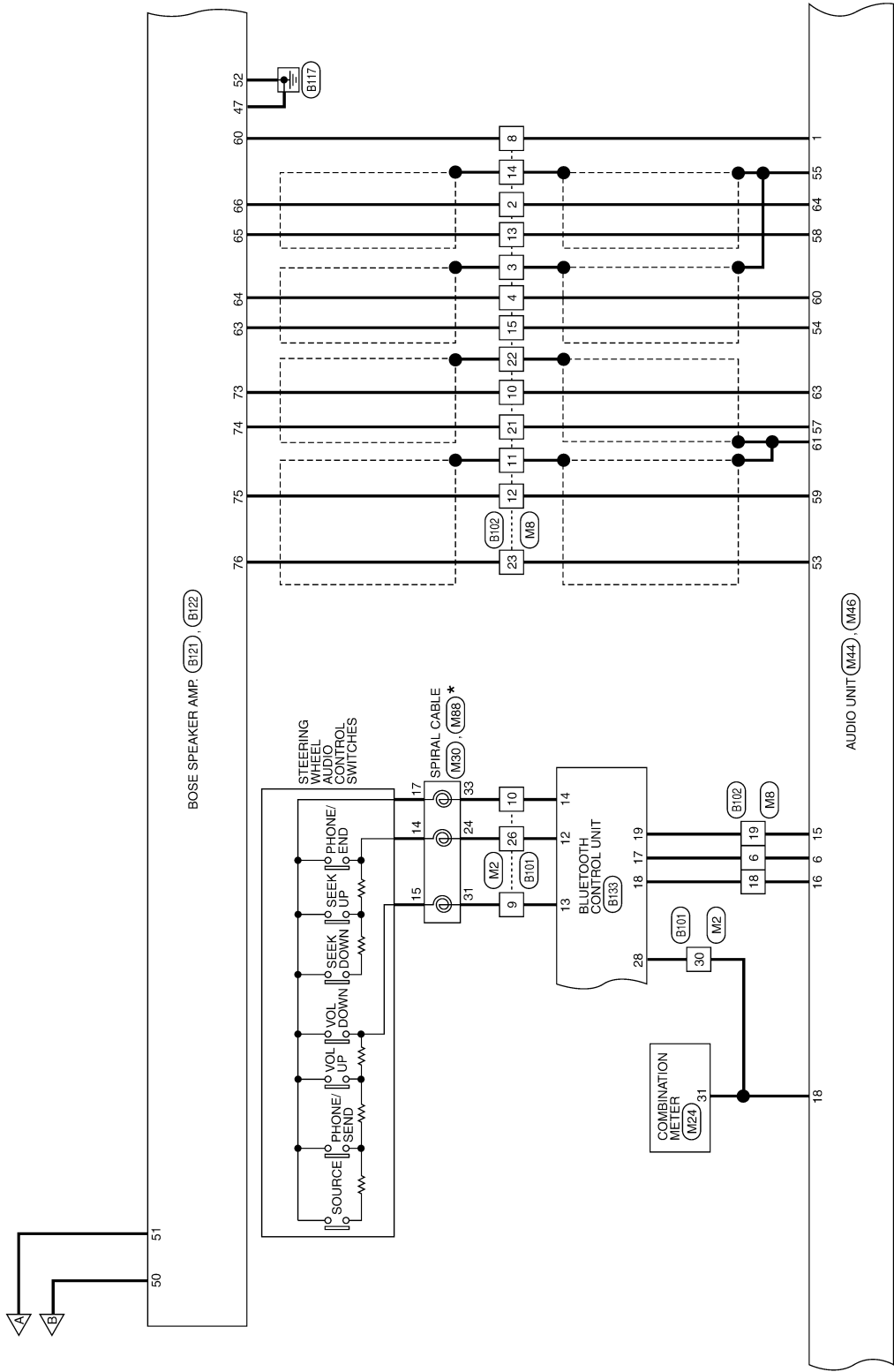
* : THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT" OF PG SECTION.

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BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

< WIRING DIAGRAM >



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

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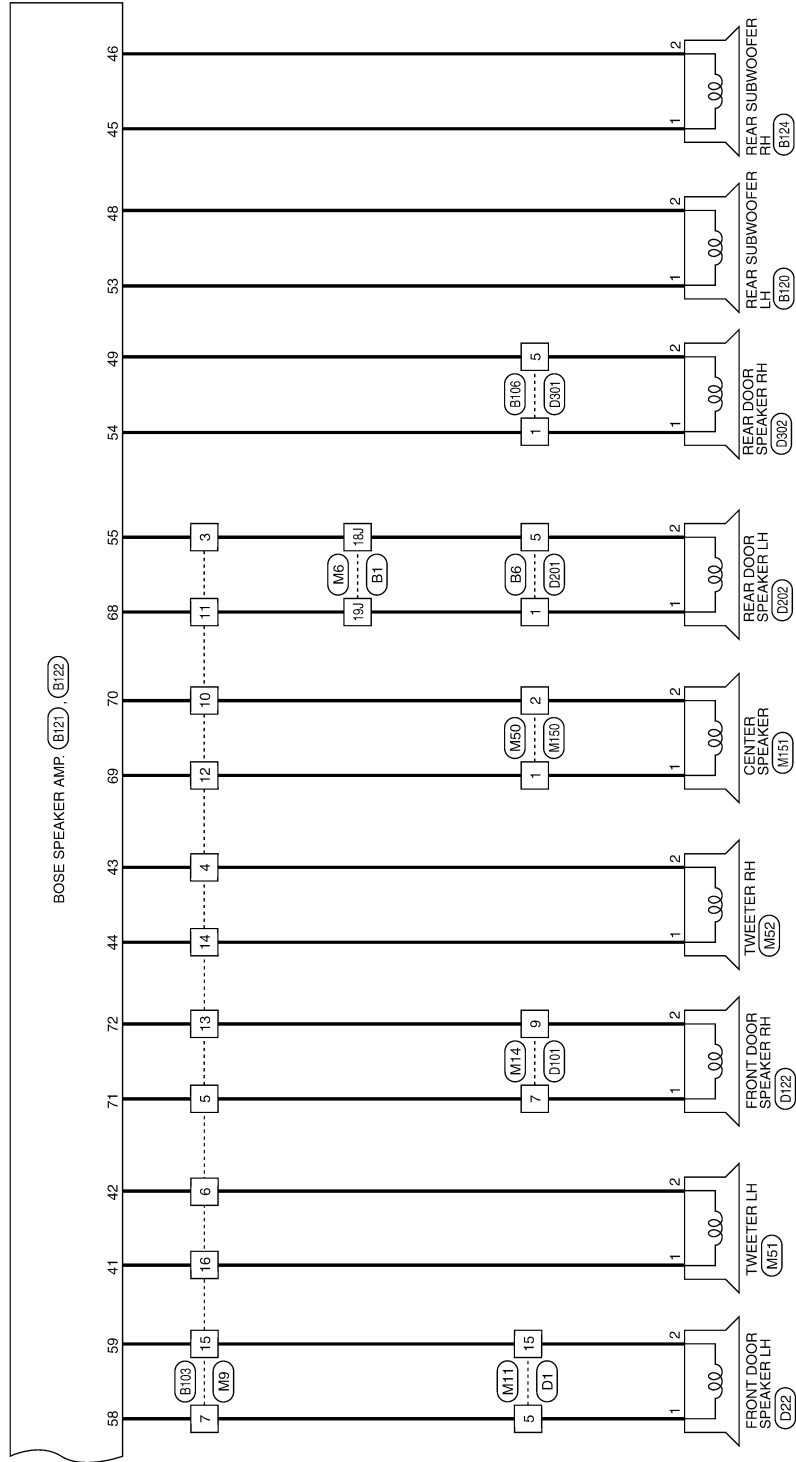
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BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

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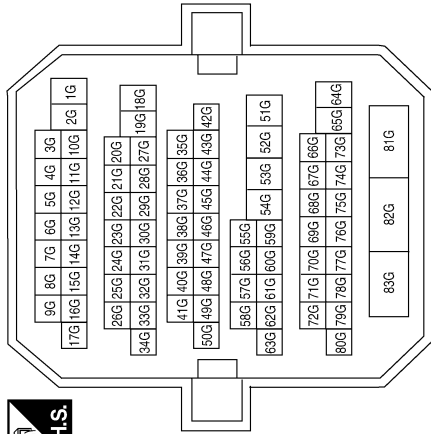
BOSE AUDIO WITHOUT NAVIGATION

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[BOSE AUDIO WITHOUT NAVIGATION]

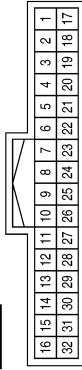
BOSE AUDIO SYSTEM CONNECTORS - WITHOUT NAVIGATION SYSTEM

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



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

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



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

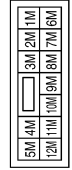
Terminal No.	Color of Wire	Signal Name
11	Y	-
12	B/R	-
13	R/B	-
14	SHIELD	-
15	R/L	-
16	Y/R	-
18	BRW	-
19	Y/L	-
20	B	-
21	SHIELD	-
22	G	-
23	SHIELD	-
24	G	-
25	Y/R	-
26	W/G	-
27	BR	-
28	SHIELD	-
30	V/W	-
31	R/W	-

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



Terminal No.	Color of Wire	Signal Name
2N	G	-
5N	V/Y	-

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



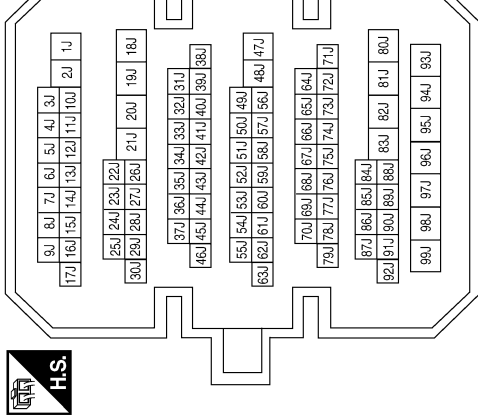
Terminal No.	Color of Wire	Signal Name
12M	O	-

BOSE AUDIO WITHOUT NAVIGATION

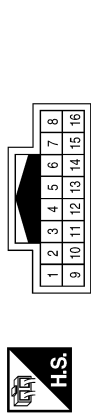
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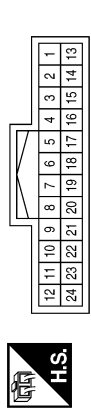
Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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



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



Terminal No.	Color of Wire	Signal Name
18J	BR/B	-
19J	R/G	-
84J	P/B	-
85J	B	-
86J	Y	-
88J	SHIELD	-
91J	GR	-

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

Terminal No.	Color of Wire	Signal Name
2	V	-
3	SHIELD	-
4	GR/V	-
6	W/G	-
8	B/P	-
10	B	-
11	SHIELD	-
12	G	-
13	LG	-
14	SHIELD	-
15	W/L	-
18	GR/L	-
19	L/B	-
21	W	-
22	SHIELD	-
23	R	-

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



Terminal No.	Color of Wire	Signal Name
1	BR	-
3	BR/B	-
4	GR/L	-
5	G/W	-
6	B/Y	-
7	W	-
9	B/R	-

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

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BOSE AUDIO WITHOUT NAVIGATION

< WIRING DIAGRAM >

[BOSE AUDIO WITHOUT NAVIGATION]


Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

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


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



1	2	3	4
5	6	7	8
9	10		

Terminal No.	Color of Wire	Signal Name
7	G/W	-
9	BR	-

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




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

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

Terminal No.	Color of Wire	Signal Name
9	R/L	TAIL/ILL RLY
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	L/B	STRG SW GND
16	GR/L	STRG SW B
17	-	-
18	V/W	SPEED SIGNAL
19	Y/R	BAT
20	B	GND


Connector No.	M44
Connector Name	AUDIO UNIT (BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	WHITE



1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18
19	20							

Terminal No.	Color of Wire	Signal Name
1	B/P	AMP ON
2	-	-
3	-	-
4	-	-
5	-	-
6	W/G	STRG SW A
7	V/Y	ACC
8	R/Y	ILL CONT OUT

Connector No.	M30
Connector Name	SPIRAL CABLE
Connector Color	GRAY



24	25	26	27
31	32	33	34

Terminal No.	Color of Wire	Signal Name
24	W/G	AUDIO_STRG_SW_REMOTE_A
31	GR/L	AUDIO_STRG_SW_REMOTE_B
33	L/B	AUDIO_STRG_SW_GND

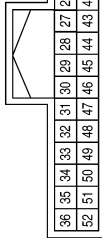
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BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

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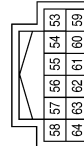
Connector No.	M45
Connector Name	AUDIO UNIT (BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	-	-
22	-	-
23	-	-
24	Y	TEL I/F -
25	BR	TEL I/F +
26	SHIELD	TEL SHIELD
27	B	GND
28	B/R	MCAN A+
29	BR	MCAN A-
30	SHIELD	MULTIMEDIA CAN SHIELD
31	B/R	MCAN B+
32	W/R	MCAN B-

Terminal No.	Color of Wire	Signal Name
33	B	GND
34	GR	CAMERA ON
35	Y	COMP+
36	SHIELD	COMP-
37	-	-
38	-	-
39	-	-
40	B	TEL GND
41	R/W	TEL ON
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-
49	-	-
50	P/B	REVERSE SGN
51	-	-
52	-	-

Connector No.	M46
Connector Name	AUDIO UNIT (BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
53	R	FR SP LH (-)
54	W/L	RR SP LH (-)
55	SHIELD	GND SHIELD1
56	-	-
57	W	FR SP RH (-)
58	LG	RR SP RH (-)

Terminal No.	Color of Wire	Signal Name
59	G	FR SP LH (+)
60	GR/V	RR SP LH (+)
61	SHIELD	GND SHIELD2
62	-	-
63	B	FR SP RH (+)
64	V	RR SP RH (+)

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BOSE AUDIO WITHOUT NAVIGATION

< WIRING DIAGRAM >

[BOSE AUDIO WITHOUT NAVIGATION]

Connector No.	M51
Connector Name	TWEETER LH
Connector Color	BROWN



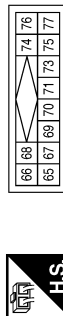
Terminal No.	Color of Wire	Signal Name
1	LG	– (WITH BOSE AUDIO SYSTEM)
2	BY	– (WITH BOSE AUDIO SYSTEM)

Connector No.	M50
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	M47
Connector Name	AUDIO UNIT (BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
65	G/B	SAT LH INPUT (-)
66	Y/L	SAT LH INPUT (+)
67	Y/G	SAT RH INPUT (-)
68	BR/W	SAT RH INPUT (+)
69	SHIELD	–
70	SHIELD	–
71	–	–
72	R	REQ (SAT-COMBI)
73	G	RX (SAT-COMBI)
74	B	TX (COMBI-SAT)
75	–	–
76	–	–

Connector No.	M87
Connector Name	WINDOW ANTENNA
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M63
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
8	B	–
11	B	–
12	B	–

Connector No.	M52
Connector Name	TWEETER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L/O	– (WITH BOSE AUDIO SYSTEM)
2	GR/L	– (WITH BOSE AUDIO SYSTEM)

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BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

< WIRING DIAGRAM >

Connector No.	M96
Connector Name	AUDIO UNIT (BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	GRAY



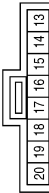
Terminal No.	Color of Wire	Signal Name
81	B	AMP SUPPLY
82	B	MAIN ANTENNA
83	-	-

Connector No.	M94
Connector Name	ROOF ANTENNA (AUDIO)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M88
Connector Name	SPIRAL CABLE
Connector Color	GRAY



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

Connector No.	M151
Connector Name	CENTER SPEAKER
Connector Color	BROWN



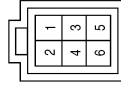
Terminal No.	Color of Wire	Signal Name
1	B/P	-
2	O/B	-

Connector No.	M150
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	M99
Connector Name	WIRE TO WIRE
Connector Color	GRAY



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

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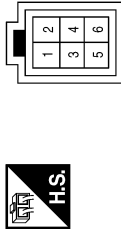
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BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

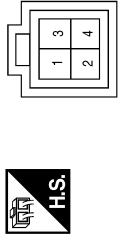
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Connector No.	M204
Connector Name	WIRE TO WIRE
Connector Color	GRAY



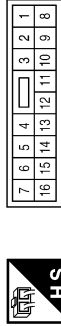
Terminal No.	Color of Wire	Signal Name
1	B	-
2	R	-
3	W	-
4	G	-

Connector No.	M205
Connector Name	USB INTERFACE
Connector Color	GREEN



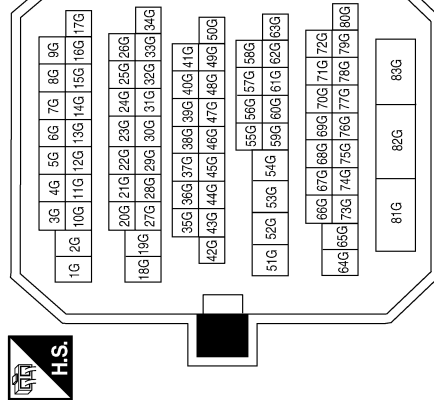
Terminal No.	Color of Wire	Signal Name
1	R	V BUS
2	G	USB (D+)
3	B	USB GND
4	W	USB (D-)

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



Terminal No.	Color of Wire	Signal Name
15	V or P/B	-

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



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

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



Terminal No.	Color of Wire	Signal Name
1	O or O/B	-
2	R or Y	-
3	V or P/B	-
5	LG or O	-

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BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

< WIRING DIAGRAM >

Connector No.	E46
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

31	30	29	28	27	26	25		
40	39	38	37	36	35	34	33	32



Terminal No.	Color of Wire	Signal Name
28	O/B or O	-

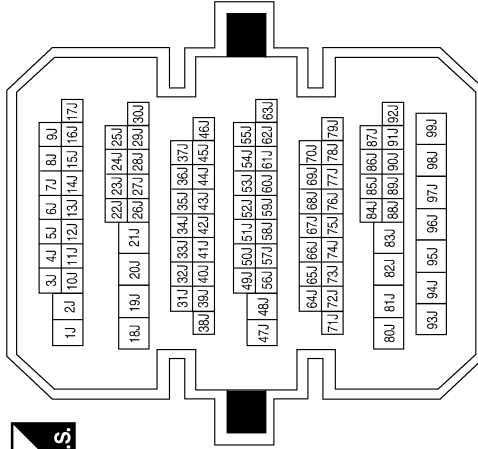
Connector No.	E45
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

17	16	15	14	13		
24	23	22	21	20	19	18



Terminal No.	Color of Wire	Signal Name
13	B/W or GR	-

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



Terminal No.	Color of Wire	Signal Name
18J	O or W/R	-
19J	LG or O/B	-
84J	P/B	-
85J	B	-
86J	Y or P	-
88J	SHIELD	-
91J	L or GR	-

Connector No.	E66
Connector Name	HYBRID VEHICLE CONTROL ECU
Connector Color	BLACK



168	167	166	165	164	163	177	176	175	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112																																
174	173	172	171	170	169	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	
180	179	178	184	183	182	181	162	161	160	159	158	157	156	155	154	153	152	151	150	149	148	147	146	145	144	143	142	141	140	139	138	137	136	135	134	133	132	131	130	129	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112

Terminal No.	Color of Wire	Signal Name
82	Y or R	BL

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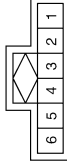


BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

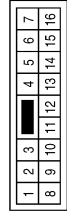
< WIRING DIAGRAM >

Connector No.	B22
Connector Name	JOINT CONNECTOR-B07
Connector Color	GRAY



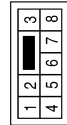
Terminal No.	Color of Wire	Signal Name
5	V or P/B	-
6	P/B	-

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



Terminal No.	Color of Wire	Signal Name
15	V or P/B	-

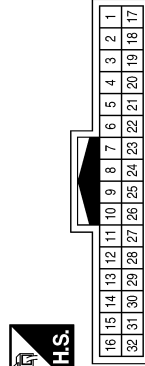
Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG or O/B	-
5	O or W/R	-

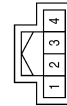
Terminal No.	Color of Wire	Signal Name
12	B/R	-
13	R/B	-
14	SHIELD	-
15	R/L	-
16	V or Y/B	-
18	BR/L	-
19	Y/L	-
20	B	-
21	SHIELD	-
22	R/W	-
23	SHIELD	-
24	O or G/W	-
25	Y/R or V	-
26	W/G or W	-
27	BR	-
28	SHIELD	-
30	P or V/W	-
31	SB or G/O	-

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



Terminal No.	Color of Wire	Signal Name
1	SB or GR/W	-
2	Y/G	-
3	SHIELD	-
4	W/L	-
5	LG	-
6	L	-
7	P	-
8	G or V/Y	-
9	GR/L	-
10	L/B or L/W	-
11	Y	-

Connector No.	B35
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L or GR	CAMERA ON
2	B	GND
3	Y or P	COMP+
4	SHIELD	COMP-

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BOSE AUDIO WITHOUT NAVIGATION

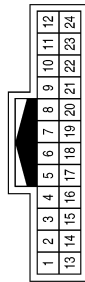
[BOSE AUDIO WITHOUT NAVIGATION]

< WIRING DIAGRAM >

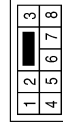
Terminal No.	Color of Wire	Signal Name
13	V	-
14	SHIELD	-
15	Y	-
18	GR/L or G	-
19	L/B	-
21	GR/V	-
22	SHIELD	-
23	B/R	-

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

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



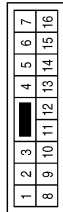
Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	V or L	-
5	P or B/W	-

Terminal No.	Color of Wire	Signal Name
7	W	-
9	G or B/R	-
10	V or O/B	-
11	L or R/G	-
12	P or B/P	-
13	SB or BR	-
14	BR or L/O	-
15	B	-
16	LG	-

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



Terminal No.	Color of Wire	Signal Name
1	SB or BR	-
3	R or BR/B	-
4	GR or GR/L	-
5	O or G/W	-
6	V or B/Y	-

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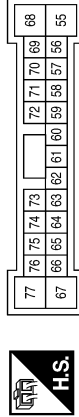
BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

< WIRING DIAGRAM >

Terminal No.	Color of Wire	Signal Name
65	V	RR RH - IN
66	LG	RR RH + IN
67	-	-
68	L or R/G	RR DOOR LH + OUT
69	P or B/P	INST CTR TWDR + OUT
70	V	INST CTR TWDR - OUT
71	O or G/W	FR DOOR RH + OUT
72	SB or BR	FR DOOR RH - OUT
73	W/L	FR RH + IN
74	GR/V	FR RH - IN
75	W/R	FR LH + IN
76	B/R	FR LH - IN
77	-	-

Connector No.	B121
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
55	R or BR/B	RR DOOR LH - OUT
56	-	-
57	-	-
58	W	FR DOOR LH + OUT
59	B	FR DOOR LH - OUT
60	G or B/P	AMP ON
61	-	-
62	-	-
63	Y	RR LH - IN
64	BR	RR LH + IN

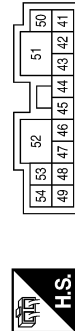
Connector No.	B120
Connector Name	REAR SUBWOOFER LH
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
41	LG	FR TWDR LH + OUT
42	V or B/Y	FR TWDR LH - OUT
43	GR or GR/L	FR TWDR RH - OUT
44	BR or L/O	FR TWDR RH + OUT
45	O or BR/W	RH WOOFER + OUT
46	SB or BR	RH WOOFER - OUT
47	B	GND
48	L or G/B	LH WOOFER - OUT
49	P or B/W	RR DOOR RH - OUT
50	SB or BR	BAT
51	G or B/R	BAT
52	B	GND
53	W or W/B	LH WOOFER + OUT
54	V or L	RR DOOR RH + OUT

Connector No.	B122
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



ABNIA2441GB

BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

< WIRING DIAGRAM >

Connector No.	B124
Connector Name	REAR SUBWOOFER RH
Connector Color	WHITE

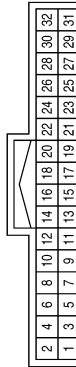


Terminal No.	Color of Wire	Signal Name
1	O or BR/W	-
2	SB or BR	-

Terminal No.	Color of Wire	Signal Name
25	SHIELD	EARTH (SIG)
26	SHIELD	DATA EARTH
27	-	-
28	R/L	REQ1 (SAT - COMBI)
29	R/W	TXD (SAT_COMBI)
30	B	RXD (COMBI_SAT)
31	-	-
32	V or Y/R	BAT
33	-	-
34	-	-
35	-	-
36	SB or GR/W	ACC

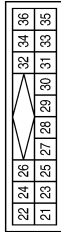
Terminal No.	Color of Wire	Signal Name
14	L/B or L/W	LAD_GND
15	-	-
16	-	-
17	W/G	LAD_OUT_1
18	GR/L or W	LAD_OUT_2
19	L/B	LAD_GND
20	-	-
21	-	-
22	B or B/W	CONT 3
23	B	CONT 4
24	-	-
25	-	-
26	-	-
27	-	-
28	P or V/W	SPEED SIGNAL
29	R/L	MIC_POWER
30	-	-
31	-	-
32	-	-

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



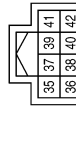
Terminal No.	Color of Wire	Signal Name
1	V or Y/B	BAT
2	G or V/Y	ACC
3	O or G/W	IGN
4	B or B/W	GND
5	-	-
6	SHIELD	SHIELD
7	B/R	MIC_IN_+
8	R/B	MIC_IN_-
9	BR	AUDIO_OUT(+)
10	Y	AUDIO_OUT(-)
11	SB or G/O	MUTE_CONTROL
12	W/G or W	LAD_IN1
13	GR/L	LAD_IN2

Connector No.	B123
Connector Name	SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	W/L	SAT_LCH (-)
22	Y/L	SAT_LCH (+)
23	Y/G	SAT_RCH (-)
24	BR/L	SAT_RCH (+)

Connector No.	B125
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
35	L	M-CAN+_1
36	P	M-CAN_-2
37	SHIELD	M-CAN_SHIELD_1
38	-	-
39	-	-
40	-	-
41	-	-
42	-	-

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BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

< WIRING DIAGRAM >

Connector No.	B139
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
33	B	BT ANTENNA
34	SHIELD	BT ANTENNA SHIELD

Connector No.	B133
Connector Name	SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER
Connector Color	VIOLET



Terminal No.	Color of Wire	Signal Name
37	B	ANTENNA SIGNAL

Connector No.	B132
Connector Name	ROOF ANTENNA (SATELLITE)
Connector Color	BROWN



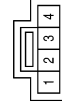
Terminal No.	Color of Wire	Signal Name
1	B	-

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



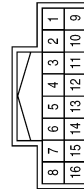
Terminal No.	Color of Wire	Signal Name
5	O or W	-
15	LG or B	-

Connector No.	R7
Connector Name	MICROPHONE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	SIG (WITHOUT NAVI)
2	R	GND (WITHOUT NAVI)
4	B	VCC (WITHOUT NAVI)

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



Terminal No.	Color of Wire	Signal Name
1	W	- (WITHOUT NAVI)
2	R	- (WITHOUT NAVI)
3	B	- (WITHOUT NAVI)
4	SHIELD	-

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BOSE AUDIO WITHOUT NAVIGATION

[BOSE AUDIO WITHOUT NAVIGATION]

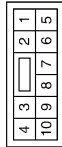
< WIRING DIAGRAM >

Connector No.	D122
Connector Name	FRONT DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L or G/W	-
2	LG or BR	-

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



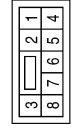
Terminal No.	Color of Wire	Signal Name
7	L or G/W	-
9	LG or BR	-

Connector No.	D22
Connector Name	FRONT DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



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

Connector No.	D301
Connector Name	WIRE TO WIRE
Connector Color	WHITE



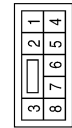
Terminal No.	Color of Wire	Signal Name
1	L or O/B	-
5	W or B/W	-

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



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

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



Terminal No.	Color of Wire	Signal Name
1	O or O/B	-
5	L or W/R	-

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BOSE AUDIO WITHOUT NAVIGATION

< WIRING DIAGRAM >

[BOSE AUDIO WITHOUT NAVIGATION]

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



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

ABNIA2439GB

AUDIO SYSTEM

[BOSE AUDIO WITHOUT NAVIGATION]

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:000000005786583

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> Audio unit power circuit Audio unit 	<ul style="list-style-type: none"> AV-76 AV-142
Steering wheel audio control switches do not operate	<ul style="list-style-type: none"> Steering wheel audio control switches Audio unit 	<ul style="list-style-type: none"> AV-98 AV-142
All speakers do not sound	<ul style="list-style-type: none"> Audio unit Audio unit power circuit BOSE speaker amp. ON signal BOSE speaker amp. ground circuit BOSE speaker amp. 	<ul style="list-style-type: none"> AV-142 AV-76 AV-97 AV-77 AV-143
One or several speakers do not sound	<ul style="list-style-type: none"> Front door speaker Tweeter Center speaker Rear door speaker Subwoofer 	<ul style="list-style-type: none"> AV-83 AV-86 AV-89 AV-91 AV-94

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	Audio unit	AV-142
CD cannot be ejected.		
The CD cannot be played.		
The sound skips, stops suddenly, or is distorted.		

SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> Satellite radio tuner power or ground circuit Satellite radio tuner communication circuit Satellite radio tuner 	<ul style="list-style-type: none"> AV-77 AV-100 AV-150
Right or left channel does not sound	<ul style="list-style-type: none"> Satellite radio tuner right channel audio signal circuit Satellite radio tuner left channel audio signal circuit Satellite radio tuner 	<ul style="list-style-type: none"> AV-103 AV-103 AV-150

HANDS-FREE PHONE

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> Bluetooth control unit power and ground circuit Bluetooth control unit 	<ul style="list-style-type: none"> AV-79 AV-75
Steering wheel audio control switches do not operate	<ul style="list-style-type: none"> Steering wheel audio control switches Bluetooth control unit 	<ul style="list-style-type: none"> AV-98 AV-75
Voice activated control does not operate	<ul style="list-style-type: none"> Microphone Steering wheel audio control switches Bluetooth control unit 	<ul style="list-style-type: none"> AV-105 AV-98 AV-75

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

NORMAL OPERATING CONDITION

Description

INFOID:000000005786584

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, audio unit malfunction
	The noise occurs when various motors are operating.	• Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		• Rear defogger coil malfunction • Open circuit in printed heater • Poor ground of antenna feeder line
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		• Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

PRECAUTION

PRECAUTIONS

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

INFOID:000000005818888

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.

Precaution for Trouble Diagnosis

INFOID:000000005438721

AV COMMUNICATION SYSTEM

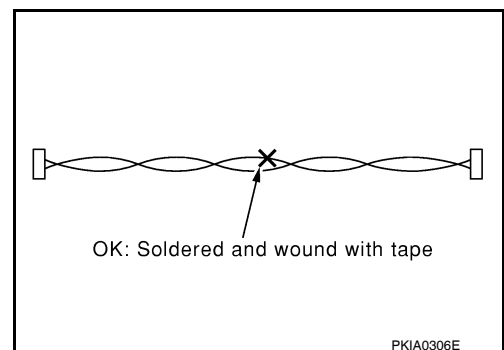
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

INFOID:000000005438722

AV COMMUNICATION SYSTEM

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



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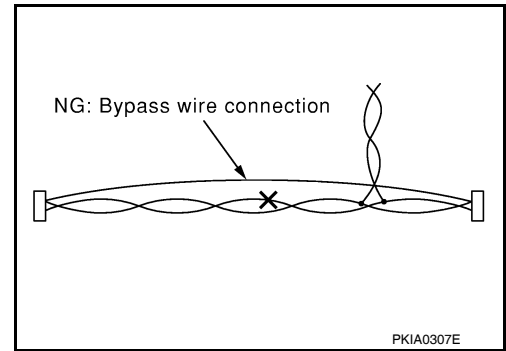
AV

PRECAUTIONS

< PRECAUTION >

[BOSE AUDIO WITHOUT NAVIGATION]

- Do not perform bypass wire connections for the repair parts. (The spliced wire will become separated and the characteristics of twisted line will be lost.)



PREPARATION

< PREPARATION >

[BOSE AUDIO WITHOUT NAVIGATION]

PREPARATION

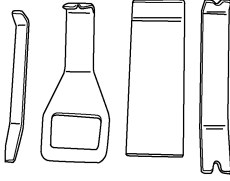
PREPARATION

Special Service Tools

INFOID:000000005818889

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

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

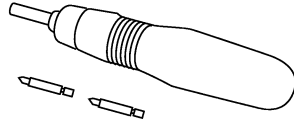


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Commercial Service Tools

INFOID:000000005438723

Tool name	Description
Power tool	Loosening bolts and nuts



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ON-VEHICLE REPAIR

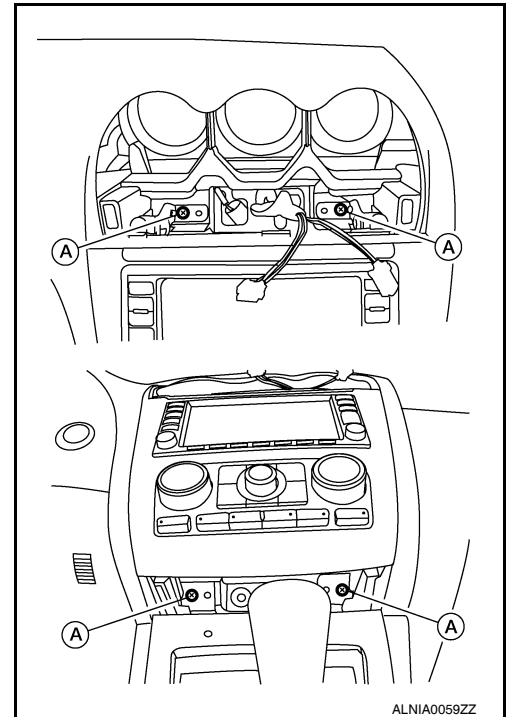
AUDIO UNIT

Removal and Installation

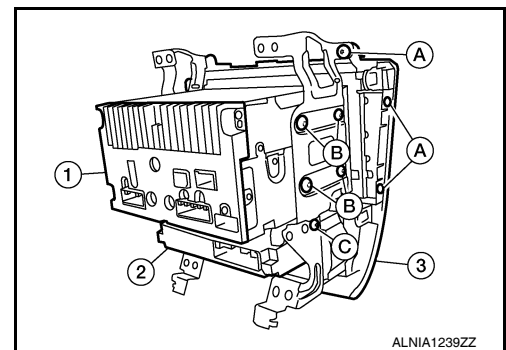
INFOID:000000005818890

REMOVAL

1. Disconnect the 12-volt battery negative terminal.
2. Remove the center ventilator grilles. Refer to [VTL-24. "CENTER VENTILATOR GRILLES : Removal and Installation"](#).
3. Remove the storage bin. Refer to [IP-11. "Removal and Installation"](#).
4. Remove the cluster lid D. Refer to [IP-11. "Removal and Installation"](#).
5. Remove the audio unit upper and lower screws (A).



6. Pull out the audio control unit assembly, disconnect the audio control unit connectors.
7. Disconnect the front air control unit connector.
8. Remove the cluster lid C screws (A), then remove the audio unit screws (B), then the front air control screw (C) and the audio unit (1).
 - Front air control (2)
 - Cluster lid C (3)



9. Remove the audio unit brackets.

INSTALLATION

Installation is in the reverse order of removal.

BOSE AMP.

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

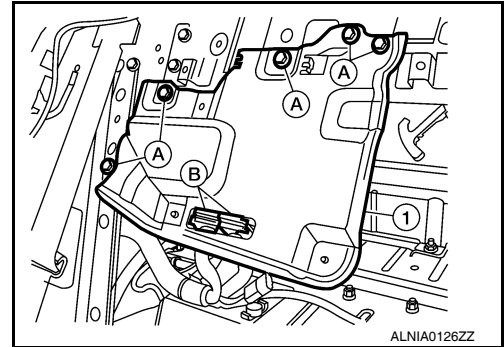
BOSE AMP.

Removal and Installation

INFOID:000000005438725

REMOVAL

1. Disconnect the 12-volt battery negative terminal.
2. Remove the rear seat back. Refer to [SE-24, "Removal and Installation"](#).
3. Remove the bose speaker amp. screws (A), then disconnect the bose speaker amp. connectors (B), and remove the bose speaker amplifier (1).



INSTALLATION

Installation is in the reverse order of removal.

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USB CONNECTOR

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

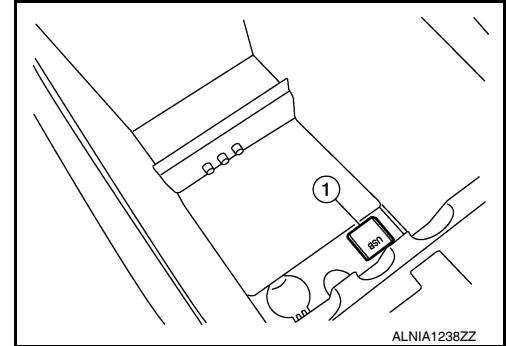
USB CONNECTOR

Removal and Installation

INFOID:000000005818891

Removal

1. Remove the center console assembly. Refer to [IP-17. "Exploded View"](#).
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.

TWEETER

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

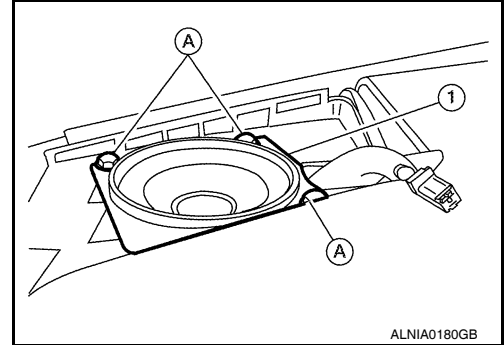
TWEETER

Removal and Installation

INFOID:000000005438726

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-26, "Removal and Installation"](#).
2. Remove tweeter speaker grille. Refer to [IP-11, "Removal and Installation"](#).
3. Remove the tweeter speaker screws (A), disconnect the tweeter speaker connector and remove the tweeter speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

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AV

CENTER SPEAKER

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

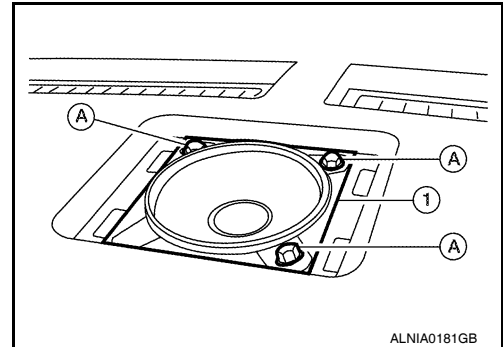
CENTER SPEAKER

Removal and Installation

INFOID:000000005438727

REMOVAL

1. Remove the center speaker grille. Refer to [IP-11, "Removal and Installation"](#).
2. Remove the center speaker screws (A), then pull out the center speaker (1), disconnect the connector and remove the center speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

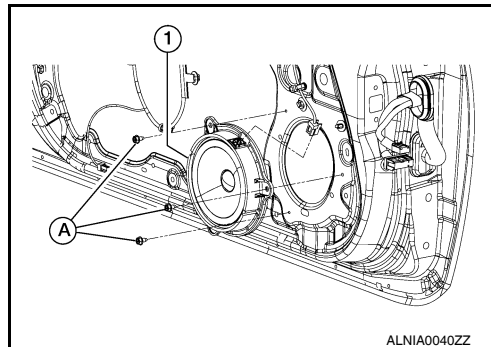
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000005438728

REMOVAL

1. Remove the front door finisher. Refer to [INT-13. "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).



INSTALLATION

Installation is in the reverse order of removal.

