# SECTION AVIGATION SYSTEM C

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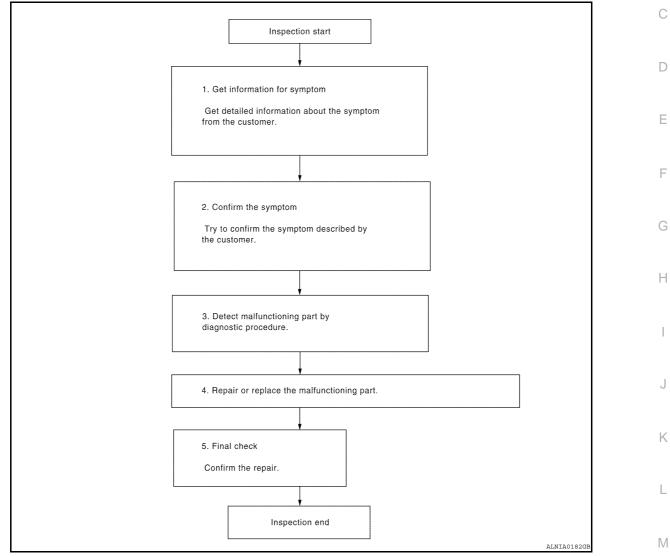
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## DIAGNOSIS AND REPAIR WORKFLOW

# 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.

## [BASE AUDIO]

INFOID:000000005430074

B

AV

## DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

Is malfunctioning part detected?

YES >> GO TO 4

NO >> GO TO 2

**4.**REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.

2. Reconnect parts or connectors disconnected during Diagnostic Procedure.

#### >> GO TO 5

# 5.FINAL CHECK

Refer to confirmed symptom in step 2, and make sure that the symptom is not detected. <u>Has the symptom been repaired?</u>

YES >> Inspection End.

NO >> GO TO 2

# [BASE AUDIO]

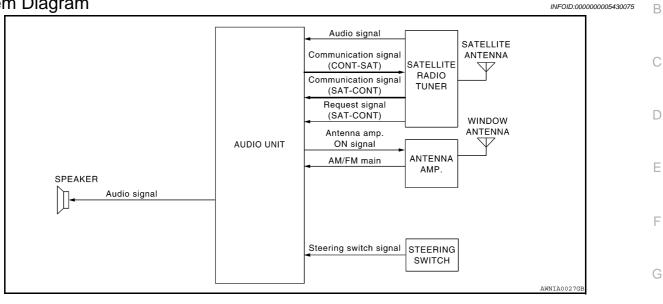
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# **FUNCTION DIAGNOSIS** AUDIO SYSTEM (COUPE)

## System Diagram



# 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.

AV

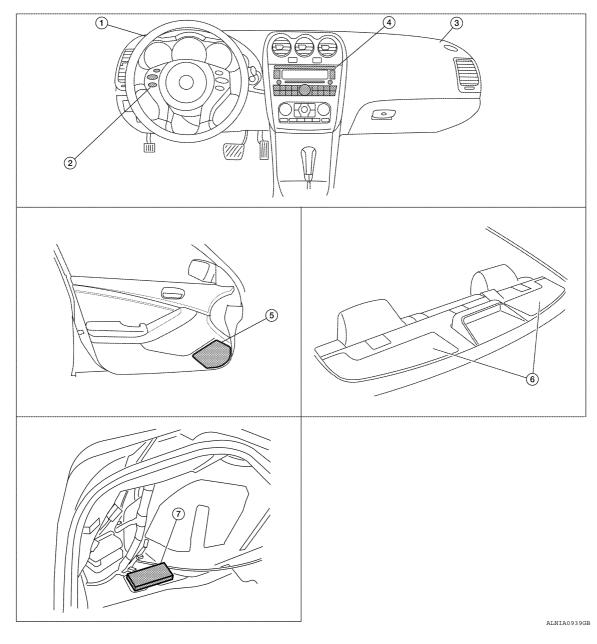
# AUDIO SYSTEM (COUPE)

#### < FUNCTION DIAGNOSIS >

# **Component Parts Location**

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[BASE AUDIO]



- 1. Front tweeter LH M51
- 4. Audio unit M43, M118, M138
- 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.

