# SECTION AVIGATION SYSTEM C

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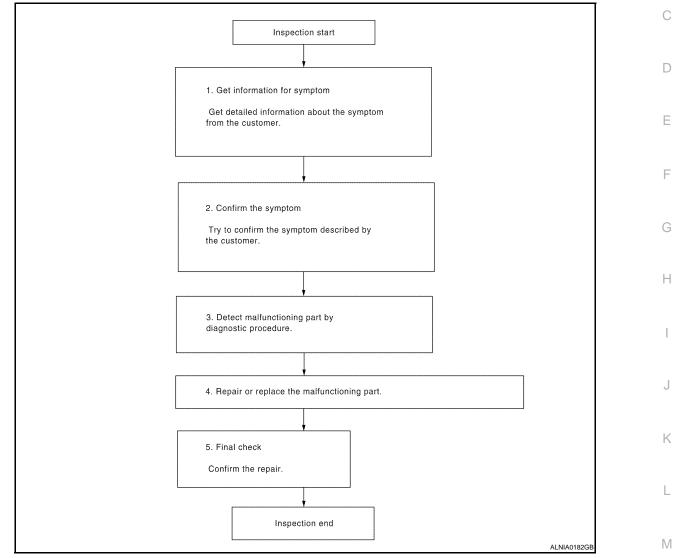
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# BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

# Work Flow

**OVERALL SEQUENCE** 



# DETAILED FLOW

# **1.**GET INFORMATION FOR SYMPTOM

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

### >> GO TO 2

**2.**CONFIRM THE SYMPTOM

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

### >> GO TO 3

**3.** DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

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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. <u>Has the symptom been repaired?</u>

YES >> Inspection End.

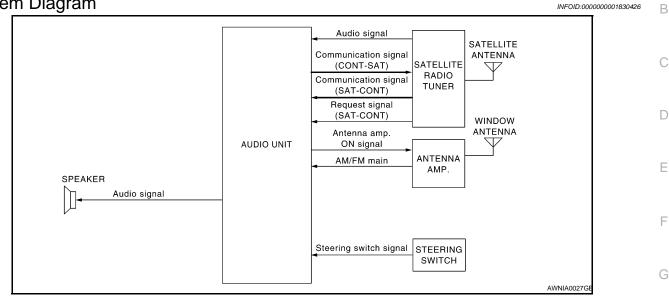
NO >> GO TO 2

# FUNCTION DIAGNOSIS AUDIO SYSTEM (COUPE)

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# System Description

### AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Window antenna
- Steering wheel audio control switches
- Door speakers
- Front tweeters
- Rear speakers

When the audio system is on, radio signals are received by the window antenna. The audio unit then sends Κ audio signals to the 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

Μ 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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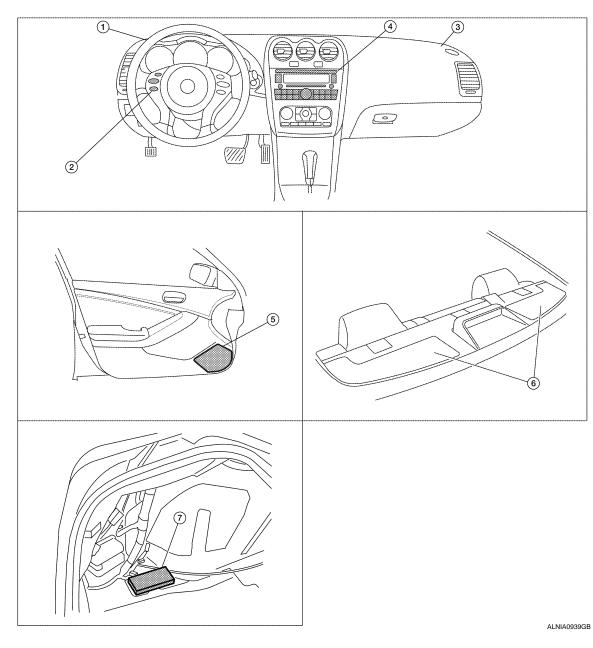
# AUDIO SYSTEM (COUPE)

### < FUNCTION DIAGNOSIS >

# **Component Parts Location**

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[BASE AUDIO]



- 1. Front tweeter LH M51
- 4. Audio unit M43, M45, M81
- 7. Satellite radio tuner B57, B58 (with satellite radio tuner)

# **Component Description**

- 2. Steering wheel audio control switches 3.
- 5. Door speaker LH D3 RH D103

- Front tweeter RH M52
- Rear speaker RH B44 LH B26

6.

INFOID:000000001830429

Part name	Description			
Audio unit	Controls audio system and satellite radio system functions			
Steering wheel audio control switches	<ul><li>Each audio operation can be operated</li><li>Steering switch signal (operation signal) is output to AV control unit</li></ul>			

# AV-12

# AUDIO SYSTEM (COUPE)

### < FUNCTION DIAGNOSIS >

# [BASE AUDIO]

Part name	Description	
Door speakers	<ul><li>Outputs audio signal from audio unit</li><li>Outputs high, mid and low range sounds</li></ul>	
Front tweeters	<ul><li>Outputs audio signal from audio unit</li><li>Outputs high range sounds</li></ul>	
Rear speakers	<ul><li>Outputs audio signal from audio unit</li><li>Outputs high, mid and low range sounds</li></ul>	
Satellite radio tuner	<ul><li>Receives radio signals from satellite antenna</li><li>Sends audio signals to audio unit</li></ul>	
Satellite antenna	Audio signal (satellite radio) is received and output to audio unit.	

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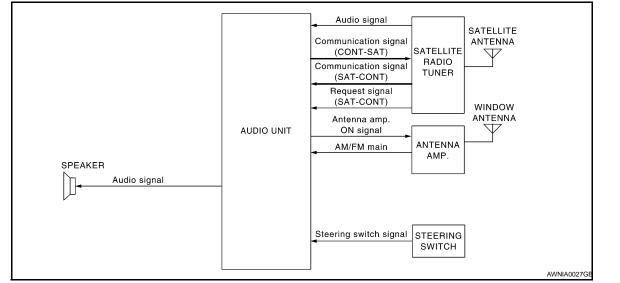
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# < FUNCTION DIAGNOSIS >

# AUDIO SYSTEM (SEDAN)

# System Diagram



# System Description

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### AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Window antenna
- Steering wheel audio control switches
- Front door speakers
- Tweeters
- Rear speakers

When the audio system is on, radio signals are received by the window antenna. The audio unit then sends audio signals to the front door speakers, tweeters 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.

# **AUDIO SYSTEM (SEDAN)**

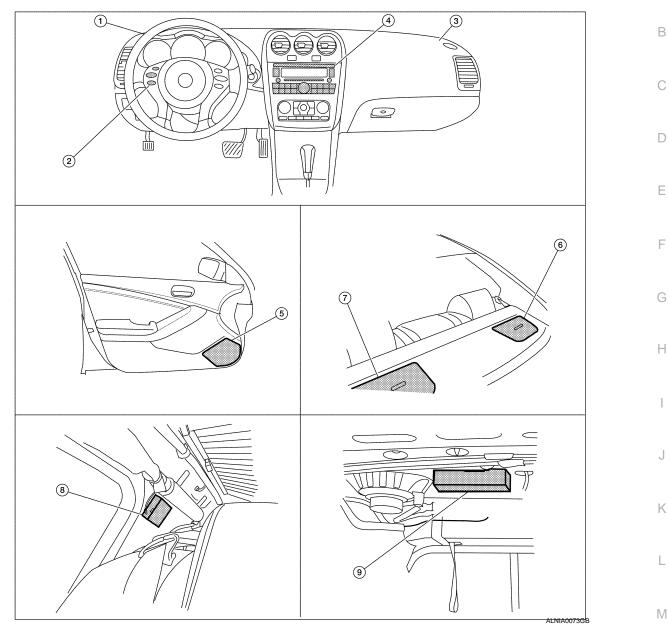
### < FUNCTION DIAGNOSIS >

# **Component Parts Location**

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[BASE AUDIO]

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- Tweeter LH M51 1.
- 4. Audio unit M43, M45, M81

**Component Description** 

7. Rear speaker LH B26

- Steering wheel audio control switches 3. 2.
- 5. Front door speaker
  - LH D3 **RH D103**
- 8. Antenna amp. M502

- Tweeter RH M52
- Rear speaker

6.

- **RH B44**
- Satellite radio tuner B57, B58 (with 9. satellite radio tuner)

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Part name	Description		
Audio unit	Controls audio system and satellite radio system functions		
Steering wheel audio control switches	<ul><li>Each audio operation can be operated</li><li>Steering switch signal (operation signal) is output to AV control unit</li></ul>		

# **AV-15**

# AUDIO SYSTEM (SEDAN)

### < FUNCTION DIAGNOSIS >

Part name	Description
Front door speakers	<ul><li>Outputs audio signal from audio unit</li><li>Outputs high, mid and low range sounds</li></ul>
Tweeters	<ul><li>Outputs audio signal from audio unit</li><li>Outputs high range sounds</li></ul>
Rear speakers	<ul><li>Outputs audio signal from audio unit</li><li>Outputs high, mid and low range sounds</li></ul>
Satellite radio tuner	<ul><li>Receives radio signals from satellite antenna</li><li>Sends audio signals to audio unit</li></ul>
Satellite antenna	Audio signal (satellite radio) is received and output to audio unit.

# < FUNCTION DIAGNOSIS >

# **DIAGNOSIS SYSTEM (AUDIO UNIT)**

# **Diagnosis Description**

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**

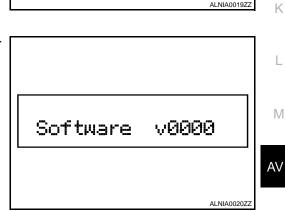
- Turn ignition switch to the ACC position. 1.
- Turn the audio unit off. 2.
- While pressing the "AUDIO" button, turn the volume control dial 3. clockwise or counterclockwise 30 clicks or more. When the selfdiagnosis mode is started, a short beep will be heard.

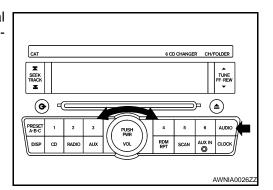
Initially, all display segments will be illuminated.

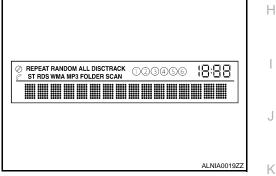
Version Check

4.

Press the "AUDIO" switch to enter version diagnostics. "Soft-1. ware" (audio software version) is displayed.









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# **DIAGNOSIS SYSTEM (AUDIO UNIT)**

### < FUNCTION DIAGNOSIS >

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



[BASE AUDIO]

ALNIA0021ZZ

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



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

SDARS	V0000
	ALNIA0023ZZ

Channel check FL

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.

**Button Check Diagnostics** 

**Channel Check Diagnostics** 

# **DIAGNOSIS SYSTEM (AUDIO UNIT)**

### < FUNCTION DIAGNOSIS >

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.

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BUTTON CHECK	В
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### [BASE AUDIO]

# POWER SUPPLY AND GROUND CIRCUIT (COUPE)

### < COMPONENT DIAGNOSIS >

# COMPONENT DIAGNOSIS POWER SUPPLY AND GROUND CIRCUIT (COUPE) AUDIO UNIT

# AUDIO UNIT : Diagnosis Procedure

# **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?

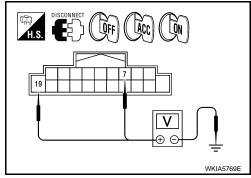
YES >> GO TO 2

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.

(	(+) (-)		(-) OFF	ACC	ON
Connector	Terminal	(-)	OIT	700	
M43	19	Ground	Battery voltage	Battery voltage	Battery voltage
10143	7	Ground	0V	Battery voltage	Battery voltage



### Are the voltage results as specified?

YES >> GO TO 3 NO >> • Check of

>> • 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

# **1.**CHECK FUSES

Check that the following fuses are not blown.

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

INFOID:000000001830432

# POWER SUPPLY AND GROUND CIRCUIT (COUPE)

### < COMPONENT DIAGNOSIS >

[BASE AUDIO]

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- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector B57.
- 3. Check voltage between the satellite radio tuner (factory installed) and ground.

(+)		(-)	OFF	ACC	ON	
Connector	Terminal	()	011	7,00	ON	
B57	32	Ground	Battery voltage	Battery voltage	Battery voltage	
160	36	Ground	0V	Battery voltage	Battery voltage	
Are the voltage results as specified?						

YES	>> GO TO 3
	~~ 00 10 0

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

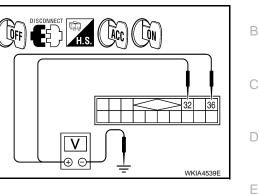
# 3. GROUND CIRCUIT CHECK

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.



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# POWER SUPPLY AND GROUND CIRCUIT (SEDAN)

< COMPONENT DIAGNOSIS >

# POWER SUPPLY AND GROUND CIRCUIT (SEDAN) AUDIO UNIT

# AUDIO UNIT : Diagnosis Procedure

**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?

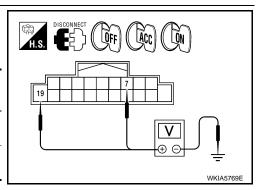
YES >> GO TO 2

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

(+)		()	055	400	01
Connector	Terminal	(-)	OFF	ACC	ON
M43		Ground	Battery voltage	Battery voltage	Battery voltage
10143	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

# **1.**CHECK FUSES

Check that the following fuses are not blown.

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

# AV-22

[BASE AUDIO]

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# POWER SUPPLY AND GROUND CIRCUIT (SEDAN)

### < COMPONENT DIAGNOSIS >

Check voltage between the satellite radio tuner (factory installed) and ground. 3.

(+)		(-)	OFF	ACC	ON
Connector	Terminal	(-)	011	700	ON
B123	32	Ground	Battery voltage	Battery voltage	Battery voltage
0123	36	Ground	0V	Battery voltage	Battery voltage
Are the voltage results as specified?					

YES >> GO TO 3

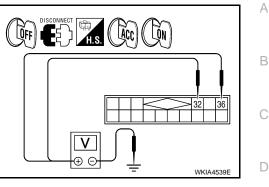
- NO >> • Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

# 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.



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[BASE AUDIO]

# **DOOR SPEAKER (COUPE)**

### < COMPONENT DIAGNOSIS >

# DOOR SPEAKER (COUPE)

# Description

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

# **Diagnosis Procedure**

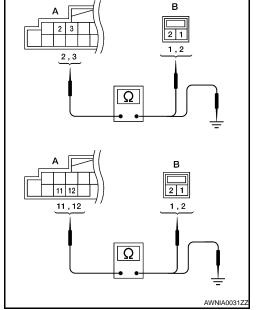
# **1.**HARNESS CHECK

- 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.

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	D3	1	
M43	3		2	Yes
	11	D400	1	165
	-	12	D103	2

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

	А		Continuity	
Connector	Terminal		Continuity	
A	2		No	
	3	Ground		
	11	Giouna		
	12			



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Are continuity results as specified?

YES >> GO TO 2

NO

- >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.
- 2.DOOR SPEAKER SIGNAL CHECK
- 1. Connect audio unit connector and front speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.

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# **DOOR SPEAKER (COUPE)**

AV-25

### < COMPONENT DIAGNOSIS >

Con-

nector

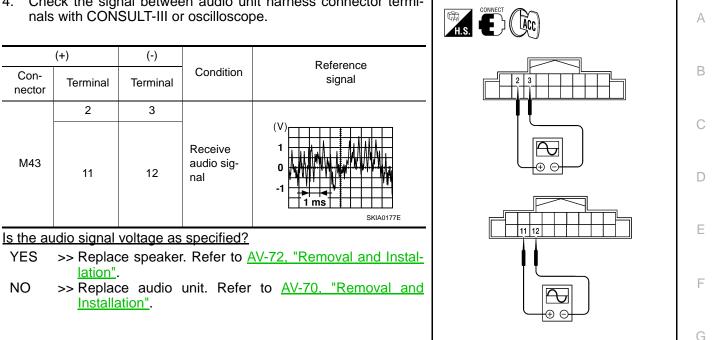
M43

YES

NO

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

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# FRONT DOOR SPEAKER (SEDAN)

### < COMPONENT DIAGNOSIS >

# FRONT DOOR SPEAKER (SEDAN)

# Description

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

### **Diagnosis** Procedure

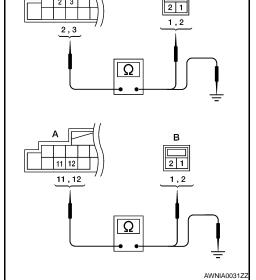
# **1.**HARNESS CHECK

- 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.

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	D3	1	
M43	3		2	Yes
	11	D400	1	Tes
	-	12	D103	2

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

	А		Continuity
Connector	Terminal		Continuity
A	2		No
	3	Ground	
	11	Giouna	
	12		



QFF

H.S.

Are continuity results as specified?

YES >> GO TO 2

NO

- >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.
- $2. {\tt FRONT DOOR SPEAKER SIGNAL CHECK}$
- 1. Connect audio unit connector and front speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.

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# FRONT DOOR SPEAKER (SEDAN)

### < COMPONENT DIAGNOSIS >

(+)

Con-

nector

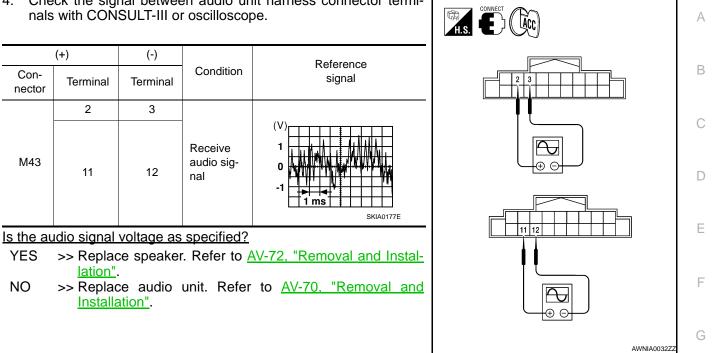
M43

YES

NO

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

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# **FRONT TWEETER (COUPE)**

### < COMPONENT DIAGNOSIS >

# FRONT TWEETER (COUPE)

# Description

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

### **Diagnosis** Procedure

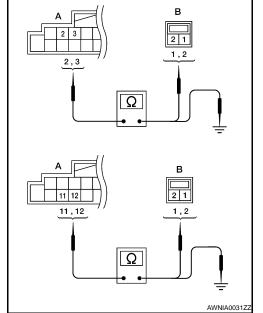
# **1.**HARNESS CHECK

- 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).

		A	В		В		Continuity
	Connector	Terminal	Connector	Terminal	Continuity		
	M43	2	- M51 -	1			
		3		2	Yes		
		11	M52	1	Tes		
		-	12	IVIJZ	2		

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

	А		Continuity
Connector	Connector Terminal		
	2		No
M43	3	Ground	
10143	11	Giouna	
	12		



H.S.

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Are the continuity results as specified?

YES >> GO TO 2

NO

- >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

2.FRONT TWEETER SIGNAL CHECK

[BASE AUDIO]

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# FRONT TWEETER (COUPE)

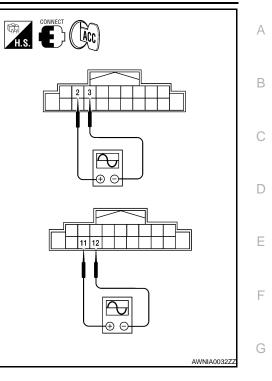
### < COMPONENT DIAGNOSIS >

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

(+)		(-)		Reference	
Con- nector	Terminal	Terminal	Condition	signal	
	2	3			
M43	11	12	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E	

### Is the audio signal voltage as specified?

- YES >> Replace tweeter. Refer to <u>AV-71, "Removal and Installa-</u> tion".
- NO >> Replace audio unit. Refer to <u>AV-70, "Removal and</u> <u>Installation"</u>.



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# TWEETER (SEDAN)

# < COMPONENT DIAGNOSIS >

# TWEETER (SEDAN)

# Description

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

### **Diagnosis** Procedure

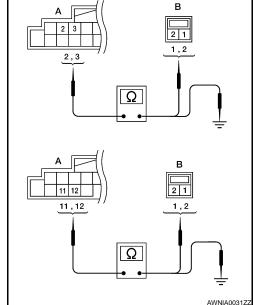
# **1.**HARNESS CHECK

- 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).

А		В		Continuity	
	Connector	Terminal	Connector	Terminal	Continuity
	M43	2	M51	1	
		3		2	Yes
		11	M52	1	Tes
		12		2	

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

	А		Continuity
Connector	Terminal		
	2		
M43	3	Ground	No
10143	11	Giouna	
	12		



Are the continuity results as specified?

YES >> GO TO 2

NO

- >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

2.TWEETER SIGNAL CHECK

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# **TWEETER (SEDAN)**

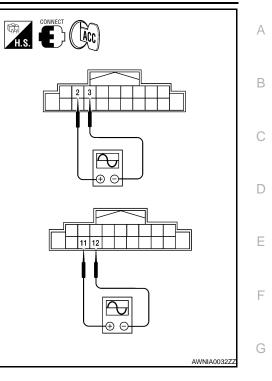
### < COMPONENT DIAGNOSIS >

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

(+)		(-)		Reference	
Con- nector	Terminal	Terminal	Condition		
	2	3			
M43	11	12	Receive audio sig- nal	(V) 1 0 -1 1 ms SKIA0177E	

### Is the audio signal voltage as specified?

- YES >> Replace tweeter. Refer to <u>AV-71, "Removal and Installa-</u> tion".
- NO >> Replace audio unit. Refer to <u>AV-70, "Removal and</u> <u>Installation"</u>.



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# **REAR SPEAKER**

# < COMPONENT DIAGNOSIS >

# **REAR SPEAKER**

# Description

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

### **Diagnosis** Procedure

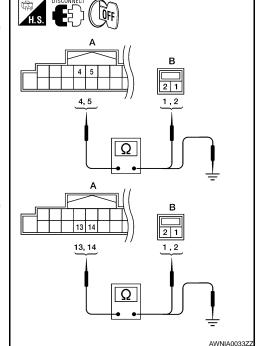
# **1.**HARNESS CHECK

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

А		В		Continuity	
	Connector	Terminal	Connector	Terminal	Continuity
	M43	4	B26	1	
		5		2	Yes
		13	B44	1	165
		14		2	

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

	А		Continuity	
Connector	nnector Terminal		Continuity	
	4		No	
M43	5	Ground		
10143	13	Giouna		
	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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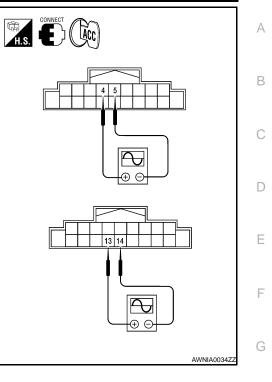
# **REAR SPEAKER**

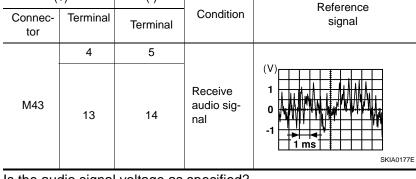
### < COMPONENT DIAGNOSIS >

- 1. Connect audio unit connector and rear 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.





### Is the audio signal voltage as specified?

(-)

- YES >> Replace rear speaker. Refer to <u>AV-73, "Removal and</u> <u>Installation - Coupe"</u>.
- NO >> Replace audio unit. Refer to <u>AV-70, "Removal and</u> <u>Installation"</u>.

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# [BASE AUDIO]

# < COMPONENT DIAGNOSIS >

# STEERING SWITCH

# Description

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

# **Diagnosis** Procedure

1. CHECK STEERING SWITCH RESISTANCE

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

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

>> Replace steering switch. Refer to AV-216, "Removal and Installation".

1. Turn ignition switch OFF.

2. CHECK HARNESS

>> GO TO 2

YES

NO

Do the steering switches check OK?

- 2. Disconnect audio unit connector M43 and spiral cable connector M30.
- Check continuity between audio unit harness connector M43 (A) 3. and spiral cable harness connector M30 (B).

A	L .		В	Continuity	
Connector	Terminal	Connector Terminal		Continuity	
	6		31		
M43	16	M30	24	Yes	
	15		33		

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

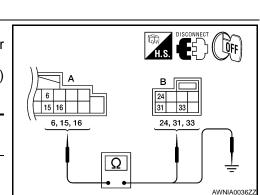
	A		Continuity
Connector	Terminal		Continuity
	6		
M43	15	Ground	No
	16		

Are the continuity results as specified?

YES >> GO TO 3

NO >> Repair harness.

**3.**SPIRAL CABLE CHECK



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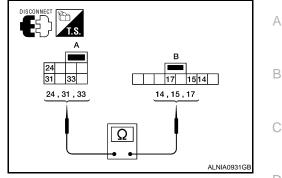
# **STEERING SWITCH**

### < COMPONENT DIAGNOSIS >

### 1. Disconnect spiral cable connector M88.

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

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



Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to <u>SR-6, "Removal and Installation"</u>.



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[BASE AUDIO]

# **COMMUNICATION SIGNAL CIRCUIT (COUPE)**

< COMPONENT DIAGNOSIS >

# COMMUNICATION SIGNAL CIRCUIT (COUPE) SATELLITE RADIO TUNER

# SATELLITE RADIO TUNER : Description

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

# SATELLITE RADIO TUNER : Diagnosis Procedure

# 1.CHECK HARNESS - 1

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector B57 and audio unit connector M45.
- Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 28 and audio unit harness connector M45 (B) terminal 38.

### Continuity should exist.

4. Check continuity between satellite radio tuner (factory installed) harness connector B57 (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

 Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 29 and audio unit harness connector M45 (B) terminal 39.

### Continuity should exist.

2. Check continuity between satellite radio tuner (factory installed) harness connector B57 (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
- Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 30 and audio unit harness connector M45 (B) terminal 40.

### Continuity should exist.

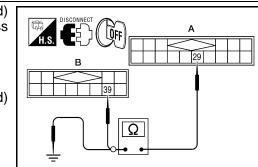
2. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 30 and ground.

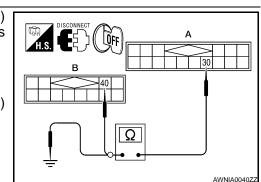
### Continuity should not exist.

Are continuity results as specified?

- YES >> GO TO 4
- NO >> Repair harness or connector.

**4.**CHECK REQ1 SIGNAL





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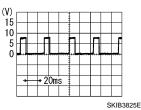
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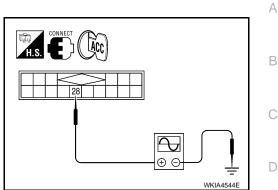
#### COMMUNICATION SIGNAL CIRCUIT (COUPE)

#### < COMPONENT DIAGNOSIS >

- 1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
- 2. Turn ignition switch to ACC
- Check signal between satellite radio tuner (factory installed) harness connector B57 terminal 28 and ground with CONSULT-III or oscilloscope.

#### 28 - Ground





Are voltage readings as specified?

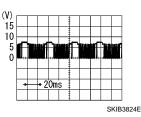
YES >> GO TO 5

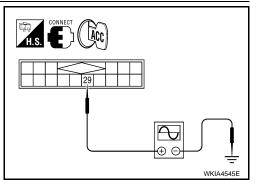
NO >> Replace audio unit. Refer to <u>AV-70, "Removal and Installation"</u>.

5. CHECK TXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector B57 terminal 29 and ground with CONSULT-III or oscillo-scope.

#### 29 - Ground





Are the voltage readings as specified?

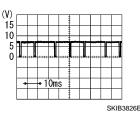
YES >> GO TO 6

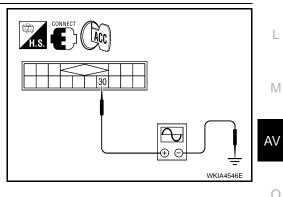
NO >> Replace satellite radio tuner.

**6.**CHECK RXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector B57 terminal 30 and ground with CONSULT-III or oscillo-scope.

#### 30 - Ground





Are the voltage readings as specified?

YES >> Replace satellite radio tuner.

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

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#### **COMMUNICATION SIGNAL CIRCUIT (SEDAN)**

< COMPONENT DIAGNOSIS >

#### COMMUNICATION SIGNAL CIRCUIT (SEDAN) SATELLITE RADIO TUNER

#### SATELLITE RADIO TUNER : Description

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

#### SATELLITE RADIO TUNER : Diagnosis Procedure

#### 1.CHECK HARNESS - 1

- 1. Turn ignition switch OFF.
- Disconnect satellite radio tuner (factory installed) connector B123 and audio unit connector M45.
- 3. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 28 and audio unit harness connector M45 (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

 Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 29 and audio unit harness connector M45 (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
- Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 30 and audio unit harness connector M45 (B) terminal 40.

#### Continuity should exist.

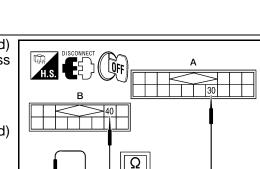
2. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 30 and ground.

#### Continuity should not exist.

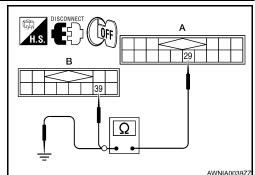
Are continuity results as specified?

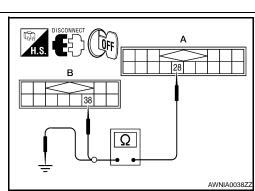
- YES >> GO TO 4
- NO >> Repair harness or connector.

**4.**CHECK REQ1 SIGNAL



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[BASE AUDIO]

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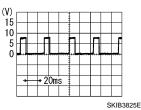
INFOID:00000003221756

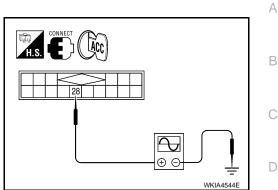
#### COMMUNICATION SIGNAL CIRCUIT (SEDAN)

#### < COMPONENT DIAGNOSIS >

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

#### 28 - Ground





Are voltage readings as specified?

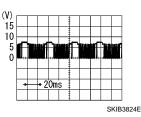
YES >> GO TO 5

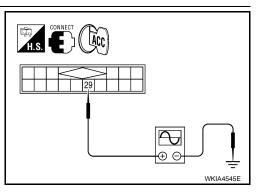
NO >> Replace audio unit. Refer to <u>AV-70, "Removal and Installation"</u>.

**5.**CHECK TXD SIGNAL

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

#### 29 - Ground





Are the voltage readings as specified?

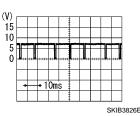
YES >> GO TO 6

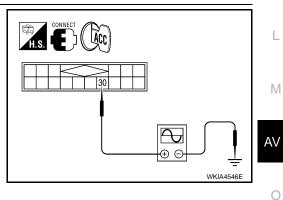
NO >> Replace satellite radio tuner.



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

#### 30 - Ground





Are the voltage readings as specified?

YES >> Replace satellite radio tuner.

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

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#### AV-40

#### < COMPONENT DIAGNOSIS >

#### SOUND SIGNAL CIRCUIT (COUPE) SATELLITE RADIO TUNER

#### SATELLITE RADIO TUNER : Description

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

#### LEFT CHANNEL

#### 1.CHECK HARNESS

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector B57 and audio unit connector M45.
- 3. Check continuity between satellite radio tuner (factory installed) connector B57 (A) and audio unit connector M45 (B).

A	N	E	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
B57	21	M45	31	Yes	
657	22	10145	32	Tes	

4. Check continuity between satellite radio tuner (factory installed) connector B57 (A) and ground.

	А		Continuity	
Connector	Terminal		Continuity	
B57	21	Ground	No	
657	22	Ground	NO	

Are continuity results as specified?

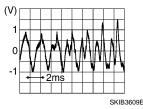
YES >> GO TO 2

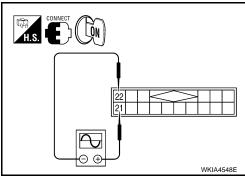
NO >> Repair harness or connector.

2. CHECK LEFT CHANNEL AUDIO SIGNAL

- 1. Connect satellite radio tuner (factory installed) and audio unit.
- 2. Turn ignition switch ON.
- Check signal between satellite radio tuner (factory installed) connector B57 terminals 21 and 22 with CONSULT-III or oscilloscope.







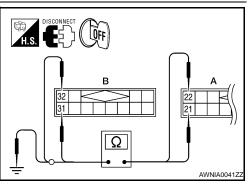
Are voltage readings as specified?

YES >> Replace audio unit. Refer to <u>AV-70, "Removal and Installation"</u>.

NO >> Replace satellite radio tuner. Refer to <u>AV-214. "Removal and Installation - Coupe"</u>.

#### RIGHT CHANNEL

**1.**CHECK HARNESS



[BASE AUDIO]

INFOID:000000001830443

INFOID:000000001830444

#### SOUND SIGNAL CIRCUIT (COUPE)

H.S.

#### < COMPONENT DIAGNOSIS >

#### 1. Turn ignition switch OFF.

- 2. Disconnect satellite radio tuner (factory installed) connector B57 and audio unit connector M45.
- 3. Check continuity between satellite radio tuner (factory installed) connector B57 (A) and audio unit connector M45 (B).

	Α	۱.	E	Continuity	
-	Connector	Terminal	Connector	Terminal	Continuity
-	B57	23	M45	33	Yes
	D37	24	10145	34	165

4. Check continuity between satellite radio tuner (factory installed) connector B57 (A) and ground.

	А		Continuity	
Connector	Terminal		Continuity	
B57	23	Ground	No	
57	24	Giodila	INO	

Are continuity results as specified?

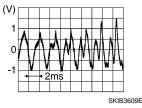
YES >> GO TO 2

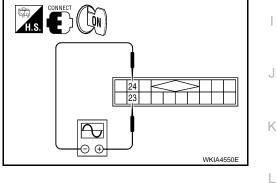
NO >> Repair harness or connector.

#### **2.**CHECK RIGHT CHANNEL AUDIO SIGNAL

- 1. Connect satellite radio tuner (factory installed) and audio unit.
- 2. Turn ignition switch ON.
- Check signal between satellite radio tuner (factory installed) connector B57 terminals 23 and 24 with CONSULT-III or oscilloscope.

#### 23 - 24





Are voltage readings as specified?

- YES >> Replace audio unit. Refer to AV-70, "Removal and Installation".
- NO >> Replace satellite radio tuner. Refer to <u>AV-214, "Removal and Installation Coupe"</u>.

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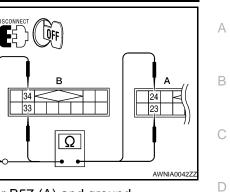
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#### [BASE AUDIO]



#### < COMPONENT DIAGNOSIS >

#### SOUND SIGNAL CIRCUIT (SEDAN) SATELLITE RADIO TUNER

#### SATELLITE RADIO TUNER : Description

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

#### LEFT CHANNEL

#### 1.CHECK HARNESS

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector B123 and audio unit connector M45.
- 3. Check continuity between satellite radio tuner (factory installed) connector B123 (A) and audio unit connector M45 (B).

A	١	E	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
B123	21	M45	31	Yes	
B123	22	10145	32	165	

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

	А		Continuity	
Connector	Terminal		Continuity	
B123	21	Ground	No	
6125	22	Ground	NO	

Are continuity results as specified?

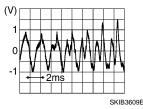
YES >> GO TO 2

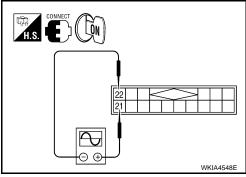
NO >> Repair harness or connector.

2. CHECK LEFT CHANNEL AUDIO SIGNAL

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







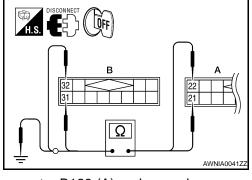
Are voltage readings as specified?

YES >> Replace audio unit. Refer to <u>AV-70, "Removal and Installation"</u>.

NO >> Replace satellite radio tuner. Refer to <u>AV-214, "Removal and Installation - Sedan"</u>.

#### **RIGHT CHANNEL**

**1.**CHECK HARNESS



[BASE AUDIO]

INFOID:000000003221757

INFOID:000000003221759

#### SOUND SIGNAL CIRCUIT (SEDAN)

#### < COMPONENT DIAGNOSIS >

#### Turn ignition switch OFF. 1.

- 2. Disconnect satellite radio tuner (factory installed) connector B123 and audio unit connector M45.
- 3. Check continuity between satellite radio tuner (factory installed) connector B123 (A) and audio unit connector M45 (B).

	A	l l	E	Continuity	
_	Connector	Terminal	Connector	Terminal	Continuity
_	B123	23	M45	33	Yes
	D123	24	10145	34	165

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

	А		Continuity	
Connector	Terminal		Continuity	
B123	23	Ground	No	
D125	24	Giodila	INO	

Are continuity results as specified?

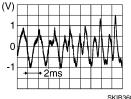
YES >> GO TO 2

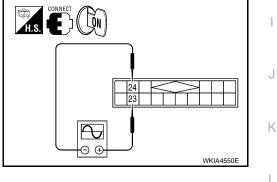
NO >> Repair harness or connector.

**2.**CHECK RIGHT CHANNEL AUDIO SIGNAL

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







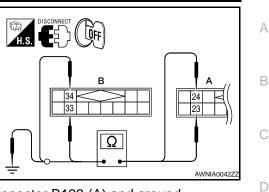
Are voltage readings as specified?

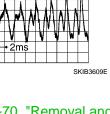
- YES >> Replace audio unit. Refer to AV-70, "Removal and Installation".
- >> Replace satellite radio tuner. Refer to AV-214, "Removal and Installation Sedan". NO

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[BASE AUDIO]

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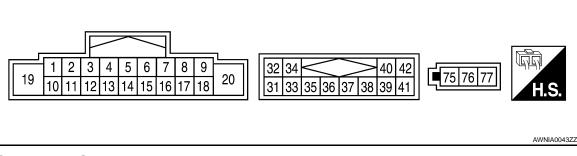
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### ECU DIAGNOSIS AUDIO UNIT (COUPE)

**Reference Value** 

**TERMINAL LAYOUT** 



#### PHYSICAL VALUES

	minal e color)	li e es	Signal in-		Condition	Deference unlug
+	-	- Item	put/out- put	Ignition switch	Operation	Reference value
2 (W)	3 (B)	Audio sound signal front LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1
4 (O/B)	5 (W/R)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1
					Press SOURCE switch	Approx. 0.0V
6 (W/G)	Ground	Remote con-	Input	ON	Press SEEK UP switch	Approx. 0.75V
(vv/G)		trol A			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

INFOID:000000001830445

#### AUDIO UNIT (COUPE)

#### < ECU DIAGNOSIS >

#### [BASE AUDIO]

	minal e color)	ltere	Signal in-		Condition	Reference value
+	-	- Item	put/out- put	Ignition switch	Operation	Reference value
11 (G/W)	12 (BR)	Audio sound signal front RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 5 KIA0177E
13 (L)	14 (B/W)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1
15 (L/B)	_	Remote con- trol ground	Input	_	_	-
					Press SEEK DOWN switch	Approx. 0.75V
16 (GR/L)	Ground	Remote con- trol B	Input	ON	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 (W/L)	Audio left channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1
34 (BR/L)	33 (Y/G)	Audio right channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 0 -1 5 KIA0177E
35	-	Shield ground (audio signal)	_	_	_	OV
36	_	Shield ground (data)	_	_	_	OV

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#### AUDIO UNIT (COUPE)

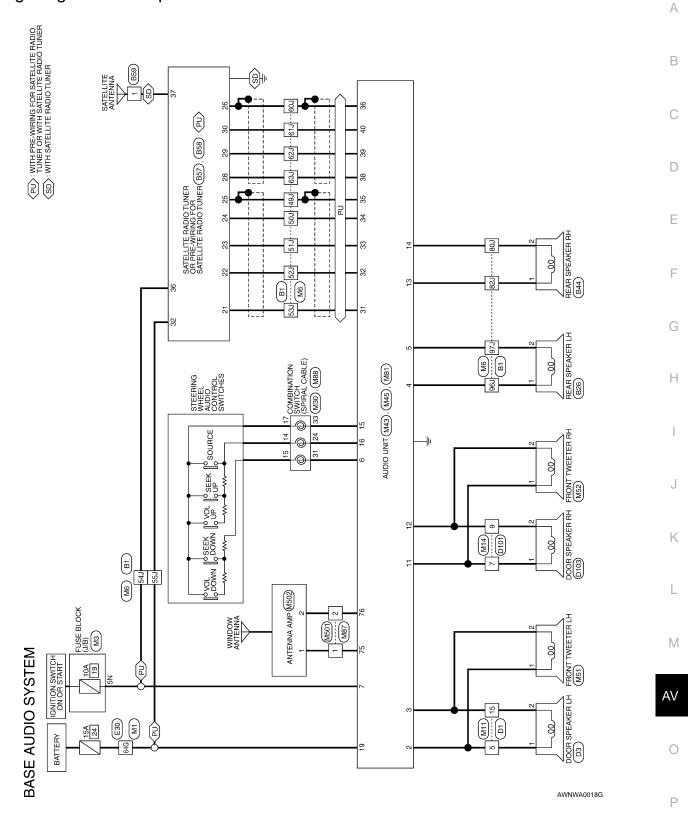
#### < ECU DIAGNOSIS >

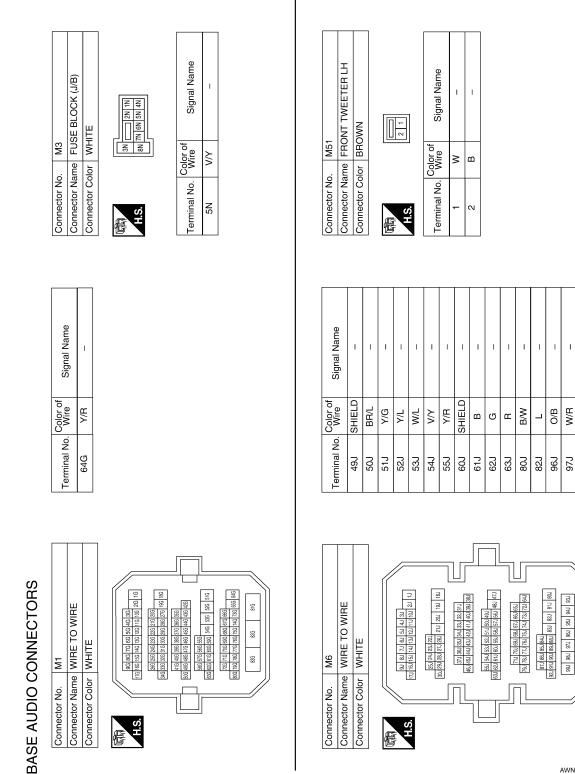
	ninal color)	Item	Signal in- put/out-		Condition	Reference value
+	_		putout	Ignition switch	Operation	
38 (R)	Ground	Satellite radio tuner request to audio unit	Input		Turn audio unit ON	5V
39 (G)	Ground	Audio RX	Input	ON	Operate audio vol- ume	(V) 6 4 2 0 • • • 5ms SKIA4403E
40 (B)	Ground	Audio TX	Output		Operate audio vol- ume	(V) 6 4 2 0 ★ ★ 2ms SKIA4402E
75 (B)	Ground	Antenna amp power supply	Output	ON	Turn audio unit ON	Battery voltage
76 (B)	Ground	Main antenna	Input	ON	Turn audio unit ON	-

#### < ECU DIAGNOSIS >

#### Wiring Diagram — Coupe

INFOID:000000001830446





## **AUDIO UNIT (COUPE)**

< ECU DIAGNOSIS >

[BASE AUDIO]

**AV-48** 

AWNIA0329GB

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	Connector Name COMBINATION SWITCH			24 25 26 27 31 32 33 34	Signal Name	AUDIO_STRG_SW_	AUDIO_STRG_SW_ REMOTE_B				E		32 34 42 42 42 31 33 35 36 37 38 39 41			Signal Name	SAI LH INPUT (-)	SAL LH INPUT (+)	SAT RH INPUT (+)	EARTH	DAT EARTH	1	RFQ1 (SAT TO COMBI)	RX (SAT TO COMBI)	TX (COMBI TO SAT)	I	1	
M30			Or GHAY	24 25 31 32	Color of Wire	W/G	GR/L					10 00	31 33 35		Color of	Wire	W/L	<u>۷/۲</u>	BR/L	SHIELD	SHIELD	1	щ	IJ	в	I	ı	
Connector No.	nnector Na	( -		H.S.	Terminal No.	24	31	55	Connector No.	Connector Name	Connector Color	Æ		0		lerminal No.	15	32	34	35	36	37	38	39	40	41	42	
ŏ	<u>ö</u>	Ċ	3	E	Ĕ				0	0  0	5	Ľ	Ŧ			- 1							I					
	TO WIRE	111		1     2     3     4       5     6     7     8     9     10	Signal Name	1	1		Signal Name	STRG SW A	ACC	ILL_CONT_OUT	TAIL/ILL_RLY	1	FR SP RH (+)	FR SP RH (-)		CING NM STER SWI GND	STRG SW B		1	BAT	1					
M14	ne WIRE	or WHITE		1     2       5     6	Color of	G/W	BR		Color of	wire W/G	۲۷	RY	R/L	-	G/W	BB -		∧n ∀/n	GR/L	1	1	Y/R	1					
Connector No.	Connector Name WIRE TO WIRE	Connector Color		际 H.S.	Terminal No.	2	o		Terminal No.	9	2	ø	6	10	11	12	2	4 7	16	17	18	19	20					
			]																			]						
	TO WIRE			1         2         3         m         4         5         6         7           8         9         10         11         12         13         14         15         16	Signal Name		1			AUDIO UNIT	Е			13 14 15 16 17 18 20					FR SP LH (+) FR SP LH (-)	BR SP LH (+)	RR SP LH (-)							
. M11	me WIRE	or WHITE		1     2     3       8     9     10     11	Color of	N	B				IOL WHILE		1 2 3	10 11 12		Color of	Wire		≥ ¤	D/B	W/R							
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE		H.S.	Terminal No.	5	15		Connector No.	Connector Name	Connector Color		L س	¢				- 0	N C	0 4	5							
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#### AUDIO UNIT (COUPE)

#### < ECU DIAGNOSIS >

#### [BASE AUDIO]

AV-49

Connector Name Connector Color	ame FRONT	Connector Name FRONT TWEETER RH Connector Color BROWN	Connector Nan Connector Colo	Connector Name Connector Color GRAY	NO UNIT	Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Color GRAY	WIRE TO GRAY	WIRE
日 H.S.			国 H.S.	<b>1</b> 2	128 22	ात्री H.S.		
Terminal No. 1 2	Color of Wire G/W BR	Signal Name	Terminal No. 75 76	Vo. Color of Wire B B	Signal Name AMP POWER SUPPLY MAIN ANTENNA	Terminal No. Col 1 2	Color of Wire B B	Signal Name
Connector No. Connector Name		M88 COMBINATION SWITCH	Connector No. Connector Name		M501 WIRE TO WIRE	Connector No. Connector Name	M502 ANTENNA AMP	AMP
Connector Color	<u> </u>	IRAL CABLE) 4Y	Connector Color	+	IZ 3	Connector Color	GRAY	
Terminal No.	Color of Wire	Signal Name	Terminal No.	Vo. Color of Wire	Signal Name	Terminal No. Co	Color of Wire	Signal Name
14	>	REMOTE A	-	8	1	-	в	I
15	_	REMOTE B	0	в	1	2	ш	I

#### AUDIO UNIT (COUPE)

#### < ECU DIAGNOSIS >

AWNIA0353GB

Connector Na.       Exponent Name       Connector Name       Nam       Name       Name <th></th>																
E30       Connector No.       B1       Terminal No.         WIFE TO WIFE       WIFE TO WIFE       Connector Name       WIFE TO WIFE       490         WIFE TO WIFE       Connector Name       WIHE TO WIFE       Connector Name       WIHE TO WIFE         WIFE TO WIFE       Connector Name       WIHE TO WIFE       Connector Name       WIHE TO WIFE         WIFE TO WIFE       Connector Name       WIHE TO WIFE       Connector Name       WIHE TO WIFE         Connector Name       WIHE TO WIFE       WIHE TO WIFE       WIHE TO WIFE       490         Statistical statistatistical statistical	Signal Name	1	1	1	1	I	1	1	1	1	1	1	1	1	1	1
E3       Connector No.       B1         WHTE       Connector No.       B1         WHTE       Connector Norme       WHTE       Connector Norme         WHTE       Connector Norme       WHTE       Connector Norme       B1         Connector Norme       WHTE       Connector Norme       B1       B2         Connector Norme       Connector Norme       WHTE       Connector Norme       B1         Connector Norme       Connector Norme       WHTE       Connector Norme       B1         Connector Norme       Connector Norme       Connector Norme       B1       B2         Connector Norme       Connector Norme       Connector Norme       B2	Color of Wire	SHIELD	BR/L	Y/G	۲/۲	W/L	۲/Y	Y/R	SHIELD	в	σ	œ	B/W		O/B	W/R
E30 WIRE TO WIRE WIRE TO WIRE WIRE TO WIRE WIRE TO WIRE WIRE TO WIRE Connector Name V Connector V CONNEC	Terminal No.	49J	50J	51J	52J	53J	54J	55J	60J	61J	62J	63J	80J	82J	69	۲26
E30 WIRE TO WIRE WHITE WHITE WHITE B26 Readed and and and and and and and and and an					<u>- 31 44 54 64 77 84 94</u>	1 2/ 10/ 11/ 12/ 13/ 14/ 15/ 16/ 17/	223 234 253	18J 19J 20J 21J 26J 27J 28J 28J 30J	511/321/321/351/361/372/	38.1 39.1 40.0 41.1 42.1 43.1 44.1 45.1 46.1	490 500 511 520 530 540 550		65.1 66.1 67.1 68.1 69.1 70.1 71.1 64.1 72.1 75.1 75.1 75.1 75.1 75.1 75.1 75.1 75	241 BA1 BA1 BA1	80J 81J 82J 88J 88J 90J 91J 92J	83.1 94.1 95.1 96.1 97.1 98.1 99.1
E30 WIRE TO WIRE WHIE TO WIRE WHIE TO WIRE WHIE TO WIRE WHIE TO WIRE WHIE WHIE WHIE Signal Name Signal Name Signal Name Signal Name Signal Name Signal Name	Connector No	Connector No		۲.		0 E										
		WIRE TO WIRE	WHILE		36 46 56 66 76 86 96	1001 071 011 010	99	0	452 452 452 445 445 452 445 455	556 566 566 566		746 756 766 776	82G		Color of	Wire Sign

#### AUDIO UNIT (COUPE)

#### [BASE AUDIO]

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AV-51

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Connector Name SATELLITE RADIO TUNER			CONNECTOR COLOR   BHOWN (WITH SIRIUS SATELLITE RADIO)					H.S.		Terminal No. Wire Signal Name	37 B ANTENNA SIGNAL						Connector No. D3 Connector Name DOOR SPEAKER LH Connector Color WHITE	Color of	Terminal No. Wire Signal Name	1 W –	2 B -
Signal Name	SAT_LCH (-)	SAT_LCH (+)	SAT_RCH (-)	SAT_RCH (+)	EARTH (SIG)	DATA	1	EC1 (SAT-COMBI)	TXD (SAT_COMBI)	RXD (COMBI_SAT)	I	BAT	1	1	I	ACC	O WIRE		Signal Name	1	1
al No. Wire	W/L	ة <u>۲</u> /۲	3 Y/G	t BR/L	SHIELD	SHIELD	1	3 R/L	P R/W	В	1	Y/R	1	1		GR/W	No.         D1           Name         WIRE TO WIRE           Color         WHITE           7         5         4         3         2           15         14         13         12         11         10         3		o. Wire	M	в
Terminal No.	2	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	Connector No. Connector Name Connector Color H.S.		Terminal No.	5	15
Connector Name SATELLITE RADIO TUNER	OR PRE-WIRING FOF	_	Connector Color WHIIE	-	22 24 26 1 32 34 36 31 32 35 37 38 30 31 33 35	co 10 00 20 20 77 00											Connector No. B59 Connector Name SATELLITE RADIO ANTENNA Connector Color GRAY (WITH SIRIUS BROWN (WITH XM SATELLITE RADIO) BROWN (WITH XM SATELLITE RADIO)	Color of	Terminal No. Wire Signal Name	- B	

AUDIO UNIT (COUPE)

< ECU DIAGNOSIS >

AV-52

AUDIO UNIT (COUPE)

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

Connector Name DOOR SPEAKER RH Connector Color BROWN

D103

Connector No.

21	Signal Name
4     3       10     9	Color of Wire
际间 H.S.	Terminal No.

1 1

GW BR

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	Colo Vir
	No.
H.S.	Terminal No.
	ame

	Signal Name	I	I
	Color of Wire	G/W	BR
中国 H.S.	Terminal No.	+	2

< ECU DIAGNOSIS >
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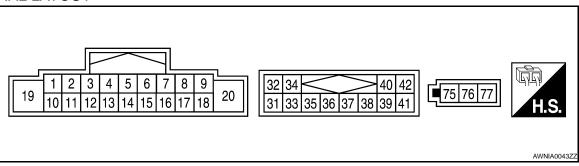
#### < ECU DIAGNOSIS >

#### AUDIO UNIT (SEDAN)

**Reference Value** 

[BASE AUDIO]

INFOID:000000003229330



#### PHYSICAL VALUES

	minal e color)	ltere	Signal in-		Condition	Deferrare value
+	_	- Item	put/out- put	Ignition switch	Operation	Reference value
2 (W)	3 (B)	Audio sound signal front LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
4 (O/B)	5 (W/R)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 T ms SKIA0177E
6		Remote con-			Press SOURCE switch Press SEEK UP	Approx. 0.0V Approx. 0.75V
(W/G)	Ground	trol A	Input	ON	switch 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
11 (G/W)	12 (BR)	Audio sound signal front RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1



#### < ECU DIAGNOSIS >

#### [BASE AUDIO]

	minal e color)	Itom	Signal in-		Condition	Deference velue
+	-	- Item	put/out- put	Ignition switch	Operation	Reference value
13 (L)	14 (B/W)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
15 (L/B)	-	Remote con- trol ground	Input	-	-	_
		_			Press SEEK DOWN switch	Approx. 0.75V
16 (GR/L)	Ground	Remote con- trol B	Input	ON	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 (W/L)	Audio left channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E
34 (BR/L)	33 (Y/G)	Audio right channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
35	_	Shield ground (audio signal)	_	-	_	0V
36	_	Shield ground (data)	_	_	-	0V

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#### < ECU DIAGNOSIS >

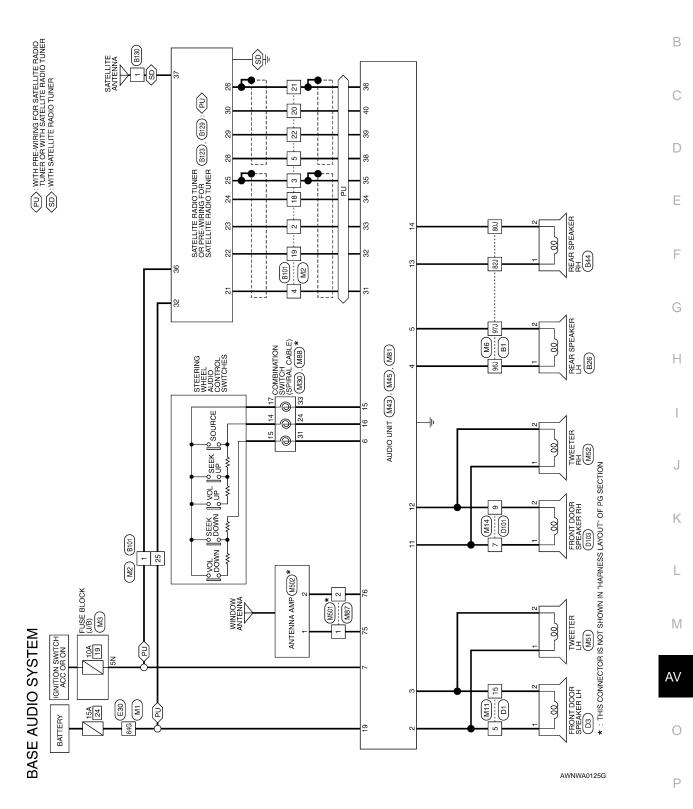
	ninal e color)	Item	Signal in- put/out-		Condition	Reference value
+	-	liciti	putout	Ignition switch	Operation	
38 (R)	Ground	Satellite radio tuner request to audio unit	Input		Turn audio unit ON	5V
39 (G)	Ground	Audio RX	Input	ON	Operate audio vol- ume	(V) 6 4 2 0 • • • 5ms SKIA4403E
40 (B)	Ground	Audio TX	Output		Operate audio vol- ume	(V) 6 4 2 0 ★ ★ 2ms SKIA4402E
75 (B)	Ground	Antenna amp power supply	Output	ON	Turn audio unit ON	Battery voltage
76 (B)	Ground	Main antenna	Input	ON	Turn audio unit ON	-

#### < ECU DIAGNOSIS >

#### Wiring Diagram — Sedan



[BASE AUDIO]



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SE AUDIO CONNECTORS	Ī		-		Г
Connector No. M1	Connector No. M2 Connector Name WIBE TO WIBE	Terminal No.	Color of Wire	Signal Name	
		-	۲/γ	I	
		2	У/G	I	
		e	SHIELD	1	
96 86 76 86 56 46 36		4	M/L	1	
H.S.		5	щ	1	
2661 2565 2445 2359 2269 216 2105 2463 3361 3265 316 3305 2361 2365 2375 1956 186	14         13         12         11         10         8         7         6         5         4         3         2         1	18	BR/L	1	
8G 37G	30 29 28 27 26 25 24 23 22 21 20 19	19	٨/L	I	
502 450 480 470 460 450 440 450 470		20	в	1	
896 576 566 566 539 620 616 610 590 546 536 526 516		21	SHIELD	1	
7261716170616961686		22	σ	I	
806 736 736 776 766 756 746 736 656 843		25	Y/R	I	
Connector No. M3	Connector No. M6 Connector Namo WIDE TO WIDE	Terminal No.	Color of Wire	Signal Name	
		80J	B/W	1	
A 4	_	82J	_	I	
		96J	O/B	I	
3N 2N 1N	91 81 71 61 51 41 31	۲ <i>1</i> 6	W/R	I	
	11.25.1 11.2 [161] [24] [25.1 [26] [22.1 [26] [22.1 [26] [22] [22] [22] [22] [22] [22] [22]				
Terminal No. Color of Signal Name					
5N V/Y –					
	[73,] 77,3 77,3,175,] 72,3 [74,] 72,3 [77,] 72,3 [77,] 72,3 [77,] 72,3 [77,] 72,3 [77,]				
	2212112018201820182018201820182018201820				
	I nee lage lage lage lage lage lage				

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#### < ECU DIAGNOSIS >

	7	W	GND								(-)	(+)	(+)				(IBMC)	MBI)	SAT)				
Connector No. M30 Connector Name COMBINATION SWITCH (SPIRAL CABLE)	24 25 26 27 31 32 33 34	Signal Name AUDIO_STRG_SW	REMOTE_A AUDIO_STRG_SW_ REMOTE_B AUDIO_STRG_SW_GND		AUDIO UNIT WHITE	1	32 34 40 42	5 36 37 38 39 41		Signal Name	SAT LH INPUT (-)	SAT LH INPUT (+)	SAT RH INPUT (+) SAT RH INPUT (+)	EARTH	DAT EARTH	I	RFQ1 (SAT TO COMBI)	RX (SAT TO COMBI)	TX (COMBI TO SAT)	I	1		
lo. M30 lame CON (SPII		Color of Wire W/G	GR/L L/B				32 34 <	31 33 3	Color of		M/L	٨٢	۹/۲ BR/L	SHIELD	SHIELD	ı	æ	σ	в	I	I		
Connector No. Connector Nan	Connector Color H.S.	Terminal No. 24	31	Connector No.	Connector Name		E	H.S.		Terminal No.	31	32	34	35	36	37	38	39	40	41	42		
										. <u> </u>								1					
TO WIRE E	7 8 9 10	Signal Name -	1	Signal Name	STRG_SW_A	ACC		I AIL/ILL_HLY -	FR SP RH (+)	FR SP RH (-)	RR SP RH (+)	RR SP RH (-)	STRG SW B	1	-	BAT	I						
M14 me WIRE T or WHITE	1     2       1     2	Color of Wire G/W	BH	Color of	wire W/G	۲/۷	R∖ L	- R	G/W	BR	_	N d	GR/L	1	1	Y/R	ı						
Connector No. M14 Connector Name WIRE TO WIRE Connector Color WHITE	品 H.S.	Terminal No.	σ	Terminal No.	Q	7	ω	9	11	12	13	14	16	17	18	19	20						
	]							[	-					Τ									
ro wire	4         5         6         7           11         12         13         14         15         16	Signal Name	1		AUDIO UNIT WHITE	1		5 6 7 8 9 14 15 16 17 18 20			Signal Name	I	FR SP LH (+) FR SP I H (-)	RR SP LH (+)	RR SP LH (-)								
Connector No. M11 Connector Name WIRE TO WIRE Connector Color WHITE	1     2     3       8     9     10     11	Color of Wire W	m					1 2 3 4 10 11 12 13		Color of	Wire	1	≥ ¤	0/B	M/R								
Connector No. Connector Nan Connector Colo		Terminal No.	15	Connector No.	Connector Name			<u></u>			Terminal No.	-	2 0	0 4	5	1							

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#### AUDIO UNIT (SEDAN)

#### < ECU DIAGNOSIS >

#### [BASE AUDIO]

AV-59

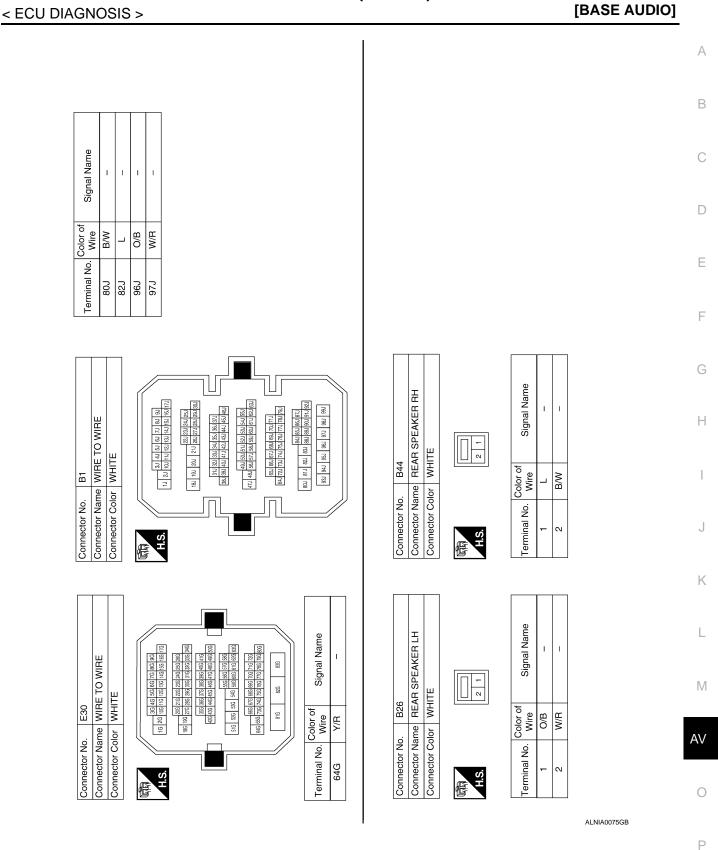
Connector No.M81Connector NameAUDIO UNITConnector ColorGRAY	(五) H.S.	Terminal No. Oolor of Signal Name	75 B AMP POWER SUPPLY	76 B MAIN ANTENNA	 Connector No. M501		Connector Color GRAY	H.S.	Terminal No. Color of Signal Name	- -	2 B -				
M52 TWEETER RH BROWN	5	of Signal Name	1	1	M88	COMBINATION SWITCH (SPIRAL CARLE)	GRAY		of Signal Name	REMOTE A	REMOTE B	GND			
Connector No. N Connector Name T Connector Color B	国 H.S.	Terminal No. Wire	1 G/W	2 BR	Connector No.	Connector Name	Connector Color	ALS IN THE INTERNATION	Terminal No. Vire	14 W	15 L	17 BR			
Connector No. M51 Connector Name TWEETER LH Connector Color BROWN	5	Terminal No. Wire Signal Name	- M	B	Connector No. M87		Connector Color GRAY	123	Terminal No.   Color of   Signal Name	н	В		Connector No. M502	Connector Name ANTENNA AMP	Connector Color GRAY

Signal Name	I	I
Color of Wire	В	В
Terminal No.	Ļ	2

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#### AUDIO UNIT (SEDAN)



#### [BASE AUDIO]

	AV CONTROL UNIT	WHITE	26 27 28 29 31	Signal Name	ж	IJ	в	RGB_GND	RGB_SYNC	RGB_SYNC_GND	γS	ЧН	٧P	IT_DISP	DISP_IT	SHIELD
. M43			22 24 \	Color of Wire	_	U	~	I	н	I	σ	ш	N	>	Ľ	I
Connector No.	Connector Name	Connector Color	品.S.H	Terminal No.	21	22	23	24	25	26	27	28	29	30	31	32

Signal Name	EARTH	DATA_EARTH	I	REQ (TO_HU)	RX (TO_HU)	TX (FROM_HU)	I	BACKUP	I	Τ	I	ACC	
Color of Wire	SHIELD	SHIELD	I	0	_	٩	ı	R/B	1	I	I	G/B	
Terminal No. Color of	25	26	27	28	29	30	31	32	33	34	35	36	

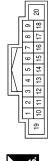
Signal Name	ILL	SHIELD	FR_RH_PRE+	FR_RH_PRE-	RR_RH_PRE+	RR_RH_PRE-	STRG_SW_GND	STRG_SW_B	I	I	8+	GND
Color of Wire	>	SHIELD	σ	×	щ	ш	SHIELD	BR	I	I	≻	в
Terminal No.	<b>б</b>	10	11	12	13	14	15	16	17	18	19	20

Connector No.	M41
Connector Name	Connector Name SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER
Connector Color WHITE	WHITE

LE	22 24 26 29 23 34 35 21 23 25 27 28 29 30 31 33 35	Signal Name
or WHI <sup>-</sup>	22 24 26 <	Color of Wire
Connector Color WHITE	低间 H.S.	Terminal No.