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REAR DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

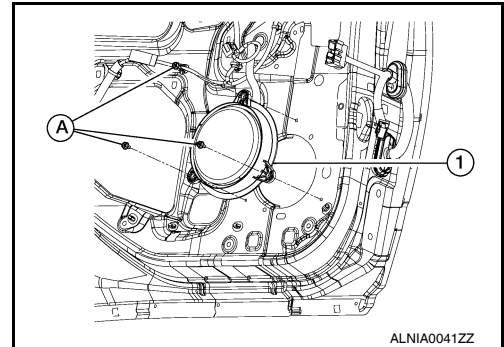
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000005438729

REMOVAL

1. Remove the rear door finisher. Refer to [INT-13. "Removal and Installation"](#).
2. Remove the rear door speaker screws (A), then disconnect the rear door speaker connector and remove the rear door speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

SUBWOOFER

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

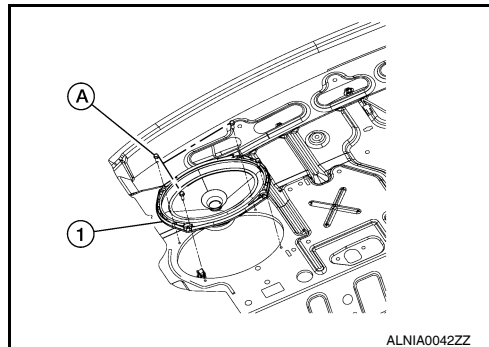
SUBWOOFER

Removal and Installation

INFOID:000000005438730

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-22. "Removal and Installation"](#).
2. Remove the rear subwoofer screws (A), then disconnect the rear subwoofer connector and remove the rear subwoofer (1).



INSTALLATION

Installation is in the reverse order of removal.

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SATELLITE RADIO TUNER

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

SATELLITE RADIO TUNER

Removal and Installation

INFOID:000000005438731

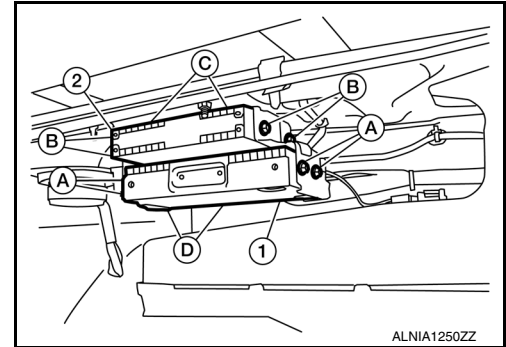
REMOVAL

1. Disconnect the 12-volt battery negative terminal.
2. Remove the trunk front finisher. Refer to [INT-30, "Removal and Installation"](#).
3. Remove the Bluetooth control unit screws (A), disconnect the Bluetooth control unit connectors (D) and remove the Bluetooth control unit (1).

NOTE:

Bluetooth control unit (1) is removed to access the satellite radio tuner unit (if equipped).

4. Remove the satellite radio tuner screws (B), disconnect the satellite tuner connectors (C) and remove the satellite radio tuner (2).



ALNIA1250ZZ

INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

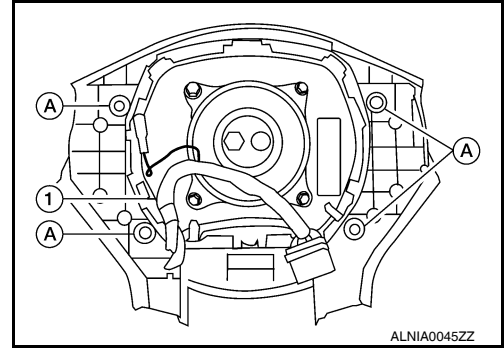
STEERING SWITCH

Removal and Installation

INFOID:000000005438735

REMOVAL

1. Remove the driver airbag module. Refer to [SR-4, "Removal and Installation"](#).
2. Remove the steering wheel switch assembly screws (A), then remove the steering wheel switches (1).



INSTALLATION

Installation is in the reverse order of removal.

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AV

AUDIO ANTENNA

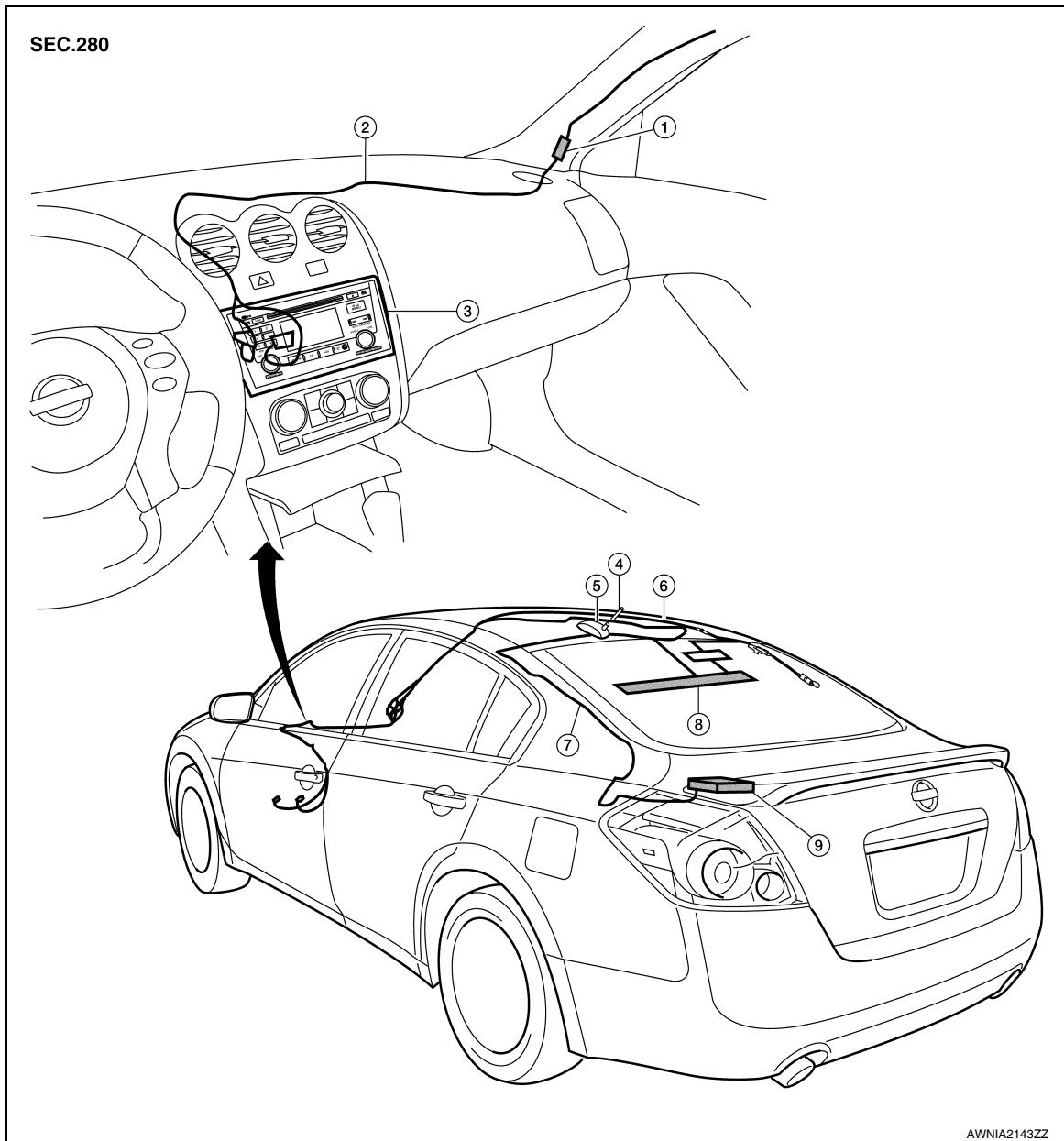
< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

AUDIO ANTENNA

Location of Antennas

INFOID:000000005438732



- | | | |
|---------------------------------|-----------------------|-----------------------------------|
| 1. Audio unit harness connector | 2. Audio unit harness | 3. Audio unit |
| 4. Roof antenna rod | 5. Roof antenna base | 6. Antenna feeder (to audio unit) |
| 7. Satellite feeder | 8. Window antenna | 9. Satellite radio tuner |

Roof Antenna

INFOID:000000005438733

REMOVAL AND INSTALLATION

Removal

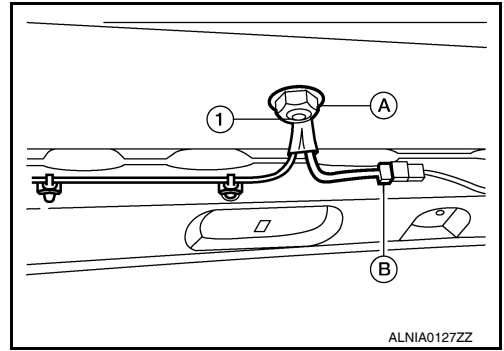
1. Remove the rear parcel shelf finisher. Refer to [INT-22, "Removal and Installation"](#).
2. Remove the rear assist grips. Refer to [INT-26, "Removal and Installation"](#).
3. Pull down headlining (rear) and obtain space work between roof and headlining.

AUDIO ANTENNA

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

4. Remove the roof antenna nut (A), then disconnect the antenna feeder connector (B) and remove the antenna feeder (1) from the roof.
5. Detach the antenna feeder harness wire clips, then disconnect the antenna feeder harness wire end and feed the antenna feeder harness through the roof to remove the roof antenna base.



Installation

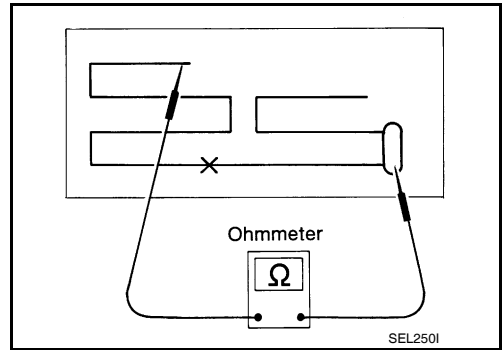
Installation is in the reverse order of removal.

Window Antenna Repair

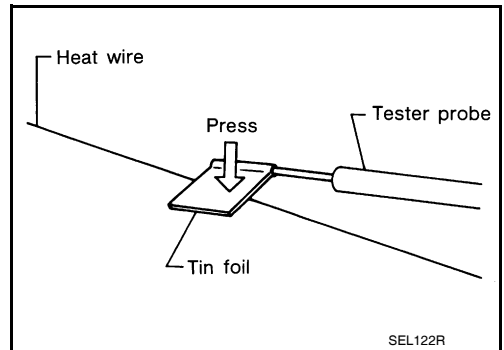
INFOID:000000005438734

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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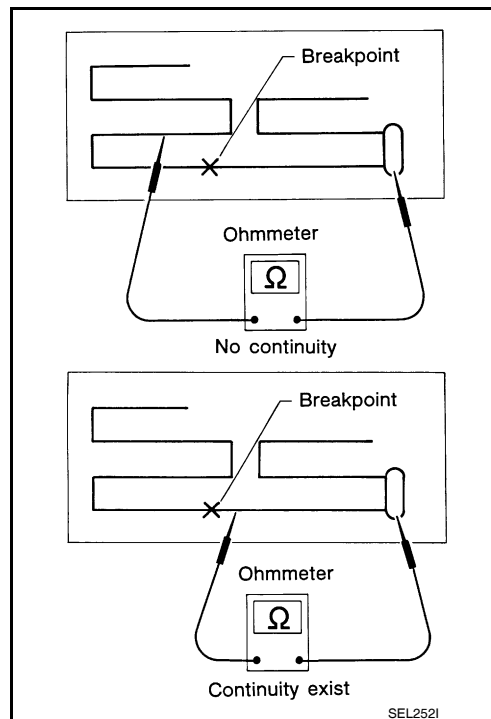
AV

AUDIO ANTENNA

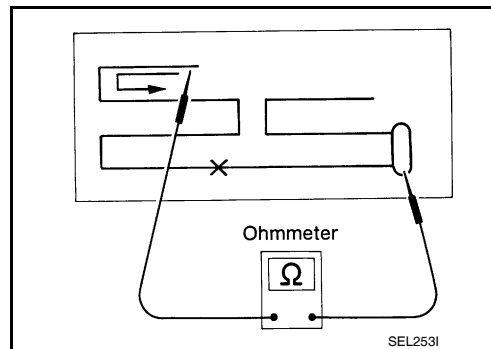
< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

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.

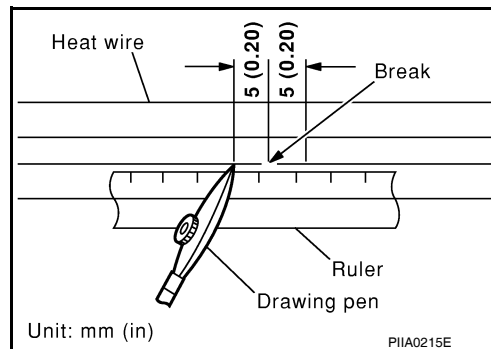


REPAIR EQUIPMENT

- 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. 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.

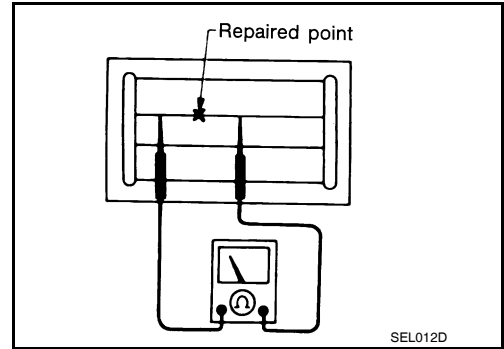


AUDIO ANTENNA

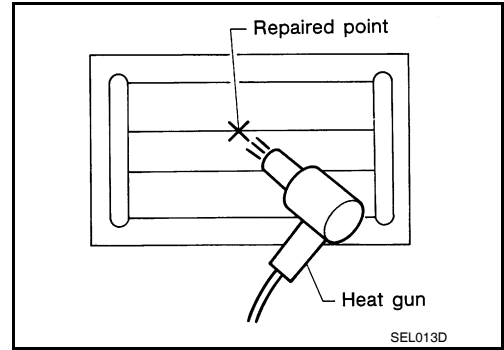
< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

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



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



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AV

MICROPHONE

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

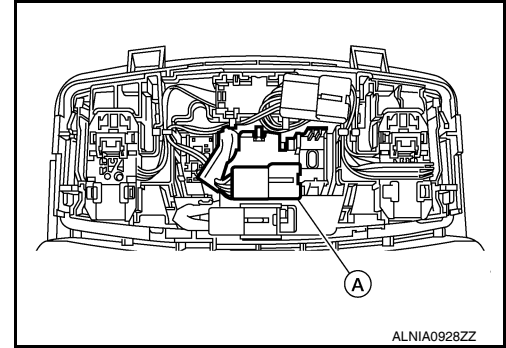
MICROPHONE

Removal and Installation

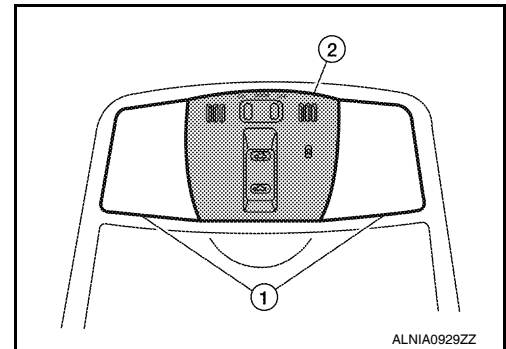
INFOID:000000005438736

REMOVAL

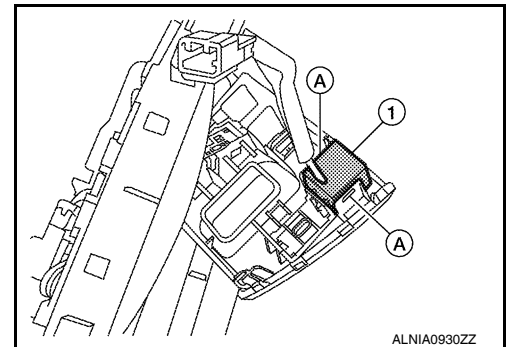
1. Remove the room/map lamp assembly. Refer to [INT-26. "Exploded View"](#).
2. Detach the microphone connector (A).



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



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



INSTALLATION

Installation is in the reverse order of removal.

TEL ANTENNA

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

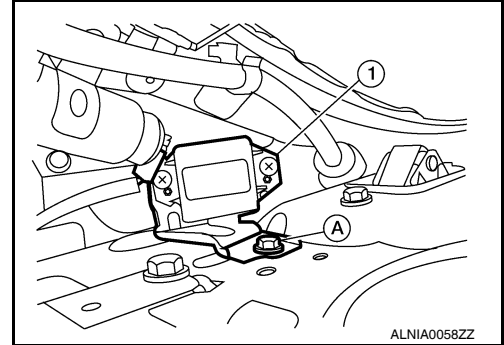
TEL ANTENNA

Removal and Installation

INFOID:000000005438737

REMOVAL

1. Disconnect the 12-volt battery negative terminal.
2. Remove the rear parcel shelf finisher. Refer to [INT-22, "Removal and Installation"](#).
3. Remove the Bluetooth antenna screw (A), disconnect the Bluetooth antenna connector and remove the Bluetooth antenna (1).



INSTALLATION

Installation is in the reverse order of removal.

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AV

BLUETOOTH CONTROL UNIT

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITHOUT NAVIGATION]

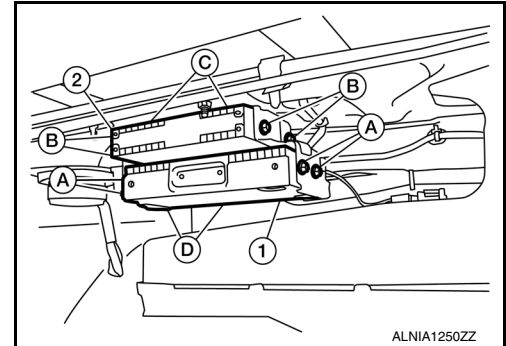
BLUETOOTH CONTROL UNIT

Removal and Installation

INFOID:000000005438738

REMOVAL

1. Disconnect the 12-volt battery negative terminal.
2. Remove the trunk front finisher. Refer to [INT-30, "Removal and Installation"](#).
3. Remove the Bluetooth control unit screws (A), disconnect the Bluetooth control unit connectors (D), then remove the Bluetooth control unit (1).
 - Satellite radio tuner (2)
 - Satellite radio tuner screws (B)
 - Satellite radio tuner connectors (C)



INSTALLATION

Installation is in the reverse order of removal.

REAR VIEW CAMERA

[BOSE AUDIO WITHOUT NAVIGATION]

< ON-VEHICLE REPAIR >

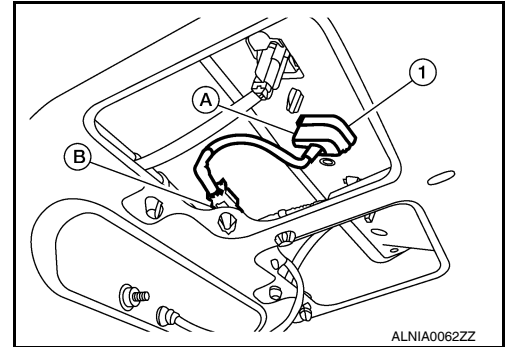
REAR VIEW CAMERA

Removal and Installation

INFOID:000000005825189

REMOVAL

1. Remove the license plate finisher. Refer to [EXT-25, "Removal and Installation"](#).
2. Remove the trunk lid finisher. Refer to [INT-30, "Removal and Installation"](#).
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:000000005818893

REAR VIEW MONITOR

For adjustment on the rear view camera, refer to [AV-68, "Diagnosis Description"](#).

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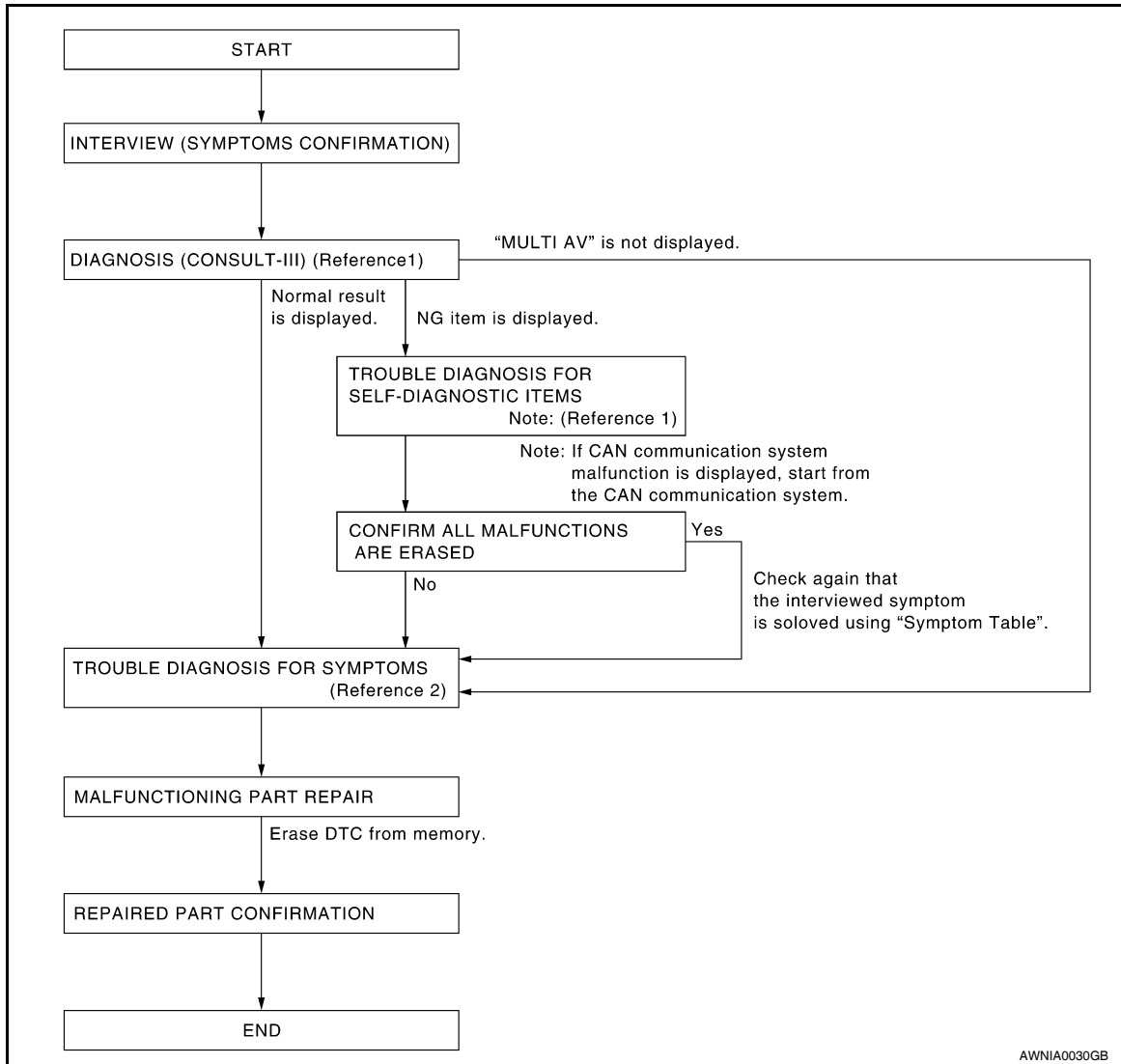
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000005786585

OVERALL SEQUENCE



- Reference 1... Refer to [AV-194, "CONSULT - III Function \(MULTI AV\)"](#).
- Reference 2... Refer to [AV-280, "Symptom Table"](#).

DETAILED FLOW

1. CHECK SYMPTOM

Check the malfunction symptoms by performing the following items.

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

>> GO TO 2

2. SELF-DIAGNOSIS (CONSULT-III)

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

DIAGNOSIS AND REPAIR WORKFLOW

[BOSE AUDIO WITH NAVIGATION]

< BASIC INSPECTION >

Is any DTC No. displayed?

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

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

1. Check the DTC No. indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC No. list. Refer to [AV-256, "DTC Index"](#).

NOTE:

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

>> GO TO 5

4. PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to [AV-280, "Symptom Table"](#).

>> GO TO 5

5. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

NOTE:

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

>> GO TO 6

6. CHECK AFTER REPAIR

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

Is any DTC No. displayed?

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

7. FINAL CHECK

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

Are any symptoms present?

- YES >> GO TO 4
- NO >> Inspection End.

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AV

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000005786586

BEFORE REPLACEMENT

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

AFTER REPLACEMENT

CAUTION:

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

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:000000005786587

1. SAVING VEHICLE SPECIFICATION

④-CONSULT-III Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [AV-162, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

NOTE:

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

>> GO TO 2.

2. REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

④-CONSULT-III Configuration

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to [AV-163, "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:000000005786588

- 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 AUDIO WITH NAVIGATION]

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

CONFIGURATION (AV CONTROL UNIT) : Special Repair Requirement INFOID:000000005786589

1. WRITING MODE SELECTION

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

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

2. PERFORM "WRITE CONFIGURATION-CONFIG FILE"

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

>> WORK END

3. PERFORM "WRITE CONFIGURATION-MANUAL SELECTION"

CONSULT-III Configuration
Select "WRITE CONFIGURATION-Manual selection" to write vehicle specifications into the AV control unit.
For data to write, refer to [AV-163. "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:000000005786590

CAUTION:
Check vehicle specifications before servicing.

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

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

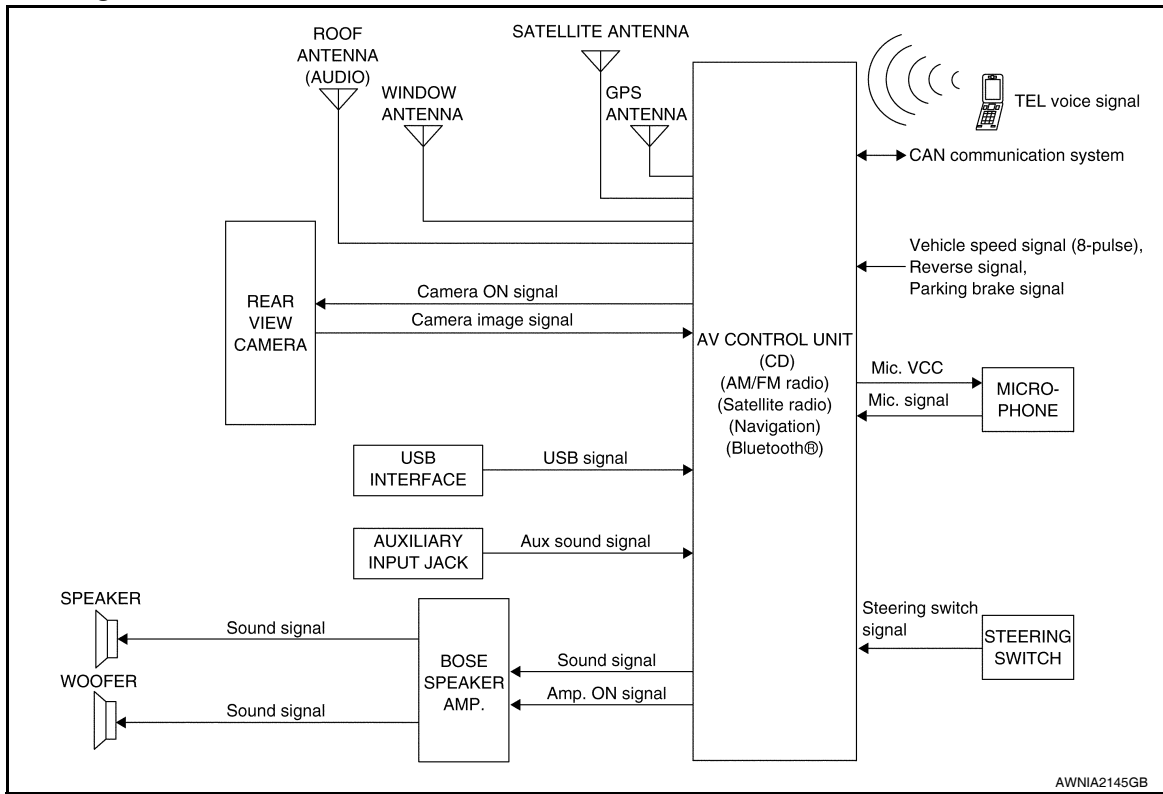
[BOSE AUDIO WITH NAVIGATION]

MANUAL SETTING ITEM		Note
Items	Setting value	
4WAS	WITHOUT	—
	WITH	—
SOUND SYSTEM	BASE	—
	BOSE	—
ANTENNA TYPE	ROD TYPE	—
	LONG TYPE	—
DUAL-ZONE AUTO TEMP	WITHOUT	—
	WITH	—
DVD PLAY FUNCTION	WITHOUT	—
	WITH	—
BODY TYPE	SED 2DR	SEDAN 2 DOOR
	SED 4DR 1	SEDAN 4 DOOR
	SED 4DR 2	SEDAN 4 DOOR (WIDE)
	H/B 2DR	H/B 2 DOOR
	H/B 4DR	H/B 4 DOOR
	COUPE 2DR	COUPE 2 DOOR
	COUPE T	COUPE T BAR
	WGN 4DR 2	49H WAGON 4 DOOR (WIDE)
	H/T 2DR 1	H/T 2 DOOR
	H/T 2DR 2	H/T 2 DOOR (HIGH-ROOF)
	H/T 4DR 1	H/T 4 DOOR
	H/T 4DR 2	H/T 4 DOOR (WIDE)
	WGN 2DR	WAGON 2 DOOR
	WGN 4DR 1	WAGON 4 DOOR
	WGN 4DR 3	WAGON 4 DOOR (HIGH-ROOF)
	WGN 4DR 4	56H WAGON 4 DOOR (WIDE)
	VAN 2DR	VAN 2 DOOR
	VAN 4DR 1	VAN 4 DOOR
	VAN 4DR 2	VAN 4 DOOR (HIGH-ROOF)
	CONV	CONVERTIBLE

FUNCTION DIAGNOSIS

MULTI AV SYSTEM

System Diagram



System Description

The multi AV system consists of the following systems.

- Navigation system
- Audio system
- Rear view monitor
- Hands-free phone system

Refer to the following table for multi AV system descriptions.

System	Reference page
Navigation system	AV-170
Audio system	AV-178
Rear view monitor system	AV-175
Hands-free phone system	AV-181

VOICE RECOGNITION

The multi AV system uses voice recognition to control functions of the following systems:

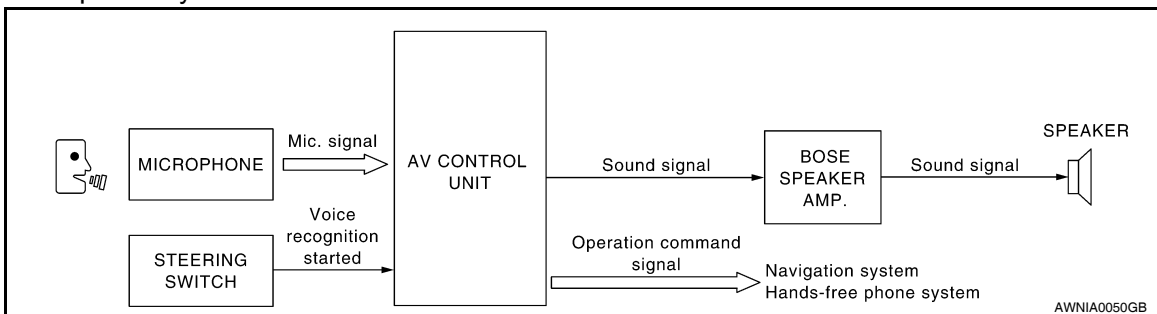
- Navigation system

MULTI AV SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

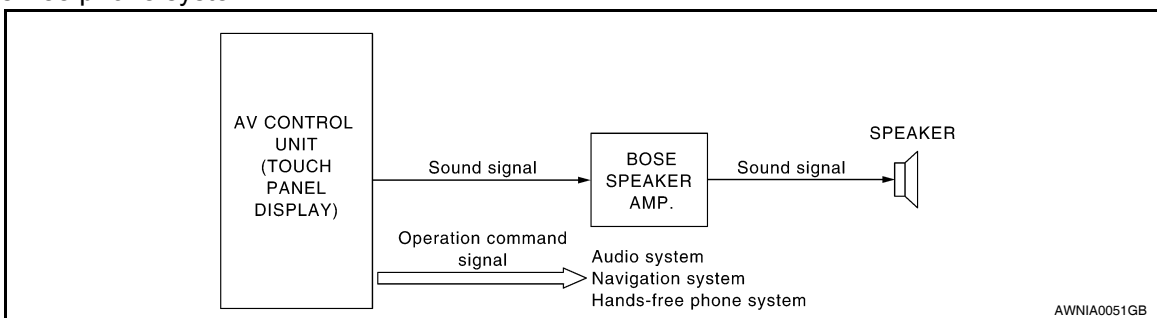
- Hands-free phone system



TOUCH PANEL

The multi AV system uses a touch panel display to control functions of the following systems:

- Audio system
- Navigation system
- Hands-free phone system



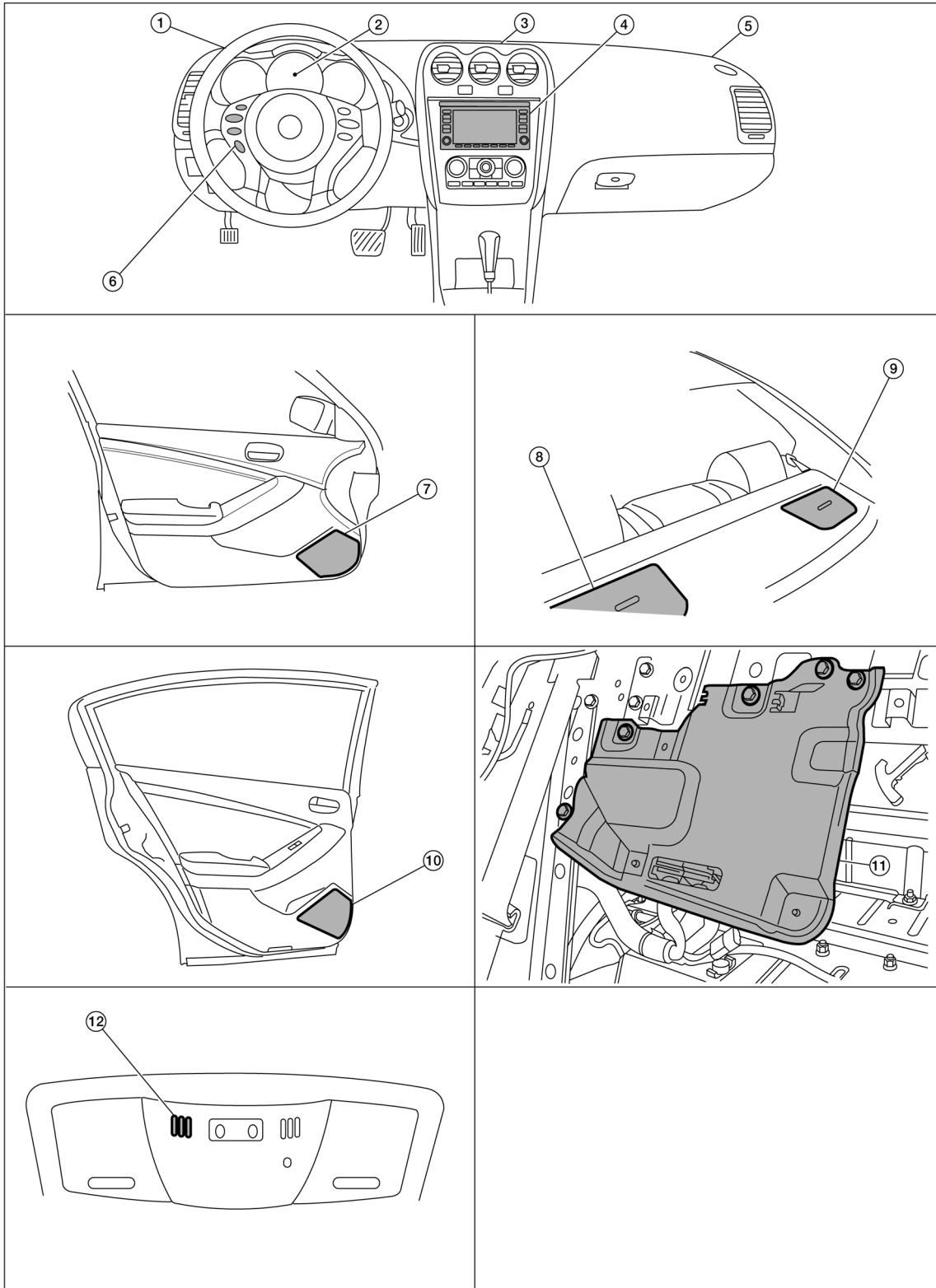
MULTI AV SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Component Parts Location

INFOID:000000005786597



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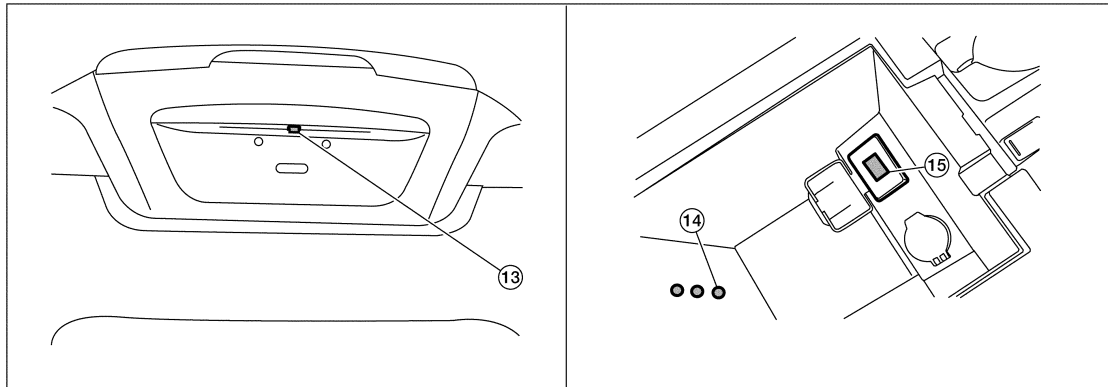
AV

AWNIA2146ZZ

MULTI AV SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]



AWNIA2147ZZ

- | | | |
|---|--|---|
| 1. Tweeter LH M51 | 2. Combination meter M24 | 3. Center speaker M151 |
| 4. AV control unit M90, M91, M100, M101, M102, M103, M104, M105 | 5. Tweeter RH M52 | 6. Steering wheel audio control switches |
| 7. Front door speaker
LH D22
RH D122 | 8. Rear subwoofer LH B120 | 9. Rear subwoofer RH B124 |
| 10. Rear door speaker
LH D202
RH D302 | 11. BOSE speaker amp. B121, B122 | 12. Microphone R7 |
| 13. Rear view camera B35 | 14. AUX jack M206 (view in center console) | 15. USB interface M205 (view in center console) |

Component Description

INFOID:000000005786598

Part name	Description
AV control unit	<ul style="list-style-type: none"> Integrates DVD-ROM drive allowing map data to be stored The AV control unit includes the navigation, audio, hands-free phone, satellite radio and display functions
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit, and outputs audio signals to each speaker.
Front door speaker	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs high, mid and low range sounds
Tweeter	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs high range sound
Center speaker	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs high, mid and low range sounds
Rear door speaker	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs high, mid and low range sounds
Rear subwoofer	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs low range sound
Rear view camera	<ul style="list-style-type: none"> Receives camera ON signal from the AV control unit Sends image signal to the AV control unit
Steering wheel audio control switches	<ul style="list-style-type: none"> Operations for audio, hands-free phone and navigation are possible Steering switch signal (operation signal) is output to AV control unit
Microphone	Voice signals are received and sent to AV control unit.
GPS antenna	GPS signal is received and sent to AV control unit.