7. Satellite radio tuner B57, B58 (with satellite radio tuner)

## **Component Description**

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 audio unit</li></ul>

# 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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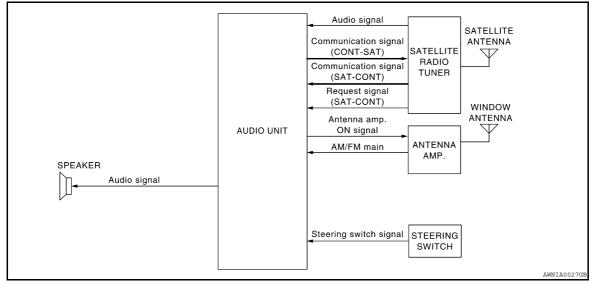
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## < FUNCTION DIAGNOSIS >

# AUDIO SYSTEM (SEDAN)

## System Diagram



## System Description

INFOID:000000005430080

## 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 >

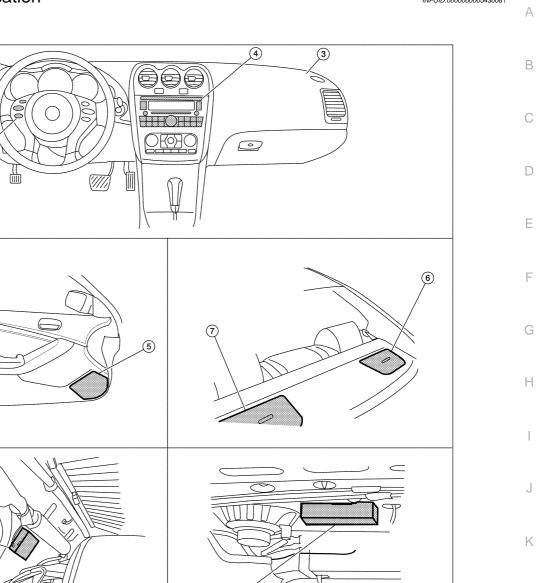
# **Component Parts Location**

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INFOID:000000005430081

[BASE AUDIO]



- 1. Tweeter LH M106
- 4. Audio unit M81, M85, M117

**Component Description** 

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7. Rear speaker LH B26

Steering wheel audio control switches 3. 2.

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- 5. Front door speaker
  - LH D20 RH D120
- 8. Antenna amp. M502

- Tweeter RH M107

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- Rear speaker **RH B44**
- Satellite radio tuner B123, B129 (with 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 audio unit</li></ul>

# 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.	

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#### < 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**

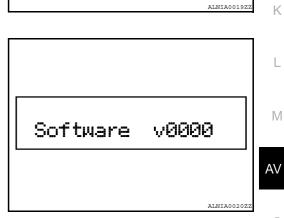
- 1. Turn ignition switch to the ACC position.
- 2. Turn the audio unit off.
- 3. While pressing the "AUDIO" button, turn the volume control dial clockwise or counterclockwise 30 clicks or more. When the self-diagnosis mode is started, a short beep will be heard.

4. Initially, all display segments will be illuminated.

Version Check

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

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# **DIAGNOSIS SYSTEM (AUDIO UNIT)**

#### < FUNCTION DIAGNOSIS >

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

> Hardware  $\nabla 0000$

> > ALNIA0021ZZ

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

CD	Mech	√0000
		ALNIA0022Z

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

then send a tone to each channel (FL, RL, RR, FR) for 1 second.

00000	
SDARS	v0000
	ALNIA0023

When all segments are illuminated, press the "TUNE" up switch to enter channel check diagnostics. The self-diagnostic function will Channel check FL ALNIA0024ZZ

**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.

## [BASE AUDIO]

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## POWER SUPPLY AND GROUND CIRCUIT (COUPE)

#### < COMPONENT DIAGNOSIS >

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

AUDIO UNIT : Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-56, "COUPE : Wiring Diagram".

# 1.CHECK FUSES

Check that the following fuses are not blown.

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

Are the fuses OK?

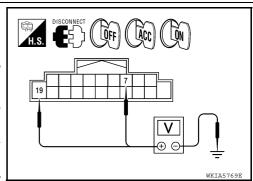
YES >> GO TO 2

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

## 2. POWER SUPPLY CIRCUIT CHECK

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

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



#### Are the voltage results as specified?

YES >> GO TO 3

NO

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

# **3.**GROUND CIRCUIT CHECK

Inspect audio unit case ground.

Does case ground pass inspection?

YES >> Inspection End.

NO >> Repair audio unit case ground.