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⊢			0	18
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		Ē	7	16
R			5 6 7	10 11 12 13 14 15 16 17 18
Ę		l K	5	14
ō	Ш		3 4	13
0	듶		3	12
$\leq$	$\geq$		2	11
e	~		ŀ	10
Connector Name AV CONTROL UNIT	Connector Color WHITE	L	1	€
2	2		-	
Sct	scte			
L L	Ш.		2	2
0 0	Ö	旧		
	5			



Signal Name	AMP ON	FR_LH_PRE+	FR_LH_PRE-	FR_LH_PRE+	FR_LH_PRE-	STRG_SW_A	ACC	I
Color of Wire	SB	щ	В	L	٢	٢	G/Y	I
Terminal No. Wire	Ļ	2	3	4	2	9	2	8

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Connector Name FRONT DOOR SPEAKER RH Connector Color BROWN		Signal Name		
ne FRONT [ or BROWN	5	Color of Wire G/W	 ۲۵	
Connector Name Connector Color	同 H.S.	al No.	N	
		[]		
		tme		
E TO WIRE TE	4         3           10         9         8         7           5         5         1	Signal		
olor WHTE		Ŭ -	¥	
Connector No. D101 Connector Name WIRE TO WIRE Connector Color WHITE	国 H.S.	Terminal No. 7	ົ	
Connector Name FRONT DOOR SPEAKER LH Connector Color WHITE		Signal Name	ı	
ne FRONT or WHITE	2	Color of Wire W	 Σ	
Connector Name Connector Color	际 H.S.	al No.	N	
				ALNIA0077GB

#### SATELLITE RADIO TUNER

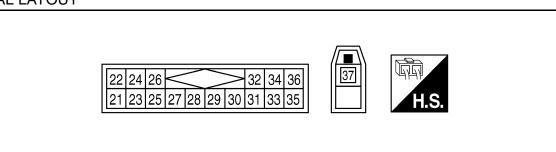
#### **Reference Value**

**TERMINAL LAYOUT** 

INFOID:000000001830447

LKIA0735E

[BASE AUDIO]



#### PHYSICAL VALUES

Terminal (Wire color)		Item	Signal input/		Condition	Voltage	
+	_			Ignition switch	Operation	(approx.)	
22 (Y/L)	21 (W/L)	Audio signal LH	Output	ON	Receive audio signal.	(V) 1 0 -1 * 2ms SKIB3609E	
24 (BR/L)	23 (Y/G)	Audio signal RH	Output	ON	Receive audio signal.	(V) 1 0 -1 -2ms SKIB3609E	
25	-	Shield	_	-	_	-	
26	-	Data ground	-	ON	_	Approx. 0 V	
28 (R/L)	Ground	REQ1 (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	(V) 15 0 10 0 10 10 10 10 10 10 10	
29 (R/W)	Ground	Communication signal (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	(V) 15 0 5 0 	

#### SATELLITE RADIO TUNER

#### < ECU DIAGNOSIS >

#### [BASE AUDIO]

Term (Wire		ltem	Signal input/	Condition		Voltage	А
+	_			output Ignition Operation		(approx.)	
30 (B)	Ground	Communication signal (AUDIO-SAT)	Input	ON	Set to the satellite radio mode	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0	B C D
32 (Y/R)	Ground	Battery power supply		OFF	_	Battery voltage	_
36 (GR/W)	2.50.00	ACC power supply	Input	ACC			E
37 (B)	_	Antenna signal		-	-	_	F

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#### SYMPTOM DIAGNOSIS AUDIO SYSTEM

AUDIO UNIT

#### AUDIO UNIT : Symptom Table

INFOID:000000001830449

Symptom	Possible cause	Reference page
Inoperative	<ul><li>Audio unit power circuit</li><li>Audio unit</li></ul>	• <u>AV-20</u> • <u>AV-70</u>
Steering wheel audio control switch does not operate	<ul><li>Steering wheel audio control switch</li><li>Audio unit</li></ul>	• <u>AV-34</u> • <u>AV-70</u>
All speakers do not sound	<ul><li>Audio unit power circuit</li><li>Audio unit</li></ul>	• <u>AV-20</u> • <u>AV-70</u>
One or several speakers do not sound	<ul><li>Door speaker</li><li>Front tweeter</li><li>Rear speaker</li></ul>	<ul> <li><u>AV-24</u></li> <li><u>AV-28</u></li> <li><u>AV-32</u></li> </ul>

#### CD

#### CD : Symptom Table

INFOID:000000001830450

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

#### SATELLITE RADIO TUNER

#### SATELLITE RADIO TUNER : Symptom Table

INFOID:000000001830451

Symptom	Possible cause	Reference page
Inoperative	<ul> <li>Satellite radio tuner power or ground circuit</li> <li>Satellite radio tuner communication circuit</li> <li>Satellite radio tuner</li> </ul>	<ul> <li><u>AV-20</u></li> <li><u>AV-36</u></li> <li><u>AV-214</u></li> </ul>
Right or left channel does not sound	<ul> <li>Satellite radio tuner right channel audio signal circuit</li> <li>Satellite radio tuner left channel audio signal circuit</li> <li>Satellite radio tuner</li> </ul>	<ul> <li><u>AV-40</u></li> <li><u>AV-40</u></li> <li><u>AV-214</u></li> </ul>

#### NORMAL OPERATING CONDITION

#### < SYMPTOM DIAGNOSIS >

#### NORMAL OPERATING CONDITION

#### Description

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 c external noise from trains and other sources. It is not a malfunction.

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

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

NOTE:

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

Type of Noise and Possible Cause

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

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[BASE AUDIO]

INFOID:000000001830452

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#### < PRECAUTION >

#### PRECAUTION PRECAUTIONS

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

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.

#### PREPARATION

#### [BASE AUDIO]

# < PREPARATION > PREPARATION

## PREPARATION

#### **Commercial Service Tools**

INFOID:000000001345952 B

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Tool name		Description	
		Loosening bolts and nuts	
Power tool			
	PBIC0191E		

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#### AUDIO UNIT

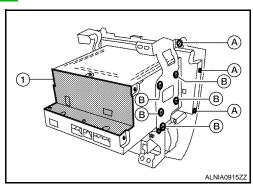
INFOID:000000001345953

# < ON-VEHICLE REPAIR > ON-VEHICLE REPAIR AUDIO UNIT

Removal and Installation

#### REMOVAL

- 1. Remove the cluster lid D. Refer to IP-11, "Removal and Installation".
- 2. Remove the cluster lid D screws (A), then remove the audio unit screws (B) and the audio unit (1).



INSTALLATION Installation is in the reverse order of removal.

#### **FRONT TWEETER**

AV-71

#### < ON-VEHICLE REPAIR >

#### FRONT TWEETER

#### **Removal and Installation**

#### REMOVAL

- 1. Remove the front pillar finisher. Refer to INT-19, "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).

С (A)(1) D Е (A) F ALNIA0050Z

**INSTALLATION** Installation is in the reverse order of removal. INFOID:000000001345954

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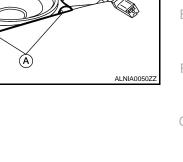
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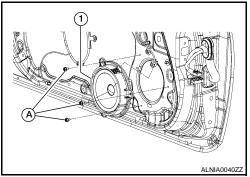
< ON-VEHICLE REPAIR >

#### FRONT DOOR SPEAKER

Removal and Installation

#### REMOVAL

- 1. Remove the front door finisher. Refer to INT-11, "Removal and Installation".
- 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.

INFOID:000000001345955

### < ON-VEHICLE REPAIR >

### **REAR SPEAKER**

### **Removal and Installation - Coupe**

### REMOVAL

- 1. Remove the trunk front finisher. Refer to INT-22, "Removal and Installation".
- 2. Remove the rear speaker screws (A), then disconnect the rear speaker connector (B) and remove the rear speaker (1).



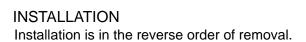
Installation is in the reverse order of removal.

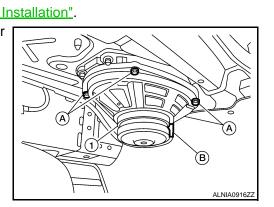
### Removal and Installation - Sedan

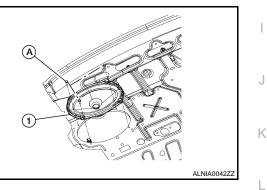
### REMOVAL

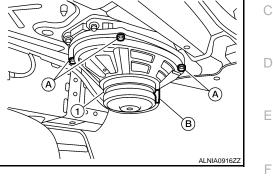
INSTALLATION

- 1. Remove the rear parcel shelf finisher. Refer to INT-36, "Removal and Installation".
- 2. Remove the rear speaker screws (A), then disconnect the rear speaker and remove the rear speaker (1).









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### **STEERING SWITCH**

### < ON-VEHICLE REPAIR >

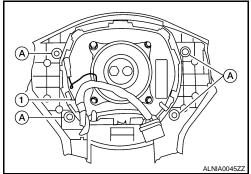
### STEERING SWITCH

### Removal and Installation

### REMOVAL

- 1. Remove the driver airbag module. Refer to <u>SR-4, "Removal and Installation"</u>.
- 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. INFOID:000000003110836



#### INFOID:000000001345957

INFOID:000000003110980

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### REMOVAL

< ON-VEHICLE REPAIR > ANTENNA AMP.

**Removal and Installation - Coupe** 

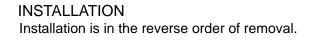
- 1. Remove the rear pillar finisher RH. Refer to INT-14, "Removal and Installation".
- Detach the antenna amp harness clip (B), disconnect the antenna amp connectors (A), remove the antenna amp screw (C) and remove the antenna amp (1).

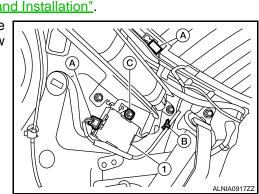
INSTALLATION Installation is in the reverse order of removal.

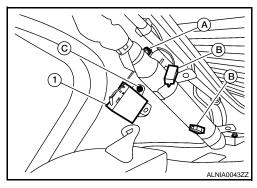
### Removal and Installation - Sedan

### REMOVAL

- 1. Remove the rear pillar finisher RH. Refer to INT-19, "Removal and Installation".
- 2. Partially remove the side curtain air bag module RH to gain access to the antenna amp. Refer to <u>SR-10.</u> <u>"Removal and Installation"</u>.
- Detach the antenna amp harness clip (A), disconnect the antenna amp connectors (B), remove the antenna amp screw (C) and remove the antenna amp (1).







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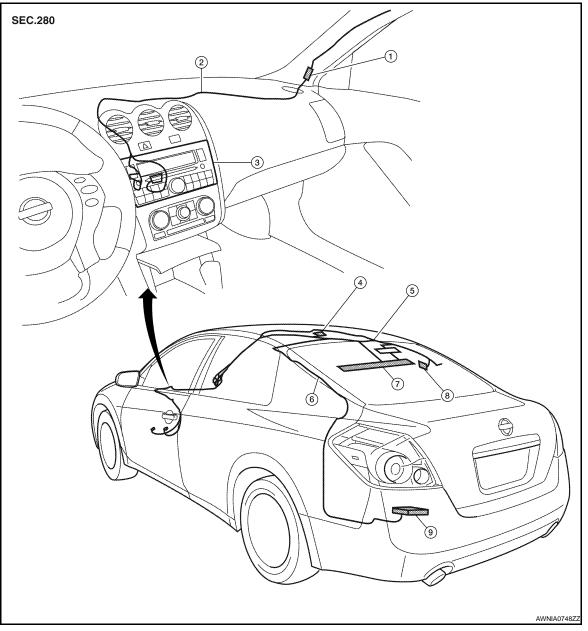
### **AUDIO ANTENNA (COUPE)**

### < ON-VEHICLE REPAIR >

# AUDIO ANTENNA (COUPE)

Location of Antenna

INFOID:000000001345958



- 1. In-line connectors M87, M501
- 4. Satellite antenna
- 7. Window Antenna

### Window Antenna Repair

### ELEMENT CHECK

- 2. Audio unit harness
- 5. Audio antenna feeder
- 8. Antenna amp.
- 3. Audio unit
- 6. Satellite radio antenna feeder
- 9. Satellite radio tuner

INFOID:000000001345959

### AV-76

[BASE AUDIO]

### AUDIO ANTENNA (COUPE)

### < ON-VEHICLE REPAIR >

### [BASE AUDIO]

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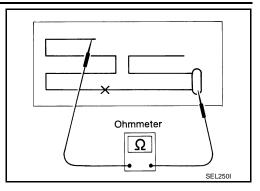
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Tester probe

SEL122R

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



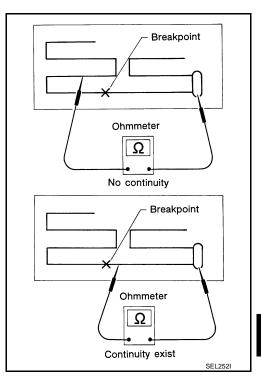
Press

Tin foil

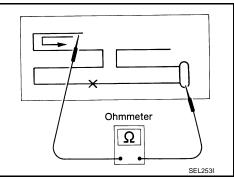
- Heat wire

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

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



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



### AUDIO ANTENNA (COUPE)

### < ON-VEHICLE REPAIR >

#### **REPAIR EQUIPMENT**

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

4.

#### REPAIRING PROCEDURE

composition is deposited.

- 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.

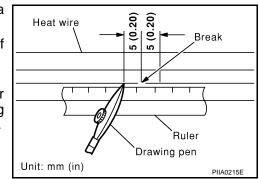
Shake silver composition container before use.

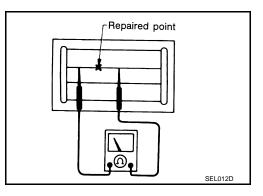
3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.

After repair has been completed, check repaired wire for conti-

Do not touch repaired area while test is being conducted.

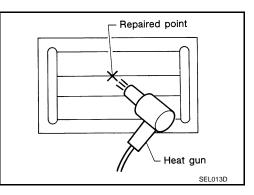
nuity. This check should be conducted 10 minutes after silver





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.



### **AUDIO ANTENNA (SEDAN)**

### < ON-VEHICLE REPAIR >

### AUDIO ANTENNA (SEDAN)

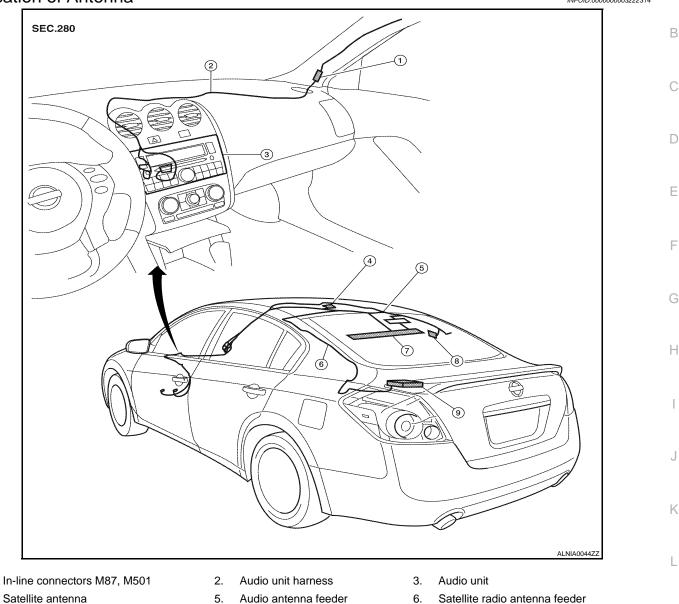
### Location of Antenna



[BASE AUDIO]



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Satellite antenna 4.

1.

Window Antenna 7.

- Satellite radio antenna feeder 6.
- 9. Satellite radio tuner

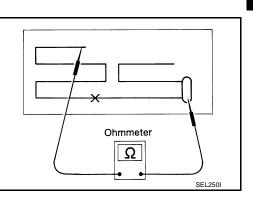
Window Antenna Repair

### **ELEMENT CHECK**

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

8.

Antenna amp.



AV

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### **AUDIO ANTENNA (SEDAN)**

#### < ON-VEHICLE REPAIR >

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

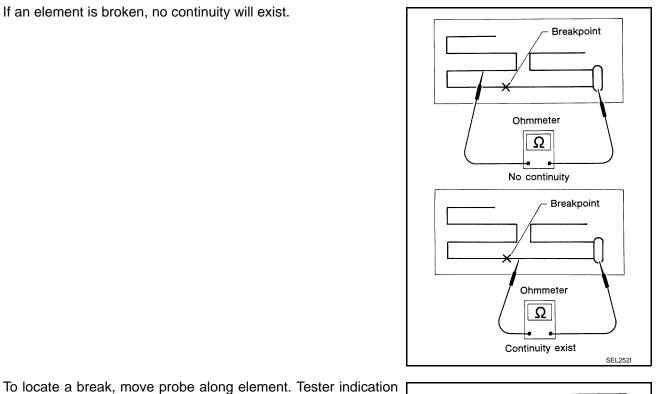
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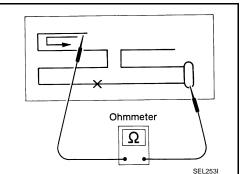
-Tin foil

[BASE AUDIO]

SEL122R

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





#### **REPAIR EQUIPMENT**

• Conductive silver composition (DuPont No. 4817 or equivalent)

will change abruptly when probe passes the broken point.

- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

3.

**REPAIRING PROCEDURE** 

### **AUDIO ANTENNA (SEDAN)**

### < ON-VEHICLE REPAIR >

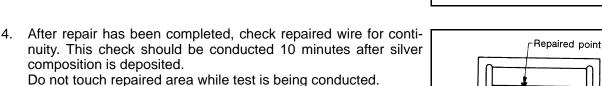
composition is deposited.

#### 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.

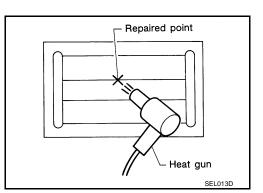
Shake silver composition container before use.

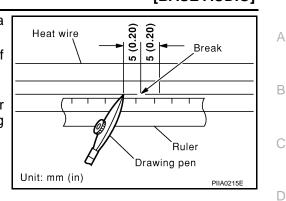
3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.



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.





### [BASE AUDIO]

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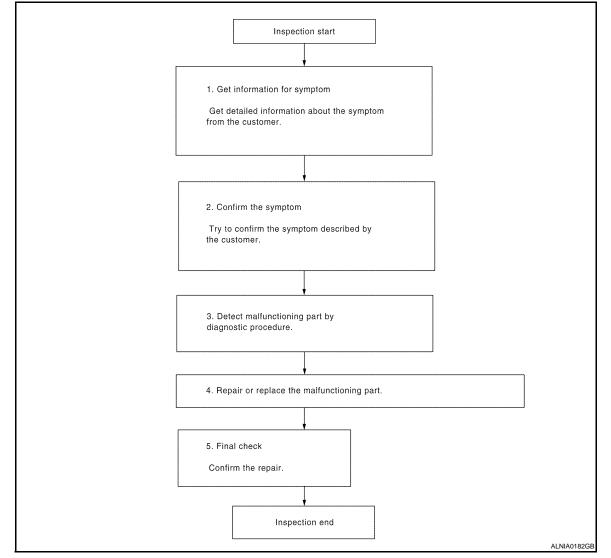
### [BOSE AUDIO WITHOUT NAVIGATION]

### BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

### Work Flow

INFOID:000000001830598

**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.

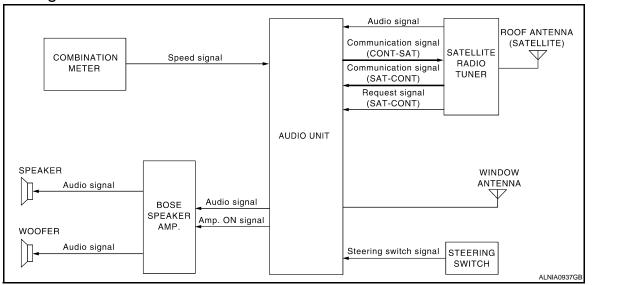
### AV-82

### DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >	[BOSE AUDIO WITHOUT NAVIGATION]
s malfunctioning part detected?	
YES >> GO TO 4	
NO >> GO TO 2	
<b>4.</b> REPAIR OR REPLACE THE MALFUNCTIONING F	2ARI
<ol> <li>Repair or replace the malfunctioning part.</li> <li>Reconnect parts or connectors disconnected durir</li> </ol>	na Diagnostic Procedure
	ig Diagnostic i Tocedure.
>> 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 (COUPE)

### System Diagram



### System Description

INFOID:000000001830600

INFOID:000000001830599

### AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- BOSE speaker amp.
- Window antenna
- Steering wheel audio control switches
- Door speakers
- Front tweeters
- Center speaker
- Rear tweeters
- Rear subwoofers

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

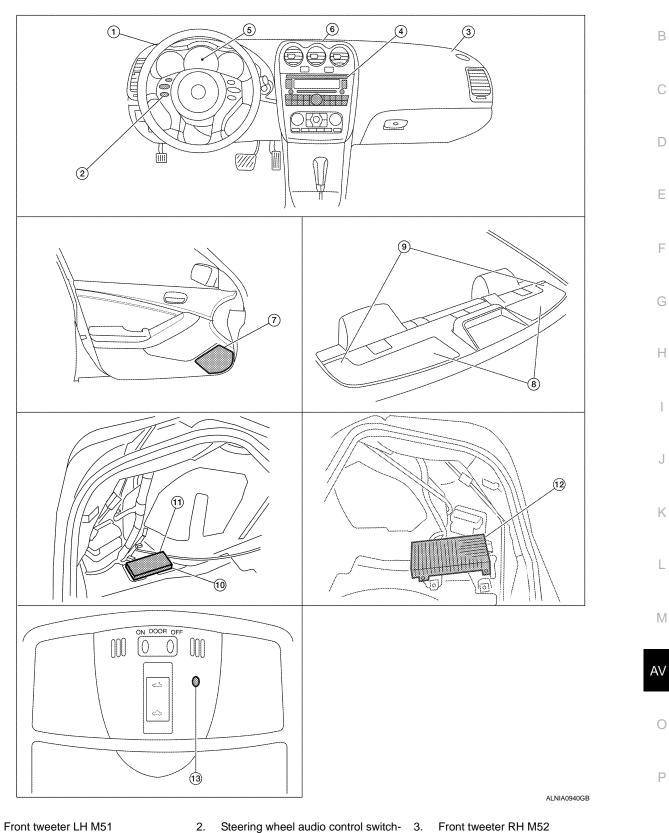
### **AUDIO SYSTEM (COUPE)**

### [BOSE AUDIO WITHOUT NAVIGATION]

### **Component Parts Location**

INFOID:000000001830601

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4. Audio unit M43, M44, M45, M81

1.

 Steering wheel audio control switch es

Combination meter M24

5.

- 6. Center speaker M151
- AV-85

- 7. Door speaker LH D3 RH D103
- 10. Satellite radio tuner B57, B58 (viewed with trunk carpet and LH floor spacer removed)
- 13. Microphone R7

### **Component Description**

- Rear subwoofer LH B25
- RH B47

8.

- 11. Bluetooth control unit B55, B56
- 9. Rear tweeter LH B16 RH B100
- 12. BOSE speaker amp B121, B122 (view with trunk carpet and RH floor spacer removed)

INFOID:000000001830602

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

### AUDIO SYSTEM (COUPE)

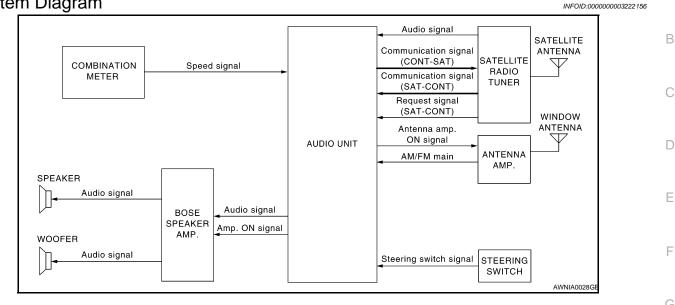
### [BOSE AUDIO WITHOUT NAVIGATION]

### AUDIO SYSTEM (SEDAN)

### [BOSÉ AUDIO WITHOUT NAVIGATION]

### AUDIO SYSTEM (SEDAN)

System Diagram



### System Description

### AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Window antenna
- BOSE speaker amp.
- · Steering wheel audio control switches
- Front door speakers
- Tweeters
- Center speaker
- Rear door speakers
- Rear subwoofers

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

### 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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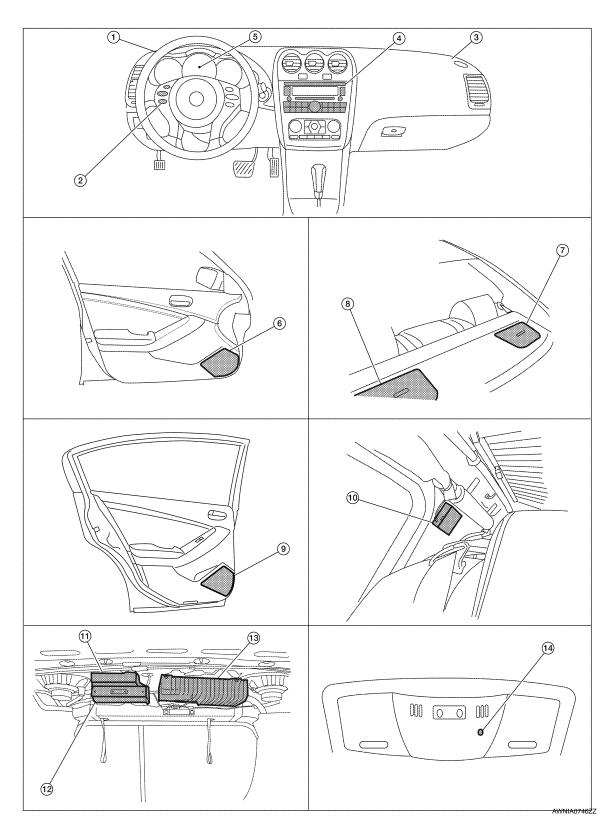
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### AUDIO SYSTEM (SEDAN)

### [BOSE AUDIO WITHOUT NAVIGATION]

### **Component Parts Location**

INFOID:000000003222158



1. Tweeter LH M51

- 4. Audio unit M43, M44, M45, M81
- 2. Steering wheel audio control switches 3.

Combination meter M24

5.

- 3. Tweeter RH M52
- 6. Front door speaker LH D3 RH D103

### **AUDIO SYSTEM (SEDAN)**

Satellite radio tuner B123, B129

Rear subwoofer RH B124

8.

11.

14. Microphone R7

### < FUNCTION DIAGNOSIS >

- 7. Rear subwoofer LH B120
- 10. Antenna amp. M502

Satellite antenna

13. BOSE speaker amp. B121, B122

### **Component Description**

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

Audio signal (satellite radio) is received and output to audio unit.

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### [BOSE AUDIO WITHOUT NAVIGATION]

- 9. Rear door speaker LH D202 RH D302
- 12. Bluetooth control unit B125, B126

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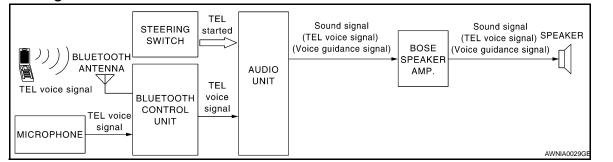
### HANDS FREE PHONE SYSTEM (COUPE)

#### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

### HANDS FREE PHONE SYSTEM (COUPE)

### System Diagram



### System Description

INFOID:000000001830604

INFOID:000000001830603

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

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

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

### **BLUETOOTH CONTROL UNIT**

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

### STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

### MICROPHONE

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

### AUDIO UNIT

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

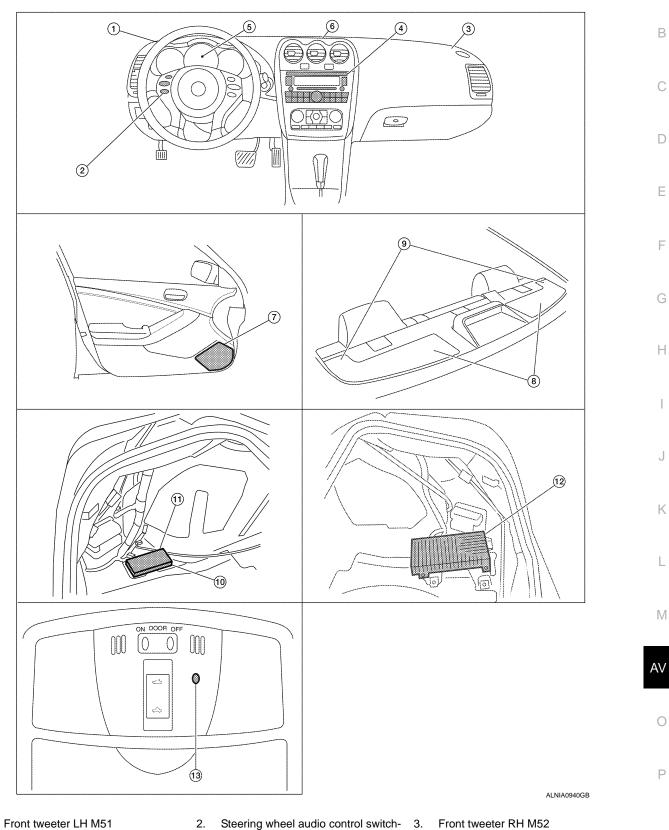
### HANDS FREE PHONE SYSTEM (COUPE) (BOSE AUDIO WITHOUT NAVIGATION)

### < FUNCTION DIAGNOSIS >

### **Component Parts Location**

INFOID:000000003222326

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4. Audio unit M43, M44, M45, M81

1.

2. Steering wheel audio control switches

5.

- Combination meter M24 6. Center speaker M151
  - AV-91

### HANDS FREE PHONE SYSTEM (COUPE) S > [BOSE AUDIO WITHOUT NAVIGATION]

### < FUNCTION DIAGNOSIS >

7. Door speaker LH D3 RH D103

- 8. Rear subwoofer LH B25 RH B47
- 11. Bluetooth control unit B55, B56
- 9. Rear tweeter LH B16 RH B100
- 12. BOSE speaker amp B121, B122 (view with trunk carpet and RH floor spacer removed)

- 10. Satellite radio tuner B57, B58 (viewed with trunk carpet and LH floor spacer removed)
- 13. Microphone R7

### **Component Description**

INFOID:000000001830606

Part name	Description	
Audio unit	<ul> <li>Receives telephone voice signal from Bluetooth control unit</li> <li>Sends telephone voice and voice guidance signals to BOSE speaker amp.</li> </ul>	
BOSE speaker amp.	Inputs power (amp ON) and sound signal from audio unit, and outputs soun signal to each speaker.	
Door speaker		
Front tweeter	Receives telephone voice and voice guidance signals from BOSE speaker amp.	
Center speaker	unp.	
Steering wheel audio control switches	<ul> <li>Start a voice recognition session</li> <li>Answer and end telephone calls</li> <li>Adjust the volume level</li> </ul>	
Microphone	Sends voice signals to Bluetooth control unit	
Bluetooth control unit	Controls hands-free phone functions	
Bluetooth antenna	Sends telephone voice signal to bluetooth control unit	

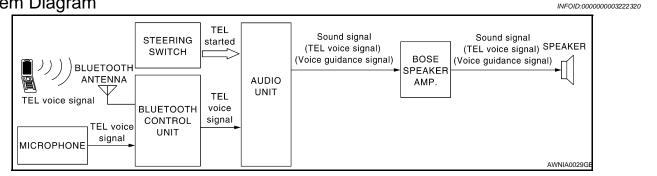
### HANDS FREE PHONE SYSTEM (SEDAN)

#### < FUNCTION DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

### HANDS FREE PHONE SYSTEM (SEDAN)

### System Diagram



### System Description

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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.

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

### STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

### MICROPHONE

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

### AUDIO UNIT

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

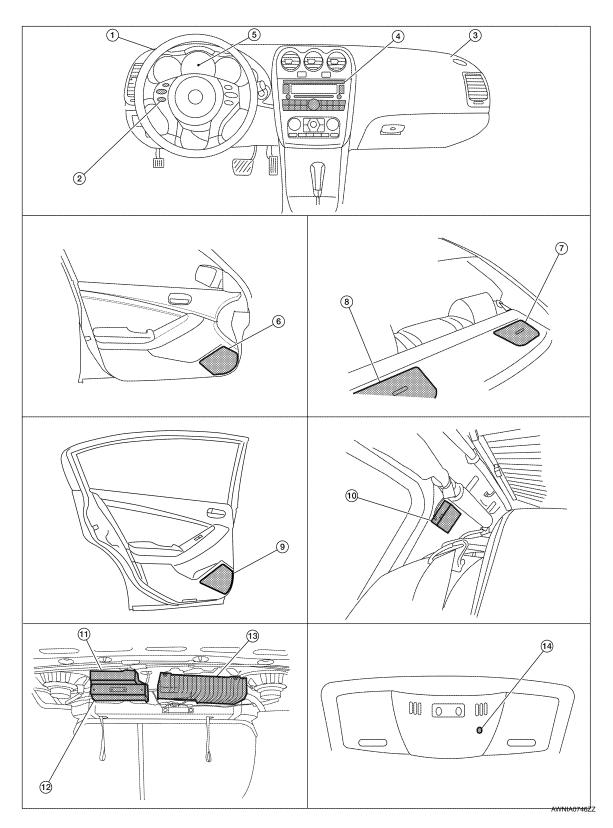
# HANDS FREE PHONE SYSTEM (SEDAN)

### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

### **Component Parts Location**

INFOID:000000003222327



- 1. Tweeter LH M51
- 4. Audio unit M43, M44, M45, M81
- 2. Steering wheel audio control switches 3.

Combination meter M24

5.

- 3. Tweeter RH M52
- Front door speaker LH D3 RH D103

#### HANDS FREE PHONE SYSTEM (SEDAN) [BOSE AUDIO WITHOUT NAVIGATION] < FUNCTION DIAGNOSIS > Rear subwoofer RH B124 7. Rear subwoofer LH B120 8. Rear door speaker 9. LH D202 RH D302 11.

- 10. Antenna amp. M502
- Satellite radio tuner B123, B129 14. Microphone R7
- 12. Bluetooth control unit B125, B126

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13. BOSE speaker amp. B121, B122

### **Component Description**

INFOID:00000003222325

Part name	Description     Receives telephone voice signal from Bluetooth control unit     Sends telephone voice and voice guidance signals to BOSE speaker amp.	
Audio unit		
BOSE speaker amp.	Inputs power (amp ON) and sound signal from audio unit, and outputs sour signal to each speaker.	
Front door speaker		
Tweeter	Receives telephone voice and voice guidance signals from BOSE speak amp.	
Center speaker		
<ul> <li>Start a voice recognition session</li> <li>Answer and end telephone calls</li> <li>Adjust the volume level</li> </ul>		
Microphone	Sends voice signals to Bluetooth control unit	
Bluetooth control unit	Controls hands-free phone functions	
Bluetooth antenna	Sends telephone voice signal to bluetooth control unit	

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### DIAGNOSIS SYSTEM (AUDIO UNIT)

### Diagnosis Description

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**

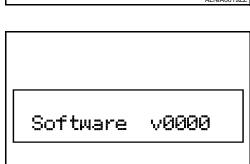
- 1. Turn ignition switch to the ACC position.
- 2. Turn the audio unit off.
- 3. While pressing the "AUDIO" button, turn the volume control dial clockwise or counterclockwise 30 clicks or more. When the self-diagnosis mode is started, a short beep will be heard.

Initially, all display segments will be illuminated.

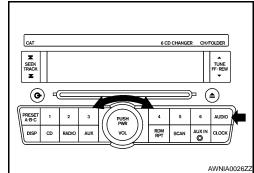


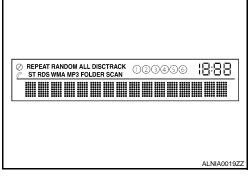
4.

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



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# **DIAGNOSIS SYSTEM (AUDIO UNIT)** [BOSE AUDIO WITHOUT NAVIGATION] < FUNCTION DIAGNOSIS > Press the "AUDIO" switch again to display the "Hardware" 2. (audio hardware version). Hardware V0000 ALNIA0021ZZ 3. Press the "AUDIO" switch again to display the "CD Mech" (CD mechanism version). CD Mech v0000 ALNIA0022ZZ 4. Press the "AUDIO" switch again to display the "SDARS" (satellite radio version). SDARS v0000 ALNIA0023ZZ **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. Channel check FL

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**Button Check Diagnostics** 

### DIAGNOSIS SYSTEM (AUDIO UNIT)

#### < FUNCTION DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

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.

5			
	BUTTON	CHECK	
			ALNIA0025ZZ

### DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

### < FUNCTION DIAGNOSIS >

### DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

### **Diagnosis Description**

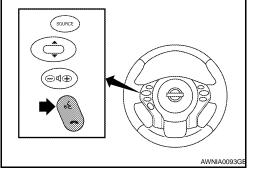
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

### BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

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

#### **OPERATION PROCEDURE**

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



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[BOSE AUDIO WITHOUT NAVIGATION]

- 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.
- The Bluetooth system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician. Refer to <u>AV-99</u>, "Work Flow".
- After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails refer to <u>AV-99</u>, "<u>Work Flow</u>".
- 8. Self-diagnosis mode is complete when the voice prompt says "All diagnostic functions completed".

### Work Flow

INFOID:000000001830609

Failure Message	Action	
"Internal failure"	Replace Bluetooth control unit. For coupe, refer to <u>AV-227</u> , " <u>Removal and Installation - Coupe</u> ". For sedan, refer to <u>AV-227</u> , " <u>Removal and Installation - Sedan</u> ".	
"Bluetooth antenna open"	1. Inspect harness connection.	
"Bluetooth antenna shorted"	<ol> <li>Replace Bluetooth antenna. For coupe, refer to <u>AV-226, "Removal and Instal-lation - Coupe"</u>. For sedan, refer to <u>AV-226, "Removal and Installation - Sedan"</u>.</li> </ol>	
"Phone/Send for Hands Free System is stuck"	Check steering wheel audio control switches. Refer to <u>AV-134</u> , "Diagnosis Proce- " <u>dure</u> ".	
"Phone/End for the Hands Free System is stuck"		
"Microphone test" (failed interactive test)	<ol> <li>Inspect harness between Bluetooth control unit and microphone.</li> <li>Replace microphone. For coupe, refer to <u>AV-224</u>, "<u>Removal and Installation -</u> <u>Coupe</u>". For sedan, refer to <u>AV-224</u>, "<u>Removal and Installation - Coupe</u>".</li> </ol>	

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AV-99

### POWER SUPPLY AND GROUND CIRCUIT (COUPE)

### < COMPONENT DIAGNOSIS >

### COMPONENT DIAGNOSIS POWER SUPPLY AND GROUND CIRCUIT (COUPE) AUDIO UNIT

### AUDIO UNIT : Diagnosis Procedure

### 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?

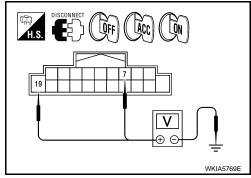
YES >> GO TO 2

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.

(	+)	(-)	OFF	ACC	ON
Connector	Terminal	(-)	OIT	700	
M43	19	Ground	Battery voltage	Battery voltage	Battery voltage
10143	7	Ground	0V	Battery voltage	Battery voltage



### Are the voltage results as specified?

YES >> GO TO 3 NO >> • Check of

>> • 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. BOSE SPEAKER AMP

### BOSE SPEAKER AMP : Diagnosis Procedure

### **1.**CHECK FUSE

Check for blown fuses.

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

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[BOSE AUDIO WITHOUT NAVIGATION]

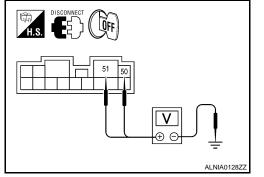
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### POWER SUPPLY AND GROUND CIRCUIT (COUPE) [BOSE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

- 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	(-)	vollage (approx.)
B122	50 Ground		Battery voltage
0122	51	Ground	Dattery voltage



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Is battery voltage present?

YES	>> GO TO 3
-----	------------

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

### **3.**CHECK GROUND CIRCUIT

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

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

### Does continuity exist?

YES >> INSPECTION END.

NO >> Repair harness or connector.

SATELLITE RADIO TUNER

### SATELLITE RADIO TUNER : Diagnosis Procedure

### **1.**CHECK FUSES

Check that the following fuses are not blown.

Unit	Terminals	Signal name	Fuse No.	
Satellite radio tuner (factory in-	32	Battery power	24	L
stalled)	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 B57.
- 3. Check voltage between the satellite radio tuner (factory installed) and ground.

### POWER SUPPLY AND GROUND CIRCUIT (COUPE) [BOSE AUDIO WITHOUT NAVIGATION]

### < COMPONENT DIAGNOSIS >

(+)		(-)	OFF	ACC	ON
Connector	Terminal	()	OIT	700	
B57	32	Ground	Battery voltage	Battery voltage	Battery voltage
037	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.

**BLUETOOTH CONTROL UNIT** 

### **BLUETOOTH CONTROL UNIT : Diagnosis Procedure**

### 1.CHECK FUSE

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

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

#### Are the fuses OK?

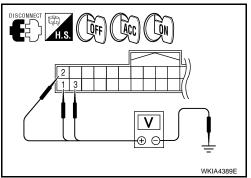
YES >> GO TO 2

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	Value (Approx.)
Connector	Terminal		position	
	1		OFF	
B55	2	Ground	ACC	Battery voltage
	3		ON	

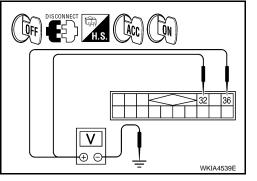


### Are the voltage results as specified?

YES >> GO TO 3

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

3. CHECK GROUND CIRCUIT



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### POWER SUPPLY AND GROUND CIRCUIT (COUPE)

### < COMPONENT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit connector B55.
- 3. Check continuity between Bluetooth control unit harness connector and ground.

(·	(+)		Continuity
Connector	Terminal	(-)	Continuity
B55	4	Ground	Yes
	24	Croand	165

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

### MICROPHONE

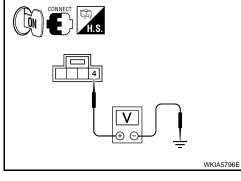
### **MICROPHONE : Diagnosis Procedure**

### **1.**CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

Check voltage between microphone harness connector and ground.

(-	+)		Ignition owitch no	
Connector Terminal (-)		(-)	Ignition switch po- sition	Value (Approx.)
R7	4	Ground	ON	5V
ls proper vo	oltage presei	nt?		

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



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### **2.**CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit and microphone connectors.
- Check continuity between microphone harness connector R7 (A) terminal 4 and Bluetooth control unit harness connector B55
  - (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?

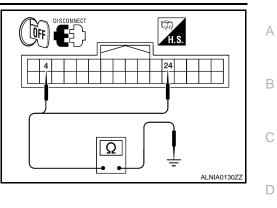
YES >> GO TO 3

NO >> Repair harness or connector.



### AV-103

[BOSE AUDIO WITHOUT NAVIGATION]



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### POWER SUPPLY AND GROUND CIRCUIT (COUPE) [BOSE AUDIO WITHOUT NAVIGATION]

### < COMPONENT DIAGNOSIS >

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

(	+)		Ignition switch po-	Value (Approx.)
Connector	Terminal	(-)	sition	
B55	29	Ground	ON	5V

### Is proper voltage present?

- YES >> Inspection End.
- NO >> Replace Bluetooth control unit. Refer to <u>AV-227</u>. <u>"Removal and Installation - Coupe"</u>.

### 4.CHECK GROUND CIRCUIT

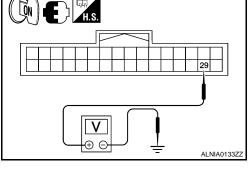
- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit and microphone connectors.
- Check continuity between microphone harness connector R7 terminal 2 and Bluetooth control unit harness connector B126 terminal 8.

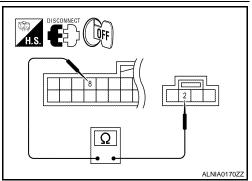
Signal name	Continuity
Microphone ground	Continuity should exist.

Is continuity present?

YES >> Inspection End.

NO >> Repair harness or connector.





### AV-104

	ENT DIAGN	OSIS >				<b>CUIT (SEDAN)</b> DSE AUDIO WITHOUT NAVIGATION] DAN)	A
AUDIO UI	NIT : Diag	nosis Pr	ocedure			INFOID:00000003222162	5
<b>1.</b> CHECK F	USES						В
Check that the	ne following f	uses are n	ot blown.				С
	Unit		Terminals		Signal	al name Fuse No.	
Audio unit			19		Battery power	24	D
			7		Ignition switch AC	CC or ON 19	
$\frac{NO >>}{2.POWER}$	SUPPLY CIR	CUIT CHE	CK r M43.		of malfunction or M43 and	n before installing new fuse.	F
(	+)	()	OFF	ACC	ON		
Connector	Terminal	(-)	OFF	ACC	ON		Н
M43	19	Ground	Battery voltage	Battery voltage	voltage		
	7	Ground	0V	Battery voltage	-	WKIA5769E	I
YES >> NO >>	ge results as GO TO 3 • Check conr • Repair harr	nector hou	sings for di	sconnect	ed or loose ter		J
3.GROUNE	CIRCUIT C	HECK					К
-	o unit case gi						
YES >> NO >>	round pass ir Inspection Er Repair audio PEAKER A	nd. unit case					L
BOSE SP	EAKER A	MP : Dia	agnosis F	Procedu	ure	INFOID:00000003222163	Μ
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Check for blo	own fuses.						

Unit	Terminals	Signal name	Fuse No.	0
BOSE speaker amp.	50	Battery power 25		
	51	Ballery power	26	Ρ

### Are the fuses OK?

YES >> GO TO 2

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

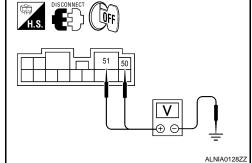
2. CHECK POWER SUPPLY CIRCUIT

### POWER SUPPLY AND GROUND CIRCUIT (SEDAN) IAGNOSIS > [BOSE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

- 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		vollage (applox.)	
B122	50	Ground Battery voltage	Battery voltage	
DTZZ	51	Ground	Battery voltage	



Is battery voltage present?

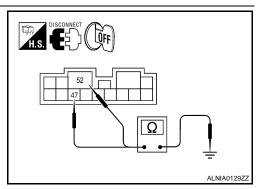
YES >> GO TO 3	
----------------	--

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

### 3. CHECK GROUND CIRCUIT

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

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



Does continuity exist?

YES >> INSPECTION END.

NO >> Repair harness or connector.

SATELLITE RADIO TUNER

### SATELLITE RADIO TUNER : Diagnosis Procedure

### 1.CHECK FUSES

Check that the following fuses are not blown.

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

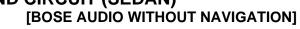
1. Turn ignition switch OFF.

- 2. Disconnect satellite radio tuner (factory installed) connector B123.
- 3. Check voltage between the satellite radio tuner (factory installed) and ground.

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### POWER SUPPLY AND GROUND CIRCUIT (SEDAN)

### < COMPONENT DIAGNOSIS >



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(	+)	(-)	OFF	ACC	ON
Connector	Terminal	(-)	OIT	700	ON
B123	32	Ground	Battery voltage	Battery voltage	Battery voltage
D123	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.

BLUETOOTH CONTROL UNIT

### **BLUETOOTH CONTROL UNIT : Diagnosis Procedure**

### 1.CHECK FUSE

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

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

#### Are the fuses OK?

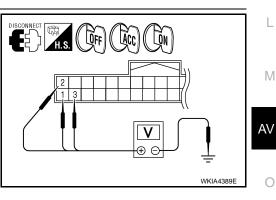
YES >> GO TO 2

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



Are the voltage results as specified?

YES >> GO TO 3

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

**3.**CHECK GROUND CIRCUIT

### POWER SUPPLY AND GROUND CIRCUIT (SEDAN)

#### < COMPONENT DIAGNOSIS >

- 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	
D120	24	Ground	165	

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector. MICROPHONE

### MICROPHONE : Diagnosis Procedure

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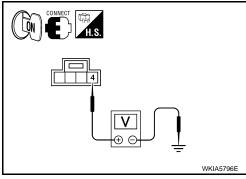
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# Check voltage between microphone harness connector and ground. (+) Ignition switch position Value (Approx.) Connector Terminal (-) sition R7 4 Ground ON 5V

1. CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

#### Is proper voltage present?

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



### 2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

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

Signal name	Continuity	
Microphone VCC signal	Continuity should exist.	

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

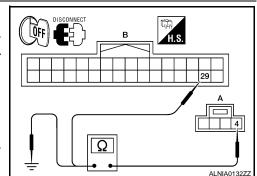
Signal name	Continuity
Microphone VCC signal	Continuity should not exist.

Are continuity results as specified?

YES >> GO TO 3

NO >> Repair harness or connector.

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



[BOSE AUDIO WITHOUT NAVIGATION]

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#### POWER SUPPLY AND GROUND CIRCUIT (SEDAN) [BOSE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

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

(	+)		Ignition switch po-	Value (Approx.)
Connector	Terminal	(-)	sition	value (Applox.)
B126	29	Ground	ON	5V

## Is proper voltage present?

- YES >> Inspection End.
- NO >> Replace Bluetooth control unit. Refer to <u>AV-227.</u> <u>"Removal and Installation - Sedan"</u>.

# 4.CHECK GROUND CIRCUIT

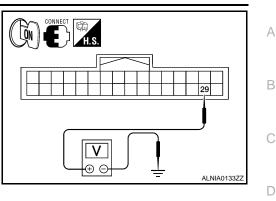
- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit and microphone connectors.
- Check continuity between microphone harness connector R7 terminal 2 and Bluetooth control unit harness connector B126 terminal 8.

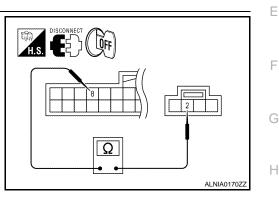
Signal name	Continuity
Microphone ground	Continuity should exist.

Is continuity present?

YES >> Inspection End.

NO >> Repair harness or connector.





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#### < COMPONENT DIAGNOSIS >

# DOOR SPEAKER (COUPE)

# Description

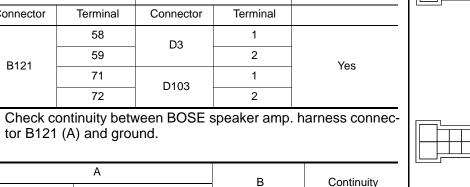
The audio unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the door speakers using the audio signal circuits.

## **Diagnosis** Procedure

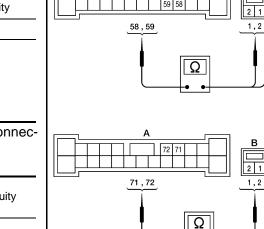
# **1.**HARNESS CHECK

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

	A		В	Continuity	
Connector	Terminal	Connector	Terminal		
	58	- D3	Da	1	
B121	59		2	Yes	
	71	D400	1	Tes	
	72	D103	2		



No



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Are continuity test results as specified?

tor B121 (A) and ground.

А

Terminal

58 59

71

72

YES >> GO TO 2

Connector

B121

3

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

Ground

2.DOOR SPEAKER SIGNAL CHECK

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# **DOOR SPEAKER (COUPE)**

## < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

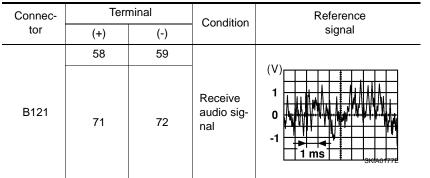
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- 1. Connect BOSE speaker amp. connector B121 and suspect speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between BOSE speaker amp. harness connector B121 terminals with CONSULT-III or oscilloscope.



## Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to AV-209, "Removal and Installation".

NO >> GO TO 3

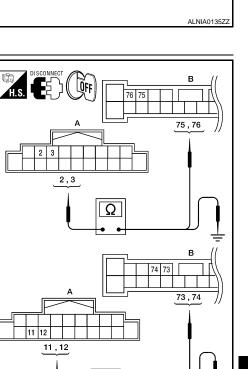
# **3.**HARNESS CHECK

- 1. Disconnect audio unit connector M43 and BOSE speaker amp. connector B121.
- 2. Check continuity between audio unit harness connector M43 (A) and BOSE speaker amp. harness connector B121 (B).

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2		75	
M43	3	B121	76	Yes
10143	11		73	Tes
	12	1	74	

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

•		А		Continuity
	Connector	Terminal		Continuity
-		2		
	M43	3		No
	10143	11	Ground	NO
		12		



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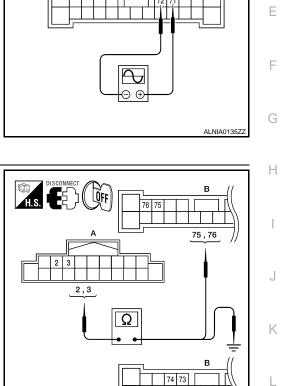
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Are continuity test results as specified?

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

**4.**DOOR SPEAKER SIGNAL CHECK



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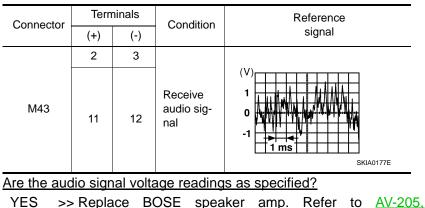
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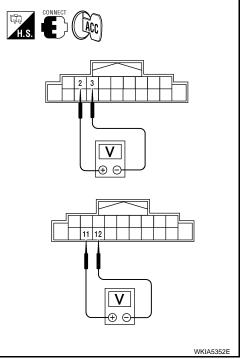
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# **DOOR SPEAKER (COUPE)**

#### < COMPONENT DIAGNOSIS >

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





- "Removal and Installation Coupe" NO
- >> Replace audio unit. Refer to AV-204, "Removal and Installation".

# [BOSE AUDIO WITHOUT NAVIGATION]

# FRONT DOOR SPEAKER (SEDAN)

#### < COMPONENT DIAGNOSIS >

# FRONT DOOR SPEAKER (SEDAN)

## Description

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

# **Diagnosis Procedure**

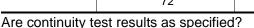
# 1.HARNESS CHECK

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

	A		В	Continuity
Connector	Terminal	Connector	Terminal	
	58	D3	1	
B121	59	05	2	Yes
	71	D400	1	165
	72	D103	2	

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

	A		Continuity
Connector	Terminal	В	Continuity
	58		No
B121	59	Ground	
	71	Giouna	NO
	72		



YES >> GO TO 2 NO >> • Check c

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

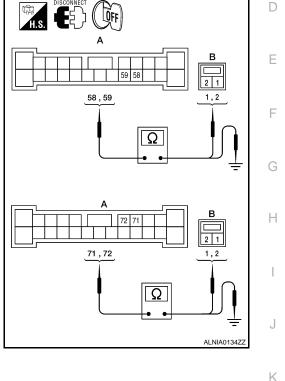
2.FRONT DOOR SPEAKER SIGNAL CHECK

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# FRONT DOOR SPEAKER (SEDAN)

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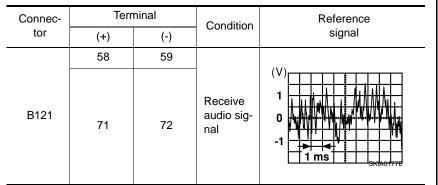
#### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION] Connect BOSE speaker amp. connector B121 and suspect

- speaker connector. 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.

1.

Check the signal between BOSE speaker amp. harness connec-4. tor B121 terminals with CONSULT-III or oscilloscope.



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## Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to AV-209, "Removal and Installation".

NO >> GO TO 3

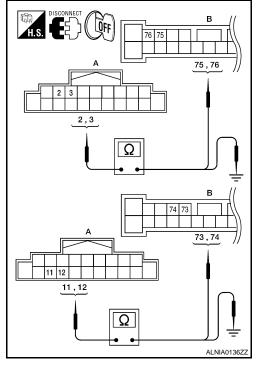
## **3.**HARNESS CHECK

- 1. Disconnect audio unit connector M43 and BOSE speaker amp. connector B121.
- 2. Check continuity between audio unit harness connector M43 (A) and BOSE speaker amp. harness connector B121 (B).

	A	I	В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2		75	
M43	3	B121	76	Yes
10143	11		73	Tes
	12		74	

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

	А		Continuity
Connector	Terminal		Continuity
	2		
M43	3	Ground	No
10143	11	Ground	NO
	12		



Are continuity test results as specified?

YES >> GO TO 4

NO

- >> Check connector housings for disconnected or loose terminals.
  - · Repair harness or connector.

**4.**FRONT DOOR SPEAKER SIGNAL CHECK

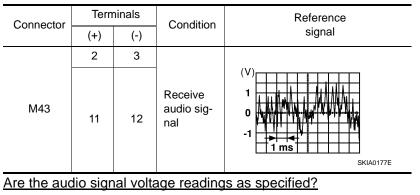
# FRONT DOOR SPEAKER (SEDAN)

#### < COMPONENT DIAGNOSIS >

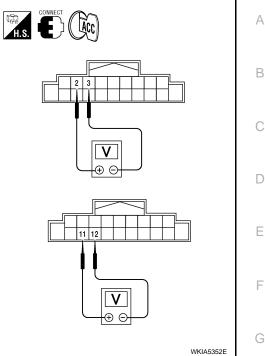
## [BOSE AUDIO WITHOUT NAVIGATION] Connect audio unit connector and BOSE speaker amp. connec-

AV-115

- 1. tor.
- 2. Turn ignition switch ACC.
- Push "POWER" switch. 3.
- Check the signal between audio unit harness connector termi-4. nals with CONSULT-III or oscilloscope.



- YES >> Replace BOSE speaker amp. Refer to AV-205, "Removal and Installation - Coupe"
- NO >> Replace audio unit. Refer to AV-204, "Removal and Installation".



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#### < COMPONENT DIAGNOSIS >

# FRONT TWEETER (COUPE)

## Description

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

## **Diagnosis Procedure**

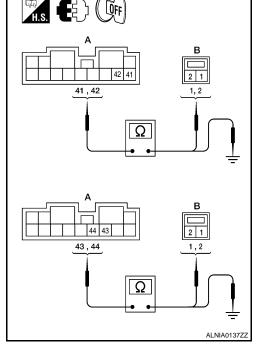
# **1.**HARNESS CHECK

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

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	41	M51	1	
B122	42	INIS I	2	Yes
BIZZ	44	MED	1	Tes
	43	M52	2	

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

A			Continuity
Connector	Terminal		Continuity
B122	41		
	42	42 Ground	
	44	Giodila	No
	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.**FRONT TWEETER SIGNAL CHECK

INFOID:000000001830617

INFOID:000000001830618

# FRONT TWEETER (COUPE)

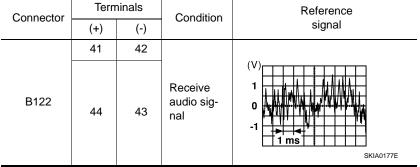
#### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

ACC

**E**)

- 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.



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

YES >> Replace suspect tweeter. Refer to AV-207, "Removal and Installation".

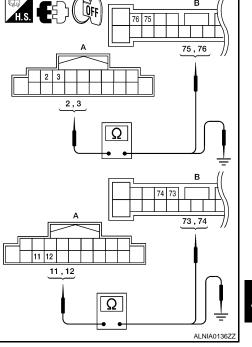
# **3.**HARNESS CHECK

- 1. Disconnect audio unit connector M43 and BOSE speaker amp. connector B121.
- 2. Check continuity between audio unit harness connector M43 (A) and BOSE speaker amp. harness connector B121 (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2		75	
M43	3	B121	76	Yes
10143	11	DIZI	73	Tes
	12		74	

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

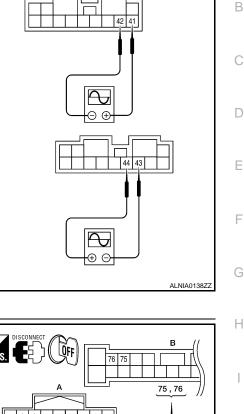
	A Connector Terminal			Continuity
-				Continuity
		2		
	M43	3	Ground	No
10143	10143	11		NO
		12		



Are continuity test results as specified?

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

**4.**FRONT TWEETER SIGNAL CHECK





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# **FRONT TWEETER (COUPE)**

#### < COMPONENT DIAGNOSIS >

Installation".

[BOSE AUDIO WITHOUT NAVIGATION]

**ACC** 

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- 1. Connect audio unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch ACC.
- 3. Push "POWER" switch.

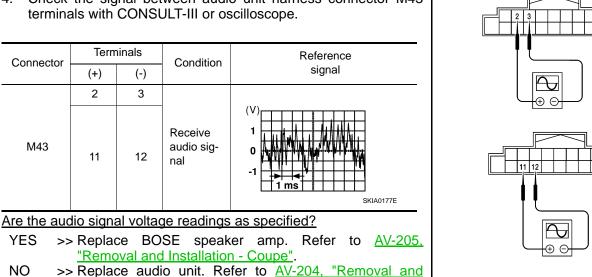
Connector

M43

YES

NO

Check the signal between audio unit harness connector M43 4. terminals with CONSULT-III or oscilloscope.



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## < COMPONENT DIAGNOSIS >

# TWEETER (SEDAN)

## Description

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

# **Diagnosis Procedure**

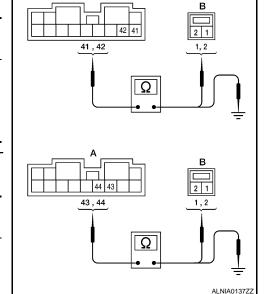
# 1.HARNESS CHECK

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

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	41	M51	1	
B122	42	- INIG I	2	Yes
	44	M52	1	165
	43	IVIJZ	2	

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

	А		Continuity
Connector	Connector Terminal		Continuity
	41		No
B122	42	Ground	
DIZZ	44	Ground	NO
	43		



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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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# [BOSE AUDIO WITHOUT NAVIGATION]

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INFOID:000000003188241

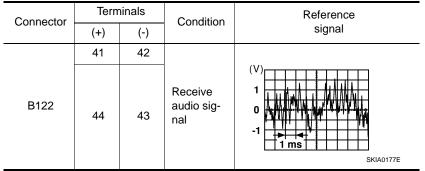
INFOID:000000003188242

# **TWEETER (SEDAN)**

## < COMPONENT DIAGNOSIS >

#### 1. Connect BOSE speaker amp. connector B122 and suspect tweeter connector.

- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- Check the signal between BOSE speaker amp. harness connec-4. tor B122 terminals with CONSULT-III or oscilloscope.



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

YES >> Replace suspect tweeter. Refer to AV-207, "Removal and Installation".

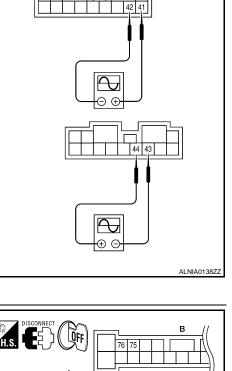
# 3. HARNESS CHECK

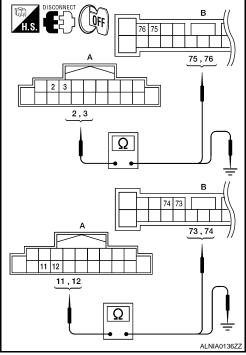
- 1. Disconnect audio unit connector M43 and BOSE speaker amp. connector B121.
- 2. Check continuity between audio unit harness connector M43 (A) and BOSE speaker amp. harness connector B121 (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2		75	
M43	3	B121	76	Yes
	11		73	Tes
	12		74	

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

	А			Continuity
	Connector	Terminal		Continuity
-		2	Ground	No
	M43	3		
	10143	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

# [BOSE AUDIO WITHOUT NAVIGATION]

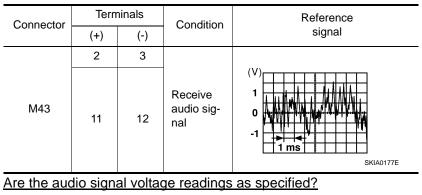
**£**,

ACC.

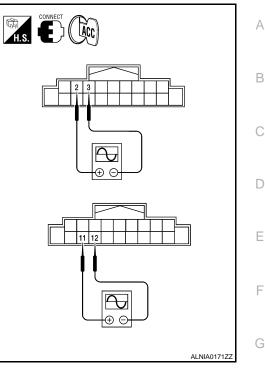
# **TWEETER (SEDAN)**

#### < COMPONENT DIAGNOSIS >

- [BOSE AUDIO WITHOUT NAVIGATION]
- 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 M43 terminals with CONSULT-III or oscilloscope.



- YES >> Replace BOSE speaker amp. Refer to <u>AV-205.</u> <u>"Removal and Installation - Coupe"</u>.
- NO >> Replace audio unit. Refer to <u>AV-204</u>, "<u>Removal and</u> <u>Installation</u>".



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## < COMPONENT DIAGNOSIS >

# CENTER SPEAKER

## Description

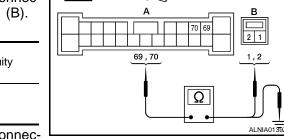
The audio unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the center speaker using the audio signal circuits.

# Diagnosis Procedure

# **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	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B121	69	M151	1	Yes
DIZI	70	INT ST	2	163



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

А			Continuity
Connector	Terminal		Continuity
B121	69	Ground	No
DIZI	70	Ground	INU

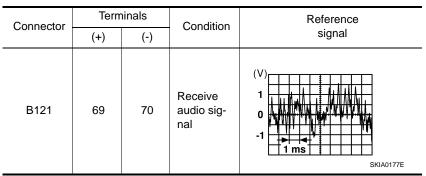
#### Are continuity test results as specified?

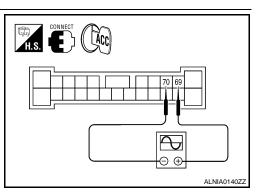
YES >> GO TO 2

- 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.





Is the audio signal voltage reading as specified?

YES >> Replace center speaker. Refer to AV-208. "Removal and Installation".

INEOID:000000001830620

# **CENTER SPEAKER**

#### < COMPONENT DIAGNOSIS >

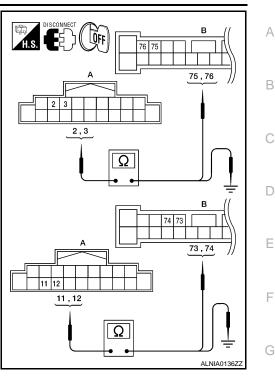
## [BOSE AUDIO WITHOUT NAVIGATION]

- 1. Disconnect audio unit connector M43 and BOSE speaker amp. connector B121.
- Check continuity between audio unit harness connector M43 (A) and BOSE speaker amp. harness connector B121 (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2		75	
M43	3	B121	76	Yes
10143	11		73	165
	12	•	74	

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

	A		Continuity
Connector Terminal			Continuity
	2		
M43	3	Ground	No
10143	11	Cround	110
	12		



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Are continuity test results as specified?

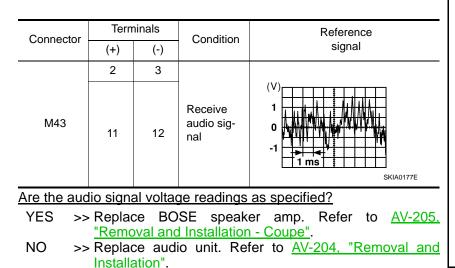
YES >> GO TO 4

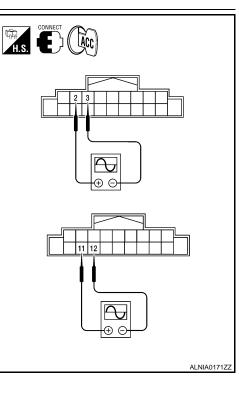
NO

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

## **4.**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 M43 terminals with CONSULT-III or oscilloscope.





#### < COMPONENT DIAGNOSIS >

# REAR TWEETER (COUPE)

## Description

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

# Diagnosis Procedure

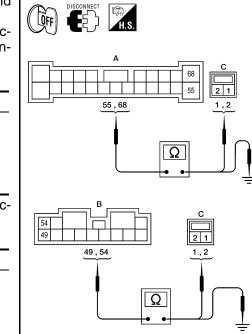
# **1.**HARNESS CHECK

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

Connector	Terminal	Connector	Terminal	Continuity
A: B121	55	C: D202	2	
A. DIZI	68	C. D202	1	Yes
B: B122	49	C: D302	2	165
	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		
A. DIZI	68		No	
B: B122	49	Ground	NO	
D. DIZZ	54			



Are the continuity test results as specified?

YES >> GO TO 2 NO >> • Check of

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

2.REAR DOOR SPEAKER SIGNAL CHECK

INFOID:000000001830621

INEOID:000000001830622

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# **REAR TWEETER (COUPE)**

Reference

signal

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#### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

- 1. Connect BOSE speaker amp. connectors and suspect tweeter connector.
- 2. Turn ignition switch to ACC.

Terminals

(-) 55

49

Are audio signal voltage readings as specified?

and Installation - Coupe".

(+)

68

54

3. Push "POWER" switch.

Connector

A: B121

B: B122

YES

Check the signal between BOSE speaker amp. harness connectors B121 (A) and B122 (B) terminals with CONSULT-III or oscilloscope.

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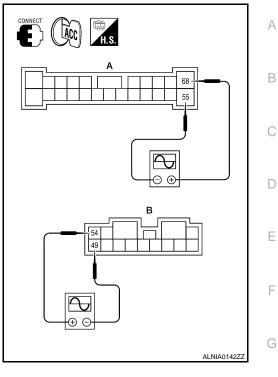
0

>> Replace suspect tweeter. Refer to AV-211, "Removal

Condition

Receive audio sig-

nal



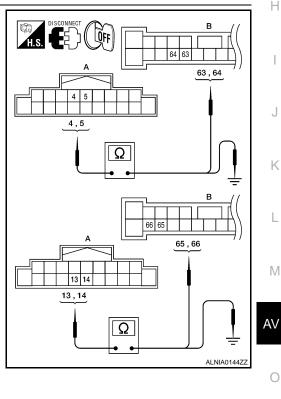
NO >> GO TO 3 3.HARNESS CHECK

- 1. Disconnect audio unit connector M43 and BOSE speaker amp. connector B121.
- Check continuity between audio unit harness connector M43 (A) and BOSE speaker amp. harness connector B121 (B).

·	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	4		64	
M43	5	B121	63	Yes
10143	13		66	res
	14	*	65	

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

	А		Continuity
Connector	Terminal		Continuity
	4		
M43	5	Ground	No
10143	13	Ground	NO
	14		



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Are the continuity test results as specified?

YES >> GO TO 4

NO

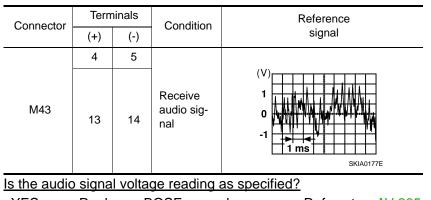
- >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

**4.**REAR DOOR SPEAKER SIGNAL CHECK

# **REAR TWEETER (COUPE)**

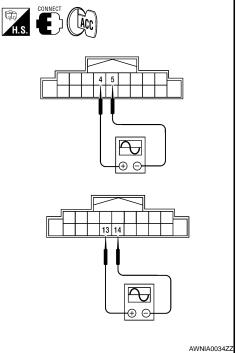
## < COMPONENT DIAGNOSIS >

- Connect audio unit connector M43 and BOSE speaker amp.
- 1. connector B121.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- Check the signal between audio unit harness connector M43 4. terminals with CONSULT-III or oscilloscope.