MULTI AV SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Part name	Description
Antenna amp.	<ul style="list-style-type: none">• Radio signal received by glass antenna is amplified and sent to AV control unit• Power (antenna amp ON signal) is supplied from AV control unit
Satellite radio antenna	Satellite radio signal is received and sent to AV control unit.

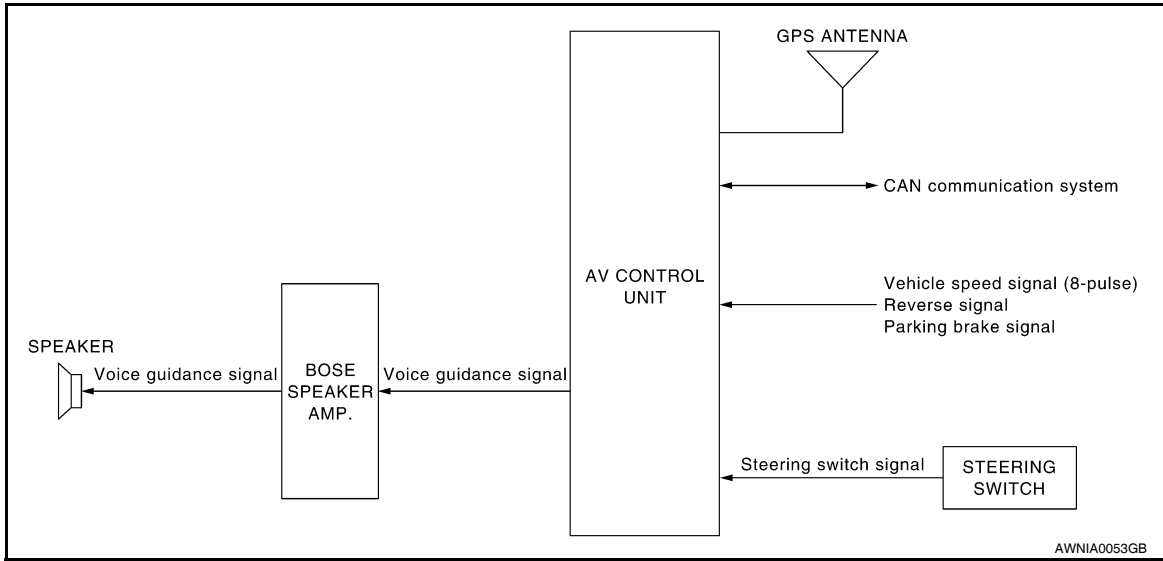
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AV

NAVIGATION SYSTEM

System Diagram

INFOID:000000005786603



AWNIA0053GB

System Description

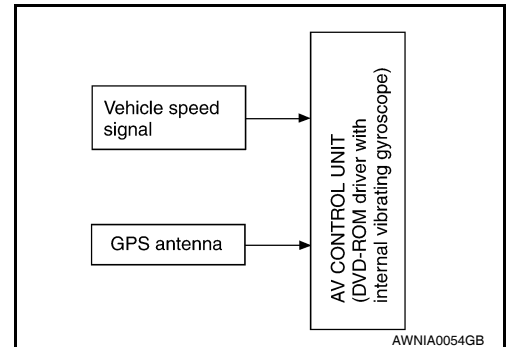
INFOID:000000005786604

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).

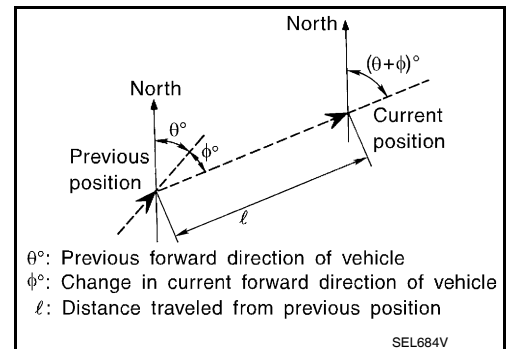
The current position of the vehicle is then identified by comparing the calculated vehicle position with map data read from the map DVD-ROM, which is stored in the DVD-ROM drive (map-matching), and indicated on the screen with a current-location mark.



AWNIA0054GB

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.



SEL684V

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

NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

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.

Type	Advantage	Disadvantage
Gyroscope (angular velocity sensor)	<ul style="list-style-type: none"> Can detect the vehicle's turning angle quite accurately. 	<ul style="list-style-type: none"> Direction errors may accumulate when the vehicle is driven for long distances without stopping.
GPS antenna (GPS information)	<ul style="list-style-type: none"> Can detect the vehicle's travel direction (North/South/East/West). 	<ul style="list-style-type: none"> Correct direction cannot be detected when the vehicle speed is low.

MAP-MATCHING

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

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.

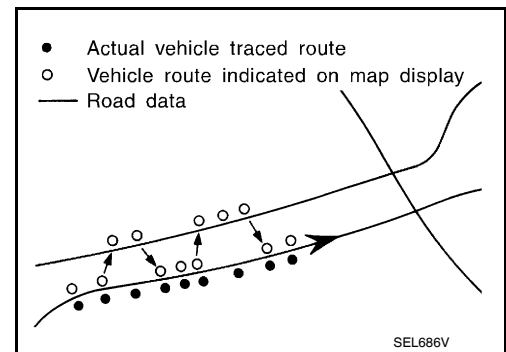
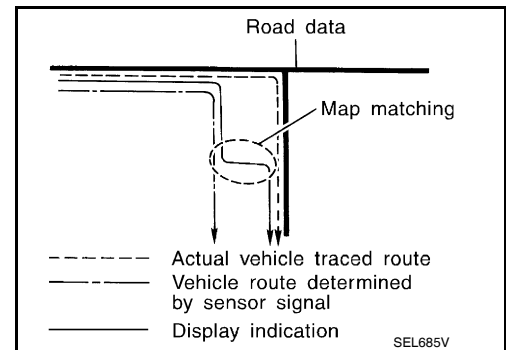
CAUTION:

The road map data is based on data stored in the map DVD-ROM.

- 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.

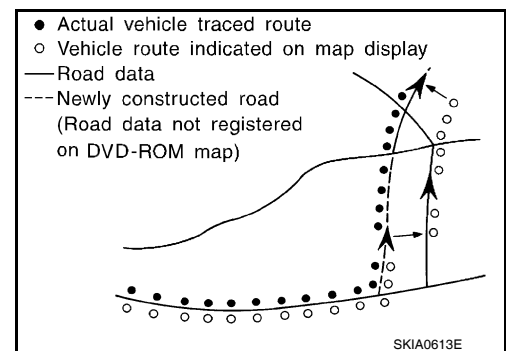
If two roads are running in parallel, they are of the same priority. Therefore, the current-location mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.



- Map-matching does not function correctly when the road on which the vehicle is driving is new and not recorded in the map DVD-ROM, 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 map DVD-ROM 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.



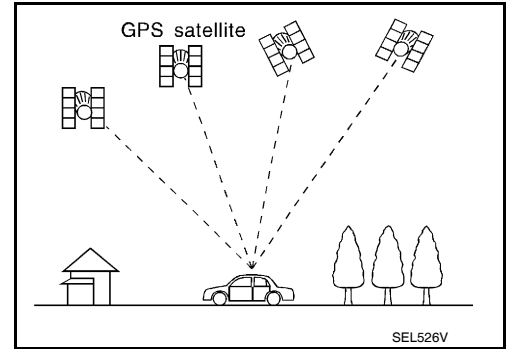
GPS (GLOBAL POSITIONING SYSTEM)

NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

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



Accuracy of the GPS will deteriorate under the following conditions.

- In two-dimensional positioning, the GPS accuracy will deteriorate when the altitude of the vehicle position changes.
- There may be an error of approximately 10 m (30 ft.) in position detected by three-dimensional positioning, which is more accurate than two-dimensional positioning. The accuracy can be even lower depending on the arrangement of the GPS satellites utilized for the positioning.
- Position detection is not possible when the vehicle is in an area where radio waves from the GPS satellite do not reach, such as in a tunnel, parking lot in a building, and under an elevated highway. Radio waves from the GPS satellites may not be received when some object is located over the GPS antenna.
- Position correction by GPS is not available while the vehicle is stopped.

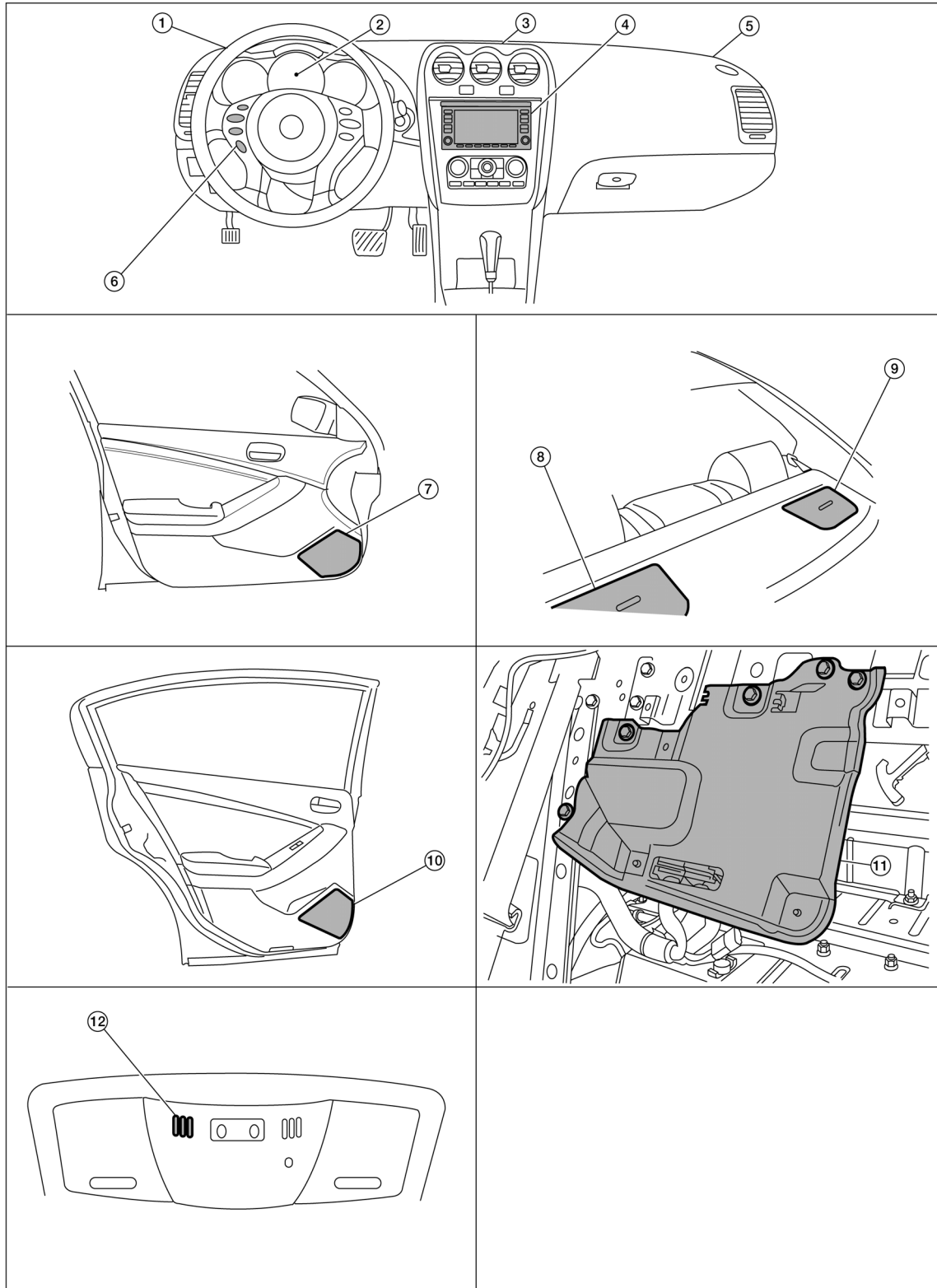
NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Component Parts Location

INFOID:000000005804696



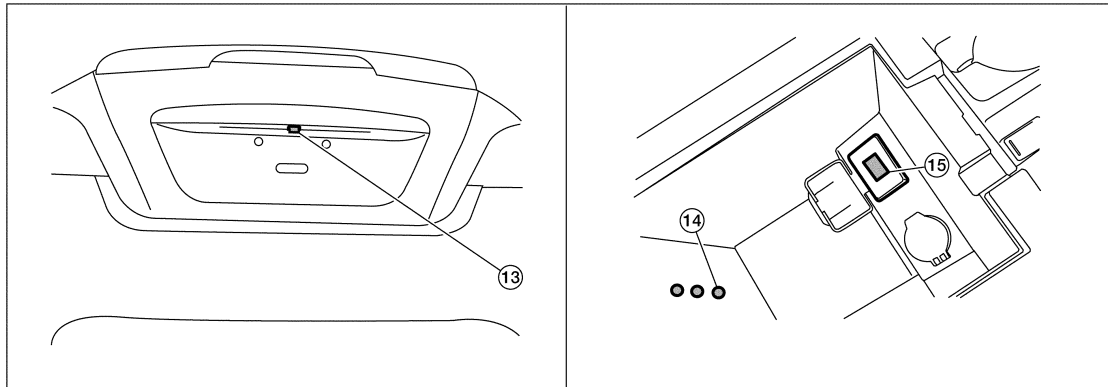
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NAVIGATION SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]



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| 1. Tweeter LH M51 | 2. Combination meter M24 | 3. Center speaker M151 |
| 4. AV control unit M90, M91, M100, M101, M102, M103, M104, M105 | 5. Tweeter RH M52 | 6. Steering wheel audio control switches |
| 7. Front door speaker
LH D22
RH D122 | 8. Rear subwoofer LH B120 | 9. Rear subwoofer RH B124 |
| 10. Rear door speaker
LH D202
RH D302 | 11. BOSE speaker amp. B121, B122 | 12. Microphone R7 |
| 13. Rear view camera B35 | 14. AUX jack M206 (view in center console) | 15. USB interface M205 (view in center console) |

Component Description

INFOID:000000005786606

Part name	Description
AV control unit	<ul style="list-style-type: none"> Controls each operation of the navigation system DVD-ROM drive is built in Voice guidance signal is output to BOSE speaker amp.
BOSE speaker amp.	Voice guidance signal is input from AV control unit, and it is output to speakers.
Tweeter	Voice guidance signal from BOSE speaker amp. is output.
Steering wheel audio control switches	<ul style="list-style-type: none"> Each operation of navigation system can be performed Steering switch signal is output to AV control unit
Microphone	Sends voice signals to AV control unit
GPS antenna	GPS signal is received and is output to AV control unit.

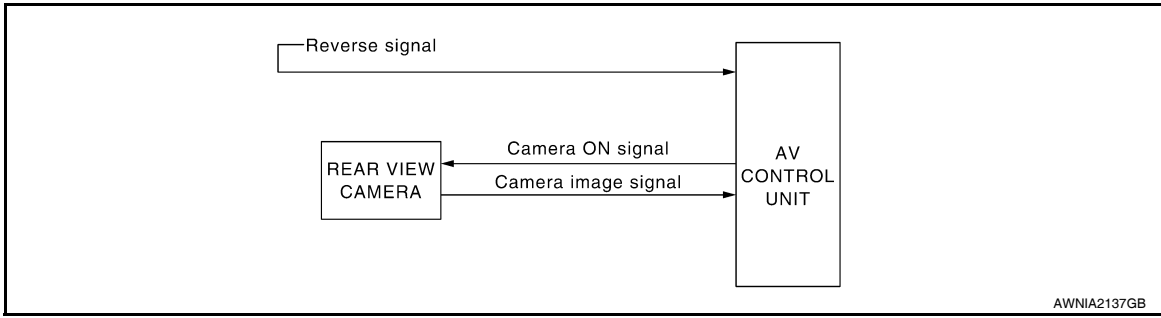
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

REAR VIEW MONITOR SYSTEM

System Diagram



INFOID:000000005786611

System Description

INFOID:000000005786612

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

AV COMMUNICATION LINE

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

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AV

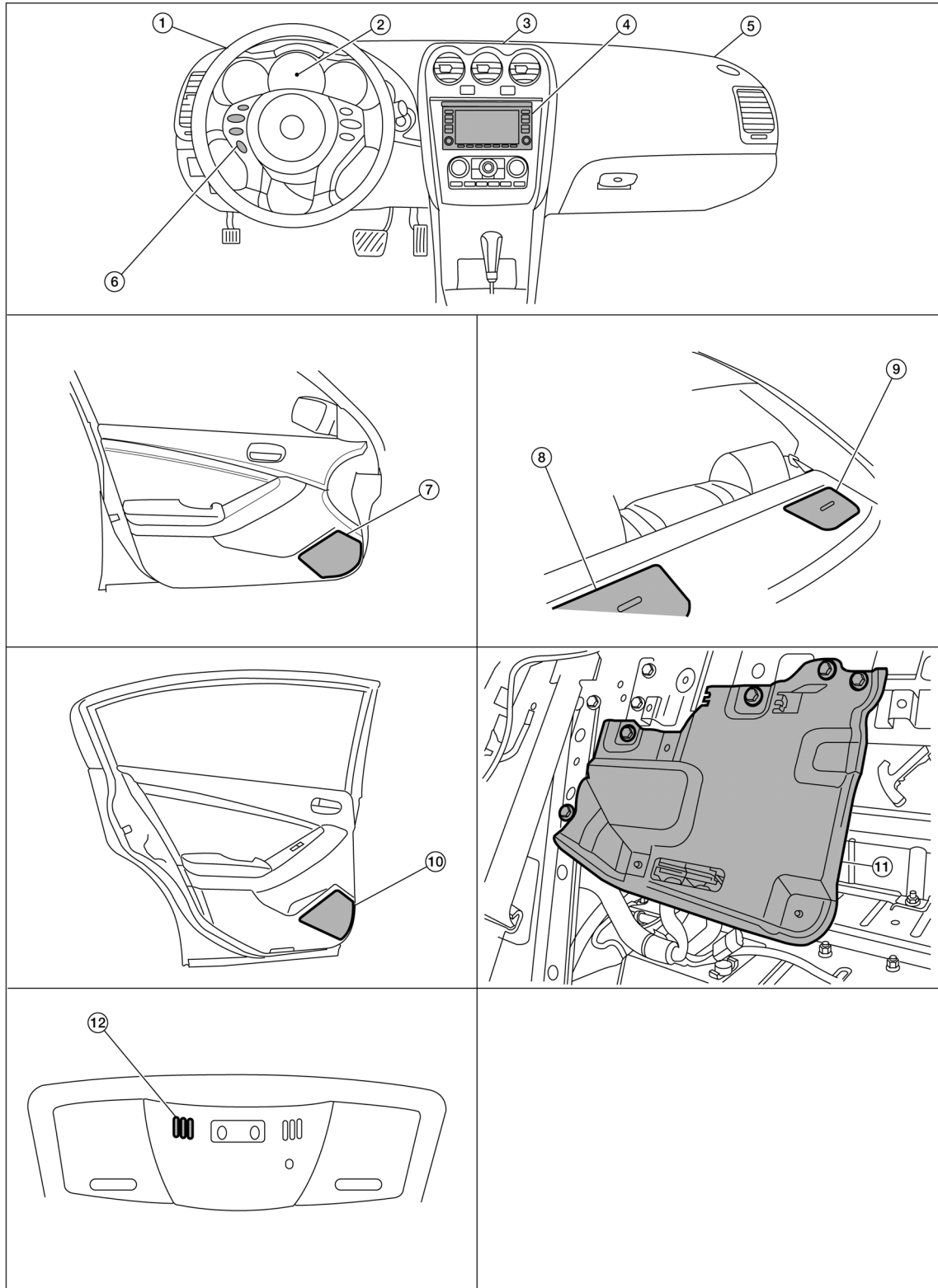
REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Component Parts Location

INFOID:000000005804697

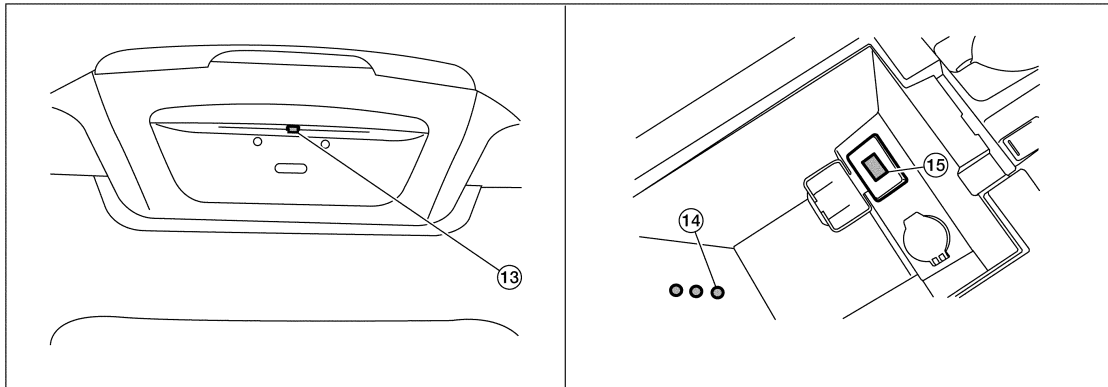


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REAR VIEW MONITOR SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]



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|---|--|---|
| 1. Tweeter LH M51 | 2. Combination meter M24 | 3. Center speaker M151 |
| 4. AV control unit M90, M91, M100, M101, M102, M103, M104, M105 | 5. Tweeter RH M52 | 6. Steering wheel audio control switches |
| 7. Front door speaker
LH D22
RH D122 | 8. Rear subwoofer LH B120 | 9. Rear subwoofer RH B124 |
| 10. Rear door speaker
LH D202
RH D302 | 11. BOSE speaker amp. B121, B122 | 12. Microphone R7 |
| 13. Rear view camera B35 | 14. AUX jack M206 (view in center console) | 15. USB interface M205 (view in center console) |

Component Description

INFOID:000000005786614

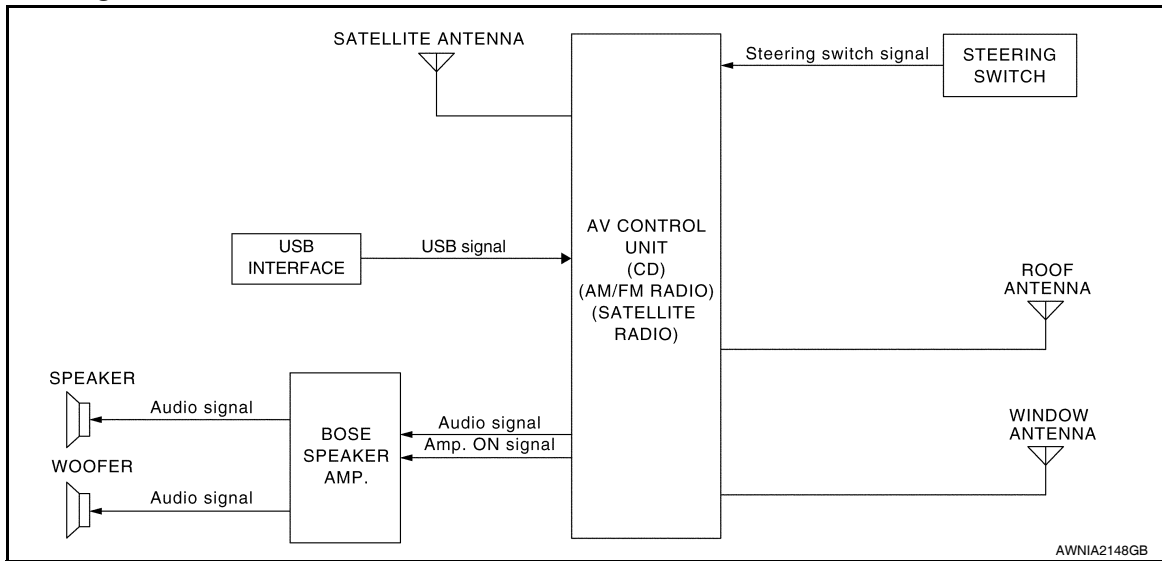
Part name	Description
AV control unit	<ul style="list-style-type: none"> Sends camera ON signal to rear view camera Receives image signal from rear view camera
Rear view camera	<ul style="list-style-type: none"> Receives camera ON signal from AV control unit Sends image signal to the AV control unit

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AV

AUDIO SYSTEM

System Diagram



System Description

INFOID:000000005786620

AUDIO SYSTEM

The audio system consists of the following components

- AV control unit
- BOSE speaker amp.
- Window antenna
- Roof antenna
- Steering wheel audio control switches
- Front door speakers
- Tweeters
- Center speaker
- Rear door speakers
- Subwoofers

When the AV control unit is on, radio signals are received by the window antenna and roof antenna. 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, tweeters, center speaker, rear door speakers and 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.

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

SPEED SENSITIVE VOLUME SYSTEM

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

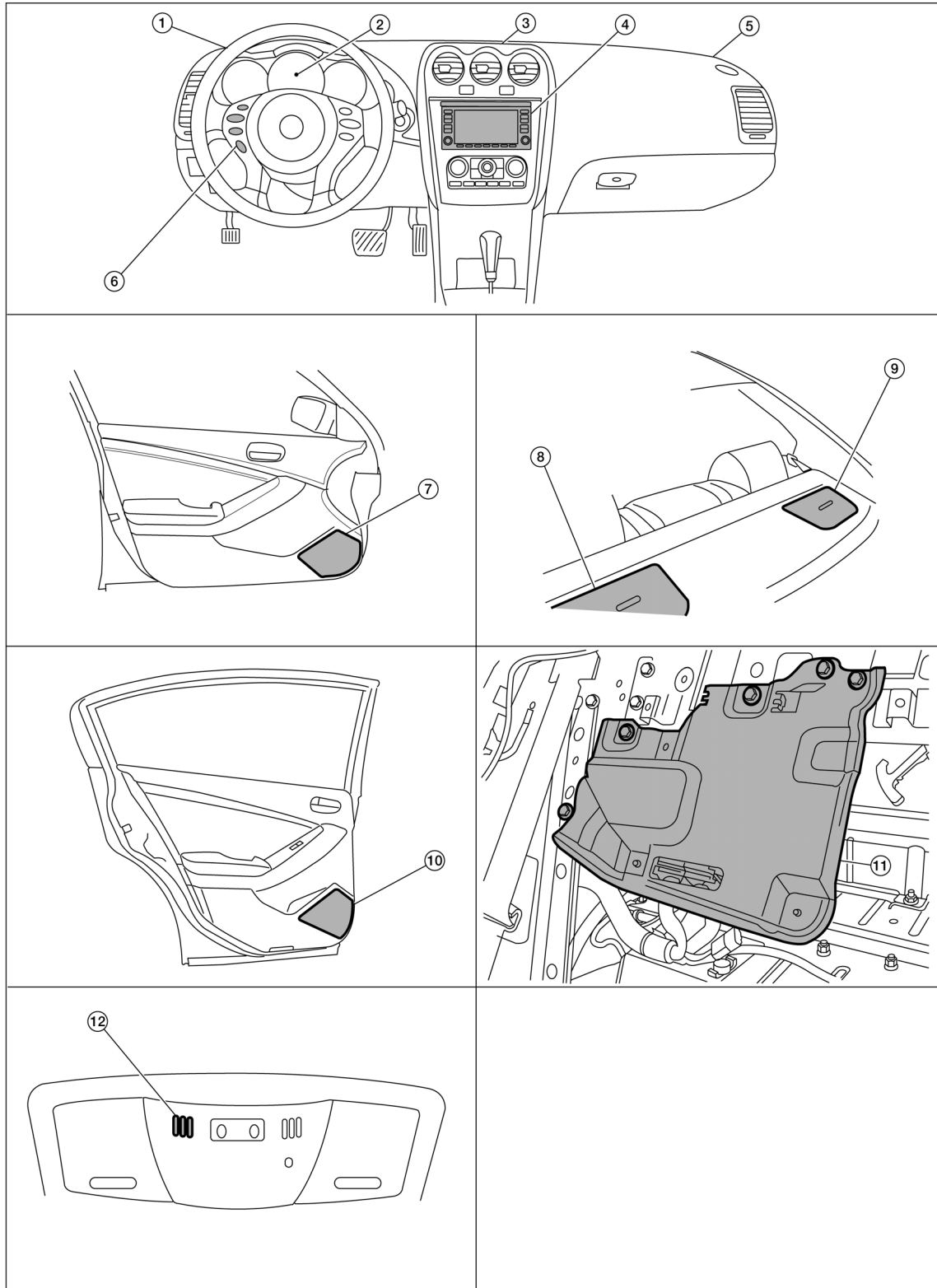
AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Component Parts Location

INFOID:000000005804698



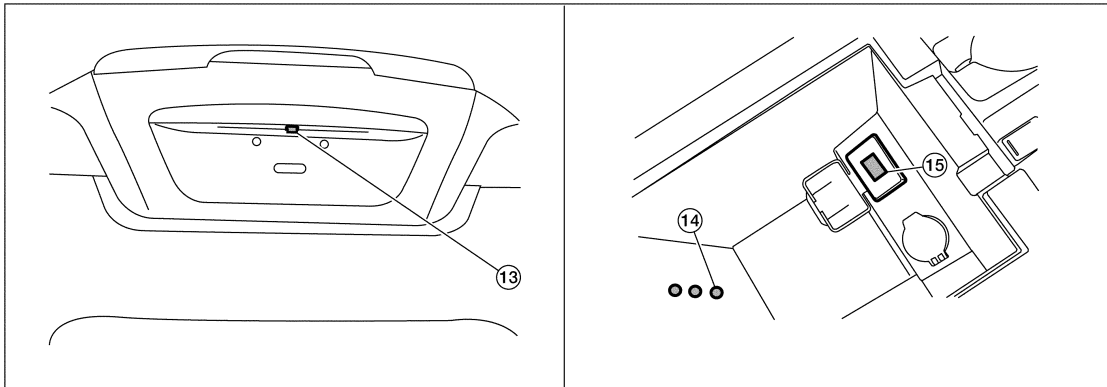
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AUDIO SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]



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- | | | |
|---|--|---|
| 1. Tweeter LH M51 | 2. Combination meter M24 | 3. Center speaker M151 |
| 4. AV control unit M90, M91, M100, M101, M102, M103, M104, M105 | 5. Tweeter RH M52 | 6. Steering wheel audio control switches |
| 7. Front door speaker
LH D22
RH D122 | 8. Rear subwoofer LH B120 | 9. Rear subwoofer RH B124 |
| 10. Rear door speaker
LH D202
RH D302 | 11. BOSE speaker amp. B121, B122 | 12. Microphone R7 |
| 13. Rear view camera B35 | 14. AUX jack M206 (view in center console) | 15. USB interface M205 (view in center console) |

Component Description

INFOID:000000005786622

Part name	Description
AV control unit	<ul style="list-style-type: none"> Controls audio system and satellite radio system functions Audio information is displayed on display screen
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit, and outputs audio signals to each speaker.
Front door speaker	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs high, mid and low range sounds
Tweeter	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs high range sound
Center speaker	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs high, mid and low range sounds
Rear door speaker	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs high, mid and low range sounds
Subwoofer	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs low range sound
Steering wheel audio control switches	<ul style="list-style-type: none"> Each audio operation can be operated Steering switch signal (operation signal) is output to AV control unit
Antenna amp.	<ul style="list-style-type: none"> Radio signal received by window antenna is amplified and sent to AV control unit Power (antenna amp ON signal) is supplied from AV control unit
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.

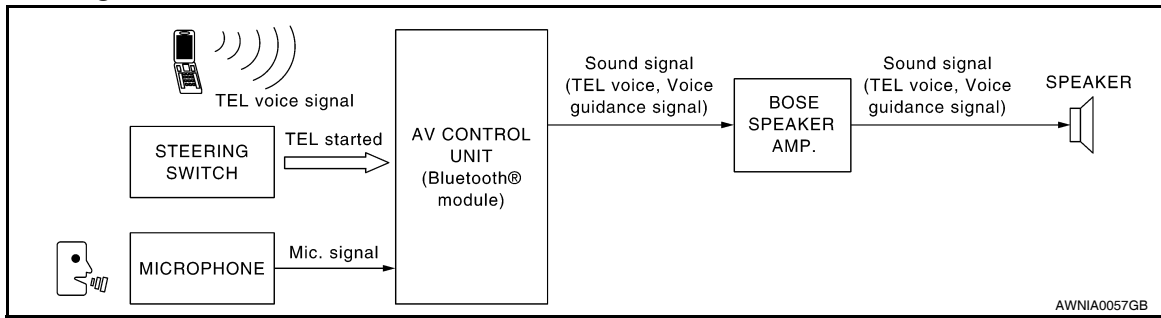
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

HANDS-FREE PHONE SYSTEM

System Diagram



System Description

INFOID:000000005786628

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 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.

AV CONTROL UNIT

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

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

MICROPHONE

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

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AV

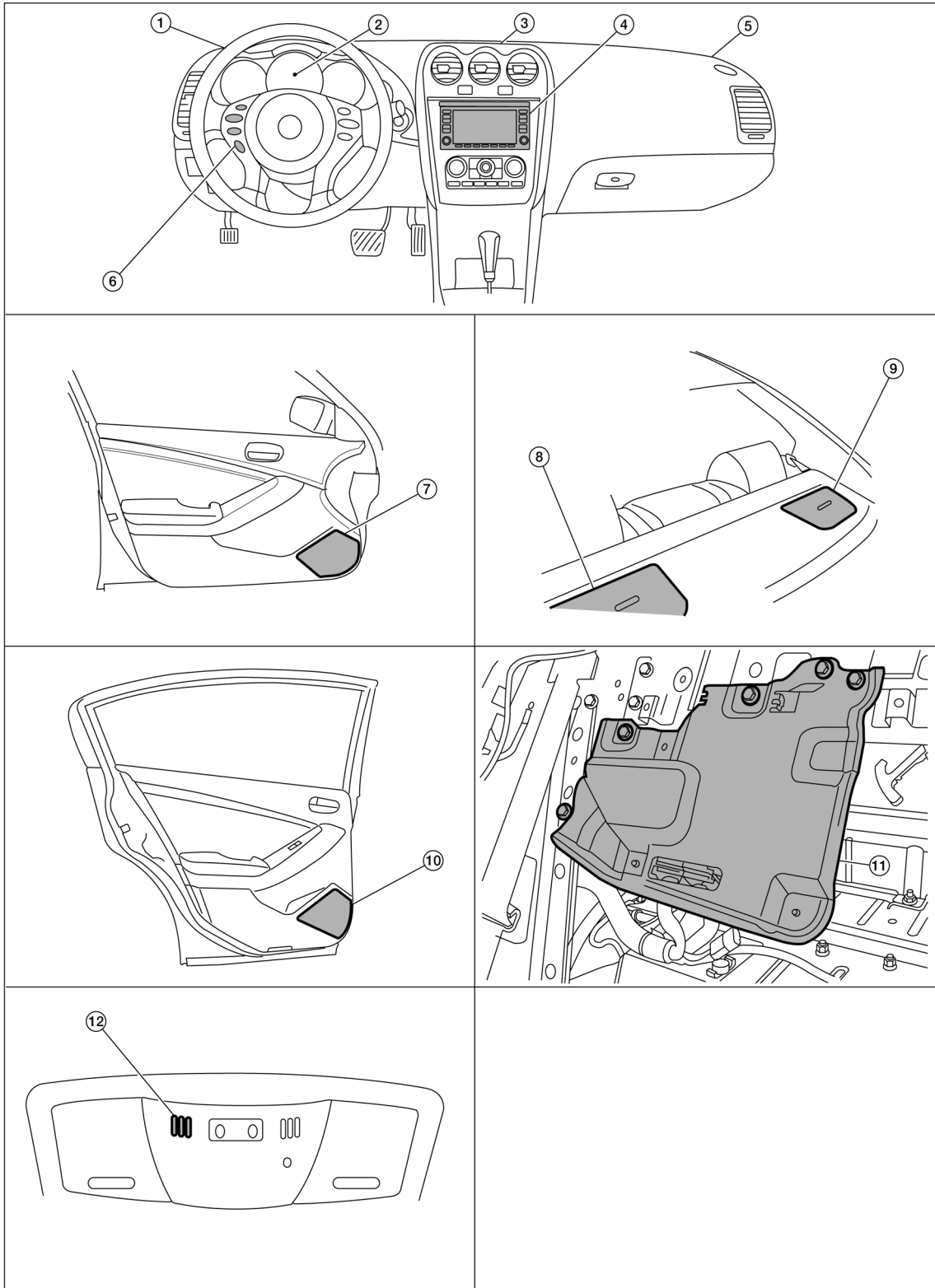
HANDS-FREE PHONE SYSTEM

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Component Parts Location

INFOID:000000005804699

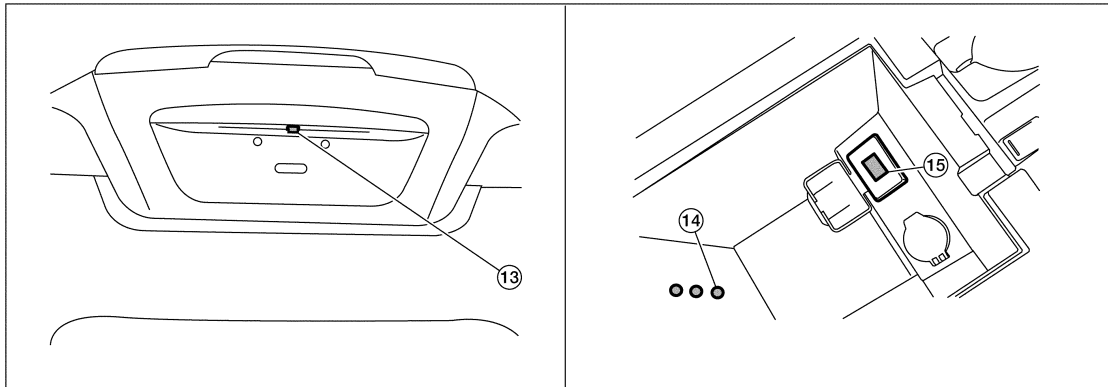


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HANDS-FREE PHONE SYSTEM

[BOSE AUDIO WITH NAVIGATION]

< FUNCTION DIAGNOSIS >



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| 1. Tweeter LH M51 | 2. Combination meter M24 | 3. Center speaker M151 |
| 4. AV control unit M90, M91, M100, M101, M102, M103, M104, M105 | 5. Tweeter RH M52 | 6. Steering wheel audio control switches |
| 7. Front door speaker
LH D22
RH D122 | 8. Rear subwoofer LH B120 | 9. Rear subwoofer RH B124 |
| 10. Rear door speaker
LH D202
RH D302 | 11. BOSE speaker amp. B121, B122 | 12. Microphone R7 |
| 13. Rear view camera B35 | 14. AUX jack M206 (view in center console) | 15. USB interface M205 (view in center console) |

Component Description

INFOID:000000005786630

Part name	Description
AV control unit	<ul style="list-style-type: none"> Controls hands-free phone functions Displays hands-free phone information on display screen
BOSE speaker amp.	Inputs power (amp ON) and sound signal from AV control unit, and outputs sound signal to each speaker.
Front door speaker	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs high, mid and low range sounds
Tweeter	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs high range sound
Center speaker	<ul style="list-style-type: none"> Outputs audio signal from BOSE speaker amp. Outputs high, mid and low range sounds
Steering wheel audio control switches	<ul style="list-style-type: none"> Start a voice recognition session Answer and end telephone calls Adjust the volume level
Microphone	Sends voice signals to AV control unit

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description

INFOID:000000005786631

- The AV control unit diagnosis function starts up 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., or if the screen does not display anything, etc.

On Board Diagnosis Function

INFOID:000000005786632

Description

- The trouble diagnosis function has a self-diagnosis mode for conducting trouble diagnosis automatically and a confirmation/adjustment mode for operating manually.
- The self-diagnosis mode performs diagnoses on the AV control unit, connections between system components as well as connections between AV control unit and GPS antenna. Then it displays the diagnosis results on the display.
- The confirmation/adjustment mode allows the technician to check, modify or adjust the vehicle signals and set values, as well as to monitor the system error records and system communication status. The checking, modifying or adjusting generally require human intervention and judgment (the system cannot make judgment automatically).

On Board Diagnosis Item

Mode	Description
Self Diagnosis	<ul style="list-style-type: none">• AV control unit diagnosis.• Diagnoses the connections across system components, between AV control unit and GPS antenna.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

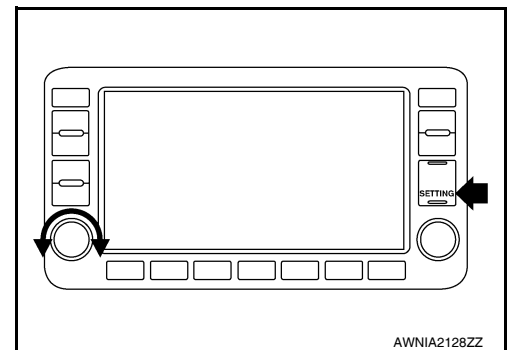
< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Mode		Description	
Confirmation/ Adjustment	Display Diagnosis	The following check functions are available: color tone check by color bar display, light and shade check by gray scale display, touch panel calibration and response check, and color tone check by white display.	
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition, reverse, side view switch and room lamp.	
	Speaker Test	The connection of a speaker can be confirmed by test tone.	
	Navigation	Steering Angle Adjustment	When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted.
		Speed Calibration	When there is a difference between the current location mark and the actual location, it can be adjusted.
		XM Subscription Status	The XM NavTraffic subscription status can be checked.
	Error History	The system malfunction and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.	
	Synchronize FES Clock	—	
	Vehicle CAN Diagnosis	The transmitting/receiving of CAN communication can be monitored.	
	AV COMM Diagnosis	The communication condition of each unit of Multi AV system can be monitored.	
	Hands-free Phone	The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.	
	Camera	The four functions of “Correct Draw Line” “Alter/Confirm Configuration”, “Reset Configuration” and “Camera Syst Type” are available.	
	XM	XM NavTraffic	Change Channel • Any necessary channels required to receive traffic information from the satellite radio system can be set.
		XM NavWeather	
		XM CGS	Change Application ID • Any application ID's required to receive traffic information from the satellite radio system can be set.
Diag		Not used.	
Delete Unit Connection Log	Erase the connection history of unit and error history.		
Initialize Settings	Initializes the AV control unit memory.		
Version Information	Version information of the AV control unit is displayed.		

STARTING PROCEDURE

1. Turn the ignition on.
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.)



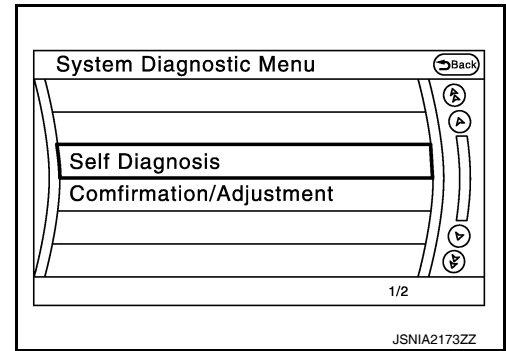
4. The trouble diagnosis initial screen is displayed, and then the items of “Self Diagnosis” and “Confirmation/Adjustment” can be selected.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

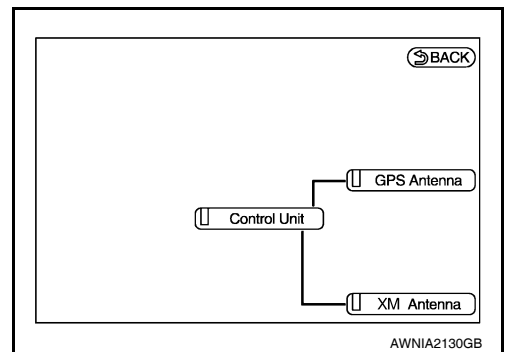
SELF-DIAGNOSIS MODE



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.

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

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

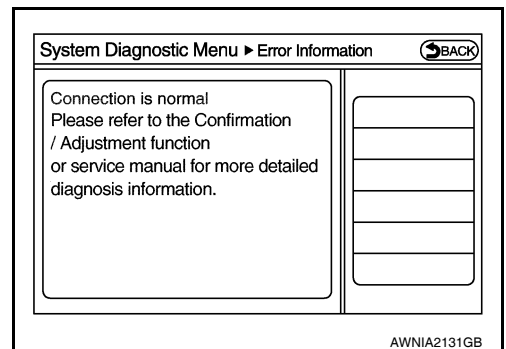


NOTE:

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.



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.

SELF-DIAGNOSIS RESULTS

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

Only Unit Part Is Displayed In Red.

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.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

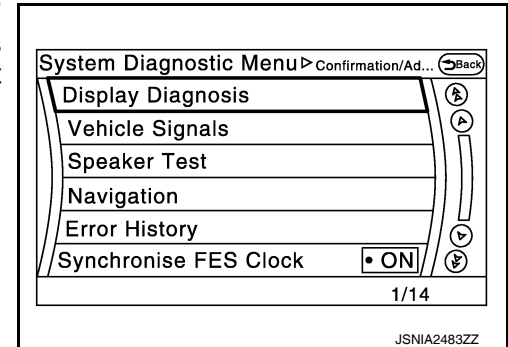
[BOSE AUDIO WITH NAVIGATION]

A Connecting Cable Between Units Is Displayed In Yellow.

Area with yellow connection lines	Description	Possible malfunction location / Action to take
Control unit ↔ XM Antenna	XM antenna connection malfunctions detected.	XM antenna
Control unit ↔ GPS Antenna	GPS antenna connection malfunctions detected.	GPS antenna

CONFIRMATION/ADJUSTMENT MODE

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



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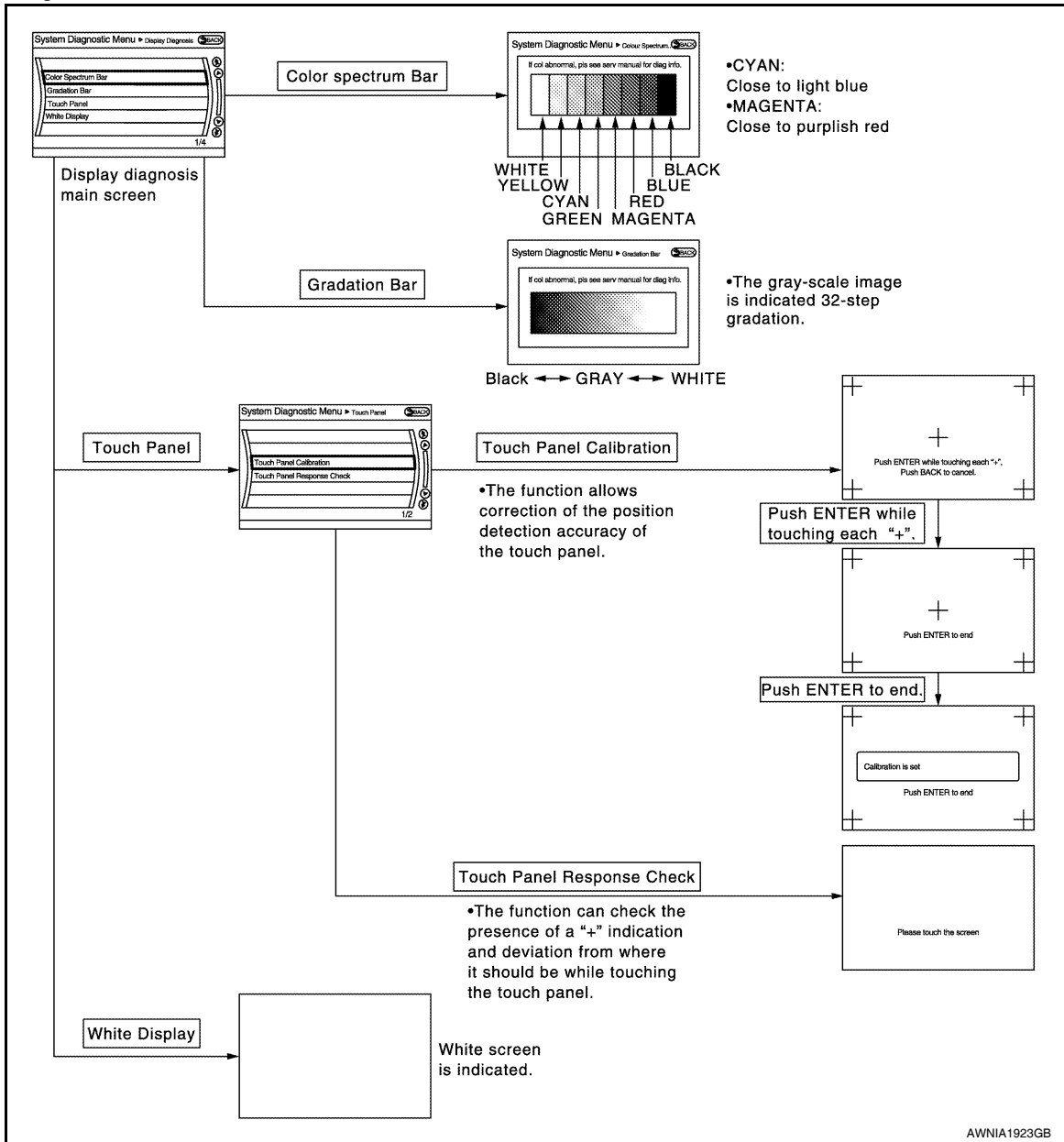
AV

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Display Diagnosis



Vehicle Signals

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

System Diagnostic Menu ▶ Vehicle Signals Back	
Vehicle speed	OFF
Parking brake	ON
Lights	OFF
Ignition	ON
Reverse	OFF
Side view Switch	-
Room Lamp	OFF

JSNIA2177ZZ

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

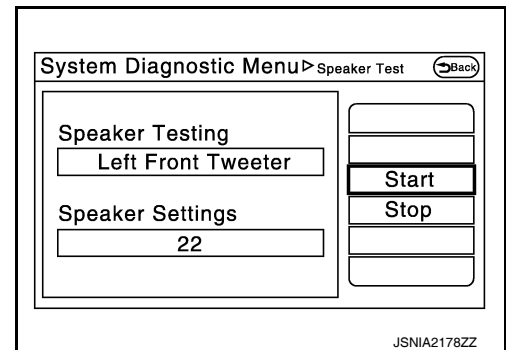
< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Diagnosis item	Display	Vehicle status	Remarks
Vehicle speed	ON	Vehicle speed > 0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.
	OFF	Vehicle speed = 0 km/h (0 MPH)	
Parking brake	ON	Parking brake is applied.	
	OFF	Parking brake is released.	
Lights	ON	Light switch ON	—
	OFF	Light switch OFF	—
Ignition	ON	Ignition switch ON	—
	OFF	Ignition switch in ACC position	—
Reverse	ON	Shift the selector lever to "R" position	Changes in indication may be delayed. This is normal.
	OFF	Shift the selector lever other than "R" position	
Side view Switch	—	—	This item is displayed, but cannot be monitored.
Room Lamp	OFF	—	This item is displayed, but not used.

Speaker Test

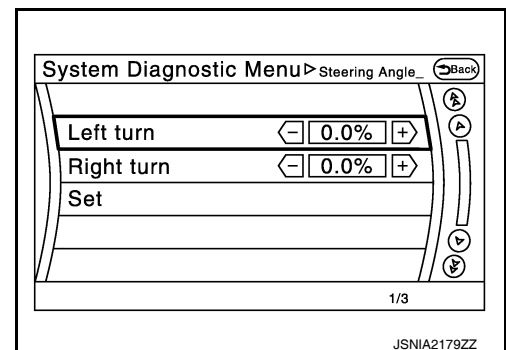
Select "SPEAKER DIAGNOSIS" to display the Speaker Diagnosis screen. Press "Start" to generate a test tone in a speaker. Press "Start" to generate a test tone in the next speaker. Press "Stop" to stop the test tones.



Navigation

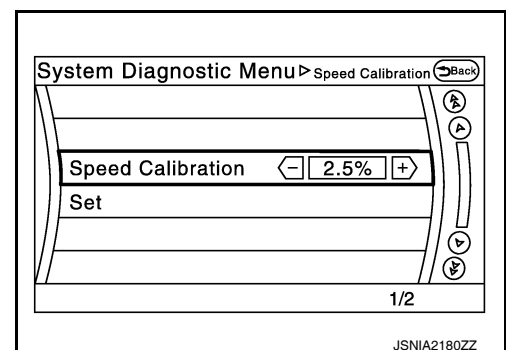
STEERING ANGLE ADJUSTMENT

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



SPEED CALIBRATION

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



DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[BOSE AUDIO WITH NAVIGATION]

< FUNCTION DIAGNOSIS >

Error History

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

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

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

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

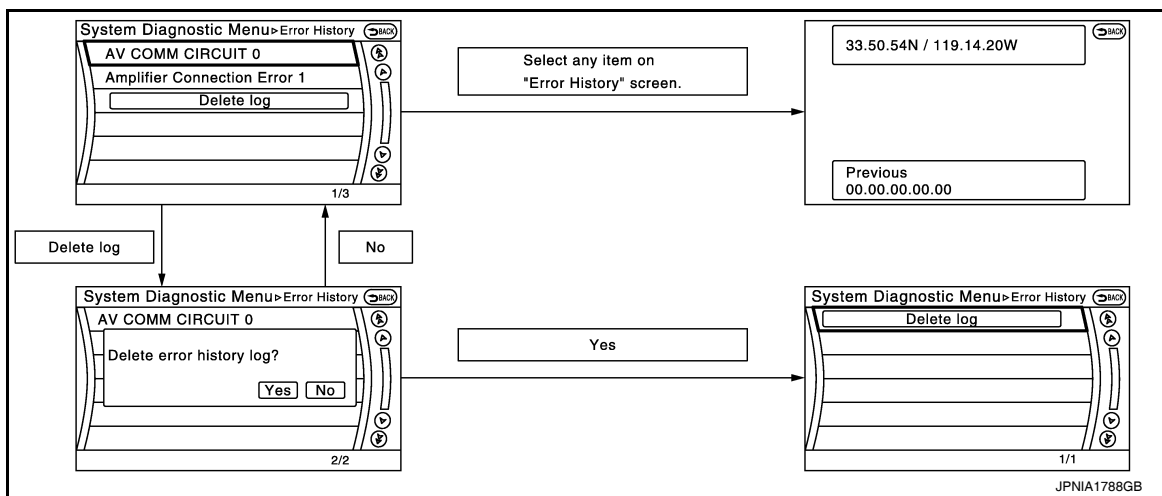
Count up method A

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

Count up method B

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

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



Error item

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-194, "CONSULT - III Function (MULTI AV)" .

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

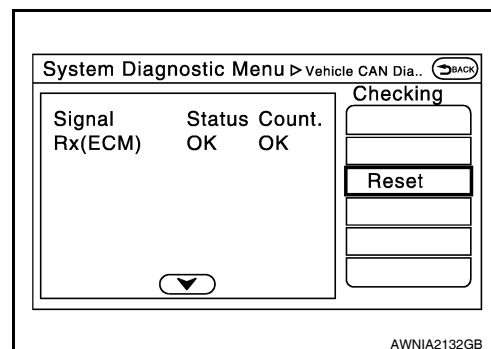
[BOSE AUDIO WITH NAVIGATION]

Error item	Description	Possible malfunction factor/Action to take
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.	
Connection Of Gyro		
Connection of G Sensor		
CAN Controller Memory Error		
Bluetooth Module Connection Error		
Sub CPU Connection Error		
iPod authentication chip error		
Audio connection error	AV control unit malfunction is detected.	
DSP Connection Error		
DSP Communication Error	AV control unit malfunction is detected.	<ul style="list-style-type: none"> If a disc can be played, then there is a possibility of the detection of a temporary malfunction. Replace the AV control unit if the malfunction occurs constantly.
HDD Connection Error		
HDD Read Error		
HDD Write Error		
HDD Communication Error		
HDD Access Error	AV control unit malfunction is detected.	<ul style="list-style-type: none"> If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. Replace the AV control unit if the malfunction occurs constantly.
HDD Read Error		
HDD Write Error		
HDD Communication Error		
HDD Access Error	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly.
GPS Communication Error		
GPS ROM Error		
GPS RAM Error		
GPS RTC Error	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.
Unfinished configuration		
USB Controller Communication Error	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DVD Mechanism Communication Error	AV control unit malfunction is detected.	<ul style="list-style-type: none"> If DVD can be played, then there is a possibility of the detection of a temporary malfunction. Replace the AV control unit if the malfunction occurs constantly.
USB electric current Error	Detection of over current in USB interface.	Check USB harness between the AV control unit and USB interface.
GPS Antenna Error	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.

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)
Rx(ECM)	OK / ???	OK / 0 - 39



DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

NOTE:

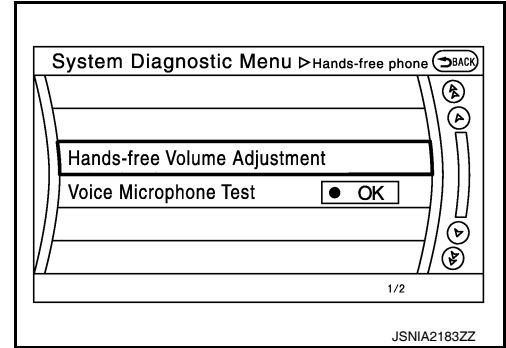
“???” indicates UNKWN

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.

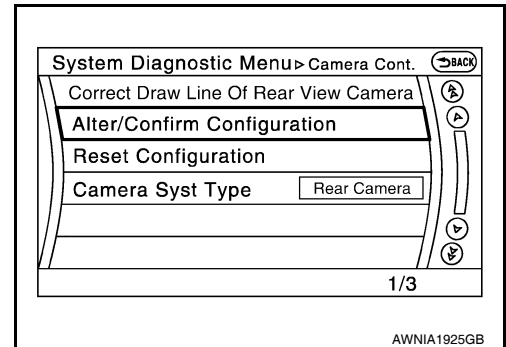
Hands-Free Phone

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



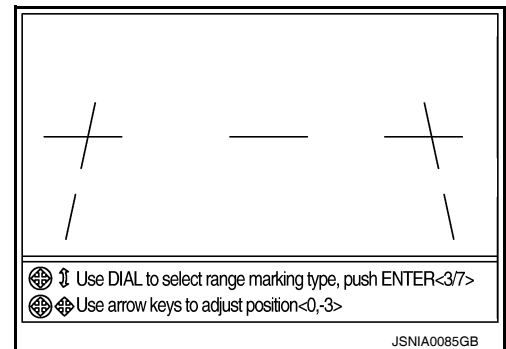
Camera

The four functions of “Correct Draw Line of Rear View Camera”, “Alter/Confirm Configuration”, “Reset Configuration” and “Camera Syst Type” are available.



Correct Draw Line of Rear View Camera

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



Alter/Confirm Configuration

- Configuration stored in the AV control unit can be checked and modified.

Configuration list

Setting item	Setting	Setting item	Setting
Predi. Course Lines	Without	Wheelbase	0.0000000
Rear Coeff. K	0.0000000	Total Length	0.0000000
Rear Coeff. F	0.0000000	Steering Gear Ratio	0.0000000
Rear Coeff. P1	0.0000000	Side Coeff. K	0.0000000

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

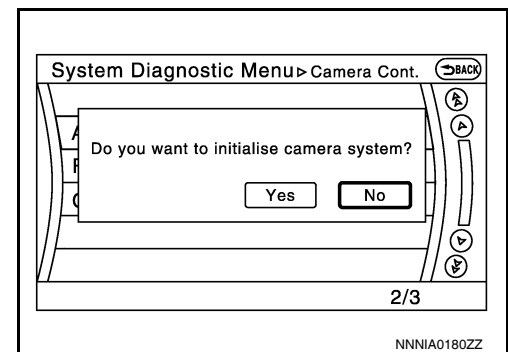
< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Setting item	Setting	Setting item	Setting
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
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	—	—

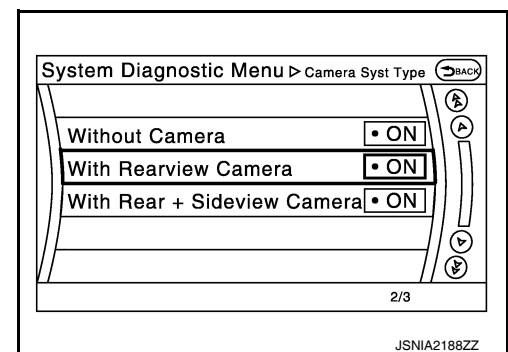
Reset Configuration

- 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

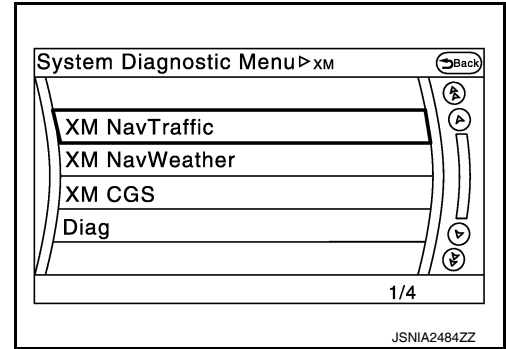
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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[BOSE AUDIO WITH NAVIGATION]

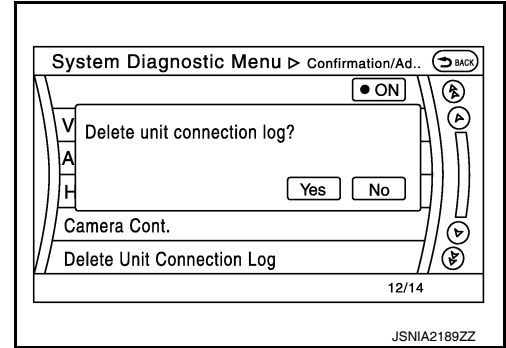
< FUNCTION DIAGNOSIS >

- Any application ID's required to receive traffic information from the satellite radio system can be set.



Delete Unit Connection Log

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

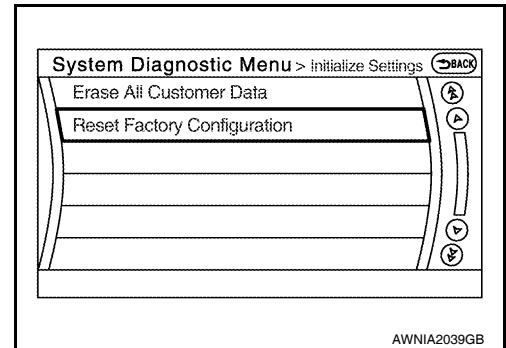


Initialize Settings

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

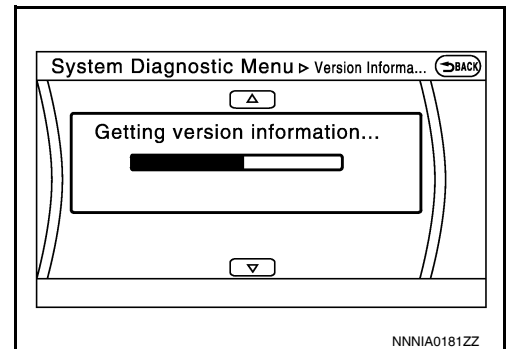
CAUTION:

- **Never perform Reset Factory Configuration except when configuration is unsuccessful.**
- **Factory Configuration Initialize requires configuration. For details, refer to [AV-184, "Description"](#).**



Version Information

Version information of the AV control unit is displayed.



CONSULT - III Function (MULTI AV)

INFOID:000000005786633

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.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[BOSE AUDIO WITH NAVIGATION]

< FUNCTION DIAGNOSIS >

Diagnosis mode	Description
Data Monitor	The diagnosis of vehicle signal that is input to the AV control unit can be performed.
Configuration	<ul style="list-style-type: none"> • Read and save the vehicle specification. • Write the vehicle specification when replacing AV control unit.

AV Communication

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

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

ECU IDENTIFICATION

The part number of AV control unit is displayed.

SELF DIAGNOSIS RESULT

- In CONSULT-III self-diagnosis, self-diagnosis results and error history are displayed collectively.
- The current malfunction indicates “CRNT”. The past malfunction indicates “PAST”.
- The timing is displayed as “0” if any of the error codes [U1000], [U1010], [U1300] and [U1310] is detected. The counter increases by 1 if the condition is normal at the next ignition switch ON cycle.

Self-diagnosis Results Display Item

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-198. "Diagnosis Procedure"
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	
Cont Unit [U1200]	AV control unit malfunction is detected.	
GYRO NO CONN [U1201]		
G-SENSOR NO CONN [U1202]		
CAN CONT [U1216]		
BLUETOOTH MODULE [U1217]		
SUB CPU CONN [U1228]		
iPod CERTIFICATION [U1229]		
Built-in AUDIO CONN [U122E]		
HDD CONN [U1218]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> • If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
HDD READ [U1219]		
HDD WRITE [U121A]		
HDD COMM [U121B]		
HDD ACCESS [U121C]		
GPS COMM [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly.
GPS ROM [U1205]		
GPS RAM [U1206]		
GPS RTC [U1207]		
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Error item	Description	Possible malfunction factor/Action to take
DSP CONN [U121D]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> If a disc can be played, then there is a possibility of the detection of a temporary malfunction. Replace the AV control unit if the malfunction occurs constantly.
DSP COMM [U121E]		
DVD COMM [U1227]	AV control unit malfunction is detected.	<ul style="list-style-type: none"> If DVD can be played, then there is a possibility of the detection of a temporary malfunction. Replace the AV control unit if the malfunction occurs constantly.
CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
USB OVERCURRENT [U1263]	Detection of over current in USB connector.	Check USB harness between the AV control unit and USB connector.

DATA MONITOR

ALL SIGNALS

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

Display Item	Display	Vehicle status	Remarks
VHCL SPD SIG	On	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.
	Off	Vehicle speed =0 km/h (0 MPH)	
PKB SIG	On	Parking brake is applied.	
	Off	Parking brake is released.	
ILLUM SIG	On	Block the light beam from the auto light optical sensor when the light SW is ON.	—
	Off	Expose the auto light optical sensor to light when the light SW is OFF or ON.	
IGN SIG	On	Ignition switch ON	
	Off	Ignition switch in ACC position	
REV SIG	On	Selector lever in R position	Changes in indication may be delayed. This is normal.
	Off	Selector lever in any position other than R	
SIDE VIEW SW	Off	This item is displayed, but cannot be monitored.	—
ROOM LAMP	Off	This item is displayed, but not used.	—

SELECTION FROM MENU

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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

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

CONFIGURATION

Configuration has three functions as follows.

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

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AV

U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:000000005786634

Refer to [LAN-7, "System Description"](#).

DTC Logic

INFOID:000000005786635

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition
U1000	CAN COMM CIRCUIT [U1000]	When AV control unit is not transmitting or receiving CAN communication signals for 2 seconds or more.

Diagnosis Procedure

INFOID:000000005786636

Symptom: Displays "CAN COMM CIRCUIT [U1000]" as a self-diagnosis result of AV control unit.

1. CHECK CAN COMMUNICATION

Select "SELF-DIAG RESULTS" mode for "MULTI AV" with CONSULT-III.

>> Go to "LAN system". Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1010 CONTROL UNIT (CAN)

Description

INFOID:000000005786637

Refer to [LAN-7, "System Description"](#).

DTC Logic

INFOID:000000005786638

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition
U1010	CONTROL UNIT (CAN) [U1010]	When a malfunction is detected during initial diagnosis for CAN controller of each control unit.

Diagnosis Procedure

INFOID:000000005786639

Symptom: Displays "CONTROL UNIT (CAN) [U1010]" as a self-diagnosis result of AV control unit.

1. CHECK CAN COMMUNICATION

Select "SELF-DIAG RESULTS" mode for "MULTI AV" with CONSULT-III.

>> Go to "LAN system". Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

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AV

U1200 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1200 AV CONTROL UNIT

Description

INFOID:000000005786640

Refer to [AV-165. "System Description"](#).

DTC Logic

INFOID:000000005786641

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1200	Cont Unit FLASH-ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	Replace AV control unit. Refer to AV-292. "Removal and Installation" .

U1201 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1201 AV CONTROL UNIT

Description

INFOID:000000005786642

Refer to [AV-165, "System Description"](#).

DTC Logic

INFOID:000000005786643

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1201	GYRO NO CONN [U1201]	An internal malfunction is detected in AV control unit (gyrocompass disconnection).	Replace AV control unit. Refer to AV-292, "Removal and Installation" .

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AV

U1202 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1202 AV CONTROL UNIT

DTC Logic

INFOID:000000005786644

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1202	G-SENSOR NO CONN [U1202]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292. "Removal and Installation" .

U1204 GPS COMM

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1204 GPS COMM

Description

INFOID:000000005786645

Refer to [AV-165, "System Description"](#).

DTC Logic

INFOID:000000005786646

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1204	GPS COMM [U1204]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-292, "Removal and Installation" .

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U1205 GPS ROM

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1205 GPS ROM

Description

INFOID:000000005786647

Refer to [AV-165. "System Description"](#).

DTC Logic

INFOID:000000005786648

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1205	GPS ROM [U1205]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-292. "Removal and Installation" .

U1206 GPS RAM

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1206 GPS RAM

Description

INFOID:000000005786649

Refer to [AV-165, "System Description"](#).

DTC Logic

INFOID:000000005786650

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1206	GPS RAM [U1206]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-292, "Removal and Installation" .

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U1207 GPS RTC

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1207 GPS RTC

Description

INFOID:000000005786651

Refer to [AV-165. "System Description"](#).

DTC Logic

INFOID:000000005786652

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1207	GPS RTC [U1207]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-292. "Removal and Installation" .

U1216 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1216 AV CONTROL UNIT

Description

INFOID:000000005786653

Refer to [AV-165, "System Diagram"](#).

DTC Logic

INFOID:000000005786654

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1216	CAN CONT [U1216]	An internal malfunction is detected in AV control unit (CAN controller).	Replace AV control unit. Refer to AV-292, "Removal and Installation" .

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AV

U1217 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1217 AV CONTROL UNIT

Description

INFOID:000000005786655

Refer to [AV-165. "System Description"](#).

DTC Logic

INFOID:000000005786656

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1217	BLUETOOTH CONN [U1217]	An internal malfunction is detected in AV control unit.	Replace AV control unit. Refer to AV-292. "Removal and Installation" .

U1218 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1218 AV CONTROL UNIT

DTC Logic

INFOID:000000005786657

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005786658

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).

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AV

U1219 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1219 AV CONTROL UNIT

DTC Logic

INFOID:000000005786659

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292. "Removal and Installation".

Diagnosis Procedure

INFOID:000000005786660

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-292. "Removal and Installation"](#).

U121A AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U121A AV CONTROL UNIT

DTC Logic

INFOID:000000005786661

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005786662

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).

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AV

U121B AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U121B AV CONTROL UNIT

DTC Logic

INFOID:000000005786663

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005786664

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).

U121C AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U121C AV CONTROL UNIT

DTC Logic

INFOID:000000005786665

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005786666

1. CHECK MUSIC BOX FUNCTION

Is music box function normal?

- YES >> Malfunction may be detected intermittently.
NO >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).

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AV

U121D AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U121D AV CONTROL UNIT

DTC Logic

INFOID:00000000578667

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121D	DSP CONN [U121D]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If a disc can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292, "Removal and Installation".

Diagnosis Procedure

INFOID:00000000578668

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-292, "Removal and Installation"](#).

U121E AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U121E AV CONTROL UNIT

DTC Logic

INFOID:000000005786669

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If a disc can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005786670

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-292, "Removal and Installation"](#).

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AV

U1225 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1225 AV CONTROL UNIT

DTC Logic

INFOID:000000005786671

DTC DETECTION LOGIC

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

U1227 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1227 AV CONTROL UNIT

DTC Logic

INFOID:000000005786672

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1227	DVD COMM [U1227]	AV control unit malfunction is detected.	<ul style="list-style-type: none">• If DVD can be played, then there is a possibility of the detection of a temporary malfunction.• Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292, "Removal and Installation".

Diagnosis Procedure

INFOID:000000005786673

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-292, "Removal and Installation"](#).

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AV

U1228 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1228 AV CONTROL UNIT

DTC Logic

INFOID:000000005786674

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1228	SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292, "Removal and Installation" .

U1229 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1229 AV CONTROL UNIT

DTC Logic

INFOID:000000005786675

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1229	iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292, "Removal and Installation" .

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AV

U122A AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U122A AV CONTROL UNIT

DTC Logic

INFOID:000000005786676

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:000000005786677

1.PERFORM THE SELF-DIAGNOSIS

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

>> Write configuration data with "MULTI AV" of CONSULT-III. Refer to [AV-194, "CONSULT - III Function \(MULTI AV\)"](#).

U122E AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U122E AV CONTROL UNIT

DTC Logic

INFOID:000000005786678

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U122E	Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-292, "Removal and Installation" .

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U1244 GPS ANTENNA

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1244 GPS ANTENNA

Description

INFOID:000000005786679

Refer to [AV-165. "System Description"](#).

DTC Logic

INFOID:000000005786680

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition
U1244	GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.

Diagnosis Procedure

INFOID:000000005786681

Regarding Wiring Diagram information, refer to [AV-261. "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.

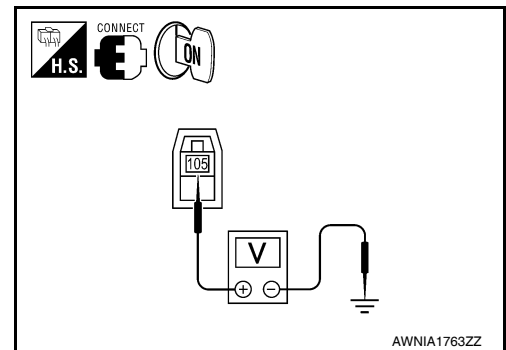
2. CHECK AV CONTROL UNIT VOLTAGE

1. Turn ignition switch ON.
2. Check voltage between AV control unit connector M90 terminal 105 and ground.

73 - Ground : Approx. 5V

Is the voltage reading as specified?

- YES >> Replace GPS antenna. Refer to [AV-305. "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-292. "Removal and Installation"](#).



U1263 USB

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1263 USB

DTC Logic

INFOID:000000005786682

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:000000005786683

1. CHECK USB HARNESS

Visually check USB harness.

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).
- NO >> Replace USB harness.

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U1310 AV CONTROL UNIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

U1310 AV CONTROL UNIT

DTC Logic

INFOID:000000005786684

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit. If the malfunction occurs constantly. Refer to AV-292. "Removal and Installation" .

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:000000005786689

Regarding Wiring Diagram information, refer to [AV-261. "Wiring Diagram"](#).

1. CHECK FUSES

Check that the following AV control unit fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
AV control unit	19	Battery power	24
	7	Ignition switch ACC or ON	19
	52	Ignition switch ON or START	3

Are the fuses OK?

YES >> GO TO 2.

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

2. POWER SUPPLY CIRCUIT CHECK

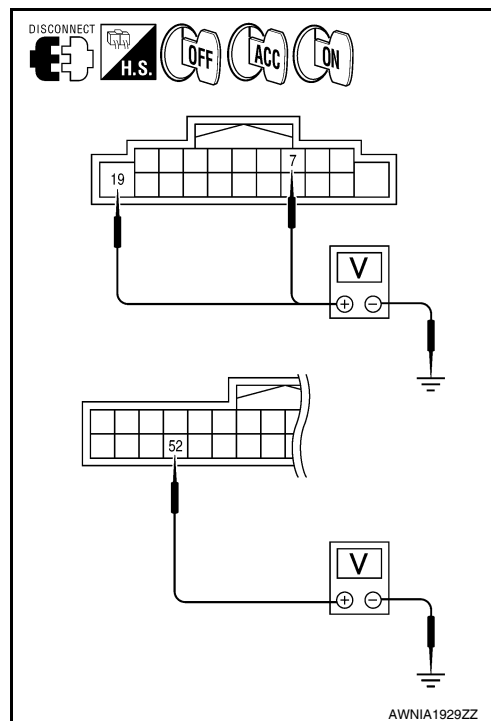
- Disconnect AV control unit connectors M100 and M102.
- Check voltage between the AV control unit connectors M100 and M102 and ground.