- YES >> Replace BOSE speaker amp. Refer to AV-205, "Removal and Installation - Coupe".
- NO >> Replace audio unit. Refer to AV-204, "Removal and Installation".

# [BOSE AUDIO WITHOUT NAVIGATION]



# REAR DOOR SPEAKER (SEDAN)

#### < COMPONENT DIAGNOSIS >

# REAR DOOR SPEAKER (SEDAN)

## Description

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

## **Diagnosis Procedure**

# 1.HARNESS CHECK

- 1. Disconnect BOSE speaker amp. connectors B121, B122 and suspect speaker connector.
- 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	
A. DIZI	68		1	Yes
B: B122	49	C. D202	2	ies
	54	C: D302	1	

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

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



YES >> GO TO 2 NO >> • Check of

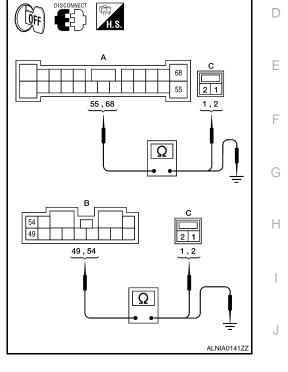
>> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

2.REAR DOOR SPEAKER SIGNAL CHECK

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INFOID-000000003188244

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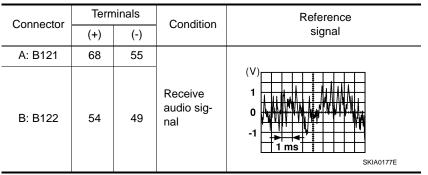
# **REAR DOOR SPEAKER (SEDAN)**

#### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

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- Connect BOSE speaker amp. connectors and suspect speaker 1. 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.



Are audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to AV-210, "Removal and Installation - Sedan". . . .

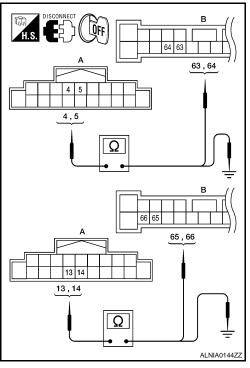
## **3.**HARNESS CHECK

- 1. Disconnect audio unit connector M43 and BOSE speaker amp. connector B121.
- 2. Check continuity between audio unit harness connector M43 (A) and BOSE speaker amp. harness connector B121 (B).

	А		В	
Connector	Terminal	Connector Terminal		Continuity
	4	B121 -	64	
M43	5		63	Yes
10143	13		66	Tes
	14		65	

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

		А		Continuity
	Connector	Terminal		Continuity
-		4		
	M43	5	Ground	No
		13	Ground	INU
		14	1	

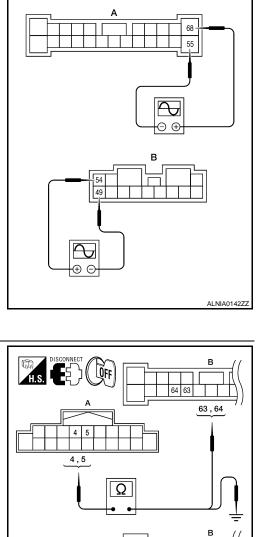


Are the continuity test results as specified?

YES >> GO TO 4 NO

- >> Check connector housings for disconnected or loose terminals.
  - · Repair harness or connector.

**4.**REAR DOOR SPEAKER SIGNAL CHECK

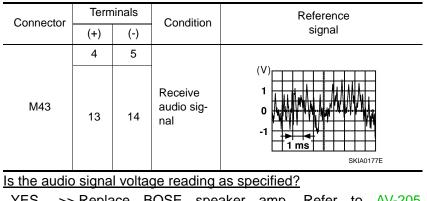


# REAR DOOR SPEAKER (SEDAN)

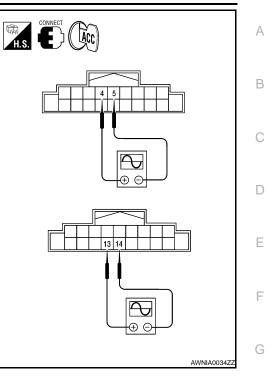
#### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

- 1. Connect audio unit connector M43 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 M43 terminals with CONSULT-III or oscilloscope.



- YES >> Replace BOSE speaker amp. Refer to <u>AV-205.</u> <u>"Removal and Installation - Sedan"</u>.
- NO >> Replace audio unit. Refer to <u>AV-204</u>, "<u>Removal and</u> <u>Installation</u>".



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# < COMPONENT DIAGNOSIS >

# **SUBWOOFER**

## Description

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

## **Diagnosis** Procedure

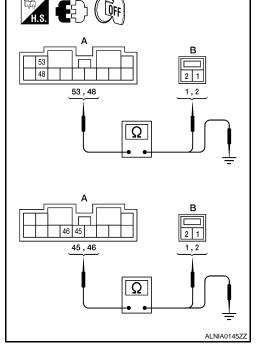
# **1.**HARNESS CHECK

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

A		В		Continuity
Connector	Terminal	Connector Terminal		Continuity
	53	B120	1	
B122	48	D120	2	Yes
DIZZ	45	P104	1	
	46	B124	2	

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

	А		Continuity
Connector	Connector Terminal		Continuity
	53		
B122	48	Ground	No
DIZZ	45	Ground	
	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

INFOID:000000001830623

INEOID:000000001830624

# SUBWOOFER

## < COMPONENT DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

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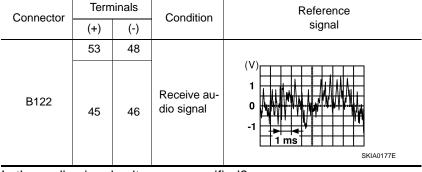
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CONNECT

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(Lacc)

- 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.



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

YES >> Replace suspect rear subwoofer. Refer to <u>AV-213</u>, <u>"Removal and Installation"</u>.

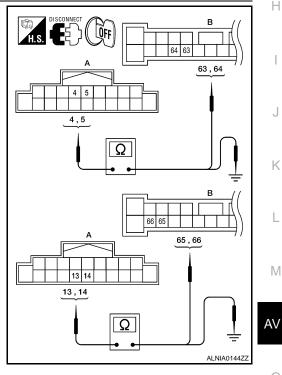
# **3.**HARNESS CHECK

- 1. Disconnect audio unit connector M43 and BOSE speaker amp. connector B121.
- Check continuity between audio unit harness connector M43 (A) and BOSE speaker amp. harness connector B121 (B).

	А		В	
Connector	Terminal	Connector Terminal		Continuity
	4	B121	64	Yes
M43	5		63	
10143	13		66	Tes
	14		65	

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

Α			Continuity
Connector	Terminal		Continuity
	4		
M43	5	Ground	No
10143	13	Ground	INO
	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

A B C D E F G

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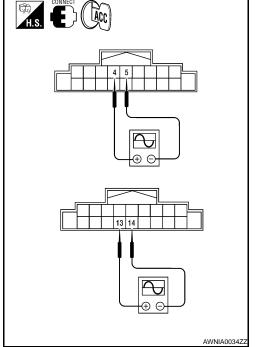
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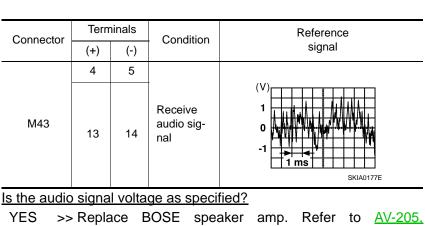
## SUBWOOFER

#### < COMPONENT DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

- 1. Connect audio unit connector M43 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 M43 terminals with CONSULT-III or oscilloscope.





- YES >> Replace BOSE speaker amp. Refer to <u>AV-205.</u> <u>"Removal and Installation - Coupe"</u>.
- NO >> Replace audio unit. Refer to <u>AV-204</u>, "<u>Removal and</u> <u>Installation</u>".

# AMP ON SIGNAL CIRCUIT

# Description

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**

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



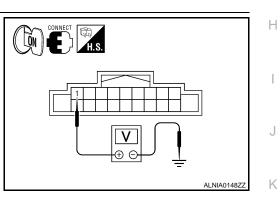
Check voltage between audio unit harness connector M43 terminal 1 and ground.

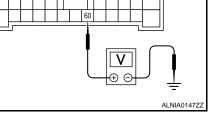
#### 1 - Ground

## : More than approx. 6.5V

Is voltage greater than 6.5V?

- YES >> Repair harness or connector.
- NO >> Replace audio unit. Refer to <u>AV-204, "Removal and</u> <u>Installation"</u>.





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[BOSE AUDIO WITHOUT NAVIGATION]

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# **STEERING SWITCH (COUPE)**

## Description

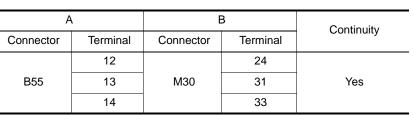
When one of the steering wheel audio control switches is pushed, the resistance in the steering switch circuit changes depending on which button is pushed.

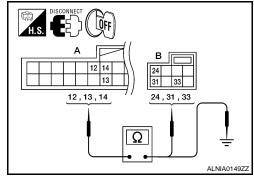
**Diagnosis Procedure** 

## WITH BLUETOOTH

## **1.**CHECK HARNESS

- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit connector B55 and spiral cable connector M30.
- 3. Check continuity between Bluetooth control unit connector B55 (A) terminals and spiral cable connector M30 (B) terminals.





4. Check continuity between Bluetooth control unit B55 (A) and ground.

	А		Continuity
Connector	Terminal	-	Continuity
	12		
B55	13	Ground	No
	14		

Are the continuity test results as specified?

YES >> GO TO 2

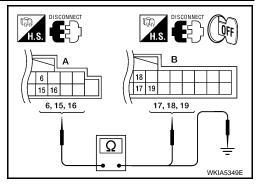
NO >> Repair harness.

2.CHECK HARNESS

1. Disconnect audio unit connector.

 Check continuity between audio unit connector M43 (A) terminals and Bluetooth control unit connector B55 (B) terminals.

A		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	6		17	
M43	15	B55	19	Yes
	16		18	



Are the continuity test results as specified?

YES >> GO TO 3

NO >> Repair harness.

**3.**SPIRAL CABLE CHECK



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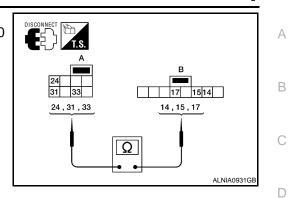
#### STEERING SWITCH (COUPE) [BOSE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

## 1. Disconnect spiral cable connector M88.

 Check continuity between spiral cable harness connector M30 and M88.

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



Are the continuity test results as specified?

YES >	>> GO	TO 4
-------	-------	------

NO >> Replace spiral cable. Refer to <u>SR-6, "Removal and Installation"</u>.

#### **4.**CHECK STEERING SWITCH

Check steering switch. Refer to AV-136, "Component Inspection".

Does the steering switch pass inspection?

- YES >> Replace Bluetooth control unit. Refer to <u>AV-227</u>, "Removal and Installation Coupe"
- NO >> Replace steering switch. Refer to <u>AV-216, "Removal and Installation"</u>.

## WITHOUT BLUETOOTH

## **1.**CHECK STEERING SWITCH

Check steering switch. Refer to <u>AV-136, "Component Inspection"</u>.

Does the steering switch pass inspection?

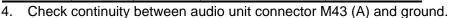
YES >> GO TO 2

NO >> Replace steering switch. Refer to <u>AV-216, "Removal and Installation"</u>.

2. CHECK HARNESS

- Disconnect audio unit connector M43 and spiral cable connector M30.
- Check continuity between spiral cable harness connector M30 (B) and audio unit harness connector M43 (A).

	B	3	A		Continuity
	Connector	Terminal	Connector	Terminal	Continuity
-		24		6	
	M30	31	M43	16	Yes
		33		15	



AV-135

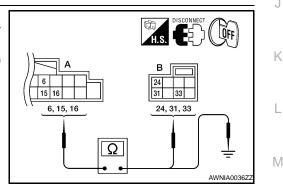
A			Continuity
Connector	Terminal	_	Continuity
	6		
M43	15	Ground	No
	16		

Are the continuity test results as specified?

YES >> GO TO 3

NO >> Repair harness.

**3.**SPIRAL CABLE CHECK



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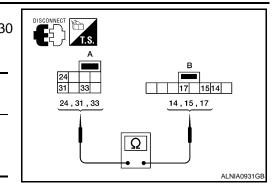
## STEERING SWITCH (COUPE) [BOSE AUDIO WITHOUT NAVIGATION]

## < COMPONENT DIAGNOSIS >

#### 1. Disconnect spiral cable connector M88.

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

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	24		14	
M30	31	M88	15	Yes
	33		17	1



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

YES >> Inspection End.

NO >> Replace spiral cable. Refer to <u>SR-6</u>, "Removal and Installation".

## **Component Inspection**

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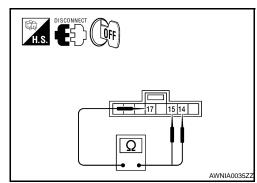
## WITH BLUETOOTH

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

Standard
----------

Between terminals 14 and 17	
switch ON	<b>: 0</b> Ω
SEEK UP switch ON	<b>: 108 – 112</b> Ω
SEEK DOWN switch ON	: <b>323 – 337</b> Ω
Between terminals 15 and 17	
VOL DOWN switch ON	: <b>0</b> Ω

VOL UP switch ON	<b>: 108 – 112</b> Ω
"≨ switch ON	: <b>323 – 337</b> Ω
SOURCE switch ON	: <b>990 – 1030</b> Ω



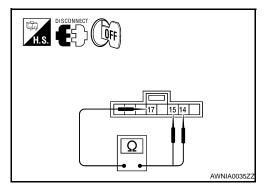
## WITHOUT BLUETOOTH

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

Ω

Standard

Between terminals 14 and 17	
SOURCE switch ON	<b>: 0</b> Ω
SEEK UP switch ON	<b>: 162 – 168</b> Ω
VOLUME UP switch ON	<b>: 639 – 665</b> Ω
Between terminals 15 and 17	
SEEK DOWN switch ON	<b>: 162 – 168</b> Ω
VOL DOWN switch ON	: <b>639 – 665</b> Ω



# STEERING SWITCH (SEDAN)

< COMPONENT DIAGNOSIS >

# Description

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

## **Diagnosis Procedure**

## WITH BLUETOOTH

# 1.CHECK HARNESS

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

	A	A B Cor		В	
	Connector	Terminal	Connector	Terminal	Continuity
-		12		24	
	B126	13	M30	31	Yes
		4.4		22	

 14
 33

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

A		_	Continuity
Connector	Terminal		Continuity
	12		
B126	13	Ground	No
	14	-	

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

YES >> GO TO 2

NO >> Repair harness.

2. CHECK HARNESS

- 1. Disconnect audio unit connector.
- Check continuity between audio unit connector M43 (A) terminals and Bluetooth control unit connector B126 (B) terminals.

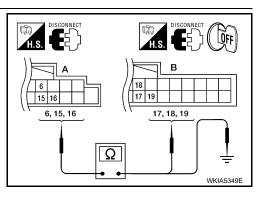
A	١	В		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	6		17		
M43	15	B126	19	Yes	
	16		18		

## Are the continuity test results as specified?

YES >> GO TO 3

NO >> Repair harness.

3.SPIRAL CABLE CHECK



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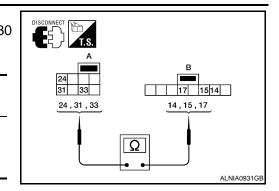
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#### STEERING SWITCH (SEDAN) [BOSE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

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

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



Are the continuity test results as specified?

YES >> GO TO 4

NO >> Replace spiral cable. Refer to <u>SR-6, "Removal and Installation"</u>.

**4.**CHECK STEERING SWITCH

Check steering switch. Refer to AV-139, "Component Inspection".

Does the steering switch pass inspection?

- YES >> Replace Bluetooth control unit. Refer to <u>AV-227, "Removal and Installation Sedan"</u>
- NO >> Replace steering switch. Refer to <u>AV-216, "Removal and Installation"</u>.

## WITHOUT BLUETOOTH

# 1. CHECK STEERING SWITCH

Check steering switch. Refer to AV-139, "Component Inspection".

Does the steering switch pass inspection?

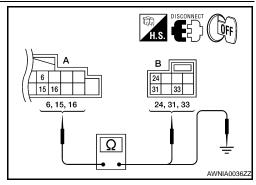
YES >> GO TO 2

NO >> Replace steering switch. Refer to <u>AV-216, "Removal and Installation"</u>.

2. CHECK HARNESS

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

E	3	А		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	24		6	
M30	31	M43	16	Yes
	33		15	



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

	А		Continuity	
Connector	Terminal			
	6		No	
M43	15	Ground		
	16			

Are the continuity test results as specified?

YES	>> GO TO 3	
1 2 0	// 00 10 0	

NO >> Repair harness.

3. SPIRAL CABLE CHECK

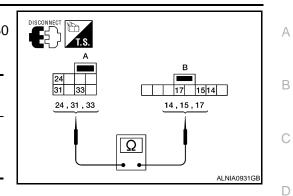
#### STEERING SWITCH (SEDAN) [BOSE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

#### 1. Disconnect spiral cable connector M88.

 Check continuity between spiral cable harness connector M30 and M88.

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



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

YES >> Inspection End.

NO >> Replace spiral cable. Refer to <u>SR-6, "Removal and Installation"</u>.

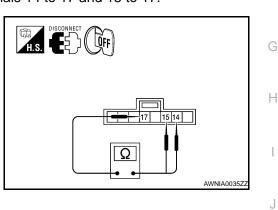
## **Component Inspection**

## WITH BLUETOOTH

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

Standard

Between terminals 14 and 17	
switch ON	: <b>0</b> Ω
SEEK UP switch ON	: <b>108 – 112</b> Ω
SEEK DOWN switch ON	<b>: 323 – 337</b> Ω
Between terminals 15 and 17	
VOL DOWN switch ON	: <b>0</b> Ω
VOL UP switch ON	: <b>108 – 112</b> Ω
"⊱ switch ON	: <b>323 – 337</b> Ω



## WITHOUT BLUETOOTH

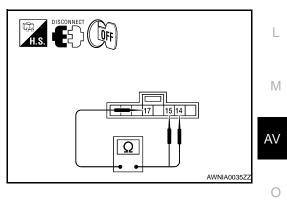
**SOURCE switch ON** 

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

: **990 – 1030** Ω

Standard

Between terminals 14 and 17	
SOURCE switch ON	<b>: 0</b> Ω
SEEK UP switch ON	: <b>162 – 168</b> Ω
VOLUME UP switch ON	: <b>639 – 665</b> Ω
Between terminals 15 and 17	
SEEK DOWN switch ON	: <b>162 – 168</b> Ω
VOL DOWN switch ON	: <b>639 – 665</b> Ω



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## **COMMUNICATION SIGNAL CIRCUIT (COUPE)**

< COMPONENT DIAGNOSIS >

# COMMUNICATION SIGNAL CIRCUIT (COUPE) SATELLITE RADIO TUNER

## SATELLITE RADIO TUNER : Description

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

# SATELLITE RADIO TUNER : Diagnosis Procedure

# 1.CHECK HARNESS - 1

#### 1. Turn ignition switch OFF.

- 2. Disconnect satellite radio tuner (factory installed) connector B57 and audio unit connector M45.
- Check continuity between satellite radio tuner (factory installed) 3. harness connector B57 (A) terminal 28 and audio unit harness connector M45 (B) terminal 38.

#### Continuity should exist.

Check continuity between satellite radio tuner (factory installed) 4. harness connector B57 (A) terminal 28 and ground.

## Continuity should not exist.

Are continuity results as specified?

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

## 2. CHECK HARNESS - 2

1. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 29 and audio unit harness connector M45 (B) terminal 39.

#### Continuity should exist.

2. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 29 and ground.

#### Continuity should not exist.

Are continuity results as specified?

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

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3.CHECK HARNESS - 3
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1. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 30 and audio unit harness connector M45 (B) terminal 40.

#### Continuity should exist.

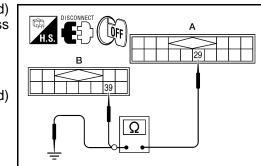
2. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 30 and ground.

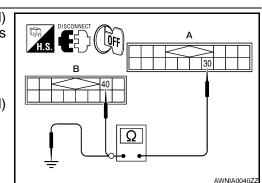
#### Continuity should not exist.

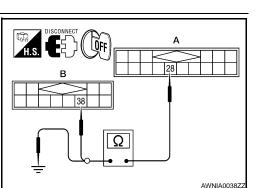
Are continuity results as specified?

- YES >> GO TO 4
- NO >> Repair harness or connector.

4.CHECK REQ1 SIGNAL







AV-140

[BOSE AUDIO WITHOUT NAVIGATION]

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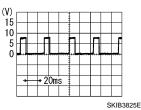
AWNIA003977

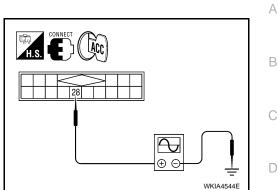
# COMMUNICATION SIGNAL CIRCUIT (COUPE)

#### < COMPONENT DIAGNOSIS >

- 1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
- 2. Turn ignition switch to ACC
- Check signal between satellite radio tuner (factory installed) harness connector B57 terminal 28 and ground with CONSULT-III or oscilloscope.

#### 28 - Ground





Are voltage readings as specified?

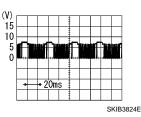
YES >> GO TO 5

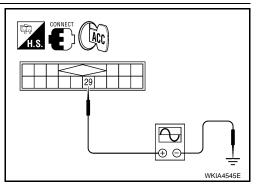
NO >> Replace audio unit. Refer to <u>AV-70, "Removal and Installation"</u>.

5. CHECK TXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector B57 terminal 29 and ground with CONSULT-III or oscillo-scope.

#### 29 - Ground





Are the voltage readings as specified?

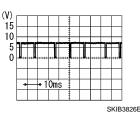
YES >> GO TO 6

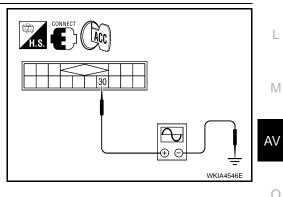
NO >> Replace satellite radio tuner.

**6.**CHECK RXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector B57 terminal 30 and ground with CONSULT-III or oscillo-scope.

#### 30 - Ground





Are the voltage readings as specified?

YES >> Replace satellite radio tuner.

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

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[BOSE AUDIO WITHOUT NAVIGATION]

# **COMMUNICATION SIGNAL CIRCUIT (SEDAN)**

< COMPONENT DIAGNOSIS >

# COMMUNICATION SIGNAL CIRCUIT (SEDAN) SATELLITE RADIO TUNER

## SATELLITE RADIO TUNER : Description

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

# SATELLITE RADIO TUNER : Diagnosis Procedure

# 1.CHECK HARNESS - 1

- 1. Turn ignition switch OFF.
- Disconnect satellite radio tuner (factory installed) connector 2. B123 and audio unit connector M45.
- Check continuity between satellite radio tuner (factory installed) 3. harness connector B123 (A) terminal 28 and audio unit harness connector M45 (B) terminal 38.

## Continuity should exist.

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

## Continuity should not exist.

Are continuity results as specified?

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

## 2. CHECK HARNESS - 2

1. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 29 and audio unit harness connector M45 (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
- 1. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 30 and audio unit harness connector M45 (B) terminal 40.

#### Continuity should exist.

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

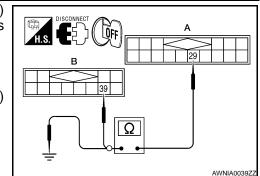
#### Continuity should not exist.

Are continuity results as specified?

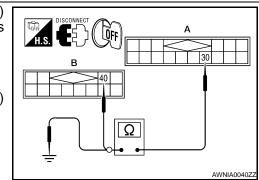
- YES >> GO TO 4
- NO >> Repair harness or connector.

4.CHECK REQ1 SIGNAL





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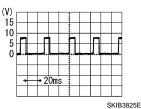


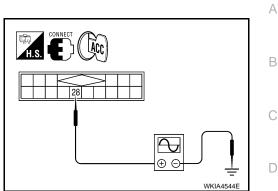
# COMMUNICATION SIGNAL CIRCUIT (SEDAN)

#### < COMPONENT DIAGNOSIS >

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

#### 28 - Ground





Are voltage readings as specified?

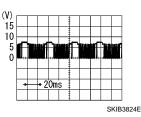
YES >> GO TO 5

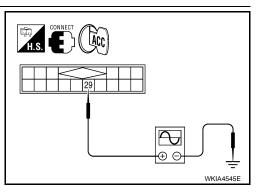
NO >> Replace audio unit. Refer to <u>AV-70, "Removal and Installation"</u>.

**5.**CHECK TXD SIGNAL

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

#### 29 - Ground





Are the voltage readings as specified?

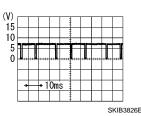
YES >> GO TO 6

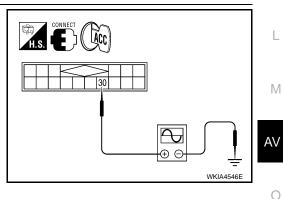
NO >> Replace satellite radio tuner.



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

#### 30 - Ground





Are the voltage readings as specified?

YES >> Replace satellite radio tuner.

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

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[BOSE AUDIO WITHOUT NAVIGATION]

# SOUND SIGNAL CIRCUIT (COUPE)

## < COMPONENT DIAGNOSIS >

# SOUND SIGNAL CIRCUIT (COUPE) SATELLITE RADIO TUNER

## SATELLITE RADIO TUNER : Description

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

## LEFT CHANNEL

# 1.CHECK HARNESS

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector B57 and audio unit connector M45.
- 3. Check continuity between satellite radio tuner (factory installed) connector B57 (A) and audio unit connector M45 (B).

A	N	В		Continuity
Connector	Terminal	Connector Terminal		Continuity
B57	21	M45	31	Yes
B37	22	10145	32	165

Check continuity between satellite radio tuner (factory installed) connector B57 (A) and ground.

	А		Continuity
Connector	Terminal		Continuity
B57	21	Ground	No
	22	Oround	NO

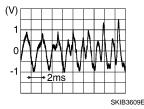
Are continuity results as specified?

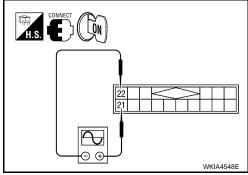
YES >> GO TO 2

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.
- Check signal between satellite radio tuner (factory installed) connector B57 terminals 21 and 22 with CONSULT-III or oscilloscope.





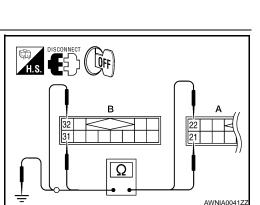
Are voltage readings as specified?

YES >> Replace audio unit. Refer to <u>AV-70, "Removal and Installation"</u>.

NO >> Replace satellite radio tuner. Refer to <u>AV-214</u>, "Removal and Installation - Coupe".

## RIGHT CHANNEL

**1.**CHECK HARNESS



[BOSE AUDIO WITHOUT NAVIGATION]

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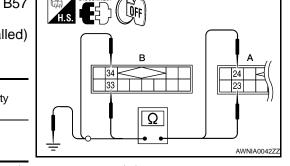
INFOID:000000003188252

## SOUND SIGNAL CIRCUIT (COUPE)

#### < COMPONENT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector B57 and audio unit connector M45.
- 3. Check continuity between satellite radio tuner (factory installed) connector B57 (A) and audio unit connector M45 (B).

	A	l l	E	3	Continuity
-	Connector	Terminal	Connector	Terminal	Continuity
-	B57	23	M45	33	Yes
	D37	24	10145	34	165



4. Check continuity between satellite radio tuner (factory installed) connector B57 (A) and ground.

	А		Continuity
Connector	Terminal		Continuity
B57	23	Ground	No
507	24	Giouna	INO

Are continuity results as specified?

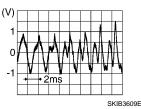
YES >> GO TO 2

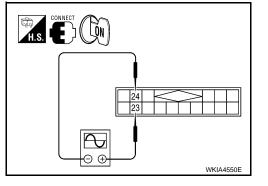
NO >> Repair harness or connector.

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

- 1. Connect satellite radio tuner (factory installed) and audio unit.
- 2. Turn ignition switch ON.
- Check signal between satellite radio tuner (factory installed) connector B57 terminals 23 and 24 with CONSULT-III or oscilloscope.

23 - 24





Are voltage readings as specified?

- YES >> Replace audio unit. Refer to AV-70, "Removal and Installation".
- NO >> Replace satellite radio tuner. Refer to <u>AV-214, "Removal and Installation Coupe"</u>.

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#### SOUND SIGNAL CIRCUIT (SEDAN) [BOSE AUDIO WITHOUT NAVIGATION]

#### < COMPONENT DIAGNOSIS >

## SOUND SIGNAL CIRCUIT (SEDAN) SATELLITE RADIO TUNER

#### SATELLITE RADIO TUNER : Description

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

#### LEFT CHANNEL

#### 1.CHECK HARNESS

- Turn ignition switch OFF. 1.
- Disconnect satellite radio tuner (factory installed) connector 2. B123 and audio unit connector M45.
- 3. Check continuity between satellite radio tuner (factory installed) connector B123 (A) and audio unit connector M45 (B).

A	N .	E	3	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B123	21	M45	31	Yes
6123	22	10145	32	165

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

	А		Continuity
Connector	Terminal		Continuity
B123	21	Ground	No
0123	22	Oround	NO

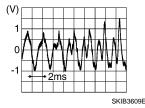
Are continuity results as specified?

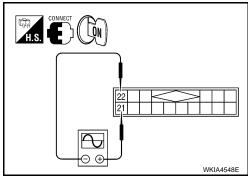
YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK LEFT CHANNEL AUDIO SIGNAL

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





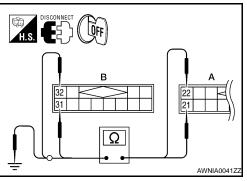
Are voltage readings as specified?

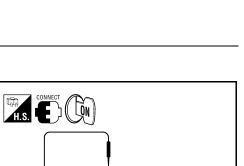
>> Replace audio unit. Refer to AV-70, "Removal and Installation". YES

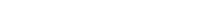
>> Replace satellite radio tuner. Refer to AV-214, "Removal and Installation - Sedan". NO

#### RIGHT CHANNEL

1.CHECK HARNESS







INFOID-000000003222185

INFOID:000000003222187

## SOUND SIGNAL CIRCUIT (SEDAN)

#### < COMPONENT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector B123 and audio unit connector M45.
- 3. Check continuity between satellite radio tuner (factory installed) connector B123 (A) and audio unit connector M45 (B).

-	A	١	E	3	Continuity
_	Connector	Terminal	Connector	Terminal	Continuity
-	B123	23	M45	33	Yes
	D123	24	10140	34	tes

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

	А		Continuity
Connector	Terminal		Continuity
B123	23	Ground	No
D125	24	Giodila	INO

Are continuity results as specified?

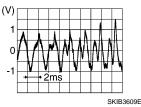
YES >> GO TO 2

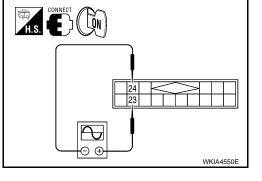
NO >> Repair harness or connector.

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

- 1. Connect satellite radio tuner (factory installed) and audio unit.
- 2. Turn ignition switch ON.
- 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-70, "Removal and Installation".
- NO >> Replace satellite radio tuner. Refer to <u>AV-214, "Removal and Installation Sedan"</u>.

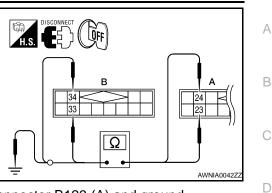
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AV-147

[BOSE AUDIO WITHOUT NAVIGATION]





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#### **MICROPHONE SIGNAL CIRCUIT (COUPE)**

#### < COMPONENT DIAGNOSIS >

## MICROPHONE SIGNAL CIRCUIT (COUPE)

#### Description

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

Continuity

Yes

#### **Diagnosis Procedure**

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

1. Turn ignition switch OFF.

А

Terminal

7

8

29

Connector

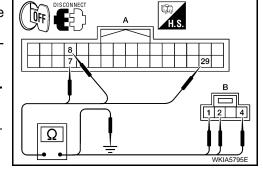
B55

- Disconnect Bluetooth control unit connector and microphone 2. connector.
- 3. Check continuity between Bluetooth control unit harness connector B55 (A) and microphone harness connector R7 (B).

Connector

R7

В



4 4. Check continuity between Bluetooth control unit harness connector B55 (A) and ground.

Terminal

1

2

	A			
Connector	Terminal		Continuity	
	7			
B55	8	Ground	No	
	29			
Are the contin	<u>nuity test results as speci</u>	fied?		
	GO TO 2 Repair harness or connec	tor.		
2.снеск м	ICROPHONE POWER S	SUPPLY		
1. Connect nector.	Bluetooth control unit co	nnector and m	nicrophone con-	CONNECT CONNECT
•	tion switch ON.			
	oltage between micropho and ground.	ne harness co	onnector R7 ter-	
4 - Gr	round	: Approx. 5V		
Is voltage rea	ading approx. 5 volts?			
	GO TO 3			
	Replace Bluetooth cont Removal and Installation		er to <u>AV-227.</u>	- WKIA5796E
3.CHECK M	ICROPHONE SIGNAL			

[BOSE AUDIO WITHOUT NAVIGATION]

INFOID:000000001830634

INFOID:000000001830635

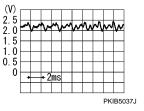
#### MICROPHONE SIGNAL CIRCUIT (COUPE) OSIS > [BOSE AUDIO WITHOUT NAVIGATION]

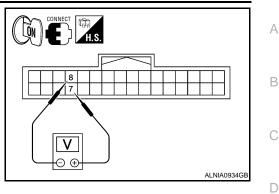
#### < COMPONENT DIAGNOSIS >

Check signal between Bluetooth control unit harness connector B55 terminals 7 and 8.

#### 7 - 8:

#### When giving a voice





Are voltage readings as specified?

- YES >> Replace Bluetooth control unit. Refer to AV-227, "Removal and Installation Coupe".
- NO >> Replace microphone. Refer to <u>AV-224, "Removal and Installation Coupe"</u>.

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#### **MICROPHONE SIGNAL CIRCUIT (SEDAN)**

#### < COMPONENT DIAGNOSIS >

## **MICROPHONE SIGNAL CIRCUIT (SEDAN)**

#### Description

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

Continuity

Yes

#### **Diagnosis Procedure**

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

1. Turn ignition switch OFF.

А

Terminal

7

8

29

Connector

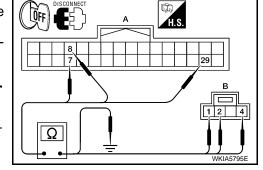
B126

- Disconnect Bluetooth control unit connector and microphone 2. connector.
- 3. Check continuity between Bluetooth control unit harness connector B126 (A) and microphone harness connector R7 (B).

Connector

R7

В



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

Terminal

1

2

4

	А		Quatinuitu		
Connector	Terminal	_	Continuity		
	7				
B126	8	Ground	No		
	29				
Are the contir	nuity test results as specif	ied?			
NO >> R	GO TO 2 Repair harness or connec				
2.снеск м	ICROPHONE POWER S	UPPLY			
nector.	Bluetooth control unit co ion switch ON.	nnector and m	nicrophone con-	CONNECT II.S.	
	oltage between micropho nd ground.	ne harness co	nnector R7 ter-		
4 - Gr	ound	: Approx. 5V			
ls voltage rea	ding approx. 5 volts?				
	SO TO 3				
	Replace Bluetooth cont Removal and Installation		er to <u>AV-227,</u>		WKIA5796E
3. СНЕСК М	ICROPHONE SIGNAL				

[BOSE AUDIO WITHOUT NAVIGATION]

INFOID:000000003222190

INFOID:000000003222191

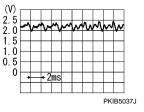
#### MICROPHONE SIGNAL CIRCUIT (SEDAN)

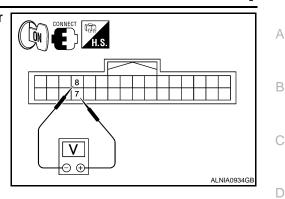
#### < COMPONENT DIAGNOSIS >

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-227, "Removal and Installation Sedan".
- NO >> Replace microphone. Refer to <u>AV-224, "Removal and Installation Sedan"</u>.

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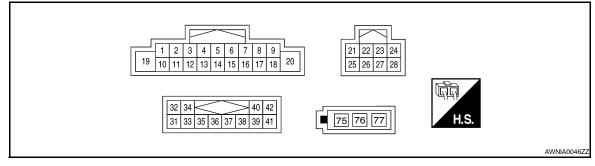
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## ECU DIAGNOSIS AUDIO UNIT (COUPE)

**Reference Value** 

INFOID:000000001830636

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES - WITH BLUETOOTH

Terminal (Wire color)		ltere	Signal in-		Condition	
+	-	- Item	put/out- put	Ignition switch	Operation	Reference value
1 (B/P)	Ground	Amp. ON sig- nal	Output	ON	-	More than approx. 6.5V
2 (G)	3 (R)	Audio sound signal front LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E
4 (GR/V)	5 (W/L)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
					Press SEEK DOWN switch.	0.7 V
6 (W/G)	Ground	Remote con- trol A	Input	ON	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
10	-	Shield	_	-	_	Approx. 0V

## AUDIO UNIT (COUPE)

	minal e color)		Signal in-		Condition	
+	_	- Item	put/out- put	Ignition switch	Operation	Reference value
11 (B)	12 (W)	Audio sound signal front RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E
13 (V)	14 (LG)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 ms 5KIA0177E
15 (L/B)	_	Remote con- trol ground	Input	_	_	- (
	Ground	Remote con-	Input	ON	Press SOURCE switch. Press w≨ switch. Press VOL UP	0 V 0.7 V 1.3 V
(GR/L)	Croana	trol B	mput		switch. Press VOL DOWN switch	2 V
					Except for above.	3.3 V
18 (V/W)	Ground	Vehicle speed signal (8- pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 15 10 5 0 • • • 20ms PKIA1935E
19 (Y/R)	Ground	Battery power	Input	-	_	Battery voltage
20	-	Shield	_	_	_	Approx. 0V
21 (L)	_	M-CAN +	_	_	_	- A
22 (P)	_	M-CAN -	_	-	_	-
23	-	Shield	-	-	_	Approx. 0V
25	-	Tel. Shield	I	_	_	Approx. 0V
26 (B/R)	27 (Y)	Telephone au- dio in	_	-	_	- 1
28 (R/W)	Ground	Telephone ON signal	Input	ON	_	_

## AUDIO UNIT (COUPE)

#### [BOSE AUDIO WITHOUT NAVIGATION]

	minal e color)	ltom	Signal in-		Condition	
+	-	Item	put/out- put	Ignition switch	Operation	Reference value
32 (Y/L)	31 (W/L)	Audio left channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E
34 (BR/L)	33 (Y/G)	Audio right channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 0 -1 5 5 5 5 5 5 5 5 5 5 5 5 5
35	-	Shield ground (audio signal)	_	-	_	0V
36	-	Shield ground (data)	_	_	_	0V
38 (R)	Ground	Satellite radio tuner request to audio unit	Input		Turn audio unit ON	5V
39 (G)	Ground	Audio RX	Input	ON	Operate audio vol- ume	(V) 6 2 0 •••• 5ms SKIA4403E
40 (B)	Ground	Audio TX	Output		Operate audio vol- ume	(V) 6 4 2 0 • • • • 2ms SKIA4402E
75 (B)	Ground	Antenna amp power supply	Output	ON	Turn audio unit ON	Battery voltage
76 (B)	Ground	Main antenna	Input	ON	Turn audio unit ON	_

PHYSICAL VALUES - WITHOUT BLUETOOTH

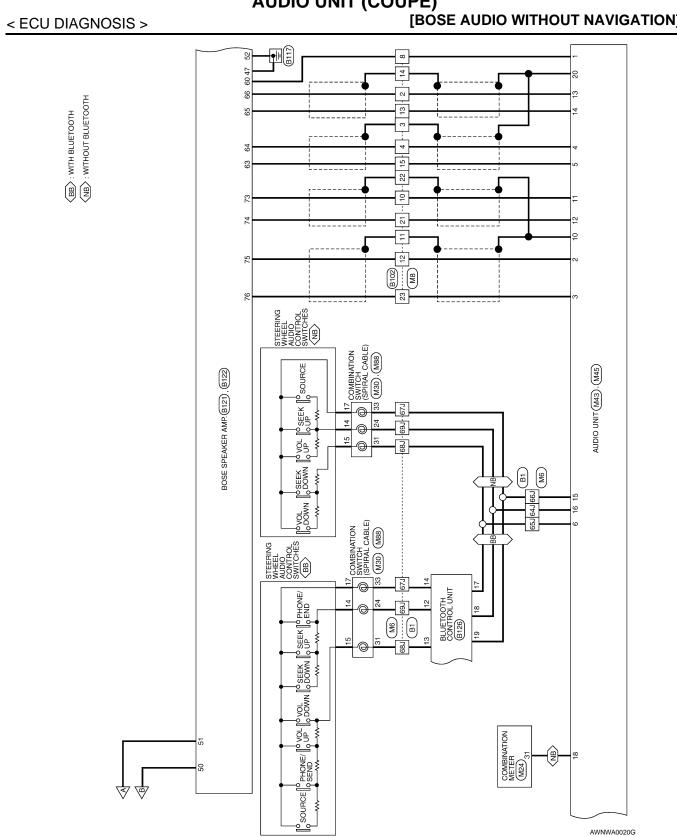
## AUDIO UNIT (COUPE)

Terminal (Wire color)			Signal in-			
+	-	- Item	put/out- put	Ignition switch	Operation	Reference value
1 (B/P)	Ground	Amp. ON sig- nal	Output	ON	-	More than approx. 6.5V
2 (G)	3 (R)	Audio sound signal front LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
4 (GR/V)	5 (W/L)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1
					Press SOURCE switch.	0.0 V
6	Ground	Remote con-	Input	ON	Press SEEK UP switch.	0.75 V
(W/G)		trol A		U.V.	Press VOL UP switch.	2.0 V
					Except for above.	5.0 V
7 (V/Y)	Ground	ACC signal	Input	ON	Ignition switch ACC or ON	Battery voltage
10	-	Shield	-	_	_	Approx. 0V
11 (B)	12 (W)	Audio sound signal front RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
13 (V)	14 (LG)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E
15 (L/B)	_	Remote con- trol ground	Input	_	-	-
					Press SEEK DOWN switch.	0.75 V
16 (GR/L)	Ground	Remote con- trol B	Input	ON	Press VOL DOWN switch.	2.0 V
					Except for above.	5.0 V

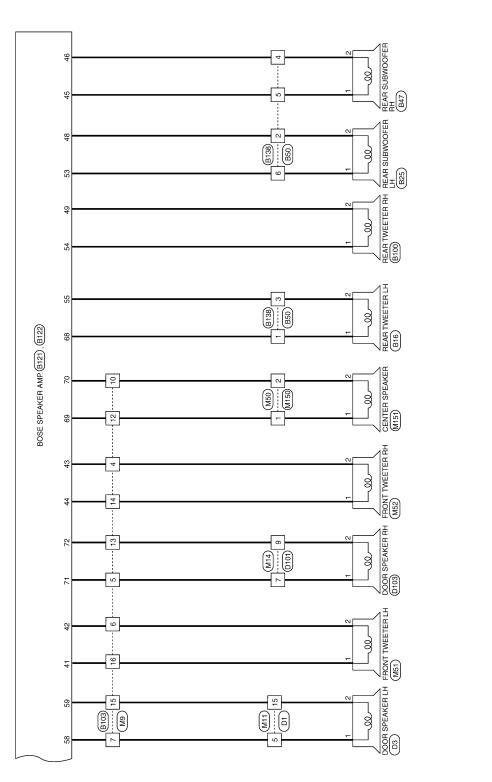
## AUDIO UNIT (COUPE)

Term (Wire		14	Signal in-		Condition	Deference volue
+	_	Item	put/out- put	Ignition switch	Operation	Reference value
18 (V/W)	Ground	Vehicle speed signal (8- pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 15 10 5 0 + 20ms PKIA1935E
19 (Y/R)	Ground	Battery power	Input	_	_	Battery voltage
20	_	Shield	_	_	_	Approx. 0V
32 (Y/L)	31 (W/L)	Audio left channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 0 -1 5 5 5 5 5 5 5 5 5 5 5 5 5
34 (BR/L)	33 (Y/G)	Audio right channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
35	_	Shield ground (audio signal)	_	_	_	OV
36	-	Shield ground (data)	_	_	_	0V
38 (R)	Ground	Satellite radio tuner request to audio unit	Input		Turn audio unit ON	5V
39 (G)	Ground	Audio RX	Input	ON	Operate audio vol- ume	(V) 6 4 2 0 •••• 5ms SKIA4403E
40 (B)	Ground	Audio TX	Output		Operate audio vol- ume	(V) 6 4 2 0 • • • 2ms SKIA4402E
75 (B)	Ground	Antenna amp power supply	Output	ON	Turn audio unit ON	Battery voltage
76 (B)	Ground	Main antenna	Input	ON	Turn audio unit ON	-

#### Wiring Diagram - Coupe INFOID:000000001830637 А $\overline{(BB)}$ : With Bluetooth $\overline{(PU)}$ : With Pre-Wiring For Satellite Radio Tuner or with Satellite Radio Tuner $\overline{(SD)}$ : With Satellite Radio Tuner BLUETOOTH ANTENNA 8 $\overline{\mathbb{A}}$ COMBINATION METER M24 : BB **.** В ç 39J 28 \$ С B103 (M7 (æ) 4 6 6W BS6 4 41J D MICROPHONE R7 : BB 42J-BLUETOOTH CONTROL UNIT (B55), Ē 39 53G 54G E30 Ε 38J F ဖ္ထ BB AUDIO UNIT (M43), (M44), (M45), (M81) G 22 ŝ Н 31J Ηı 20 69 82 6 SATELLITE SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER (B57), (B58): (PU) G 33 J BOSE AUDIO WITHOUT NAVIGATION SYSTEM FUSE BLOCK (J/B) M3 49J Κ 50.1 IGNITION SWITCH IGNITION SWITCH 10A 3 -51J Z <u>19</u> L 54J 52J We We B1 10A (8) æ 2 53J أستناسا السبيا Z Μ ANTENNA AMP (M502) 15A 26 AV N MEOT M87 25 Z5 0 64G E30 15A 24 (8) [] □ BATTERY /A0019G Ρ



## **AUDIO UNIT (COUPE)**



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#### AUDIO UNIT (COUPE) [BOSE AUDIO WITHOUT NAVIGATION]

А

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С

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G

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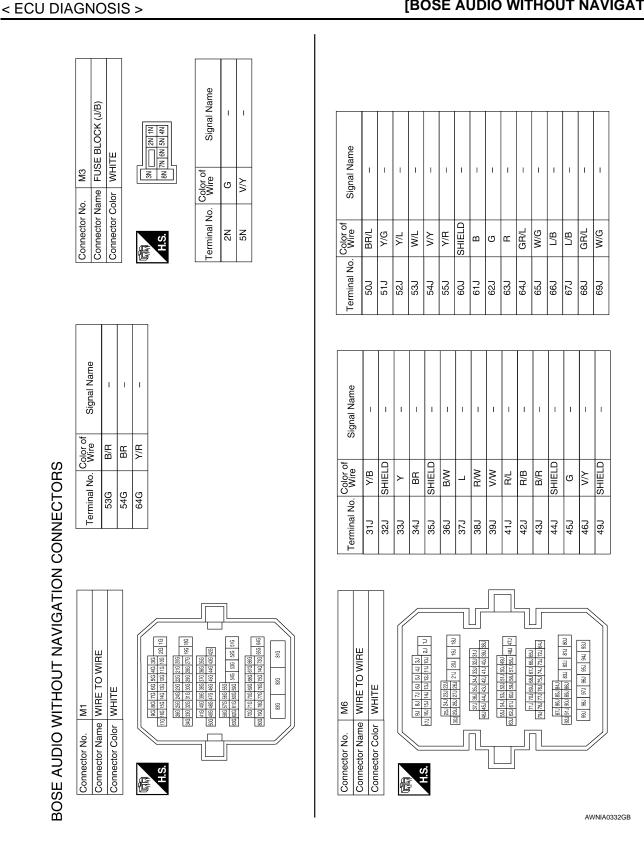
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## **AUDIO UNIT (COUPE)**

AGNOSIS >	[BOSE AUDIO WITHOUT NAVIGATIO	)N]
No. Color of Signal Name G	r No. M11 r Name WIRE TO WIRE r Color WHITE 8 9 10 11 12 13 14 15 16 No. Color of Signal Name W	A B C D
Terminal No. 12 14 15 21 23	Connector No. Connector Name Connector Name Terminal No. 000 15	F
O WIRE Signal Name	Signal Name	G
r No. M8 r Name WIRE TO WIRE r Color WHITE r Color WHITE 12 11 10 9 8 7 6 5 4 24 28 22 21 20 19 18 17 16 B/P B/P SHIELD B/P SHIELD	Color of Wire BR GR/L GIA GR/L G/B B/R G/B B/R B/P D/B B/P L/O L/O L/O L/O L/O L/O L/O L/O L/O M/B B/B B/B B/B B/B B/B B/B B/B B/B B/B	I
Connector No. Connector Name Connector Name Connector Color Terminal No. 2 3 3 3 11 10 11 3 11 11 3 3 3 11 11 3 11 11 3 11 11	Terminal No.       1       4       5       6       6       10       12       13       13       15       16       15       16       16       173       16       16	J
O WIRE         O WIRE           14         15           1         1	0 WIRE 1 0 3 2 1 1 0 3 1 1 1 0 1 1 1 1 0 1 1 1 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	K
Connector No.     M7       Connector Name     WIRE TO WIRE       Connector No.     M7       Connector No.     WIRE TO WIRE       Tornial No.     Color of 11/12/13/14/15/16       Terminal No.     Color of 11/12/14/15/16       Terminal No.     Color of 11/12/14/16       Terminal No.     Color of 11/12/14/16       Terminal No.     Color of 11/12/14/16       Terminal No. <td>Connector No. M9 Connector Name WIRE TO WIRE Connector Color BROWN</td> <td>M</td>	Connector No. M9 Connector Name WIRE TO WIRE Connector Color BROWN	M
		0

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Connector No. M30 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Color GRAY	24 25 28 27 31 32 33 34	ial No. Color of Signal Name	W/G	I GR/L AUDIO_STRG_SW_ REMOTE_B JL/B AUDIO_STRG_SW_GND	Connector No M44	e		_	K	21 22 23 24	25 26 27 28		Color of	al No. Wire Signal Name	1 L M-CAN +	P M-CAN -	3 SHIELD –		5 SHIELD –	3 B/R TEL I/F +	7 Y TEL I/F -	3 R/W TEL ON
Connector No. Connector Nar Connector Col	雨 H.S.	Terminal No.	24	31 33	Connec	Connec	Connec				0			Terminal No.	21	22	23	24	25	26	27	28
M24 COMBINATION METER WHITE	6         7         8         9         10         11         12         13         14         15         16         17         18         19         20           26         27         28         29         30         31         32         33         34         35         37         38         39         40	of Signal Name	8P/R OUT			Signal Name	STRG_SW_A	ACC	1	1	- I	FR SP RH (+)	FR SP RH (-)	RR SP RH (+)	RR SP RH (-)	STRG_SW_GND	- STRG_SW_B		SPEE	BAT		
		Color of Wire	N/N			Wire	W/G	γν	1	I	SHIELD	В	≥	>	P	L/B	GR/L	1	۸/۷	Y/R	SHIELD	
Connector No. Connector Name Connector Color	H.S. H.S. 21 22 23 24 25	Terminal No.	31			Terminal No.	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20	
Connector No. M14 Connector Name WIRE TO WIRE Connector Color WHITE	H.S. (1 2 (1 2 (1 2 (1 2 (1 2 (1 2 (1 2 (1	Terminal No. Color of Signal Name	7 G/W –		Connector No M43	eu		_		1 2 3 4 5 6 7 8 9			Color of	Terminal No. Wire Signal Name	1 B/P AMP_ON	2 G FRSPLH(+)	3 R FR SP LH (-)	4 GR/V RR SP LH (+)	5 W/L RR SP LH (-)			

#### **AUDIO UNIT (COUPE)** [BÓSE AUDIO WITHOUT NAVIGATION]

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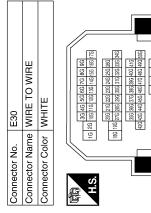
								me								Ð	PLY	ENNA	Ē
M50 WIRE TO WIRE	ш			1 2	]			Signal Name	I	I			UNIT		29	Signal Name	AMP SUPPLY	MAIN ANTENNA -	[
Connector No. M50 Connector Name WIRE					]			Terminal No. Wire	1 B/P	2 O/B	-		Connector No. M81 Connector Name AUDIO UNIT	Connector Color GRAY		Terminal No. Color of	75 B	76 B 77 –	E
Conn	Conn		佢	S H				Termii					Conne	Conne	H.S.	Termi			F
	(-)	(+)	(-)	(+)				(IBMC	(IBI)	SAT)									(
Signal Name	SAT LH INPUT (-)	SAT LH INPUT (+)	SAT RH INPUT (-)	SAT RH INPUT (+)	EARTH	DAT EARTH	I	RFQ1 (SAT TO COMBI)	RX (SAT TO COMBI)	TX (COMBI TO SAT)	I	1	Connector No. M52 Connector Name FRONT TWEETER RH	NN		Signal Name	l	1	I
Color of Wire	M/L	Y/L	Y/G	BR/L	SHIELD	SHIELD	1	æ	U	в	-	1	me FROI	or BROWN		Color of Wire	9	GR/L	
Terminal No.	31	32	33	34	35	36	37	38	66	40	41	42	Connector No. Connector Nan	Connector Color	际间 H.S.	Terminal No.	-	2	,
		7														[			I
NIT			40 42	7 38 39 41									WEETER LH			Signal Name	1	1	l
Connector No. M45 Connector Name ALIDIO LINIT		_	30 34	31 33 35 36 37 38 39 41									Connector No. M51 Connector Name FRONT TWEETER LH	r Color BROWN		No. Color of Wire	ГG	B/Y	r A
Connector No.	Connector Color				0 L								Connector No. Connector Nan	Connector Color	H.S.	Terminal No.	-	N	(

M150 WIRE TO WIRE	Signal Name	M502 ANTENNA AMP GRAY	Signal Name
Connector No. M150 Connector Name WIRE TC Connector Color WHITE	Terminal No. Color of Wire 1 B/P 2 O/B	Connector No. M502 Connector Name ANTEN Connector Color GRAY	Terminal No. Color of Wire 2 B
M88 COMBINATION SWITCH (SPIRAL CABLE) GRAY 19 18 17 16 15 14 13	Signal Name REMOTE A GND GND	1 E TO WRE 17 23	Signal Name
Connector No. M88 Connector Name COMB Connector Color GRAY	Terminal No.Color of Wire14W15L17BR	Connector No. M501 Connector Name WIRE TO WIRE Connector Color GRAY	Terminal No. Color of Wire 1 B B
M87 WIRE TO WIRE GRAY	Signal Name	M151 CENTER SPEAKER BROWN	Signal Name
Connector No. M87 Connector Name WIRE Connector Color GRAY	Terminal No. Color of Wire 2 B B	Connector No. M151 Connector Name CENTEF Connector Color BROWN	Terminal No. Color of Wire 1 B/P 2 O/B

AWNIA0336GB

Signal Name	I	1	I	I	I	I	I	I	I	I	I	I	I	I	1	I
Color of Wire	BR/L	γ/G	٨٦	W/L	γ/٧	Y/R	SHIELD	ш	თ	œ	GR/L	W/G	L/B	L/B	GR/L	W/G
Terminal No.	50J	51J	52J	53J	54J	55J	60J	61J	62J	63J	64J	65J	66J	C73	68J	69
Signal Name	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Color of Wire	Y/B	SHIELD	~	BR	SHIELD	B/W	_	R/W	V/V	R/L	R/B	B/R	SHIELD	σ	٨٨	SHIELD
Terminal No. Color of	31J	32J	33J	34J	35J	36J	37J	38J	39J	41J	42J	43J	44J	45J	46J	49J
Connector No. B1 Connector Name WIRE TO WIRE	Connector Color WHITE				11 22 100 111 122 132 144 155 155 155 155 155	ŝ				47.1 48.1 56.4 15.0 15.1 58.1 56.4 15.0 1 47.1 48.1 56.1 15.1 15.1 59.1 59.1 56.1 66.2 16.2 16.2 1		644/722/754/754/754/754/754/754/754/754/754/754	844) 853 864) 873	80. 81.1 82.1 88.1 88.1 98.1 97.1 92.1	831 941 951 951 951 951 981 991	

Signal Name	I	1	1
Color of Wire	B/R	BR	Y/R
Terminal No.	53G	54G	64G



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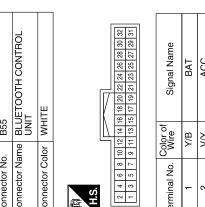
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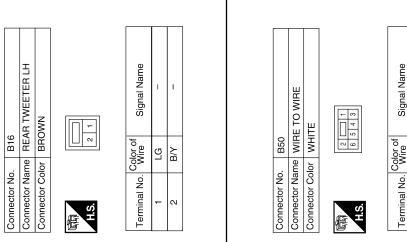
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					I .									
B47 REAR SUBWOOFER RH WHITE		Signal Name	Ι	I		Signal Name	MIC_IN_+	MIC_IN	AUDIO_OUT(+)	AUDIO_OUT(-)	MUTE_CONTROL	LAD_IN1	LAD_IN2	LAD_GND
		Color of Wire	BR/W	BR		Color of	B/B	B/B	BR	≻	G/O	M/G	GR/L	L/B
Connector No. Connector Name Connector Color	田 H.S.	Terminal No.	1	2		Terminal No		80	6	10	11	12	13	14
Connector No. B25 Connector Name REAR SUBWOOFER LH Connector Color WHITE	H.S.	Terminal No. Color of Signal Name	1 W/B -	2 G/B –		Connector No. B55	Connector Name BLUETOOTH CONTROL UNIT	Connector Color WHITE			H.S.		6         8         10         12         14         16         18         20         22         24         26         28         30           - <t< td=""><td></td></t<>	
B16 REAR TWEETER LH BROWN		Signal Name	I	I			WIRE TO WIRE	E		5 4 3			Signal Name	
		Color of Wire	ГG	B/Y		o. B50				0 17			Color of	
inector No. Inector Name Inector Color	vi	minal No.	-	N		inector No.	inector Name				n		minal No	· · · ·

Signal Name	MIC_IN_+	MIC_IN	AUDIO_OUT(+)	AUDIO_OUT(-)	MUTE_CONTROL	LAD_IN1	LAD_IN2	LAD_GND	IND1	LAD_OUT_1	LAD_OUT_2	LAD_GND	CONT5	SPEED SIGNAL	MIC_POWER
Color of Wire	B/R	R/B	ВВ	≻	G/O	W/G	GR/L	L/B	BR/W	W/G	GR/L	L/B	B/W	W/N	R/L
Terminal No.	7	8	6	10	11	12	13	14	15	17	18	19	24	28	29



Signal Name	BAT	ACC	IGN	GND	I
Color of Wire	Y/B	٨/٧	G/W	B/W	SHIELD
Terminal No.	ŀ	2	e	4	9



Signal Name	1	1	I	1	1	I	
Color of Wire	R/G	G/B	BR/B	BR	BR/W	W/B	
Terminal No. Color of	-	5	e	4	5	9	

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# AUDIO UNIT (COUPE)

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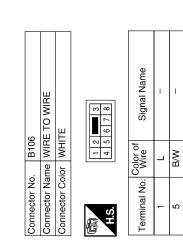
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me	(-) H	(+) F	H (-)	H (+)	SIG)	-	COMBIN										RH				lame			В
Signal Name	SAT_LCH (-)	SAT_LCH (+)	SAT_RCH (-)	SAT_RCH (+)	EARTH (SIG)	DATA	EEO1 (SAT - COMBI)	TXD (SAT COMBIN	BYD (COMBL SAT)		BAT	i I	1	1	ACC		REAR TWEETER RH	NW	~	]	Signal Name	I	1	С
. Color of Wire	M/L	٨/L	Y/G	BR/L	SHIELD	SHIELD	- 2	-	ď	ו ב	Υ/R	1	1	1	GR/W	Vo. B100					Color of Wire	9	GR/L	D
Terminal No.	21	22	23	24	25	26	28	07		31	32	33	34	35	36	Connector No.	Connector Name	Connector Color	品.S.H		Terminal No.	-	2	E
																							1	F
	IO TUNER FOR	IO TUNER			35														NER) NER) DIO)		ame			G
	SATELLITE RADIO TUNER OR PRE-WIRING FOR	ELLITE RAD	Щ		24 26 32 34 36 23 27 28 29 30 31 33 35													ANTENNA	GHAY (WITH SIHIUS SATELLITE TUNER) BROWN (WITH XM SATELLITE RADIO)	(=)	Signal Name	1		Н
		-	Color WHILE	15	21 23 25 27											Vo. B59	a				o. Color of Wire	В		I
Connector No.	Connector Name		Connector Color	Æ		0. 1										Connector No.	Connector Name		Connector Color	国 H.S.	Terminal No.	-		J
		1	]												_				.	٦			1	K
	CONTROL							Signal Name	M-CAN +_1	M-CAN2	SHIELD_1	JUMPER 1	M-CAN+_2	JUMPER 1	M-CAN2				H SIRIUS UNER) H XM		Signal Name	ANTENNA SIGNAL		L
G	BLUETOOTH CONTROL UNIT	WHITE		K	5 37 39 41 5 38 40 42				M-CA		M-CAN_SHIELD	M-CAN_JUMPER	M-C/	M-CAN_JUMPER	M-C/			OR PRE-WIRING FOR SATELLITE RADIO TUI	BROWN (WITH SIRIUS SATELLITE TUNER) VIOLET (WITH XM SATELLITE RADIO)					M
H		-		l	36 35		Color of	lo. Wire		٩	SHIELD	Y/R	Y/R	SB	SB	NO R58					lo. Color of Wire	B	-	AV
Connector No.	Connector Name	Connector Color		佢	H.S.			Terminal No.	35	36	37	39	40	41	42	Connector No	Connector Namo	CONTRECTO	Connector Color	EEEEEEEEEEEEEEEEEEEEEE	Terminal No.	37		0
																						A	WNIA0339GB	
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# AUDIO UNIT (COUPE)

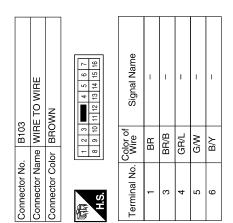
#### [BOSE AUDIO WITHOUT NAVIGATION]

AV-167

Terminal No.		ç	2	4.4	<u>+</u>	15	18	19	21	22	23
		_		_							
Signal Name			I		I	I	I	I	I	1	I
Color of		-	2		011ELU	BR	W/G	B/G	W/L	SHIELD	W/R
Terminal No. Color of	5	c	V	¢	o	4	9	8	10	11	12
Connector No. B102	Connector Name WIRE TO WIRE		Connector Color WHITE					24 23 22 21 20 19 18 17 16 15 14 13			



Signal Name	I	1	1	I	1	1	I	I	I
Color of Wire	×	B/B	O/B	R/G	B/P	BR	Г/О	В	ГG
Terminal No. Color of Wire	7	6	10	11	12	13	14	15	16



AWNIA0340GB

Signal Name

Color of Wire

I.

I.

SHIELD

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SHIELD GR/V

B/B

I.

GR/L Г/B

	Connector Name BOSE SPEAKER AMP	Connector Color BROWN	H.S.	Terminal No. Color of Signal Name	41 LG FR TWDR LH + O	42   B/Y   FR TWDR LH - O	
,	0	0		<u> </u>			
_	BOSE SPEAKER AMP	BROWN	75         74         73         72         71         70         69         68           66         65         64         62         61         60         59         58         57         56         55	Signal Name	TWTR RR PSHELF	ги - ООГ	
- - - -	me BOS	lor BRC	76 75 74 73 66 65 64 63	Color of Wire	BR/B		>
	Connector Name	Connector Color	而 H.S.	Terminal No. Color of	55		58

B121

Connector No.

Signal Name	TWTR RR PSHELF LH - OUT	RR DOOR LH + OUT	FR DOOR LH - OUT	AMP ON	RR LH - IN	RR LH + IN	RR RH - IN	RR RH + IN	TWTR RR PSHELF LH + OUT	INST CTR TWDR + OUT	INST CTR TWDR - OUT	FR DOOR RH + OUT	FR DOOR RH - OUT	FR RH + IN	FR RH - IN	FR LH + IN	FR LH - IN
Color of Wire	BR/B	M	В	B/G	Y	BR	>	ГG	R/G	B/P	O/B	G/W	BR	W/L	GR/V	W/R	B/R
Terminal No.	55	58	59	60	63	64	65	66	68	69	20	11	72	73	74	75	76



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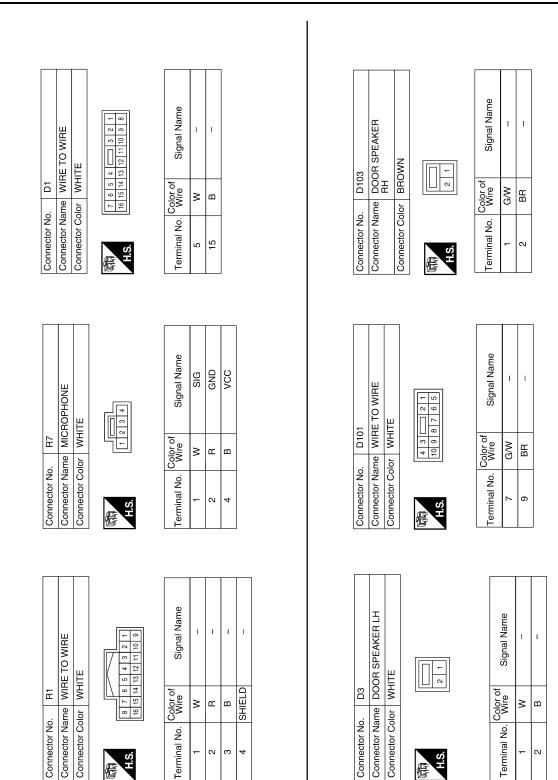
# Connector No. B122

Signal Name	FR TWDR LH + OUT	FR TWDR LH - OUT	FR TWDR RH - OUT	FR TWDR RH + OUT	RH WOOFER + OUT	RH WOOFER - OUT	GND	LH WOOFER - OUT	TWTR RR PSHELF RH - OUT	BAT	BAT	GND	LH WOOFER + OUT	TWTR RR PSHELF RH + OUT
Color of Wire	ŋ	B/Υ	GR/L	Ŋ	BR/W	ВВ	B/W	G/B	B/W	BR	B/R	B/W	W/B	L
Terminal No.	41	42	43	44	45	46	47	48	49	50	51	25	53	54

B138	WIRE TO WIRE	WHITE	2 6 5 4 3 1
Connector No.	Connector Name	Connector Color	国 H.S.