Connector	(+)	(-)	OFF	ACC	ON
	Terminal				
M100	7	Ground	0V	Battery voltage	Battery voltage
	19	Ground	Battery voltage	Battery voltage	Battery voltage
M102	52	Ground	0V	0V	Battery voltage

Are the voltage results as specified?

YES >> GO TO 3.

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



3. GROUND CIRCUIT CHECK

POWER SUPPLY AND GROUND CIRCUIT

[BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Check continuity between AV control unit harness connector M100 and ground.

(+)		(-)	Continuity
Connector	Terminal		
M100	20	Ground	Yes

Are the continuity results as specified?

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

BOSE SPEAKER AMP

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:000000005786690

Regarding Wiring Diagram information, refer to [AV-261. "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuses of the BOSE speaker amp. are not blown.

Unit	Terminals	Signal name	Fuse No.
BOSE speaker amp.	50	Battery power	25
	51		26

Are the fuses OK?

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

2.CHECK POWER SUPPLY CIRCUIT

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

(+)		(-)	Voltage (approx.)
Connector	Terminal		
B122	50	Ground	Battery voltage
	51		

Are the voltage readings as specified?

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

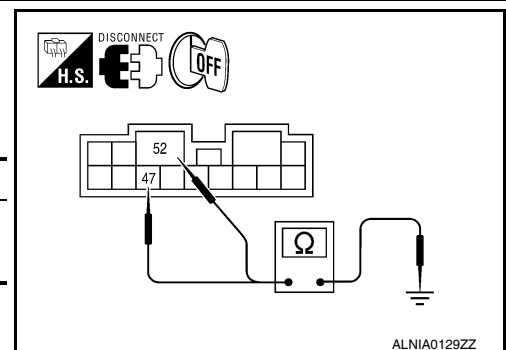
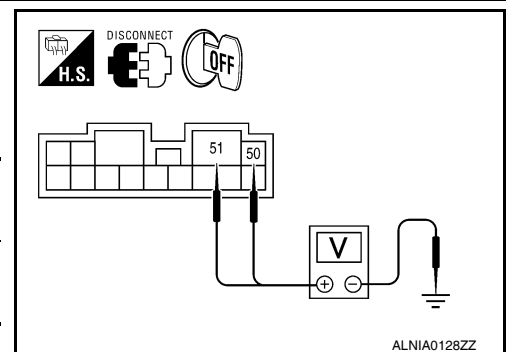
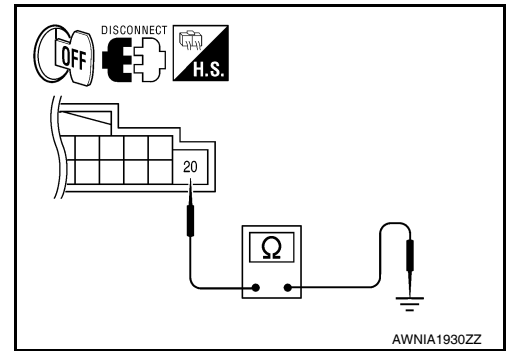
3.CHECK GROUND CIRCUIT

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

Connector	Terminal	—	Continuity
B122	47	Ground	Yes
	52		

Are continuity test results as specified?

- YES >> Inspection End.



POWER SUPPLY AND GROUND CIRCUIT

[BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

NO >> Repair harness or connector.

REAR VIEW CAMERA

REAR VIEW CAMERA : Diagnosis Procedure

INFOID:000000005786691

Regarding Wiring Diagram information, refer to [AV-261, "Wiring Diagram"](#).

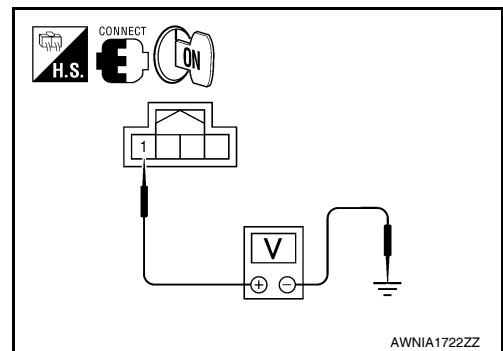
1. CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA SIDE)

1. Turn ignition switch ON.
2. Shift transmission into Reverse.
3. Check voltage between rear view camera harness connector B35 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
B35	1	Ground	Reverse	6V

Is voltage reading approximately 6 volts?

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

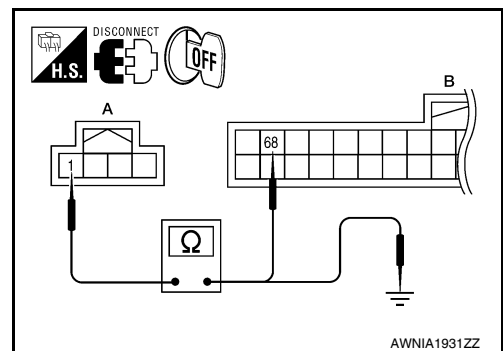


2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect rear view camera and AV control unit connectors.
3. Check continuity between rear view camera harness connector B35 (A) terminal 1 and AV control unit harness connector M103 (B) terminal 68.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B35	1	M103	68	Yes

4. Check continuity between rear view camera harness connector B35 (A) terminal 1 and ground.



A		—	Continuity
Connector	Terminal		
B35	1	Ground	No

Are continuity test results as specified?

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

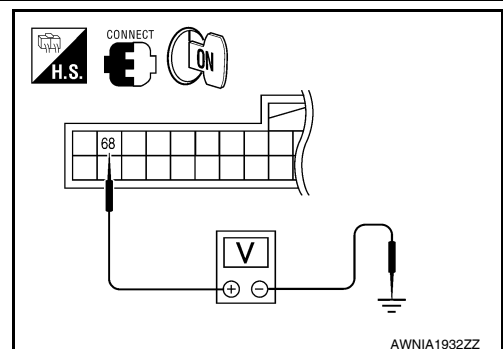
3. CHECK POWER SUPPLY CIRCUIT (AV CONTROL UNIT SIDE)

1. Connect rear view camera control unit harness connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit harness connector M103 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
M103	68	Ground	Reverse	6V

Is voltage reading approximately 6 volts?

- YES >> Inspection End.



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POWER SUPPLY AND GROUND CIRCUIT

[BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

NO >> Replace AV control unit. Refer to [AV-292. "Removal and Installation"](#).

4.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera harness connector.
3. Check continuity between rear view camera harness connector B35 terminal 2 and ground.

Connector	Terminal	—	Continuity
B35	2	Ground	Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

MICROPHONE

MICROPHONE : Diagnosis Procedure

INFOID:000000005786692

Regarding Wiring Diagram information, refer to [AV-261. "Wiring Diagram"](#).

1.CHECK POWER SUPPLY CIRCUIT

Check voltage between microphone harness connector R7 terminal 4 and ground.

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

Is approximately 5V present?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect microphone and AV control unit harness connectors.
3. Check continuity between microphone harness connector R7 (A) terminal 4 and AV control unit harness connector M102 (B) terminal 44.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	4	M102	44	Yes

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

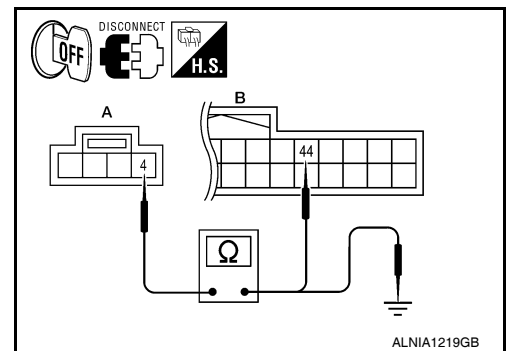
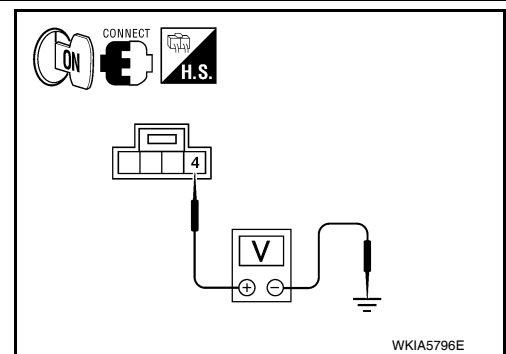
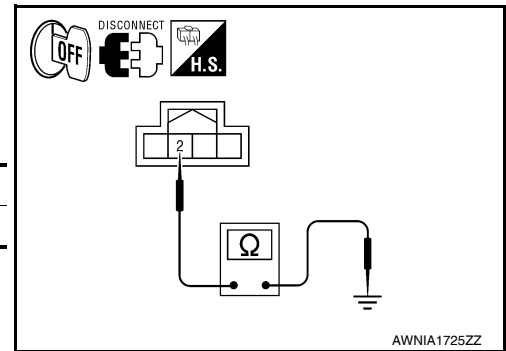
A		—	Continuity
Connector	Terminal		
R7	4	Ground	No

Are the continuity test results as specified?

YES >> Replace the AV control unit. Refer to [AV-292. "Removal and Installation"](#).

NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT



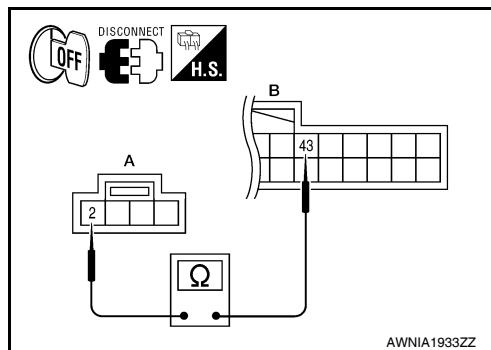
POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

1. Turn ignition switch OFF.
2. Disconnect microphone harness connector R7 and AV control unit harness connector M102.
3. Check continuity between microphone harness connector R7 (A) terminal 2 and AV control unit harness connector M102 (B) terminal 43.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R7	2	M102	43	Yes



Does continuity exist?

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

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FRONT DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

FRONT DOOR SPEAKER

Description

INFOID:000000005786695

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

Diagnosis Procedure

INFOID:000000005786696

Regarding Wiring Diagram information, refer to [AV-261, "Wiring Diagram"](#).

1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B121 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connector B121 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B121	58	D22	1	Yes
	59		2	
	71	D122	1	
	72		2	

3. Check continuity between BOSE speaker amp. harness connector B121 (A) and ground.

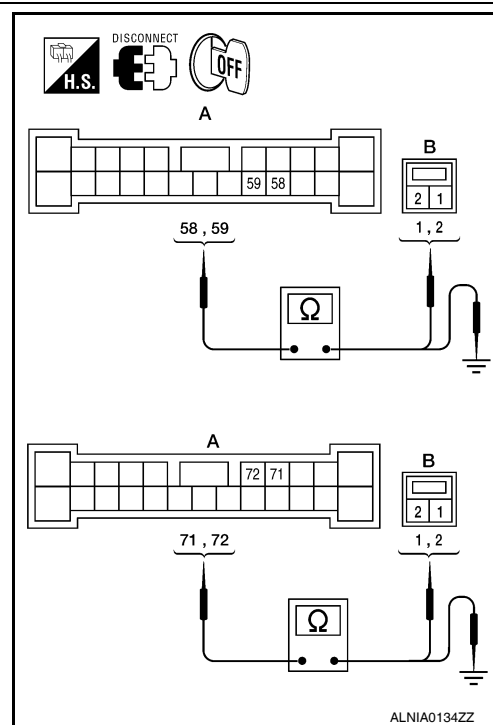
A		—	Continuity
Connector	Terminal		
B121	58	Ground	No
	59		
	71		
	72		

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



ALNIA0134ZZ

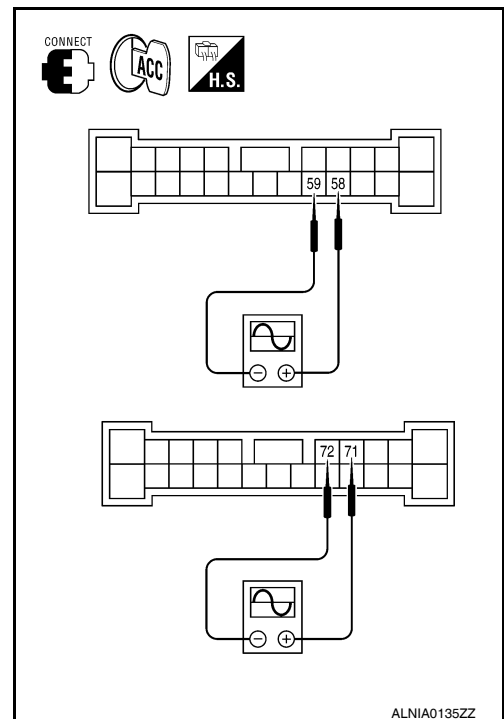
FRONT DOOR SPEAKER

[BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connector B121 and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between BOSE speaker amp. harness connector B121 terminals with CONSULT-III or oscilloscope.

Connector	Terminal		Condition	Reference signal
	(+)	(-)		
B121	58	59	Receive audio signal	
	71	72		



Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to [AV-298. "Removal and Installation"](#).

NO >> GO TO 3

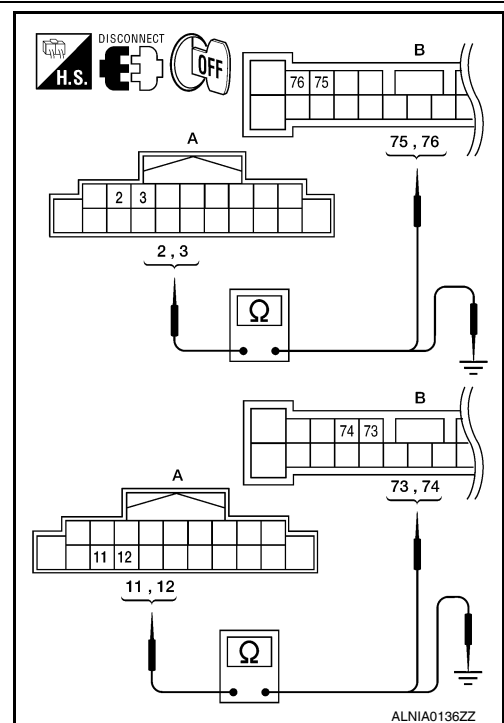
3. HARNESS CHECK

1. Disconnect AV control unit connector M100 and BOSE speaker amp. connector B121.
2. Check continuity between audio unit harness connector M100 (A) and BOSE speaker amp. harness connector B121 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M100	2	B121	75	Yes
	3		76	
	11		73	
	12		74	

3. Check continuity between AV control unit harness connector M100 (A) and ground.

A		—	Continuity
Connector	Terminal		
M100	2	Ground	No
	3		
	11		
	12		



Are continuity test results as specified?

YES >> GO TO 4

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

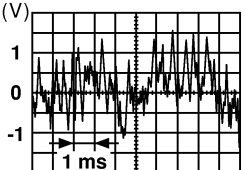
4. FRONT DOOR SPEAKER SIGNAL CHECK

FRONT DOOR SPEAKER

[BOSE AUDIO WITH NAVIGATION]

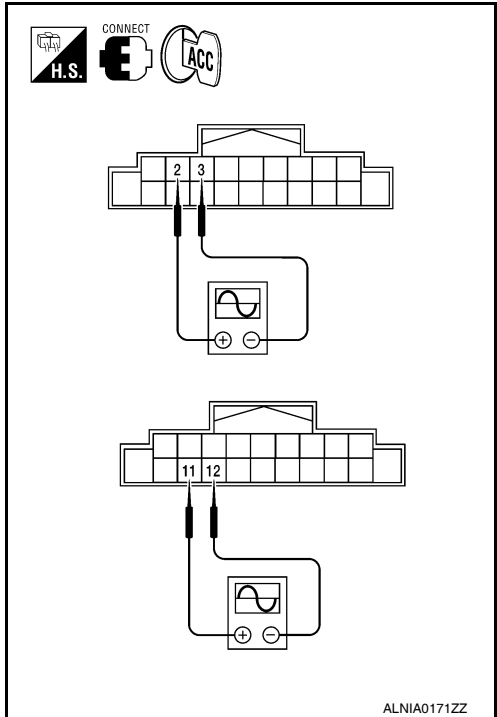
< COMPONENT DIAGNOSIS >

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

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M100	2	3	Receive audio signal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
	11	12		

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-293, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).



TWEETER

Description

INFOID:000000005786699

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:000000005786700

Regarding Wiring Diagram information, refer to [AV-261, "Wiring Diagram"](#).

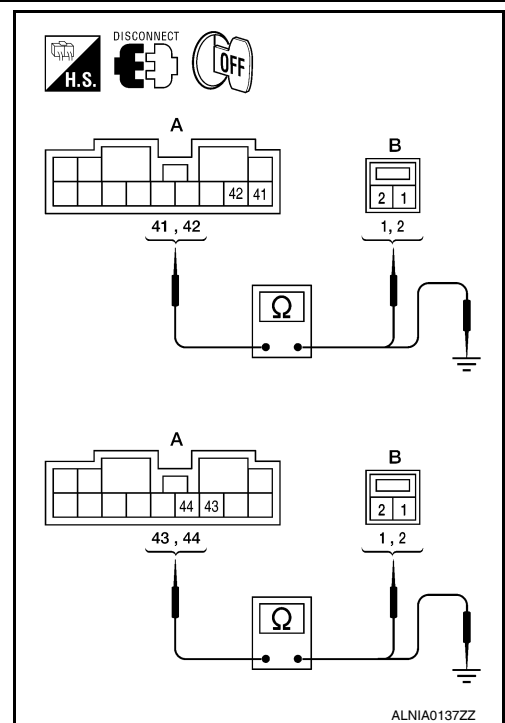
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B122 and suspect tweeter connector.
2. Check continuity between BOSE speaker amp. harness connector B122 (A) and suspect tweeter harness connector (B).

Terminals				Continuity
A		B		
Connector	Terminal	Connector	Terminal	
B122	41	M51	1	Yes
	42		2	
	44	M52	1	
	43		2	

3. Check continuity between BOSE speaker amp. harness connector B122 (A) and ground.

Terminals				Continuity
A		—		
Connector	Terminal			
B122	41	Ground		No
	42			
	44			
	43			



Are continuity test results as specified?

YES >> GO TO 2

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

2. TWEETER SIGNAL CHECK

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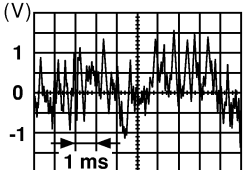
AV

TWEETER

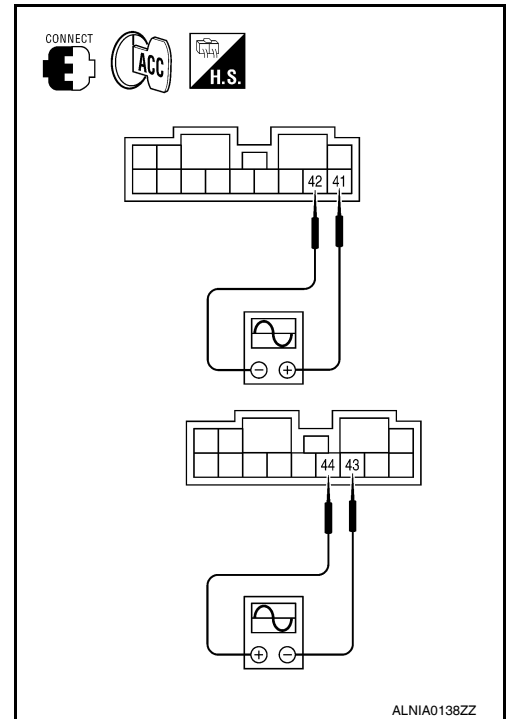
< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

1. Connect BOSE speaker amp. connector B122 and suspect tweeter connector.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between BOSE speaker amp. harness connector B122 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B122	41	42	Receive audio signal	
	44	43		

SKIA0177E



Are voltage readings as specified?

YES >> Replace suspect tweeter. Refer to [AV-296. "Removal and Installation"](#).

NO >> GO TO 3

3. HARNESS CHECK

1. Disconnect AV control unit connector M100 and BOSE speaker amp. connector B121.
2. Check continuity between AV control unit harness connector (A) M100 and BOSE speaker amp. harness connector B121 (B).

Terminals				Continuity
A		B		
Connector	Terminal	Connector	Terminal	
M100	2	B121	75	Yes
	3		76	
	11		73	
	12		74	

3. Check continuity between AV control unit harness connector B121 (A) and ground.

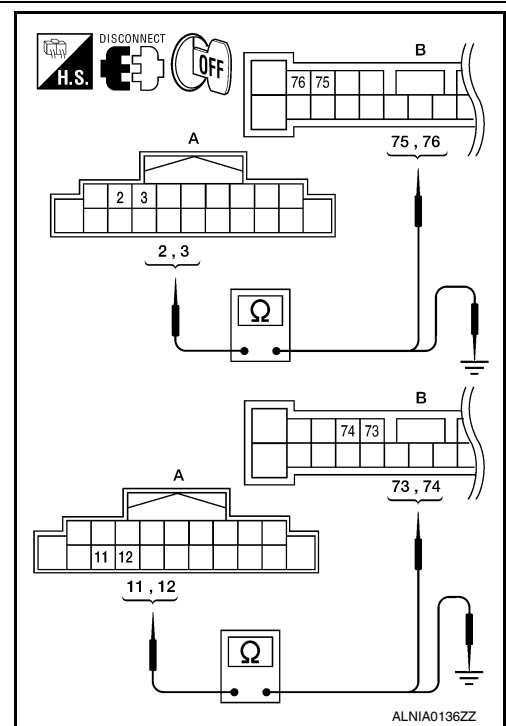
Terminals			Continuity
A		—	
Connector	Terminal		
M100	2	Ground	No
	3		
	11		
	12		

Are continuity test results as specified?

YES >> GO TO 4

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

4. TWEETER SIGNAL CHECK

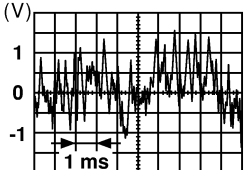


TWEETER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

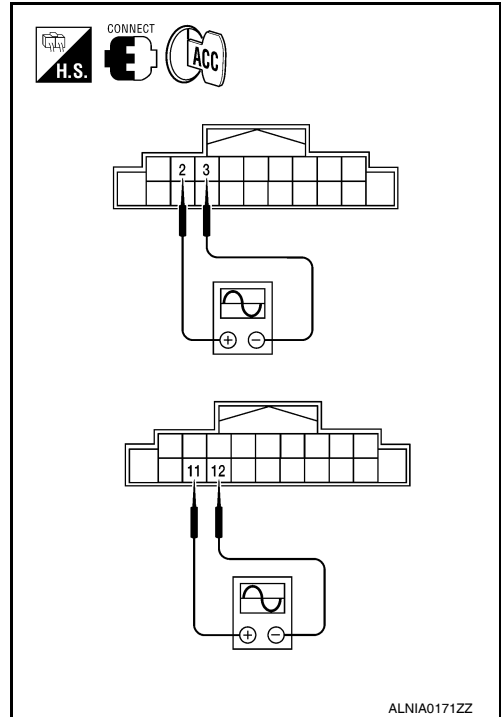
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M100	2	3	Receive audio signal	
	11	12		

SKIA0177E

Are voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-293, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).



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AV

CENTER SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

CENTER SPEAKER

Description

INFOID:000000005786701

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

Diagnosis Procedure

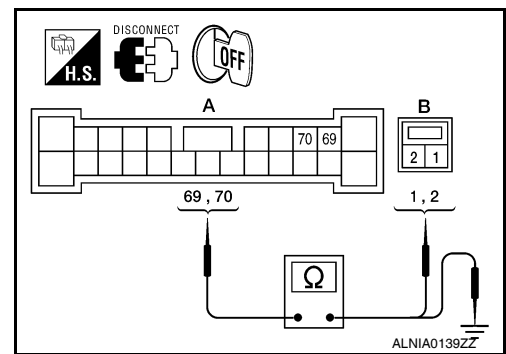
INFOID:000000005786702

Regarding Wiring Diagram information, refer to [AV-261, "Wiring Diagram"](#).

1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B121 and center speaker connector M151.
2. Check continuity between BOSE speaker amp. harness connector B121 (A) and center speaker harness connector M151 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B121	69	M151	1	Yes
	70		2	



3. Check continuity between BOSE speaker amp. harness connector B121 (A) and ground.

A		—	Continuity
Connector	Terminal		
B121	69	Ground	No
	70		

Are continuity test results as specified?

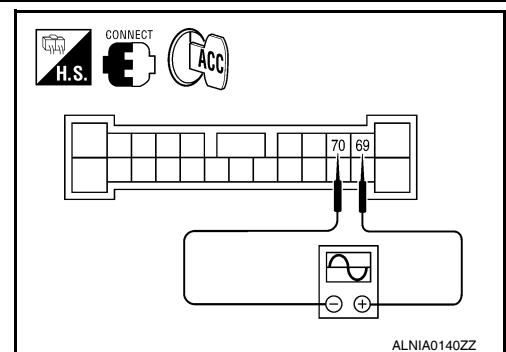
YES >> GO TO 2

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

2. CENTER SPEAKER SIGNAL CHECK

1. Connect BOSE speaker amp. connector B121 and center speaker connector.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between BOSE speaker amp. harness connector B121 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B121	69	70	Receive audio signal	<p>SKIA0177E</p>



Is the audio signal voltage reading as specified?

CENTER SPEAKER

[BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

- YES >> Replace center speaker. Refer to [AV-297. "Removal and Installation"](#).
- NO >> GO TO 3

3. HARNESS CHECK

1. Disconnect AV control unit connector M100 and BOSE speaker amp. connector B121.
2. Check continuity between AV control unit harness connector M100 (A) and BOSE speaker amp. harness connector B121 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M100	2	B121	75	Yes
	3		76	
	11		73	
	12		74	

3. Check continuity between AV control unit harness connector M100 (A) and ground.

A		—	Continuity
Connector	Terminal		
M100	2	Ground	No
	3		
	11		
	12		

Are continuity test results as specified?

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

4. CENTER SPEAKER SIGNAL CHECK

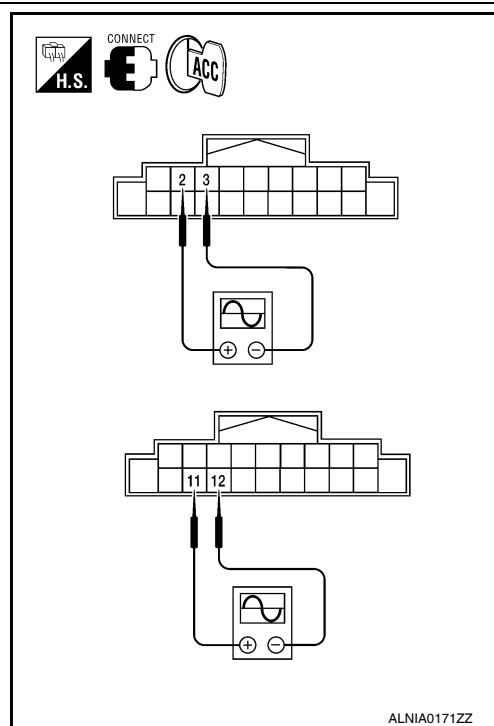
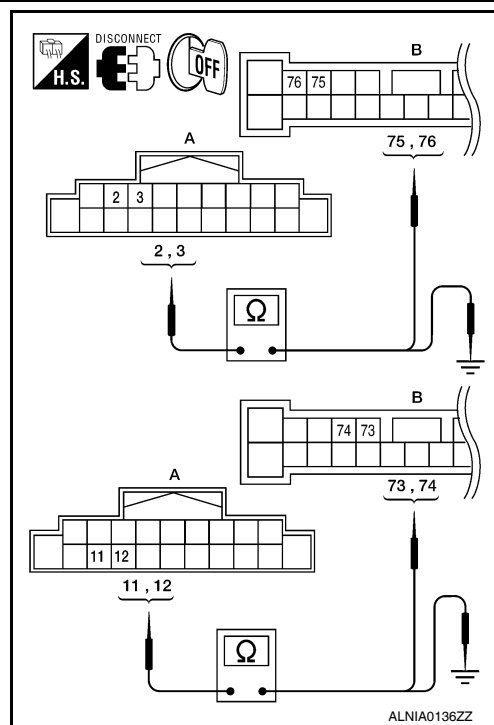
1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push "POWER" switch.
4. Check the signal between AV control unit harness connector M100 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M100	2	3	Receive audio signal	
	11	12		

SKIA0177E

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-293. "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-292. "Removal and Installation"](#).



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AV

REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

REAR DOOR SPEAKER

Description

INFOID:000000005786705

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

Diagnosis Procedure

INFOID:000000005786706

Regarding Wiring Diagram information, refer to [AV-299, "Removal and Installation"](#).

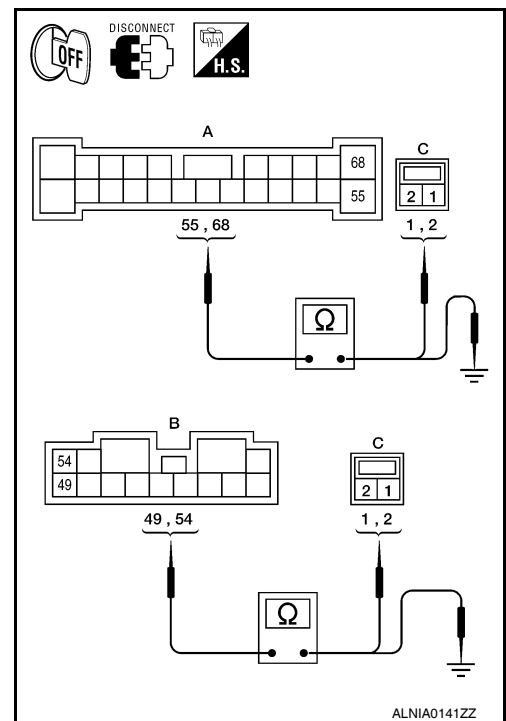
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connectors B121, B122 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connectors B121 (A) and B122 (B) and suspect speaker harness connector (C).

Connector	Terminal	Connector	Terminal	Continuity
A: B121	55	C: D202	2	Yes
	68		1	
B: B122	49	C: D302	2	
	54		1	

3. Check continuity between BOSE speaker amp. harness connectors B121 (A) and B122 (B) and ground.

Connector	Terminal	—	Continuity
A: B121	68	Ground	No
	55		
B: B122	49		
	54		



Are the continuity test results as specified?

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

2. REAR DOOR SPEAKER SIGNAL CHECK

REAR DOOR SPEAKER

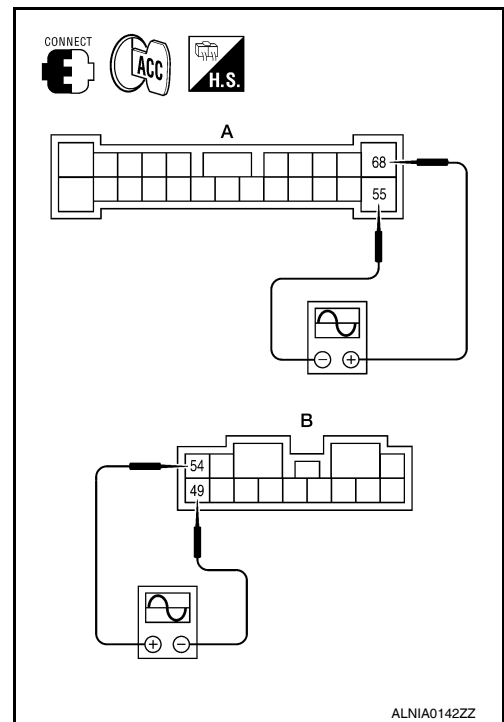
[BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

1. Connect BOSE speaker amp. connectors B121, B122 and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between BOSE speaker amp. harness connectors (A) B121 and (B) B122 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
A: B121	68	55	Receive audio signal	
B: B122	54	49		

SKIA0177E



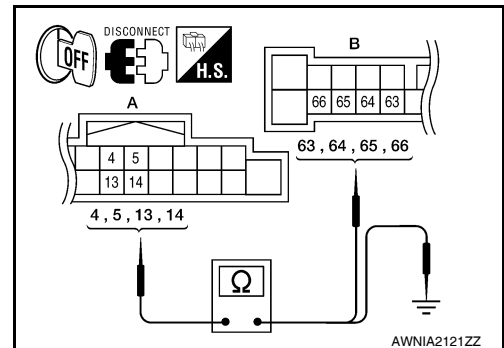
Is the audio signal voltage readings as specified?

- YES >> Replace suspect speaker. Refer to [AV-299. "Removal and Installation"](#).
- NO >> GO TO 3.

3. HARNESS CHECK

1. Disconnect AV control unit connector M100 and BOSE speaker amp. connector B121.
2. Check continuity between AV control unit harness connector M100 (A) and BOSE speaker amp. harness connector B121 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M100	4	B121	64	Yes
	5		63	
	13		66	
	14		65	



3. Check continuity between AV control unit harness connector M100 (A) and ground.

A		—	Continuity
Connector	Terminal		
M100	4	Ground	No
	5		
	13		
	14		

Are continuity test results as specified?

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

4. REAR DOOR SPEAKER SIGNAL CHECK

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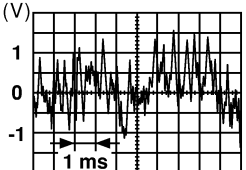
AV

REAR DOOR SPEAKER

< COMPONENT DIAGNOSIS >

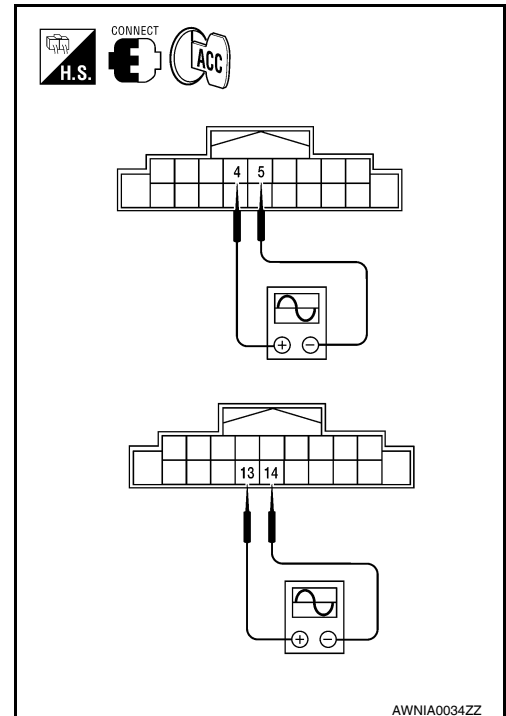
[BOSE AUDIO WITH NAVIGATION]

1. Connect AV control unit connector M100 and BOSE speaker amp. connector B121.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between AV control unit harness connector M100 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M100	4	5	Receive audio signal	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
	13	14		

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-293, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).



SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

SUBWOOFER

Description

INFOID:000000005786709

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:000000005786710

Regarding Wiring Diagram information, refer to [AV-261, "Wiring Diagram"](#).

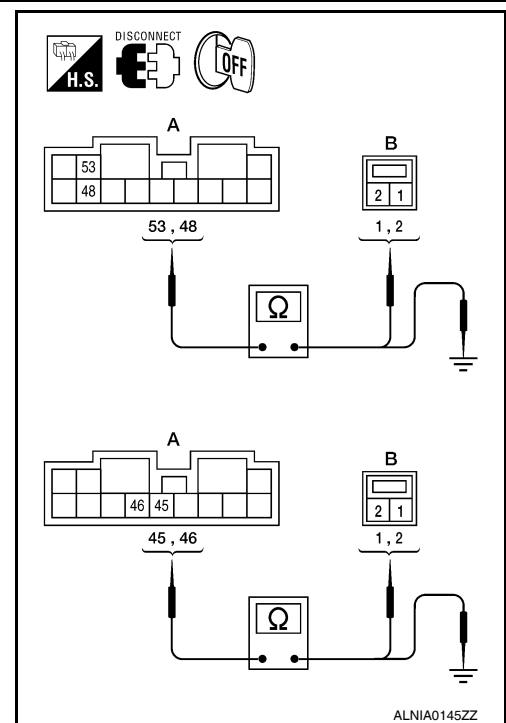
1. HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B122 and suspect rear subwoofer connector.
2. Check continuity between BOSE speaker amp. harness connector B122 (A) and suspect rear subwoofer harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B122	53	B120	1	Yes
	48		2	
	45	B124	1	
	46		2	

3. Check continuity between BOSE speaker amp. harness connector B122 (A) and ground.

A		—	Continuity
Connector	Terminal		
B122	53	Ground	No
	48		
	45		
	46		



Are the continuity test results as specified?

YES >> GO TO 2

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

2. REAR SUBWOOFER SIGNAL CHECK

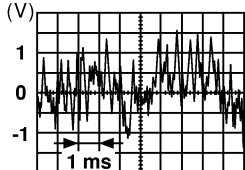
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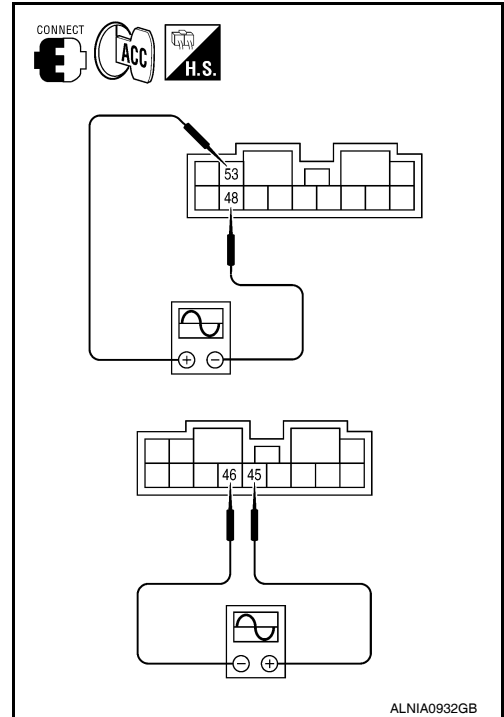
SUBWOOFER

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

1. Connect BOSE speaker amp. connector B122 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 B122 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B122	53	48	Receive audio signal	 <small>SKIA0177E</small>
	45	46		



Is the audio signal voltage as specified?