		_			_	
Signal Name	-	I	—	I	H	ļ
Color of Wire	R/G	G/B	BR/B	ВВ	BR/W	W/B
Terminal No.	Ļ	2	в	4	5	9

Signal Name	I	1	1	I	I	I	
Color of Wire	R/G	G/B	BR/B	ВВ	BR/W	W/B	
							1



AWNIA0342GB

## AUDIO UNIT (SEDAN)

#### **Reference Value**

INFOID:000000003222255

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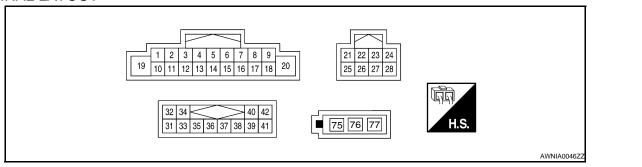
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#### TERMINAL LAYOUT



#### PHYSICAL VALUES - WITH BLUETOOTH

Terminal (Wire color)		ltere	Signal in- put/out-		Condition	Defense unku
+	_	- Item	put/out- put	Ignition switch	Operation	Reference value
1 (B/P)	Ground	Amp. ON sig- nal	Output	ON	_	More than approx. 6.5V
2 (G)	3 (R)	Audio sound signal front LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1
4 (GR/V)	5 (W/L)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 ms 5 KIA0177E
					Press SEEK DOWN switch.	0.7 V
6 (W/G)	Ground	Remote con- trol A	Input	ON	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
10	-	Shield	_	-	_	Approx. 0V

## AUDIO UNIT (SEDAN)

	minal e color)		Signal in-		Condition	
+	-	Item	put/out- put	Ignition switch	Operation	Reference value
11 (B)	12 (W)	Audio sound signal front RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 5KIA0177E
13 (V)	14 (LG)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1
15 (L/B)	-	Remote con- trol ground	Input	_	_	-
					Press SOURCE switch.	0 V
					Press 💉 switch.	0.7 V
16 (GR/L)	Ground	Remote con- trol B	Input	ON	Press VOL UP switch.	1.3 V
					Press VOL DOWN switch	2 V
					Except for above.	3.3 V
18 (V/W)	Ground	Vehicle speed signal (8- pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 15 10 5 0 • • • 20ms PKIA1935E
19 (Y/R)	Ground	Battery power	Input	-	_	Battery voltage
20	-	Shield	_	_	_	Approx. 0V
21 (L)	-	M-CAN +	_	_	_	-
22 (P)	-	M-CAN -	_	_	-	-
23	-	Shield	_	_	_	Approx. 0V
25	_	Tel. Shield	_	_	_	Approx. 0V
26 (B/R)	27 (Y)	Telephone au- dio in	_	_	_	-
28 (R/W)	Ground	Telephone ON signal	Input	ON	_	_

## AUDIO UNIT (SEDAN)

#### [BÓSE AUDIO WITHOUT NAVIGATION]

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	ninal color)	Item	Signal in- put/out-		Condition	Reference value	
+	_	nem	putout-	Ignition switch	Operation	Reference value	
32 (Y/L)	31 (W/L)	Audio left channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 1 1 1 1 1 1 1 1 1 1 1 1	B C D
34 (BR/L)	33 (Y/G)	Audio right channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1	E
35	_	Shield ground (audio signal)	_	_	_	0V	G
36	_	Shield ground (data)	_	_	-	0V	
38 (R)	Ground	Satellite radio tuner request to audio unit	Input		Turn audio unit ON	5V	Н
39 (G)	Ground	Audio RX	Input	ON	Operate audio vol- ume	(V) 6 4 2 0 • • • 5ms SKIA4403E	J
40 (B)	Ground	Audio TX	Output	1	Operate audio vol- ume	(V) 6 2 0 • • • 2ms SKIA4402E	L
75 (B)	Ground	Antenna amp power supply	Output	ON	Turn audio unit ON	Battery voltage	AV
76 (B)	Ground	Main antenna	Input	ON	Turn audio unit ON	_	0

PHYSICAL VALUES - WITHOUT BLUETOOTH

AV-173

## AUDIO UNIT (SEDAN)

#### [BÓSE AUDIO WITHOUT NAVIGATION]

	minal e color)		Signal in- put/out-		Condition				
+	_	- Item	put/out- put	Ignition switch	Operation	Reference value			
1 (B/P)	Ground	Amp. ON sig- nal	Output	ON	-	More than approx. 6.5V			
2 (G)	3 (R)	Audio sound signal front LH	Output	ON	Receive audio sig- nal	(V) 1 -1 -1 -1 -1 -1 -1 -1 -1 -1			
4 (GR/V)	5 (W/L)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1			
					Press SOURCE switch.	0.0 V			
6	Ground	Remote con-	Input	ON	Press SEEK UP switch.	0.75 V			
(W/G)				-	trol A	Input	-	Press VOL UP switch.	2.0 V
					Except for above.	5.0 V			
7 (V/Y)	Ground	ACC signal	Input	ON	Ignition switch ACC or ON	Battery voltage			
10	-	Shield	-	_	_	Approx. 0V			
11 (B)	12 (W)	Audio sound signal front RH	Output	ON	Receive audio sig- nal	(V) 1 -1 1 1 1 1 1 1 1 1 1 1 1 1 1			
13 (V)	14 (LG)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 <u>1 ms</u> 5KIA0177E			
15 (L/B)	_	Remote con- trol ground	Input	_	_	_			
					Press SEEK DOWN switch.	0.75 V			
16 (GR/L)	Ground	Remote con- trol B	Input	ON	Press VOL DOWN switch.	2.0 V			
					Except for above.	5.0 V			

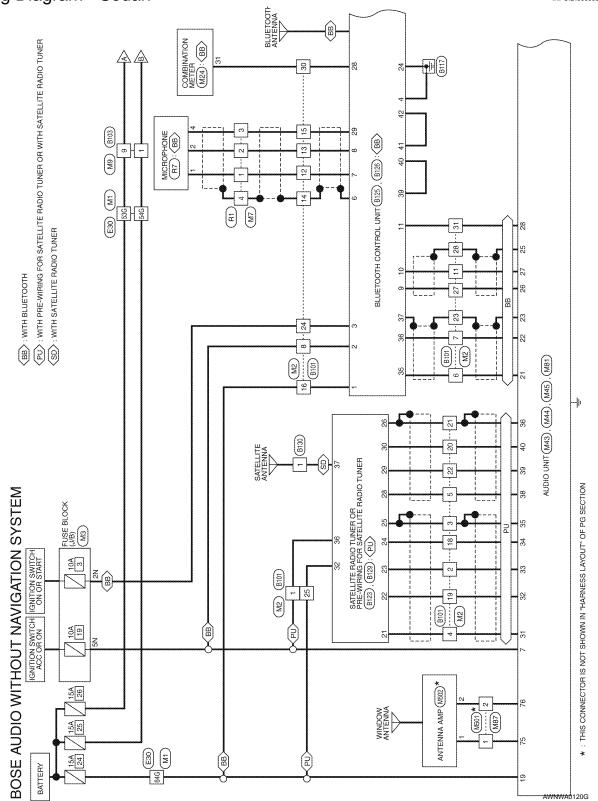
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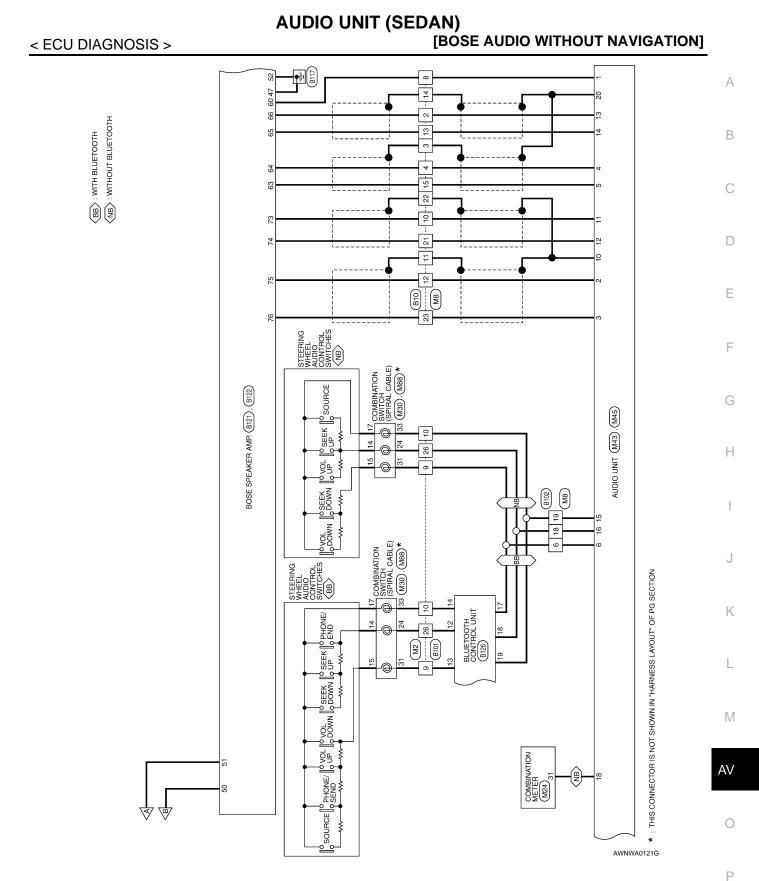
## AUDIO UNIT (SEDAN)

	minal e color)	ltere	Signal in-		Condition	Deference volue	A
+	-	- Item	put/out- put	Ignition switch	Operation	Reference value	
18 (V/W)	Ground	Vehicle speed signal (8- pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 15 10 5 0 ★ ★ 20ms PKIA1935E	B C D
19 (Y/R)	Ground	Battery power	Input	_	_	Battery voltage	
20	_	Shield	_	_	_	Approx. 0V	E
32 (Y/L)	31 (W/L)	Audio left channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 -1 -1 -1 -1 -1 -1 -1 -1 -1	F
34 (BR/L)	33 (Y/G)	Audio right channel sound signal from satellite radio tuner	Input	ON	Receive audio sig- nal	(V) 1 0 -1 1 ms 5KIA0177E	H I J
35	_	Shield ground (audio signal)	_	_	_	0V	0
36	-	Shield ground (data)	-	_	_	0V	Κ
38 (R)	Ground	Satellite radio tuner request to audio unit	Input		Turn audio unit ON	5V	L
39 (G)	Ground	Audio RX	Input	ON	Operate audio vol- ume	(V) 6 4 2 0 ★ ★ 5ms SKIA4403E	M
40 (B)	Ground	Audio TX	Output		Operate audio vol- ume	(V) 6 4 2 0 • • 2ms SKIA4402E	O
75 (B)	Ground	Antenna amp power supply	Output	ON	Turn audio unit ON	Battery voltage	
76 (B)	Ground	Main antenna	Input	ON	Turn audio unit ON	-	
				AV/ 17			

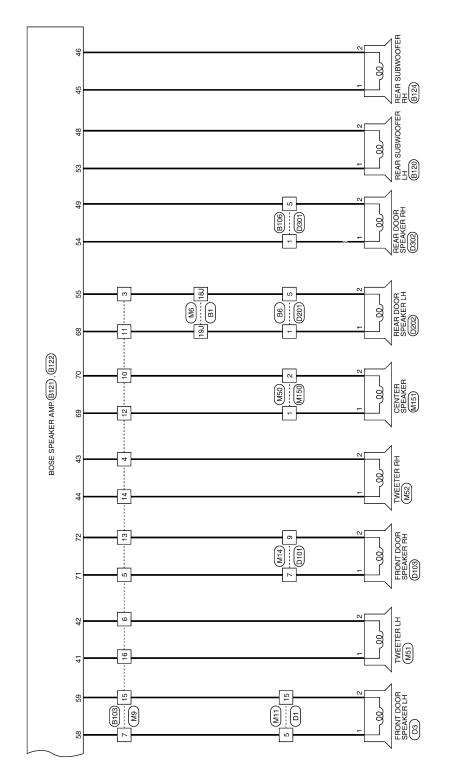
#### Wiring Diagram - Sedan







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Signal Name	1							-										1									
Color of Wire	<u>}</u>	B/R	R/B	SHIELD	R/L	Y/B	BR/L	۲/۲	в	SHIELD	g	SHIELD	σ	Y/R	W/G	BR	SHIELD	N/N	R/W	-							
Terminal No.	11	12	13	14	15	16	18	19	20	21	22	23	24	25	26	27	28	30	31	7							
ON SYSTEM CONNECTORS	Connector Name WIRE TO WIRE						32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17		Terminal No. Color of Signal Name	vire	V/Y	۲/4	SHIELD	>	œ				GR/L	10 L/B -							
BOSE AUDIO WITHOUT NAVIGATION SYSTEM CONNECTORS Connector No. M1 Connector No. M2 Connector No. M3 Connector				909 800 705 860 560 460 360 Professional International 251 16		2001 2002 2002 2002 2002 2002 2002 2002	416 409 883 889 889 889 889 889	500 (466) (466) (466) (466) (466) (469) (4	2001 501 0 304 200 200 200 200 200 200 200 200 200 2	226/1/16/202/600/600/600/600/	846 1795 1706 1706 1705 1705 1705 1705 1705 1705	512 502 512			Terminal No. Color of Signal Name	R3G B/B -			11/1		1 1	Connector Name FUSE BLOCK (J/B) Connector Color WHITF		7N 6N	+	ZN G	 ЭB

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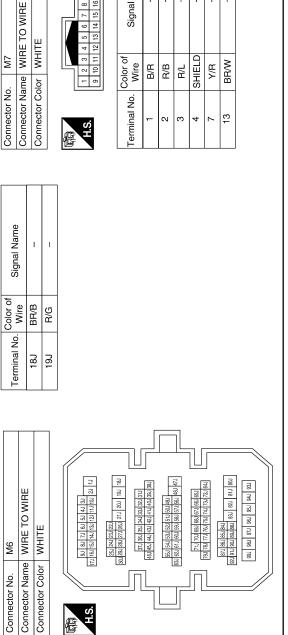
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AV-179



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Signal Name

Color of Wire

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SHIELD

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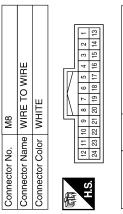
BR/W Y/R

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B/B R/B В/L

Signal Name	I	I	I	I	I	I	I	I	I
Color of Wire	σ	ГG	SHIELD	W/L	GR/L	L/B	Μ	SHIELD	В
Terminal No.	12	13	14	15	18	19	21	22	23



	_			_	_	_	_	
Signal Name	I	I	I	I	I	I	I	
Color of Wire	>	SHIELD	GR/V	W/G	B/P	В	SHIELD	
Terminal No.	2	е	4	9	8	10	11	

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J DIAGNOSI		(SEDAN) [BOSE AUDIO WITHOUT NAVIGATION
Connector No. M11 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No.       Color of Signal Name       Signal Name         5       W       -         15       B       -	Connector No.     M30       Connector Name     COMBINATION SWITCH       Connector Name     COMBINATION SWITCH       Connector Color     GRAY       Image: Spin stress of the stress of
Signal Name -		NATION METER           011112         011112           011112         13           011112         13           8P/R OUT         8
Color of Wire BR	BH/B GR/L G/W B/Y B/P B/P B/P B/P B/P B/P B/P B/P B/P B/P	M24           me         COMBIT           me         COMBIT           1         1           1         1           1         1           1         1           1         1           1         1           1         1           1         1           1         1           1         1           1         1           1         1           1         1           1         1           1         1           1         1         1           1         1         1         1           1         1         1         1         1           1         1         1         1         1         1           1         1         1         1         1         1         1           1         1         1         1         1         1         1           1         1         1         1         1         1         1         1         1         1         1         1 <th1< th=""> <th1< th=""> <th1< th=""> <!--</td--></th1<></th1<></th1<>
No.	4     4     6     5     4       11     12     11     10     9     7     6       15     13     12     11     10     11     15	Connector No. Connector Name Connector Name Connector Name Land 12 23 24 25 28 26 12 23 24 25 28 26 20 20 20 20 20 20 20 20 20 20 20 20 20
	1	
M9 WIRE TO WIRE BROWN	2 1 1 1 1 0 0 2 1 1 1 0 0 2 1 1 1 1 0 0 2 1 1	O WIRE Signal Name
	15     15     16     5     4       15     15     14     13     12     11	M14       me     WIRE T       M14     M14
Connector No. Connector Name Connector Color		mector No mector No 7 7 9
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# AUDIO UNIT (SEDAN) IBOSE AUDIO WITHOUT NAVIGATION]

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	DIO LINIT	TF CIN	1	1	21 22 23 24	25 26 27 28				Signal	M-C	M-O		
. M44	me AUF	Dr. MH	5		21 22	25 26				Wire	_	٩	SHIELD	ı
Connector No.	Connector Name AUDIO UNIT	Connector Color WHITE		肥		0 E				Terminal No.	21	22	23	24
				_										
Signal Name		STRG_SW_A	ACC	I	1	I	FR SP RH (+)			RR SP RH (+)	RR SP RH (-)	STRG_SW_GND	STRG_SW_B	I
Color of	Wire	9/M	۲/۷	1	1	SHIELD	ш	1/1/	^ ^	^	ГG	L/B	GR/L	I
Terminal No Color of		9	7	8	6	10	11	10	2	13	14	15	16	17
			_				•							1
	TINU OIC			$\left[ \right]$	4 5 6 7 8 9	10 11 12 13 14 15 16 17 18 20				Signal Name	AMP_ON	FR SP LH (+)	FR SP LH (-)	RR SP LH (+)
o. M43	or Name AUDIO UNIT	or Color WHITE				19 10 11 12			Color of	Wire	B/P	σ	щ	GR/V
or No.	or N		5			-				No				

Connector Name Connector Color

E

Connector No.

Signal Name

M-CAN -

M-CAN +

TEL I/F -

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> SHIELD B/B

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SPEED SIGNAL

N/V Y/R

BAT T

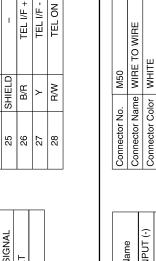
SHIELD

19 18

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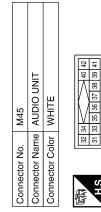
4 5 6 7 8 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 / 0 0 0 0 0	Signal Name	AMP_ON	FR SP LH (+)	FR SP LH (-)	RR SP LH (+)	RR SP LH (-)
1 5 3 1 2 3	2	Color of Wire	B/P	თ	щ	GR/V	M/L
H.S.		Terminal No.	-	5	e	4	5





b. Color of Signal Name	B/P –	O/B –
Terminal No.	ł	2

Signal Name	SAT LH INPUT (-)	SAT LH INPUT (+)	SAT RH INPUT (-)	SAT RH INPUT (+)	EARTH	DAT EARTH	I	RFQ1 (SAT TO COMBI)	RX (SAT TO COMBI)	TX (COMBI TO SAT)	Ι	1
Color of Wire	W/L	۲/۲	Y/G	BR/L	SHIELD	SHIELD	I	щ	J	в	I	I
Terminal No.	31	32	33	34	35	36	37	38	39	40	41	42



H.S.

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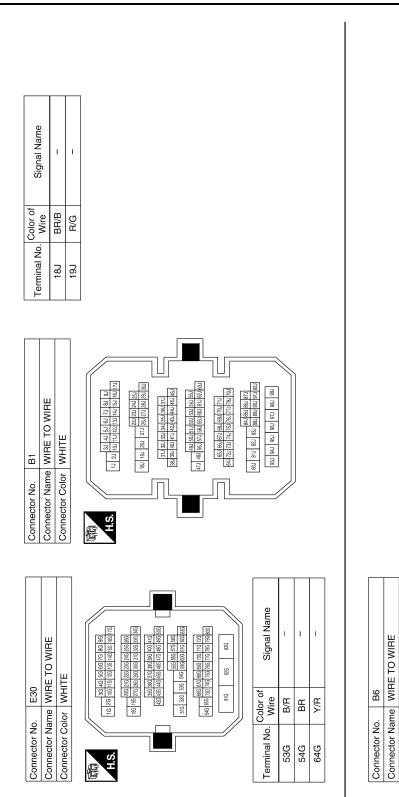
GNOSIS >		[BOSE AUDIO WITHOUT NAVIGAT	
UNIT 희河 Signal Name	AMP SUPPLY MAIN ANTENNA - B50 B1 TE TO WIRE 11 11 2 1	rof Signal Name B – – – – – – – – – – – – – – – – – – –	
Connector No. M81 Connector Name AUDIO UNIT Connector Color GRAY H.S. Terminal No. Color of Sign			
Connector No. Connector Name Connector Color H.S.	75 E 76 E 77 - 77 - 77 Connector No. Connector Name Connector Color	Terminal No. Colo Terminal No. Colo Connector No. Connector No. Connector No. Connector No. Connector No. Connector No. Connector No. Connector No. Colo Connector No. Connector Color	
e			
M52 TWEETER RH BROWN 211 211 Signal Name		Signal Name REMOTE A REMOTE B GND GND CaND 2 3 Signal Name	
		Terminal No. Color of Signal 14 W REM 15 L REM 17 BR GI Connector No. M501 Connector No. Color Co	
Connector No. Connector Name Connector Color H.S.	2 GF Connector No. Connector Name Connector Color	Terminal No. Color 15 15 D 17 E Connector No. Connector Name Connector Name Connector Name Terminal No. Color 1 1 2	
M51 TWEETER LH BROWN	S7 RE TO WIRE AAY	rof Signal Name M151 CENTER SPEAKER BROWN BROWN BROWN BROWN BROWN BROWN	
	B/Y B/Y olor GRAY		
Connector No. Connector Name Connector Color	1     LG       2     B/Y       2     B/Y       Connector No.     M87       Connector Name     WIRE TO WIRE       Connector Color     GRAY	Terminal No. Color 2 1 1 Connector No. Connector Name Connector Color Terminal No. Color 1 B 2 0	
		ALNIA0034GB	

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# AUDIO UNIT (SEDAN)

< ECU DIAGNOSIS >

### [BÓSE AUDIO WITHOUT NAVIGATION]



Connector Color WHITE	olor WH	ITE
国 H.S.	1 2 4 5	5 6 7 8 5 6 7 8 3
Terminal No.	Color of Wire	Signal Name
Ŧ	O/B	I

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W/R

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Signal Name	1	a	1	I	1	I	3	-	I							
Color of Wire	в	SHIELD	R/W	SHIELD	G/W	Υ/R	W/G	BR	SHIELD	W/N	G/O					
Terminal No. Wire	20	21	22	23	24	25	26	27	28	30	31					
		[	[							r			1			
Signal Name	-	1	1	I	ł	1	1	-	I	1	w	1				
Color of Wire	٩	λ/λ	GR/L	L/B	7	B/R	R/B	SHIELD	R/L	Y/B	BR/L	איר				
Terminal No. Wire	7	ω	თ	10	11	12	13	14	15	16	18	19				
B101 WIRF TO WIRF	Connector Color   WHITE			L		16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17	L	Color of	o. Wire Signal Name	GR/W		SHIELD -		R/L –	
Connector No.	Connector C		E			16 15 14 1	32 31 30 2			Terminal No.		2	e	4	5	9

Prminal NO
ŋ
SHIELD
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W/L
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### AUDIO UNIT (SEDAN) [BÓSE AUDIO WITHOUT NAVIGATION]

Name									
Signal Name			1		1			1	
Color of	Wire		≥	!	B/H	ą	D D	R/G	a D
Terminal No Color of		1	/		ი	01	2	11	67
						ſ			
Vo. B103	Vame WIRF TO WIRF		Color BROWN				1	9 10 11 12 13 14 15 16	
No.	Vame	2	Color				ŀ	- 8	

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Connector Name WIRE TO WIRE

Connector No. B106

Connector Color WHITE

8 9 10 11 12 13 14 15 16	Signal Name	-	T	-	I
8 9 10 1	Color of Wire	BR	BR/B	GR/L	G/W
H.S.	Terminal No.	-	с	4	5

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INST CTR TWDR - OUT INST CTR TWDR + OUT FR DOOR RH + OUT **RR DOOR LH + OUT** FR DOOR RH - OUT FR DOOR LH - OUT **RR DOOR LH + OUT RR DOOR LH - OUT** Signal Name RR LH + IN RR RH - IN RR RH + IN FR RH + IN FR LH + IN RR LH - IN FR RH - IN FR LH - IN AMP ON Color of Wire BR/B GR/V B/G R/G B/P O/B G/W W/R B/B ŋ ВВ W/L ВВ ≥ ш ≻ > Ferminal No. 59 59 60 64 65 99 68 69 70 7 72 73 74 75 76 55

L L

W/B

G/B

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AUDIO	UNIT	(SEDAN)	)

# [BÓSE AUDIO WITHOUT NAVIGATION]

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Terminal No		2	6	10	11	12	
	E TO WIRE				12 13 14 15 16		

Connector Name Connector Color

E

Connector No.

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	10	
5 16	11	Œ
]]	12	ш
	13	
	14	_
I	15	
ļ	16	
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Signal Name

Color of Wire

Terminal No.

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B/V

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	-	I	-	-	I
5	B/P	ВВ	Г/О	В	ГG
	12	13	14	15	16

20	REAR SPEAKER SUBWOOFER LH	WHITE		Signal Name
B120				Color of Wire
Connector No.	Connector Name	Connector Color	献 H.S.	Terminal No.

Connector Name	BOSE SPEAKER AMP
Connector Color	BROWN
际间 H.S.	

B121

Connector No.

ſ	B123	16 SATELLITE RADIO TUNER	SATELLITE RADIO TUNER	or WHITE		22 24 26 32 34 36 21 23 25 27 28 29 30 31 33 35	2 2 2 2 2 2										
	Connector No.	Connector Name		Connector Color WHITE			H.S.										
	2	BOSE SPEAKER AMP	BROWN	[	2 51 50	46 45 44 43 42 41	Signal Name	FR TWDR LH + OUT	FR TWDR LH - OUT	FR TWDR RH - OUT	FR TWDR RH + OUT	RH WOOFER + OUT	RH WOOFER - OUT	GND	LH WOOFER - OUT	RR DOOR RH - OUT	BAT
Ī	. B122			L	54 53 52	49 48 47	Color of Wire	ГG	B/Y	GR/L	2	BR/W	BR	B/W	G/B	B/W	BR
	Connector No.	Connector Name	Connector Color	4	E	H.S.	Terminal No.	41	42	43	44	45	46	47	48	49	50

	Connector No
EAKER AMP	Connector Na
	Connector Co
51 50	

•	SAT_LCH (-)	SAT_LCH (+)	SAT_RCH (-)	SAT_RCH (+)	EARTH (SIG)	DATA	I	REQ1 (SAT - COMBI)	TXD (SAT_COMBI)	RXD (COMBI_SAT)	I	BAT	-	-	1
	M/L	7/L	Y/G	BR/L	SHIELD	SHIELD	-	R/L	R/W	В	I	Y/R	I	Ι	I

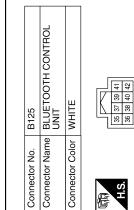
Signal Name	SAT_LCH (-)	SAT_LCH (+)	SAT_RCH (-)	SAT_RCH (+)	EARTH (SIG)	DATA	I	REQ1 (SAT - CON	TXD (SAT_COM	RXD (COMBI_S/	-	BAT	T	-	-	ACC
Color of Wire	M/L	۲/۲	Y/G	BR/L	SHIELD	SHIELD	I	R/L	R/W	В	I	Y/R	I	I	I	GR/W
Terminal No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

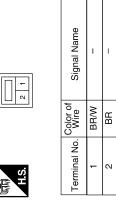
		l
.ol	B123	
ame	SATELLITE RADIO TUNER	
	OR PRE-WIRING FOR SATELLITE RADIO TUNER	
olor	WHITE	_
22 24	26 34 32 34	
21 23	s 25 27 28 29 30 31 33 35	

< ECU DIAGNOSIS >

Connector Color	22 2 22 2	H.S.										
	52 51 51 50 46 45 44 43 42 41	Signal Name	FR TWDR LH + OUT	FR TWDR LH - OUT	FR TWDR RH - OUT	FR TWDR RH + OUT	RH WOOFER + OUT	RH WOOFER - OUT	GND	LH WOOFER - OUT	RR DOOR RH - OUT	BAT
	54 53 5 49 48 47	Color of Wire	ГG	B/Υ	GR/L	Γ/0	BR/W	ВВ	B/W	G/B	B/W	BR

Signal Name	$M-CAN +_{-}1$	M-CAN2	M-CAN_SHIELD_1	M-CAN_JUMPER 1	M-CAN+_2	M-CAN_JUMPER 1	M-CAN2
Color of Wire	_	٩	SHIELD	Y/R	Y/R	SB	SB
Terminal No. Wire	35	36	37	39	40	41	42





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# **AUDIO UNIT (SEDAN)**

# [BÓSE AUDIO WITHOUT NAVIGATION]

LH WOOFER + OUT RR DOOR RH + OUT

W/B B/W

52 53 54

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GND BAT

B/B

51

Connector No. B124 Connector Name REAR SUBWOOFER RH

Connector Color WHITE

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Connector Name BLUETHOOTH CONTROL		Wire	signal Name		ADIO TUNER
UNIT	7	B/R	MIC_IN_+	Connector Name OR PRE-WIRING FOR	ING FOR
Connector Color WHITE	8	R/B	MIC_IN		
	6	ВВ	AUDIO_OUT(+)		
	10	7	AUDIO_OUT(-)		
	11	G/O	MUTE_CONTROL		
	12	W/G	LAD_IN1	H.S.	
10 12 14 16 18 20 22 24 26 28 30	13	GR/L	LAD_IN2	N000000	
7   9   11   13   15   17   19   21   23   25   27   29   31	14	L/B	LAD_GND		
-	17	W/G	LAD_OUT_1	Terminal No. Wire Sign	Signal Name
Terminal No. Color of Signal Name	18	GR/L	LAD_OUT_2		ANTENNA SIGNA
	19	L/B	LAD_GND		
	24	B/W	CONT5		
	28	W/N	SPEED SIGNAL		
	29	R/L	MIC_POWER		
SHIELD					
Connector No. B130	Connector No.	o. D1		Connector No. D3	
Connector Name SATELLITE RADIO	Connector Name	ame WIRI	WIRE TO WIRE		FRONT DOOR SPEAKER LH
Connector Color BROWN	Connector Color	olor WHITE	E	Connector Color WHITE	
	H.S.	7 6 5 4 16 15 14 13	5 4 <u>1</u> 3 2 1 14 13 12 11 10 9 8	H.S.	
Color of		Color of			
Terminal No. Wire Signal Name	Terminal No.		Signal Name		Signal Name
	ى ئ	X	ł	1 W	
	15	ß	1	2	I

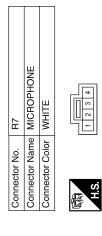
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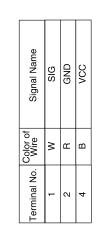
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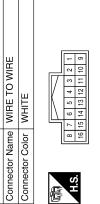
# [BOSE AUDIO WITHOUT NAVIGATION]

<pre>AUDIO U &lt; ECU DIAGNOSIS &gt;</pre>	INIT (SEDAN) [BOSE AUDIO WITHOUT NAVIGA	TION]
		A
a a a a a a a a a a a a a a a a a a a	ame AKER RH	B
D201 WIRE TO WIRE WHITE WHITE Signal Name B B -	D302 BROWN BROWN BROWN BROWN 	D
nector No. nector Name nector Color 1 0. S V(V)	Inector No. Inector Name Inal No. Color 2 B/V	E
		F
P103 FRONT DOOR SPEAKER RH BROWN BROWN BROWN BROWN BROWN BROWN 	D301 WIRE TO WIRE WHITE e e N N -	G
		I
Connector No. Connector Name Connector Color H.S. Terminal No. W	Connector No. Connector Name Connector Name Connector Color Terminal No. S B	J
		K
D101 WIRE TO WIRE WHITE Signal Name	D202 REAR DOOR SPEAKER LH BROWN re e Re Signal Name Re - R -	L
Connector No. D1C Connector Name WIF Connector Name WIF Connector Color WH H.S. Color of Terminal No. Color of 9 BR	ector No. vector Name ector Color W(V)	AV
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Connector No.

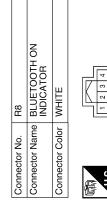
Signal Name	I	I	I	I	I	I	
Color of Wire	M	щ	В	SHIELD	B/Υ	BR	
Terminal No. Color of	Ļ	2	3	4	2	13	

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

-	Signal Name	I	I	
2	Color of Wire		B/W	
H.S.	Terminal No.	-	2	

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Signal Name	Ι	Ι	
Color of Wire	L	B/W	
erminal No.	-	2	



+ 2 4 -	Signal Name	QNI	BAT
-]	Color of Wire	BR	B/Y
H.S.	Terminal No.	F	2

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### **BOSE SPEAKER AMP**

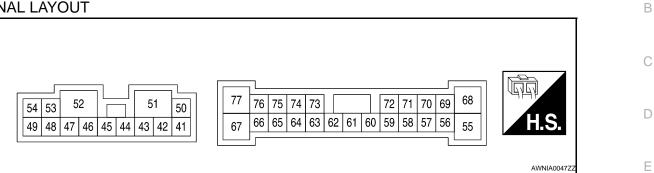
### [BOSE AUDIO WITHOUT NAVIGATION]

### **BOSE SPEAKER AMP**

### **Reference Value**

INFOID:000000001830638





### PHYSICAL VALUES

	ninal color)	lterr	Signal in-		Condition	Reference value	F
+	-	- Item	put/out- put	Ignition switch	Operation		G
41 (LG)	42 (B/Y)	Front tweeter LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E	Η
44 (L/O)	43 (GR/L)	Front tweeter RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	J K
45 (BR/W)	46 (BR)	Subwoofer RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	M
47 (B/W)	Ground	Ground	_	ON	_	-	0
50 (BR) 51 (B/R)	Ground	Battery	Input	_	_	Battery voltage	P
52 (B/W)	Ground	Ground	_	ON	-	_	

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# **BOSE SPEAKER AMP**

### < ECU DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

	minal color)	Item	Signal in- put/out-		Condition	Reference value
+	-	liem	put/out- put	Ignition switch	Operation	Relefence value
53 (W/B)	48 (G/B)	Subwoofer LH	Output	ON	Receive audio sig- nal	(V) 1 1 1 1 1 1 1 1 1 1 1 1 1
54 (L)	49 (B/W)	Rear tweeter RH	Output	ON	Receive audio sig- nal	(V) 1 1 1 1 1 1 1 1 1 1 1 1 1
58 (W)	59 (B)	Door speaker LH	Output	ON	Receive audio sig- nal	(V) 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1
60 (B/G)	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	(V) 1 -1 -1 -1 -1 -1 -1 -1 -1 -1
66 (LG)	65 (V)	Audio sound sig- nal rear RH	Input	ON	Receive audio sig- nal	(V) 1 0 -1 5 5 5 5 5 5 5 5 5 5 5 5 5
68 (R/G)	55 (BR/B)	Rear tweeter LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 5 5 5 5 5 5 5 5 5 5 5 5 5

# **BOSE SPEAKER AMP**

### < ECU DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

	ninal color)	Item	Signal in- put/out-		Condition	Reference value	А
+	_	nem	putout	lgnition switch	Operation		
69 (B/P)	70 (O/B)	Center speaker	Output	ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E	B C D
71 (G/W)	72 (BR)	Door speaker RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 5 5 5 5 5 5 5 5 5 5 5 5 5	E
73 (W/L)	74 (GR/V)	Audio sound sig- nal front RH	Input	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	G
75 (W/R)	76 (B/R)	Audio sound sig- nal front LH	Input	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	J

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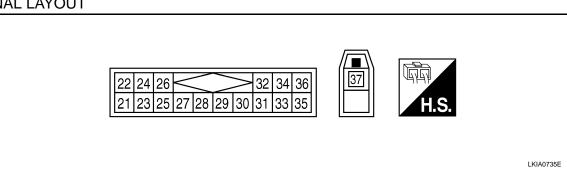
# SATELLITE RADIO TUNER

# SATELLITE RADIO TUNER

### **Reference Value**

**TERMINAL LAYOUT** 

INFOID:000000001830639



### PHYSICAL VALUES

Term (Wire	ninal color)	ltem	Signal input/		Condition	Voltage
+	_	nem	output	Ignition switch	Operation	(approx.)
22 (Y/L)	21 (W/L)	Audio signal LH	Output	ON	Receive audio signal.	(V) 1 0 -1 SKIB3609E
24 (BR/L)	23 (Y/G)	Audio signal RH	Output	ON	Receive audio signal.	(V) 1 0 -1 + 2ms SKIB3609E
25	-	Shield	-	-	_	-
26	-	Data ground	-	ON	_	Approx. 0 V
28 (R/L)	Ground	REQ1 (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	(V) 15 10 5 0 • • • 20ms SKIB3825E
29 (R/W)	Ground	Communication signal (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0

# SATELLITE RADIO TUNER

### < ECU DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

Tern (Wire		ltem	Signal	Condition		Voltage	A
+	_	nem	input/ output	Ignition switch	Operation	(approx.)	
30 (B)	Ground	Communication signal (AUDIO-SAT)	Input	ON	Set to the satellite radio mode	(V) 15 0 5 0 + 10ms SKIB3826E	B
32 (Y/R)	Ground	Battery power supply		OFF		Potton weltogo	_
36 (GR/W)	Ground	ACC power supply	Input	ACC		Battery voltage	E
37	_	Antenna signal	1	-	-	-	_

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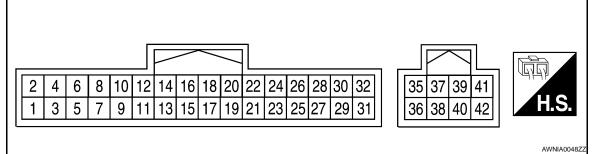
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# **BLUETOOTH CONTROL UNIT**

### **Reference Value**

INFOID:000000001830640

TERMINAL LAYOUT



### PHYSICAL VALUES

	Terminal (Wire color)		Signal input/		Condition	Reference value
+	-	Item	output	Ignition switch	Operation	(Approx.)
1 (Y/B)	Ground	Battery power	Input	_	-	Battery voltage
2 (V/Y)	Ground	ACC power	Input	ACC/ON	-	Battery voltage
3 (G/W)	Ground	IGN power	Input	ON/ START	-	Battery voltage
4 (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	(V) 1 0 -1 + 2ms SKIB3609E
11 (G/O)	-	Mute	Output	_	_	-
					Press SEEK DOWN switch.	0.7 V
12 (W/G)	Ground	Remote con- trol switch 1	Input	ACC/ON	Press SEEK UP switch.	1.3 V
· · ·					Pressing 🗪 switch.	2.0 V
					Except for above.	3.3 V

### < ECU DIAGNOSIS >

# BLUETOOTH CONTROL UNIT

### [BOSE AUDIO WITHOUT NAVIGATION]

	ninal color)	Item	Signal		Condition	Reference value
+	-	. nem	input/ output	Ignition switch	Operation	(Approx.)
					Press SOURCE switch.	0 V
					Press 🏑 switch.	0.7 V
13 (GR/L)	Ground	Remote con- trol switch 2	Input	ACC/ON	Press VOL UP switch.	1.3 V
					Press VOL DOWN switch	2 V
					Except for above.	3.3 V
14 (L/B)	-	Remote con- trol ground	Input	-	-	-
					Press SEEK DOWN switch.	0.7 V
17 (W/G)	Ground	Steering switch	Output	ACC/ON	Press SEEK UP switch.	1.3 V
(, C)					Pressing 🗪 switch.	2.0 V
					Except for above.	3.3 V
					Press SOURCE switch.	0 V
					Press 📢 switch.	0.7 V
18 (GR/L)	Ground	Steering switch 2	Output	ACC/ON	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	_	-	-
24 (B/W)	-	Ground	-	_	_	-
28 (V/W)	_	Vehicle speed signal (8- pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 15 10 5 0 ++20ms PKIA1935E
29 (R/L)	Ground	Microphone power	Output	_	_	_
35 (L)	_	M-CAN (+)	-	_		_
36 (P)	-	M-CAN (-)	-	-	-	
37	-	Shield ground	-	_	-	
39 (Y/R)	-	M-CAN jump- er-1	-	_		
40 (Y/R)	-	M-CAN (+) 2	_	_		_

### < ECU DIAGNOSIS >

# BLUETOOTH CONTROL UNIT

### [BOSE AUDIO WITHOUT NAVIGATION]

	Terminal (Wire color)		Signal input/		Condition	Reference value
+	_	Item	output	Ignition switch	Operation	(Approx.)
41 (SB)	_	M-CAN jump- er-1	_	_		-
42 (SB)	_	M-CAN (-) 2	_	_		-

SYMPTOM DIAGNOSIS

AUDIO SYSTEM (COUPE)

# AUDIO SYSTEM (COUPE)

### [BOSE AUDIO WITHOUT NAVIGATION]

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### Symptom Table

### AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul><li>Audio unit power circuit</li><li>Audio unit</li></ul>	• <u>AV-100</u> • <u>AV-204</u>
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>Audio unit</li></ul>	• <u>AV-134</u> • <u>AV-204</u>
All speakers do not sound	<ul> <li>Audio unit</li> <li>Audio unit power circuit</li> <li>BOSE speaker amp. ON signal</li> <li>BOSE speaker amp. ground circuit</li> <li>BOSE speaker amp.</li> </ul>	AV-204     AV-100     AV-133     AV-100     AV-205
One or several speakers do not sound	<ul> <li>Door speaker</li> <li>Front tweeter</li> <li>Center speaker</li> <li>Rear tweeter</li> <li>Subwoofer</li> </ul>	AV-209     AV-207     AV-208     AV-211     AV-213

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.		<u>AV-204</u>
CD cannot be ejected.	Audio unit	
The CD cannot be played.		
The sound skips, stops suddenly, or is distorted.		

### SATELLITE RADIO

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Symptom	Possible cause Reference page		
Inoperative	<ul> <li>Satellite radio tuner power or ground circuit</li> <li>Satellite radio tuner communication circuit</li> <li>Satellite radio tuner</li> </ul>	<ul> <li><u>AV-106</u></li> <li><u>AV-140</u></li> <li><u>AV-214</u></li> </ul>	L
Right or left channel does not sound	<ul> <li>Satellite radio tuner right channel audio signal circuit</li> <li>Satellite radio tuner left channel audio signal circuit</li> <li>Satellite radio tuner</li> </ul>	<ul> <li><u>AV-144</u></li> <li><u>AV-144</u></li> <li><u>AV-214</u></li> </ul>	M

### HANDS-FREE PHONE

	AV		
Symptom	Possible cause	Reference page	
Inoperative	<ul><li>Bluetooth control unit power and ground circuit</li><li>Bluetooth control unit</li></ul>	• <u>AV-107</u> • <u>AV-227</u>	0
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>Bluetooth control unit</li></ul>	• <u>AV-134</u> • <u>AV-227</u>	_
Voice activated control does not operate	<ul><li>Microphone</li><li>Steering wheel audio control switch</li><li>Bluetooth control unit</li></ul>	<u>AV-148</u> <u>AV-134</u> <u>AV-227</u>	Ρ

# AUDIO SYSTEM (SEDAN)

# Symptom Table

[BOSE AUDIO WITHOUT NAVIGATION]

## AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul><li>Audio unit power circuit</li><li>Audio unit</li></ul>	• <u>AV-105</u> • <u>AV-204</u>
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>Audio unit</li></ul>	<ul> <li><u>AV-137</u></li> <li><u>AV-204</u></li> </ul>
All speakers do not sound	<ul> <li>Audio unit</li> <li>Audio unit power circuit</li> <li>BOSE speaker amp. ON signal</li> <li>BOSE speaker amp. ground circuit</li> <li>BOSE speaker amp.</li> </ul>	<ul> <li>AV-204</li> <li>AV-105</li> <li>AV-133</li> <li>AV-105</li> <li>AV-205</li> </ul>
One or several speakers do not sound	<ul> <li>Front door speaker</li> <li>Tweeter</li> <li>Center speaker</li> <li>Rear door speaker</li> <li>Subwoofer</li> </ul>	<ul> <li>AV-113</li> <li>AV-119</li> <li>AV-122</li> <li>AV-127</li> <li>AV-130</li> </ul>

**AUDIO SYSTEM (SEDAN)** 

CD

Symptom	Possible cause	Reference page	
CD cannot be inserted.			
CD cannot be ejected.	- Audio unit	<u>AV-204</u>	
The CD cannot be played.			
The sound skips, stops suddenly, or is distorted.			

### SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	<ul> <li>Satellite radio tuner power or ground circuit</li> <li>Satellite radio tuner communication circuit</li> <li>Satellite radio tuner</li> </ul>	• <u>AV-106</u> • <u>AV-142</u> • <u>AV-214</u>
Right or left channel does not sound	<ul> <li>Satellite radio tuner right channel audio signal circuit</li> <li>Satellite radio tuner left channel audio signal circuit</li> <li>Satellite radio tuner</li> </ul>	• <u>AV-146</u> • <u>AV-146</u> • <u>AV-214</u>

### HANDS-FREE PHONE

Symptom	Possible cause	Reference page
Inoperative	<ul><li>Bluetooth control unit power and ground circuit</li><li>Bluetooth control unit</li></ul>	• <u>AV-107</u> • <u>AV-99</u>
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>Bluetooth control unit</li></ul>	• <u>AV-137</u> • <u>AV-99</u>
Voice activated control does not operate	<ul><li>Microphone</li><li>Steering wheel audio control switch</li><li>Bluetooth control unit</li></ul>	<ul> <li><u>AV-148</u></li> <li><u>AV-137</u></li> <li><u>AV-99</u></li> </ul>

### NORMAL OPERATING CONDITION

#### < SYMPTOM DIAGNOSIS >

# NORMAL OPERATING CONDITION

### Description

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 c external noise from trains and other sources. It is not a malfunction.

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

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

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

Type of Noise and Possible Cause

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

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# PRECAUTION PRECAUTIONS

### Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSION-ER"

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.

### [BOSE AUDIO WITHOUT NAVIGATION]

# < PREPARATION >

# PREPARATION

# PREPARATION

# **Commercial Service Tools**

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

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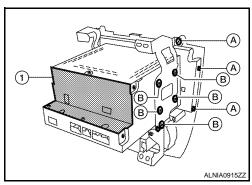
# ON-VEHICLE REPAIR AUDIO UNIT

Removal and Installation

INFOID:000000003110982

### REMOVAL

- 1. Remove the cluster lid D. Refer to IP-11, "Removal and Installation".
- 2. Remove the cluster lid D screws (A), then remove the audio unit screws (B) and the audio unit (1).



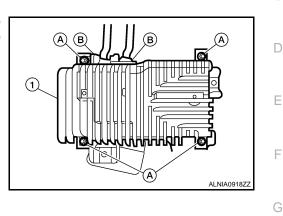
INSTALLATION Installation is in the reverse order of removal.

# BOSE SPEAKER AMP

### Removal and Installation - Coupe

### REMOVAL

- 1. Disconnect the battery negative terminal.
- 2. Remove the trunk floor carpet and spare tire cover. Refer to INT-22, "Removal and Installation".
- 3. Remove the RH trunk floor spacer.
- 4. Remove the Bose speaker amp. screws (A), then disconnect the Bose speaker amp. connectors (B) and remove the Bose speaker amp. (1).



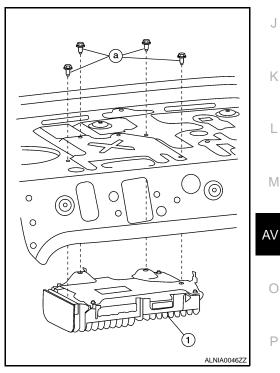
### INSTALLATION

Installation is in the reverse order of removal.

### Removal and Installation - Sedan

### REMOVAL

- 1. Disconnect the battery negative terminal.
- 2. Remove the rear parcel shelf. Refer to INT-36, "Removal and Installation".
- 3. Remove the Bose speaker amp. screws (a), then disconnect the Bose speaker amp. connectors and remove the speaker amplifier (1).



INSTALLATION Installation is in the reverse order of removal. А

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# CD CHANGER

### Removal and Installation

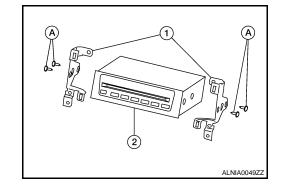
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### REMOVAL

- 1. Remove the Cluster D lower finisher. Refer to IP-11, "Removal and Installation".
- 2. Put selector lever in the drive "D" position (CVT models only).
- 3. Put shift lever in neutral (M/T models only).
- 4. Using a suitable tool remove the CD changer finisher (1), then disconnect the power socket, AUX jack connectors and remove the CD changer finisher (1).

- Remove the CD changer screws (A), pull out the unit, then disconnect the CD changer connector and remove the CD changer (1).



INSTALLATION Installation is in the reverse order of removal.

6. Remove the CD changer bracket screws (A).

• CD changer brackets (1)

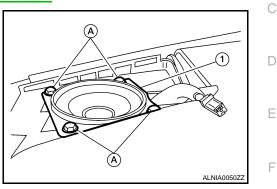
• CD changer (2)

# FRONT TWEETER

# **Removal and Installation**

### REMOVAL

- 1. Remove the front pillar finisher. Refer to INT-19, "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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[BOSE AUDIO WITHOUT NAVIGATION]

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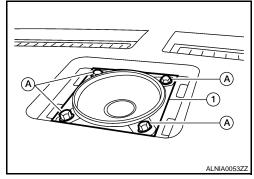
# CENTER SPEAKER

### Removal and Installation

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### REMOVAL

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



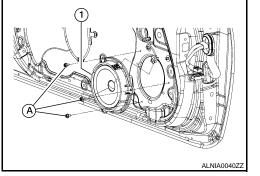
INSTALLATION Installation is in the reverse order of removal.

# FRONT DOOR SPEAKER

### Removal and Installation

### REMOVAL

- 1. Remove the front door finisher. Refer to INT-11, "Removal and Installation".
- 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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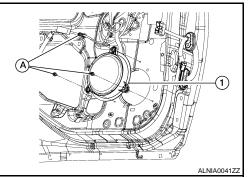
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# REAR DOOR SPEAKER

Removal and Installation - Sedan

### REMOVAL

- 1. Remove the rear door finisher. Refer to INT-32, "Removal and Installation".
- Remove the rear door speaker screws (A), then disconnect the rear door speaker connector and remove the rear door speaker (1).



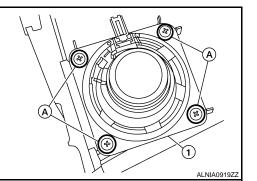
INSTALLATION Installation is in the reverse order of removal.

# **REAR TWEETER**

Removal and Installation - Coupe

### REMOVAL

- 1. Remove the rear parcel shelf finisher. Refer to INT-16, "Removal and Installation".
- 2. Remove the rear tweeter speaker screws (A) and remove the
- rear tweeter speaker (1).



**INSTALLATION** Installation is in the reverse order of removal.

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[BOSE AUDIO WITHOUT NAVIGATION]

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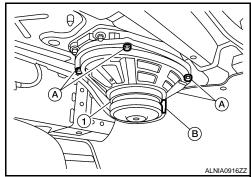
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# REAR SPEAKER

Removal and Installation - Coupe

### REMOVAL

- 1. Remove the trunk front finisher. Refer to INT-22, "Removal and Installation".
- 2. Remove the rear speaker screws (A), then disconnect the rear speaker connector (B) and remove the rear speaker (1).



INSTALLATION Installation is in the reverse order of removal.

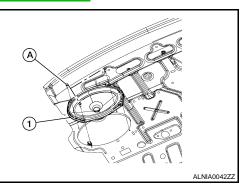
### Removal and Installation - Sedan

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### REMOVAL

- 1. Remove the rear parcel shelf finisher. Refer to INT-44, "Removal and Installation".
- 2. Remove the rear speaker screws (A), then disconnect the rear speaker and remove the rear speaker (1).



INSTALLATION Installation is in the reverse order of removal.

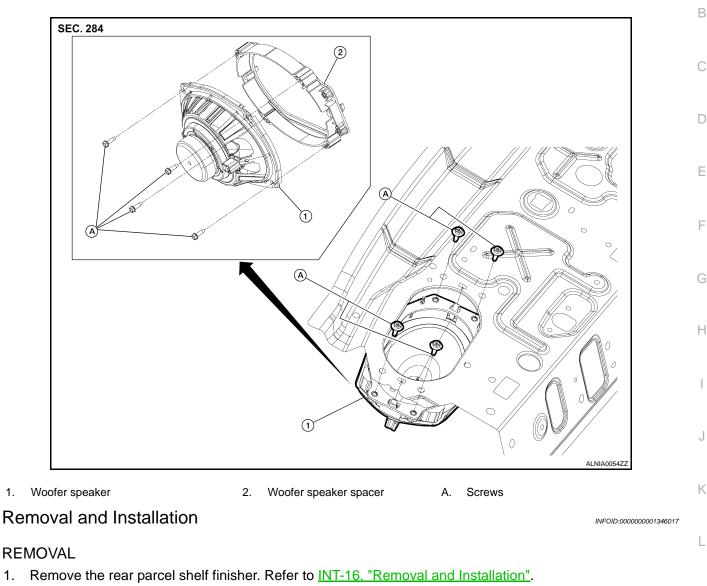
### [BOSE AUDIO WITHOUT NAVIGATION]

### < ON-VEHICLE REPAIR > **WOOFER**

### Components

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- 2. Remove the trunk front finisher. Refer to INT-22, "Removal and Installation".
- 3. Remove the woofer speaker screws from the top, disconnect the woofer speaker harness connector and remove the woofer speaker and spacer assembly.
- 4. Remove the spacer screws and remove the woofer speaker from the spacer.

### **INSTALLATION**

1.

Installation is in the reverse order of removal.

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# SATELLITE RADIO TUNER

### Removal and Installation - Coupe

### REMOVAL

- 1. Disconnect the battery negative terminal.
- 2. Remove the trunk floor carpet and spare tire cover. Refer to INT-22, "Removal and Installation".
- 3. Remove the LH trunk floor spacer.
- 4. Remove the Bluetooth control unit screws (A), then disconnect the Bluetooth control unit connectors and remove the Bluetooth control unit (1).
- Remove the satellite radio tuner assembly nuts (C), and satellite radio tuner screw (D), disconnect the satellite radio tuner harness connectors and remove the satellite radio tuner and bracket assembly (2 and 3), then remove the satellite radio tuner screws (B) and remove satellite radio tuner (2) from the bracket (3).

### NOTE:

Bluetooth control unit (1) is removed with the satellite radio tuner (2) (if equipped).

### INSTALLATION

Installation is in the reverse order of removal.

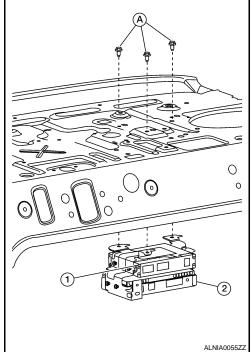
Removal and Installation - Sedan

### REMOVAL

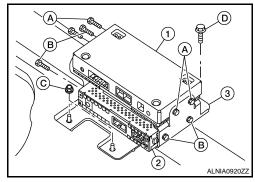
- 1. Disconnect the battery negative terminal.
- 2. Remove the rear parcel shelf finisher. Refer to INT-36, "Removal and Installation".
- 3. Remove the satellite radio tuner unit screws (A), disconnect the satellite tuner harness connectors and remove the satellite radio tuner (1).

#### NOTE:

Bluetooth control unit (2) is removed with the satellite radio tuner unit (if equipped).







INFOID:000000003185281

# SATELLITE RADIO ANTENNA

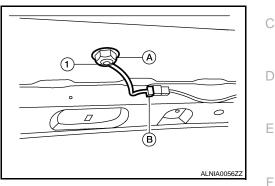
### [BOSE AUDIO WITHOUT NAVIGATION]

# SATELLITE RADIO ANTENNA

Removal and Installation

### REMOVAL

- 1. Lower the headliner at the rear. Refer to <u>INT-19, "Removal and Installation"</u>.
- 2. Remove the satellite radio antenna nut (A), then disconnect the satellite radio antenna connector (B) and remove the satellite radio antenna (1).



INSTALLATION Installation is in the reverse order of removal.

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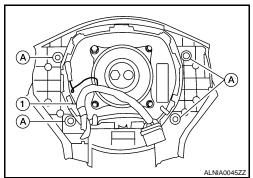
# [BOSE AUDIO WITHOUT NAVIGATION]

# STEERING SWITCH

### Removal and Installation

REMOVAL

- 1. Remove the driver airbag module. Refer to <u>SR-4, "Removal and Installation"</u>.
- 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.

## **AUDIO ANTENNA (COUPE)**

# [BOSE AUDIO WITHOUT NAVIGATION]

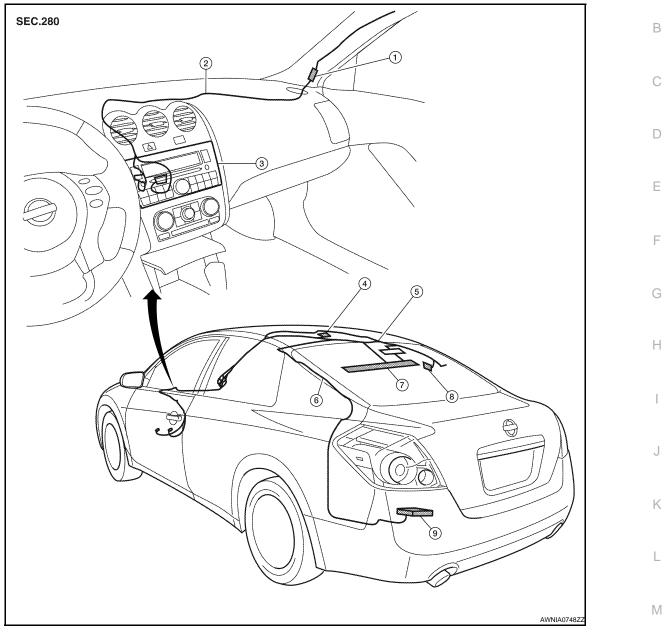
# AUDIO ANTENNA (COUPE)

Location of Antenna

# INFOID:000000003185299

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- In-line connectors M87, M501 1.
- Satellite antenna 4.
- 7. Window Antenna

## Window Antenna Repair

#### **ELEMENT CHECK**

- Audio unit harness 2.
- Audio antenna feeder 5.
- 8. Antenna amp.
- Audio unit 3.
- Satellite radio antenna feeder 6.
- 9. Satellite radio tuner

INFOID:000000003185300 0

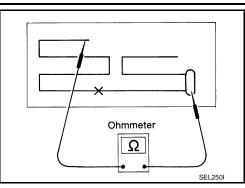
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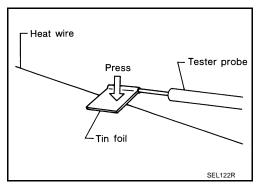
# AUDIO ANTENNA (COUPE)

## [BOSE AUDIO WITHOUT NAVIGATION]

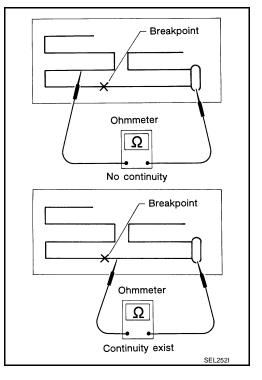
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



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



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



- Ohmmeter SEL253I
- 3. To locate a break, move probe along element. Tester indication will change abruptly when probe passes the broken point.

## AUDIO ANTENNA (COUPE)

#### < ON-VEHICLE REPAIR >

#### **REPAIR EQUIPMENT**

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

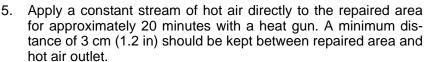
#### **REPAIRING PROCEDURE**

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

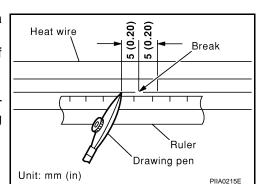
Do not touch repaired area while test is being conducted.

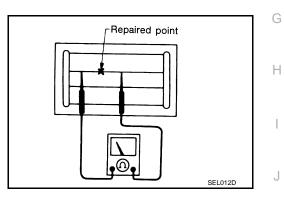


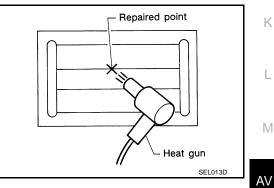
If a heat gun is not available, let the repaired area dry for 24 hours.



#### [BOSE AUDIO WITHOUT NAVIGATION]







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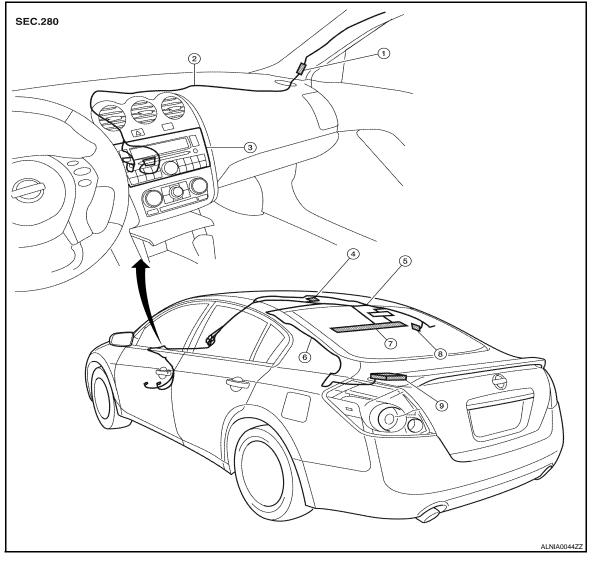
## **AUDIO ANTENNA (SEDAN)**

## [BOSE AUDIO WITHOUT NAVIGATION]

# AUDIO ANTENNA (SEDAN)

## Location of Antenna

INFOID:000000003222309



- In-line connectors M87, M501 1.
- Satellite antenna 4.
- Window Antenna 7.

- Audio unit harness 2.
- Audio antenna feeder 5.
- Satellite radio antenna feeder 6.

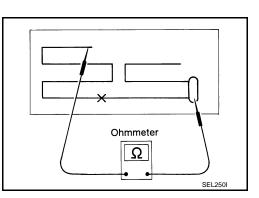
3.

9. Satellite radio tuner

Audio unit

#### INFOID:000000003222310

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



# AV-220

- 8. Antenna amp.

**ELEMENT CHECK** 

## AUDIO ANTENNA (SEDAN)

# [BOSE AUDIO WITHOUT NAVIGATION]

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

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

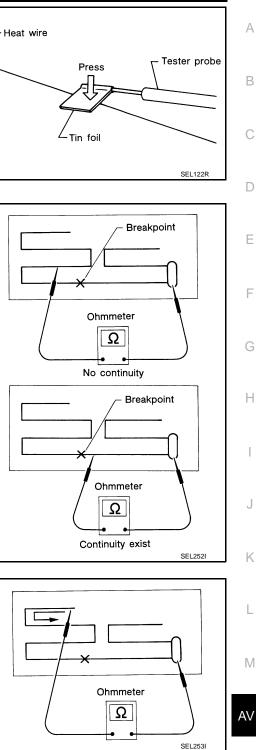
< ON-VEHICLE REPAIR >

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



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

REPAIRING PROCEDURE



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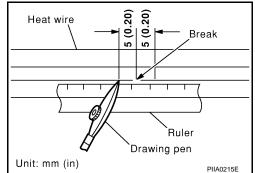
## AUDIO ANTENNA (SEDAN)

## [BOSE AUDIO WITHOUT NAVIGATION]

- 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.

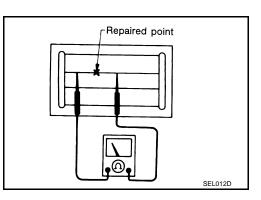


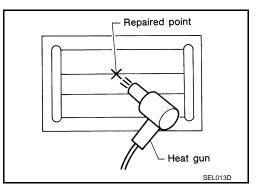
4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

Do not touch repaired area while test is being conducted.

5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet.

If a heat gun is not available, let the repaired area dry for 24 hours.



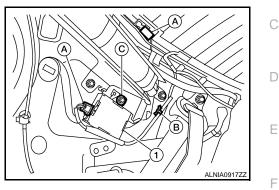


# ANTENNA AMP.

## **Removal and Installation - Coupe**

#### REMOVAL

- 1. Remove the rear pillar finisher RH. Refer to INT-19, "Exploded View".
- 2. Detach the antenna amp harness clip (B), disconnect the antenna amp connectors (A), remove the antenna amp screw (C) and remove the antenna amp (1).



[BOSE AUDIO WITHOUT NAVIGATION]

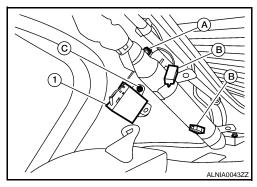
#### INSTALLATION

Installation is in the reverse order of removal.

## Removal and Installation - Sedan

#### REMOVAL

- 1. Remove the rear pillar finisher RH. Refer to INT-40, "Exploded View".
- 2. Partially remove the side curtain air bag module RH to gain access to the antenna amp. Refer to SR-10. "Removal and Installation".
- 3. Detach the antenna amp harness clip (A), disconnect the antenna amp connectors (B), remove the antenna amp screw (C) and remove the antenna amp (1).



INSTALLATION Installation is in the reverse order of removal.

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# MICROPHONE

# Removal and Installation - Coupe

**REMOVAL - WITH SUNROOF** 

- 1. Remove the map lamp assembly. Refer to INT-19. "Exploded View".
- 2. Detach the microphone connector (A).

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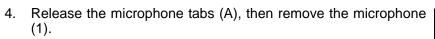
10

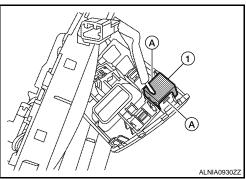
6

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

This step and the following step are (non sunroof only).

nroot only).





INSTALLATION Installation is in the reverse order of removal.

## Removal and Installation - Sedan

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#### REMOVAL

- 1. Remove the map lamp. Refer to <u>INT-40, "Exploded View"</u>.
- 2. Remove the Bluetooth microphone (2).

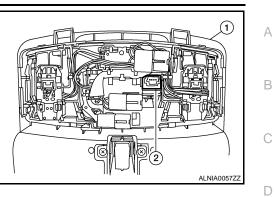
[BOSE AUDIO WITHOUT NAVIGATION]

## MICROPHONE

#### < ON-VEHICLE REPAIR >

• Map lamp (1)

## [BOSE AUDIO WITHOUT NAVIGATION]



INSTALLATION Installation is in the reverse order of removal.



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## TEL ANTENNA

Removal and Installation - Coupe

#### REMOVAL

- 1. Remove the trunk front finisher, trunk floor carpet and spare tire cover. Refer to INT-21, "Exploded View".
- 2. Remove the LH trunk floor spacer.
- 3. Remove the rear pillar LH. Refer to INT-19, "Exploded View".
- 4. Remove the rear parcel shelf. Refer to INT-16. "Removal and Installation".
- 5. Remove the Bluetooth antenna screw (A), then detach the Bluetooth antenna harness clips, disconnect the Bluetooth antenna connector and remove the Bluetooth antenna (1).

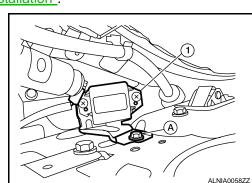
INSTALLATION Installation is in the reverse order of removal.

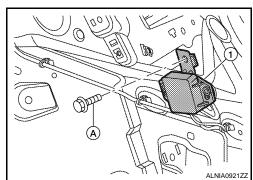
Removal and Installation - Sedan

REMOVAL

- 1. Remove the rear parcel shelf. Refer to INT-36, "Removal and Installation".
- 2. Remove the Bluetooth antenna screw (A), fold down the rear seat, disconnect the Bluetooth antenna connector and remove the Bluetooth antenna (1).

INSTALLATION Installation is in the reverse order of removal.





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INFOID:000000003185307

[BOSE AUDIO WITHOUT NAVIGATION]

# **BLUETOOTH CONTROL UNIT**

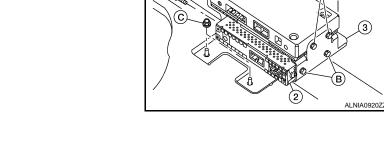
# **Removal and Installation - Coupe**

## REMOVAL

- 1. Disconnect the battery negative terminal.
- 2. Remove the trunk floor carpet and spare tire cover. Refer to INT-21, "Exploded View".
- 3. Remove the LH trunk floor spacer.
- 4. Remove the Bluetooth control unit screws (A), disconnect the Bluetooth control unit connectors and remove the Bluetooth control unit (1).
  - Satellite radio tuner (2)
  - Satellite radio tuner screws (B)
  - Satellite radio tuner bracket (3)
  - Satellite radio tuner bracket nuts (C)

Installation is in the reverse order of removal.

• Satellite radio tuner bracket screw (D)

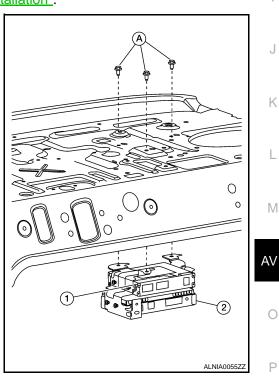


Removal and Installation - Sedan

INSTALLATION

#### REMOVAL

- 1. Remove the rear parcel shelf. Refer to INT-36, "Removal and Installation".
- 2. Remove the Bluetooth control unit screws (A), disconnect the Bluetooth control unit connectors and remove the Bluetooth control unit (2).
  - Satellite radio tuner (1)



INSTALLATION Installation is in the reverse order of removal. [BOSE AUDIO WITHOUT NAVIGATION]

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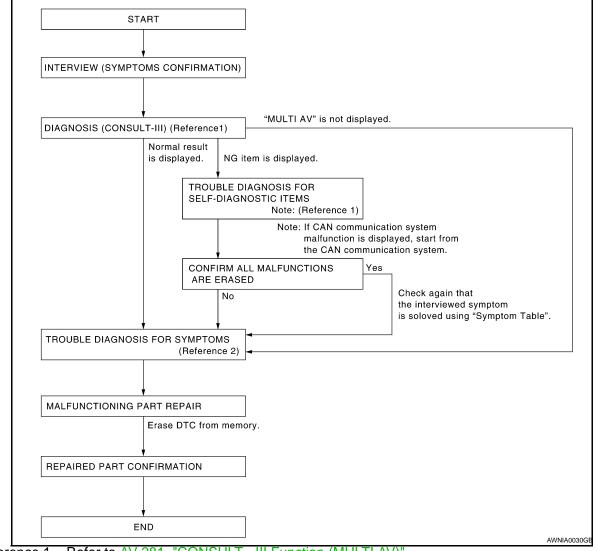
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# BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

## Work Flow

INFOID:000000001830453

#### **OVERALL SEQUENCE**



Reference 1... Refer to <u>AV-281, "CONSULT - III Function (MULTI AV)"</u>.