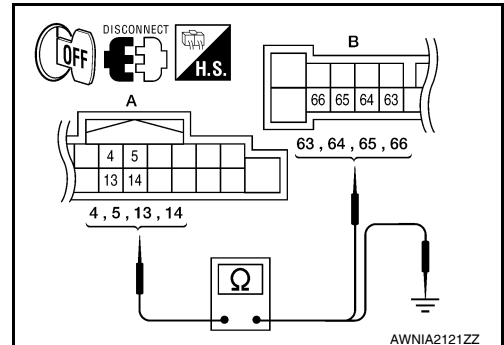
YES >> Replace suspect rear subwoofer. Refer to [AV-300](#), "[Removal and Installation](#)".

NO >> GO TO 3

3. HARNESS CHECK

1. Disconnect AV control unit connector M100 and BOSE speaker amp. connector B121.
2. Check continuity between AV control unit harness connector M100 (A) and BOSE speaker amp. harness connector B121 (B).

A		B.		Continuity
Connector	Terminal	Connector	Terminal	
M100	4	B121	64	Yes
	5		63	
	13		66	
	14		65	



3. Check continuity between AV control unit harness connector M100 (A) and ground.

A		—	Continuity
Connector	Terminal		
M100	4	Ground	No
	5		
	13		
	14		

Are continuity test results as specified?

YES >> GO TO 4

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

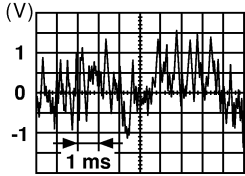
4. REAR SUBWOOFER SIGNAL CHECK

SUBWOOFER

< COMPONENT DIAGNOSIS >

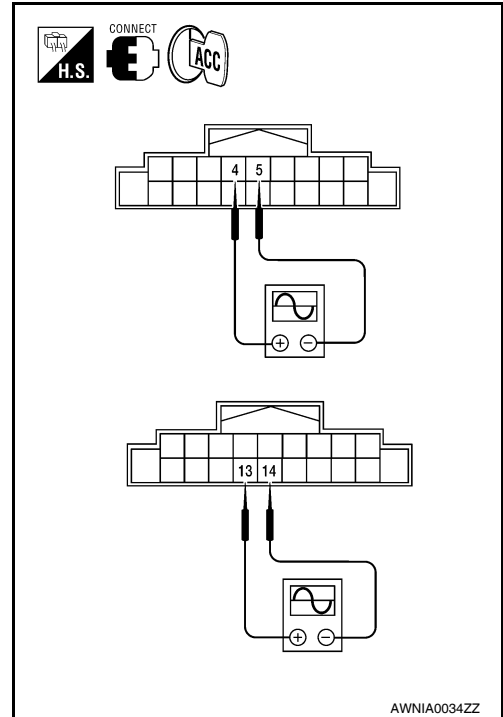
[BOSE AUDIO WITH NAVIGATION]

1. Connect AV control unit connector M100 and BOSE speaker amp. connector B121.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check the signal between AV control unit harness connector M100 terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M100	4	5	Receive audio signal	 <small>SKIA0177E</small>
	13	14		

Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to [AV-293, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).



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AV

STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

STEERING SWITCH

Description

INFOID:000000005786711

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.

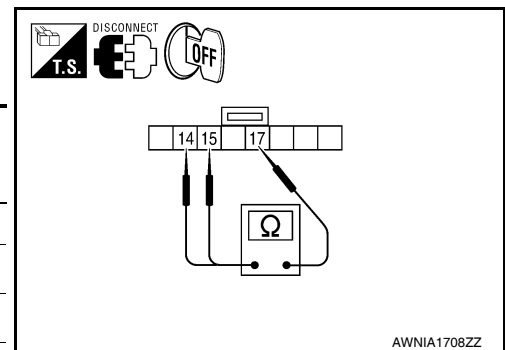
Diagnosis Procedure

INFOID:000000005786712

Regarding Wiring Diagram information, refer to [AV-261, "Wiring Diagram"](#).

1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect steering wheel audio control switch connector M88.
3. Check resistance between steering switch connector terminals.



Terminal	Signal name	Condition	Resistance (Ω) (Approx.)
14	Enter	Depress ENTER switch.	2003-2043
	Voice recognition	Depress switch.	716-730
	Menu (down)	Depress switch.	318-324
	Menu (up)	Depress switch.	120-122
15	Source	Depress SOURCE switch.	0
	Menu back	Depress the back switch.	716-730
	Phone	Depress switch.	318-324
	Volume (up)	Depress VOL up switch.	120-122
	Volume (down)	Depress VOL down switch.	0

Do the steering wheel audio control switches check OK?

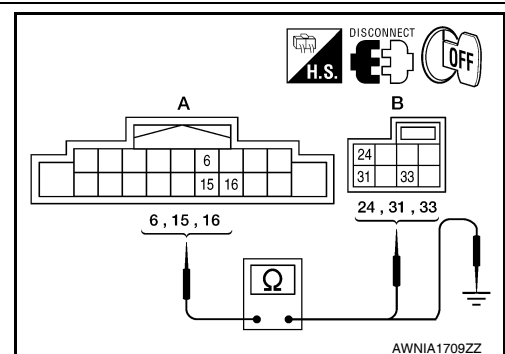
YES >> GO TO 2.

NO >> Replace steering wheel audio control switch. Refer to [AV-306, "Removal and Installation"](#).

2. CHECK HARNESS

1. Disconnect AV control unit connector M100 and spiral cable connector M30.
2. Check continuity between AV control unit harness connector M100 (A) and spiral cable harness connector M30 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M100	6	M30	24	Yes
	15		33	
	16		31	



3. Check continuity between AV switch connector M100 (A) and ground.

STEERING SWITCH

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

A		—	Continuity
Connector	Terminal		
M100	6	Ground	No
	15		
	16		

Are the continuity results as specified?

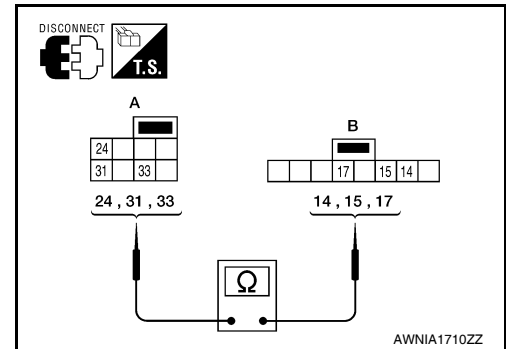
YES >> GO TO 3.

NO >> Repair harness.

3. SPIRAL CABLE CHECK

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

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



Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to [SR-7. "Removal and Installation"](#).

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AMP ON SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

AMP ON SIGNAL CIRCUIT

Description

INFOID:000000005786713

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:000000005786714

Regarding Wiring Diagram information, refer to [AV-261, "Wiring Diagram"](#).

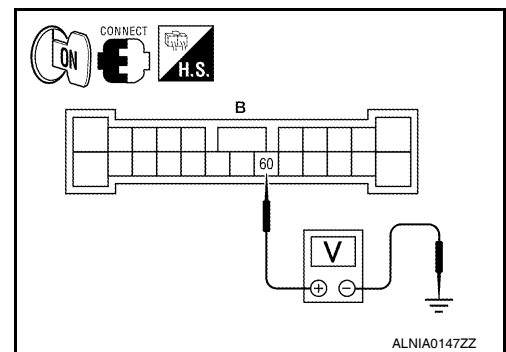
1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

1. Turn audio system ON.
2. Check voltage between BOSE speaker amp. harness connector B121 terminal 60 and ground.

60 - Ground : More than approx. 6.5V

Is voltage greater than 6.5V?

- YES >> INSPECTION END.
NO >> GO TO 2



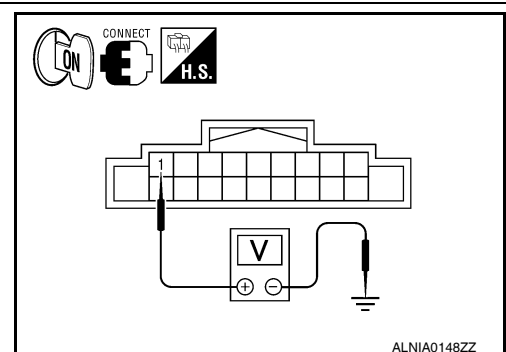
2. CHECK AMP ON SIGNAL (AV CONTROL UNIT)

Check voltage between AV control unit harness connector M100 terminal 1 and ground.

1 - Ground : More than approx. 6.5V

Is voltage approximately 6.5 volts?

- YES >> Repair harness or connector.
NO >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).



AUX IMAGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

AUX IMAGE SIGNAL CIRCUIT

Description

INFOID:000000005786715

- 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.

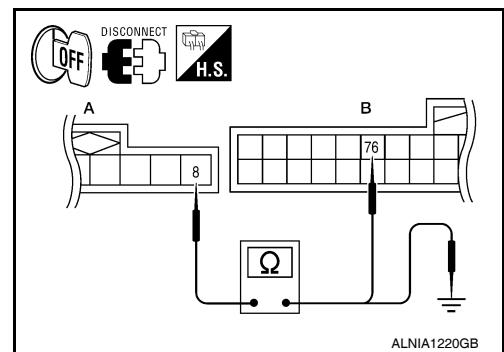
Diagnosis Procedure

INFOID:000000005786716

Regarding Wiring Diagram information, refer to [AV-261, "Wiring Diagram"](#).

1. CHECK CONTINUITY AUX IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect auxiliary input jack connector M206 and AV control unit connector M103.
3. Check continuity between auxiliary input jack harness connector M206 (A) terminal 8 and AV control unit harness connector M103 (B) terminal 76.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M206	8	M103	76	Yes

4. Check continuity between auxiliary input jack harness connector M206 (A) terminal 8 and ground.

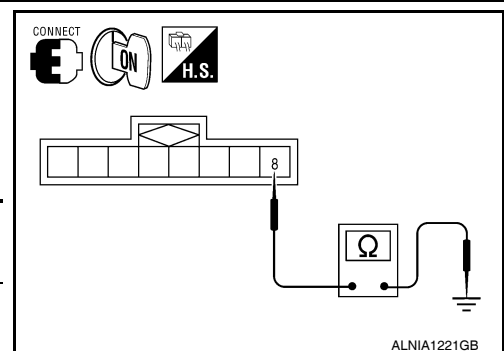
A		—	Continuity
Connector	Terminal		
M206	8	Ground	No

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 M206 and AV control unit connector M103.
2. Turn ignition switch ON.
3. Check signal between auxiliary input jack connector M206 terminal 8 and ground.



(+) Connector		(-)	Condition	Reference signal
Connector	Terminal			
M206	8	Ground	Receive audio signal	<p>SKIB2236J</p>

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).
 NO >> Check that there is no malfunction in the external device.

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AV

MICROPHONE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000005786717

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

Diagnosis Procedure

INFOID:000000005786718

Regarding Wiring Diagram information, refer to [AV-261, "Wiring Diagram"](#).

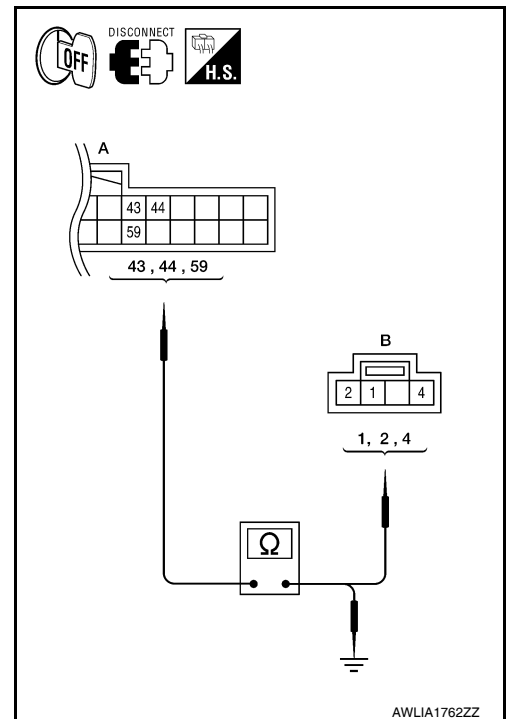
1. CHECK HARNESS BETWEEN AV CONTROL UNIT AND MICROPHONE

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector and microphone connector.
3. Check continuity between AV control unit harness connector M102 (A) and microphone harness connector R7 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M102	59	R7	1	Yes
	43		2	
	44		4	

4. Check continuity between AV control unit harness connector M102 (A) and ground.

A		—	Continuity
Connector	Terminal		
M102	44	Ground	No
	43		
	59		



Are the continuity test results as specified?

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

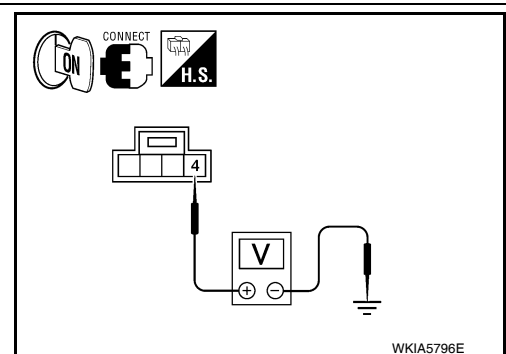
2. CHECK MICROPHONE POWER SUPPLY

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

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

Is voltage reading approx. 5 volts?

- YES >> GO TO 3.
 NO >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).



3. CHECK MICROPHONE SIGNAL

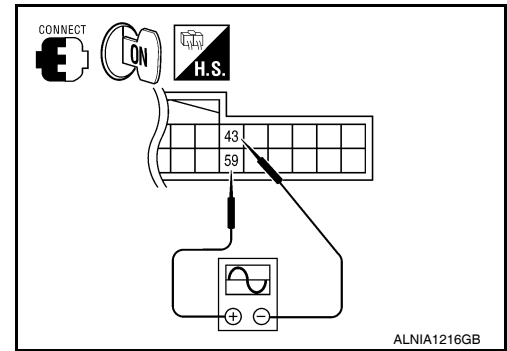
MICROPHONE SIGNAL CIRCUIT

[BOSE AUDIO WITH NAVIGATION]

< COMPONENT DIAGNOSIS >

Check signal between AV control unit harness connector M102 terminals 43 and 59.

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
M102	59	43	<p>While speaking into MIC</p> <p>PKIB5037J</p>



Are voltage readings as specified?

- YES >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-307, "Removal and Installation"](#).

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CAMERA IMAGE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:000000005786719

Rear view camera images are transmitted to the AV control unit using the camera image signal circuits.

Diagnosis Procedure

INFOID:000000005786720

Regarding Wiring Diagram information, refer to [AV-261, "Wiring Diagram"](#).

1. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

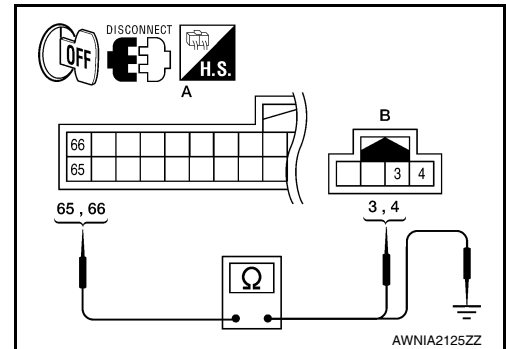
1. Turn ignition switch OFF.
2. Disconnect AV control unit connector and rear view camera connector.
3. Check continuity between AV control unit harness connector M103 (A) terminals 65, 66 and rear view camera harness connector B35 (sedan) or T7 (coupe) (B) terminals 3, 4.

65 - 4 : Continuity should exist.

66 - 3 : Continuity should exist.

4. Check continuity between AV control unit harness connector M103 (A) terminals 9, 10 and ground.

65, 66 - Ground : Continuity should not exist.



Is inspection result OK?

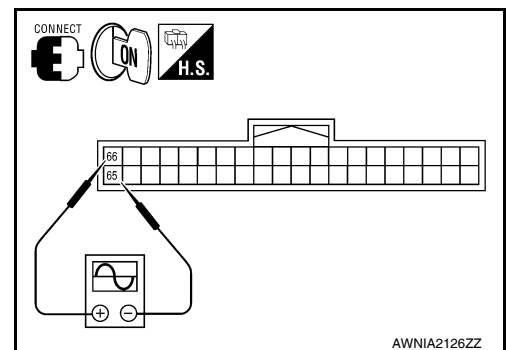
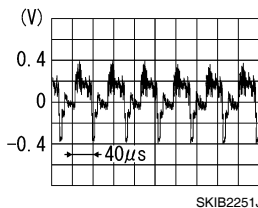
YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK CAMERA IMAGE SIGNAL

1. Connect AV control unit connector and rear view camera connector.
2. Turn ignition switch ON.
3. Check signal between AV control unit harness connector M103 terminals 65 and 66.

65 - 66 :



Is inspection result OK?

YES >> Replace AV control unit. Refer to [AV-292, "Removal and Installation"](#).

NO >> Replace rear view camera. Refer to [AV-308, "Removal and Installation"](#).

REVERSE SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

REVERSE SIGNAL CIRCUIT

Description

INFOID:000000005786721

A reverse signal is supplied from the back-up lamp relay to the AV control unit. When this signal is received, the display shows a view to the rear of the vehicle.

Diagnosis Procedure

INFOID:000000005786722

Regarding Wiring Diagram information, refer to [AV-261, "Wiring Diagram"](#).

1. BACK-UP LAMP INSPECTION

1. Turn ignition switch ON.
2. Shift selector lever to R position.

Does back-up lamp illuminate?

- YES >> GO TO 2
NO >> Check back-up lamp system. Refer to [EXL-4, "Work Flow"](#).

2. CHECK REVERSE POSITION INPUT SIGNAL

With CONSULT-III

Select "DATA MONITOR" of "MULTI AV". Operate ignition switch with "REV SIG" of "DATA MONITOR" and check operate status.

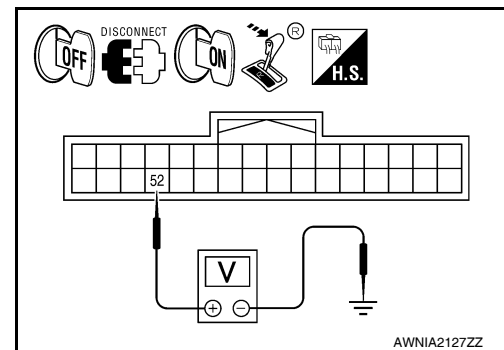
Without CONSULT-III

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector.
3. Turn ignition switch ON.
4. Shift selector lever to R position.
5. Check voltage between AV control unit harness connector M102 terminal 52 and ground.

Battery voltage should exist.

Does battery voltage exist?

- YES >> Inspection End.
NO >> Check harness for open or short between AV control unit and back-up lamp relay.



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AV

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

ECU DIAGNOSIS

AV CONTROL UNIT

Reference Value

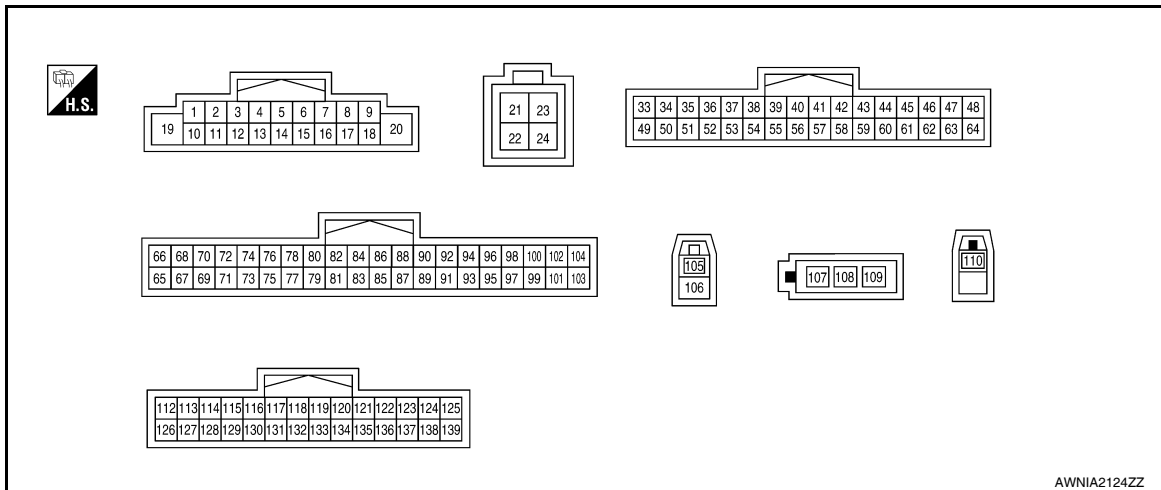
INFOID:000000005786725

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III data monitor item

Display Item	Display	Vehicle status	Remarks
VHCL SPD SIG	ON	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.
	OFF	Vehicle speed =0 km/h (0 MPH)	
PKB SIG	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.
	OFF	Parking brake is released.	
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON.	—
	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.	
IGN SIG	ON	Ignition switch ON	—
	OFF	Ignition switch in ACC position	
REV SIG	ON	Selector lever in R position	Changes in indication may be delayed. This is normal.
	OFF	Selector lever in any position other than R	

TERMINAL LAYOUT

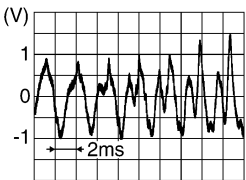
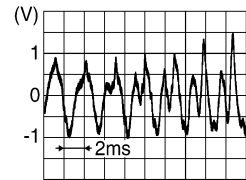



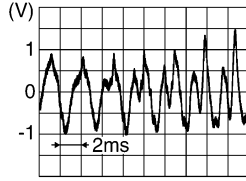
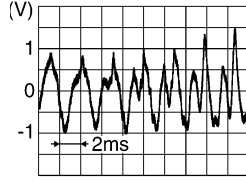


PHYSICAL VALUES

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
1 (B/P)	Ground	Amp. ON signal	Output	Ignition switch ON	—	Battery voltage
2 (G)	3 (R)	Pre-amp. audio signal front LH	Output	Ignition switch ON	Audio output	 <small>SKIB3609E</small>
4 (GR)	5 (R)	Pre-amp. audio signal rear LH	Output	Ignition switch ON	Audio output	 <small>SKIB3609E</small>
6 (W/G)	15 (L/B)	Steering switch signal A	Input	Ignition switch OFF	Depress ENTER switch.	2023Ω
					Depress  switch.	723Ω
					Depress  switch.	321Ω
					Depress  switch.	121Ω
					Depress SOURCE switch.	0Ω
7 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
9 (R/L)	8 (R/Y)	Illumination signal	Input	OFF	Lighting switch is OFF	0V
					Lighting switch is ON	Battery voltage
10	—	Shield	—	—	—	—
11 (B)	12 (W)	Pre-amp. audio signal front RH	Output	Ignition switch ON	Audio output	 <small>SKIB3609E</small>
13 (V)	14 (LG)	Audio signal rear RH	Output	Ignition switch ON	Audio output	 <small>SKIB3609E</small>
15 (L/B)	Ground	Steering switch signal ground	—	Ignition switch ON	—	0V

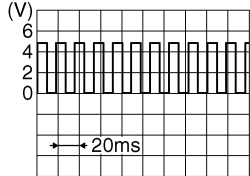
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AV CONTROL UNIT

< ECU DIAGNOSIS >

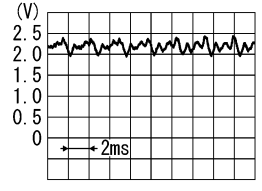
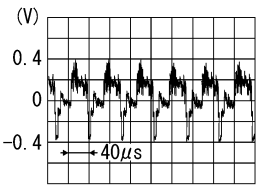
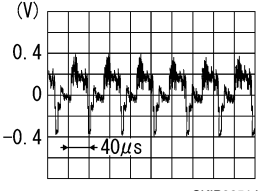
[BOSE AUDIO WITH NAVIGATION]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
16 (GR/L)	15 (L/B)	Steering switch signal B	Input	Ignition switch ON	Depress the back switch.	723Ω
					Depress switch.	321Ω
					Depress VOL up switch.	121Ω
					Depress VOL down switch.	0Ω
19 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0V
21 (B)	—	USB ground	—	—	—	—
22 (W)	—	USB D-	—	—	—	—
23 (R)	—	V BUS signal	—	—	—	—
24 (G)	—	USB D+	—	—	—	—
37 (G/R)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake is ON.	5.0 V
					Parking brake is OFF.	0 V
44 (R/L)	43 (R/B)	Microphone VCC	Output	Ignition switch ON	—	5.0 V
46 (P)	—	CAN-L	Input/ Output	—	—	—
51 (R/L)	Ground	Illumination signal	Input	Ignition switch OFF	Lighting switch is OFF.	0 V
					Lighting switch is ON.	12.0 V
52 (G)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
53 (P/B)	Ground	Reverse signal	Input	Ignition switch ON	R position	12.0 V
					Other than R position	0 V
54 (V/W)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	<p>NOTE: Maximum voltage may be 12.0 V due to specifications (connected units).</p>  <p style="text-align: right; font-size: small;">SKIA6649J</p>

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

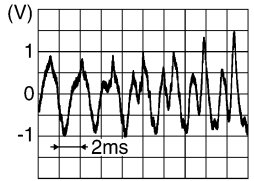
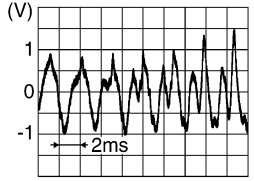
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
59 (B/R)	Ground	Microphone signal	Input	Ignition switch ON	Give a voice	
62 (L)	—	CAN-H	Input/ Output	—	—	—
65	—	Shield	—	—	—	—
66 (Y)	Ground	Camera image signal	Input	Ignition switch ON	Camera image is displayed.	
67 (B)	Ground	Rear view camera ground	—	Ignition switch ON	—	0 V
68 (GR)	Ground	Camera ON signal	Output	Ignition switch ON	R position.	6.0 V
					Other than R position.	0 V
75 (P)	Ground	AUX image signal ground	—	Ignition switch ON	—	0 V
76 (L)	75 (P)	AUX image signal	Input	Ignition switch ON	At AUX image is displayed.	
77 (B)	—	Shield	—	—	—	—
105 (B)	—	GPS antenna signal	—	—	—	—
106 (B)	—	Shield	—	—	—	—
107 (B)	—	Amplified window antenna signal	Input	—	—	—
108 (B)	Ground	Antenna amp. ON signal	Output	Ignition switch ACC	—	Battery voltage
110 (B)	—	Satellite antenna signal	—	—	—	—

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AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
115 (W)	130 (B)	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is select- ed.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
128	—	Shield	—	—	—	—
129 (R)	130 (B)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is select- ed.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

DTC Index

INFOID:000000005786726

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-198
U1010	CONTROL UNIT (CAN) [1010]	AV-199
U1200	Cont Unit [U1200]	AV-200
U1201	GYRO NO CONN [U1201]	AV-201
U1202	G-SENSOR NO CONN [U1202]	AV-202
U1204	GPS COMM [U1204]	AV-203
U1205	GPS ROM [U1205]	AV-204
U1206	GPS RAM [U1206]	AV-205
U1207	GPS RTC [U1207]	AV-206
U1216	CAN CONT [U1216]	AV-207
U1217	BLUETOOTH MODULE [U1217]	AV-208
U1218	HDD CONN [U1218]	AV-209
U1219	HDD READ [U1219]	AV-210
U121A	HDD WRITE [U121A]	AV-211
U121B	HDD COMM [U121B]	AV-212
U121C	HDD ACCESS [U121C]	AV-213
U121D	DSP CONN [U121D]	AV-214
U121E	DSP COMM [U121E]	AV-215
U1225	USB CONTROLLER [U1225]	AV-216
U1227	DVD COMM [U1227]	AV-217
U1228	SUB CPU CONN [U1228]	AV-218
U1229	iPod CERTIFICATION [U1229]	AV-219
U122A	CONFIG UNFINISH [U122A]	AV-220
U122E	Built-in AUDIO CONN [U122E]	AV-221

AV CONTROL UNIT

< ECU DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

DTC	Display item	Refer to
U1244	GPS ANTENNA CONN [U1244]	AV-222
U1263	USB OVERCURRENT [U1263]	AV-223
U1310	CONTROL UNIT (AV) [U1310]	AV-224

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BOSE SPEAKER AMP

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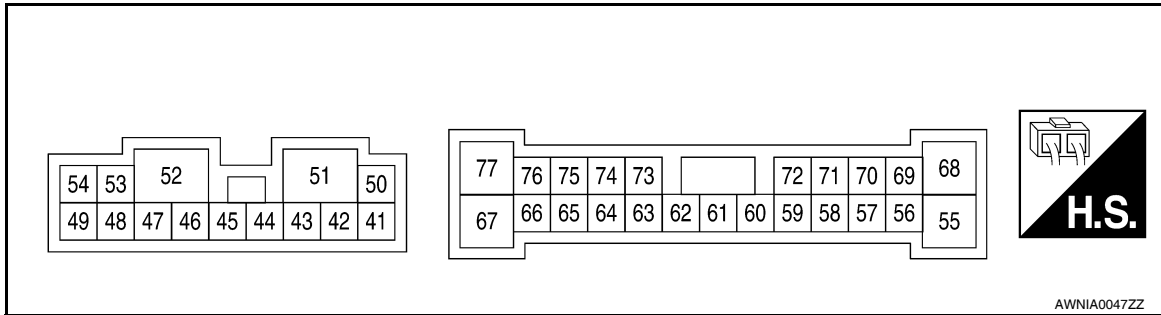
[BOSE AUDIO WITH NAVIGATION]

BOSE SPEAKER AMP

Reference Value

INFOID:000000005786727

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	-	Signal name	Input/Output		
41 (LG)	42 (V or B/Y)	Sound signal front tweeter LH	Output	Ignition switch ON	<p>SKIB3609E</p>
44 (BR or L/O)	43 (GR or GR/L)	Sound signal front tweeter RH	Output	Ignition switch ON	<p>SKIB3609E</p>
45 (O or BR/W)	46 (SB or BR)	Sound signal subwoofer RH	Output	Ignition switch ON	<p>SKIB3609E</p>
47 (B or B/L)	Ground	GND	—	Ignition switch ON	0V
50 (SB or BR)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
51 (G or B/R)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
52 (B)	Ground	GND	—	Ignition switch ON	0V

BOSE SPEAKER AMP

< ECU DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

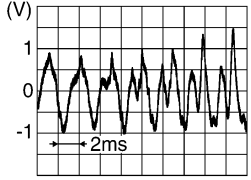
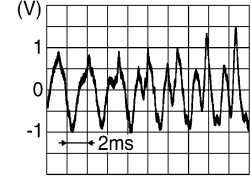
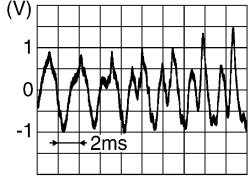
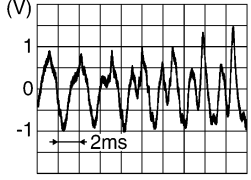
Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	-	Signal name	Input/Output		
53 (W or W/B)	48 (L or G/B)	Sound signal subwoofer LH	Output	Ignition switch ON	
54 (V or L)	49 (P or B/W)	Sound signal rear tweeter RH	Output	Ignition switch ON	
58 (W)	59 (B)	Sound signal door speaker LH	Output	Ignition switch ON	
60 (G or B/G)	Ground	Amp. ON signal	Input	Ignition switch ACC	Battery voltage
64 (BR)	63 (Y)	Sound signal rear LH	Input	Ignition switch ON	
66 (LG)	65 (V)	Sound signal rear RH	Input	Ignition switch ON	
68 (L or R/G)	55 (R or BR/B)	Sound signal rear tweeter LH	Output	Ignition switch ON	

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BOSE SPEAKER AMP

< ECU DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

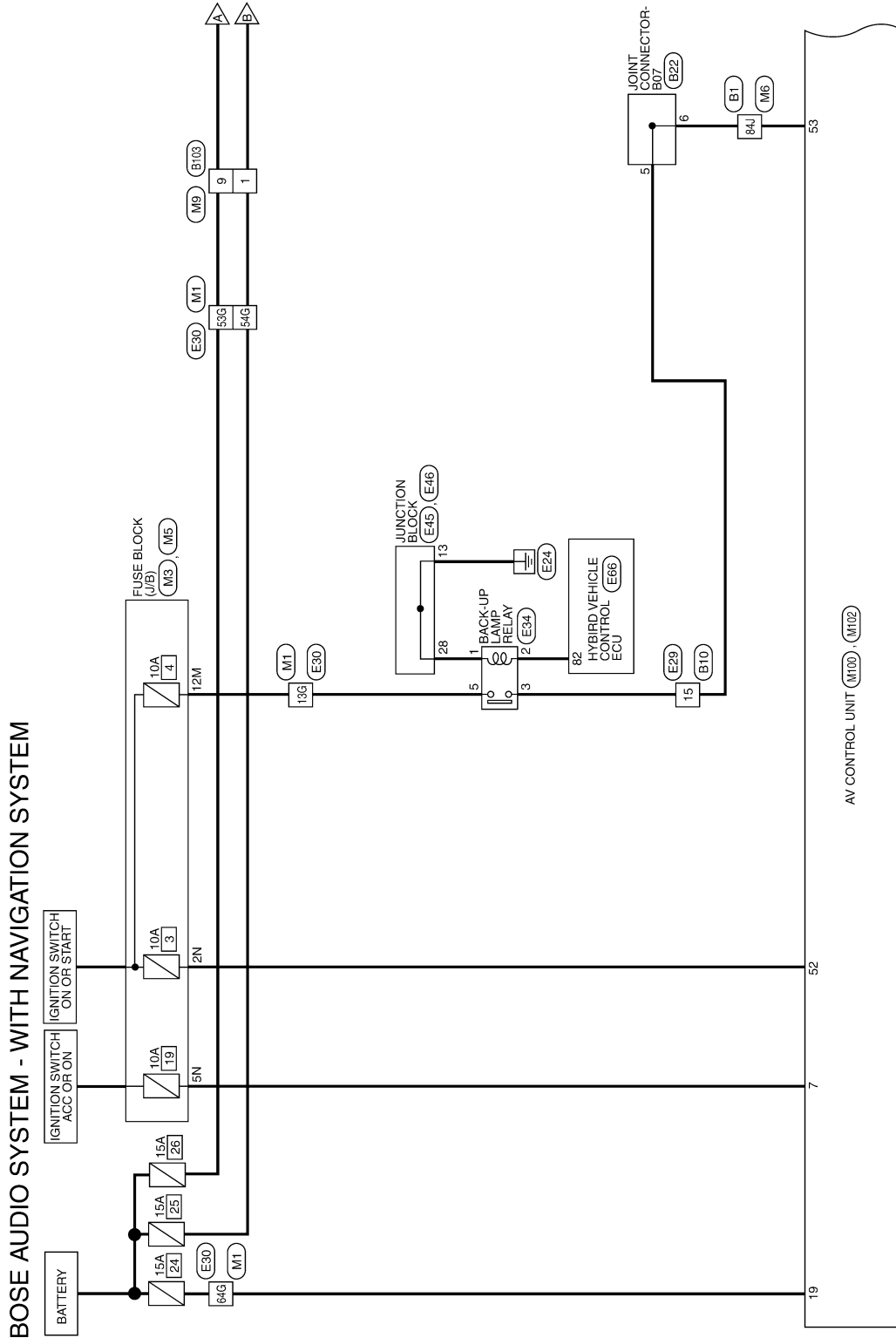
Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	-	Signal name	Input/Output		
69 (P or B/P)	70 (V or O/B)	Sound signal center speaker	Output	Ignition switch ON	
71 (O or G/W)	72 (SB or BR)	Sound signal door speaker RH	Output	Ignition switch ON	
73 (W/L)	74 (GR/V)	Sound signal front RH	Input	Ignition switch ON	
75 (W/R)	76 (B/R)	Sound signal front LH	Input	Ignition switch ON	

WIRING DIAGRAM

BOSE AUDIO WITH NAVIGATION

Wiring Diagram

INFOID:000000005804715



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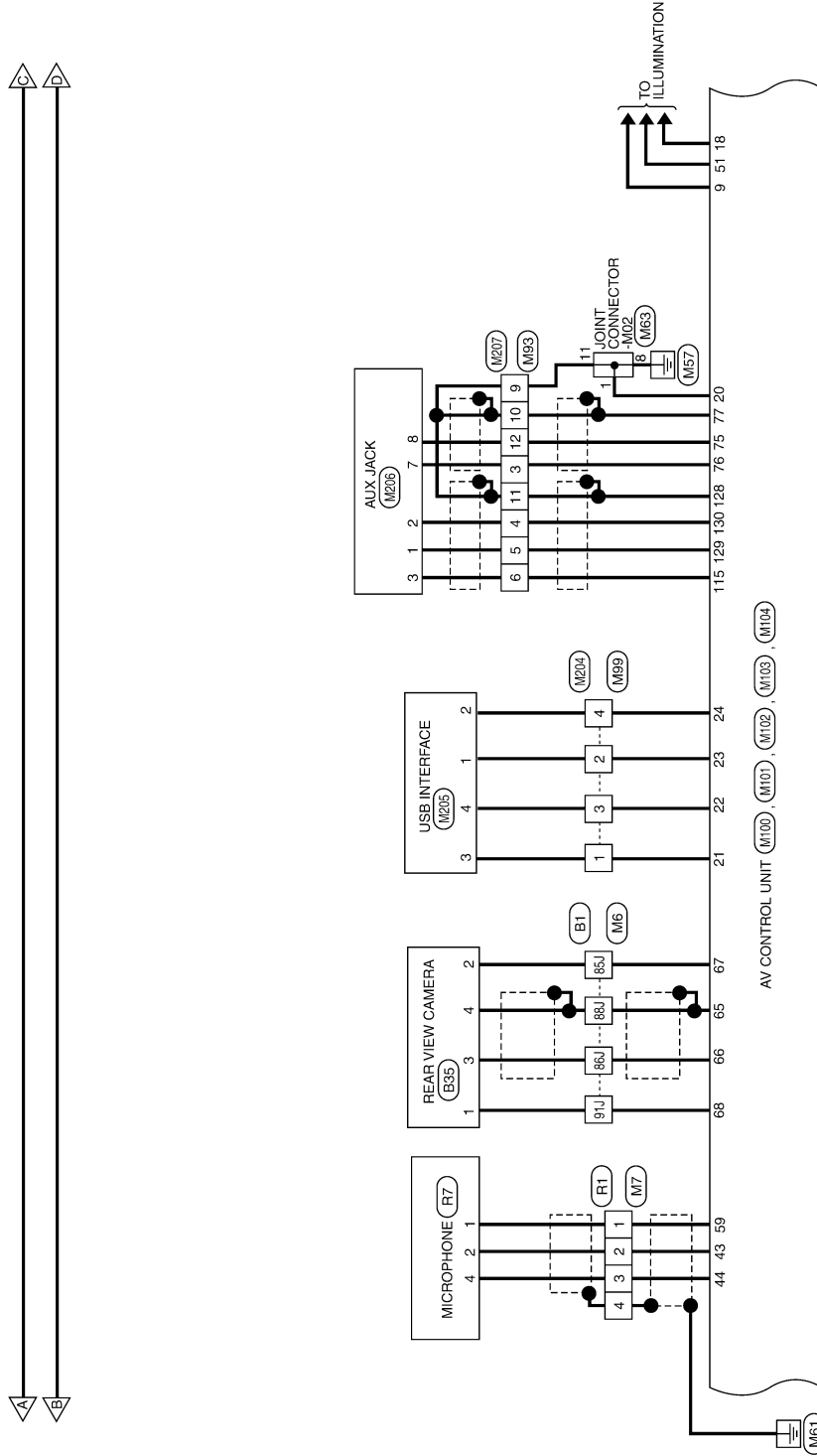
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BOSE AUDIO WITH NAVIGATION