Reference 2... Refer to AV-411, "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.

# AV-228

## DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >	[BOSE AUDIO WITH NAVIGATION]
Is any DTC No. displayed?	
YES >> GO TO 3	
NO >> GO TO 4	
<b>3.</b> CHECK SELF-DIAGNOSIS RESULTS (CONSULT-III)	
<ol> <li>Check the DTC No. indicated in the self-diagnosis results.</li> <li>Perform the relevant diagnosis referring to the DTC No. list NOTE:</li> </ol>	t. Refer to <u>AV-377, "DTC Index"</u> .
Start with the diagnosis for the CAN communication system in UNIT (CAN) [U1010]" is displayed.	"CAN COMM CIRCUIT [U1000] or CONTROL
>> GO TO 5	
<b>4.</b> PERFORM DIAGNOSIS BY SYMPTOM	
Perform the relevant diagnosis referring to the diagnosis classic trable".	nart by symptom. Refer to <u>AV-411, "Symptom</u>
>> GO TO 5	
<b>5.</b> REPAIR OR REPLACE MALFUNCTIONING PARTS	
Repair or replace the identified malfunctioning parts.	
Erase the stored self-diagnosis results after repairing or replac been indicated in the self-diagnosis results.	ng the relevant components if any DTC No. has
>> GO TO 6	
6.CHECK AFTER REPAIR	
1. Perform self-diagnosis for "MULTI AV" with CONSULT-II	after repairing or replacing the malfunctioning
parts.	and repairing of replacing the manufactoring
2. Check if any DTC No. is displayed in the self-diagnosis re	sults.
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 are present.	symptom is solved or that any other symptoms

Are any symptoms present?

YES >> GO TO 4

NO >> Inspection End.

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## **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

## INSPECTION AND ADJUSTMENT REAR VIEW MONITOR GUIDING LINE ADJUSTMENT

REAR VIEW MONITOR GUIDING LINE ADJUSTMENT : Description

This mode is used to modify the side distance guidelines if they are dislocated from the rear view monitor image, because of variations of body/camera mounting conditions.

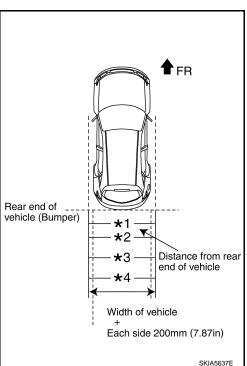
# REAR VIEW MONITOR GUIDING LINE ADJUSTMENT : Special Repair Requirement

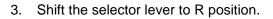
INFOID:000000001830455

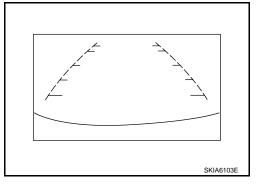
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- Create a correction line to modify the screen. Draw lines on the rearward of the vehicle passing through the following points: 200 mm (7.87 inch) from both sides of the vehicle, and
  - \*1: 0.5 m (1.5 feet)
  - \*2: 1 m (3 feet)
  - \*3: 2 m (7 feet)
  - \*4: 3 m (10 feet)
    - and from the rear end of the bumper
- With the ignition switch OFF, connect CONSULT-III, then turn ignition switch ON. Select "REARVIEW CAMERA". CAUTION:

Stop engine for safety when correcting side distance guideline.







- 4. Touch "SELCT GUIDELINE PATTERN" under "WORK SUPPORT" menu.
- 5. Touch "UP" or "DOWN", and select the guide line, "PATTERN NO. 0" or "PATTERN NO. 1", which is the closest to the corrected line.
- 6. Touch "SAVE", and confirm the guide line.
- 7. Touch "END".
- 8. Touch "ADJ GUIDELINE POSITION" under the "WORK SUPPORT" menu.
- 9. Adjust the guide line touching "X UP", "X DOWN", "Y UP" or "Y DOWN" so that the corrected line can fit the guide line.
- 10. Touch "SAVE", and confirm the guide line.

## AV-230

#### < BASIC INSPECTION >

11. Touch "END" to finish correcting.

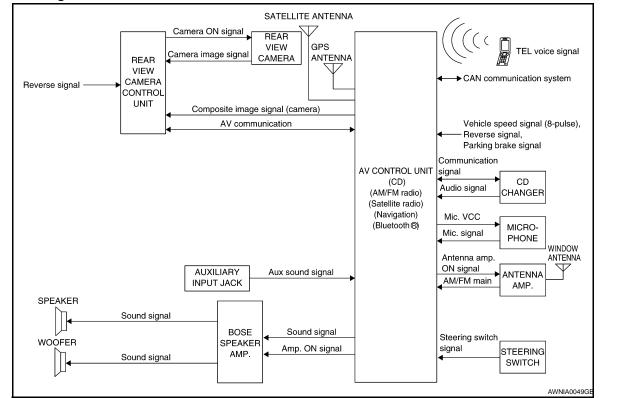
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#### < FUNCTION DIAGNOSIS >

# FUNCTION DIAGNOSIS MULTI AV SYSTEM (COUPE)

## System Diagram



## System Description

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INFOID:000000001830456

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	<u>AV-242</u>
Audio system	<u>AV-260</u>
Rear view monitor system	<u>AV-253</u>
Hands-free phone system	<u>AV-267</u>

#### **VOICE RECOGNITION**

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

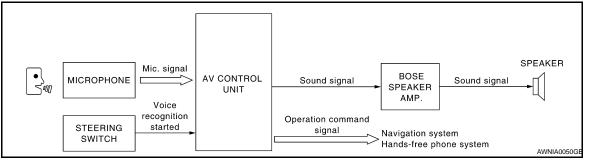
Navigation system

# MULTI AV SYSTEM (COUPE)

#### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

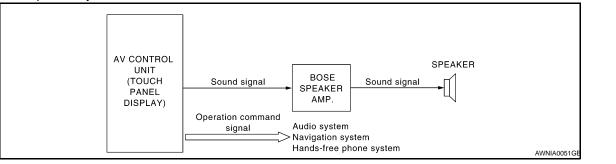
#### • Hands-free phone system



#### 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





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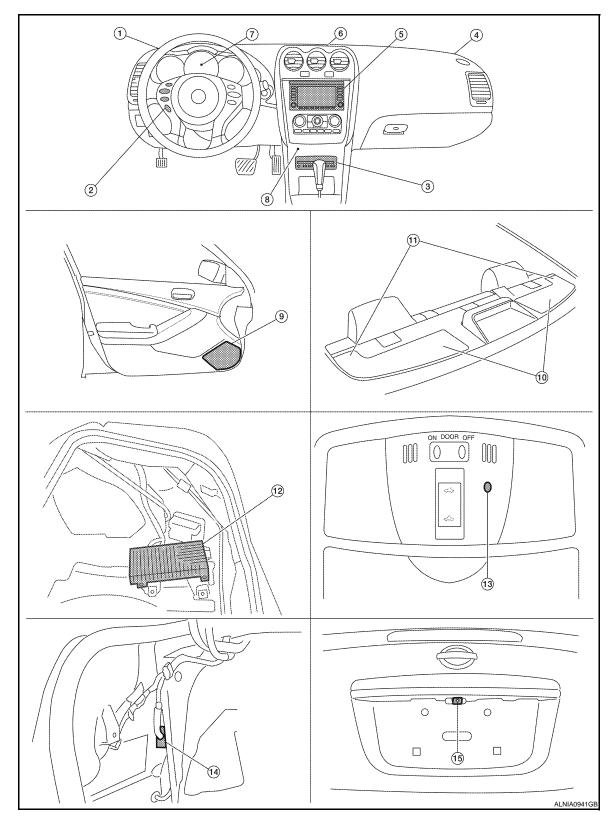
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## **MULTI AV SYSTEM (COUPE)**

#### < FUNCTION DIAGNOSIS >

# [BÓSE AUDIO WITH NAVIGATION]

## **Component Parts Location**



- 1. Front tweeter LH M51
- 4. Front tweeter RH M52
- 2. Steering wheel audio control switches 3.
- 5. AV control unit M46, M47, M48, M81, 6. M90, M91
- CD changer M42
- Center speaker M151

# **MULTI AV SYSTEM (COUPE)**

## [BÓSE AUDIO WITH NAVIGATION]

< FUNCTION DIAGNOSIS >			[BOSE AUDIO WITH NAVIGATION]			
7.	Combination meter M24	8.	Aux Jack M41	9.	Door speaker LH D3 RH D103	A
10.	Rear subwoofer LH B25 RH B47	11.	Rear tweeter LH B16 RH B100	12.	BOSE speaker amp. B121, B122 (view with trunk carpet and RH floor spacer removed)	В
13.	Microphone R7	14.	Rear view camera control unit B31 (view with trunk side finisher LH re- moved)		Rear view camera T7	С

# **Component Description**

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Part name	Description		
AV control unit	<ul> <li>Integrates DVD-ROM drive allowing map data to be stored</li> <li>The AV control unit includes the navigation, audio, hands-free phone, satellite radio and display functions</li> </ul>		
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit, and outputs audio signals to each speaker.		
CD changer	Outputs audio signals to AV control unit.		
Door speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>		
Front tweeter	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sound</li></ul>		
Center speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>		
Rear tweeter	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sounds</li></ul>		
Rear subwoofer	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs low range sound</li></ul>		
Rear view camera control unit	<ul> <li>Camera image signal is input from rear view camera, and camera image is indicated on the display</li> <li>Power (camera ON signal) is sent to rear view camera</li> <li>Controlled by AV communication sent from AV control unit</li> <li>AV control unit recognizes the presence of camera system with camera connection recognition signal</li> </ul>		
Rear view camera	<ul> <li>Receives camera ON signal from rear view camera control unit</li> <li>Sends image signal to rear view camera control unit</li> </ul>		
Steering wheel audio control switches	<ul> <li>Operations for audio, hands-free phone and navigation are possible</li> <li>Steering switch signal (operation signal) is output to AV control unit</li> </ul>		
Microphone	Voice signals are received and sent to AV control unit.		
GPS antenna	GPS signal is received and sent to AV control unit.		
Satellite radio antenna	Satellite radio signal is received and sent to AV control unit.		

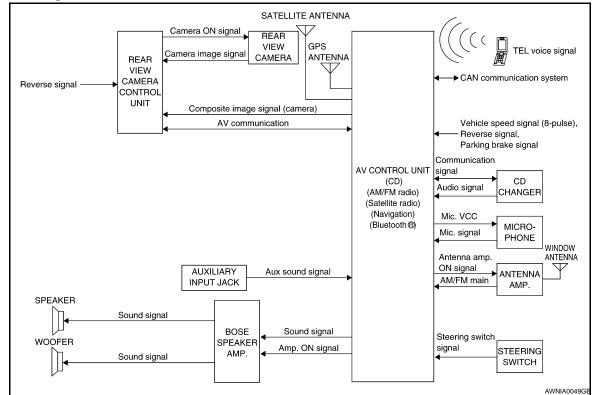
# MULTI AV SYSTEM (SEDAN)

#### < FUNCTION DIAGNOSIS >

# MULTI AV SYSTEM (SEDAN)

### System Diagram

INFOID:000000003214775



## System Description

The multi AV system consists of the following systems.

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

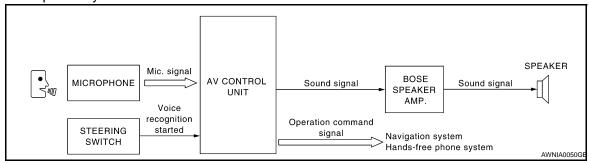
Refer to the following table for multi AV system descriptions.

System	Reference page
Navigation system	<u>AV-247</u>
Audio system	<u>AV-263</u>
Rear view monitor system	<u>AV-256</u>
Hands-free phone system	<u>AV-270</u>

## VOICE RECOGNITION

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

- Navigation system
- Hands-free phone system





## MULTI AV SYSTEM (SEDAN)

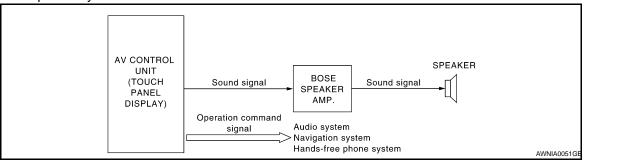
#### < FUNCTION DIAGNOSIS >

# [BÓSE AUDIO WITH NAVIGATION]

#### 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





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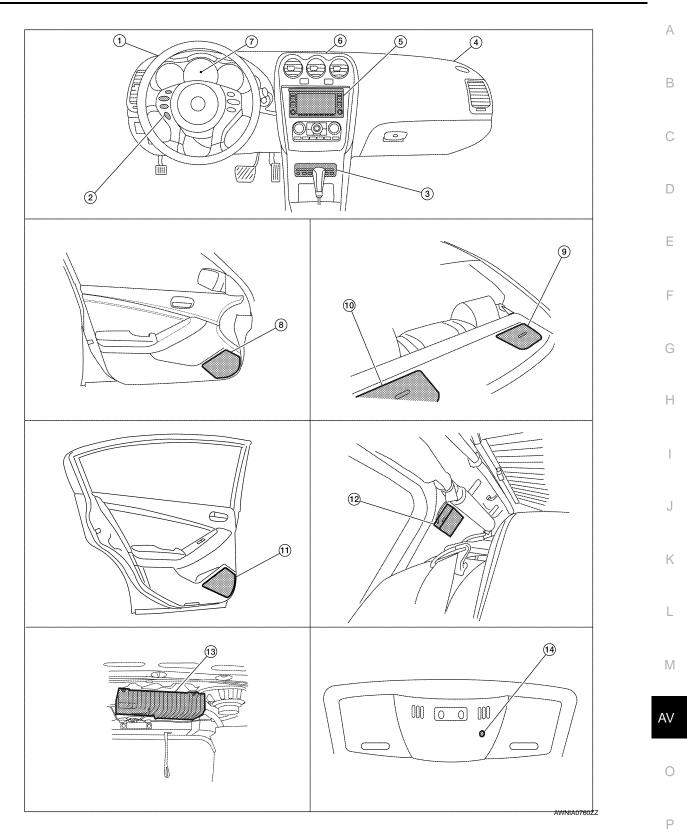
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< FUNCTION DIAGNOSIS >

Component Parts Location

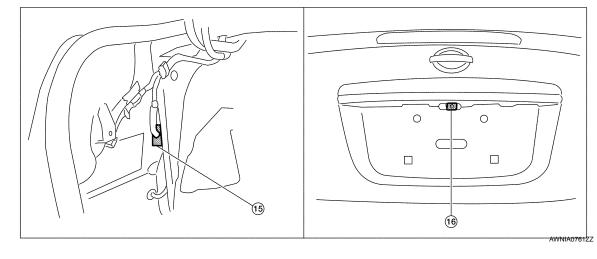
#### < FUNCTION DIAGNOSIS >

## MULTI AV SYSTEM (SEDAN) [BOSE AUDIO WITH NAVIGATION]



## MULTI AV SYSTEM (SEDAN)

#### < FUNCTION DIAGNOSIS >



- 1. Tweeter LH M51
- 4. Tweeter RH M52
- 7. Combination meter M24
- 10. Rear subwoofer LH B120
- 13. BOSE speaker amp. B121, B122
- 16. Rear view camera B35

## Component Description

- 2. Steering wheel audio control switches 3.
- 5. AV control unit M46, M47, M48, M81, 6. M90, M91
- 8. Front door speaker LH D3 RH D103
- 11. Rear door speaker LH D202 RH D302
- 14. Microphone R7

- CD changer M42
- Center speaker M151
- 9. Rear subwoofer RH B124
- 12. Antenna amp M502 (view with rear pillar finisher RH removed)
- Rear view camera control unit B31 (view with trunk side finisher LH removed)

Part name	Description	
AV control unit	<ul> <li>Integrates DVD-ROM drive allowing map data to be stored</li> <li>The AV control unit includes the navigation, audio, hands-free phone, sate lite radio and display functions</li> </ul>	
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit, and outputs audio signals to each speaker.	
CD changer	Outputs audio signals to AV control unit.	
Front door speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>	
Tweeter	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sound</li></ul>	
Center speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>	
Rear door speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>	
Rear subwoofer	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs low range sound</li></ul>	
Rear view camera control unit	<ul> <li>Camera image signal is input from rear view camera, and camera image is indicated on the display</li> <li>Power (camera ON signal) is sent to rear view camera</li> <li>Controlled by AV communication sent from AV control unit</li> <li>AV control unit recognizes the presence of camera system with camera connection recognition signal</li> </ul>	
Rear view camera	<ul> <li>Receives camera ON signal from rear view camera control unit</li> <li>Sends image signal to rear view camera control unit</li> </ul>	



# MULTI AV SYSTEM (SEDAN)

#### < FUNCTION DIAGNOSIS >

## [BÓSE AUDIO WITH NAVIGATION]

Part name	Description	
Steering wheel audio control switches	<ul> <li>Operations for audio, hands-free phone and navigation are possible</li> <li>Steering switch signal (operation signal) is output to AV control unit</li> </ul>	
Microphone	Voice signals are received and sent to AV control unit.	
GPS antenna	GPS signal is received and sent to AV control unit.	
Antenna amp.	<ul> <li>Radio signal received by glass antenna is amplified and sent to AV control unit</li> <li>Power (antenna amp ON signal) is supplied from AV control unit</li> </ul>	
Satellite radio antenna	Satellite radio signal is received and sent to AV control unit.	

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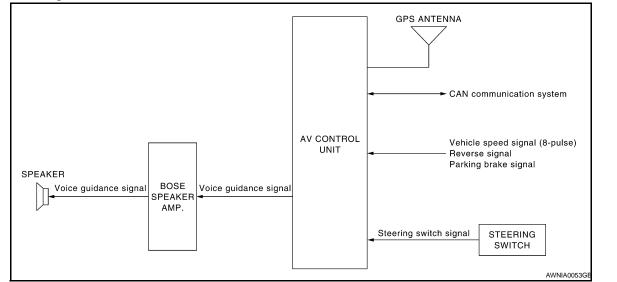
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#### < FUNCTION DIAGNOSIS >

# NAVIGATION SYSTEM (COUPE)

System Diagram



## System Description

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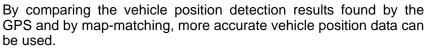
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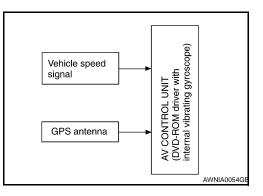
Refer to NAVI System Owner's Manual for system operation.

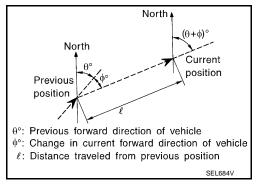
The navigation system periodically calculates the vehicle's current position according to the following three signals: Travel distance of the vehicle as determined by the vehicle speed sensor, turning angle of the vehicle as determined by the gyroscope (angular velocity sensor), and the direction of 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.



The current vehicle position will be calculated by detecting the distance the vehicle moved from the previous calculation point and its direction.





#### TRAVEL DISTANCE

Travel distance calculations are based on the vehicle speed input signal. Therefore, the calculation may become incorrect as the tires wear down. To prevent this, an automatic distance fine adjustment function has been adopted.

#### TRAVEL DIRECTION

Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). As the gyroscope and GPS antenna have both merit and demerit, input signals

## AV-242

#### < 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.

Туре	Advantage	Disadvantage	
Gyroscope (angular velocity sensor)	Can detect the vehicle's turning angle quite accurately.	• Direction errors may accumulate when the vehicle is driven for long distances without stopping.	В
GPS antenna (GPS information)	Can detect the vehicle's travel direction (North/South/East/West).	Correct direction cannot be detected when the vehicle speed is low.	С

#### 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.

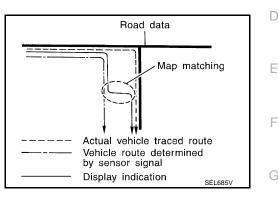
If two roads are running in parallel, they are of the same priority. Therefore, the current-location mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.

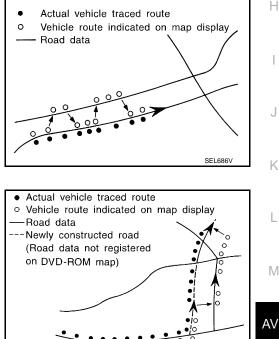
 Map-matching does not function correctly when the road on which the vehicle is driving is new and not recorded in the map DVD-ROM, or when the road pattern stored in the map data and the actual road pattern are different due to repair.

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 currentlocation 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)





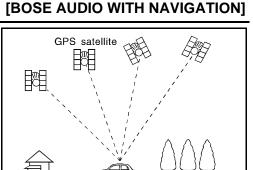
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#### < FUNCTION DIAGNOSIS >

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).



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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.

## < FUNCTION DIAGNOSIS >

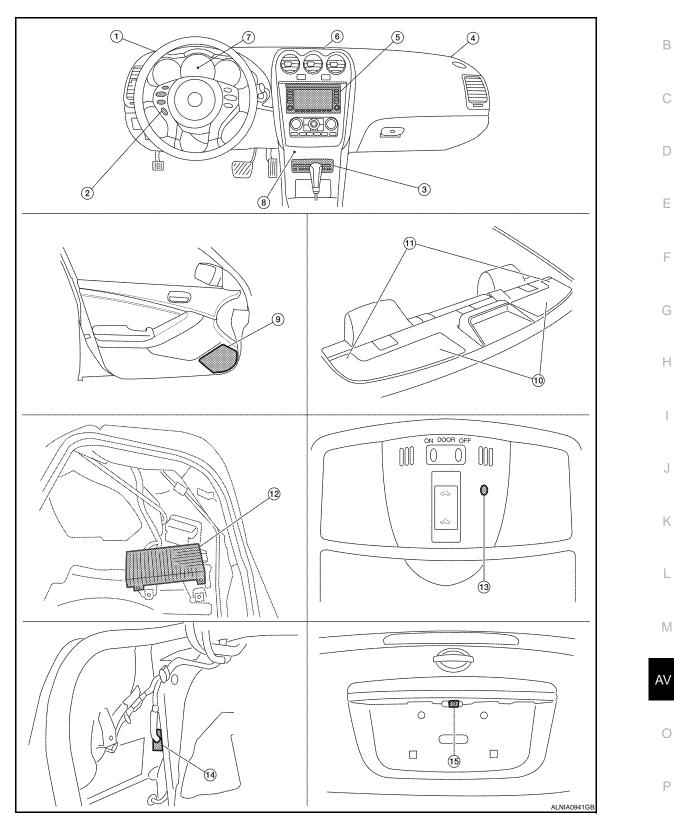
# [BOSE AUDIO WITH NAVIGATION]

## **Component Parts Location**

INFOID:000000003220896

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- Front tweeter LH M51 1.
- Front tweeter RH M52 4.
- 2. Steering wheel audio control switches 3. 5.
  - AV control unit M46, M47, M48, M81, 6. M90, M91
- CD changer M42 Center speaker M151

AV-245

< F	< FUNCTION DIAGNOSIS >			[BOSE AUDIO WITH NAVIGATION]	
7.	Combination meter M24	8.	Aux Jack M41	9.	Door speaker LH D3 RH D103
10.	Rear subwoofer LH B25 RH B47	11.	Rear tweeter LH B16 RH B100	12.	BOSE speaker amp. B121, B122 (view with trunk carpet and RH floor spacer removed)
13.	Microphone R7	14.	Rear view camera control unit B31 (view with trunk side finisher LH re- moved)		Rear view camera T7

# **Component Description**

Part name	Description
AV control unit	<ul> <li>Controls each operation of the navigation system</li> <li>DVD-ROM drive is built in</li> <li>Voice guidance signal is output to BOSE speaker amp.</li> </ul>
BOSE speaker amp.	Voice guidance signal is input from AV control unit, and it is output to speakers.
Front tweeter	Voice guidance signal from BOSE speaker amp. is output.
Steering wheel audio control switches	<ul> <li>Each operation of navigation system can be performed</li> <li>Switch operating signal is output to AV control unit</li> </ul>
Microphone	Sends voice signals to AV control unit
GPS antenna	GPS signal is received and is output to AV control unit.

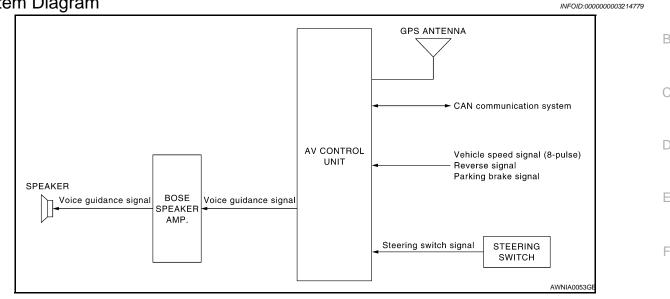
#### NAVIGATION SYSTEM (SEDAN) [BOSE AUDIO WITH NAVIGATION]

#### < FUNCTION DIAGNOSIS >

## NAVIGATION SYSTEM (SEDAN)



System Diagram



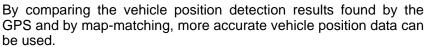
## System Description

#### NOTE:

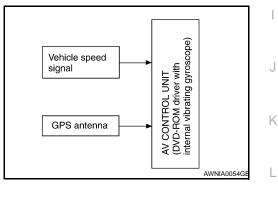
Refer to NAVI System Owner's Manual for system operation.

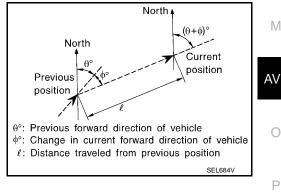
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#### TRAVEL DISTANCE

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#### TRAVEL DIRECTION

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## NAVIGATION SYSTEM (SEDAN)

#### < 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.

Туре	Advantage	Disadvantage	
Gyroscope (angular velocity sensor)	Can detect the vehicle's turning angle quite accurately.	• Direction errors may accumulate when the vehicle is driven for long distances without stopping.	
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#### MAP-MATCHING

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#### CAUTION:

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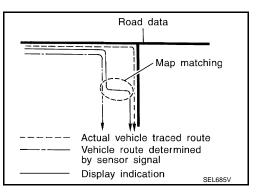
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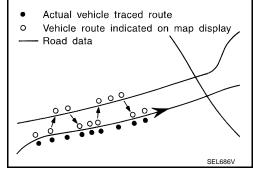
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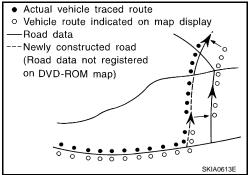
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GPS (GLOBAL POSITIONING SYSTEM)



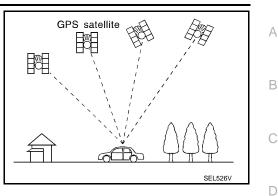




## **NAVIGATION SYSTEM (SEDAN)**

#### < FUNCTION DIAGNOSIS >

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).



[BOSE AUDIO WITH NAVIGATION]

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- Position detection is not possible when the vehicle is in an area where radio waves from the GPS satellite do
  not reach, such as in a tunnel, parking lot in a building, and under an elevated highway. Radio waves from
  the GPS satellites may not be received when some object is located over the GPS antenna.
- Position correction by GPS is not available while the vehicle is stopped.

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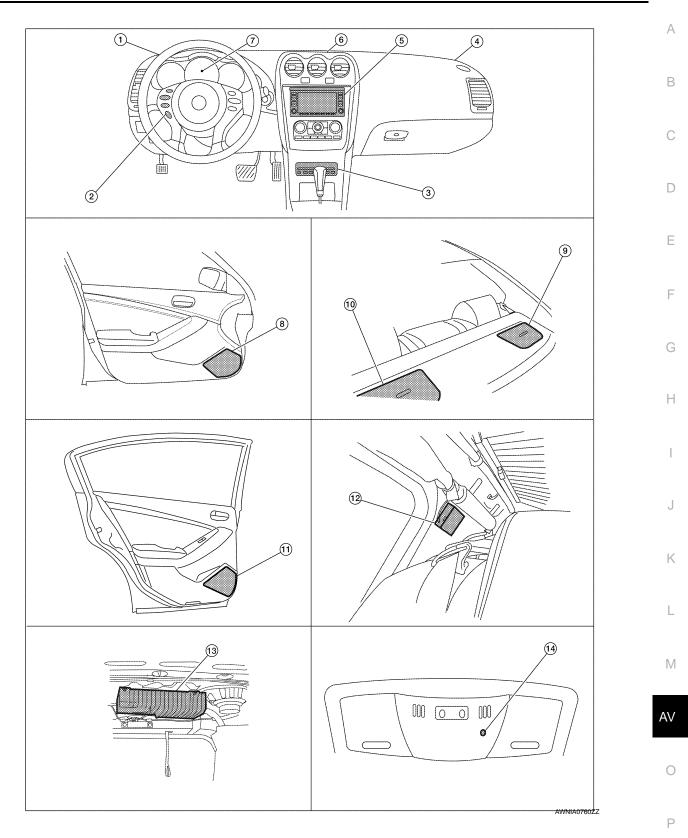
< FUNCTION DIAGNOSIS >

Component Parts Location

# NAVIGATION SYSTEM (SEDAN)

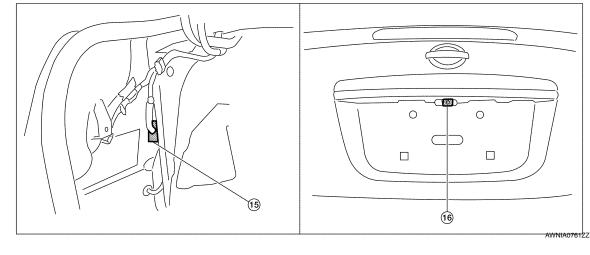
#### < FUNCTION DIAGNOSIS >

## [BOSE AUDIO WITH NAVIGATION]



## **NAVIGATION SYSTEM (SEDAN)**

#### < FUNCTION DIAGNOSIS >



- 1. Tweeter LH M51
- 4. Tweeter RH M52
- 7. Combination meter M24
- 10. Rear subwoofer LH B120
- 13. BOSE speaker amp. B121, B122
- 16. Rear view camera B35

## Component Description

- 2. Steering wheel audio control switches 3.
- 5. AV control unit M46, M47, M48, M81, 6. M90, M91
- 8. Front door speaker LH D3 RH D103
- 11. Rear door speaker LH D202 RH D302
- 14. Microphone R7

- CD changer M42
- Center speaker M151
- 9. Rear subwoofer RH B124
- 12. Antenna amp M502 (view with rear pillar finisher RH removed)
- Rear view camera control unit B31 (view with trunk side finisher LH removed)

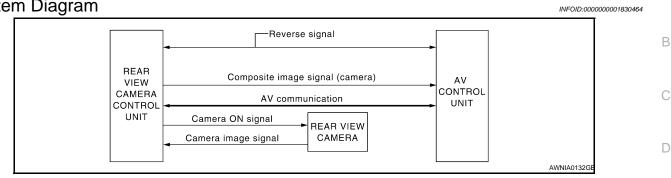
Part name	Description
AV control unit	<ul> <li>Controls each operation of the navigation system</li> <li>DVD-ROM drive is built in</li> <li>Voice guidance signal is output to BOSE speaker amp.</li> </ul>
BOSE speaker amp.	Voice guidance signal is input from AV control unit, and it is output to speakers.
Tweeter	Voice guidance signal from BOSE speaker amp. is output.
Steering switches	<ul> <li>Each operation of navigation system can be performed</li> <li>Switch operating signal is output to AV control unit</li> </ul>
Microphone	Sends voice signals to AV control unit
GPS antenna	GPS signal is received and is output to AV control unit.

### **REAR VIEW MONITOR SYSTEM (COUPE)**

### < FUNCTION DIAGNOSIS >

# **REAR VIEW MONITOR SYSTEM (COUPE)**

### System Diagram



### System Description

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

### **AV COMMUNICATION LINE**

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

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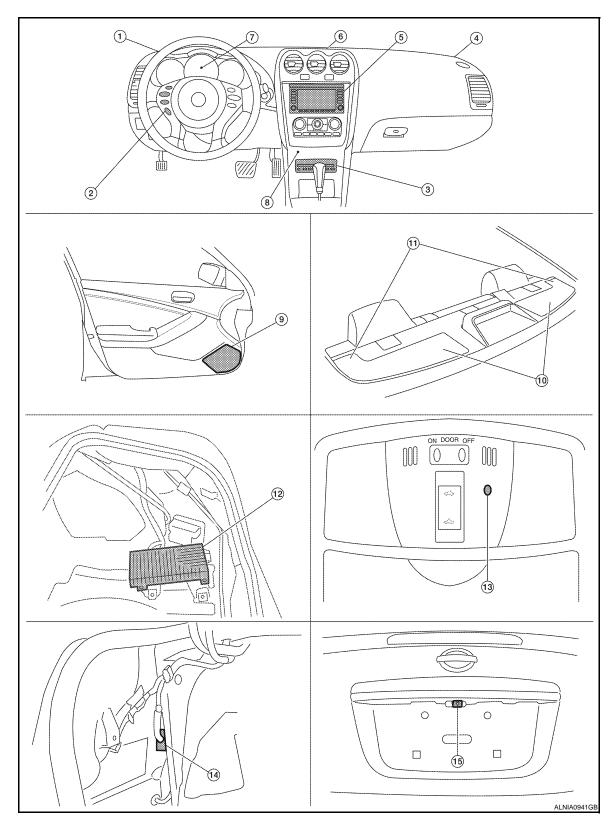
# REAR VIEW MONITOR SYSTEM (COUPE)

### < FUNCTION DIAGNOSIS >

EIM (COUPE) [BOSE AUDIO WITH NAVIGATION]

# **Component Parts Location**

INFOID:000000003220895



- 1. Front tweeter LH M51
- 4. Front tweeter RH M52
- 2. Steering wheel audio control switches 3.
- 5. AV control unit M46, M47, M48, M81, 6. M90, M91
- CD changer M42
- Center speaker M151

# REAR VIEW MONITOR SYSTEM (COUPE)

< FUNCTION DIAGNOSIS >			[BOSE AUDIO WITH NAVIGATION]			
7.	Combination meter M24	8.	Aux Jack M41	9.	Door speaker LH D3 RH D103	А
10.	Rear subwoofer LH B25 RH B47	11.	Rear tweeter LH B16 RH B100	12.	BOSE speaker amp. B121, B122 (view with trunk carpet and RH floor spacer removed)	В
13.	Microphone R7	14.	Rear view camera control unit B31 (view with trunk side finisher LH re- moved)	15. -	Rear view camera T7	С

# **Component Description**

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Description	
Camera image signal is sent from rear view camera control unit	
<ul> <li>Receives reverse signal from back-up lamp relay</li> <li>Receives rear view camera image signal</li> <li>Sends camera ON signal to rear view camera</li> <li>Sends image signal to AV control unit</li> </ul>	
<ul> <li>Receives camera ON signal from rear view camera control unit</li> <li>Sends image signal to rear view camera control unit</li> </ul>	
-	Camera image signal is sent from rear view camera control unit <ul> <li>Receives reverse signal from back-up lamp relay</li> <li>Receives rear view camera image signal</li> <li>Sends camera ON signal to rear view camera</li> <li>Sends image signal to AV control unit</li> </ul>

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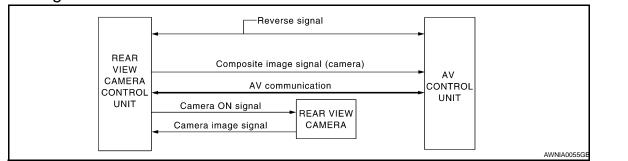
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### **REAR VIEW MONITOR SYSTEM (SEDAN)**

### < FUNCTION DIAGNOSIS >

# REAR VIEW MONITOR SYSTEM (SEDAN)

### System Diagram



### System Description

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

### AV COMMUNICATION LINE

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

# EM (SEDAN)

[BOSE AUDIO WITH NAVIGATION]

# REAR VIEW MONITOR SYSTEM (SEDAN)

### < FUNCTION DIAGNOSIS >

Component Parts Location

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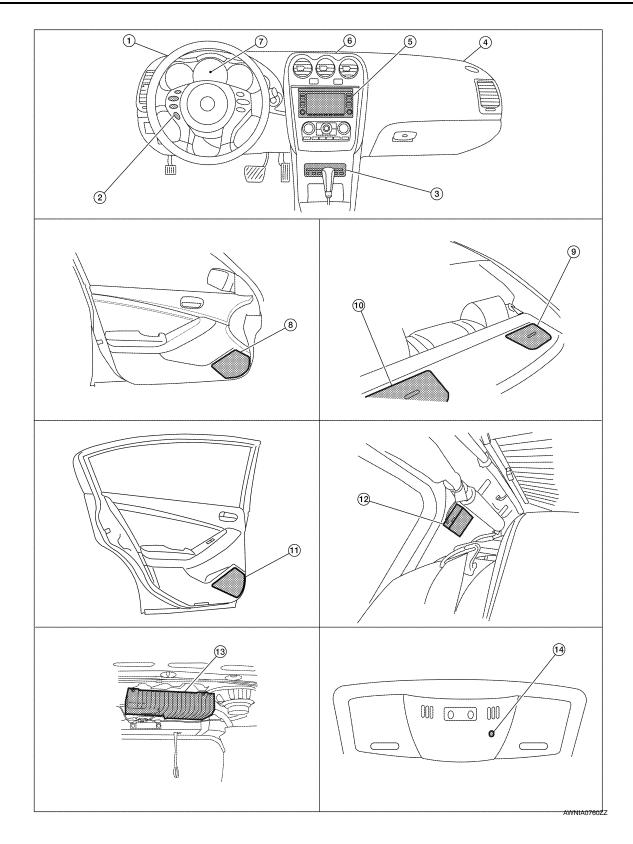
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### REAR VIEW MONITOR SYSTEM (SEDAN) IS > [BOSE AUDIO WITH NAVIGATION]

### < FUNCTION DIAGNOSIS >



# REAR VIEW MONITOR SYSTEM (SEDAN)

### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

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1.	Tweeter LH M51	2.	Steering wheel a	udio control switches	3.	CD changer M42	
4.	Tweeter RH M52	5.	AV control unit M M90, M91	146, M47, M48, M81,	6.	Center speaker M151	F
7.	Combination meter M24	8.	Front door speał LH D3 RH D103	ker	9.	Rear subwoofer RH B124	G
10.	Rear subwoofer LH B120	11.	Rear door speak LH D202 RH D302	er	12.	Antenna amp M502 (view with rear pil- lar finisher RH removed)	Н
13.	BOSE speaker amp. B121, B122	14.	Microphone R7		15.	Rear view camera control unit B31 (view with trunk side finisher LH re- moved)	
16.	Rear view camera B35					,	I
Со	mponent Description					INFOID:000000003214786	J

Part name	Description	
AV control unit	Camera image signal is sent from rear view camera control unit	
Rear view camera control unit	<ul> <li>Receives reverse signal from park/neutral position (PNP) switch (with CVT and QR25DE)</li> <li>Receives reverse signal from back-up lamp relay (with CVT and VQ35DE)</li> <li>Receives reverse signal from back up lamp switch (with M/T)</li> <li>Receives rear view camera image signal</li> <li>Sends camera ON signal to rear view camera</li> <li>Sends image signal to AV control unit</li> </ul>	
Rear view camera	<ul> <li>Receives camera ON signal from rear view camera control unit</li> <li>Sends image signal to rear view camera control unit</li> </ul>	

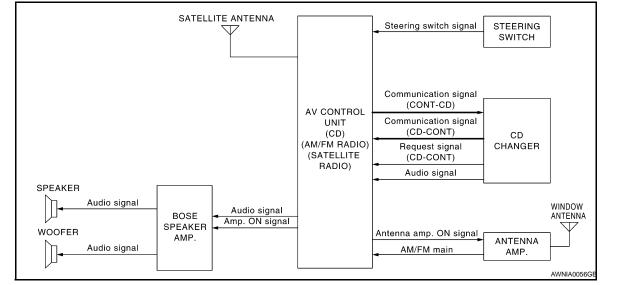
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### < FUNCTION DIAGNOSIS >

# AUDIO SYSTEM (COUPE)

### System Diagram



# System Description

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### AUDIO SYSTEM

The audio system consists of the following components

- AV control unit (audio unit)
- BOSE speaker amp.
- Window antenna
- Steering wheel audio control switches
- Door speakers
- Front tweeters
- Center speaker
- Rear tweeters
- Subwoofers
- CD changer

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

### AV-260

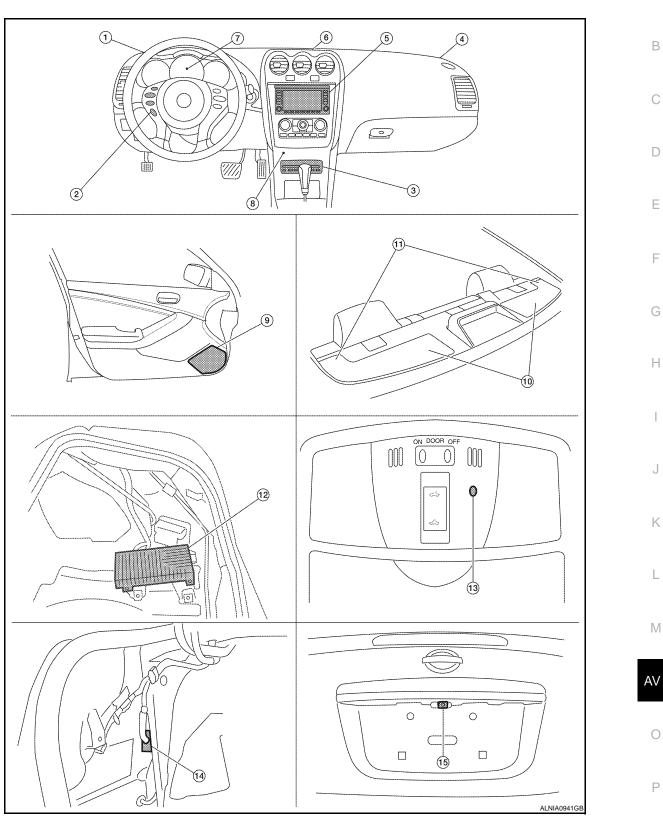
### **AUDIO SYSTEM (COUPE)** [BOSE AUDIO WITH NAVIGATION]

### < FUNCTION DIAGNOSIS >

# **Component Parts Location**

INFOID:000000003220892

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- Front tweeter LH M51 1.
- Front tweeter RH M52 4.
- 2. Steering wheel audio control switches 3. 5.
  - AV control unit M46, M47, M48, M81, 6. M90, M91
- CD changer M42 Center speaker M151

# **AUDIO SYSTEM (COUPE)**

### **(BOSE AUDIO WITH NAVIGATION)**

< FUNCTION DIAGNOSIS > 7. Combination meter M24 8. Aux Jack M41 9. Door speaker LH D3 RH D103 10. Rear subwoofer 11. Rear tweeter 12. BOSE speaker amp. B121, B122 (view LH B16 LH B25 with trunk carpet and RH floor spacer RH B100 **RH B47** removed) 13. Microphone R7 14. Rear view camera control unit B31 15. Rear view camera T7 (view with trunk side finisher LH removed)

# **Component Description**

INFOID:000000001830471

Part name	Description
AV control unit	<ul> <li>Controls audio system and satellite radio system functions</li> <li>Audio information is displayed on display screen</li> </ul>
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit, and outputs audio signals to each speaker.
CD changer	Sends audio signals to AV control unit
Door speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Front tweeter	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sound</li></ul>
Center speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Rear tweeter	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sounds</li></ul>
Subwoofer	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs low range sound</li></ul>
Steering wheel audio control switches	<ul> <li>Each audio operation can be operated</li> <li>Steering switch signal (operation signal) is output to AV control unit</li> </ul>
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.

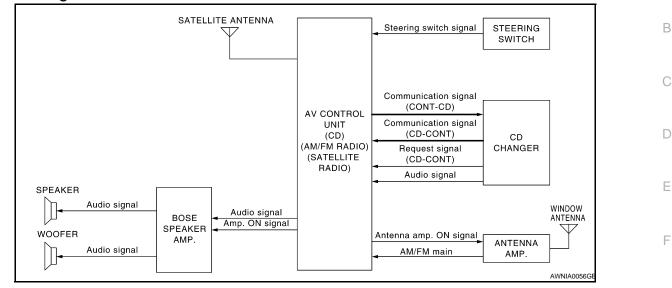
# AUDIO SYSTEM (SEDAN)

### < FUNCTION DIAGNOSIS >

# AUDIO SYSTEM (SEDAN)

# [BOSE AUDIO WITH NAVIGATION]

### System Diagram



### System Description

### AUDIO SYSTEM

The audio system consists of the following components

- AV control unit (audio unit)
- BOSE speaker amp.
- Window antenna
- Antenna amp.
- Steering wheel audio control switches
- Front door speakers
- Tweeters
- Center speaker
- Rear door speakers
- Subwoofers
- CD changer

When the audio system is on, radio signals are received by the window antenna. These signals are amplified L by the antenna amp. before reaching the audio unit. 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 subwoofers. Μ

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

### SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components

- Satellite antenna
- Satellite radio tuner

When the satellite radio system is on, radio signals are supplied to the satellite radio tuner from the satellite antenna. The satellite radio tuner then sends audio signals to the 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 P level can be selected by the customer. Refer to Owner's Manual for operating instructions.

AV-263

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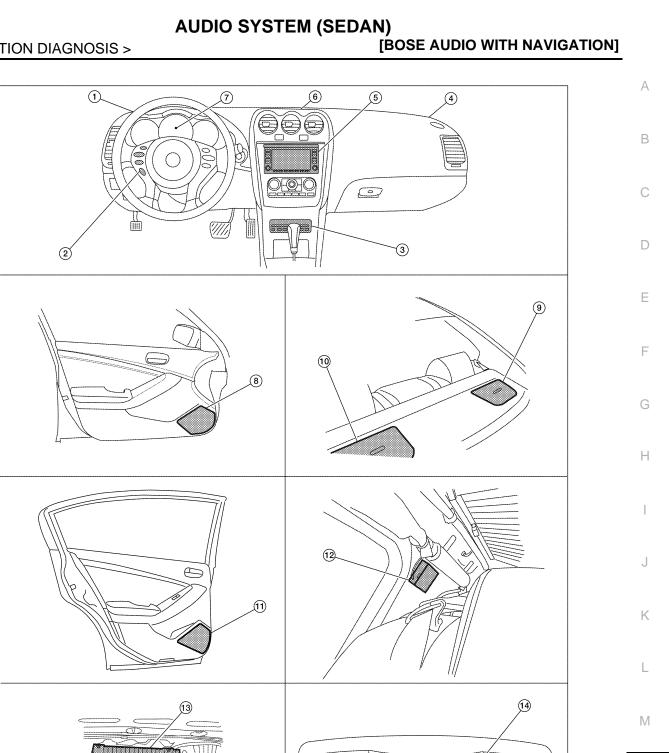
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# AUDIO SYSTEM (SEDAN)

### < FUNCTION DIAGNOSIS >



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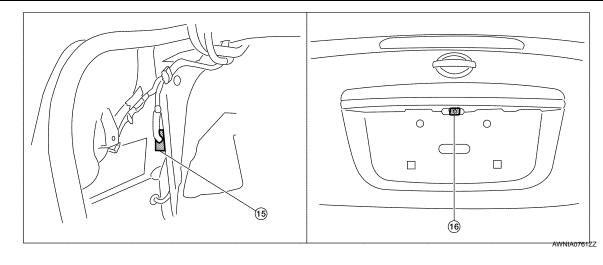
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### AUDIO SYSTEM (SEDAN)

### < FUNCTION DIAGNOSIS >



- 1. Tweeter LH M51
- 4. Tweeter RH M52
- 7. Combination meter M24
- 10. Rear subwoofer LH B120
- 13. BOSE speaker amp. B121, B122
- 16. Rear view camera B35

### Component Description

- 2. Steering wheel audio control switches 3.
- 5. AV control unit M46, M47, M48, M81, 6. M90, M91
- Front door speaker
   LH D3
   RH D103
- 11. Rear door speaker LH D202 RH D302
- 14. Microphone R7

- CD changer M42
- Center speaker M151
- 9. Rear subwoofer RH B124
- 12. Antenna amp M502 (view with rear pillar finisher RH removed)
- Rear view camera control unit B31 (view with trunk side finisher LH removed)

INFOID:000000003214790

Part name	Description
AV control unit	<ul> <li>Controls audio system and satellite radio system functions</li> <li>Audio information is displayed on display screen</li> </ul>
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit, and outputs audio signals to each speaker.
CD changer	Sends audio signals to AV control unit
Front door speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Tweeter	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sound</li></ul>
Center speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Rear door speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>
Suboofer	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs low range sound</li></ul>
Steering wheel audio control switches	<ul> <li>Each audio operation can be operated</li> <li>Steering switch signal (operation signal) is output to AV control unit</li> </ul>
Antenna amp.	<ul> <li>Radio signal received by window antenna is amplified and sent to AV control unit</li> <li>Power (antenna amp ON signal) is supplied from AV control unit</li> </ul>
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.

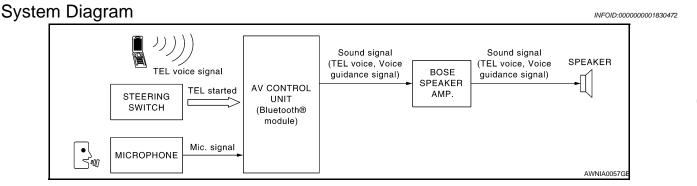
### AV-266

# HANDS FREE PHONE SYSTEM (COUPE)

### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

# HANDS FREE PHONE SYSTEM (COUPE)



### System Description

INFOID:000000001830473

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. 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. 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

### MICROPHONE

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

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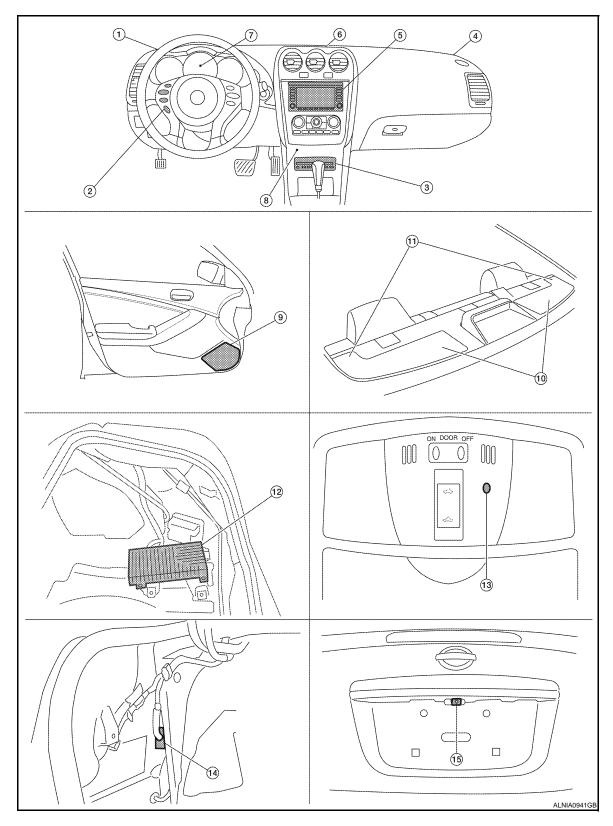
# HANDS FREE PHONE SYSTEM (COUPE)

### < FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# **Component Parts Location**

INFOID:000000003220894



- 1. Front tweeter LH M51
- 4. Front tweeter RH M52
- 2. Steering wheel audio control switches 3.
- 5. AV control unit M46, M47, M48, M81, 6. M90, M91
- CD changer M42
- Center speaker M151

### HANDS FREE PHONE SYSTEM (COUPE) [BOSE AUDIO WITH NAVIGATION] < FUNCTION DIAGNOSIS > 7. Combination meter M24 8. Aux Jack M41 9. Door speaker LH D3 RH D103 10. Rear subwoofer 11. Rear tweeter 12. BOSE speaker amp. B121, B122 (view LH B25 LH B16 with trunk carpet and RH floor spacer RH B100 RH B47 removed) 13. Microphone R7 14. Rear view camera control unit B31 15. Rear view camera T7

(view with trunk side finisher LH re-

moved)

# **Component Description**

INFOID:000000001830475

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Part name	Description	
AV control unit	<ul><li>Controls hands-free phone functions</li><li>Displays hands-free phone information on display screen</li></ul>	
BOSE speaker amp.	Inputs power (amp ON) and sound signal from AV control unit, and outputs sound signal to each speaker.	
Door speaker	Receives telephone voice and voice guidance signals from the BOSE speaker amp.	
Front tweeter		
Center speaker		
Steering wheel audio control switches	<ul><li>Start a voice recognition session</li><li>Answer and end telephone calls</li><li>Adjust the volume level</li></ul>	
Microphone	Sends voice signals to AV control unit	

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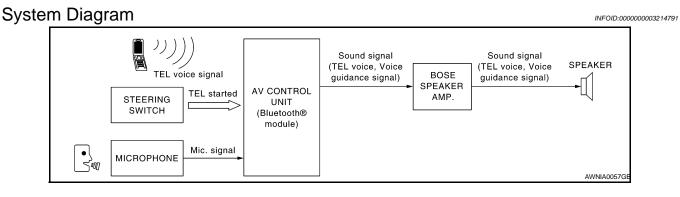
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### < FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# HANDS FREE PHONE SYSTEM (SEDAN)



### System Description

INFOID:000000003214792

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. During this time the Bluetooth ON indicator will flash until initialization is complete. 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.

# AV-270

### < FUNCTION DIAGNOSIS >

Component Parts Location

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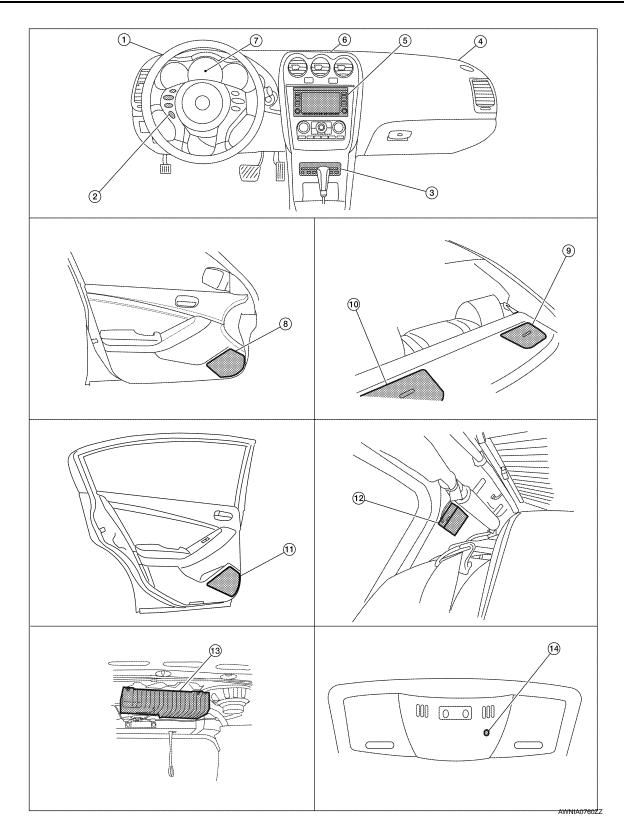
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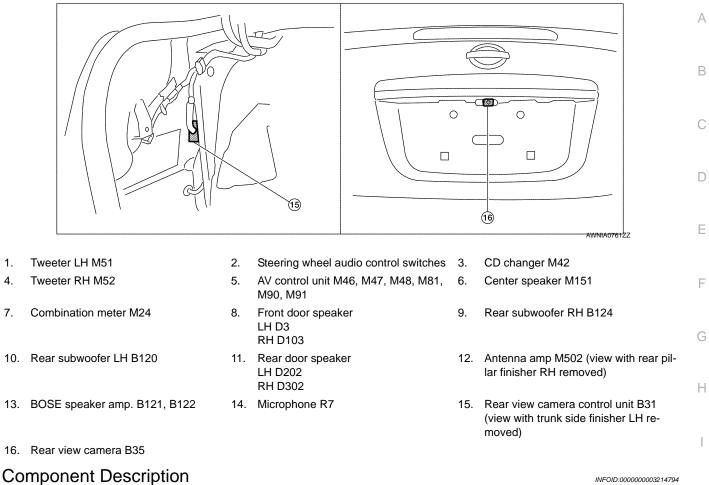
# < FUNCTION DIAGNOSIS >





### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]



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Part name	Description	_
AV control unit	<ul> <li>Controls hands-free phone functions</li> <li>Displays hands-free phone information on display screen</li> </ul>	K
BOSE speaker amp.	Inputs power (amp ON) and sound signal from AV control unit, and outputs sound signal to each speaker.	L
Front door speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>	
Tweeter	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high range sound</li></ul>	M
Center speaker	<ul><li>Outputs audio signal from BOSE speaker amp.</li><li>Outputs high, mid and low range sounds</li></ul>	
Steering wheel audio control switches	<ul> <li>Start a voice recognition session</li> <li>Answer and end telephone calls</li> <li>Adjust the volume level</li> </ul>	
Microphone	Sends voice signals to AV control unit	- 0

### < FUNCTION DIAGNOSIS >

# DIAGNOSIS SYSTEM (AV CONTROL UNIT)

### Diagnosis Description

INFOID:000000001830476

### DESCRIPTION

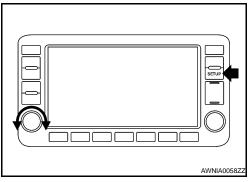
- Diagnosis function consists of the self-diagnosis mode performed automatically and the CONFIRMATION/ ADJUSTMENT mode operated manually.
- Self-diagnosis mode checks for connections between the units constituting this system, analyzes each individual unit at the same time, and displays the results on the LCD screen.
- CONFIRMATION/ADJUSTMENT mode is used to perform trouble diagnosis that requires operation and judgment by an operator (trouble that cannot be automatically judged by the system), to check/change the set value, and to display the History of Errors of the multi AV system.

### DIAGNOSIS ITEM

Mode			Description		
	Self-diagnosis		<ul> <li>AV control unit diagnosis (DVD-ROM drive will not be diagnosed when no map DVD-ROM is in it.</li> <li>Analyzes connection between the AV control unit, CD changer, satel- lite radio antenna and GPS antenna.</li> </ul>		
	Display diagnosis	Color spectrum bar	Color tone of the screen can be checked by the display of a color bar.		
		Gradation bar	Shading of the screen can be checked by the display of a gray scale.		
		Touch panel	<ul><li>Touch panel response can be checked.</li><li>Touch panel calibration can be performed.</li></ul>		
	Vehicle signals		The following vehicle signals are analyzed: Vehicle speed signal, park- ing brake signal, light signal, ignition switch signal, and reverse signal.		
	Speaker test		Connection can be checked by sending a test tone to each speaker.		
	Navigation		XM NavTraffic subscription status can be checked.		
	Error history		Diagnosis results previously stored in the memory are displayed in this mode.		
CONFIRMATION/ ADJUSTMENT	Vehicle CAN diagr	nosis	The transmitting/receiving of CAN communication can be monitored.		
ADJUSTMENT	Handsfree phone	Handsfree volume adjustment	Volume of hands-free phone can be adjusted.		
		Voice microphone test	Hands-free phone microphone can be tested.		
		Delete handsfree memory	Hands-free phone memory can be deleted.		
	Bluetooth	Confirm / Change Passkey	Bluetooth passkey can be changed.		
	Didelootin	Confirm / Change Device Key	Bluetooth device name can be changed.		
	XM SAT		Traffic channel information can be reviewed and changed.		

### **OPERATION PROCEDURE**

- 1. Start the engine.
- 2. Turn the audio system off.
- 3. While pressing the "SETUP" button, turn the volume control dial clockwise or counterclockwise for 30 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)



### < FUNCTION DIAGNOSIS >

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

# [BOSE AUDIO WITH NAVIGATION]

System Diagnosis	Back
iagnosis mation / Adjustment	
ase select an item	
ase select an item	ALNIA

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### SELF-DIAGNOSIS

- 1. Perform self-diagnosis by selecting "Self-diagnosis".
  - Self-diagnosis subdivision screen is displayed, and the selfdiagnosis mode starts.
  - A bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.

NOTE:

Self-diagnosis requires approximately 10 seconds to complete.

System Diagnosis	(S Back)
Self I Confi Cancel	
(i) Please select an item	
	ALNIA0087ZZ

 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
<b>Connection malfunction</b>	Gray	Yellow
Unit malfunction Note	Red	Green

 Image: System Diagnosis > Connection Confi...
 Back

 Image: CD Changer
 Image: CD Changer

 Image: SAT Antenna
 Image: Control unit

 Image: GPS Antenna
 Image: Control unit

 Image: Althouse Antenna
 Image: Control unit

 Image: Althouse Antenna
 Image: Control unit

 Image: Althouse Antenna
 Image: Control unit

 Image: Control unit
 Image

Note:

- Only the control unit (AV control unit) is displayed in red.
- If multiple malfunctions occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > yellow > gray.
- 3. Select a switch on the "SELF DIAGNOSIS" screen and comments for the diagnosis results will be shown.

System Diagnosis>Error Information	Back
Self diagnosis did not detect any error.	
Please refer to the Confirmation/	
Adjustment function or service manual for more detailed diagnosis information.	
	ALNIA0089

Self-Diagnosis Results

### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Area with yellow connection lines	Description	Possible malfunction location / Action to take
I System Diagnosis>Connection Confi         CD Changer         SAT Antenna         GPS Antenna	AV control unit malfunction is detected	Replace the AV control unit. Refer to AV-422, "Removal and Installation".
Image: System Diagnosis>Connection Confi       Sack)         Image: CD Changer       Image: Control unit         Image: SAT Antenna       Image: Control unit         Image: GPS Antenna       Image: Control unit         Image: Gray       Image: Control unit         Image: Control unit       Image: Control unit <td>GPS antenna connection malfunction is detected</td> <td>GPS antenna</td>	GPS antenna connection malfunction is detected	GPS antenna
Image: System Diagnosis>Connection Confi       Sack)         Image: CD Changer       Image: SAT Antenna         Image: SAT Antenna       Image: Control unit         Image: GPS Antenna       Image: Gray         Image: Gray       Image: Sate State Sta	Poor connection is detected in satel- lite antenna	<ul> <li>Satellite antenna feeder</li> <li>Satellite antenna</li> </ul>

### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Area with yellow connection lines	Description	Possible malfunction location / Action to take	А
System Diagnosis>Connection Confi         CD Changer         I         SAT Antenna         GPS Antenna         I: Gray         Gray         ALNIA0093GB	No diagnosis due to internal malfunc- tion of CD changer	Replace the CD changer. Refer to <u>AV-</u> 424, "Removal and Installation".	B C D
Image: System Diagnosis>Connection Confi       Sack         Image: CD Changer       Image: Sack         Image: CD Changer       Image: Control unit         Image: SAT Antenna       Image: Control unit         Image: Gray       Image: Control unit         Image: Control unit       I	<ul> <li>CD changer power supply and ground circuits</li> <li>A malfunction is detected in communication circuit between AV control unit and CD changer (REQ1 signal or communication signal)</li> <li>A malfunction is detected in communication signal between AV control unit and CD changer (REQ1 signal or communication signal)</li> </ul>	<ul> <li>CD changer power supply and ground circuits</li> <li>Communication line between AV control unit and CD changer (REQ1 signal or communication signal)</li> </ul>	E F G

### 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 button on the "Confirmation/Adjustment Mode" screen to display the relevant trouble diagnosis screen. Press the "BACK" button to return to the initial Confirmation/Adjustment Mode screen.

Display Diagnosis	
Vehicle Signals	
Speaker Test	
Navigation	
Error History	

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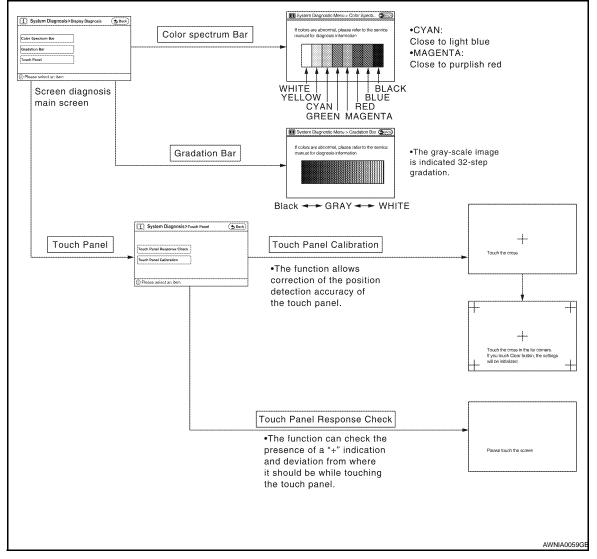
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### < FUNCTION DIAGNOSIS >

### **Display Diagnosis**



Vehicle Signals

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

li	System Diagnosis>V	ehicle Signals	🕤 Back
	Vehicle speed	OFF	
	Parking brake	OFF	
	Lights	OFF	
	Ignition	ON	
	Reverse	OFF	
	L		
			ALNIA0096ZZ

Diagnosis item	Dis- play	Vehicle status	Remarks
	ON	Vehicle speed > 0 km/h	
Vehicle speed	OFF	Vehicle speed = 0 km/h	
	-	Ignition switch in ACC position	Changes in indication may be delayed by approxi- mately 1.5 seconds. This is normal.
Parking brake	ON	Parking brake is applied.	
	OFF	Parking brake is released.	

### < FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Diagnosis item	Dis- play	Vehicle status	Remarks	А
Lights	ON	Light switch ON	Block the light beam from the auto light optical sensor.	
Lights	OFF	Light switch OFF	Block the light beam nom the auto light optical sensor.	D
Ignition	ON	Ignition switch ON		D
gritton	OFF	Ignition switch in ACC position		
	ON	Selector lever in R position		С
Reverse	OFF	Selector lever in any position other than R	Changes in indication may be delayed by approxi- mately 1.5 seconds. This is normal.	
	-	Ignition switch in ACC position		D

### Speaker Test

Select "SPEAKER TEST" to display the speaker diagnosis screen. Press "START" to generate a test tone in speakers. Press "End" to stop the test tones.

### NOTE:

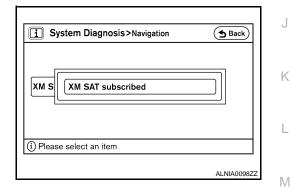
The speakers are tested in the following order:

Front left tweeter > front center > front right tweeter > front right > rear right > woofer > rear left > front left

System Diagnosis>Speaker 1	Start End
i) Push start to test next speaker	

Navigation

The XM NavTraffic subscription status can be checked.



Error History

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.

Vehicle CAN Diagnosis

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### DIAGNOSIS SYSTEM (AV CONTROL UNIT) IS S [BOSE AUDIO WITH NAVIGATION]

### < FUNCTION 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.

Items	Display (Current)	Malfunction counter (Past)
Rx (ECM)	OK / UNKWN	OK / 0 - 39
Rx (Cluster)	OK / UNKWN	OK / 0 - 39
Rx (HEV)	not used	_

# System Diagnosis>Vehicle CAN Dia... Checking Signal Status Rx(ECM) OK Rx(Cluster) OK Rx(HEV) OK Reset

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### Handsfree Phone

The hands-free phone reception volume adjustment, microphone test and memory erase functions are available.

<b>System Diagnosis&gt;Handsfree Phone</b>	( Back
Handsfree Volume Adjustment	
Voice Microphone Test O ON	
Delete Handsfree Memory	
(i) Please select an item	
	ALNIA0100ZZ

Bluetooth

Passkey confirmation/change

- The passkey of Bluetooth can be confirmed and changed.
- The passkey can be changed by four digits within 0 to 9.

<b>i</b> System Diagnosis>	Confirm / Change	<b>Back</b>
Bluetooth Passkey	1234	
(i) Please select an item		

Device name confirmation/change

- The device name of Bluetooth can be confirmed and changed.
- The device name can be changed by sixteen digits within A to Z (small character can be used) and - (hyphen).

System Diagn	osis>Confirm / Change	S Bac
Device Name	MY-CAR	
i Please select an ite	em	

XM SAT

### < FUNCTION DIAGNOSIS >

### Change Channel

Change Application ID

satellite radio system can be set.