[BOSE AUDIO WITH NAVIGATION]

< WIRING DIAGRAM >

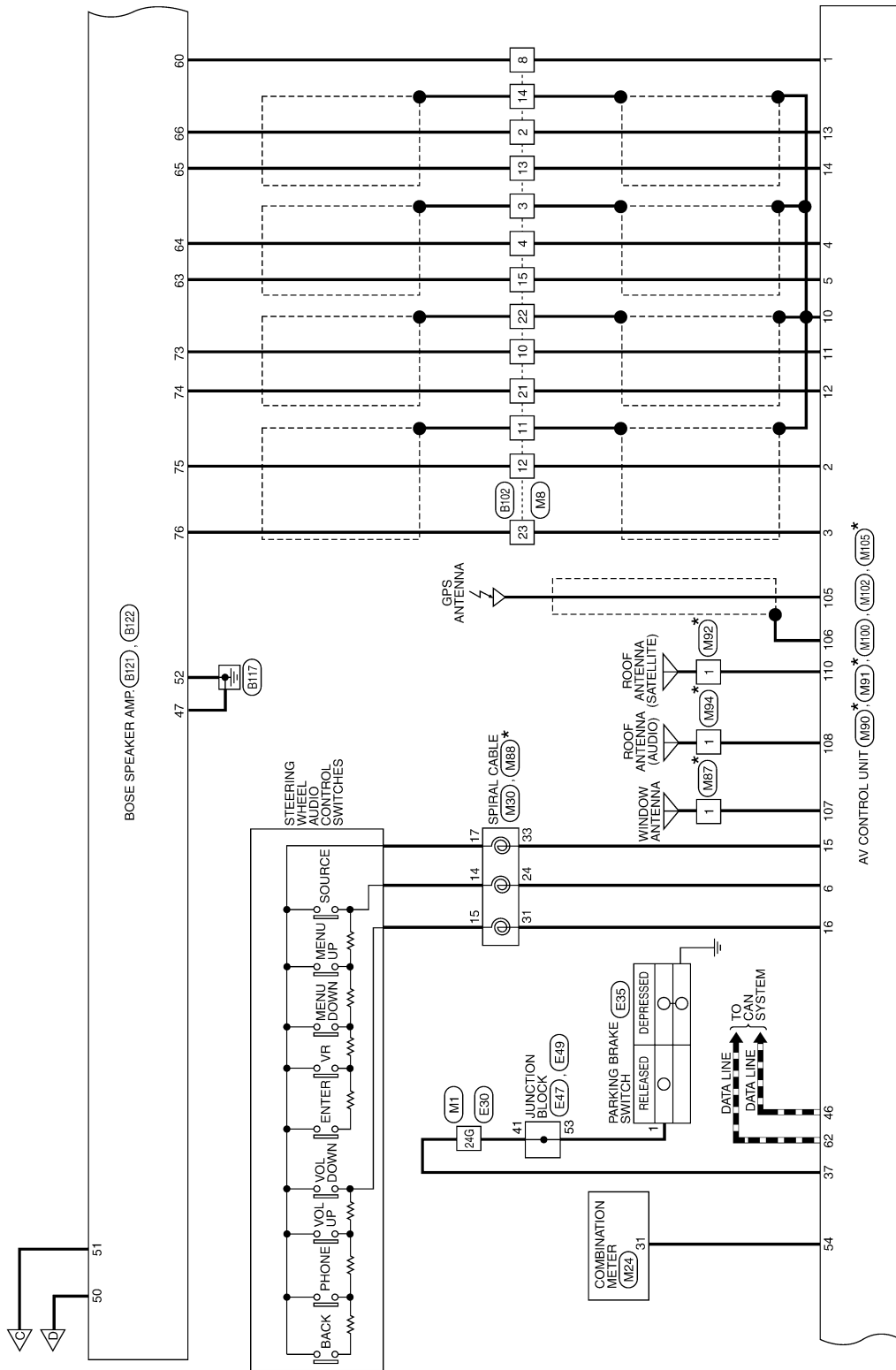


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BOSE AUDIO WITH NAVIGATION

[BOSE AUDIO WITH NAVIGATION]

< WIRING DIAGRAM >



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

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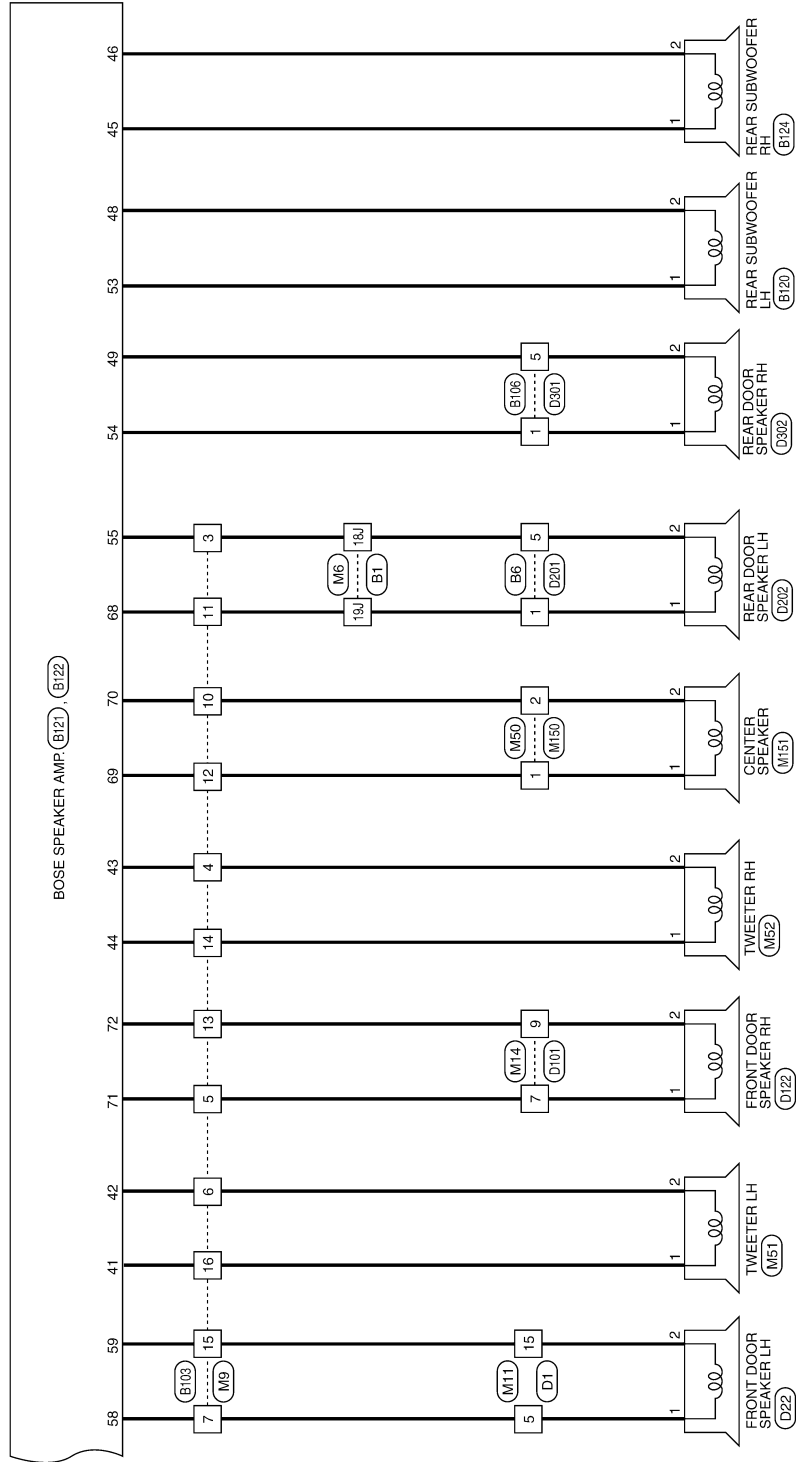
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BOSE AUDIO WITH NAVIGATION

< WIRING DIAGRAM >

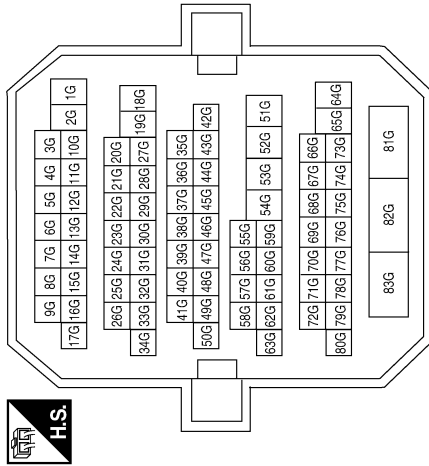
[BOSE AUDIO WITH NAVIGATION]



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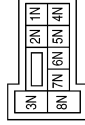
BOSE AUDIO SYSTEM CONNECTORS - WITH NAVIGATION SYSTEM

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



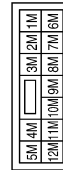
Terminal No.	Color of Wire	Signal Name
13G	O	-
24G	G/R	-
53G	B/R	-
54G	BR	-
64G	Y/R	-

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



Terminal No.	Color of Wire	Signal Name
2N	G	-
5N	V/Y	-

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



Terminal No.	Color of Wire	Signal Name
12M	O	-

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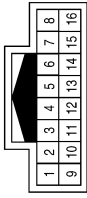
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BOSE AUDIO WITH NAVIGATION

< WIRING DIAGRAM >

[BOSE AUDIO WITH NAVIGATION]

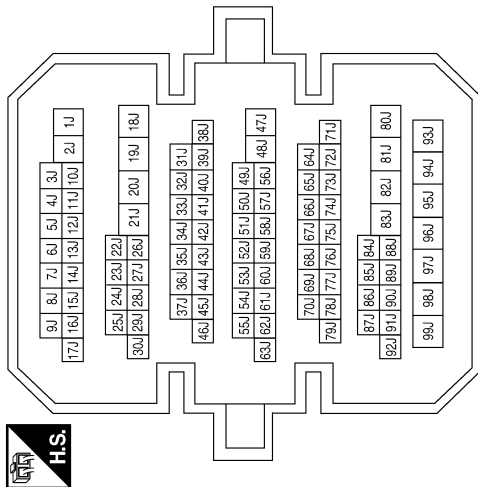
Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

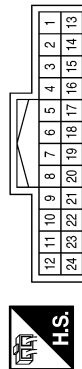
Terminal No.	Color of Wire	Signal Name
18J	BR/B	-
19J	R/G	-
84J	P/B	-
85J	B	-
86J	Y	-
88J	SHIELD	-
91J	GR	-

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



Terminal No.	Color of Wire	Signal Name
2	V	-
3	SHIELD	-
4	GR/V	-
8	B/P	-
10	B	-
11	SHIELD	-
12	G	-
13	LG	-
14	SHIELD	-
15	W/L	-
21	W	-
22	SHIELD	-
23	R	-

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

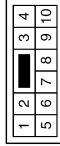


BOSE AUDIO WITH NAVIGATION

[BOSE AUDIO WITH NAVIGATION]

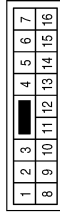
< WIRING DIAGRAM >

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



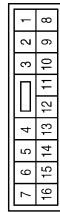
Terminal No.	Color of Wire	Signal Name
7	G/W	-
9	BR	-

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



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

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



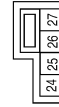
Terminal No.	Color of Wire	Signal Name
1	BR	-
3	BR/B	-
4	GR/L	-
5	G/W	-
6	B/Y	-
7	W	-
9	B/R	-
10	O/B	-
11	R/G	-
12	B/P	-
13	BR	-
14	L/O	-
15	B	-
16	LG	-

Connector No.	M50
Connector Name	WIRE TO WIRE
Connector Color	WHITE



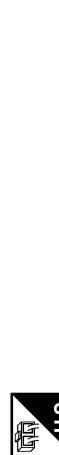
Terminal No.	Color of Wire	Signal Name
1	B/P	-
2	O/B	-

Connector No.	M30
Connector Name	SPIRAL CABLE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	W/G	AUDIO_STRG_SW_REMOTE_A
31	GR/L	AUDIO_STRG_SW_REMOTE_B
33	L/B	AUDIO_STRG_SW_GND

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



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

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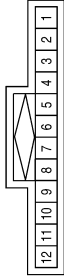


BOSE AUDIO WITH NAVIGATION

[BOSE AUDIO WITH NAVIGATION]

< WIRING DIAGRAM >

Connector No.	M63
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	B	-
8	B	-
11	B	-

Connector No.	M52
Connector Name	TWEETER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L/O	-(WITH BOSE AUDIO SYSTEM)
2	GR/L	-(WITH BOSE AUDIO SYSTEM)

Connector No.	M51
Connector Name	TWEETER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-(WITH BOSE AUDIO SYSTEM)
2	B/Y	-(WITH BOSE AUDIO SYSTEM)

Connector No.	M90
Connector Name	AV CONTROL UNIT (BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
105	B	-
106	B	-

Connector No.	M88
Connector Name	SPIRAL CABLE
Connector Color	GRAY



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

Connector No.	M87
Connector Name	WINDOW ANTENNA
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	B	-

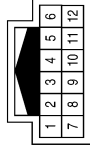
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BOSE AUDIO WITH NAVIGATION

[BOSE AUDIO WITH NAVIGATION]

< WIRING DIAGRAM >

Connector No.	M93
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	L	-
4	B	-
5	R	-
6	W	-
9	B	-
10	B	-
11	SHIELD	-
12	P	-

Connector No.	M92
Connector Name	ROOF ANTENNA (SATELLITE)
Connector Color	BROWN



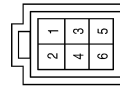
Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M91
Connector Name	AV CONTROL UNIT (BOSE AUDIO SYSTEM WITH NAV)
Connector Color	VIOLET



Terminal No.	Color of Wire	Signal Name
110	B	-

Connector No.	M99
Connector Name	WIRE TO WIRE
Connector Color	GRAY



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

Connector No.	M94
Connector Name	ROOF ANTENNA (AUDIO)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-

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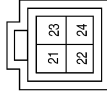
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BOSE AUDIO WITH NAVIGATION

< WIRING DIAGRAM >

[BOSE AUDIO WITH NAVIGATION]

Connector No.	M101
Connector Name	AV CONTROL UNIT (BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	GREEN



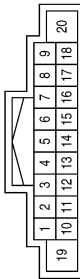
Terminal No.	Color of Wire	Signal Name
21	B	USB GRN
22	W	USB D-
23	R	V-BUS
24	G	USB D+

Terminal No.	Color of Wire	Signal Name
7	V/Y	ACC
8	R/Y	ILL CONT
9	R/L	ILL
10	SHIELD	SHIELD
11	B	FR RH PRE+
12	W	FR RH PRE-
13	V	RR RH PRE+
14	LG	RR RH PRE-
15	L/B	STRG SW GND
16	GR/L	STRG SW B
17	-	-
18	-	-
19	Y/R	+B
20	B	GND

Terminal No.	Color of Wire	Signal Name
59	B/R	MIC SIG
60	-	-
61	-	-
62	L	CAN-H
63	-	-
64	-	-

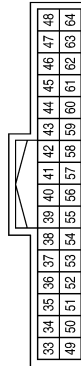
Terminal No.	Color of Wire	Signal Name
42	-	-
43	R/B	MIC GND
44	R/L	MIC +B
45	-	-
46	P	CAN-L
47	-	-
48	-	-
49	-	-
50	-	-
51	R/L	MR OUTPUT
52	G	IGN
53	P/B	REVERSE SIG
54	V/W	SPEED
55	-	-
56	-	-
57	-	-
58	-	-

Connector No.	M100
Connector Name	AV CONTROL UNIT (BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B/P	AMP ON
2	G	FR LH PRE+
3	R	FR LH PRE-
4	GY	RR LH PRE+
5	R	RR LH PRE-
6	W/G	STRG SW A

Connector No.	M102
Connector Name	AV CONTROL UNIT (BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
33	-	-
34	-	-
35	-	-
36	-	-
37	G/R	PKB SIG
38	-	-
39	-	-
40	-	-
41	-	-

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BOSE AUDIO WITH NAVIGATION

[BOSE AUDIO WITH NAVIGATION]

< WIRING DIAGRAM >

Terminal No.	Color of Wire	Signal Name
86	-	-
87	-	-
88	-	-
89	-	-
90	-	-
91	-	-
92	-	-
93	-	-
94	-	-
95	-	-
96	-	-
97	-	-
98	-	-
99	-	-
100	-	-
101	-	-
102	-	-

Terminal No.	Color of Wire	Signal Name
70	-	-
71	-	-
72	-	-
73	-	-
74	-	-
75	P	AUX VIDEO-
76	L	AUX VIDEO+
77	B	VIDEO SHIELD
78	-	-
79	-	-
80	-	-
81	-	-
82	-	-
83	-	-
84	-	-
85	-	-

Connector No.	M103
Connector Name	AV CONTROL UNIT (BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	WHITE



66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104
65	67	69	71	73	75	77	79	81	83	85	87	89	91	93	95	97	99	101	103

Terminal No.	Color of Wire	Signal Name
65	SHIELD	R CAMERA SHIELD
66	Y	R CAMERA COMP
67	B	CAMERA GND
68	GR	CAMERA V+
69	-	-

Terminal No.	Color of Wire	Signal Name
131	-	-
132	-	-
133	-	-
134	-	-
135	-	-
136	-	-
137	-	-
138	-	-
139	-	-

Terminal No.	Color of Wire	Signal Name
117	-	-
118	-	-
119	-	-
120	-	-
121	-	-
122	-	-
123	-	-
124	-	-
125	-	-
126	-	-
127	-	-
128	SHIELD	AUX SHIELD
129	R	AUX AUDIO RH
130	B	AUX AUDIO-

Connector No.	M104
Connector Name	AV CONTROL UNIT (BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
112	-	-
113	-	-
114	-	-
115	W	AUX AUDIO LH
116	-	-

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BOSE AUDIO WITH NAVIGATION

< WIRING DIAGRAM >

[BOSE AUDIO WITH NAVIGATION]

Connector No.	M151
Connector Name	CENTER SPEAKER (BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	BROWN



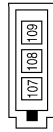
Terminal No.	Color of Wire	Signal Name
1	B/P	-
2	O/B	-

Connector No.	M150
Connector Name	WIRE TO WIRE
Connector Color	WHITE



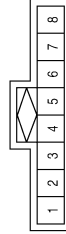
Terminal No.	Color of Wire	Signal Name
1	B/P	-
2	O/B	-

Connector No.	M105
Connector Name	AV CONTROL UNIT (BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	GRAY



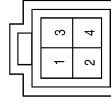
Terminal No.	Color of Wire	Signal Name
107	B	AMP SUPPLY
108	B	MAIN ANTENNA
109	-	-

Connector No.	M206
Connector Name	AUX JACK
Connector Color	WHITE



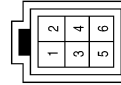
Terminal No.	Color of Wire	Signal Name
1	R/B	AUX AUDIO RH
2	R/L	AUX AUDIO-
3	B/R	AUX AUDIO LH
7	L	AUX VIDEO+
8	B/W	AUX VIDEO-

Connector No.	M205
Connector Name	USB INTERFACE
Connector Color	GREEN



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

Connector No.	M204
Connector Name	WIRE TO WIRE
Connector Color	GRAY



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

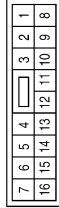
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BOSE AUDIO WITH NAVIGATION

< WIRING DIAGRAM >

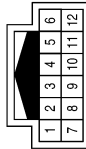
[BOSE AUDIO WITH NAVIGATION]

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



Terminal No.	Color of Wire	Signal Name
15	V or P/B	-

Connector No.	M207
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	L	-
4	R/L	-
5	R/B	-
6	B/R	-
9	GR	-
10	B	-
11	SHIELD	-
12	B/W	-

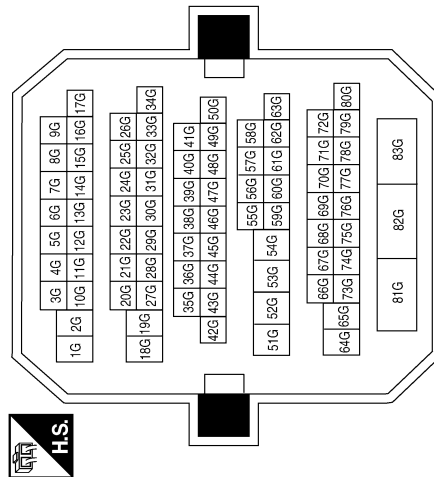
Connector No.	E34
Connector Name	BACK-UP LAMP RELAY
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	O or O/B	-
2	R or Y	-
3	V or P/B	-
5	LG or O	-

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

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



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BOSE AUDIO WITH NAVIGATION

[BOSE AUDIO WITH NAVIGATION]

< WIRING DIAGRAM >

Connector No.	E46
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

31	30	29	28	27	26	25		
40	39	38	37	36	35	34	33	32



Terminal No.	Color of Wire	Signal Name
28	O/B or O	-

Connector No.	E45
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

17	16	15	14	13		
24	23	22	21	20	19	18



Terminal No.	Color of Wire	Signal Name
13	B/W or GR	-

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

1



Terminal No.	Color of Wire	Signal Name
1	P or G/R	-

Connector No.	E49
Connector Name	JUNCTION BLOCK
Connector Color	BROWN

54	53	52	51
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Terminal No.	Color of Wire	Signal Name
53	P or G/R	-

Connector No.	E47
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

42	41		
46	45	44	43



Terminal No.	Color of Wire	Signal Name
41	BR or G/R	-

Connector No.	E66
Connector Name	HYBRID VEHICLE CONTROL ECU
Connector Color	BLACK

168	167	166	165	164	163	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61
174	173	172	171	170	169	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96	95
180	179	178	177	176	175	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112
186	185	184	183	182	181	162	161	160	159	158	157	156	155	154	153	152	151	150	149	148	147	146



Terminal No.	Color of Wire	Signal Name
82	R or Y	BL

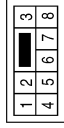
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BOSE AUDIO WITH NAVIGATION

[BOSE AUDIO WITH NAVIGATION]

< WIRING DIAGRAM >

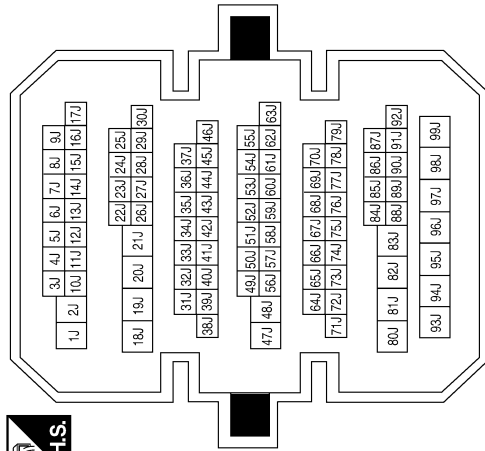
Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



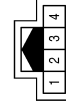
Terminal No.	Color of Wire	Signal Name
1	LG or O/B	-
5	O or W/R	-

Terminal No.	Color of Wire	Signal Name
18J	O or W/R	-(WITH NAVI)
19J	LG or O/B	-(WITH NAVI)
84J	P/B	-
85J	B	-
86J	Y or P	-
88J	SHIELD	-
91J	L or GR	-

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

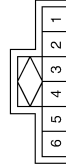


Connector No.	B35
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE



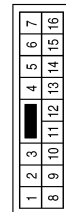
Terminal No.	Color of Wire	Signal Name
1	L or GR	CAMERA ON
2	B	GND
3	Y or P	COMP +
4	SHIELD	COMP -

Connector No.	B22
Connector Name	JOINT CONNECTOR-B07
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
5	V or P/B	-
6	P/B	-

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



Terminal No.	Color of Wire	Signal Name
15	V or P/B	-

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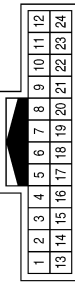
BOSE AUDIO WITH NAVIGATION

< WIRING DIAGRAM >

[BOSE AUDIO WITH NAVIGATION]

Terminal No.	Color of Wire	Signal Name
2	LG	-
3	SHIELD	-
4	BR	-
8	G or B/G	-
10	W/L	-
11	SHIELD	-
12	W/R	-
13	V	-
14	SHIELD	-
15	Y	-
21	GR/V	-
22	SHIELD	-
23	B/R	-

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



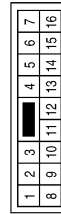
Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	V or L	-
5	P or B/W	-

Terminal No.	Color of Wire	Signal Name
1	SB or BR	-
3	R or BR/B	-
4	GR or GR/L	-
5	O or G/W	-
6	V or B/Y	-
7	W	-
9	G or B/R	-
10	V or O/B	-
11	L or R/G	-
12	P or B/P	-
13	SB or BR	-
14	BR or L/O	-
15	B	-
16	LG	-(WITH NAVI)

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



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BOSE AUDIO WITH NAVIGATION

< WIRING DIAGRAM >

[BOSE AUDIO WITH NAVIGATION]

Terminal No.	Color of Wire	Signal Name
63	Y	RR LH - IN
64	BR	RR LH + IN
65	V	RR RH - IN
66	LG	RR RH + IN
67	-	-
68	L or R/G	RR DOOR LH + OUT
69	P or B/P	INST CTR TWDR + OUT
70	V or O/B	INST CTR TWDR - OUT
71	O or G/W	FR DOOR RH + OUT
72	SB or BR	FR DOOR RH - OUT
73	W/L	FR RH + IN
74	GR/V	FR RH - IN
75	W/R	FR LH + IN
76	B/R	FR LH - IN
77	-	-

Connector No.	B121
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
55	R or BR/B	RR DOOR LH - OUT
56	-	-
57	-	-
58	W	FR TWDR LH + OUT
59	B	FR TWDR LH - OUT
60	G or B/G	AMP ON
61	-	-
62	-	-

Connector No.	B120
Connector Name	REAR SUBWOOFER LH
Connector Color	WHITE



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

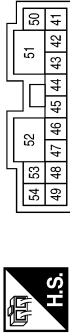
Connector No.	B124
Connector Name	REAR SUBWOOFER RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	O or BR/W	-
2	SB or BR	-

Terminal No.	Color of Wire	Signal Name
41	LG	FR TWDR LH + OUT
42	V or B/Y	FR TWDR LH - OUT
43	GR or GR/L	FR TWDR RH - OUT
44	BR or L/O	FR TWDR RH + OUT
45	O or BR/W	RH WOOFER + OUT
46	SB or BR	RH WOOFER - OUT
47	B or B/L	GND
48	L or G/B	LH WOOFER - OUT
49	P or B/W	RR DOOR RH - OUT
50	SB or BR	BAT
51	G or B/R	BAT
52	B	GND
53	W or W/B	LH WOOFER +OUT
54	V or L	RR DOOR RH + OUT

Connector No.	B122
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



ABNIA2444GB

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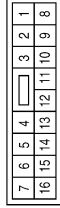
AV

BOSE AUDIO WITH NAVIGATION

< WIRING DIAGRAM >

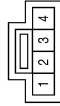
[BOSE AUDIO WITH NAVIGATION]

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



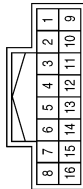
Terminal No.	Color of Wire	Signal Name
5	O or W	-
15	LG or B	-

Connector No.	R7
Connector Name	MICROPHONE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B/R	SIG (WITH NAVI)
2	R/B	GND (WITH NAVI)
4	R/L	VCC (WITH NAVI)

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



Terminal No.	Color of Wire	Signal Name
1	B/R	- (WITH NAVI)
2	R/B	- (WITH NAVI)
3	R/L	- (WITH NAVI)
4	SHIELD	-

Connector No.	D122
Connector Name	FRONT DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L or G/W	-
2	LG or BR	-

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



Terminal No.	Color of Wire	Signal Name
7	L or G/W	-
9	LG or BR	-

Connector No.	D22
Connector Name	FRONT DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



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


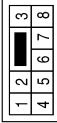
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BOSE AUDIO WITH NAVIGATION

[BOSE AUDIO WITH NAVIGATION]



< WIRING DIAGRAM >

Connector No.	D301
Connector Name	WIRE TO WIRE
Connector Color	WHITE


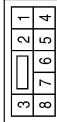
Terminal No.	Color of Wire	Signal Name
1	L	-
5	W or B/W	-

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



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

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

Terminal No.	Color of Wire	Signal Name
1	O or O/B	-
5	L or W/R	-

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

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

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AV

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM

Symptom Table

INFOID:000000005786729

NAVIGATION SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">• AV control unit power and ground circuit• AV control unit	<ul style="list-style-type: none">• AV-225• AV-292
Steering wheel audio control switches do not operate	<ul style="list-style-type: none">• Steering wheel audio control switches• AV control unit	<ul style="list-style-type: none">• AV-244• AV-292
Voice activated control does not operate	<ul style="list-style-type: none">• Microphone• Steering wheel audio control switches• AV control unit	<ul style="list-style-type: none">• AV-248• AV-244• AV-292

HANDS-FREE PHONE SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">• AV control unit power and ground circuit• AV control unit	<ul style="list-style-type: none">• AV-225• AV-292
Steering wheel audio control switches do not operate	<ul style="list-style-type: none">• Steering wheel audio control switches• AV control unit	<ul style="list-style-type: none">• AV-244• AV-292
Voice activated control does not operate	<ul style="list-style-type: none">• Microphone• Steering wheel audio control switches• AV control unit	<ul style="list-style-type: none">• AV-248• AV-244• AV-292

REAR VIEW MONITOR

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">• Rear view camera power and ground circuit• Reverse signal circuit• Camera image signal circuit	<ul style="list-style-type: none">• AV-227• AV-251• AV-250

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none">• AV control unit power and ground circuit• AV control unit	<ul style="list-style-type: none">• AV-225• AV-292
Steering wheel audio control switches do not operate	<ul style="list-style-type: none">• Steering wheel audio control switches• AV control unit	<ul style="list-style-type: none">• AV-244• AV-292
All speakers do not sound	<ul style="list-style-type: none">• AV control unit power and ground circuit• BOSE speaker amp. ON signal• BOSE speaker amp. power and ground circuit• BOSE speaker amp.• AV control unit	<ul style="list-style-type: none">• AV-225• AV-246• AV-226• AV-246• AV-292
One or several speakers do not sound	<ul style="list-style-type: none">• Front door speaker• Tweeter• Center speaker• Rear door speaker• Subwoofer	<ul style="list-style-type: none">• AV-230• AV-233• AV-236• AV-238• AV-241

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

NORMAL OPERATING CONDITION

Description

INFOID:000000005786730

AUDIO SYSTEM

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

Noise

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

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

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

NOTE:

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

Type of Noise and Possible Cause

Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	<ul style="list-style-type: none"> • Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		<ul style="list-style-type: none"> • Fuel pump condenser
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	<ul style="list-style-type: none"> • Relay malfunction, audio unit malfunction
	The noise occurs when various motors are operating.	<ul style="list-style-type: none"> • Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		<ul style="list-style-type: none"> • Rear defogger coil malfunction • Open circuit in printed heater • Poor ground of antenna feeder line
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		<ul style="list-style-type: none"> • Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

NAVIGATION SYSTEM

Basic Operation

Symptom	Cause	Remedy
No image is shown.	Display brightness adjustment is set fully to DARK side.	Adjust the display brightness.
No guide sound is heard. Audio guide volume is too low or too high.	Volume control is set to OFF, MIN or MAX.	Adjust the audio guide volume.
	Audio guidance is not available while the vehicle is driving on a dark pink route.	System is not malfunctioning.
Screen is too dark. Motion of the image is too slow.	Temperature inside the vehicle is low.	Wait until the temperature inside the vehicle reaches the proper temperature.
Small black or bright spots appear on the screen.	Symptom peculiar to a liquid crystal display (display unit).	System is not malfunctioning.

Vehicle Mark

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Symptom	Cause	Remedy
Map screen and BIRDVIEW™ Name of the place vary with the screen.	Some thinning of the character data is done to prevent the display becoming to complex. In some cases and in some locations, the display contents may differ. The same place name, street name, etc. may not be displayed every time on account of the data processing.	System is not malfunctioning.
Vehicle mark is not positioned correctly.	Vehicle is transferred by ferry or by towing after its ignition switch is turned to OFF.	Drive the vehicle for a while in the GPS satellite signal receiving condition.
Screen will not switch to nighttime mode after the lighting switch is turned ON.	The daytime screen is selected by the "SWITCH SCREENS" when the last time the screen dimming setting is done. Switching between daytime/nighttime screen may be inhibited by the automatic illumination adjustment function.	Perform screen dimming and select the nighttime screen by "SWITCH SCREENS".
Map screen will not scroll in accordance with the vehicle travel.	Current location is not displayed.	Press "MAP" button to display the current location.
Vehicle mark will not be shown.	Current location is not displayed.	Press "MAP" button to display the current location.
Accuracy indicator (GPS satellite mark) on the map screen stays gray.	GPS satellite signal is intercepted because the vehicle is in or behind a building.	Move the vehicle out to an open space.
	GPS satellite signal cannot be received because an obstacle is placed on top of the instrument panel.	Do not place anything on top of the meter display (instrument panel).
	GPS satellites are not visible from current location.	Wait until GPS satellites are visible by moving the vehicle.
Vehicle location accuracy is low.	Accuracy indicator (GPS satellite mark) on the map screen stays gray.	Current location is not determined.
	Vehicle speed setting by the vehicle speed pulse has been deviated (advanced or retarded) from the actual vehicle speed because tire chain is fitted or the system has been used on another vehicle.	Drive the vehicle for a while [for approx. 30 minutes at approx. 30 km/h (19 MPH)] and the deviation will be automatically adjusted. If advancement or retard still occur, perform the distance adjustment by CONFIRMATION/ADJUSTMENT mode of diagnosis function.
	Map data has error or omission. (Vehicle mark is always deviated to the same position.)	As a rule, an updated map DVD-ROM will be released once a year.

Destination, Passing Points and Menu Items Cannot be Selected/Set

Symptom	Cause	Remedy
Destination cannot be set.	Destination to be set is on an expressway.	Set the destination on an ordinary road.
Passing point is not searched when re-searching the route.	The vehicle has already passed the passing point, or the system judged so.	To include the passing points that have been passed into the route again, set the route again.
Route information will not be displayed.	Route searching has not been done.	Set the destination and perform route searching.
	Vehicle mark is not on the recommended route.	Drive on the recommended route.
	Route guide is turned OFF.	Turn route guide ON.
	Route information is not available on the dark pink route.	System is not malfunctioning.
After the route searching, no guide sign will appear as the vehicle goes near the entrance/exit to the toll road.	Vehicle mark is not on the recommended route. (On the display, only guide signs related to the recommended route will be shown.)	Drive on the recommended route.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Symptom	Cause	Remedy
Automatic route searching is not possible.	Vehicle is driving on a highway (gray route), or no recommended route is available.	Drive on a road to be searched. Or re-search the route manually. In this case, however, the whole route will be searched.
Performed automatic detour search (or detour search). However, the result is the same as that of the previous search.	Performed search with every conditions considered. However, the result is the same as that of the previous search.	System is not malfunctioning.
Passing points cannot be set.	More than five passing points were set.	Passing points can be set up to five. To stop at more than five points, perform sharing in several steps.
When setting the route, the starting point cannot be selected.	The current vehicle location is always set as the starting point of a route.	System is not malfunctioning.
Some menu items cannot be selected.	The vehicle is being driven.	Stop the vehicle at a safe place and then operate the system.

Voice Guide

Symptom	Cause	Remedy
Voice guide will not operate.	Note: Voice guide is only available at intersections that satisfy certain conditions (indicated by ● on the map). Therefore, guidance may not be given even when the route on the map changes direction.	System is not malfunctioning.
	The vehicle is not on the recommended route.	Return to the recommended route or re-search the route.
	Voice guide is turned OFF.	Turn voice guide ON.
	Route guide is turned OFF.	Turn route guide ON.
Voice guide does not match the actual road pattern.	Voice guide may vary with the direction to which the vehicle is turn and the connection of the road to other roads.	Drive in conformity to the actual traffic rules.

Route Search

Symptom	Cause	Remedy
No route is shown.	No road to be searched is found around the destination.	Find wider road (orange road or wider) nearby and reset the destination and passing points onto it. Take care of the traveling direction when there are separate up and down roads.
	Starting point and the destination are too close.	Set the destination at more distant point.
	Conditional traffic regulation (day of the week/ time of the day) is set at the area around the current location or the destination.	Turn the time-regulating search conditions OFF. Turn "Avoid regulation time" in the search conditions OFF.
Indicated route is intermittent.	In some areas, highways (gray routes) are not used for the search ^(Note) Therefore, the route to the current location or the passing points may be intermittent.	System is not malfunctioning.
When the vehicle has passed the recommended route, it is deleted from the screen.	A recommended route is controlled by each section. When the vehicle has passed the passing point 1, then the map data from the starting point up to the passing point 1 will be deleted. (The data may remain undeleted in some area.)	System is not malfunctioning.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

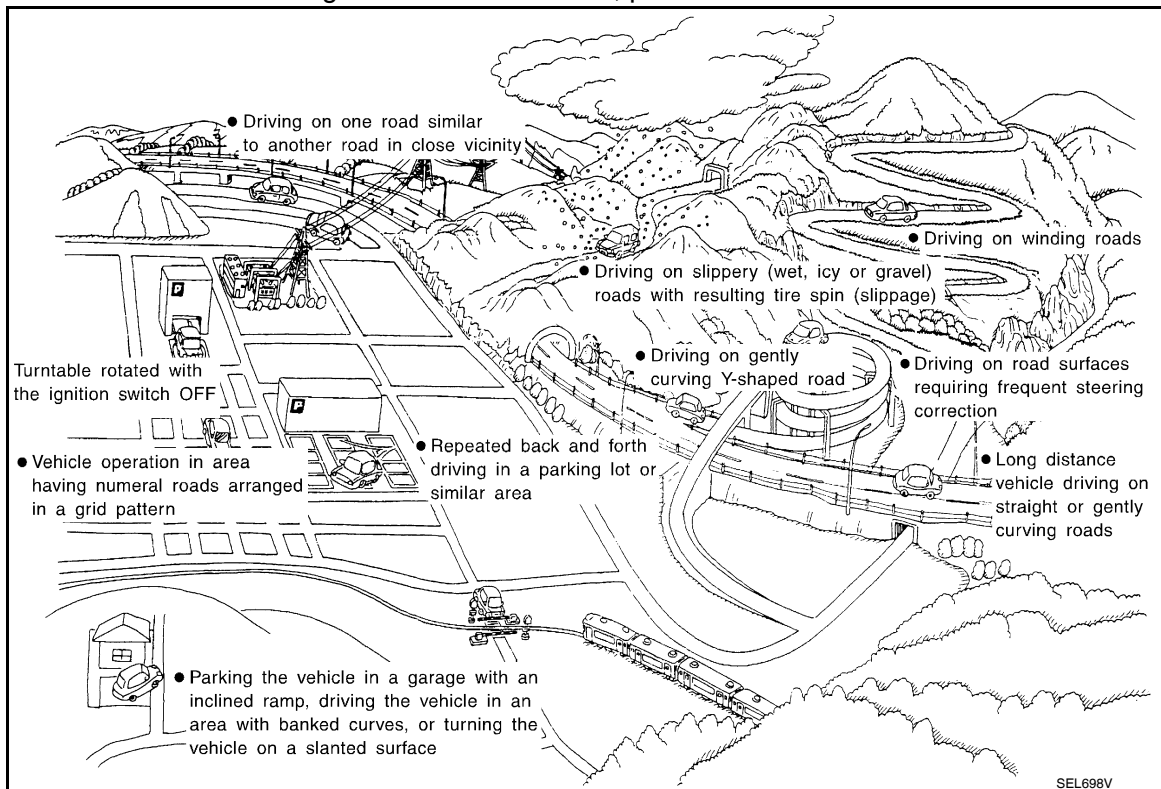
Symptom	Cause	Remedy
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, etc.) is set at the area around the starting point or the destination.	Slightly move the starting point or the destination, or set the passing point on the route of your choice.
	In the area where highways (gray routes) are used for the search, left turn has priority around the current location and the destination (passing points). For this reason, the recommended route may be detouring.	System is not malfunctioning.
Landmarks on the map do not match the actual ones.	This can be happen due to omission or error in the map data.	As a rule, an updated map DVD-ROM will be released once a year. Wait until the latest map has become available.
Recommended route is far from the starting point, passing points, and destination.	Starting point, passing points, and destination of the route guide were set far from the desired points because route searching data around these area were not stored.	Reset the destination onto the road nearby. If this road is one of the highways (gray routes), an ordinary road nearby may be displayed as the recommended route.

NOTE:

Except for the ordinance-designated cities. (Malfunctioning areas may be changed in the updated map disc.)

Examples of Current-Location Mark Displacement

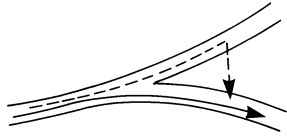
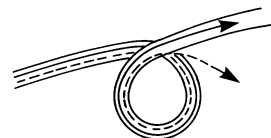
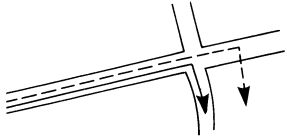
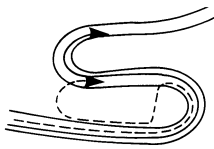
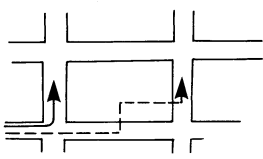
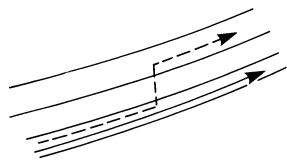
Vehicle's travel amount is calculated by reading its travel distance and turning angle. Therefore, if the vehicle is driven in the following manner, an error will occur in the vehicle's current location display. If correct location has not been restored after driving the vehicle for a while, perform location correction.



NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

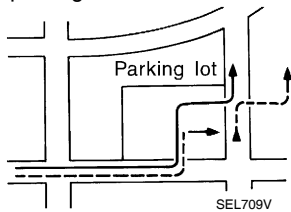
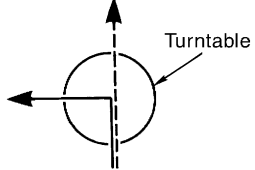
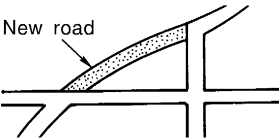
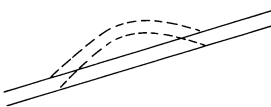
Cause (condition) –: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
Y-intersections  ELK0192D	At a Y intersection or similar gradual division of roads, an error in the direction of travel deduced by the sensor may result in the current-location mark appearing on the wrong road.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
Spiral roads  ELK0193D	When driving on a large, continuous spiral road (such as loop bridge), turning angle error is accumulated and the vehicle mark may deviate from the correct location.	
Straight roads  ELK0194D	When driving on a long, straight road and slow curve without stopping, map-matching does not work effectively enough and distance errors may accumulate. As a result, the vehicle mark may deviate from the correct location when the vehicle is turned at a corner.	
Zigzag roads  ELK0195D	When driving on a zigzag road, the map may be matched to other roads in the similar direction nearby at every turn, and the vehicle mark may deviate from the correct location.	
Roads laid out in a grid pattern  ELK0196D	When driving where roads are laid out in a grid pattern, or where many roads are running in the similar direction nearby, the map may be matched to them by mistake and the vehicle mark may deviate from the correct location.	
Parallel roads  ELK0197D	When two roads are running in parallel (such as highway and sideway), the map may be matched to the other road by mistake and the vehicle mark may deviate from the correct location.	

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

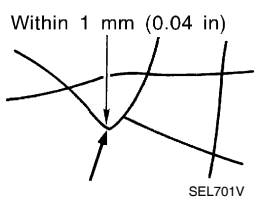
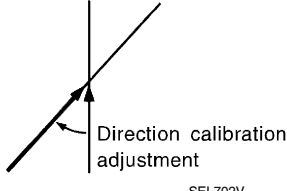
[BOSE AUDIO WITH NAVIGATION]

Cause (condition) -: While driving ooo: Display		Driving condition	Remarks (correction, etc.)
Place	In a parking lot  SEL709V	When driving in a parking lot, or other location where there are no roads on the map, matching may place the vehicle mark on a nearby road. When the vehicle returns to the road, the vehicle mark may have deviated from the correct location. When driving in circle or turning the steering wheel repeatedly, direction errors accumulate, and the vehicle mark may deviate from the correct location.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
	Turntable  SEL710V	When the ignition switch is OFF, the navigation system cannot get the signal from the gyroscope (angular speed sensor). Therefore, the displayed direction may be wrong and the correct road may not be easily returned to after rotating the vehicle on a turntable with the ignition OFF.	
	Slippery roads	On snow, wet roads, gravel, or other roads where tires may slip easily, accumulated mileage errors may cause the vehicle mark to deviate from the correct road.	
	Slopes	When parking in sloped garages, when travelling on banked roads, or in other cases where the vehicle turns when tilted, an error in the turning angle will occur, and the vehicle mark may deviate from the road.	
Map data	Road not displayed on the map screen  SEL699V	When driving on new roads or other roads not displayed on the map screen, map matching does not function correctly and matches the location to a nearby road. When the vehicle returns to a road which is on the map, the vehicle mark may deviate from the correct road.	
	Different road pattern (Changed due to repair)  ELK0201D	If the road pattern stored in the map data and the actual road pattern are different, map matching does not function correctly and matches the location to a nearby road. The vehicle mark may deviate from the correct road.	
Vehicle	Use of tire chains	When tire chains are used, the mileage is not correctly detected, and the vehicle mark may deviate from the correct road.	Drive the vehicle for a while. If the distance still deviates, adjust it by using the distance adjustment function. (If the tire chain is removed, recover the original value.)

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Cause (condition) –: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
Precautions for driving	Just after the engine is started	If the vehicle is driven just after the engine is started when the gyroscope (angular speed sensor) correction is not completed, the vehicle can lose its direction and may have deviated from the correct location. Wait for a short while before driving after starting the engine.
	Continuous driving without stopping	When driving long distances without stopping, direction errors may accumulate, and the current-location mark may deviate from the correct road. Stop and adjust the orientation.
	Abusive driving	Spinning the wheels or engaging in other kinds of abusive driving may result in the system being unable to perform correct detection, and may cause the vehicle mark to deviate from the correct road. If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
How to correct location	Position correction accuracy 	If the accuracy of location settings is poor, accuracy may be reduced when the correct road cannot be found, particularly in places where there are many roads. Enter in the road displayed on the screen with an accuracy of approx. 1mm. Caution: Whenever possible, use detailed map for the correction.
	Direction when location is corrected 	If the accuracy of location settings during correction is poor, accuracy may be reduced afterwards. Perform direction correction.

Location Correction by Map-Matching is Slow

- The map-matching function needs to refer to the data of the surrounding area. It is necessary to drive some distance for the function to work.
- Because map-matching operates on this principle, when there are many roads running in similar directions in the surrounding area, no matching determination may be made. The location may not be corrected until some special feature is found.

Name of Road is Not Displayed

The current road name may not be displayed if there are no road names displayed on the map screen.

Contents of Display Differ for Birdview™ and the (Flat) Map Screen

Difference of the BIRDVIEW™ screen from the flat map screen are as follows.

- The current place name displays names which are primarily in the direction of vehicle travel.
- The amount of time before the vehicle travel or turn angle is updated on the screen is longer than for the (flat) map display.
- The conditions for display of place names, roads, and other data are different for nearby areas and for more distant areas.
- Some thinning of the character data is done to prevent the display becoming too complex. In some cases and in some locations, the display contents may differ.
- The same place name, street name, etc. may be displayed multiple times.

Vehicle Mark Shows a Position Which is Completely Wrong

In the following cases, the vehicle mark may appear on completely different position in the map depending on the GPS satellite signal receiving conditions. In this case, perform location correction and direction correction.

- When location correction has not been done
- If the receiving conditions of the GPS satellite signal is poor, if the vehicle mark becomes out of place, it may move to a completely different location and not come back if location correction is not done. The position will be corrected if the GPS signal can be received.
- When the vehicle has traveled by ferry, or when the vehicle has been being towed

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

- Because calculation of the current location cannot be done when traveling with the ignition off, for example when traveling by ferry or when being towed, the location before travel is displayed. If the precise location can be detected with GPS, the location will be corrected.

Vehicle Mark Jumps

In the following cases, the vehicle mark may appear to jump as a result of automatic correction of the current location.

- When map matching has been done
 - If the current location and the vehicle mark are different when map matching is done, the vehicle mark may seem to jump. At this time, the location may be “corrected” to the wrong road or to a location which is not on a road.
- When GPS location correction has been done
 - If the current location and the vehicle mark are different when the location is corrected using GPS measurements, the vehicle mark may seem to jump. At this time, the location may be “corrected” to a location which is not on a road.

Vehicle Mark is in a River or Sea

The navigation system moves the vehicle mark with no distinction between land and rivers or sea. If the vehicle mark is somehow out of place, it may appear that the vehicle is driving in a river or the sea.

Vehicle Mark Automatically Rotates

The system wrongly memorizes the rotating status as stopping when the ignition switch is turned ON with the turntable rotating. That causes the vehicle mark to rotate when the vehicle is stopped.

When Driving on Same Road, Sometimes Vehicle Mark is in Right Place and Sometimes it is in Wrong Place

The conditions of the GPS antenna (GPS data) and gyroscope (angular speed sensor) change gradually. Depending on the road traveled and the operation of the steering wheel, the location detection results will be different. Therefore, even on a road on which the location has never been wrong, conditions may cause the vehicle mark to deviate.

PRECAUTION

PRECAUTIONS

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

INFOID:000000005818896

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.

Precaution for Trouble Diagnosis

INFOID:000000005438865

AV COMMUNICATION SYSTEM

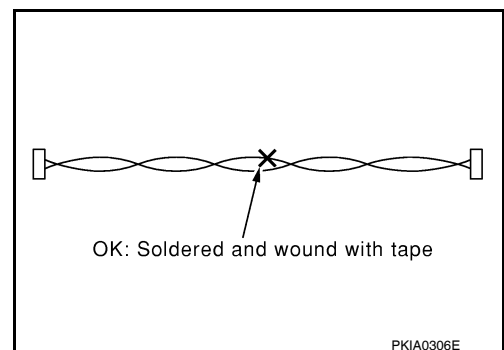
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

INFOID:000000005438866

AV COMMUNICATION SYSTEM

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



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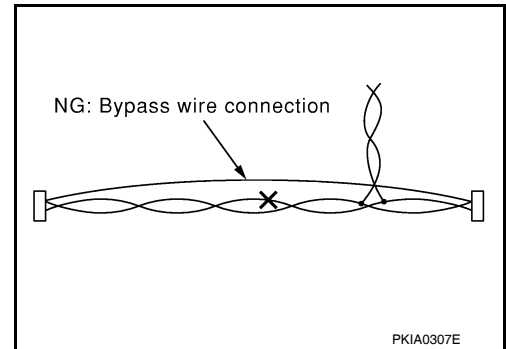
AV

PRECAUTIONS

< PRECAUTION >

[BOSE AUDIO WITH NAVIGATION]

- Do not perform bypass wire connections for the repair parts. (The spliced wire will become separated and the characteristics of twisted line will be lost.)



PREPARATION

< PREPARATION >

[BOSE AUDIO WITH NAVIGATION]

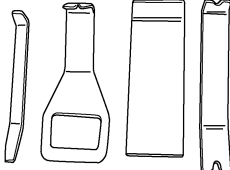
PREPARATION

PREPARATION

Special Service Tools

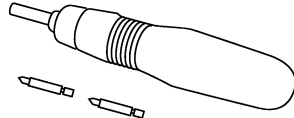
INFOID:000000005818897

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

Commercial Service Tools

INFOID:000000005438867

Tool name	Description
Power tool  PBIC0191E	Loosening bolts and nuts

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ON-VEHICLE REPAIR

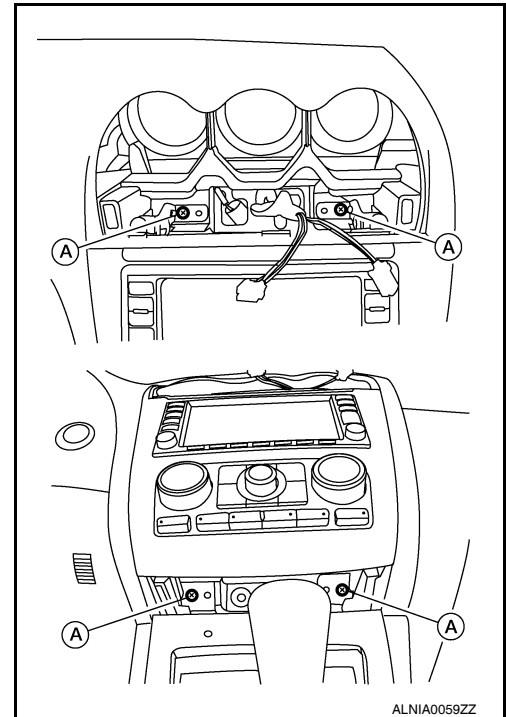
AV CONTROL UNIT

Removal and Installation

INFOID:000000005818898

REMOVAL

1. Disconnect the 12-volt battery negative terminal.
2. Remove the center ventilator grilles. Refer to [VTL-24. "CENTER VENTILATOR GRILLES : Removal and Installation"](#).
3. Remove the storage bin. Refer to [IP-10. "Exploded View"](#).
4. Remove cluster lid D. Refer to [IP-11. "Removal and Installation"](#).
5. Remove the AV control unit upper and lower screws (A).



6. Pull out the AV control unit assembly, disconnect the AV control unit assembly connectors.
7. Disconnect the front air control unit connector.
8. Remove the AV control unit bracket screws, then remove the AV control unit brackets.

INSTALLATION

Installation is in the reverse order of removal.

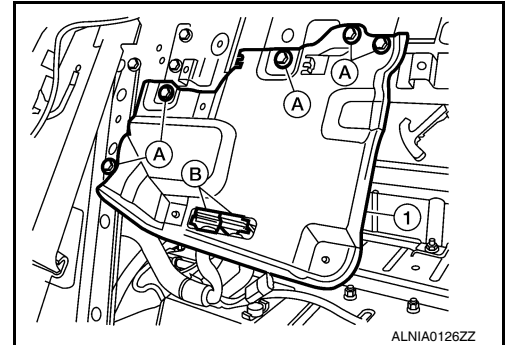
BOSE AMP.

Removal and Installation

INFOID:000000005438869

REMOVAL

1. Disconnect the 12-volt battery negative terminal.
2. Remove the rear seat back. Refer to [SE-24, "Removal and Installation"](#).
3. Remove the bose speaker amp. screws (A), then disconnect the bose speaker amp. connectors (B), and remove the bose speaker amplifier (1).



INSTALLATION

Installation is in the reverse order of removal.

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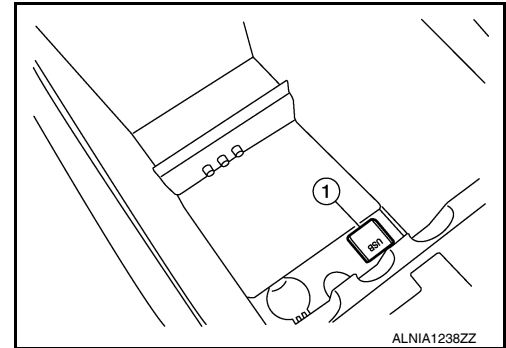
USB CONNECTOR

Removal and Installation

INFOID:000000005818899

Removal

1. Remove the center console assembly. Refer to [IP-14. "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 AUDIO WITH NAVIGATION]

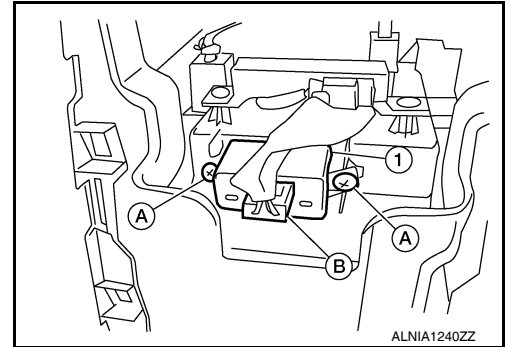
AUXILIARY INPUT JACKS

Removal and Installation

INFOID:000000005818900

REMOVAL

1. Remove the center console. Refer to [IP-14, "Removal and Installation"](#).
2. Remove the center console bin box.
3. Disconnect the auxiliary input jacks connector (B).
4. Remove the auxiliary input jacks screws (A).
5. Remove the auxiliary input jacks (1).



INSTALLATION

Installation is in the reverse order of removal.

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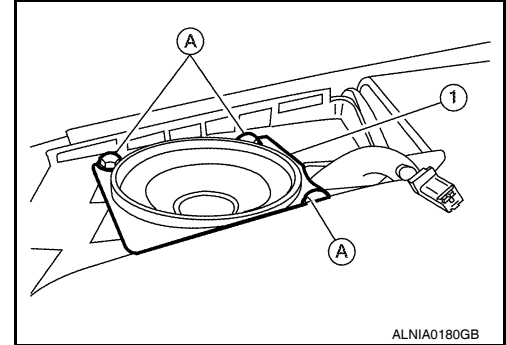
TWEETER

Removal and Installation

INFOID:000000005438871

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-26, "Removal and Installation"](#).
2. Remove tweeter speaker grille. Refer to [IP-11, "Removal and Installation"](#).
3. Remove the tweeter speaker screws (A), disconnect the tweeter speaker connector and remove the tweeter speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

CENTER SPEAKER

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITH NAVIGATION]

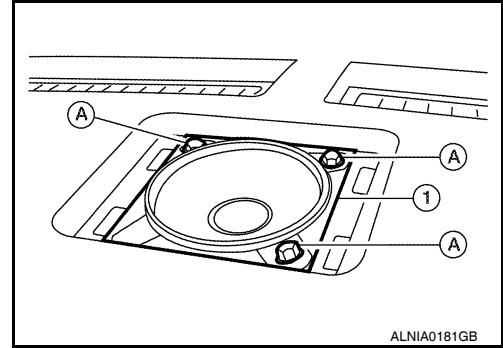
CENTER SPEAKER

Removal and Installation

INFOID:000000005438872

REMOVAL

1. Remove the center speaker grille. Refer to [JP-11, "Removal and Installation"](#).
2. Remove the center speaker screws (A), then pull out the center speaker (1), disconnect the connector and remove the center speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

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FRONT DOOR SPEAKER

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITH NAVIGATION]

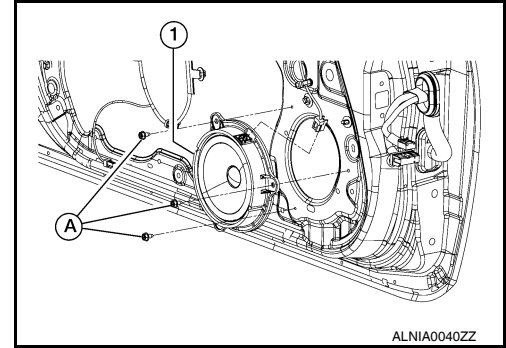
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000005438873

REMOVAL

1. Remove the front door finisher. Refer to [INT-13, "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).



INSTALLATION

Installation is in the reverse order of removal.

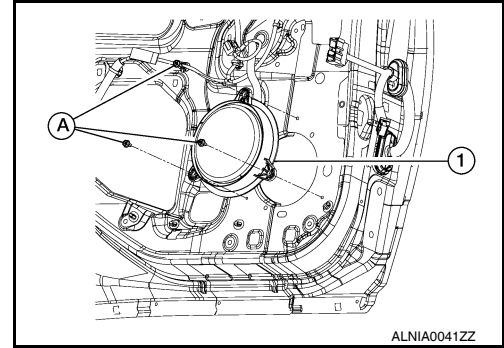
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000005438874

REMOVAL

1. Remove the rear door finisher. Refer to [INT-13. "Removal and Installation"](#).
2. Remove the rear door speaker screws (A), then disconnect the rear door speaker connector and remove the rear door speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

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SUBWOOFER

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITH NAVIGATION]

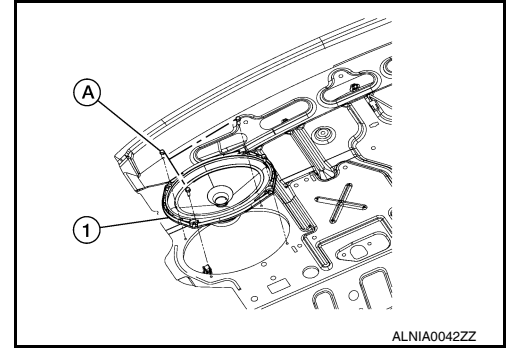
SUBWOOFER

Removal and Installation

INFOID:000000005438875

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-22, "Removal and Installation"](#).
2. Remove the rear subwoofer screws (A), then disconnect the rear subwoofer connector and remove the rear subwoofer (1).



INSTALLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

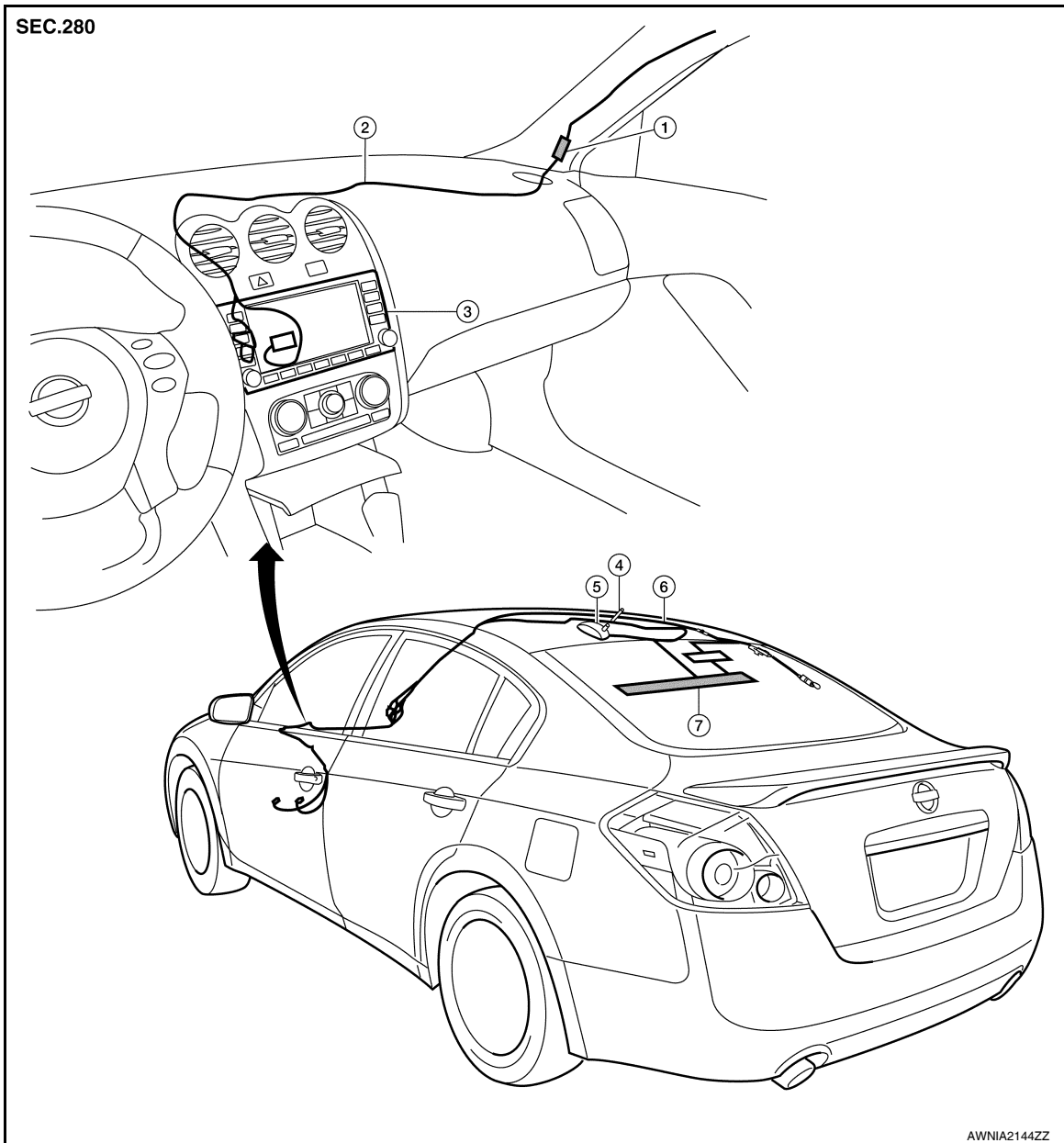
< ON-VEHICLE REPAIR >

[BOSE AUDIO WITH NAVIGATION]

AUDIO ANTENNA

Location of Antennas

INFOID:000000005438876



- | | | |
|--------------------------------------|----------------------------|--|
| 1. AV control unit harness connector | 2. AV control unit harness | 3. AV control unit |
| 4. Roof antenna rod | 5. Roof antenna base | 6. Antenna feeder (to AV control unit) |
| 7. Window antenna | | |

Roof Antenna

INFOID:000000005438877

REMOVAL AND INSTALLATION

Removal

1. Remove the rear parcel shelf finisher. Refer to [INT-22, "Removal and Installation"](#).
2. Remove the rear assist grips. Refer to [INT-26, "Removal and Installation"](#).
3. Pull down headlining (rear) and obtain space work between roof and headlining.

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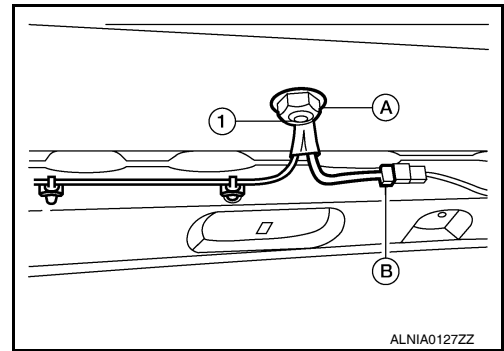
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AUDIO ANTENNA

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITH NAVIGATION]

4. Remove the roof antenna nut (A), then disconnect the antenna feeder connector (B) and remove the antenna feeder (1) from the roof.
5. Detach the antenna feeder harness wire clips, then disconnect the antenna feeder harness wire end and feed the antenna feeder harness through the roof to remove the roof antenna base.



Installation

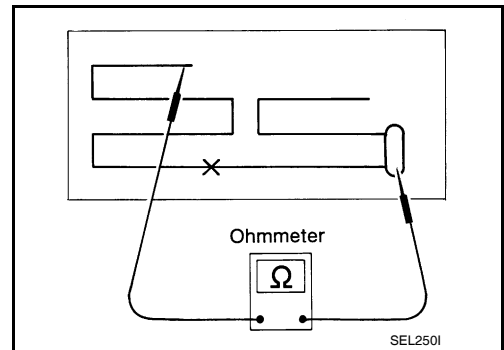
Installation is in the reverse order of removal.

Window Antenna Repair

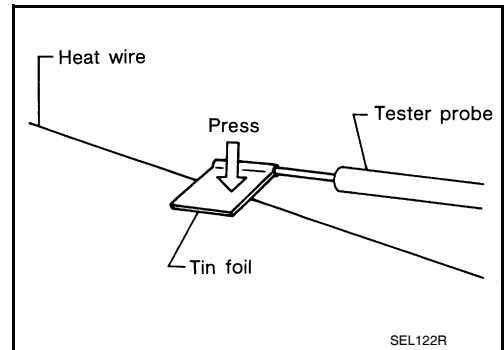
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ELEMENT CHECK

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



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

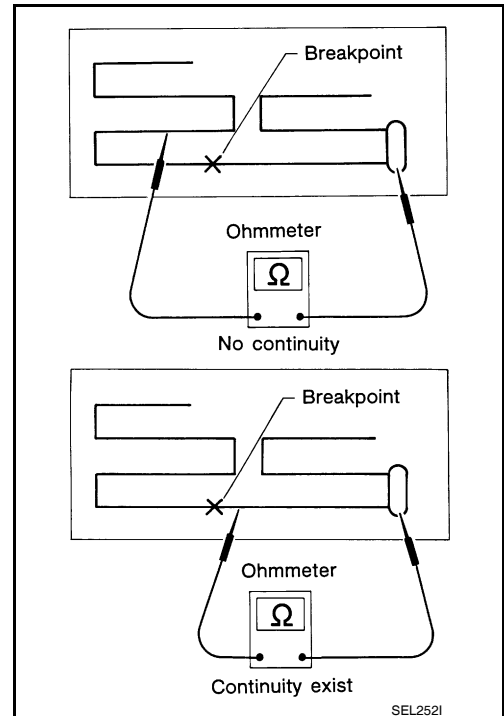


AUDIO ANTENNA

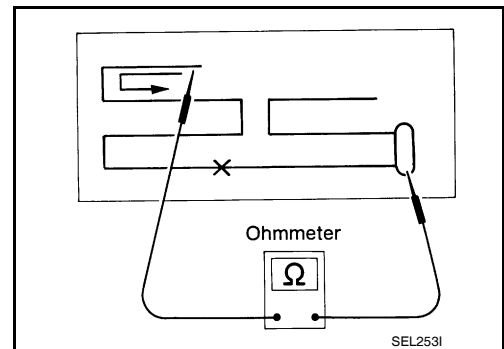
< ON-VEHICLE REPAIR >

[BOSE AUDIO WITH NAVIGATION]

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



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

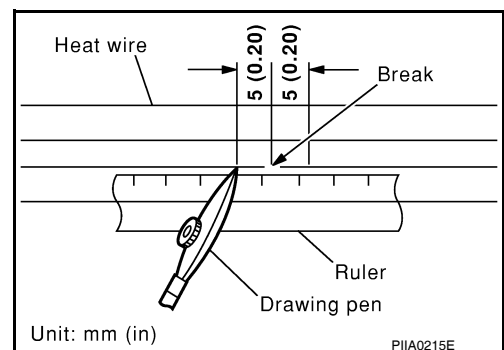


REPAIR EQUIPMENT

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

REPAIRING PROCEDURE

- Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
- Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
- Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.

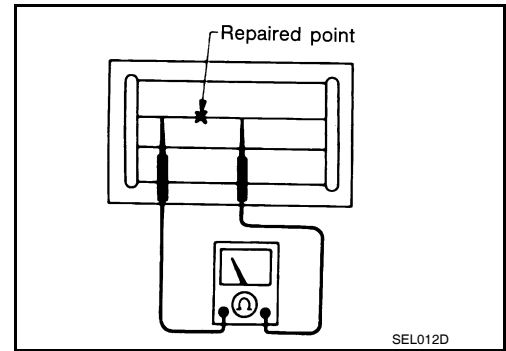


AUDIO ANTENNA

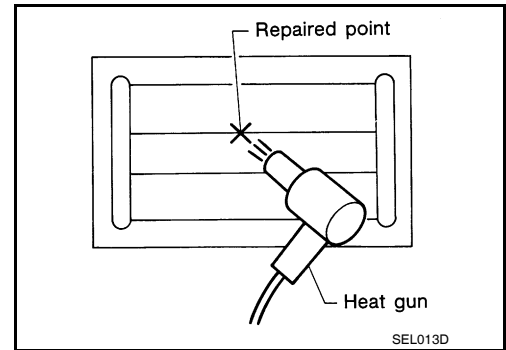
< ON-VEHICLE REPAIR >

[BOSE AUDIO WITH NAVIGATION]

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.



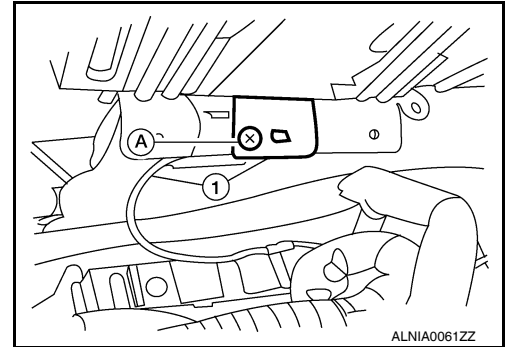
GPS ANTENNA

Removal and Installation

INFOID:000000005438879

REMOVAL

1. Remove the combination meter. Refer to [IP-11. "Removal and Installation"](#).
2. Remove the navigation audio unit. Refer to [AV-292. "Removal and Installation"](#).
3. Remove the GPS navigation antenna screw (A), then fish the GPS navigation antenna connector and harness (1), through the combination meter instrument panel opening and remove the GPS antenna.



INSTALLATION

Installation is in the reverse order of removal.

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STEERING SWITCH

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITH NAVIGATION]

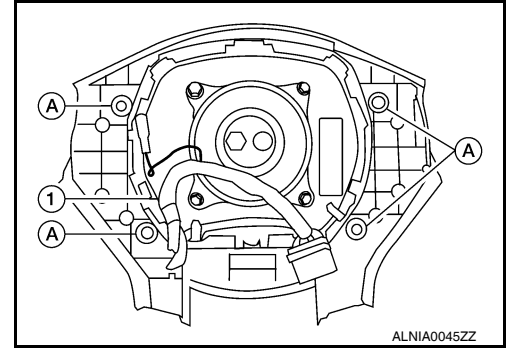
STEERING SWITCH

Removal and Installation

INFOID:000000005438880

REMOVAL

1. Remove the driver airbag module. Refer to [SR-4, "Removal and Installation"](#).
2. Remove the steering wheel switch assembly screws (A), then remove the steering wheel switches (1).



INSTALLATION

Installation is in the reverse order of removal.

MICROPHONE

< ON-VEHICLE REPAIR >

[BOSE AUDIO WITH NAVIGATION]

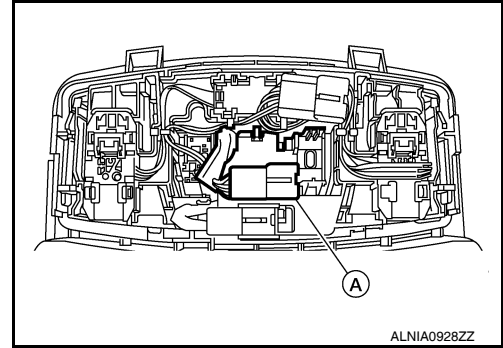
MICROPHONE

Removal and Installation

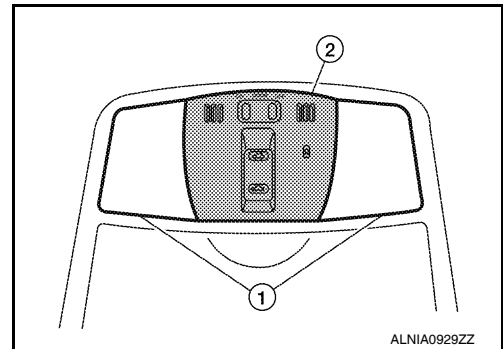
INFOID:000000005438881

REMOVAL

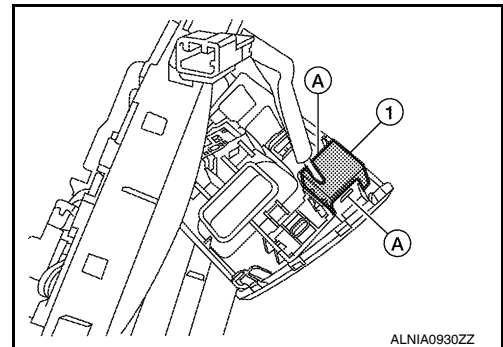
1. Remove the room/map lamp assembly. Refer to [INT-26. "Exploded View"](#).
2. Detach the microphone connector (A).



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



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



INSTALLATION

Installation is in the reverse order of removal.

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

AV

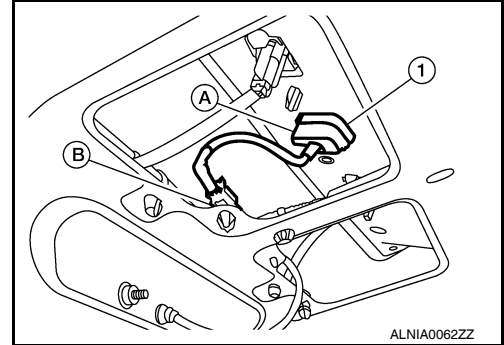
REAR VIEW CAMERA

Removal and Installation

INFOID:000000005438882

REMOVAL

1. Remove the license plate finisher. Refer to [EXT-25. "Removal and Installation"](#).
2. Remove the trunk lid finisher. Refer to [INT-30. "Removal and Installation"](#).
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:000000005438883

REAR VIEW MONITOR

For adjustment on the rear view camera, refer to [AV-68. "Diagnosis Description"](#)