- Any necessary channels required to receive traffic information from the satellite radio system can be set.

Any application ID's required to receive traffic information from the

[BOSE AUDIO WITH NAVIGATION] System Diagnosis>Traffic Info. CH 🗲 Back 255 Delete 2 3

6

9

3

6

9

5

8

0

System Diagnosis > Traffic Info. APPID

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Back

Delete

Enter

ALNIA0104ZZ

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

System D	iagnosis>Tra	affic Info. EXTI	D Sack
5_			Delete
	2	3	)
4	5	6	
	8	9	
	0		Enter
			ALNIA0105ZZ

# CONSULT - III Function (MULTI AV)

CONSULT-III can display each diagnostic item using the diagnostic test modes shown following.

MULTI AV diagnosis mode	Description	- 
SELF-DIAG RESULTS	Displays AV control unit self-diagnosis results.	- IVI
DATA MONITOR	Displays AV control unit input/output data in real time.	
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.	AV
AV COMM MONITOR	Allows the technician to monitor the status of the Multi AV system communication signals.	
ECU PART NUMBER	The part number of AV control unit can be checked.	_

### SELF-DIAG RESULTS

**Display Item List** Refer to AV-377, "DTC Index".

# DATA MONITOR

**Display Item List** 

INFOID:000000001830477

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### < FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Display item [unit]	ALL SIGNALS	SELECTION FROM MENU	Description	
VHCL SPD SIG [ON/OFF]	х	x	Displays "ON" when vehicle speed > 0 km/h. Displays "OFF" when vehicle speed = 0 km/h.	
PKB SIG [ON/OFF]	Х	Х	Displays [ON/OFF] condition of parking brake switch.	
ILLUM SIG [ON/OFF]	Х	Х	Displays [ON/OFF] condition of lighting switch.	
IGN SIG [ON/OFF]	Х	Х	Displays [ON/OFF] condition of ignition switch.	
REV SIG [ON/OFF]	Х	Х	Displays [ON/OFF] condition of back-up lamp switch.	

### [BOSE AUDIO WITH NAVIGATION]

**COMPONENT DIAGNOSIS** А **U1000 CAN COMM CIRCUIT** Description INFOID:000000001830478 В Refer to AV-232, "System Description". **DTC** Logic INFOID:000000001830479 DTC DETECTION LOGIC D DTC CONSULT-III display Detection condition CAN COMM CIRCUIT When AV control unit is not transmitting or receiving CAN communication signals for 2 sec-U1000 [U1000] onds or more. Е **Diagnosis Procedure** INFOID:000000001830480 F 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-10, "Condition of Error Detection". Н Κ L Μ AV

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### < COMPONENT DIAGNOSIS >

# U1010 CONTROL UNIT (CAN)

### Description

Refer to LAN-9, "Description".

**DTC Logic** 

INFOID:000000001830482

INFOID:000000001830483

INFOID:000000001830481

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**

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-10, "Condition of Error Detection".

### < COMPONENT DIAGNOSIS >

# U1200 AV CONTROL UNIT

# Description

Refer to AV-232. "System Description".

# DTC Logic

### INFOID:000000001830485

INFOID:000000001830484

### 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 <u>AV-422</u> , "Removal and Instal- lation".	D
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### [BOSE AUDIO WITH NAVIGATION]

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# U1201 AV CONTROL UNIT

# Description

Refer to AV-232, "System Description".

DTC Logic

INFOID:000000001830487

INFOID:000000001830486

### 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 (gy-rocompass disconnection).	Replace AV control unit. Refer to <u>AV-422, "Removal and Instal- lation"</u> .

### < COMPONENT DIAGNOSIS >

# U1204 GPS COMM

# Description

Refer to AV-232, "System Description".

# DTC Logic

INFOID:000000001830489

INFOID:000000001830488

# 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 <u>AV-422, "Removal and Instal-</u> lation".	D
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### < COMPONENT DIAGNOSIS >

# U1205 GPS ROM

# Description

Refer to AV-232, "System Description".

DTC Logic

INFOID:000000001830491

# 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 <u>AV-422, "Removal and Instal- lation"</u> .

INFOID:000000001830490

### U1206 GPS RAM

### Description

Refer to AV-232, "System Description".

### DTC Logic

INFOID:000000001830493

INFOID:000000001830492

### 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 <u>AV-422</u> , "Removal and Instal- lation".	D
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### [BOSE AUDIO WITH NAVIGATION]

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### U1207 GPS RTC

### Description

Refer to AV-232, "System Description".

DTC Logic

INFOID:000000001830495

### 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 <u>AV-422, "Removal and Instal-</u> lation".

INFOID:000000001830494

### U1208 DVD-ROM COMM

< COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

	J 1200 L	VD-ROM COM	1M	
DTC Logic       INFOLD-000001830497         DTC DETECTION LOGIC       Information in the internal malfunction is detected in AV control unit (DVD-ROM).         U1208       DVD-ROM COMM (U1208)         Diagnosis Procedure       INFOLD-000001830498         .CHECK DVD-ROM       Information is detected in AV control unit (DVD-ROM).         CHECK DVD-ROM       Information is detected in AV control unit (DVD-ROM).         Check DVD-ROM       Information is detected in AV control unit (DVD-ROM).         CHECK DVD-ROM       Information is detected in AV control unit (DVD-ROM).         Check DVD-ROM       Information is detected in AV control unit (DVD-ROM).         Check DVD-ROM       Information is detected in AV control unit (DVD-ROM).         Check DVD-ROM       Information is detected in AV control unit (DVD-ROM).         Check DVD-ROM       Information is detected in AV control unit (DVD-ROM).         Check DVD-ROM       Information is detected in AV control unit (DVD-ROM).         Check DVD-ROM       Information is detected in AV control unit (DVD-ROM).         Check DVD-ROM       Information is detected in AV control unit (DVD-ROM).         Check DVD-ROM for dirt, scratches and warpage.       Information is detected in AV-422, "Removal and Installation".         OK       >> Replace AV control unit. Refer to AV-422, "Removal and Installation".	Descriptio	on		INFOID:000000001830496
DTC       CONSULT-III display       Detection condition         U1208       DVD-ROM COMM [U1208]       An internal malfunction is detected in AV control unit (DVD-ROM).         Diagnosis Procedure         OFFICE CHECK DVD-ROM         CHECK DVD-ROM         Check DVD-ROM for dirt, scratches and warpage.         Sthe DVD-ROM for dirt, scratches and warpage.         OK         > Replace AV control unit. Refer to AV-422, "Removal and Installation".	Refer to <u>AV-</u>	-232, "System Descrip	otion".	
DTC       CONSULT-III display       Detection condition         U1208       DVD-ROM COMM [U1208]       An internal malfunction is detected in AV control unit (DVD-ROM).         Diagnosis Procedure         INFOLE:00000001830498         CHECK DVD-ROM         CHECK DVD-ROM         Check DVD-ROM for dirt, scratches and warpage.         a the DVD-ROM clean and undamaged?         OK       >> Replace AV control unit. Refer to AV-422, "Removal and Installation".	OTC Logi	ic		INFOID:000000001830497
U1208       DVD-ROM COMM [U1208]       An internal malfunction is detected in AV control unit (DVD-ROM).         Diagnosis Procedure       INFOID:00000001830498         .CHECK DVD-ROM       Check DVD-ROM for dirt, scratches and warpage.         Sthe DVD-ROM clean and undamaged?       OK       >> Replace AV control unit. Refer to AV-422, "Removal and Installation".	DTC DETE	CTION LOGIC		
01208       [U1208]       An internal mairunction is detected in AV control unit (DVD-ROM).         Diagnosis Procedure       INFOID:00000001830498         .CHECK DVD-ROM       Check DVD-ROM for dirt, scratches and warpage.         Sthe DVD-ROM clean and undamaged?       OK         OK       >> Replace AV control unit. Refer to AV-422, "Removal and Installation".	DTC	CONSULT-III display	Detection condition	
.CHECK DVD-ROM Check DVD-ROM for dirt, scratches and warpage. <u>S the DVD-ROM clean and undamaged?</u> OK >> Replace AV control unit. Refer to <u>AV-422, "Removal and Installation"</u> .	U1208		An internal malfunction is detected in AV control unit (DVD-ROM).	
Check DVD-ROM for dirt, scratches and warpage. <u> S the DVD-ROM clean and undamaged?</u> OK >> Replace AV control unit. Refer to <u>AV-422, "Removal and Installation"</u> .	Diagnosis	s Procedure		INFOID:000000001830498
s the DVD-ROM clean and undamaged? OK >> Replace AV control unit. Refer to <u>AV-422, "Removal and Installation"</u> .	.CHECK	DVD-ROM		
OK >> Replace AV control unit. Refer to <u>AV-422, "Removal and Installation"</u> .				
NG >> Replace DVD-ROM map.			•	
	NG >>	Replace DVD-ROM r	nap.	
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### U1209 DVD-ROM READ

### Description

Refer to AV-232, "System Description".

DTC Logic

INFOID:000000001830500

INFOID:000000001830501

### DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition
U1209	DVD-ROM READ [U1209]	An internal malfunction is detected in AV control unit (DVD-ROM).

### **Diagnosis Procedure**

### 1.CHECK DVD-ROM

Check DVD-ROM for dirt, scratches and warpage.

Is the DVD-ROM clean and undamaged?

YES >> Replace AV control unit. Refer to <u>AV-422, "Removal and Installation"</u>.

NO >> Replace DVD-ROM map.

### AV-292

INFOID:000000001830499

[BOSE AUDIO WITH NAVIGATION]

### **U120A DVD-ROM DISC**

### **IBOSE AUDIO WITH NAVIGATION1**

< COMPO	NENT DIAGNOSIS >	[BOSE AUDIO WIT	H NAVIGATION]
U120A [	DVD-ROM DIS	C	
Descripti	on		INFOID:000000001830502
Refer to AV	-232, "System Descri	<u>ption"</u> .	
DTC Log	ic		INFOID:000000001830503
DTC DETE	ECTION LOGIC		
DTC	CONSULT-III display	Detection condition	
U120A	DVD-ROM DISC [U120A]	An internal malfunction is detected in AV control unit (DVD-ROM).	
Diagnosi	s Procedure		INFOID:000000001830504
<b>1.</b> снеск	DVD-ROM		
Check DVD	-ROM for dirt, scratch	nes and warpage.	
s the DVD-	-ROM clean and unda	maged?	
		init. Refer to AV-422, "Removal and Installation".	
NO >>	Replace DVD-ROM	map.	

### **U120C DVD-ROM MECHA DETECT**

### Description

Refer to AV-232, "System Description".

DTC Logic

INFOID:000000001830506

INFOID:000000001830507

INFOID:000000001830505

### DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition
U120C	DVD-ROM MECHA DE- TECT [U120C]	An internal malfunction is detected in AV control unit (DVD-ROM).

### **Diagnosis Procedure**

### 1.CHECK DVD-ROM

Check DVD-ROM for dirt, scratches and warpage.

Is the DVD-ROM clean and undamaged?

YES >> Replace AV control unit. Refer to <u>AV-422, "Removal and Installation"</u>.

NO >> Replace DVD-ROM map.

### **U120D DVD-ROM DRIVE MECHA**

### < COMPONENT DIAGNOSIS >

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### [BOSE AUDIO WITH NAVIGATION]

U120D DVD-ROM DRIVE MECHA			Λ	
Descriptio	on		INFOID:000000001830508	A
Refer to AV	Refer to <u>AV-232, "System Description"</u> .			
DTC Logi	ic		INFOID:000000001830509	
DTC DETE	CTION LOGIC			С
DTC	CONSULT-III display	Detection condition		
U120D	DVD-ROM MECHA [U120D]	An internal malfunction is detected in AV control unit (DVD-ROM).		D
Diagnosis	s Procedure		INFOID:000000001830510	Е
1.снеск	DVD-ROM			
	-ROM for dirt, scratch			F
YES >>		nit. Refer to AV-422, "Removal and Installation".		
NO >>	Replace DVD-ROM r	nap.		G
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### U1210 DVD-ROM SEEK

### Description

Refer to AV-232, "System Description".

DTC Logic

INFOID:000000001830512

INFOID:000000001830513

INFOID:000000001830511

### DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition
U1210	DVD-ROM SEEK [U1210]	An internal malfunction is detected in AV control unit (DVD-ROM).

### **Diagnosis Procedure**

### 1.CHECK DVD-ROM

Check DVD-ROM for dirt, scratches and warpage.

Is the DVD-ROM clean and undamaged?

YES >> Replace AV control unit. Refer to <u>AV-422, "Removal and Installation"</u>.

NO >> Replace DVD-ROM map.

### **U1212 DVD-ROM DATA FORWARD**

### < COMPONENT DIAGNOSIS >

### U1212 DVD-ROM DATA FORWARD

#### Description INFOID:000000001830514 Refer to AV-232, "System Description". **DTC** Logic INFOID:000000001830515 DTC DETECTION LOGIC DTC CONSULT-III display Detection condition DVD-ROM DATA FOR-U1212 WARD An internal malfunction is detected in AV control unit (DVD-ROM). [U1212] **Diagnosis Procedure** INFOID:000000001830516 1

1.CHE	CK DVD-ROM			
Check I	Check DVD-ROM for dirt, scratches and warpage.			
Is the D	VD-ROM clean and undamaged?			
YES	>> Replace AV control unit. Refer to AV-422, "Removal and Installation".			

NO >> Replace DVD-ROM map.

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### [BOSE AUDIO WITH NAVIGATION]

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### U1213 DVD-ROM DATA

### Description

Refer to AV-232, "System Description".

DTC Logic

INFOID:000000001830518

INFOID:000000001830519

INFOID:000000001830517

[BOSE AUDIO WITH NAVIGATION]

### DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition
U1213	DVD-ROM DATA [U1213]	An internal malfunction is detected in AV control unit (DVD-ROM).

### **Diagnosis Procedure**

### 1.CHECK DVD-ROM

Check DVD-ROM for dirt, scratches and warpage.

Is the DVD-ROM clean and undamaged?

YES >> Replace AV control unit. Refer to <u>AV-422, "Removal and Installation"</u>.

NO >> Replace DVD-ROM map.

### \_\_\_\_\_

### **U1214 DVD-ROM TIMEOUT**

### < COMPONENT DIAGNOSIS >

### U1214 DVD-ROM TIMEOUT

Description

Refer to AV-232. "System Description".

DTC Logic

### DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition		
U1214	DVD-ROM TIMEOUT [U1214]	An internal malfunction is detected in AV control unit (DVD-ROM).		D
Diagnosi	s Procedure		INFOID:000000001830522	Е
1.снеск	DVD-ROM			
Check DVE	-ROM for dirt, scratch	nes and warpage.		F
Is the DVD	-ROM clean and unda	maged?		
	<ul> <li>Replace AV control u</li> <li>Replace DVD-ROM</li> </ul>	nit. Refer to <u>AV-422, "Removal and Installation"</u> .		G

NO >> Replace DVD-ROM map.

### [BOSE AUDIO WITH NAVIGATION]

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### U1215 DVD-ROM LOAD

### Description

Refer to AV-232, "System Description".

DTC Logic

INFOID:000000001830524

INFOID:000000001830525

INFOID:000000001830523

### DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition
U1215	DVD-ROM LOAD [U1215]	An internal malfunction is detected in AV control unit (DVD-ROM).

### **Diagnosis Procedure**

### 1.CHECK DVD-ROM

Check DVD-ROM for dirt, scratches and warpage.

Is the DVD-ROM clean and undamaged?

YES >> Replace AV control unit. Refer to <u>AV-422, "Removal and Installation"</u>.

NO >> Replace DVD-ROM map.

### U1216 AV CONTROL UNIT

### Description

Refer to AV-232. "System Description".

### DTC Logic

INFOID:0000000001830527

INFOID:000000001830526

### 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 <u>AV-422</u> , " <u>Removal and Instal- lation</u> ".	D
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### [BOSE AUDIO WITH NAVIGATION]

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### U1217 AV CONTROL UNIT

### Description

Refer to AV-232, "System Description".

DTC Logic

INFOID:000000001830529

INFOID:000000001830528

### 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 (Blue- tooth module connection malfunction).	Replace AV control unit. Refer to <u>AV-422, "Removal and Instal- lation"</u> .

### U1220 AV CONTROL UNIT

### Description

Refer to AV-232. "System Description".

### DTC Logic

INFOID:000000001830531

### DTC DETECTION LOGIC

	DTC	CONSULT-III display	Detection condition	Action to take	
_	U1220	XM SERIAL COMM [U1220]	An internal malfunction is detected in AV control unit (sat- ellite radio tuner communication malfunction).	Replace AV control unit. Refer to <u>AV-422</u> , "Removal and Instal- lation".	D
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### [BOSE AUDIO WITH NAVIGATION]

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INFOID:000000001830530

### U1244 GPS ANTENNA

### Description

Refer to AV-232, "System Description".

DTC Logic

### DTC DETECTION LOGIC

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

### **Diagnosis Procedure**

### **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.

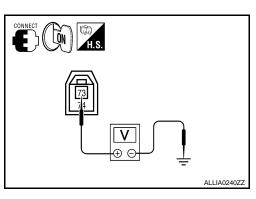
2. Check voltage between AV control unit connector M90 terminal 73 and ground.

### 73 - Ground

: Approx. 5V

Is the voltage reading as specified?

- YES >> Replace GPS antenna. Refer to <u>AV-433, "Removal and</u> <u>Installation"</u>.
- NO >> Replace AV control unit. Refer to <u>AV-422, "Removal and</u> <u>Installation"</u>.



INFOID:000000001830532

INFOID:000000001830533

INFOID:000000001830534

	JINEINI DIAGNOSIS		
J124C	CD CHANGER	8	
Descript	tion		INFOID:000000001830535
Refer to A	AV-232, "System Desci	ription".	
DTC Lo			INFOID:000000001830536
	•		
DEL	TECTION LOGIC		
DTC	CONSULT-III display	Detect	on condition
U124C	N-BUS CD CHG CONN [U124C]		bower supply and ground circuits it. (Between CD changer and AV control unit) nal circuit. (Between CD changer and AV control
Diagnos	sis Procedure		INFOID:00000001830537
.CHECI	K CD CHANGER POV	VER SUPPLY AND GROUND CIRCU	ШΤ
			10. "CD CHANGER : Diagnosis Proce-
<u>ure"</u> .			
-	and ground check Ok	<u><?</u></u>	
	>> GO TO 2 >> Repair power suppl	v or ground circuit	
		CIRCUIT CONTINUITY	
	ignition switch OFF.	onector M42 and AV control unit conn	ector M48
. Disco	onnect CD changer cor	nnector M42 and AV control unit conn CD changer harness connector M42	
. Disco . Checl (A) te	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar	CD changer harness connector M42 nd AV control unit harness connector	
. Disco . Checl (A) te	onnect CD changer cor k continuity between (	CD changer harness connector M42 nd AV control unit harness connector	
. Disco . Checl (A) te M48 (	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar	CD changer harness connector M42 nd AV control unit harness connector	
. Disco . Checl (A) te M48 ( <b>8</b> -	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar	CD changer harness connector M42 nd AV control unit harness connector nd 72.	B B A 69,70,72 69,70,72
2. Disco 6. Checl (A) te M48 ( 8 - 9 -	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - <b>72</b>	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b>	B TO 70 72 69 , 70 , 72
<ul> <li>Disco</li> <li>Checl</li> <li>(A) te</li> <li>M48 (</li> <li>8 -</li> <li>9 -</li> <li>10</li> <li>Checl</li> </ul>	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 ) - 70	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> CD changer harness connector M42	B         70         72           A         69,70,72           8,9,10         Ω
. Disco . Checl (A) te M48 ( <b>8</b> - <b>9</b> - <b>10</b> . Checl (A) te	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 ) - 70 k continuity between (	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> CD changer harness connector M42	B 70 72 69,70,72 8,9,10 8,9,10 Ω
. Disco . Checl (A) te M48 ( 8 - 9 - 10 . Checl (A) te 8,	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> CD changer harness connector M42 round. <b>: Continuity should not exist.</b>	B         70         72           A         69,70,72           8,9,10         Ω
. Disco . Checl (A) te M48 ( <b>8 -</b> <b>9 -</b> <b>10</b> . Checl (A) te <b>8</b> , <u>are the cc</u> YES >	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> CD changer harness connector M42 round. <b>: Continuity should not exist.</b> Specified?	B         70         72           A         69,70,72           8,9,10         Ω
:. Disco :. Checl (A) te M48 ( 8 - 9 - 10 :. Checl (A) te 8, vre the cc YES > NO >	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3 >> Repair harness or c	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> CD changer harness connector M42 round. <b>: Continuity should not exist.</b> <b>: Specified?</b> connector.	B         70         72           A         69,70,72           8,9,10         Ω
2. Disco 3. Checl (A) te M48 ( 8 - 9 - 10 4. Checl (A) te 8, <u>Are the cc</u> NO >	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> CD changer harness connector M42 round. <b>: Continuity should not exist.</b> <b>: Specified?</b> connector.	B         70         72           A         69,70,72           8,9,10         Ω
<ol> <li>Disco</li> <li>Checl</li> <li>(A) te</li> <li>M48 (</li> <li>8 -</li> <li>9 -</li> <li>10</li> <li>Checl</li> <li>(A) te</li> <li>8,</li> <li>Are the co</li> <li>YES &gt;</li> <li>NO &gt;</li> <li>CHECH</li> <li>Conne</li> </ol>	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3 >> Repair harness or o K REQUEST SIGNAL ect CD changer conne	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> CD changer harness connector M42 round. <b>: Continuity should not exist.</b> <b>: Specified?</b> connector.	B         70         72           A         69,70,72           8,9,10         Ω
<ul> <li>Disco</li> <li>Checl</li> <li>(A) te</li> <li>M48 (</li> <li>8 -</li> <li>9 -</li> <li>10</li> <li>Checl</li> <li>(A) te</li> <li>8,</li> <li>Are the co</li> <li>YES &gt;</li> <li>NO &gt;</li> <li>CHECH</li> <li>Conno</li> <li>Turn i</li> </ul>	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3 >> Repair harness or content K REQUEST SIGNAL ect CD changer conne- ignition switch ON.	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> CD changer harness connector M42 round. <b>: Continuity should not exist.</b> <b>: Continuity should not exist.</b> <b>: Specified?</b> connector.	B         70         72           A         69,70,72           8,9,10         Ω
<ul> <li>Disco</li> <li>Checl</li> <li>(A) te</li> <li>M48 (</li> <li>8 -</li> <li>9 -</li> <li>10</li> <li>Checl</li> <li>(A) te</li> <li>8,</li> <li>Are the cc</li> <li>YES &gt;</li> <li>NO &gt;</li> <li>CHECH</li> <li>Connois</li> <li>Connois</li> <li>Checl</li> </ul>	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3 >> Repair harness or content K REQUEST SIGNAL ect CD changer conne- ignition switch ON.	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> CD changer harness connector M42 round. <b>: Continuity should not exist.</b> <b>: Continuity should not exist.</b> <b>: Specified?</b> connector.	B         70         72           A         69,70,72           8,9,10         Ω
<ul> <li>2. Disco</li> <li>3. Checl</li> <li>(A) te</li> <li>M48 (</li> <li>8 -</li> <li>9 -</li> <li>10</li> <li>4. Checl</li> <li>(A) te</li> <li>8,</li> <li>Are the cc</li> <li>YES &gt;</li> <li>NO &gt;</li> <li>3. CHECH</li> <li>2. Turn i</li> <li>3. Checl</li> <li>minal</li> </ul>	onnect CD changer cor k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3 >> Repair harness or c K REQUEST SIGNAL ect CD changer conne ignition switch ON. k signal between CD o	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> CD changer harness connector M42 round. <b>: Continuity should not exist.</b> <b>: Continuity should not exist.</b> <b>: Specified?</b> connector.	B         70         72           A         69,70,72           8,9,10         Ω
<ul> <li>2. Disco</li> <li>3. Checl</li> <li>(A) te</li> <li>M48 (</li> <li>8 -</li> <li>9 -</li> <li>10</li> <li>4. Checl</li> <li>(A) te</li> <li>8,</li> <li>Are the cc</li> <li>YES &gt;</li> <li>NO &gt;</li> <li>3. CHECH</li> <li>2. Turn i</li> <li>3. Checl</li> <li>minal</li> </ul>	onnect CD changer cork k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3 >> Repair harness or co K REQUEST SIGNAL ect CD changer conne- ignition switch ON. k signal between CD of 8 and ground.	CD changer harness connector M42 nd AV control unit harness connector nd 72. <b>: Continuity should exist.</b> <b>: Continuity should exist.</b> CD changer harness connector M42 round. <b>: Continuity should not exist.</b> <b>: Continuity should not exist.</b> <b>: Specified?</b> connector.	B         70         72           A         69,70,72           8,9,10         Ω
<ul> <li>2. Disco</li> <li>3. Checl</li> <li>(A) te</li> <li>M48 (</li> <li>8 -</li> <li>9 -</li> <li>10</li> <li>4. Checl</li> <li>(A) te</li> <li>8,</li> <li>Are the cc</li> <li>YES &gt;</li> <li>NO &gt;</li> <li>3. CHECH</li> <li>2. Turn i</li> <li>3. Checl</li> <li>minal</li> </ul>	onnect CD changer cork k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3 >> Repair harness or co K REQUEST SIGNAL ect CD changer conne- ignition switch ON. k signal between CD of 8 and ground.	CD changer harness connector M42 nd AV control unit harness connector nd 72. : Continuity should exist. : Continuity should exist. : Continuity should exist. CD changer harness connector M42 round. : Continuity should not exist. s specified? connector. ector and AV control unit connector. changer harness connector M42 ter-	B         70         72           A         69,70,72           8,9,10         β
<ul> <li>2. Disco</li> <li>3. Checl</li> <li>(A) te</li> <li>M48 (</li> <li>8 -</li> <li>9 -</li> <li>10</li> <li>4. Checl</li> <li>(A) te</li> <li>8,</li> <li>Are the cc</li> <li>YES &gt;</li> <li>NO &gt;</li> <li>3. CHECH</li> <li>2. Turn i</li> <li>3. Checl</li> <li>minal</li> </ul>	onnect CD changer cork k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3 >> Repair harness or co K REQUEST SIGNAL ect CD changer conne- ignition switch ON. k signal between CD of 8 and ground.	CD changer harness connector M42 nd AV control unit harness connector nd 72. : Continuity should exist. : Continuity should exist. CD changer harness connector M42 round. : Continuity should not exist. s specified? connector. ector and AV control unit connector. changer harness connector M42 ter-	B         70         72           A         69,70,72           8,9,10         β
<ul> <li>2. Disco</li> <li>3. Checl</li> <li>(A) te</li> <li>M48 (</li> <li>8 -</li> <li>9 -</li> <li>10</li> <li>4. Checl</li> <li>(A) te</li> <li>8,</li> <li>Are the cc</li> <li>YES &gt;</li> <li>NO &gt;</li> <li>3. CHECH</li> <li>2. Turn i</li> <li>3. Checl</li> <li>minal</li> </ul>	onnect CD changer cork k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3 >> Repair harness or co K REQUEST SIGNAL ect CD changer conne- ignition switch ON. k signal between CD of 8 and ground.	CD changer harness connector M42 nd AV control unit harness connector nd 72. : Continuity should exist. : Continuity should exist. : Continuity should exist. CD changer harness connector M42 round. : Continuity should not exist. a specified? connector. ector and AV control unit connector. changer harness connector M42 ter-	B         70         72           A         69,70,72           8,9,10         β
<ul> <li>Disco</li> <li>Checl</li> <li>(A) te</li> <li>M48 (</li> <li>9 -</li> <li>10</li> <li>Checl</li> <li>(A) te</li> <li>8,</li> <li>Are the cc</li> <li>YES &gt;</li> <li>NO &gt;</li> <li>CHECH</li> <li>Conno</li> <li>Checl</li> <li>Turn i</li> <li>Checl</li> <li>minal</li> </ul>	onnect CD changer cork k continuity between ( erminals 8, 9 and 10 ar (B) terminals 69, 70 ar - 72 - 69 0 - 70 k continuity between ( erminals 8, 9, 10 and g 9, 10 - Ground ontinuity test results as >> GO TO 3 >> Repair harness or co K REQUEST SIGNAL ect CD changer conne- ignition switch ON. k signal between CD of 8 and ground.	CD changer harness connector M42 nd AV control unit harness connector nd 72. : Continuity should exist. : Continuity should exist. : Continuity should exist. CD changer harness connector M42 round. : Continuity should not exist. specified? connector. ector and AV control unit connector. changer harness connector M42 ter-	B         70         72           A         69,70,72           8,9,10         β

### U124C CD CHANGER

< COMPONENT DIAGNOSIS >

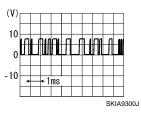
### Are the voltage readings as specified?

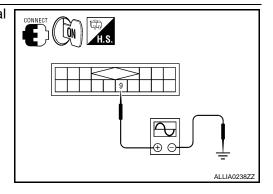
- YES >> GO TO 4
- NO >> Replace CD changer. Refer to <u>AV-424, "Removal and Installation"</u>.

4. CHECK COMMUNICATION SIGNAL

Check signal between CD changer harness connector M42 terminal 9 and ground.

### 9 - Ground





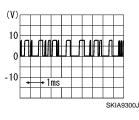
### Are the voltage readings as specified?

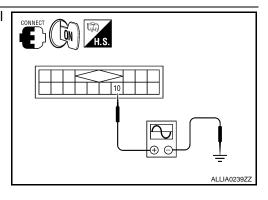
NO >> Replace CD changer. Refer to <u>AV-424, "Removal and Installation"</u>.

**5.**CHECK COMMUNICATION SIGNAL

Check signal between CD changer harness connector M42 terminal 10 and ground.

### 10 - Ground





Are the voltage readings as specified?

- YES >> Inspection End.
- NO >> Replace AV control unit. Refer to <u>AV-422, "Removal and Installation"</u>.

### POWER SUPPLY AND GROUND CIRCUIT (COUPE) < COMPONENT DIAGNOSIS >

### POWER SUPPLY AND GROUND CIRCUIT (COUPE) **AV CONTROL UNIT**

### **AV CONTROL UNIT : Diagnosis Procedure**

### **1.**CHECK FUSE

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

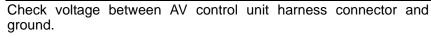
Unit	Terminals	Signal name	Fuse No.	
	20	Battery power	24	D
AV control unit	7	Ignition switch ACC or ON	19	
	10	Ignition switch ON or START	3	_

### 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



(-	+)	(-)	Ignition switch po-	Value (Ap-
Connector	Terminal	()	sition	prox.)
	20		OFF	
M47	7	Ground	ACC	Battery volt- age
	10		ON	9

### Are the voltage tests as specified?

YES >> GO TO 3

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

### ${f 3.}$ CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connectors.
- 3. Check continuity between AV control unit harness connector M47 terminal 19 and ground.

Signal name	Continuity
Ground	Continuity should exist.

### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

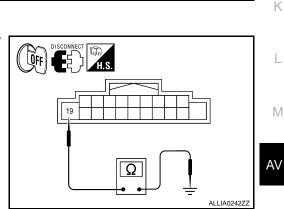
### REAR VIEW CAMERA CONTROL UNIT

### **REAR VIEW CAMERA CONTROL UNIT : Diagnosis Procedure**

### 1.CHECK FUSE

Check that the following fuses of the rear view camera control unit are not blown.

Unit	Terminals	Signal name	Fuse No.
Rear view camera control unit	1	Battery power	24
	2	Ignition switch ACC or ON	19



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### AV-307

[BOSE AUDIO WITH NAVIGATION]



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[BOSE AUDIO WITH NAVIGATION]

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### 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 rear view camera control unit harness connector and ground.

(+	·)	(-)	Ignition switch	Value (Approx.)
Connector	Terminal	()	position	value (Applox.)
B31	1	Ground	OFF	Battery voltage
001	2	Ground	ACC	Dattery Voltage

### Are the voltage readings as specified?

- YES >> GO TO 3
- NO >> Check harness between rear view camera control unit and fuse.

### **3.**CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect rear view camera control unit connector.
- Check continuity between rear view camera control unit harness connector B31 terminal 3 and ground.

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Signal name	Continuity
Ground	Continuity should exist.

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

### REAR VIEW CAMERA

### REAR VIEW CAMERA : Diagnosis Procedure

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

Check voltage between rear view camera harness connector and ground.

(+)		(-)	Transmission po-	Value (Approx.)
Connector	Terminal	(-)	sition	value (Applox.)
T7	1	Ground	Reverse	6V

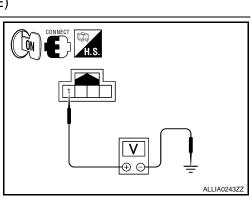
Is voltage reading approximately 6 volts?

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

### 2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.

2. Disconnect rear view camera and rear view camera control unit connectors.



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#### < COMPONENT DIAGNOSIS >

3. Check continuity between rear view camera harness connector T7 (A) terminal 1 and rear view camera control unit harness connector B31 (B) terminal 8.

Signal name	Continuity	
Camera ON signal	Continuity should exist.	

Check continuity between rear view camera harness connector 4 T7 (A) terminal 1 and ground.

Signal name	Continuity	
Camera ON signal	Continuity should not exist.	

Are continuity test results as specified?

YES >> GO TO 3

NO >> Repair harness or connector.

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

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

(+	(+)		Condition	Value (Approx.)
Connector	Terminal	(-)	Condition	value (Applex.)
B31	8	Ground	Reverse	6V

#### Is voltage reading approximately 6 volts?

YES >> Inspection End.

NO >> Replace rear view camera control unit. Refer to AV-447, "Removal and Installation - Coupe".

### **4.**CHECK GROUND CIRCUIT

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

Signal name	Continuity
Ground	Continuity should exist.

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

### BOSE SPEAKER AMP

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

### 1.CHECK FUSE

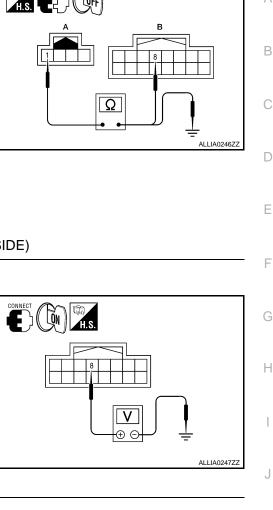
Check that the following fuses of the BOSE speaker amp. are not blown.

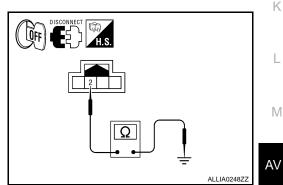
Unit	Terminals	Signal name	Fuse No.
BOSE speaker amp.	50	Battery power	25
	51	Dattery power	26

Are the fuses OK?

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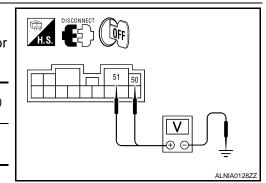
[BOSE AUDIO WITH NAVIGATION]

- 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.
- Check voltage between BOSE speaker amp harness connector and ground.

(+)		(-)	Voltage (approx.)
Connector	Terminal	(-)	voltage (approx.)
B122	50	- Ground Batter	Battery voltage
DIZZ	51	Ciouna	Dattery voltage



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### 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
DIZZ	52	Ground	165

Are continuity test results as specified?

YES >> Inspection End.

NO >> Repair harness or connector.

### CD CHANGER

### **CD CHANGER : Diagnosis Procedure**

### 1.CHECK FUSE

Check that the following fuses of the CD changer are not blown.

Unit	Terminals	Signal name	Fuse No.
CD changer	12	Battery power	24
CD changer	16	Ignition switch ACC or ON	19

### 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

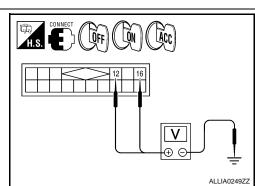
Check voltage between CD changer harness connector and ground.

(+)		(-)	Ignition switch po-	Value (Approx.)
Connector	Terminal	()	sition	
M42	12	Ground	OFF	Battery voltage
IVI4Z	16	Cround	ACC	Dattery voltage

Are the voltage readings as specified?

YES >> Inspection End.

NO >> Check harness between CD changer and fuse.



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### MICROPHONE

### **MICROPHONE : Diagnosis Procedure**

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

Check voltage between microphone harness connector and ground.

(+)			Ignition	Value (Ap-
Connector	Terminal	(-)	switch posi- tion	prox.)
R7	4	Ground	ON	5V

Is proper voltage present?

YES >> GO TO 4

NO >> GO TO 2

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[BOSE AUDIO WITH NAVIGATION]

### 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 M46 (B) terminal 46.

Signal name	Continuity	
Microphone VCC signal	Continuity should exist.	

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

Signal name	Continuity
Microphone VCC signal	Continuity should not exist.

Are the 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 AV control unit harness connector.
- 2. Turn ignition switch to ACC.
- 3. Check voltage between AV control unit harness connector and ground.

(+	(+)		Ignition switch	Value (Approx.)
Connector	Terminal	(-)	position	
M46	46	Ground	ACC	5V

Is voltage approximately 5 volts?

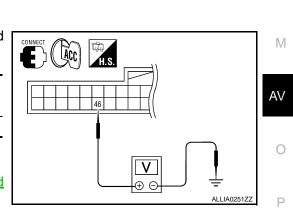
YES >> Inspection End.

>> Replace AV control unit. Refer to AV-422, "Removal and NO Installation".

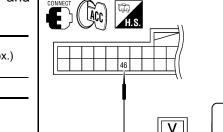
### 4.CHECK GROUND CIRCUIT

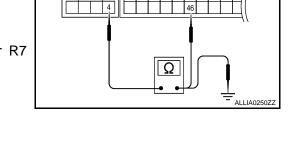
1. Turn ignition switch OFF.

2. Disconnect microphone harness connector R7 and AV control unit harness connector M46.



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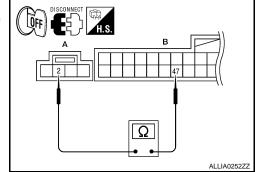
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 Check continuity between microphone harness connector R7 (A) terminal 2 and AV control unit harness connector M46 (B) terminal 47.

### [BOSE AUDIO WITH NAVIGATION]



Signal name	Continuity
Ground	Continuity should exist.

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

### POWER SUPPLY AND GROUND CIRCUIT (SEDAN)

### < COMPONENT DIAGNOSIS >

### POWER SUPPLY AND GROUND CIRCUIT (SEDAN) **AV CONTROL UNIT**

### **AV CONTROL UNIT : Diagnosis Procedure**

### **1.**CHECK FUSE

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

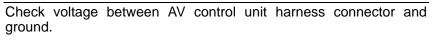
Unit	Terminals	Signal name	Fuse No.	-
	20	Battery power	24	D
AV control unit	7	Ignition switch ACC or ON	19	-
	10	Ignition switch ON or START	3	_

### 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



(-	+)	(-)	Ignition switch po-	Value (Ap-
Connector	Terminal	()	sition	prox.)
	20		OFF	
M47	7	Ground	ACC	Battery volt- age
	10		ON	30

### Are the voltage tests as specified?

YES >> GO TO 3

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

### ${f 3.}$ CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connectors.
- 3. Check continuity between AV control unit harness connector M47 terminal 19 and ground.

Signal name	Continuity
Ground	Continuity should exist.

### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

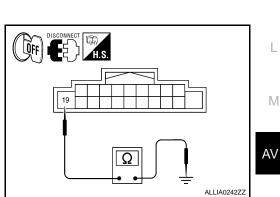
### REAR VIEW CAMERA CONTROL UNIT

### **REAR VIEW CAMERA CONTROL UNIT : Diagnosis Procedure**

### 1.CHECK FUSE

Check that the following fuses of the rear view camera control unit are not blown.

Unit	Terminals	Signal name	Fuse No.
Rear view camera control unit	1	Battery power	24
	2	Ignition switch ACC or ON	19



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### [BOSE AUDIO WITH NAVIGATION]



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### POWER SUPPLY AND GROUND CIRCUIT (SEDAN)

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

H.S. (QFF) (ACC)

### 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 rear view camera control unit harness connector and ground.

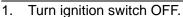
(+	·)	(-)	Ignition switch	Value (Approx.)
Connector	Terminal	()	position	value (Applox.)
B31	1	Ground	OFF	Battery voltage
001	2	Ground	ACC	Dattery Voltage

### Are the voltage readings as specified?

YES >> GO TO 3

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

### 3. CHECK GROUND CIRCUIT



- 2. Disconnect rear view camera control unit connector.
- Check continuity between rear view camera control unit harness connector B31 terminal 3 and ground.

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Signal name	Continuity
Ground	Continuity should exist.

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

### REAR VIEW CAMERA

### REAR VIEW CAMERA : Diagnosis Procedure

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

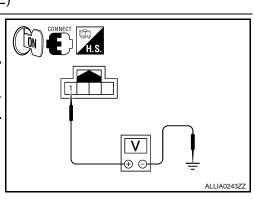
Check voltage between rear view camera harness connector and ground.

Connector	Terminal	Transmission posi- tion	Value (Approx.)
B35	1	Reverse	6V

Is inspection result normal?

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

2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)



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### POWER SUPPLY AND GROUND CIRCUIT (SEDAN) **(BOSE AUDIO WITH NAVIGATION)**

### < COMPONENT DIAGNOSIS >

- Turn ignition switch OFF. 1.
- 2. Disconnect rear view camera and rear view camera control unit connectors.
- 3. Check continuity between rear view camera harness connector B35 (A) terminal 1 and rear view camera control unit harness connector B31 (B) terminal 8.

Signal name	Continuity
Camera ON signal	Continuity should exist.

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

Signal name	Continuity
Camera ON signal	Continuity should not exist.

Is inspection result normal?

>> GO TO 3 YES

NO >> Repair harness or connector.

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

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

Connector	Terminal	Transmission posi- tion	Value (Approx.)
B31	8	Reverse	6V

### Is voltage approximately 6V?

- YES >> Inspection End.
- NO >> Replace rear view camera control unit. Refer to AV-447. "Removal and Installation - Sedan".

### 4.CHECK GROUND CIRCUIT

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

Signal name	Continuity
Ground	Continuity should exist.

### Is inspection result normal?

YES >> Inspection End.

NO >> Repair harness or connector.

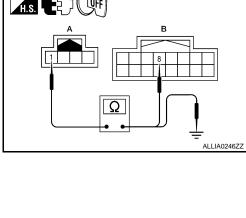
BOSE SPEAKER AMP

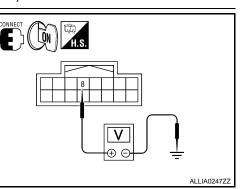
### **BOSE SPEAKER AMP : Diagnosis Procedure**

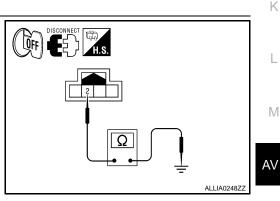
### 1.CHECK FUSE

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

Unit	Terminals	Terminals Signal name	
BOSE speaker amp.	50	Battery power	25
	51	Dattery power	26







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### POWER SUPPLY AND GROUND CIRCUIT (SEDAN)

< COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

### Are the fuses OK?

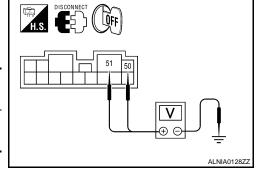
YES >> GO TO 2

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	(-)	vollage (applox.)	
B122	50	Ground Batte	Battery voltage	
DIZZ	51	Giouna	Dattery voltage	



### 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.

Terminal

47

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Check continuity between BOSE speaker amp harness connector and ground.

Ground

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Are continuity test results as specified?

YES >> Inspection End.

NO >> Repair harness or connector.

### CD CHANGER

Connector

B122

### **CD CHANGER : Diagnosis Procedure**

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### 1.CHECK FUSE

Check that the following fuses of the CD changer are not blown.

Unit	Terminals	Signal name	Fuse No.
CD changer	12	Battery power	24
CD changer	16	Ignition switch ACC or ON	19

Continuity

Yes

### 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

### AV-317

### POWER SUPPLY AND GROUND CIRCUIT (SEDAN) [BOSE AUDIO WITH NAVIGATION]

### < COMPONENT DIAGNOSIS >

Check voltage between CD changer harness connector and ground.

(+)		(-)	Ignition switch po-	Value (Approx.)
Connector	Terminal	()	sition	value (/ pplox.)
M42	12	Ground	OFF	Battery voltage
10142	16	Gibunu	ACC	Dattery voltage

Are the voltage readings as specified?

YES >> Inspection End. NO >> Check harness

IO >> Check harness between CD changer and fuse.

### MICROPHONE

### **MICROPHONE : Diagnosis Procedure**

### **1.**CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

Check voltage between microphone harness connector and ground.

(·	+)		Ignition	Value (Ap-
Connector	Terminal	(-)	switch posi- tion	prox.)
R7	4	Ground	ON	5V

Is proper voltage present?

YES >> GO TO 4

NO >> GO TO 2

### 2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

- 1. Turn ignition switch OFF.
- 2. Disconnect microphone and AV control unit harness connectors.
- Check continuity between microphone harness connector R7 (A) terminal 4 and AV control unit harness connector M46 (B) terminal 46.

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 the continuity test results as specified?

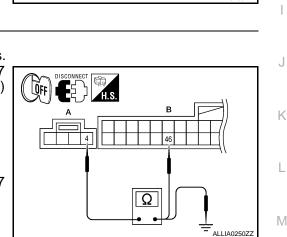
YES >> GO TO 3

NO >> Repair harness or connector.

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

1. Connect AV control unit harness connector.

2. Turn ignition switch to ACC.



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### POWER SUPPLY AND GROUND CIRCUIT (SEDAN) IAGNOSIS > [BOSE AUDIO WITH NAVIGATION]

### < COMPONENT DIAGNOSIS >

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

(+	(+)		Ignition switch	Value (Approx.)
Connector	Terminal	(-)	position	
M46	46	Ground	ACC	5V

Is voltage approximately 5 volts?

YES >> Inspection End.

NO >> Replace AV control unit. Refer to <u>AV-422</u>, "<u>Removal and</u> <u>Installation</u>".

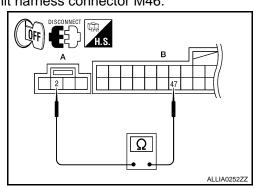
### 4.CHECK GROUND CIRCUIT

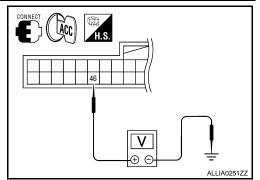
- 1. Turn ignition switch OFF.
- 2. Disconnect microphone harness connector R7 and AV control unit harness connector M46.
- Check continuity between microphone harness connector R7 (A) terminal 2 and AV control unit harness connector M46 (B) terminal 47.

Signal name	Continuity
Ground	Continuity should exist.

Does continuity exist?

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





### DOOR SPEAKER (COUPE) [BOSE AUDIO WITH NAVIGATION]

### < COMPONENT DIAGNOSIS >

### DOOR SPEAKER (COUPE)

### Description

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

### **Diagnosis Procedure**

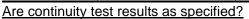
### **1.**HARNESS CHECK

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

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B121	58	D3	1	
	59		2	Yes
	71	D103	1	Tes
	72	0103	2	

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

A			Continuity
Connector	Terminal		Continuity
B121	58		No
	59	Ground	
	71	Giouna	NO
	72	1	



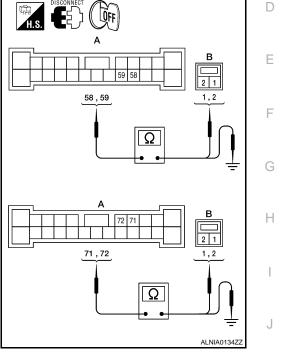
YES >> GO TO 2

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

2.DOOR SPEAKER SIGNAL CHECK

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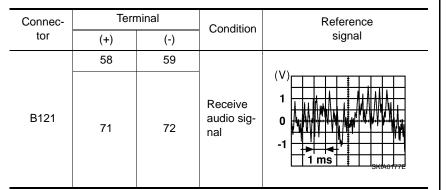
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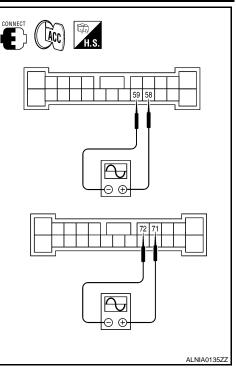
### **DOOR SPEAKER (COUPE)**

### < COMPONENT DIAGNOSIS >

- 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.



### [BOSE AUDIO WITH NAVIGATION]



### Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to <u>AV-427</u>, "<u>Removal</u> and <u>Installation</u>".

NO >> GO TO 3

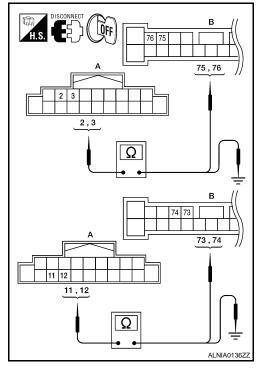
### **3.**HARNESS CHECK

- 1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B121.
- 2. Check continuity between audio unit harness connector M47 (A) and BOSE speaker amp. harness connector B121 (B).

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	B121	75	
M47	3		76	Yes
	11		73	Tes
	12		74	

3. Check continuity between AV control unit harness connector M47 (A) and ground.

	A Connector Terminal			Continuity
-			_	
-		2		No
		3	Ground	
M47	11	Ground	INO	
		12		



Are continuity test results as specified?

YES >> GO TO 4

NO

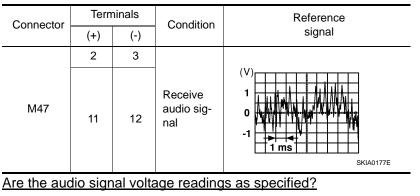
- >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

**4.**DOOR SPEAKER SIGNAL CHECK

### **DOOR SPEAKER (COUPE)**

### < 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.



- YES >> Replace BOSE speaker amp. Refer to <u>AV-423</u>, <u>"Removal and Installation - Coupe"</u>.
- NO >> Replace AV control unit. Refer to <u>AV-422</u>, "<u>Removal and</u> <u>Installation</u>".

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### [BOSE AUDIO WITH NAVIGATION]

### FRONT DOOR SPEAKER (SEDAN)

### < COMPONENT DIAGNOSIS >

### FRONT DOOR SPEAKER (SEDAN)

### Description

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

### **Diagnosis** Procedure

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### **1.**HARNESS CHECK

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

	A	В		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B121	58	D3	1		
	59		2	Yes	
	DIZI	71	D102	1	165
	72	D103	2		

2 1 58,59 1.2 Ω Check continuity between BOSE speaker amp. harness connec-71,72 1,2 Ω

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

Are continuity test results as specified?

tor B121 (A) and ground.

YES >> GO TO 2

3.

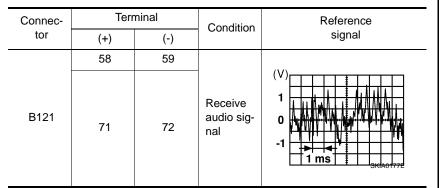
NO >> • Check connector housings for disconnected or loose terminals. • Repair harness or connector.

2.FRONT DOOR SPEAKER SIGNAL CHECK

### FRONT DOOR SPEAKER (SEDAN)

### < 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.



### Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to AV-427, "Removal and Installation".

NO >> GO TO 3

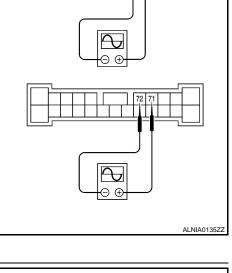
### **3.**HARNESS CHECK

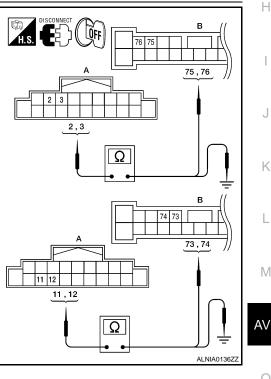
- 1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B121.
- 2. Check continuity between audio unit harness connector M47 (A) and BOSE speaker amp. harness connector B121 (B).

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	B121	75	
M47	3		76	Yes
	11		73	Tes
	12	+	74	

3. Check continuity between AV control unit harness connector M47 (A) and ground.

	A			Continuity
_	Connector	Terminal		Continuity
	M47	2		No
		3	Ground	
10147	11	Ground	NO	
		12		





Are continuity test results as specified?

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

**4.**FRONT DOOR SPEAKER SIGNAL CHECK

AV-323

### [BOSE AUDIO WITH NAVIGATION]

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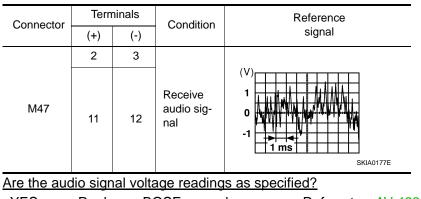
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### FRONT DOOR SPEAKER (SEDAN)

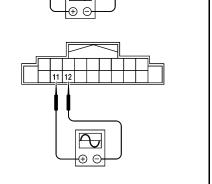
### < COMPONENT DIAGNOSIS >

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



- YES >> Replace BOSE speaker amp. Refer to AV-423. "Removal and Installation - Sedan"
- NO >> Replace AV control unit. Refer to AV-422, "Removal and Installation".

### [BOSE AUDIO WITH NAVIGATION] () H.S. F ACC Ð Θ



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### FRONT TWEETER (COUPE)

#### < COMPONENT DIAGNOSIS >

### FRONT TWEETER (COUPE)

#### Description

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

### **Diagnosis Procedure**

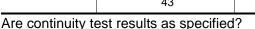
### 1.HARNESS CHECK

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

A		В		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B122	41	M51	ME 1	1	
	42		2	Yes	
	44	M52	1	165	
	43		2		

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

	А		Continuity
Connector	Terminal		Continuity
	41		No
B122	42	- Ground	
	44		
	43		



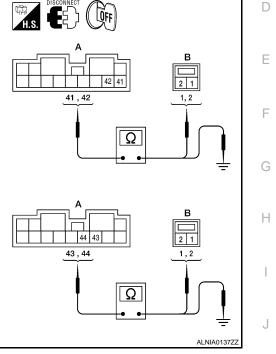
YES >> GO TO 2 NO >> • Check c

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

2.FRONT TWEETER SIGNAL CHECK

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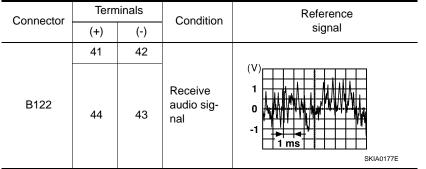
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### FRONT TWEETER (COUPE)

#### < 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.



#### Are voltage readings as specified?

YES >> Replace suspect tweeter. Refer to <u>AV-425. "Removal</u> and Installation".

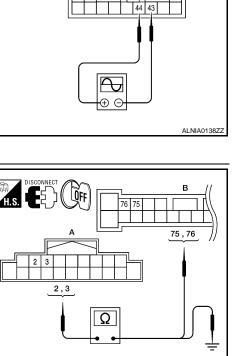
### **3.**HARNESS CHECK

- 1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B121.
- Check continuity between AV control unit harness connector (A) M47 and BOSE speaker amp. harness connector B121 (B).

	٨		В	
	A		D	Continuity
Connector	Terminal	Connector	Terminal	
	2	B121	75	
M47	3		76	Yes
	11		73	Tes
	12		74	

3. Check continuity between AV control unit harness connector B121 (A) and ground.

1		٨		
		A	_	Continuity
	Connector	Connector Terminal		Continuity
-		2		
M47	3	Ground	No	
	11			
		12		



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#### Are continuity test results as specified?

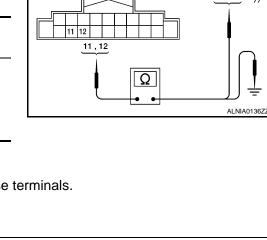
YES >> GO TO 4

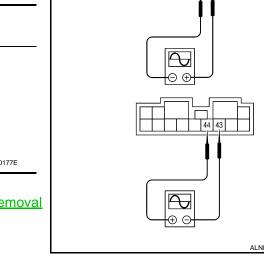
NO

- >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

**4.**FRONT TWEETER SIGNAL CHECK

### [BOSE AUDIO WITH NAVIGATION]





CONNECT

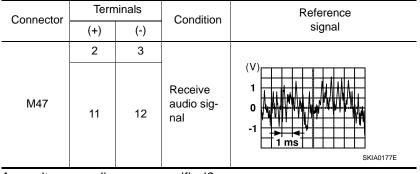
ACC.

### FRONT TWEETER (COUPE)

AV-327

#### < COMPONENT DIAGNOSIS >

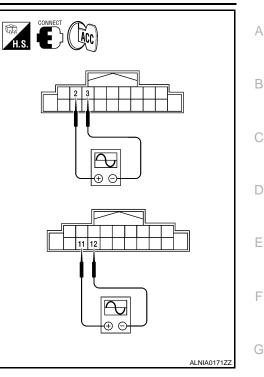
- 1. Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between AV control unit harness connector terminals with CONSULT-III or oscilloscope.



#### Are voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to <u>AV-423</u>. "Removal and Installation - Coupe".
- NO >> Replace AV control unit. Refer to <u>AV-422, "Removal and</u> <u>Installation"</u>.

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### TWEETER (SEDAN)

### Description

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

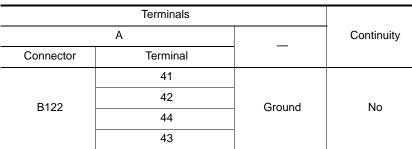
### **Diagnosis Procedure**

### **1.**HARNESS CHECK

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

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

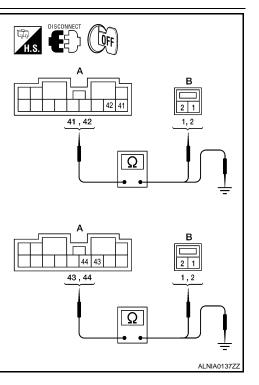
3. Check continuity between BOSE speaker amp. harness connector B122 (A) and ground.



Are continuity test results as specified?

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

2.TWEETER SIGNAL CHECK



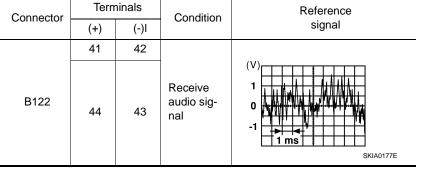
# INEQID:00000003214806

INFOID:000000003214805

### TWEETER (SEDAN)

#### < 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.



#### Are voltage readings as specified?

YES >> Replace suspect tweeter. Refer to <u>AV-425. "Removal</u> and Installation".

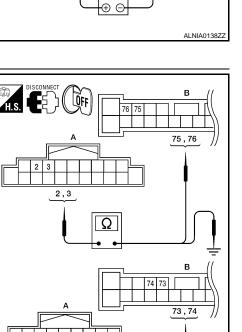
### **3.**HARNESS CHECK

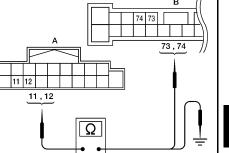
- 1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B121.
- Check continuity between AV control unit harness connector (A) M47 and BOSE speaker amp. harness connector B121 (B).

Terminals				
	A B			Continuity
Connector	Terminal	Connector	Terminal	
M47	2	B121	75	
	3		76	Yes
	11		73	165
	12		74	

 Check continuity between AV control unit harness connector B121 (A) and ground.

	Continuity		
Connector Terminal			
M47	2		No
	3	Ground	
	11	Ground	INU
	12	1	





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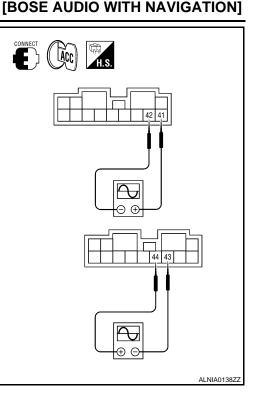
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#### Are continuity test results as specified?

YES >> GO TO 4

- NO >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.
- **4.**TWEETER SIGNAL CHECK

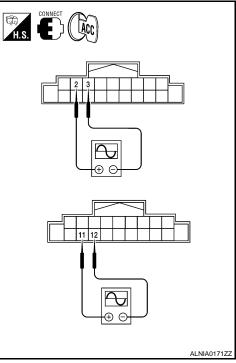


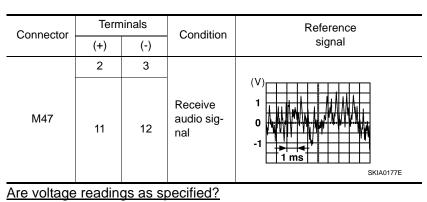
### **TWEETER (SEDAN)**

#### < 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.

# [BOSE AUDIO WITH NAVIGATION]





- YES >> Replace BOSE speaker amp. Refer to <u>AV-423</u>. <u>"Removal and Installation - Sedan"</u>.
- NO >> Replace AV control unit. Refer to <u>AV-422</u>, "<u>Removal and</u> <u>Installation</u>".

### CENTER SPEAKER

### Description

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

### Diagnosis Procedure

### **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	Continuity
B121	69	M151	1	Yes
DIZI	70	INT J	2	165

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

	А		Continuity
Connector	Terminal		Continuity
B121	69	Ground	No
DIZI	70	Glound	NO

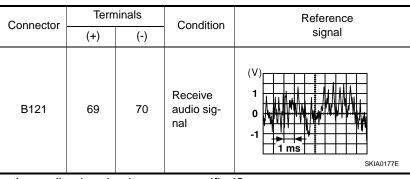
### Are continuity test results as specified?

YES >> GO TO 2

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

### 2.center speaker signal check

- Connect BOSE speaker amp. connector B121 and center 1. speaker connector M151.
- 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.



Is the audio signal voltage as specified?

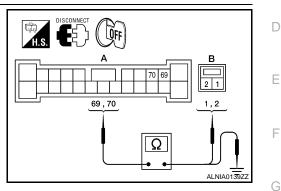
- YES >> Replace center speaker. Refer to AV-426, "Removal and Installation".
- NO >> GO TO 3
- 3.HARNESS CHECK



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### **CENTER SPEAKER**

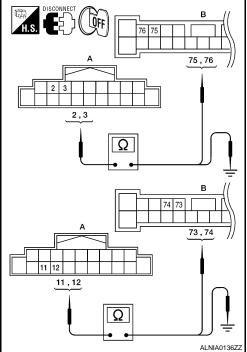
#### < COMPONENT DIAGNOSIS >

- 1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B121.
- 2. Check continuity between audio unit harness connector M47 (A) and BOSE speaker amp. harness connector B121 (B).

A		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	B121	75	
M47	3		76	Yes
	11		73	165
	12		74	

3. Check continuity between AV control unit harness connector M47 (A) and ground.

	А		Continuity
Connector	Terminal		Continuity
	2		No
M47	3	Ground	
10147	11	Giouna	NO
	12		



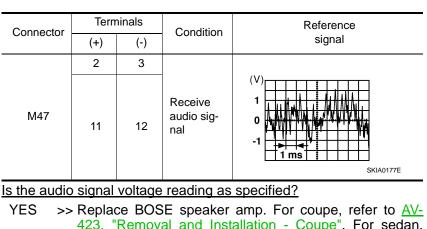
#### Are continuity test results as specified?

YES >> GO TO 4 NO

- >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

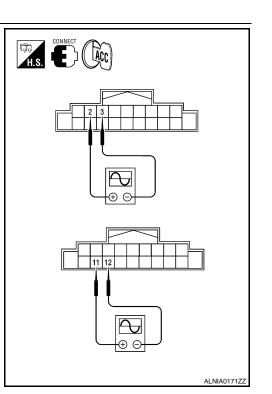
### **4.**CENTER SPEAKER SIGNAL CHECK

- 1. Connect AV control unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio unit harness connector M47 terminals with CONSULT-III or oscilloscope.



423, "Removal and Installation - Coupe". For sedan, refer to AV-423, "Removal and Installation - Sedan".

NO >> Replace AV control unit. Refer to AV-422, "Removal and Installation".



#### [BOSE AUDIO WITH NAVIGATION]

### **REAR TWEETER (COUPE)**

#### < COMPONENT DIAGNOSIS >

### **REAR TWEETER (COUPE)**

### Description

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

### **Diagnosis Procedure**

### **1.**HARNESS CHECK

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

Connector	Terminal	Connector	Terminal	Continuity	
A: B121	55	C: D202	0. 0000	2	
	68		1	Yes	
B: B122	49	C: D302	2	ies	
	54		1		

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

Connector	Terminal	_	Continuity
A: B121	68		No
A. DIZI	55	Ground	
B: B122	49	Ground	NO
D. D122	54		



YES >> GO TO 2 NO >> • Check of

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

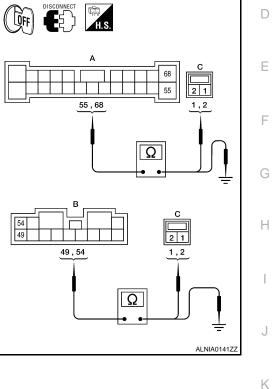
2. REAR TWEETER SIGNAL CHECK

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### **REAR TWEETER (COUPE)**

Reference

signal

#### < COMPONENT DIAGNOSIS >

- Connect BOSE speaker amp. connectors B121, B122 and suspect tweeter connector.
- 2. Turn ignition switch to ACC.

Terminals

(-)

55

49

(+)

68

54

3. Push "POWER" switch.

Connector

A: B121

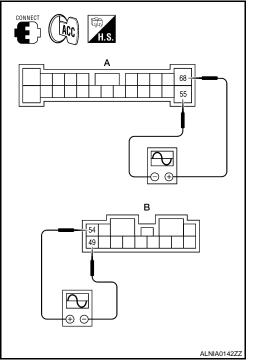
B: B122

 Check the signal between BOSE speaker amp. harness connectors (A) B121 and (B) B122 terminals with CONSULT-III or oscilloscope.

Condition

Receive audio sig-

nal



Is the audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to <u>AV-429</u>, "<u>Removal</u> <u>and Installation - Coupe</u>". NO >> GO TO 3.

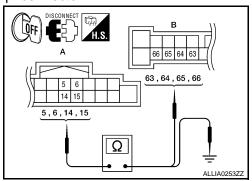
NO >> GO 10 3.

**3.**HARNESS CHECK

1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B121.

2. Check continuity between AV control unit harness connector M47 (A) and BOSE speaker amp. harness connector B121 (B).

	A B		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	5	64		
M47	6	B121	63	Yes
	14		66	Tes
	15		65	



3. Check continuity between AV control unit harness connector M47 (A) and ground.

	А		Continuity
Connector	Connector Terminal		Continuity
	5		No
M47	6	Ground	
10147	14	Ground	NO
	15		

Are continuity test results as specified?

YES >> GO TO 4 NO >> • Check c

- >> Check connector housings for disconnected or loose terminals.
- Repair harness or connector.

**4.**REAR TWEETER SIGNAL CHECK

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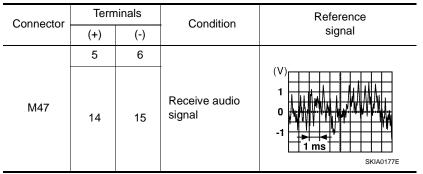
#### [BOSE AUDIO WITH NAVIGATION]

### **REAR TWEETER (COUPE)**

AV-335

#### < COMPONENT DIAGNOSIS >

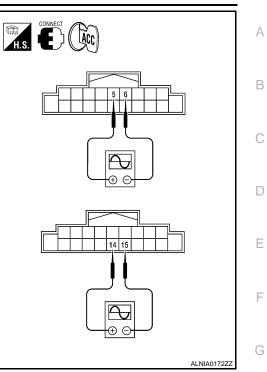
- 1. Connect AV control unit connector M47 and BOSE speaker amp. connector B121.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between AV control unit harness connector M47 terminals with CONSULT-III or oscilloscope.



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

- YES >> Replace BOSE speaker amp. Refer to <u>AV-423.</u> <u>"Removal and Installation - Coupe"</u>.
- NO >> Replace AV control unit. Refer to <u>AV-422</u>, "<u>Removal and</u> <u>Installation</u>".

### [BOSE AUDIO WITH NAVIGATION]



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### REAR DOOR SPEAKER (SEDAN)

#### < COMPONENT DIAGNOSIS >

### REAR DOOR SPEAKER (SEDAN)

### Description

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

### Diagnosis Procedure

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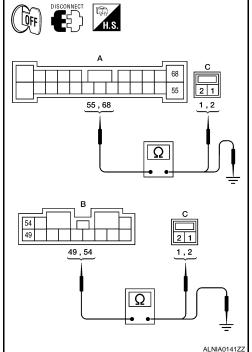
### **1.**HARNESS CHECK

- 1. Disconnect BOSE speaker amp. connectors B121, B122 and suspect speaker connector.
- 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	
A. DIZI	68	C. D202	1	Yes
B: B122	49	C: D302	2	165
	54		1	

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

Connector	Terminal	_	Continuity	
A: B121	68			
A. DIZI	55	Ground	No	
B: B122	49	Ground	NO	
D. DTZZ	54			



Are the continuity test results as specified?

YES >> GO TO 2 NO >> • Check of

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

2.REAR DOOR SPEAKER SIGNAL CHECK

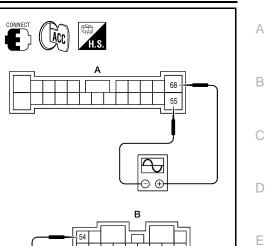
AV-336

INFOID:000000003214807

### REAR DOOR SPEAKER (SEDAN)

#### < COMPONENT DIAGNOSIS >

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



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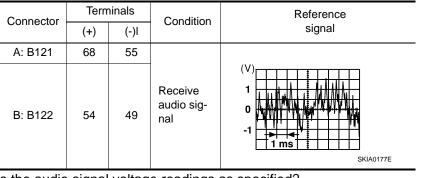
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Is the audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to <u>AV-428, "Removal</u> and Installation - Sedan".

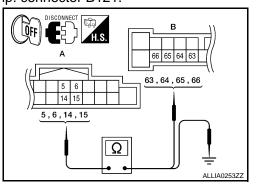
NO >> GO TO 3.

**3.**HARNESS CHECK

1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B121.

 Check continuity between AV control unit harness connector M47 (A) and BOSE speaker amp. harness connector B121 (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	5		64	
M47	6	B121	63	Yes
	14		66	Tes
	15		65	



3. Check continuity between AV control unit harness connector M47 (A) and ground.

	А		Continuity
Connector	Connector Terminal		Continuity
	5		No
M47	6	Ground	
10147	14	Ground	NO
	15		

Are continuity test results as specified?

YES >> GO TO 4 NO >> • Check of

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

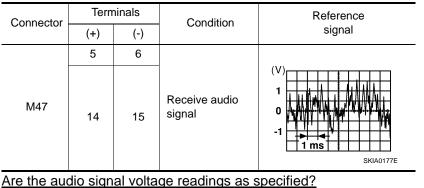
**4.**REAR DOOR SPEAKER SIGNAL CHECK

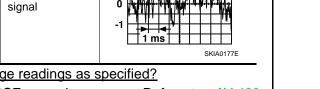
[BOSE AUDIO WITH NAVIGATION]

### **REAR DOOR SPEAKER (SEDAN)**

#### < COMPONENT DIAGNOSIS >

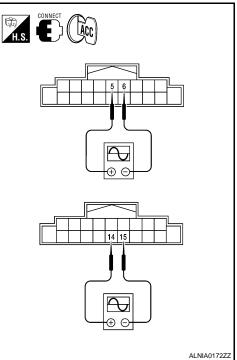
- 1. Connect AV control unit connector M47 and BOSE speaker amp. connector B121.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- Check the signal between AV control unit harness connector 4. M47 terminals with CONSULT-III or oscilloscope.





- YES >> Replace BOSE speaker amp. Refer to AV-423. "Removal and Installation - Sedan"
- NO >> Replace AV control unit. Refer to AV-422, "Removal and Installation".

#### [BOSE AUDIO WITH NAVIGATION]



### < COMPONENT DIAGNOSIS > **SUBWOOFER**

# Description

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

### **Diagnosis** Procedure

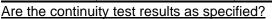
### **1.**HARNESS CHECK

- 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	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	53	B120	1	
B122	48	0120	2	Yes
	45	B124	1	163
	46		2	

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

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



YES >> GO TO 2

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

2. REAR SUBWOOFER SIGNAL CHECK

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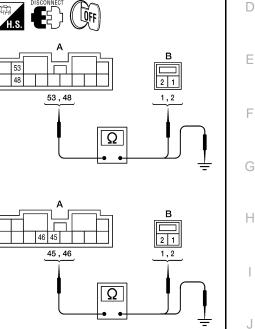
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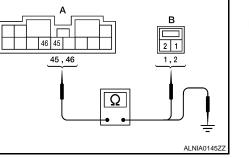
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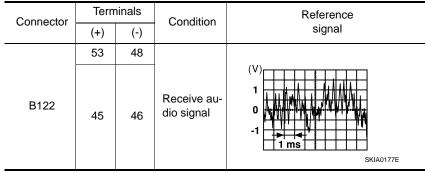
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### SUBWOOFER

#### < 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.



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

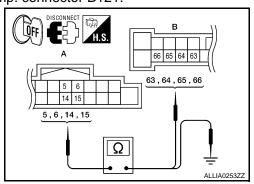
YES >> Replace suspect rear subwoofer. For coupe, refer to <u>AV-430</u>, "Removal and Installation - Coupe". For sedan, refer to <u>AV-430</u>, "Removal and Installation - Sedan". NO >> GO TO 3

3.HARNESS CHECK

1. Disconnect AV control unit connector M47 and BOSE speaker amp. connector B121.

2. Check continuity between AV control unit harness connector M47 (A) and BOSE speaker amp. harness connector B121 (B).

	A	E	3.	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	5	B121	64	
M47	6		63	Yes
	14		66	Tes
	15		65	



 Check continuity between AV control unit harness connector M47 (A) and ground.

	A Connector Terminal		Continuity
Connector			Continuity
	5		No
M47	6	Ground	
10147	14	Ground	
	15		

Are continuity test results as specified?

YES >> GO TO 4 NO >> • Check c

- >> Check connector housings for disconnected or loose terminals.
- Repair harness or connector.

**4.**REAR SUBWOOFER SIGNAL CHECK

[BOSE AUDIO WITH NAVIGATION]

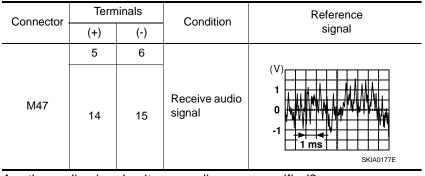
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### SUBWOOFER

AV-341

#### < COMPONENT DIAGNOSIS >

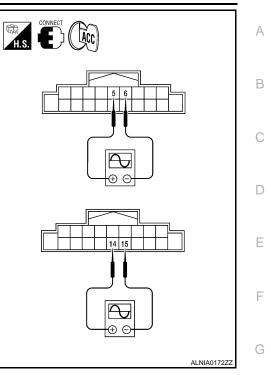
- 1. Connect AV control unit connector M47 and BOSE speaker amp. connector B121.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between AV control unit harness connector M47 terminals with CONSULT-III or oscilloscope.



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

- YES >> Replace BOSE speaker amp. Refer to <u>AV-205.</u> <u>"Removal and Installation - Coupe"</u>.
- NO >> Replace AV control unit. Refer to <u>AV-422</u>, "<u>Removal and</u> <u>Installation</u>".

#### [BOSE AUDIO WITH NAVIGATION]



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### AMP ON SIGNAL CIRCUIT

### Description

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**

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)

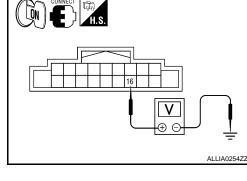
Check voltage between AV control unit harness connector M47 terminal 16 and ground.

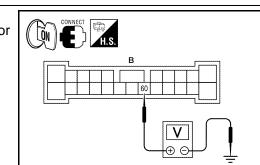
#### 16 - Ground

: More than approx. 6.5V

Is voltage approximately 6.5 volts?

- YES >> Repair harness or connector.
- NO >> Replace AV control unit. Refer to <u>AV-422, "Removal and</u> <u>Installation"</u>.





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### STEERING SWITCH

### Description

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

### **Diagnosis** Procedure

### 1.CHECK HARNESS

- 1. Turn ignition switch OFF.
- Disconnect AV control unit connector M46 and spiral cable connector M30. 2.
- Check continuity between AV control unit connector M46 termi-3. nals 25, 26, and 27 and spiral cable connector M30 terminals 24, 31, and 33.

	A	١	В		В		Continuity
_	Connector	Terminal	Connector	Terminal	Continuity		
-		25		24			
	M46	26	M30	33	Yes		
		27		31			

4. Check continuity between AV control unit connector M46 (A) and ground.

	A		Continuity	
Connector	Connector Terminal		Continuity	
	25			
M46	26	Ground	No	
	27			

Are the continuity test results as specified?

YES >> GO TO 2

NO >> Repair harness.

2.SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M88.

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

-		1			
А			В	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	24		14		
M30	31	M88	15	Yes	
	33		17		

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

YES >> GO TO 3.

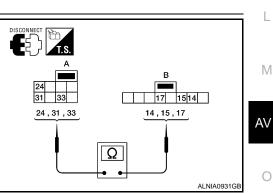
- NO >> Replace spiral cable. Refer to <u>SR-6, "Removal and Installation"</u>.
- 3.CHECK STEERING SWITCH

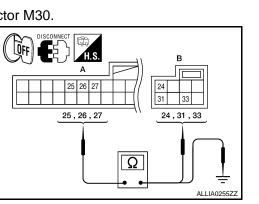
Check steering switch. Refer to AV-344, "Component Inspection".

Does the steering switch pass inspection?

YES >> INSPECTION END.

>> Replace steering switch. Refer to AV-434, "Removal and Installation". NO





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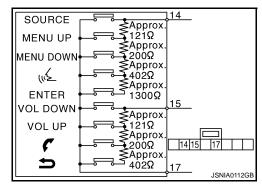
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### **Component Inspection**

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

iu iii	
Between terminals 14 and 17	
ENTER switch ON	<b>: 2003 – 2043</b> Ω
" <mark>∕ switch ON</mark>	<b>: 716 – 730</b> Ω
MENU DOWN switch ON	<b>: 318 – 324</b> Ω
MENU UP switch ON	<b>: 120 – 122</b> Ω
SOURCE switch ON	<b>: 0</b> Ω
Between terminals 15 and 17	
<b>Switch ON</b>	<b>: 716 – 730</b> Ω
switch ON	<b>: 318 – 324</b> Ω
VOL UP switch ON	<b>: 120 – 122</b> Ω
VOL DOWN switch ON	<b>: 0</b> Ω



### **MICROPHONE SIGNAL CIRCUIT**

#### < COMPONENT DIAGNOSIS >

### MICROPHONE SIGNAL CIRCUIT

### Description

Power is supplied to the microphone from the AV control unit. The microphone transmits voice signals to the  $_{\rm B}$  AV control unit.

#### Diagnosis Procedure

### $1. {\sf CHECK} \ {\sf CONTINUITY} \ {\sf BETWEEN} \ {\sf AV} \ {\sf CONTROL} \ {\sf UNIT} \ {\sf AND} \ {\sf MICROPHONE} \ {\sf CIRCUIT}$

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector M46 and microphone connector R7.
- Check continuity between AV control unit harness connector M46 (A) terminals 45, 46, 47 and microphone harness connector R7 (B) terminals 1, 2, 4.
  - 45 1 : Continuity should exist.
  - 47 2 46 - 4

- : Continuity should exist.
- : Continuity should exist.
- 4. Check continuity between AV control unit harness connector M46 (A) terminals 45, 46, 47 and ground.

#### 45, 46, 47 - Ground

#### : Continuity should not exist.

#### Is inspection result OK?

YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK MICROPHONE VCC VOLTAGE

- 1. Connect AV control unit connector.
- 2. Turn ignition switch ON.
- Check voltage between AV control unit harness connector M46 terminals 46 and 47.

46 - 47

#### : Approx. 5V

#### Is inspection result OK?

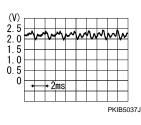
- YES >> GO TO 3
  - NO >> Replace AV control unit. Refer to <u>AV-422, "Removal and</u> <u>Installation"</u>.

### **3.**CHECK MICROPHONE SIGNAL

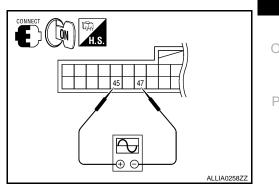
- 1. Connect microphone connector.
- Check signal between AV control unit harness connector M46 terminals 45 and 47.

2



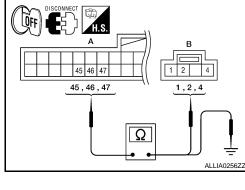


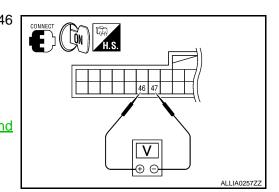
AV-345



#### Is inspection result OK?

YES >> Replace AV control unit. Refer to AV-422, "Removal and Installation".







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[BOSE AUDIO WITH NAVIGATION]

### **MICROPHONE SIGNAL CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

NO >> Replace microphone. For coupe, refer to <u>AV-442, "Removal and Installation - Coupe"</u>. For sedan, refer to, <u>AV-442, "Removal and Installation - Sedan"</u>.

#### CAMERA IMAGE SIGNAL CIRCUIT (REAR VIEW CAMERA TO CAMERA CON-TROL UNIT)(COUPE)

< COMPONENT DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

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## CAMERA IMAGE SIGNAL CIRCUIT (REAR VIEW CAMERA TO CAMERA CONTROL UNIT)(COUPE)

### Description

Rear view camera images are transmitted to the rear view camera control unit using the camera image signal circuits.

### Diagnosis Procedure

### 1. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect rear view camera control unit connector and rear view camera connector.
- Check continuity between rear view camera control unit harness connector B31 (A) terminals 9, 10 and rear view camera harness connector T7 (B) terminals 3, 4.
  - 9 4 10 - 3

### : Continuity should exist. : Continuity should exist.

- 4. Check continuity between rear view camera control unit harness connector B31 (A) terminals 9, 10 and ground.
  - 9, 10 Ground

#### : Continuity should not exist.

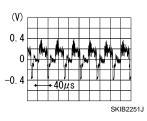
#### Is inspection result OK?

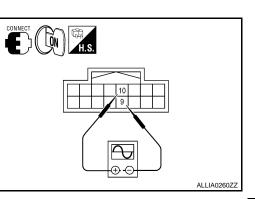
YES >> GO TO 2

- NO >> Repair harness or connector.
- 2.CHECK CAMERA IMAGE SIGNAL
- 1. Connect rear view camera control unit connector and rear view camera connector.
- 2. Turn ignition switch ON.
- Check signal between rear view camera control unit harness connector B31 terminals 10 and 9.

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10 - 9





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#### Is inspection result OK?

- YES >> Replace rear view camera control unit. Refer to <u>AV-447</u>, "Removal and Installation Coupe".
- NO >> Replace rear view camera. Refer to <u>AV-446, "Removal and Installation"</u>.

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#### CAMERA IMAGE SIGNAL CIRCUIT (REAR VIEW CAMERA TO CAMERA CON-TROL UNIT)(SEDAN)

#### < COMPONENT DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

### CAMERA IMAGE SIGNAL CIRCUIT (REAR VIEW CAMERA TO CAMERA CONTROL UNIT)(SEDAN)

### Description

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Rear view camera images are transmitted to the rear view camera control unit using the camera image signal circuits.

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### Diagnosis Procedure

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### 1. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect rear view camera control unit connector and rear view camera connector.
- Check continuity between rear view camera control unit harness connector B31 (A) terminals 9, 10 and rear view camera harness connector B35 (B) terminals 3, 4.
  - 9 4 10 - 3

### : Continuity should exist. : Continuity should exist.

4. Check continuity between rear view camera control unit harness connector B31 (A) terminals 9, 10 and ground.

#### 9, 10 - Ground

#### : Continuity should not exist.

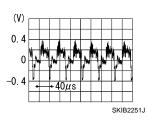
#### Is inspection result OK?

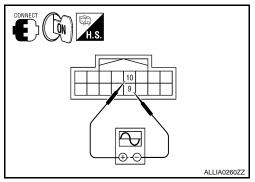
YES >> GO TO 2

- NO >> Repair harness or connector.
- 2.CHECK CAMERA IMAGE SIGNAL
- 1. Connect rear view camera control unit connector and rear view camera connector.
- 2. Turn ignition switch ON.
- 3. Check signal between rear view camera control unit harness connector B31 terminals 10 and 9.

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10 - 9





#### Is inspection result OK?

- YES >> Replace rear view camera control unit. Refer to <u>AV-447</u>, "<u>Removal and Installation Sedan</u>".
- NO >> Replace rear view camera. Refer to <u>AV-446, "Removal and Installation"</u>.

#### CAMERA ON SIGNAL CIRCUIT (COUPE) ISIS > [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

### CAMERA ON SIGNAL CIRCUIT (COUPE)

#### Description

When the selector lever is placed in the R position, the rear view camera control unit sends a camera ON signal to the rear view camera.

### **Diagnosis Procedure**

### 1. CHECK CAMERA ON SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect rear view camera control unit connector and rear view camera connector.
- 3. Check continuity between rear view camera control unit harness connector B31 (A) terminal 8 and rear view camera harness connector T7 (B) terminal 1.

#### 8 - 1

#### : Continuity should exist.

4. Check continuity between rear view camera control unit harness connector B31 (B) terminal 8 and ground.

#### 8 - Ground

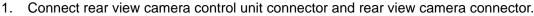
#### : Continuity should not exist.

Is inspection result OK?

YES >> GO TO 2

NO >> Repair harness or connector.

### 2. CHECK CAMERA ON SIGNAL VOLTAGE



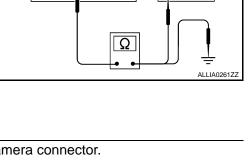
- 2. Turn ignition switch ON.
- Check voltage between rear view camera control unit harness connector B31 terminal 8 and ground.

#### 8 - Ground

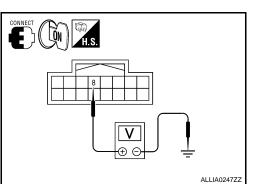
#### : Approx. 6V

#### Is inspection result OK?

- YES >> Replace rear view camera. Refer to <u>AV-446</u>, "<u>Removal</u> <u>and Installation</u>".
- NO >> Replace rear view camera control unit. Refer to <u>AV-447</u>, <u>"Removal and Installation - Coupe"</u>.



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### **CAMERA ON SIGNAL CIRCUIT (SEDAN)**

### < COMPONENT DIAGNOSIS >

### CAMERA ON SIGNAL CIRCUIT (SEDAN)

### Description

When the selector lever is placed in the R position, the rear view camera control unit sends a camera ON signal to the rear view camera.

### Diagnosis Procedure

### 1. CHECK CAMERA ON SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect rear view camera control unit connector and rear view camera connector.
- Check continuity between rear view camera control unit harness connector B31 (A) terminal 8 and rear view camera harness connector B35 (B) terminal 1.

#### 8 - 1

#### : Continuity should exist.

4. Check continuity between rear view camera control unit harness connector B31 (B) terminal 8 and ground.

#### 8 - Ground

: Continuity should not exist.

#### Is inspection result OK?

YES >> GO TO 2

NO >> Repair harness or connector.

### 2. CHECK CAMERA ON SIGNAL VOLTAGE

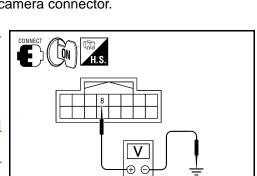
- 1. Connect rear view camera control unit connector and rear view camera connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between rear view camera control unit harness connector B31 terminal 8 and ground.

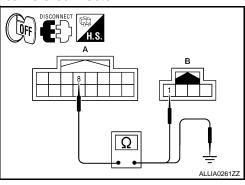
#### 8 - Ground

#### : Approx. 6V

#### Is inspection result OK?

- YES >> Replace rear view camera. Refer to <u>AV-446, "Removal</u> <u>and Installation"</u>.
- NO >> Replace rear view camera control unit. Refer to <u>AV-447</u>, <u>"Removal and Installation - Sedan"</u>.





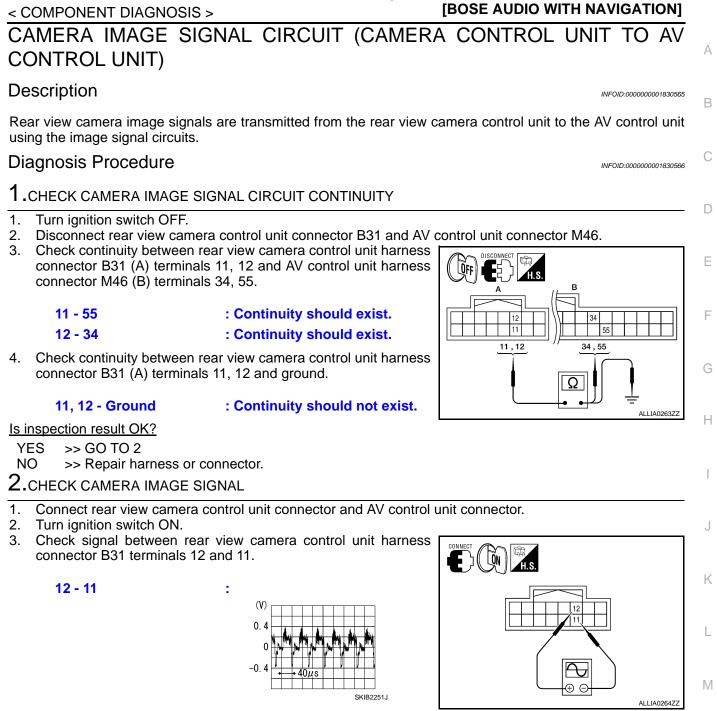
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# CAMERA IMAGE SIGNAL CIRCUIT (CAMERA CONTROL UNIT TO AV CON-TROL UNIT)



#### Is inspection result OK?

- YES >> Replace AV control unit. Refer to AV-422, "Removal and Installation".
- AV >> Replace rear view camera control unit. For coupe, refer to AV-447, "Removal and Installation -NO Coupe". For sedan, refer to AV-447, "Removal and Installation - Sedan".

### **REVERSE SIGNAL CIRCUIT**

### Description

A reverse signal is supplied from the back-up lamp relay to the rear view camera control unit. When this signal is received, the display shows a view to the rear of the vehicle.

### Diagnosis Procedure

**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 <u>EXL-4, "Work Flow"</u>.

2.CHECK REVERSE POSITION INPUT SIGNAL

#### With CONSULT-III

Select "DATA MONITOR" of "REARVIEW CAMERA". Operate ignition switch with "R POSI SIG" of "DATA MONITOR" and check operate status.

**OFF** 

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#### Without CONSULT-III

- 1. Turn ignition switch OFF.
- 2. Disconnect rear view camera control unit connector.
- 3. Turn ignition switch ON.
- 4. Shift selector lever to R position.
- 5. Check voltage between rear view camera control unit harness connector B31 terminal 4 and ground.

#### Battery voltage should exist.

Does battery voltage exist?

- YES >> Inspection End.
- NO >> Check harness for open or short between rear view camera control unit and back-up lamp relay.



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# ECU DIAGNOSIS AV CONTROL UNIT (COUPE)

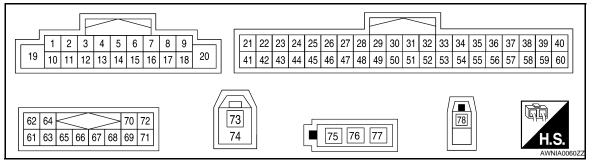
### **Reference Value**

### VALUES ON THE DIAGNOSIS TOOL

#### CONSULT-III data monitor item

Display Item	Dis- play	Vehicle status	Remarks	
VHCL SPD SIG	ON	Vehicle speed > 0 km/h (0 MPH)	D	
VHCL SFD SIG	OFF	Vehicle speed = 0 km/h (0 MPH)	Changes in indication may be delayed. This is	
PKB SIG	ON	Parking brake is applied.	normal.	
PKD SIG	OFF	Parking brake is released.	E	
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON .	F	
	OFF Expose the auto light optical sensor to light when the light SW is OFF or ON.			
IGN SIG	ON	Ignition switch ON	-	
IGN SIG	OFF	Ignition switch in ACC position		
	ON	Selector lever in R position	Changes in indication may be delayed. This is	
REV SIG	OFF	Selector lever in any position other than R	normal.	

#### **TERMINAL LAYOUT**



### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value		
+	_	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)	AV	
1				Ignition	Parking brake ON	0V		
(G/R)	Ground	Parking brake signal	Input	switch ON	Parking brake OFF	Battery voltage	0	
2 (G)	3 (R)	Sound signal front LH	Output	Ignition switch ON		(V) 1 0 -1 + 2ms SKIB3609E	Ρ	
4		Shield		—	—	—		

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	ninal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)
5 (GR/V)	6 (W/L)	Sound signal rear LH	Output	Ignition switch ON		(V) 1 -1 -1 -1 -1 -1 -1 -1 -1 -1
7 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
8 (V/W)	Ground	Vehicle speed (8-pulse) signal	Input	Ignition switch ON	When vehicle speed is ap- prox. 40 km/h (25MPH)	(V) 4 2 0 • • • 20ms SKIA6649J
9	Ground	Illumination signal	Input	OFF	Lighting switch is OFF.	0V
(R/L)			•		Lighting switch is ON.	Battery voltage
10 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
11 (B)	12 (W)	Sound signal front RH	Output	Ignition switch ON	_	(V) 1 0 -1 • 2ms SKIB3609E
13		Shield	—		_	_
14 (V)	15 (LG)	Sound signal rear RH	Output	Ignition switch ON	_	(V) 1 0 -1 + 2ms SKIB3609E
16 (B/P)	Ground	Amp. ON signal	Output	Ignition switch ON	_	Battery voltage
17 (P/B)	Ground	Reverse signal	Input	Ignition switch ON	R position	Battery voltage
18 (R/Y)	Ground	Illumination control	Input	OFF	_	Refer to INL-10, "System De- scription".
19 (B)	Ground	Ground		Ignition switch ON	_	0V

#### < ECU DIAGNOSIS >

### [BÓSE AUDIO WITH NAVIGATION]

	ninal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)
20 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
24 (L)		CAN-H	Input/ Output			_
					Keep pressing SOURCE switch.	0V
					Keep pressing MENU UP switch.	1V
25 (W/G)	26 (L/B)	Steering switch signal 1	Input	Ignition switch ON	Keep pressing MENU DOWN switch.	2V
				ON	Keep pressing 🟑 switch	3V
					Keep pressing ENTER switch.	4V
					Except for above.	5V
26 (L/B)	Ground	Steering switch signal ground	_	Ignition switch ON	_	٥V
					Keep pressing VOL DOWN switch.	0V
27	26	Steering switch signal 2	Input	Ignition switch	Keep pressing VOL UP switch.	1V
(GR/L)	(L/B)	Steering Switch Signal 2	Input	ON	Keep pressing 🌈 switch.	2V
					Keep pressing 🗲 switch.	3V
					Except for above.	5V
28		Shield				
31 (W/R)	Ground	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is select- ed	(V) 1 0 -1 -2ms SKIB3609E
32	—	Shield	_		—	_
33 (W/L)	Ground	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is select- ed	(V) 1 0 -1 *2ms SKIB3609E
34 (W)	Ground	Camera image signal	Input	Ignition switch ON	Rear view camera image displayed	$(V)$ $0.4$ $0$ $-0.4$ $+40\mu$ s

#### < ECU DIAGNOSIS >

### [BÓSE AUDIO WITH NAVIGATION]

	ninal color)	Description			Condition	Reference value
+	-	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)
35		Shield	_		—	
44 (P)	_	CAN-L	Input/ Output		_	_
45 (B/R)	Ground	Microphone signal	Input	Ignition switch ON		(V) 2. 5 2. 0 1. 5 1. 0 0. 5 0 • • • 2ms • • • • • • • • • • • • • • • • • • •
46 (R/L)	Ground	Microphone VCC	Output	Ignition switch ON	_	5V
47 (R/B)	Ground	Microphone ground	_	Ignition switch ON	_	0V
48	—	Shield	—	_	—	—
53	Ground	Camera-connection rec-	Input	Ignition switch	Connected to camera con- trol unit connector	0V
(V/G)	Giouna	ognition signal	mput	ON	Not connected to camera control unit connector	5V
55 (R)	Ground	Camera image signal	Input	Ignition switch ON	Rear view camera image displayed	(V) 0.4 0 −0.4 → 40μs SKiB2251J
62 (Y/L)	61 (W/L)	CD changer sound sig- nal LH	Input	Ignition switch ON		(V) 1 -1 • 2ms SKIB3609E
64 (Y/G)	63 (BR/L)	CD changer sound sig- nal RH	Input	Ignition switch ON		(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
65		Shield			_	_
66		Shield			_	_

# < ECU DIAGNOSIS >

### [BÓSE AUDIO WITH NAVIGATION]

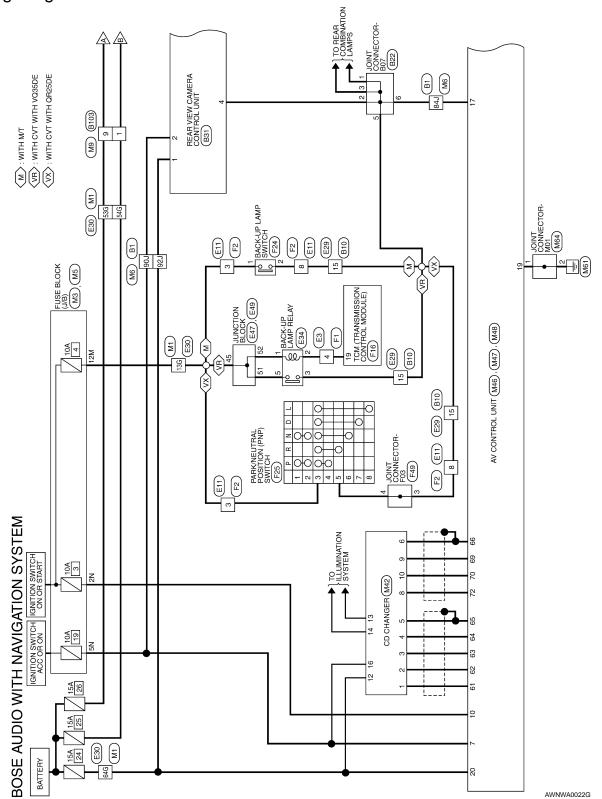
	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)	
69 (B)	Ground	Communication signal (CD→CONT)	Input	Ignition switch ON		(V) 10 -10 -10 -10 -10 -10 -10 -10	B C D
70 (G)	Ground	Communication signal (CONT→CD)	Input	lgnition switch ON		(V) 10 0 -10 -10 -10 -10 -10 -10 -	E
72 (R)	Ground	Request signal (CD→CONT)	Output	Ignition switch ON		(V) 10 0 -10 • + 10ms SKIA9299J	G
73 (B)	_	GPS signal	Input	Ignition switch ACC	Not connected to GPS an- tenna connector	5V	1
74 (B)	_	Shield			_	_	J
75 (B)	Ground	Antenna amp. power supply	Output	Ignition switch ACC	_	Battery voltage	K
76 (B)	_	Main antenna	Input	_	_	_	L
78 (B)	Ground	Satellite antenna signal	Input	Ignition switch ACC	Not connected to satellite antenna connector	5V	M

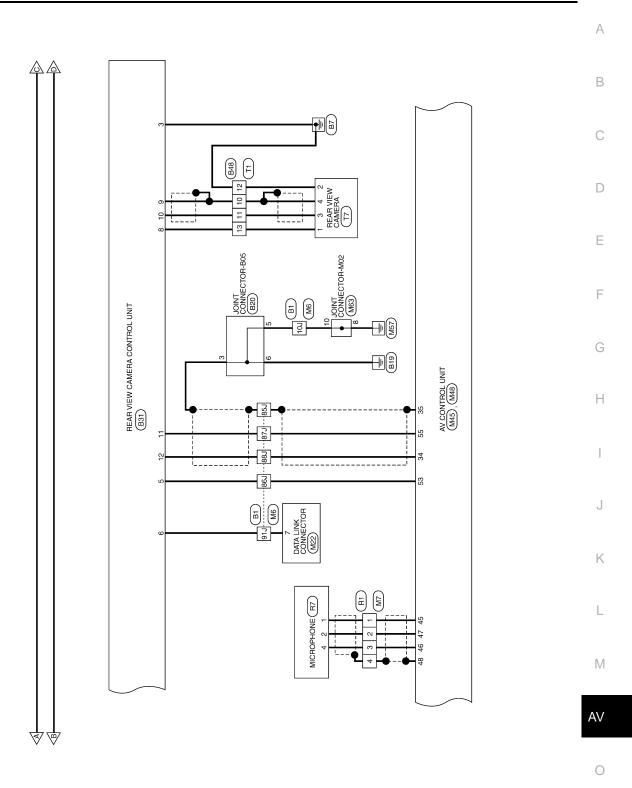
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Wiring Diagram

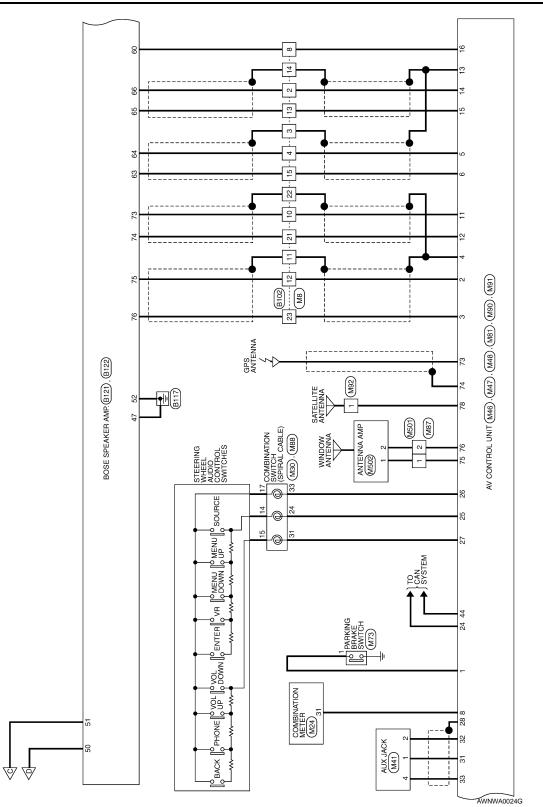
INFOID:000000001830570

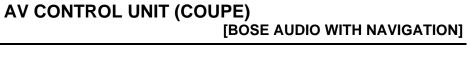


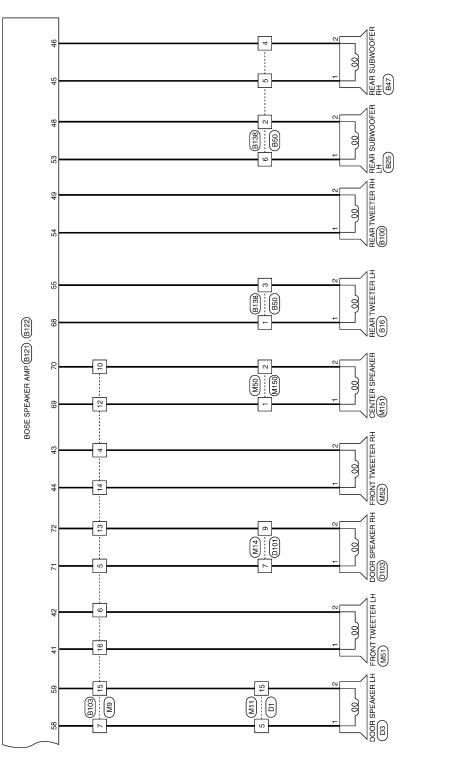


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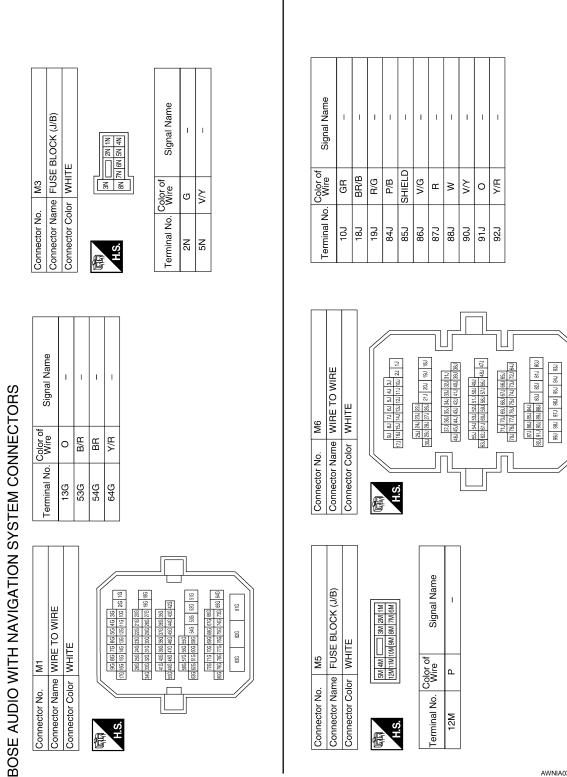
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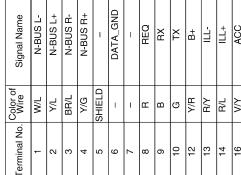
## **AV CONTROL UNIT (COUPE)**

#### < ECU DIAGNOSIS >

Connector Name     Connector Name       Image: State of the s	MIT     Connector Name     MIT       n     WIRE TO WIRE     Connector Name     WIRE TO WIRE       n     WIRE     Connector Name     WIRE TO WIRE       n     Image: Signal Name     Image: Signal Name     Image: Signal Name       Nor     Signal Name     Signal Name     Signal Name       Nor     Signal Name     Nine     Signal Name       Nor     Signal Name     Signal Name     Signal Name       Nor     Signal Name     Nine     Signal Name       Nor     Signal Name     Nine     Signal Name       Nor     Signal Name     Nine     Signal Name       Nor     Signal Name     Signal Name     Signal Name       Nor     Signal Name     Signal Name     Signal Name       Nor     Signal Name     Signal Name     Signal Name	Connector Name WIRE TO WIRE	Connector Color BROWN	(京) H.S.	Terminal No. Color of Wire	1 B/R	3 BR/B			_		10 O/B	11 R/G		13 BR	14 L/O		16 LG	Connector No. M22	Connector Name DATA LINK CONNECTOR	Connector Color WHITE	대해 H.C. 	-	Terminal No. Color of Wire	0		
	O WRE Signal Name Signal Name Signal Name Signal Name	RE TO WIRE	HTE	6 5 4 3 2 18 17 16 15 14		I	1		I	I	I	1		1	1	1	I		4	RE TO WIRE	HTE	2 - 3 4 6 7 8 9 10	- - - -		1	1	
	O WIRE     Signal     1     1     1     1     1       Signal     N     N     N     N     N     N	Connector No. M8 Connector Name WI	Connector Color WH	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Terminal No. Wire													-		Connector Name WI	Connector Color WH			Terminal No. Wire			
			Ĩ		I Name		1	1	1											E		5 6 7 14 15 16		l Name	1	1	

Connector No. M41 Connector Name AUX JACK Connector Color WHITE	H.S.	Terminal No. Color of Signal Name		2 SHIELD	4 W/L AUX_OUT_L										
M30 COMBINATION SWITCH (SPIRAL CABLE) GRAY	34 25 26 27 31 22 33 34	Signal Name	AUDIO_STRG_SW_ REMOTE_A		AUDIO_STRG_SW_GND		Signal Name	N-BUS L-	N-BUS L+	N-BUS R-	N-BUS R+	1	DATA_GND	1	REQ
		Color of Wire	W/G	GR/L	L/B	10,000	Wire	M/L	٨/L	BR/L	Y/G	SHIELD	1	ı	æ
Connector No. Connector Name Connector Color	मिन्ने H.S.	Terminal No.	24	31	33		Terminal No.	Ţ	2	ю	4	5	9	7	8
Connector No. M24 Connector Name COMBINATION METER Connector Color WHITE	1         2         3         4         5         6         7         8         9         10         11         12         13         14         16         16         17         18         19         20           21         22         23         24         25         26         27         28         30         31         32         33         34         36         37         38         39         40	Terminal No. Wire Signal Name	31 V/W 8P/R OUT				Connector No. M42 Connector Name CD CHANGER		-		1 3 5 7 8 9 10 11 13				

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r Name AV C	Connector Name AV CONTROL UNIT		Wire	Signal Name	Terminal No.	5	ö
Connector Color WHITE	TE	29	I	I	45	B/R	MIC_IN+
		30	I	I	46	R/L	MIC_+B
		31	W/R	AUX_IN_R	47	R/B	MIC_GND
		32	SHIELD	I	48	SHIELD	-
		33	M/L	AUX_IN_L	49	ı	I
21 22 23 24 25 26 27 28 29 30 31	29 30 31 32 33 34 35 36 37 38 39 40	34	N	COMP_IN +	50	1	I
4 45 46 47 48 49	52 53 54 55	35	SHIELD	1	51	Ι	-
Torminal No. Color of	N N N N N N N N N N N N N N N N N N N	36	1	1	52	I	-
NO. WIFE	Signal Name	37	ı	I	53	D//	RV_CAM_SIG
I	1	38	ı	I	54	I	Ι
I	I	39	I	1	55	н	COMP_IN-
I	1	40	ı	1	56	I	I
L	V-CAN_H	41	1	1	57	1	1
W/G	STRG_SW_SIG_1	42	1		58	I	I
L/B	STRG_SW_GND	43	1	1	59	1	1
GR/L	STRG_SW_SIG_2		0				
Connector No. M47	M47	Terminal No.	Color of Wire	Signal Name			
		7	٨/٧	ACC			
_		8	N/N	SPEED (8P)			
Ľ		6	R/L	ILL			
	4 5 6 7 8 9	10	ŋ	IGN			
12	16 17	11	В	FR_RH +			
		12	M	FR_RH -			
Terminal No Mire	Signal Name	13	SHIELD	1			
		14	>	RR_RH +			
5		15	ГG	RR_RH -			
י פ	+	16	B/P	AMP_ON			
r	FR_LH -	17	P/B	RV			
SHIELD	I	18	RУ	ILL CONT			
GR/V	RR_LH +	19	m	GND			
W/L	RR_LH -	20	Y/R	B+			

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### [BÓSE AUDIO WITH NAVIGATION]

Connector No. M51 Connector Name FRONT TWEETER LH Connector Color BROWN			Signal Name	I	I										JOINT CONNECTOR-M01	~	4 3 2 1	Signal Name	1	I	
40. M51 Vame FRONT 7 Solor BROWN		-	D. Color of Wire	ГG	B∖									40. M64		Color GRAY	0	Color of Wire	m	B	
Connector No. Connector Name Connector Color	जित्र H.S.		Terminal No.	-	N									Connector No.	Connector Name	Connector Color	同 H.S.	Terminal No.	-	2	
Connector No. M50 Connector Name WIRE TO WIRE Connector Color WHITE		-	Color of Signal Name	B/P –	O/B –									M63	e JOINT CONNECTOR-M02	r BLUE	10 9 8 7 6 5 4 3 2 1	Color of Signal Name	Р	GR –	
Connector No. M50 Connector Name WIRE T Connector Color WHITE	园 H.S.	-	Terminal No.	F	N									Connector No.	Connector Name	Connector Color	雨 H.S.	Terminal No.	8	10	
M48 AV CONTROL UNIT GRAY	62 64 70 72 61 63 65 66 67 68 69 71	Signal Name	N-BUS_L -	N-BUS_L + N-BUS_R -	N-BUS_R +	1	DATA_GND	I	I	RX	ТХ	I	REQ2		FRONT TWEETER RH	NM	5	Signal Name	1	1	
	62 64 < 61 63 66	0	W/L	Y/L BR/L	γ/G	SHIELD	1	I	-	В	σ	I	щ	O MEO	ame FRO	olor BROWN		Color of Wire	Г/0	GR/L	
Connector No. Connector Name Connector Color	雨 H.S.	Terminal No.	61	63 65	64	65	66	67	68	69	70	71	72	Connector No	Connector Name	Connector Color	品.S.H	Terminal No.	-	2	

AV CONTROL UNIT (COUPE)

< ECU DIAGNOSIS >

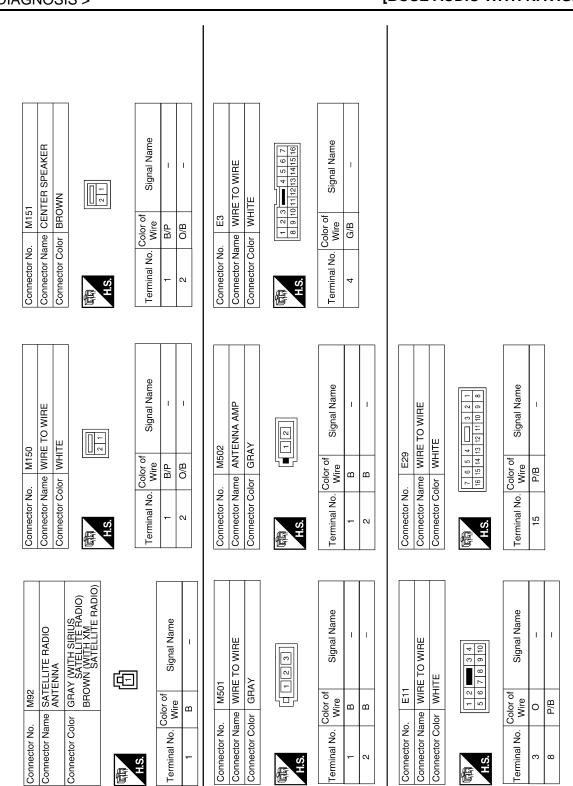
AWNIA0346GB

[BOSE AUDIO WITH NAVIGATION]	-
Connector No.     M91       Connector Name     AV CONTROL UNIT       Connector Name     AV CONTROL UNIT       Connector Color     BROWN (WITH SIRUS VIOLET (WITH SIRUS)       VIOLET (WITH SIRUS)     MITH SIRUS       Total     Mith Sirus       Terminal No.     Color of Signal Name       78     B	
Connector No.     M90       Connector Name     AV CONTROL UNIT       Connector Name     AV CONTROL UNIT       Connector Color     GRAY       Time     Time       Taminal No.     Wire       T3     B       T4     B	
Connector No.     M88       Connector Name     COMBINATION SWITCH       Connector Name     COMBINATION SWITCH       Connector Color     GRAY       Connector Color     GRAY       Terminal No.     Color of Signal Name       14     W       15     L       17     BR       17     BR	P
	MBB     Connector No.     MB0       Connector Name (SPHAL CABLE)     Connector Name (SPHAL CABLE)     Connector Name (SPHAL CABLE)       Connector Name (SPHAL CABLE)     Connector Name (SPHAL CABLE)     V COVTROL UNIT Connector Color       MBF     MBF       MBF     MBF       Ommetor Name (SPHAL CABLE)     MBF       MBF       <

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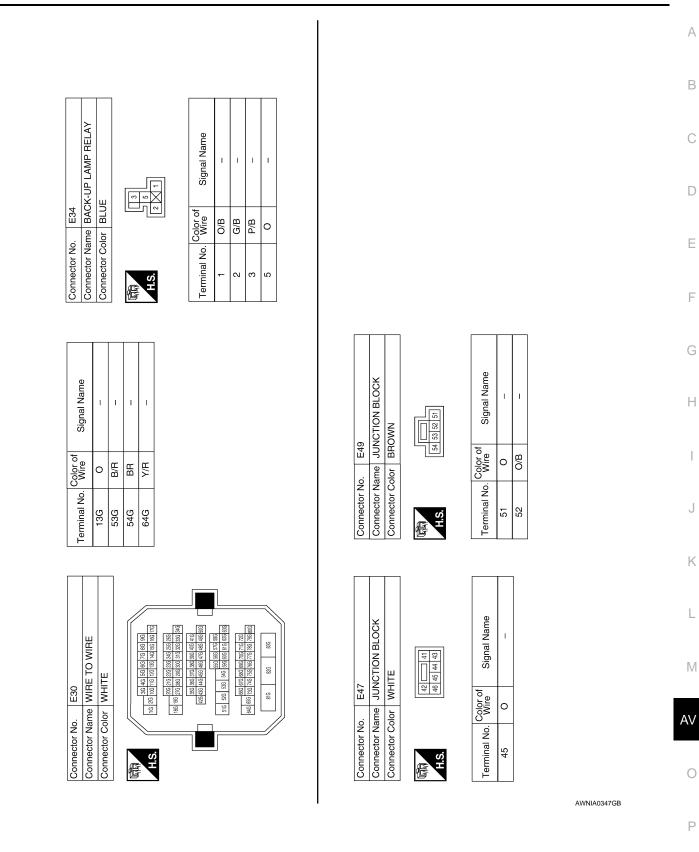
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AV CONTROL UNIT (COUPE)

#### < ECU DIAGNOSIS >

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< ECU DIAGNOSIS >

Connector No.         F16           Connector Name         TCM (TRANSMISSION           Connector Color         BLACK           Connector Color         BLACK           Mission         State           Mission         State           Mission         State           Tig         State         State           Mission         State         State         State	Terminal No.     Color of Wire     Signal Name       19     G/B     REV LAMP RLY	Connector No.     F49       Connector Name     JOINT CONNECTOR-F03       Connector Color     BLACK       Connector Color     BLACK       Image: Second Seco
Connector No.     F2       Connector Name     WIRE TO WIRE       Connector Color     WHITE       M.S.     10 9 8 7 6 5	Terminal No.     Color of Wire     Signal Name       3     0     -       8     P/B     -	Connector No.     F25       Connector Name     PARK/NEUTRAL POSITION       Connector Name     PARK/NEUTRAL POSITION       Connector Color     BLACK       Connector Color     BLACK       Image: Signal Name     3       3     O
Connector No. F1 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Color of Signal Name 4 G/B –	Connector No.     F24       Connector Name     BACK UP LAMP SWITCH       Connector Color     BLACK       Connector Color     BLACK       Terminal No.     Color of Wire     Color of Signal Name       2     P/B     -

ALNIA0067GB

Connector No.     B6       Connector Name     WIRE TO WIRE       Connector Name     WIRE TO WIRE       Connector Color     WHITE       Times     1       Terminal No.     Color of Nire     Signal Name       5     W/R     -	Connector No.     B20       Connector Name     JOINT CONNECTOR-B05       Connector Color     GRAY       Connector Color     GRAY       Image: Second Structure     Image: Second Structure       Image: Second Structure     Image: Second Structure       Image: Second Structure     Signal Name       Image: Second Structure     Image: Second Structure       Im	
Terminal No.     Color of Wire     Signal Name       10J     GR     -       18J     BR/B     -       18J     P/B     -       19J     R/G     -       84J     P/B     -       85J     SHIELD     -       86J     V/G     -       87J     R     -       90J     V     -       92J     Y     -	Connector No.     B16       Connector Name     REAR TWEETER LH       Connector Color     BROWN       Time     2       Terminal No.     Color of Wire     Signal Name       2     B/V       2     B/V	
Connector No.         B1           Connector Name         WIRE TO WIRE           Main         14 al 0011120314015 (0011           Main         14 al 00111120314015 (0011           Main         19 al 01111203303           Main         19 al 011112033           Main         10 al 001112033           Main         10 al 001112033           Main         10 al 00111203           Main         10 al 00111203           Main         10 al 00112033           Main         10 al 00111203	Connector No.     B10       Connector Name     WIRE TO WIRE       Connector Name     WIRE TO WIRE       Connector Name     WIRE TO WIRE       Connector Name     Wire       MHITE     Signal Name       Terminal No.     Color of Nire     Signal Name       15     P/B     -	

### < ECU DIAGNOSIS >

100	REAR VIEW CAMERA CONTROL UNIT	WHITE	6 8 10 12 14 16 5 2 a 11 13 15	<u>c</u>	of Signal Name	н В	ACC	GND	REV	CONTROL 1	DDL (K-LINE)	CAMERA ON	CAMERA -	CAMERA +	COMP -	COMP +		B50	WIRE TO WIRE	WHITE	,	6 5 4 3	of Cianol Namo
F	e		5	~ -	Color of Wire	≻	>	в	P/B	V/G	0	GR	Γ	Р	æ	Ν	┠┝						Color of
	Connector Name	Connector Color	雨 H.S.		Terminal No.	-	2	e	4	2	9	8	6	10	11	12		Connector No.	Connector Name	Connector Color		HHA	Terminal No
	SUBWOOFER LH				Signal Name	1	1												TO WIRE	Е		4 5 6 7 8 12 13 14 15 16	Signal Name

Signal Name	I	I	I	I	I	I
Color of Wire	R/G	G/B	BR/B	ВВ	BR/W	W/B
Terminal No.	-	2	Э	4	5	9

Connector No.	B25
Connector Name	<b>REAR SUBWOOFER LH</b>
Connector Color	WHITE
。 H.S.	
	Color of Signal Name

Connector Name JOINT CONNECTOR-B07 Connector Color GRAY

B22

Connector No.

Signal Nam	-	-
Color of Wire	W/B	G/B
Terminal No.	ł	2

4 3 2 1	Signal Name	I	I	I	I	I
9	Color of Wire	P/B	P/B	P/B	P/B	P/B
品.S.H	Terminal No. Wire	ł	2	в	5	9

	B48	Connector Name WIRE TO WIRE	WHITE	
	Connector No.	Connector Name	Connector Color WHITE	

B47

Connector No.

Connector Name

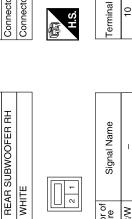
		3 4 5	11 12 1:	
:		2	10	
	山	L SH	6	

-			
	Signal Name	I	I
	Color of Wire	BR/W	ΒЯ

-N

		_	Signal Name
8	16		Na
7	15		lal
9	12 13 14 15		Sigr
5	13		05
4	12		
З	10 11		
2	10		e of
-	6	J	Color of Wire
U T	5		minal No.

Signal Name	I	I	I	I
Color of Wire	L	٩	в	GR
Terminal No.	10	11	12	13



ITE		Signal Nar
lor WHITE		Color of Wire
Connector Color	品. H.S.	Terminal No.

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## **AV CONTROL UNIT (COUPE)**

[BÓSE AUDIO WITH NAVIGATION]

Connector No. B100	Connector No.	B102		Terminal No.	Color of Wire	Signal Name	
	Connector Color			2	ГG	1	
_		_		3	SHIELD	I	
	<u>ال</u>			4	BR	I	
	U.	12 11 10 9 8 7 6	6 5 4 3 2 1	8	B/G	I	
	_	3 22 21 20 19	£∏	10	W/L	I	
				11	SHIELD	I	
Terminal No. Wire Signal Name				12	W/R	I	
2				13	^	I	
				14	SHIELD	I	
				15	7	I	
				21	GR/V	1	
				22	SHIELD	1	
				23	B/B	1	
Connector No. B103		Color of	Picco Nomo	Connector No.	B106		
Connector Name WIRE TO WIRE		wire		Connector Name WIRE TO WIRE	me WIRE	E TO WIRE	
Connector Color BROWN	-	BR	I	Connector Color	or WHITE	ļ	
	ო	BR/B	1				
	4	GR/L	I	E	6 1		
1         2         3         4         3         6         7           8         9         10         11         12         13         14         15         16	2	G/W	1		4 5	4 5 6 7 8	
	9	B/Y	1	<u>b</u>			
	7	N	1				
	ი	B/R	1	Terminal No.	Color of Wire	Signal Name	
	10	O/B	I		-	5	
	11	R/G	I	- u			
	12	B/P	I	0		I	
	13	BR	I				
	14	L/O	I				
	15	В	I				
	16	LG	I				

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Connector No.	B138
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE
H.S.	0         0         0           0         0         0         0

B122

Connector No.

Signal Name	I	I	I	I	I	I
Color of Wire	R/G	G/B	BR/B	BR	BR/W	W/B
Terminal No.	Ļ	2	Е	4	5	9

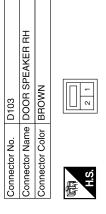
BOSE SPEAKER AMP BROWN	22 32 46 45 44 43 42 41	Signal Name	FR TWDR LH + OUT	FR TWDR LH - OUT	FR TWDR RH - OUT	FR TWDR RH + OUT	RH WOOFER + OUT	RH WOOFER - OUT	GND	LH WOOFER - OUT	TWTR RR PSHELF RH-OUT	BAT	BAT	GND	LH WOOFER +OUT	TWTR RR PSHELF RH +OUT	
	54 53 54 53 54 53 54 53 54 53 54 53 55 54 53 55 55 55 55 55 55 55 55 55 55 55 55	Color of Wire	ГG	B/Y	GR/L	L/O	BR/W	ВВ	B/L	G/B	B/W	BR	B/R	В	W/B		
Connector Name Connector Color	ඛ H.S.	Terminal No.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	

B121 BOSE SPEAKER AMP	BROWN		73         72         71         70         69         68           63         62         61         60         59         58         57         56         55	Signal Name	TWTR RR PSHELF LH - OUT	RR TWDR LH + OUT	FR TWDR LH - OUT	AMP ON	RR LH - IN	RR LH + IN	RR RH - IN	RR RH + IN	TWTR RR PSHELF LH + OUT	INST CTR TWDR + OUT	INST CTR TWDR - OUT	FR DOOR RH + OUT	FR DOOR RH - OUT	FR RH + IN	FR RH - IN	FR LH + IN	FR LH - IN
		_	76 75 74 7 66 65 64 6	Color of Wire	BR/B	N	m	B/G	≻	ВВ	>	ГG	R/G	B/P	O/B	G/W	BR	M/L	GR/V	W/R	B/B
Connector No. Connector Name	Connector Color	[ {	77 H.S.	Terminal No.	55	58	59	60	63	64	65	66	68	69	70	71	72	73	74	75	76

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	AV CONTROL UNIT		
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MIRE	Signal Name	Signal Name	AB
0. R1 ame WIRE TO blor WHITE 16 15 14 13 12		ector Color WHITE	C D
			F
AR VIE	Signal Name CAMERA ON GND COMP + COMP -	WIRE TO WIRE WHITE 5 14 13 12 11 10 9 8 5 14 13 12 11 10 9 8 7 of Signal Name	G H
		Connector Name WIF Connector Color WH List Terminal No. Color of 5 W 15 B	l J
	e	Φ	K
TTE	R Signal Name	MICROPHONE WHITE WHITE Signal Name GND VCC	M
	Terminal No.         Wire           10         GR           11         Y           12         B           13         GR           13         GR	Connector Name MICROPHONE Connector Color WHITE Terminal No. Color of Signal 1 W S 2 R Gil 4 B V V	AV
			AWNIA0352GB

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Connector Name WIRE TO WIRE

D101

Connector No.

Connector Color WHITE

H.S. E

		-	
Signal Name	I	I	
Color of Wire	G/W	BR	
Terminal No.	2	6	

Terminal No.	-	2	
	<b></b>		1
Signal Name	I	1	

AWNIA0362GB

Signal Name Color of Wire G/W ВВ

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### AV CONTROL UNIT (COUPE) [BOSE AUDIO WITH NAVIGATION]

< ECU DIAGNOSIS >

### DTC Index

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CONSULT-III display	Malfunction	Reference page
CAN COMM CIRCUIT [U1000]	When AV control unit is not transmitting or receiving CAN communication signals for 2 seconds or more.	<u>AV-283</u>
CONTROL UNIT (CAN) [U1010]	When a malfunction is detected during initial diagnosis for CAN controller of each control unit.	<u>AV-284</u>
Cont Unit FLASH- ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	<u>AV-285</u>
GYRO NO CONN [U1201]	An internal malfunction is detected in AV control unit (gyrocompass disconnection).	<u>AV-286</u>
GPS COMM [U1204]	An internal malfunction is detected in AV control unit (GPS malfunction).	<u>AV-287</u>
GPS ROM [U1205]	An internal malfunction is detected in AV control unit (GPS malfunction).	<u>AV-288</u>
GPS RAM [U1206]	An internal malfunction is detected in AV control unit (GPS malfunction).	<u>AV-289</u>
GPS RTC [U1207]	An internal malfunction is detected in AV control unit (GPS malfunction).	<u>AV-290</u>
DVD-ROM COMM [U1208]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-291</u>
DVD-ROM READ [U1209]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-292</u>
DVD-ROM DISC [U120A]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-293</u>
DVD-ROM MECHA DETECT [U120C]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-294</u>
DVD-ROM MECHA [U120D]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-295</u>
DVD-ROM SEEK [U1210]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-296</u>
DVD-ROM DATA FORWARD [U1212]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-297</u>
DVD-ROM DATA [U1213]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-298</u>
DVD-ROM TIMEOUT [U1214]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-299</u>
DVD-ROM LOAD [U1215]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-300</u>
CAN CONT [U1216]	An internal malfunction is detected in AV control unit (CAN controller).	<u>AV-301</u>
BLUETOOTH CONN [U1217]	An internal malfunction is detected in AV control unit (Bluetooth module connection malfunc- tion).	<u>AV-302</u>
XM SERIAL COMM [U1220]	An internal malfunction is detected in AV control unit (satellite radio tuner communication mal- function).	<u>AV-303</u>

### AV CONTROL UNIT (COUPE)

#### < ECU DIAGNOSIS >

### [BÓSE AUDIO WITH NAVIGATION]

CONSULT-III display	Malfunction	Reference page
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	<u>AV-304</u>
N-BUS CD CHG CONN [U124C]	<ul> <li>A malfunction is detected in CD changer power supply and ground circuits</li> <li>Malfunction occurs in request signal circuit. (Between CD changer and AV control unit)</li> <li>Malfunction occurs in communication signal circuit. (Between CD changer and AV control unit)</li> </ul>	<u>AV-305</u>

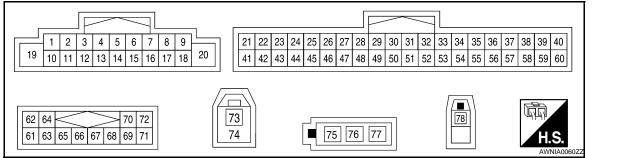
### **Reference Value**

#### VALUES ON THE DIAGNOSIS TOOL

#### CONSULT-III data monitor item

Display Item	Dis- play	Vehicle status	Remarks	С
VHCL SPD SIG	ON	Vehicle speed > 0 km/h (0 MPH)		
VHUL SPD SIG	OFF	Vehicle speed = 0 km/h (0 MPH)	Changes in indication may be delayed. This is	D
PKB SIG	ON	Parking brake is applied.	normal.	D
PKD SIG	OFF	Parking brake is released.		
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON.		E
	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.		F
IGN SIG	ON	Ignition switch ON		0
IGN SIG	OFF	Ignition switch in ACC position		G
	ON	Selector lever in R position	Changes in indication may be delayed. This is	
REV SIG	OFF	Selector lever in any position other than R	Changes in indication may be delayed. This is normal.	Н

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal color)	Description			Condition	Reference value	Μ
+	_	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)	
	- ·			Ignition	Parking brake ON	0V	AV
1 (G/R)	Ground	Parking brake signal	Input	switch ON	Parking brake OFF	Battery voltage	
2 (G)	3 (R)	Sound signal front LH	Output	Ignition switch ON		(V) 1 -1 -1 -1 -1 -1 -1 -1 -1 -1	P
4		Shield			—	-	

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	ninal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)
5 (GR/V)	6 (W/L)	Sound signal rear LH	Output	Ignition switch ON	_	(V) 1 0 -1 * 2ms SKIB3609E
7 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
8 (V/W)	Ground	Vehicle speed (8-pulse) signal	Input	lgnition switch ON	When vehicle speed is ap- prox. 40 km/h (25MPH)	(V) 4 2 0 • • • 20ms SKIA6649J
9 (R/L)	Ground	Illumination signal	Input	OFF	Lighting switch is OFF.	0V
			•		Lighting switch is ON.	Battery voltage
10 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
11 (B)	12 (W)	Sound signal front RH	Output	Ignition switch ON	_	(V) 1 0 -1 + 2ms SKIB3609E
13		Shield			_	_
14 (V)	15 (LG)	Sound signal rear RH	Output	lgnition switch ON	_	(V) 1 0 -1 2ms SKIB3609E
16 (B/P)	Ground	Amp. ON signal	Output	Ignition switch ON	_	Battery voltage
17 (P/B)	Ground	Reverse signal	Input	Ignition switch ON	R position	Battery voltage
18 (R/Y)	Ground	Illumination control	Input	OFF	_	Refer to INL-10, "System De- scription".
19 (B)	Ground	Ground	_	Ignition switch ON	—	0V

#### < ECU DIAGNOSIS >

### [BÓSE AUDIO WITH NAVIGATION]

	ninal color)	Description			Condition	Reference value	А
+	_	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)	
20 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	В
24 (L)		CAN-H	Input/ Output		_	_	С
					Keep pressing SOURCE switch.	0V	D
					Keep pressing MENU UP switch.	1V	_
25 (W/G)	26 (L/B)	Steering switch signal 1	Input	Ignition switch	Keep pressing MENU DOWN switch.	2V	E
				ON	Keep pressing 🔬 switch	3V	
					Keep pressing ENTER switch.	4V	F
					Except for above.	5V	
26 (L/B)	Ground	Steering switch signal ground	_	lgnition switch ON	_	0V	G
					Keep pressing VOL DOWN switch.	0V	F
27 (GR/L)	26 (L/B)	Steering switch signal 2	Input	Ignition switch	Keep pressing VOL UP switch.	1V	
27 (GR/L)	20 (L/B)	Steering Switch Signal 2	input	ON	Keep pressing 🌈 switch.	2V	
					Keep pressing <b>5</b> switch.	3V	J
					Except for above.	5V	
28	—	Shield	_	_	_		L
31 (W/R)	Ground	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is select- ed	(V) 1 0 -1 • 2ms SKIB3609E	K
32 (W)	Ground	AUX ground	_	Ignition switch ON	_	OV	A۷
33 (W/L)	Ground	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is select- ed	(V) 1 0 -1 -1 -1 -1 -1 SKIB3609E	C

# < ECU DIAGNOSIS >

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)
34 (W)	Ground	Camera image signal	Input	Ignition switch ON	Rear view camera image displayed	(V) 0.4 −0.4 + 40µs SKIB2251J
35		Shield			_	
44 (P)	—	CAN-L	Input/ Output		—	_
45 (B/R)	Ground	Microphone signal	Input	Ignition switch ON	_	(V) 2.5 2.0 1.5 1.0 0.5 0 • • • 2ms PKIB5037J
46 (R/L)	Ground	Microphone VCC	Output	Ignition switch ON	_	5V
47 (R/B)	Ground	Microphone ground		Ignition switch ON	_	0V
48	—	Shield	—	—	—	_
53 (V/G)	Ground	Camera-connection rec- ognition signal	Input	Ignition switch ON	Connected to camera con- trol unit connector Not connected to camera control unit connector	0V 5V
55 (R)	Ground	Camera image signal	Input	Ignition switch ON	Rear view camera image displayed	(V) 0.4 0 −0.4 •••40µs skiB2251J
62 (Y/L)	61 (W/L)	CD changer sound sig- nal LH	Input	Ignition switch ON	_	(V) 1 0 -1 • • 2ms SKIB3609E
64 (Y/G)	63 (BR/L)	CD changer sound sig- nal RH	Input	Ignition switch ON		(V) 1 0 -1 • 2ms SKIB3609E

#### < ECU DIAGNOSIS >

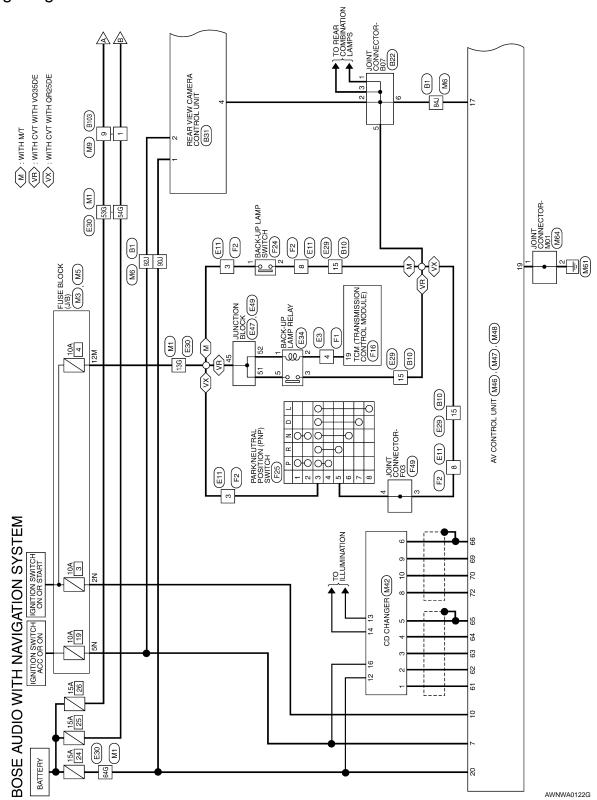
	minal color)	Description			Condition	Reference value
+	-	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)
65	—	Shield		—	—	—
66	—	Shield	_	—	—	_
69 (B)	Ground	Communication signal (CD→CONT)	Input	Ignition switch ON		(V) 10 0 -10 • • 1ms SKIA9300J
70 (G)	Ground	Communication signal (CONT→CD)	Input	Ignition switch ON		(V) 10 0 -10 • • 1ms SKIA9301J
72 (R)	Ground	Request signal (CD→CONT)	Output	Ignition switch ON		(V) 10 0 -10 + 10ms SKIA9299J
73 (B)		GPS signal	Input	Ignition switch ACC	Not connected to GPS an- tenna connector	5V
74 (B)	-	Shield	—	—	—	_
75 (B)	Ground	Antenna amp. supply	Output	Ignition switch ACC	_	Battery voltage
76 (B)	—	Main antenna	Input		—	_
78 (B)	Ground	Satellite antenna signal	Input	Ignition switch ACC	Not connected to satellite antenna connector	5V

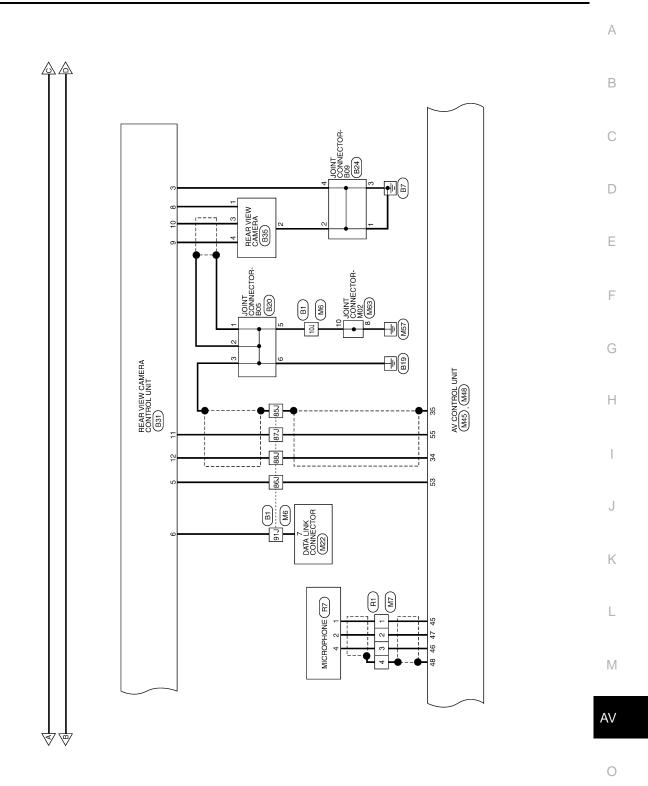
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Wiring Diagram



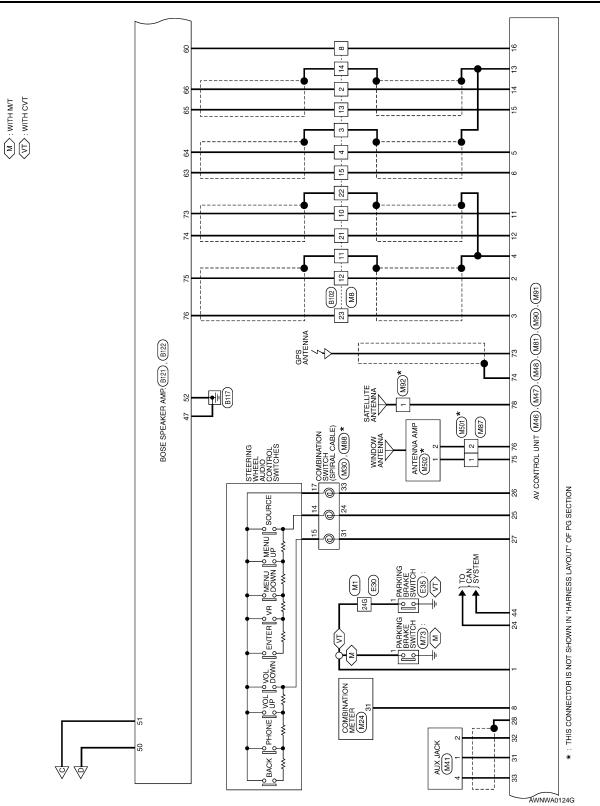


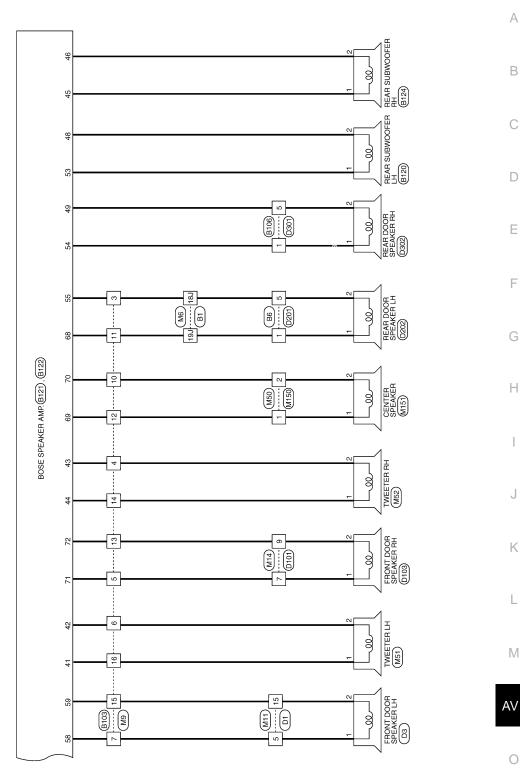


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Cork (JB)       Cornector No.       M6         OCK (JB)       Connector Name       WIRE TO WIRE         Connector Name       WIRE TO WIRE       Connector Name         Millini       Connector Name       WIRE TO WIRE         Connector Name       WIRE TO WIRE       Connector Name         Millini       Millini       Millini         Signal Name       Signal Name       100       CR         Signal Name       Signal Name       Signal Name       Signal Name         Signal Name       Signal Name       Signal Name       Signal Name         Nimme       Signal Name       Signal Name       Signal Name         Signal Name       Signal Name       Signal Name       Signal Name         Signal Name       Signal Name       Signal Name       Signal Name         Nimme       Signal Name       Signal Name       Signal Name         Signal Name       Signal Name       Signal Name       Signal Name         Signal Name       Signal Name       Signal Name       Signal Name         No       Signal Name       Signal Name       Signal Name         No       Signal Name       Signal Name       Signal Name         No       Signal Name       Signal Name <td< th=""></td<>

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## **AV CONTROL UNIT (SEDAN)**

#### < ECU DIAGNOSIS >

Connector No.     M7       Connector Name     WIRE TO WIRE       Connector Name     WIRE TO WIRE       Connector Color     WHITE       Main     Signal Name       Terminal No.     Color of Wire     Signal Name       Terminal No.     Color of Wire     Signal Name       M1     Connector No.     M11       Connector No.     M11       Connector Name     WIRE TO WIRE       Connector No.     M11       Connector Name     WIRE TO WIRE       Main     Signal Name       Main     Signal Name
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### [BÓSE AUDIO WITH NAVIGATION]

Connector No. M41 Connector Name AUX JACK Connector Color WHITE	H.S.	Terminal No. Color of Signal Name		2 SHIELD	4 W/L AUX_OUT_L															
M30 COMBINATION SWITCH (SPIRAL CABLE) GRAY	24 25 28 27 31 22 38 34 31 22 38 34	Signal Name	AUDIO_STRG_SW	AUDIO_STRG_SW_ REMOTE B	AUDIO_STRG_SW_GND	Signal Name	N-BUS L-	N-BUS L+	N-BUS R-	N-BUS R+	I	DATA_GND	1	REQ	RX	TX	B+	ILL-	ILL+	ACC
Connector No. M30 Connector Name COMB (SPIR) Connector Color GRAY	HIS.	Terminal No. Color of Wire	24 W/G	31 GR/L	33 L/B	Terminal No. Wire	1 W/L	2 Y/L	3 BR/L	4 Υ/G	2 SHIELD	9	- 2	8	а 6	10 G	12 Y/R	13 R/Y	14 R/L	16 V/Y
Connector No. M24 Connector Name COMBINATION METER Connector Color WHITE	H.S. 1 22 23 24 25 26 27 28 29 30 31 32 33 43 5 36 37 38 39 40	Terminal No. Color of Signal Name	31 V/W 8P/R OUT			Connector No. M42 Connector Name CD CHANGER	>   3	-		3 5 7 8 9 10 11 13										ALN

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Terminal No. Color of Signal Name	45 B/R MIC_IN+	46 R/L MIC_+B	47 R/B MIC_GND	48 SHIELD –		- 20	51	52	53 V/G RV_CAM_SIG	54	55 R COMP_IN-	- 26	57		26	09													
Signal Name	1	1	AUX_IN_R	1	AUX_IN_L	COMP_IN +	1	1	1	1	1	1	1	1	1	V-CAN I	Signal Name	ACC	SPEED (8P)		IGN	FR_RH +	FR_RH -	I	RR_RH +	RR_RH -	AMP_ON	BV	
Color of Wire	1	1	W/R	SHIELD	W/L	N	SHIELD	1	1	1	1	1	1	1	1	٩	Color of	WIre V/Y	M/V	R/L	J	В	Μ	SHIELD	>	ГG	B/P	P/B	
Terminal No.	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	Terminal No.	7	8	6	10	11	12	13	14	15	16	47	e q
M46 AV CONTEOU LINIT	AV CONTROL UNIT					21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40	8		Wire Signal Name	1	1	1	L V-CAN_H	W/G STRG_SW_SIG_1	L/B STRG_SW_GND	GR/L STRG_SW_SIG_2	M47	Connector Name AV CONTROL UNIT	Connector Color WHITE			12 13 14 15 16		Color of Signal Name			£' {	R FR_LH -	SHIELD –

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-	8	6	10	11	12	13	14	15	16	17	18	19	20
						al Name		PKB	<pre>{_LH +</pre>	- H-	1	4 - H +	R_LH -

Connector No. M51 Connector Name TWEETER LH Connector Color BROWN	Terminal No. Color of Signal Name 1 LG - 2 B/Y -	Connector No. M64 Connector Name JOINT CONNECTOR-M01 Connector Color GRAY	Terminal No.     Color of Wire     Signal Name       1     B     -       2     B     -
	Signal Name	M63 JOINT CONNECTOR-M02 BLUE BLUE 9 8 7 7 6 5 4 3 2 1	Signal Name
Connector No. M50 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No.     Color of Wire     Si       1     B/P     2	Connector No. M63 Connector Name JOINT CO Connector Color BLUE	Terminal No. Color of Sig 8 B 10 GR
M48 AV CONTROL UNIT GRAY 61 63 66 67 68 68 71	Signal Name N-BUS_L - N-BUS_L + N-BUS_L + N-BUS_R - N-BUS_R + - DATA_GND - - RX TX TX HEQ2	M52 TWEETER RH BROWN	Signal Name
Connector No. M48 Connector Name AV CO Connector Color GRAY	Terminal No.         Color of Wire           61         W/L           62         Y/L           63         BR/L           63         BR/L           64         Y/G           65         SHIELD           66         -           67         -           68         -           69         B           63         SHIELD           63         SHIELD           64         Y/G           67         -           70         G           71         -           72         R	Connector No. M52 Connector Name TWEETE Connector Color BROWN	Terminal No.     Color of Wire       1     L/O       2     GR/L

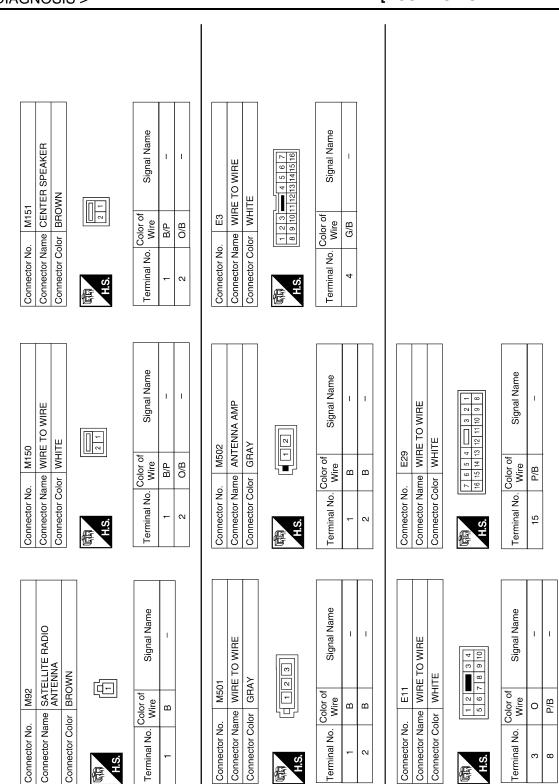
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Signal Name	M91 AV CONTROL UNIT VIOLET ref signal Name
0 01 23	M91 AV CONT
Connector No. Connector Narr Connector Colo H.S. Terminal No. C	Connector No. Connector Name Connector Name Terminal No. ZB
Conne Conne H.S.	Termiri 76
TROL UNIT Signal Name AMP SUPPLY MAIN ANTENNA	signal Name
Signe AMP &	Signa Signa
	AV CONTROL UNIT AV CONTROL UNIT GRAY Signal Nar
0. M81 ame AV Galor GRA blor GRA Color of B B B	
Connector No. M81 Connector Name AV CO Connector Color GRAY ALS TS Terminal No. Wire 75 B	
Conne Conne H.S.	77     Connec     Connec     Connec     Connec     Termina     73     73
- E	
M73 PARKING BRAKE SWITCH (WITH M/T) BLACK BLACK To of Signal Name Re -	M88 M88 COMBINATION SWITCH (SPIRAL CABLE) GRAY rof Signal Name re REMOTE A R GND
Signa	Image: Second
	M88 M88 COMBIN COMBIN Free R R
0. M73 ame PARH (WIT1 Olor BLAC	
Connector No. M73 Connector Name PARKIN (WITH 1 (WITH 1 (WITH 1 (WITH 1 (MITH 1 (MITH 1) (MITH 1) (MIT	Connector No. Connector Name Connector Name Terminal No. Vii 15 17 B
Connector Nc Connector Na Connector Cc Connector Cc Terminal No.	Connect Connect Connect 14 17 17
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## AV CONTROL UNIT (SEDAN)

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lame		
CK-UP LAMP RELAY	E49 JUNCTION BLOCK BROWN Free Signal Name	
Connector No.     E34       Connector Name     BACK-UP LAMP RELAY       Connector Name     BACK-UP LAMP RELAY       Connector Color     BLUE       Image: Signal Name     3       Terminal No.     Olor of Signal Name       3     P/B       3     P/B       5     O	ctor No. ctor Name ctor Color 2 0/ 2 0/	
Connee Connee Termir 3 3	Conne Conne 5 5 5	
e l		
Signal Name	Connector No. E47 Connector Name JUNCTION BLOCK Connector Color WHITE terminal No. Virie Signal Name 45 O -	
Color of Wire Wire BJ/R BJ/R Y/R	0.     E47       ame     JUNCTION       ame     JUNCTION       olor     WHITE       Vire     Sig	
Terminal No.       13G       24G       54G       64G	Connector No. Connector Name Connector Color H.S. 45 45 0	
	E35 PARKING BRAKE SWITCH (WITH CVT) BLACK BLACK 	
E30           e         WIRE TO WIRE           n         WHIRE TO WIRE           10 20 100 110 120 133 144 155 166 150 160 160 161 161 164 155 144 155 166 150 160 161 164 155 144 155 145 154 155 145 154 155 145 154 155 145 154 155 155	E35 Re of Signal BLACK	
ctor No.	Gor No. Color Name Gor Color	
Connec Connec H.S.	Connee Connee H.S.	
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### [BOSE AUDIO WITH NAVIGATION]

F16 TCM (TRANSMISSION CONTROL MODULE) BLACK	33 34 35 36 37 38 39 40 47 48 22 24 25 26 27 28 29 30 45 46 13 14 15 16 17 18 19 20 43 44 3 4 5 6 7 8 9 10 41 42	r of Signal Name B REV LAMP RLY	F49 JOINT CONNECTOR-F03 BLACK	5 4 3 2 1 10 9 8 7 6	r of Signal Name
Connector No. Connector Name Connector Color	H.S. 11122 11122 11122	Terminal No. Color of Wire 19 G/B	Connector No. Connector Name Connector Color	_	Terminal No. Color of Wire 3 G/W
E TO WIRE TE		Signal Name	F25 PARK/NEUTRAL POSITION POPOLO OVED (WITH		Sign
Connector No. F2 Connector Name WIRE TO WIRE Connector Color WHITE	(月) H.S.	Terminal No. Color of 3 0 Wire 8 P/B	Connector No. F25 Connector Name PAR	Connector Color BLACK	Terminal No. Color of Wire
) WIRE		Signal Name	F24 BACK UP LAMP SWITCH BLACK		Signal Name
Connector No. P1 Connector Name WIRE TO WIRE Connector Color WHITE	HS.	Terminal No. Color of Wire 4 G/B	Connector No. F24 Connector Name BACK U Connector Color BLACK	- 1-	Terminal No. Volor of Mire 2 P/B

		A
TO WIRE Signal Name	B22 JOINT CONNECTOR-B07 GRAY 6 4 3 2 1 6 4 3 2 1 6 2 3 2 1 8	B C D
Connector No. B6 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Color of Signal 1 O/B Signal	Connector No. B22 Connector Name JOINT Connector Color GRAY Terminal No. Wire 3 P/B 5 P/B 6 P/B	E
		G
Color of Wire GR GR BR/B BR/B BR/B V/G P/B SHIELD V/G	B20 JOINT CO GRAY 5 4 3 2 5 4 5 4 5 4 5 5 5 6 5 4 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6	I
Terminal No.     100       190     880       900     910	Connector No. Connector Name Connector Name Connector Name Connector Name Connector Name Connector No. Color 1 Connector No. Color 3 Cf 6 B	J
B1           WIRE TO WIRE           WHIE TO WIRE           WHIE TO WIRE           WHIE TO WIRE           WHIE           WALL           Statistic           Statistic           Statistic           WIRE           WIRE           Statistic           WIRE           WIRE<	B10 WHITE TO WIRE TO FOULD TO	L
Connector No. B1 Connector Name WIRE TO WIRE Connector Color WHITE 1.1 2.1 1001/12/2018/14/15/ 13.1 4.5 16/17/18/14/15/ 13.1 4.5 16/17/17/18/16/17/17/17/18/16/17/17/18/16/17/17/18/16/17/17/18/16/17/17/18/16/17/17/18/16/17/17/18/16/17/17/18/16/17/17/18/16/17/17/18/16/17/17/18/16/16/16/16/16/16/16/16/16/16/16/16/16/	Connector No.     B10       Connector Name     WIF       Connector Name     WIF       Connector Color     WH       Terminal No.     Vire       15     P/B	AV O
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[BOSE AUDIO WITH NAVIGATION]

AV-397

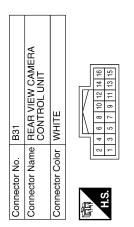
Signal Name	B +	ACC	GND	REV	CONTROL 1	DDL (K-LINE)	CAMERA ON	CAMERA -	CAMERA +	COMP -	COMP +
Color of Wire	Y	>	в	P/B	V/G	0	GR	Г	Р	н	M
Terminal No.	t	2	ę	4	5	9	8	6	10	11	12

Signal Name	I	I	I	I	I	I	I	I	I	I	1	1	I
Color of Wire	ГG	SHIELD	BR	B/G	M/L	SHIELD	W/R	>	SHIELD	≻	GR/V	SHIELD	B/B
Terminal No.	2	3	4	8	10	11	12	13	14	15	21	22	23

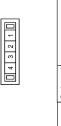
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Signal Name	I	I	I	I
Color of Wire	в	В	В	в
Terminal No. Color of Wire	Ŧ	2	3	4

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

AV-398

Connector Name WIRE TO WIRE

B102

Connector No.

Connector Color WHITE



Signal Name	CAMERA ON	GND	COMP +	COMP -
Color of Wire	GR	в	٩.	_
Terminal No.	Ļ	2	e	4

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O WIRE				7 8			Signal Name	0	1	I						Signal Name	RR DOOR LH - OUT	RR TWDR LH + OUT	FR TWDR LH - OUT	AMP ON	RR LH - IN	RR LH + IN	RR RH - IN	RR RH + IN	RR DOOR LH + OUT	INST CTR TWDR + OUT	INST CTR TWDR - OUT	FR DOOR RH + OUT	FR DOOR RH - OUT	FR RH + IN	FR RH - IN	FR LH + IN	FR LH - IN	
<ul> <li>B106</li> <li>B106</li></ul>			- C -	4 5 6 7 8			Color of	Wire		D/ W						Color of Wire		N N	В	B/G	7	BR	>	LG	R/G RI	B/P INS	O/B INS	G/W FF	BR	M/L	GR/V	W/R	B/B	
Connector No. Connector Name	Connector Color				0 H		Terminal No.	Ŧ	-  u	n						Terminal No.	55	58	59	60	63	64	65	99	68	69	20	71	72	73	74	75	76	
															]					89 1	ß													
Signal Name	1	1	I	1	1	1	1	I	I	I	I	I	1	1			BOSE SPEAKER AMP BROWN	2		76 75 74 73 72 71 70 69 <sup>68</sup> As As As As As At An 50 56 58 57 56 55														
Color of Wire	BR	BR/B	GR/L	G/W	Β/Υ	N	B/R	O/B	R/G	B/P	BR	D/1	в	ГG				_		76 75 74 73 66 65 64 63 63														
Terminal No.		e	4	5	9	7	6	10	11	12	13	14	15	16		Connector No.	Connector Name			= = U	à													
				<u> </u>			L	<u> </u>					1	I						9			Г		-		٦							
Ц			•	5 6 7 14 15 16													AKER ER LH							Signal Name		1								
B103 WIBE TO WIBE				10 11 12 13 14 5												B120	REAR SPEAKER SUBWOOFER LH	WHITE			5					0								
Connector No. E	Connector Name V		Ŀ	8 9 2													Connector Name	Connector Color			16	I	-	Terminal No. Wire	1 W/B	2 G/B								
			£		2 1 2											Conn	Conn	Conn		E	H.S.			Termi										

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# AV CONTROL UNIT (SEDAN)

[BÓSE AUDIO WITH NAVIGATION]

AV-399

Connector Name REAR SUBWOOFER RH	Connector Color WHITE			H.S.			Terminal No. Color of Signal Name								Connector No. D101		Connector Color WHITE	H.S.	Terminal No. Color of Signal Name		9 BR -
Signal Name	FR TWDR LH + OUT	FR TWDR LH - OUT	FR TWDR RH - OUT	FR TWDR RH + OUT	RH WOOFER + OUT	RH WOOFER - OUT	GND	LH WOOFER - OUT	RR DOOR RH - OUT	BAT	BAT	GND	LH WOOFER +OUT	RR DOOR RH + OUT		FRONT DOOR SPEAKER LH	Щ		Signal Name	1	1
Color of Wire	ГG	B/Y	GR/L	ГQ	BR/W	BR	B/L	G/B	B/W	BR	B/R	в	W/B	_	D3	-	olor WHITE		Color of	>	в
Terminal No.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	Connector No.	Connector Name	Connector Color	赋词 H.S.	Terminal No.	-	2
B122 BOSE SPEAKER AMP	BROWN			52         51         50           47         46         45         44	2											WIRE TO WIRE	WHITE	5         4         1         3         2         1           14         13         12         11         10         9         8	of Signal Name		1
				54 53 <sup>52</sup> 49 48 47 46											Connector No. D1		Connector Color W	7 6 5 14	Color of	2	B
Connector No. Connector Name	Connector Color														ラ	ラー	OL.		Terminal No.		

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DIAGNOSIS >	[BOSE AUDIO WITH NAVIGATION]	
Connector No.     D202       Connector Name     REAR DOOR SPEAKER LH       Connector Color     BROWN       Connector Color     BROWN       Image: Second Se	Connector No.       R1         Connector Name       WIRE TO WIRE         Connector Name       WIRE TO WIRE         Connector Color       WHITE         Connector Color       WHITE         Connector Color       WHITE         Connector Color       WHITE         Connector Color       Wire         Connector Color       Vire         Connector Color       Color of Color of Signal Name         Vire       Color of Color of Signal Name	A B C D F
Connector No.     D201       Connector Name     WIRE TO WIRE       Connector Name     WIRE TO WIRE       Connector Color     WHITE       Image: Signal Name     1       Image: Signal Name     0/B       Image: Signal Name     -	Connector No.     D302       Connector Name     REAR DOOR SPEAKER RH       Connector Color     BROWN       Time     Time       Time     Time       2     Brown       2     Brown       1     Vire       2     Brown       1     V       2     Brown       2     Brown       2     Brown       2     Brown       3gnal Name       1     W       2     Brown       3     Signal Name       1     W       2     Brown       4     B     VCC	G H I K
Connector No.     D103       Connector Name     FRONT DOOR SPEAKER RH       Connector Name     FRONT DOOR SPEAKER RH       Connector Color     BROWN       Terminal No.     Color of Signal Name       1     GW       2     BR		L M AV

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# AV CONTROL UNIT (SEDAN)

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#### SE AUDIO WITH NAVIGATION

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#### AV CONTROL UNIT (SEDAN) [BOSE AUDIO WITH NAVIGATION]

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# DTC Index

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CONSULT-III display	Malfunction	Reference page
CAN COMM CIRCUIT [U1000]	When AV control unit is not transmitting or receiving CAN communication signals for 2 seconds or more.	<u>AV-283</u>
CONTROL UNIT (CAN) [U1010]	When a malfunction is detected during initial diagnosis for CAN controller of each control unit.	<u>AV-284</u>
Cont Unit FLASH- ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	<u>AV-285</u>
GYRO NO CONN [U1201]	An internal malfunction is detected in AV control unit (gyrocompass disconnection).	<u>AV-286</u>
GPS COMM [U1204]	An internal malfunction is detected in AV control unit (GPS malfunction).	<u>AV-287</u>
GPS ROM [U1205]	An internal malfunction is detected in AV control unit (GPS malfunction).	<u>AV-288</u>
GPS RAM [U1206]	An internal malfunction is detected in AV control unit (GPS malfunction).	<u>AV-289</u>
GPS RTC [U1207]	An internal malfunction is detected in AV control unit (GPS malfunction).	<u>AV-290</u>
DVD-ROM COMM [U1208]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-291</u>
DVD-ROM READ [U1209]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-292</u>
DVD-ROM DISC [U120A]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-293</u>
DVD-ROM MECHA DETECT [U120C]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-294</u>
DVD-ROM MECHA [U120D]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-295</u>
DVD-ROM SEEK [U1210]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-296</u>
DVD-ROM DATA FORWARD [U1212]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-297</u>
DVD-ROM DATA [U1213]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-298</u>
DVD-ROM TIMEOUT [U1214]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-299</u>
DVD-ROM LOAD [U1215]	An internal malfunction is detected in AV control unit (DVD-ROM).	<u>AV-300</u>
CAN CONT [U1216]	An internal malfunction is detected in AV control unit (CAN controller).	<u>AV-301</u>
BLUETOOTH CONN [U1217]	An internal malfunction is detected in AV control unit (Bluetooth module connection malfunc- tion).	<u>AV-302</u>
XM SERIAL COMM [U1220]	An internal malfunction is detected in AV control unit (satellite radio tuner communication mal- function).	<u>AV-303</u>

## AV-402

# AV CONTROL UNIT (SEDAN)

#### < ECU DIAGNOSIS >

#### [BÓSE AUDIO WITH NAVIGATION]

CONSULT-III display	Malfunction	Reference page	A
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	<u>AV-304</u>	В
N-BUS CD CHG CONN [U124C]	<ul> <li>A malfunction is detected in CD changer power supply and ground circuits</li> <li>Malfunction occurs in request signal circuit. (Between CD changer and AV control unit)</li> <li>Malfunction occurs in communication signal circuit. (Between CD changer and AV control unit)</li> </ul>	<u>AV-305</u>	С

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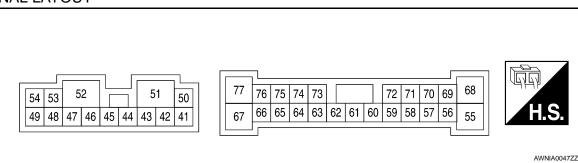
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# BOSE SPEAKER AMP

#### **Reference Value**

INFOID:000000001830572

TERMINAL LAYOUT



#### PHYSICAL VALUES

	minal e color)	Description		Condition	Reference value
+	-	Signal name	Input/Output		(Approx.)
41 (LG)	42 (B/Y)	Sound signal front tweeter LH	Output	Ignition switch ON	(V) 1 0 -1 + 2ms SKIB3609E
44 (L/O)	43 (GR/L)	Sound signal front tweeter RH	Output	Ignition switch ON	(V) 1 0 -1 • • 2 ms SKIB3609E
45 (BR/W)	46 (BR)	Sound signal subwoofer RH	Output	Ignition switch ON	(V) 1 0 -1 -2ms SKIB3609E
47 (B/L)	Ground	GND	—	Ignition switch ON	0V
50 (BR)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
51 (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]

	minal e color)	Description		Condition	Reference value
+	-	Signal name	Input/Output	2 3.1011011	(Approx.)
53 (W/B)	48 (G/B)	Sound signal subwoofer LH	Output	Ignition switch ON	(V) 1 0 -1 • 2ms SKIB3609E
54 (L)	49 (B/W)	Sound signal rear tweeter RH	Output	Ignition switch ON	(V) 1 0 -1 2 M SKIB3609E
58 (W)	59 (B)	Sound signal door speaker LH	Output	Ignition switch ON	(V) 1 0 -1 2ms SKIB3609E
60 (B/G)	Ground	Amp. ON signal	Input	Ignition switch ACC	Battery voltage
64 (BR)	63 (Y)	Sound signal rear LH	Input	Ignition switch ON	(V) 1 0 -1 + 2ms SKIB3609E
66 (LG)	65 (V)	Sound signal rear RH	Input	Ignition switch ON	(V) 1 0 -1 2 SKIB3609E
68 (R/G)	55 (BR/B)	Sound signal rear tweeter LH	Output	Ignition switch ON	(V) 1 0 −1 + 2ms SKIB3609E

# **BOSE SPEAKER AMP**

#### < ECU DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

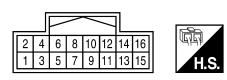
	minal color)	Description		Condition	Reference value (Approx.)
+	-	Signal name	Input/Output		(Approx.)
69 (B/P)	70 (O/B)	Sound signal center speaker	Output	Ignition switch ON	(V) 1 0 -1 + 2ms SKIB3609E
71 (G/W)	72 (BR)	Sound signal door speaker RH	Output	Ignition switch ON	(V) 1 0 -1 ★ 2ms SKIB3609E
73 (W/L)	74 (GR/V)	Sound signal front RH	Input	Ignition switch ON	(V) 1 0 -1 2 M SKIB3609E
75 (W/R)	76 (B/R)	Sound signal front LH	Input	Ignition switch ON	(V) 1 0 -1 • 2ms SKIB3609E

# REAR VIEW CAMERA CONTROL UNIT

## **Reference Value**

INFOID:000000001830573

WKIA5224E



#### PHYSICAL VALUES

Terr	ninal	Description			Condition	Reference value	
	color)	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)	_
1 (Y)	Ground	Battery power	Input	OFF	_	Battery voltage	- (
2 (V)	Ground	ACC power	Input	ACC	_	Battery voltage	
3 (B)	Ground	Ground	_	ON	_	0V	-
4	Ground		laput	ON	A/T selector lever R position	Battery voltage	-
(P/B)	Ground	Reverse signal input	Input	ON	A/T selector lever in other than R position	0V	-
5 (V/G)	Ground	AV Control	Output	ON	_	0V	-
6 (O)	Ground	DDL	Output	—	_	_	
8 (GR)	Ground	Camera power output	Output	ON	A/T selector lever R position	6V	-
9 (L)	Ground	Camera image input (-)	Input	ON	_	0V	-
10 (P)	Ground	Camera image input (+)	Input	ON	A/T selector lever R position	(V) 0.6 0.4 0.2 0 -0.2 -0.4 -0.6 -0.2 -0.4 -0.6 -SKIA4894E	A

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В

С

D

Ε

#### REAR VIEW CAMERA CONTROL UNIT [BOSE AUDIO WITH NAVIGATION]

< ECU DIAGNOSIS >

#### Description Condition Terminal Reference value Input/ Ignition (Wire color) (Approx.) Signal name Operation Output switch (V) 0.6 0 A/T selector lever R 11 ſ ON Ground Composite image output (-) Output (R) position -0 -0. SKIA4896E (V 0.6 0 12 A/T selector lever R ON Ground Composite image output (+) Output (W) position -0 -0. -0. SKIA4896E

#### [BOSE AUDIO WITH NAVIGATION]

#### < ECU DIAGNOSIS >

# **CD CHANGER**

#### **Reference Value**

INFOID:000000001830574

AWNIA0061ZZ

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#### **TERMINAL LAYOUT** В С > 12 14 16 2 4 6 < 1 3 5 7 8 9 10 11 13 15 D Е

#### PHYSICAL VALUES

	minal e color)	Description			Condition	Reference value	F
+	-	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)	G
2 (Y/L)	1 (W/L)	CD changer sound signal LH	Output	Ignition switch ON	When CD change mode is selected	(V) 1 0 -1 • 2ms SKIB3609E	H
4 (Y/G)	3 (BR/L)	CD changer sound signal RH	Output	lgnition switch ON	When CD change mode is selected	(V) 1 0 -1 + 2ms SKIB3609E	J K
5	_	Shield	—	—	—	_	_
6	Ground	Data ground	Input	—	CD player ON	Less than 0.2V	_
8 (R)	Ground	Request signal (CD→CONT)	Output	Ignition switch ON	When CD change mode is selected	(V) 10 0 -10 + 10ms SKIA9299J	AV
9 (B)	Ground	Communication signal (CONT→CD)	Input	Ignition switch ON	When CD change mode is selected	(V) 10 0 -10 -10 -10 -10 -10 -10 -	F

AV-409

# **CD CHANGER**

#### < ECU DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output	Ignition switch	Operation	(Approx.)
10 (G)	Ground	Communication signal (CD→CONT)	Output	Ignition switch ON	When CD change mode is selected	(V) 10 0 -10 -10 -10 -10 -10 -10 -
12 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
13 (R/Y)	Ground	Illumination (-)	Input	OFF	_	Refer to INL-10, "System De- scription".
14	Ground	Illumination (+)	Input	OFF	Lighting switch is OFF.	0V
(R/L)	Clound		mput	011	Lighting switch is ON.	Battery voltage
16 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage

# SYMPTOM DIAGNOSIS

# MULTI AV SYSTEM

# Symptom Table

#### NAVIGATION SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul><li>AV control unit power and ground circuit</li><li>AV control unit</li></ul>	• <u>AV-307</u> • <u>AV-301</u>
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>AV control unit</li></ul>	• <u>AV-343</u> • <u>AV-301</u>
Voice activated control does not operate	<ul><li>Microphone</li><li>Steering wheel audio control switch</li><li>AV control unit</li></ul>	<u>AV-345</u> <u>AV-343</u> <u>AV-301</u>

#### HANDS-FREE PHONE SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul><li>AV control unit power and ground circuit</li><li>AV control unit</li></ul>	• <u>AV-307</u> • <u>AV-301</u>
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>AV control unit</li></ul>	• <u>AV-343</u> • <u>AV-301</u>
Voice activated control does not operate	<ul> <li>Microphone</li> <li>Steering wheel audio control switch</li> <li>AV control unit</li> </ul>	<ul> <li><u>AV-345</u></li> <li><u>AV-343</u></li> <li><u>AV-301</u></li> </ul>

#### REAR VIEW MONITOR

Symptom	Possible cause	Reference page	J
Inoperative	<ul> <li>Rear view camera control unit power and ground circuit</li> <li>Reverse signal circuit</li> <li>Camera ON signal circuit</li> <li>Camera image signal circuit (rear view camera to rear view camera control unit)</li> </ul>	<ul> <li><u>AV-307</u></li> <li><u>AV-352</u></li> <li><u>AV-349</u></li> <li><u>AV-347</u></li> </ul>	K
	<ul> <li>Camera image signal circuit (rear view camera control unit to AV control unit)</li> <li>Rear view camera control unit</li> </ul>	<ul> <li><u>AV-351</u></li> <li><u>AV-347</u></li> </ul>	L

#### AUDIO SYSTEM

Symptom	Possible cause	Reference page	M
Inoperative	<ul><li>AV control unit power and ground circuit</li><li>AV control unit</li></ul>	• <u>AV-307</u> • <u>AV-301</u>	AV
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>AV control unit</li></ul>	• <u>AV-343</u> • <u>AV-301</u>	-
All speakers do not sound	<ul> <li>AV control unit power and ground circuit</li> <li>BOSE speaker amp. ON signal</li> <li>BOSE speaker amp. power and ground circuit</li> <li>BOSE speaker amp.</li> <li>AV control unit</li> </ul>	<ul> <li><u>AV-307</u></li> <li><u>AV-342</u></li> <li><u>AV-309</u></li> <li><u>AV-342</u></li> <li><u>AV-342</u></li> <li><u>AV-301</u></li> </ul>	O
One or several speakers do not sound	<ul> <li>Door speaker</li> <li>Front tweeter</li> <li>Center speaker</li> <li>Rear tweeter</li> <li>Subwoofer</li> </ul>	<ul> <li><u>AV-319</u></li> <li><u>AV-325</u></li> <li><u>AV-331</u></li> <li><u>AV-333</u></li> <li><u>AV-339</u></li> </ul>	_

#### [BOSE AUDIO WITH NAVIGATION]

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#### < SYMPTOM DIAGNOSIS >

# NORMAL OPERATING CONDITION

#### Description

INFOID:000000001830576

[BOSE AUDIO WITH NAVIGATION]

#### 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

C	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 lin	ked with the operation of the fuel pump.	Fuel pump condenser
Noise only occurs when various	A cracking or snapping sound occurs with the operation of various switches.	Relay malfunction, audio unit malfunction
electrical components are oper- ating.	The noise occurs when various motors are operat- ing.	<ul><li>Motor case ground</li><li>Motor</li></ul>
The noise occurs constantly, not just under certain conditions.		<ul> <li>Rear defogger coil malfunction</li> <li>Open circuit in printed heater</li> <li>Poor ground of antenna feeder line</li> </ul>
A cracking or snapping sound occ it is vibrating excessively.	urs while the vehicle is being driven, especially when	<ul> <li>Ground wire of body parts</li> <li>Ground due to improper part installation</li> <li>Wiring connections or a short circuit</li> </ul>

#### 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.	Volume control is set to OFF, MIN or MAX.	Adjust the audio guide volume.
Audio guide volume is too low or too high.	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 malfunction.

Vehicle Mark

#### < 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 pre- vent 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 cor- rectly.	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 sat- ellite 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 dim- ming setting is done. Switching between daytime/nighttime screen may be inhibited by the automatic illumination adjust- ment function.	Perform screen dimming and select the nighttime screen by "SWITCH SCREENS".
Map screen will not scroll in accor- dance with the vehicle travel.	Current location is not displayed.	Press "MAP" button to display the current lo- cation.
Vehicle mark will not be shown.	Current location is not displayed.	Press "MAP" button to display the current lo- cation.
Accuracy indicator (GPS satellite mark) on the map screen stays	GPS satellite signal is intercepted because the vehicle is in or behind a building.	Move the vehicle out to an open space.
gray.	GPS satellite signal cannot be received because an obstacle is placed on top of the instrument pan- el.	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 mov- ing 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 fit- ted or the system has been used on another vehi- cle.	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 CONFIRMA-TION/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

			. M
Symptom	Cause	Remedy	111
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.	AV
Route information will not be displayed.	Route searching has not been done.	Set the destination and perform route searching.	0
	Vehicle mark is not on the recommended route.	Drive on the recommended route.	-
	Route guide is turned OFF.	Turn route guide ON.	P
	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 rec- ommended route will be shown.)	Drive on the recommended route.	-

# AV-413

#### < 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). Howev- er, the result is the same as that of the previous search.	Performed search with every conditions consid- ered. 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 se- lected.	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 $\bullet$ 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 ac- tual 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 des- tination.	Find wider road (orange road or wider) near- by and reset the destination and passing points onto it. Take care of the traveling direc- tion 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 cur- rent 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 <sup>(Note)</sup> 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 sec- tion. 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.

#### < SYMPTOM DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

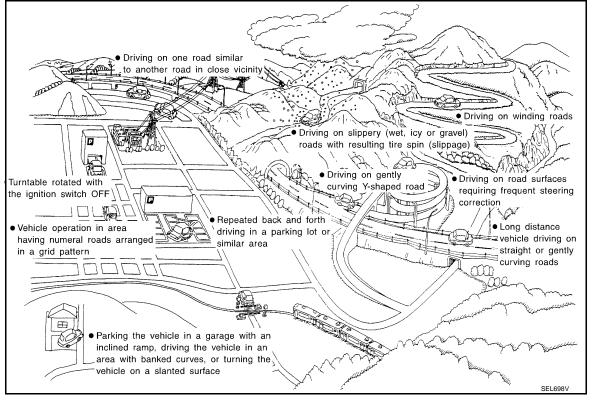
Symptom	Cause	Remedy
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, etc.) is set at the area around the starting point or the destination.	Slightly move the starting point or the destina- tion, or set the passing point on the route of your choice.
	In the area where highways (gray routes) are used for the search, left turn has priority around the current location and the destination (passing points). For this reason, the recommended route may be detouring.	System is not malfunctioning.
Landmarks on the map do not match the actual ones.	This can be happen due to omission or error in the map data.	As a rule, an updated map DVD-ROM will be released once a year. Wait until the latest map has become available.
Recommended route is far from the starting point, passing points, and destination.	Starting point, passing points, and destination of the route guide were set far from the desired points because route searching data around these area were not stored.	Reset the destination onto the road nearby. If this road is one of the highways (gray routes), an ordinary road nearby may be displayed as the recommended route.

#### NOTE:

Except for the ordinance-designated cities. (Malfunctioning areas may be changed in the updated map disc.)

#### Examples of Current-Location Mark Displacement

Vehicle's travel amount is calculated by reading its travel distance and turning angle. Therefore, if the vehicle is driven in the following manner, an error will occur in the vehicle's current location display. If correct location has not been restored after driving the vehicle for a while, perform location correction.



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#### < SYMPTOM DIAGNOSIS >

# NORMAL OPERATING CONDITION

#### [BOSE AUDIO WITH NAVIGATION]

Y-intersections	At a Y intersection or similar gradual divi- sion 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.	
ELK0192D	wrong road.	
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	When driving on a long, straight road and slow curve without stopping, map-matching does not work effectively enough and dis- tance errors may accumulate. As a result, the vehicle mark may deviate from the cor- rect location when the vehicle is turned at a corner.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform lo-
Zigzag roads	When driving on a zigzag road, the map may be matched to other roads in the simi- lar direction nearby at every turn, and the vehicle mark may deviate from the correct location.	cation correction and, if neces- sary, direction correction.
Roads laid out in a grid pattern	When driving where roads are laid out in a grid pattern, or where many roads are run- ning in the similar direction nearby, the map may be matched to them by mistake and the vehicle mark may deviate from the cor- rect location.	
Parallel roads		
	When two roads are running in parallel (such as highway and sideway), the map may be matched to the other road by mis- take and the vehicle mark may deviate from the correct location.	
	Straight roads	ELKOTERD       may deviate from the correct location.         Straight roads       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       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       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       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.

#### < SYMPTOM DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

Cause (cor	ndition) –: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
	In a parking lot	When driving in a parking lot, or other loca- tion 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 devi- ated from the correct location. When driving in circle or turning the steer- ing wheel repeatedly, direction errors accu- mulate, and the vehicle mark may deviate from the correct location.	
Place	Turntable Turntable SEL710V	When the ignition switch is OFF, the navi- gation 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 eas- ily 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.	If after travelling about 10 km (6 miles) the correct location has
	Slopes	When parking in sloped garages, when travelling on banked roads, or in other cas- es where the vehicle turns when tilted, an error in the turning angle will occur, and the vehicle mark may deviate from the road.	not been restored, perform lo- cation correction and, if neces- sary, direction correction.
	Road not displayed on the map screet	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	
Map data	SEL699V	on the map, the vehicle mark may deviate from the correct road.	
	Different road pattern (Changed due to repair)	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.	
	ELK0201D	The vehicle mark may deviate from the cor- rect 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, ad- just it by using the distance ad- justment function. (If the tire chain is removed, recover the original value.)

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#### < SYMPTOM DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

Cause (con	dition) –: 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 stop- ping, 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 perform correct detec- tion, and may cause the vehicle mark to de- viate from the correct road.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform lo- cation correction and, if neces- sary, direction correction.
How to cor- rect location	Position correction accuracy Within 1 mm (0.04 in)	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 correc- tion.
	Direction when location is corrected	If the accuracy of location settings during correction is poor, accuracy may be re- duced 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<sup>™</sup> and the (Flat) Map Screen

Difference of the BIRDVIEW<sup>™</sup> 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

#### AV-418

#### < 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 A 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 B 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 <sup>G</sup> The conditions of the GPS antenna (GPS data) and gyroscope (angular speed sensor) change gradually. Depending on the road traveled and the operation of the steering wheel, the location detection results will be different. Therefore, even on a road on which the location has never been wrong, conditions may cause the vehicle mark to deviate.

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# < PRECAUTION > PRECAUTION PRECAUTIONS

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

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.

#### Precaution for Trouble Diagnosis

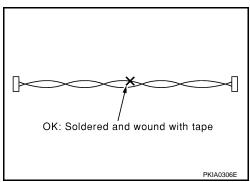
#### AV COMMUNICATION SYSTEM

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

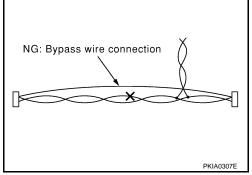
#### Precaution for Harness Repair

#### AV COMMUNICATION SYSTEM

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



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



AV-420

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#### [BOSE AUDIO WITH NAVIGATION]

# < PREPARATION >

# PREPARATION

# PREPARATION

# **Commercial Service Tools**

INFOID:000000001346155 B

Tool name		Description	
		Loosening bolts and nuts	
Power tool			
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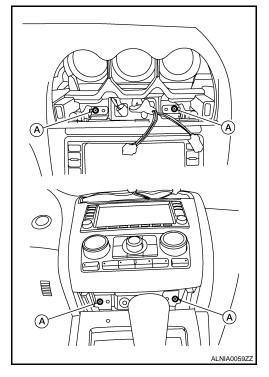
# <ON-VEHICLE REPAIR > ON-VEHICLE REPAIR AUDIO UNIT

Removal and Installation

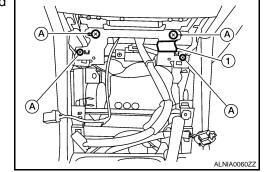
INFOID:000000001346156

#### REMOVAL

- 1. Remove cluster lid C. Refer to IP-11, "Removal and Installation".
- 2. Remove cluster lid D lower finisher. Refer to IP-11. "Removal and Installation".
- 3. Remove navigation audio unit upper and lower screws (A).



4. Remove the navigation audio unit bracket screws (A) and remove the navigation audio unit bracket (1).



5. Pull out the navigation audio unit assembly, disconnect the navigation audio unit assembly connectors.

#### INSTALLATION

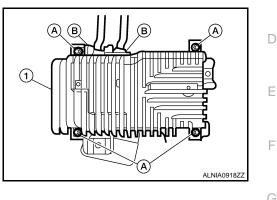
Installation is in the reverse order of removal.

# BOSE SPEAKER AMP

#### **Removal and Installation - Coupe**

#### REMOVAL

- 1. Disconnect the battery negative terminal.
- 2. Remove the trunk floor carpet and spare tire cover. Refer to INT-22, "Removal and Installation".
- 3. Remove the RH trunk floor spacer.
- 4. Remove the Bose speaker amp. screws (A), then disconnect the Bose speaker amp. connectors (B) and remove the Bose speaker amp. (1).



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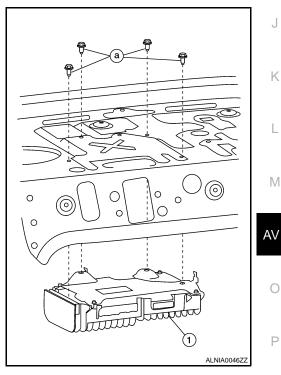
#### INSTALLATION

Installation is in the reverse order of removal.

#### Removal and Installation - Sedan

#### REMOVAL

- 1. Disconnect the battery negative terminal.
- 2. Remove the rear parcel shelf. Refer to INT-36, "Removal and Installation".
- 3. Remove the Bose speaker amp. screws (a), then disconnect the Bose speaker amp. connectors and remove the speaker amplifier (1).



**INSTALLATION** Installation is in the reverse order of removal.

# CD CHANGER

#### Removal and Installation

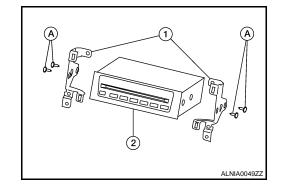
INFOID:000000003185341

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#### REMOVAL

- 1. Remove the Cluster D lower finisher. Refer to IP-11, "Removal and Installation".
- 2. Put selector lever in the drive "D" position (CVT models only).
- 3. Put shift lever in neutral (M/T models only).
- 4. Using a suitable tool remove the CD changer finisher (1), then disconnect the power socket, AUX jack connectors and remove the CD changer finisher (1).

- Remove the CD changer screws (A), pull out the unit, then disconnect the CD changer connector and remove the CD changer (1).



INSTALLATION Installation is in the reverse order of removal.

6. Remove the CD changer bracket screws (A).

• CD changer brackets (1)

• CD changer (2)

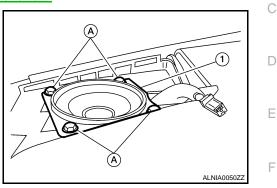
[BOSE AUDIO WITH NAVIGATION]

# FRONT TWEETER

## Removal and Installation

#### REMOVAL

- 1. Remove the front pillar finisher. Refer to INT-19, "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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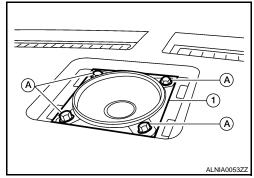
# **CENTER SPEAKER**

#### Removal and Installation

INFOID:000000003185349

#### REMOVAL

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



[BOSE AUDIO WITH NAVIGATION]

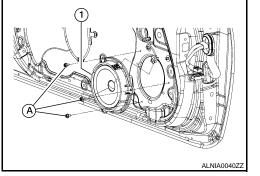
INSTALLATION Installation is in the reverse order of removal.

# FRONT DOOR SPEAKER

#### Removal and Installation

#### REMOVAL

- 1. Remove the front door finisher. Refer to INT-11, "Removal and Installation".
- 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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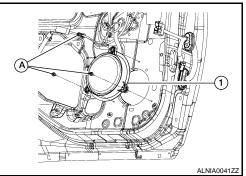
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# REAR DOOR SPEAKER

Removal and Installation - Sedan

#### REMOVAL

- 1. Remove the rear door finisher. Refer to INT-32, "Removal and Installation".
- Remove the rear door speaker screws (A), then disconnect the rear door speaker connector and remove the rear door speaker (1).



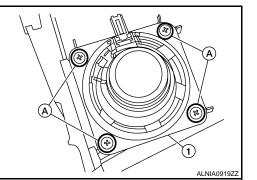
INSTALLATION Installation is in the reverse order of removal.

# REAR TWEETER

Removal and Installation - Coupe

#### REMOVAL

- 1. Remove the rear parcel shelf finisher. Refer to INT-16, "Removal and Installation".
- 2. Remove the rear tweeter speaker screws (A) and remove the
- rear tweeter speaker (1).



INSTALLATION Installation is in the reverse order of removal.

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[BOSE AUDIO WITH NAVIGATION]

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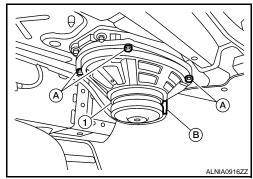
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# REAR SPEAKER

Removal and Installation - Coupe

REMOVAL

- 1. Remove the trunk front finisher. Refer to INT-22, "Removal and Installation".
- 2. Remove the rear speaker screws (A), then disconnect the rear speaker connector (B) and remove the rear speaker (1).



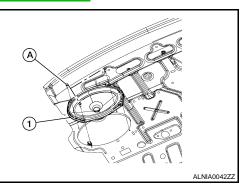
INSTALLATION Installation is in the reverse order of removal.

Removal and Installation - Sedan

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#### REMOVAL

- 1. Remove the rear parcel shelf finisher. Refer to INT-44, "Removal and Installation".
- 2. Remove the rear speaker screws (A), then disconnect the rear speaker and remove the rear speaker (1).



INSTALLATION Installation is in the reverse order of removal.

## SATELLITE RADIO TUNER

< ON-VEHICLE REPAIR >

## [BOSE AUDIO WITH NAVIGATION]

SATELLITE RADIO TUNER		Δ
Removal and Installation - Coupe	INFOID:000000003185355	~
For removal and installation, refer to <u>AV-422, "Removal and Installation"</u> . Removal and Installation - Sedan	INFOID:000000003185356	В
For removal and installation, refer to AV-422, "Removal and Installation".		С

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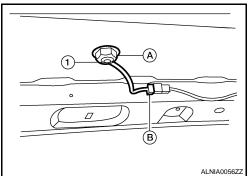
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# SATELLITE RADIO ANTENNA

Removal and Installation

REMOVAL

- 1. Lower the headliner at the rear. Refer to <u>INT-19, "Removal and Installation"</u>.
- 2. Remove the satellite radio antenna nut (A), then disconnect the satellite radio antenna connector (B) and remove the satellite radio antenna (1).



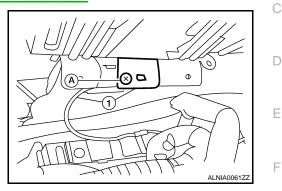
INSTALLATION Installation is in the reverse order of removal.

# **GPS ANTENNA**

### **Removal and Installation**

#### REMOVAL

- 1. Remove the combination meter. Refer to MWI-172, "Removal and Installation".
- 2. Remove the navigation audio unit. Refer to AV-422, "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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# [BOSE AUDIO WITH NAVIGATION]

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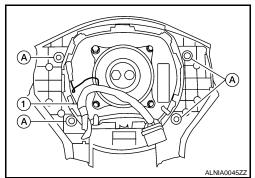
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# **STEERING SWITCH**

# Removal and Installation

REMOVAL

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



[BOSE AUDIO WITH NAVIGATION]

INSTALLATION Installation is in the reverse order of removal.

# **AUDIO ANTENNA (COUPE)**

#### < ON-VEHICLE REPAIR >

# [BOSE AUDIO WITH NAVIGATION]

# AUDIO ANTENNA (COUPE)

Location of Antenna

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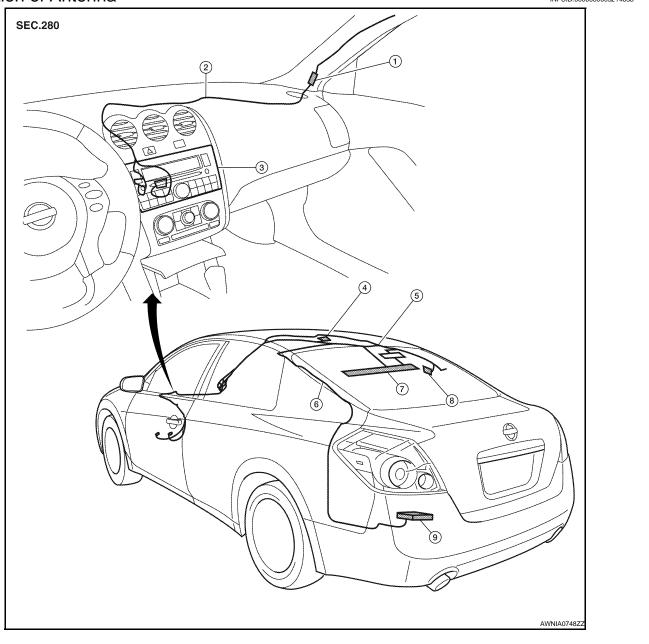
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- In-line connectors M87, M501 1.
- Satellite antenna 4.
- 7. Window Antenna

# Window Antenna Repair

#### **ELEMENT CHECK**

- Audio unit harness 2.
- Audio antenna feeder 5.
- 8. Antenna amp.
- Audio unit 3.
- Satellite radio antenna feeder 6.
- 9. Satellite radio tuner

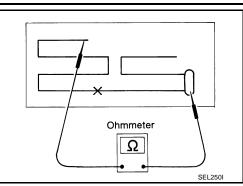
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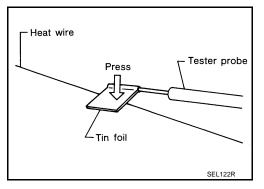
# AUDIO ANTENNA (COUPE)

### [BOSE AUDIO WITH NAVIGATION]

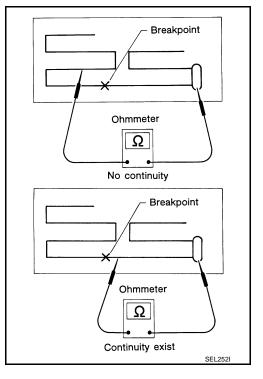
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



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



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



- Ohmmeter SEL253I
- 3. To locate a break, move probe along element. Tester indication will change abruptly when probe passes the broken point.

# AUDIO ANTENNA (COUPE)

#### < ON-VEHICLE REPAIR >

# **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**

composition is deposited.

- 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.

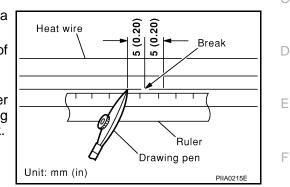
Do not touch repaired area while test is being conducted.

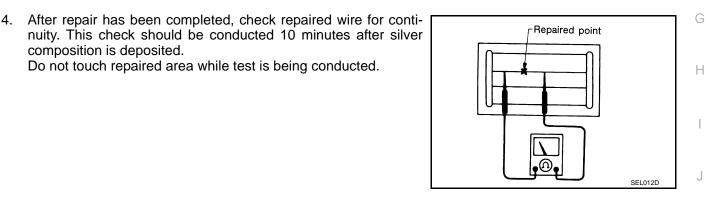


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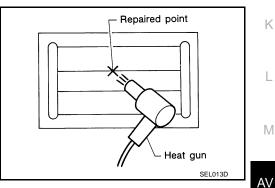






5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet.

If a heat gun is not available, let the repaired area dry for 24 hours.



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# **AUDIO ANTENNA (SEDAN)**

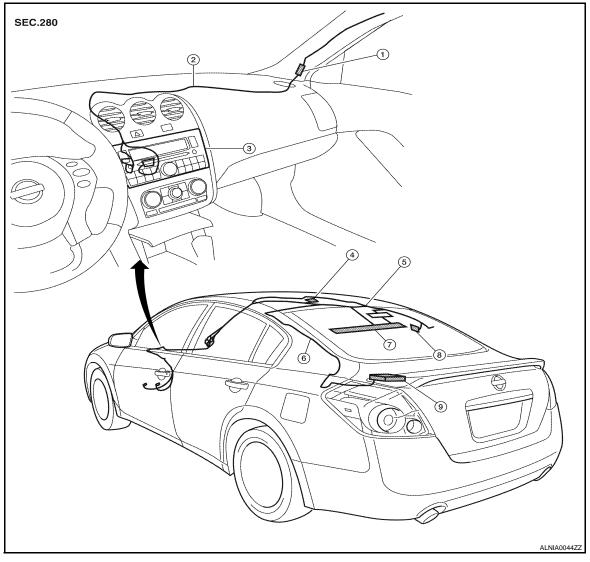
#### < ON-VEHICLE REPAIR >

# [BOSE AUDIO WITH NAVIGATION]

# AUDIO ANTENNA (SEDAN)

Location of Antenna

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- In-line connectors M87, M501 1.
- Satellite antenna 4.
- Window Antenna 7.

- Audio unit harness 2.
- Audio antenna feeder 5. Antenna amp.
- Satellite radio antenna feeder 6.

3.

9. Satellite radio tuner

Audio unit

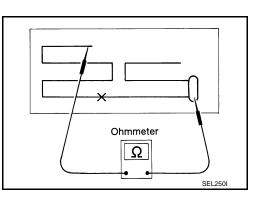
#### INFOID:000000003222318

Window Antenna Repair

# **ELEMENT CHECK**

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

8.



# AUDIO ANTENNA (SEDAN)

- [BOSE AUDIO WITH NAVIGATION]
- When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.

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

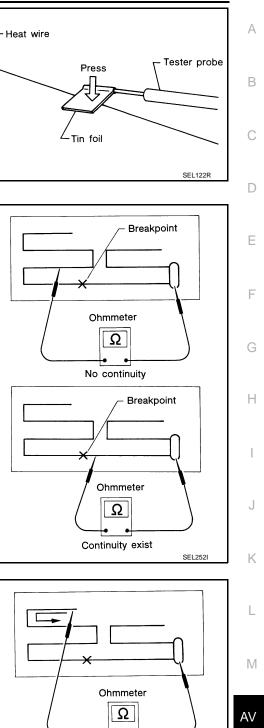
< ON-VEHICLE REPAIR >

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



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

REPAIRING PROCEDURE



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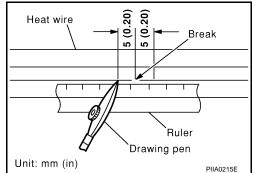
# AUDIO ANTENNA (SEDAN)

#### < ON-VEHICLE REPAIR >

- [BOSE AUDIO WITH NAVIGATION]
- 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.

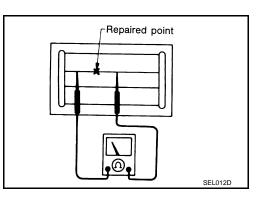


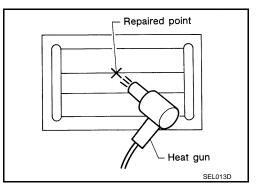
4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

Do not touch repaired area while test is being conducted.

5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet.

If a heat gun is not available, let the repaired area dry for 24 hours.



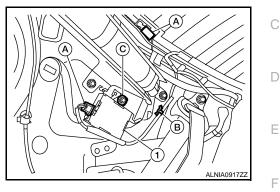


# ANTENNA AMP.

# Removal and Installation - Coupe

#### REMOVAL

- 1. Remove the rear pillar finisher RH. Refer to INT-19, "Exploded View".
- Detach the antenna amp harness clip (B), disconnect the antenna amp connectors (A), remove the antenna amp screw (C) and remove the antenna amp (1).



[BOSE AUDIO WITH NAVIGATION]

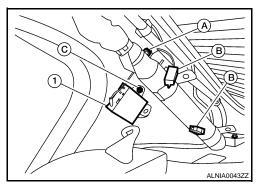
#### INSTALLATION

Installation is in the reverse order of removal.

# Removal and Installation - Sedan

#### REMOVAL

- 1. Remove the rear pillar finisher RH. Refer to INT-40, "Exploded View".
- 2. Partially remove the side curtain air bag module RH to gain access to the antenna amp. Refer to <u>SR-10.</u> <u>"Removal and Installation"</u>.
- Detach the antenna amp harness clip (A), disconnect the antenna amp connectors (B), remove the antenna amp screw (C) and remove the antenna amp (1).



INSTALLATION Installation is in the reverse order of removal.

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# MICROPHONE

Removal and Installation - Coupe

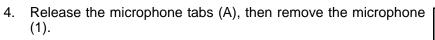
**REMOVAL - WITH SUNROOF** 

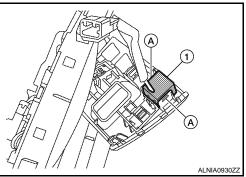
- 1. Remove the map lamp assembly. Refer to INT-19. "Exploded View".
- 2. Detach the microphone connector (A).

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

This step and the following step are (non sunroof only).





INSTALLATION Installation is in the reverse order of removal.

Removal and Installation - Sedan

INFOID:000000003185547

#### REMOVAL

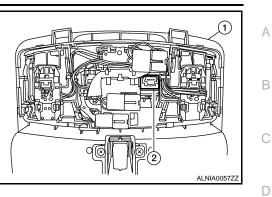
- 1. Remove the map lamp. Refer to <u>INT-40, "Exploded View"</u>.
- 2. Remove the Bluetooth microphone (2).

# MICROPHONE

#### < ON-VEHICLE REPAIR >

• Map lamp (1)

### [BOSE AUDIO WITH NAVIGATION]



INSTALLATION Installation is in the reverse order of removal.

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# TEL ANTENNA

### Removal and Installation - Coupe

#### REMOVAL

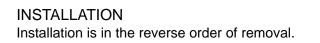
- 1. Remove the trunk front finisher, trunk floor carpet and spare tire cover. Refer to INT-21, "Exploded View".
- 2. Remove the LH trunk floor spacer.
- 3. Remove the rear pillar LH. Refer to INT-19, "Exploded View".
- 4. Remove the rear parcel shelf. Refer to INT-16. "Removal and Installation".
- 5. Remove the Bluetooth antenna screw (A), then detach the Bluetooth antenna harness clips, disconnect the Bluetooth antenna connector and remove the Bluetooth antenna (1).

INSTALLATION Installation is in the reverse order of removal.

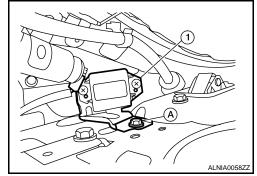
### Removal and Installation - Sedan

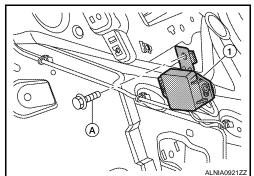
REMOVAL

- 1. Remove the rear parcel shelf. Refer to INT-36, "Removal and Installation".
- 2. Remove the Bluetooth antenna screw (A), fold down the rear seat, disconnect the Bluetooth antenna connector and remove the Bluetooth antenna (1).



INFOID:000000003185548





# **BLUETOOTH CONTROL UNIT**

< ON-VEHICLE REPAIR >	[BOSE AUDIO WITH NAVIGATION]	
BLUETOOTH CONTROL UNIT		Δ
Removal and Installation - Coupe	INFOID:00000003185550	
For removal and installation, refer to AV-422, "Removal and Installat	<u>ion"</u> .	В
Removal and Installation - Sedan	INFOID:00000003185551	
For removal and installation, refer to AV-422. "Removal and Installat	<u>ion"</u> .	С

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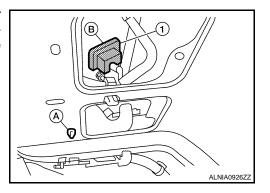
# **REAR VIEW MONITOR**

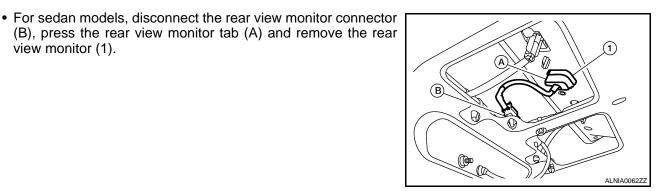
# **Removal and Installation**

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#### REMOVAL

- 1. Remove the license plate finisher. Refer to EXT-23, "Removal and Installation".
- 2. Remove trunk lid finisher. Refer to INT-21, "Exploded View".
- 3. Remove the rear view monitor by performing the following:
  - For coupe models, release the clip (A), then pull out the rear view monitor connector, disconnect the rear view monitor connector, press the rear view monitor tab (B) and remove the rear view monitor (1).





**INSTALLATION** Installation is in the reverse order of removal.

#### Adjustment

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#### REAR VIEW MONITOR

view monitor (1).

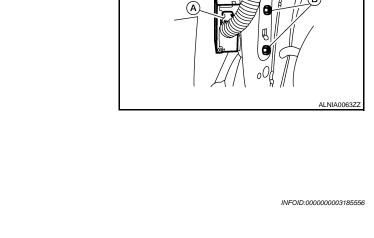
For adjustment on the rear view monitor, refer to DLK-11, "ADDITIONAL SERVICE WHEN REPLACING CON-TROL UNIT : Special Repair Requirement".

# CAMERA CONTROL UNIT

# Removal and Installation - Coupe

#### REMOVAL

- 1. Disconnect the battery negative terminal.
- 2. Remove the trunk floor carpet and spare tire cover. Refer to INT-22, "Removal and Installation".
- 3. Remove the LH trunk side finisher. Refer to INT-22, "Removal and Installation".
- 4. Remove the LH trunk floor spacer.
- 5. Disconnect the rear view monitor control unit connector (A), then remove the rear view monitor screws (B) and remove the rear view monitor control unit (1).



(1)

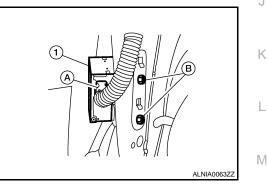
# Installation is in the reverse order of removal.

**INSTALLATION** 

### Removal and Installation - Sedan

#### REMOVAL

- 1. Remove the trunk side finisher. Refer to INT-44, "Removal and Installation".
- 2. Disconnect the rear view monitor control unit connector (A), then remove the rear view monitor screws (B) and remove the rear view monitor control unit (1).



INSTALLATION Installation is in the reverse order of removal.

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