SATELLITE RADIO TUNER

# SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000005430085

Regarding Wiring Diagram information, refer to AV-56. "COUPE : Wiring Diagram".

# 1.CHECK FUSES

Check that the following fuses are not blown.

[BASE AUDIO]

# POWER SUPPLY AND GROUND CIRCUIT (COUPE)

#### < COMPONENT DIAGNOSIS >

[BASE AUDIO]

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

#### 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.

(+)		(-)	OFF	ACC	ON
Connector	Terminal	()	OIT	ACC	<b>UN</b>
B57	32	Ground	Battery voltage	Battery voltage	Battery voltage
537	36	Ground 0V	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.

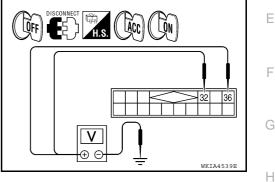
# $3. {\tt GROUND} \, {\tt CIRCUIT} \, {\tt CHECK}$

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

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**[BASE AUDIO]** 

Regarding Wiring Diagram information, refer to AV-63, "SEDAN : Wiring Diagram".

# 1.CHECK FUSES

Check that the following fuses are not blown.

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

Are the fuses OK?

YES >> GO TO 2

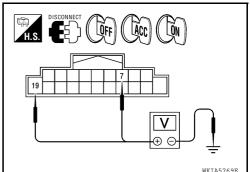
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect audio unit connector M85.

Check voltage between the audio unit connector M85 and ground.

(+)		(-) OFF	100		
Connector	Terminal	(-)	OFF	ACC	ON
M85	19	Ground	Battery voltage	Battery voltage	Battery voltage
VIOS	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

INFOID:000000005430087

Regarding Wiring Diagram information, refer to AV-63, "SEDAN : Wiring Diagram".

## 1.CHECK FUSES

Check that the following fuses are not blown.

# POWER SUPPLY AND GROUND CIRCUIT (SEDAN)

#### < COMPONENT DIAGNOSIS >

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

#### 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.

(+)		(-)	OFF	ACC	ON
Connector	Terminal		OIT	ACC	<b>UN</b>
B123	32	Ground	Battery voltage	Battery voltage	Battery voltage
DIZJ	36	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.

# $3. {\tt GROUND} \, {\tt CIRCUIT} \, {\tt CHECK}$

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.

# **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

Regarding Wiring Diagram information, refer to AV-56, "COUPE : Wiring Diagram".

## **1.**HARNESS CHECK

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

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	D3	1	
M43	3	05	2	Yes
	11	D103	1	165
	12		2	

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

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

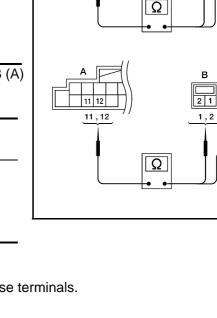
#### Are continuity results as specified?

YES >> GO TO 2

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

# 2.DOOR SPEAKER SIGNAL CHECK

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



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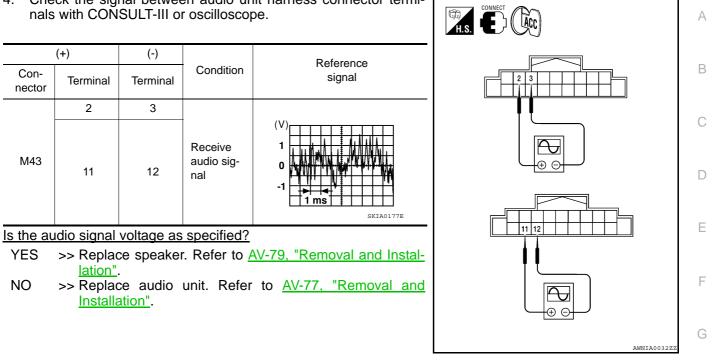
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# **DOOR SPEAKER (COUPE)**

#### < COMPONENT DIAGNOSIS >

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

Regarding Wiring Diagram information, refer to AV-63, "SEDAN : Wiring Diagram".

## **1.**HARNESS CHECK

- 1. Disconnect audio unit connector M85 (A) and suspect speaker connector (B).
- 2. Check continuity between audio unit harness connector M85 (A) terminal and suspect speaker harness connector (B) terminal.

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M85	2	D20	1	
	3		2	Yes
	11	D400	1	163
		12	D120	2

3. Check continuity between audio unit harness connector M85 (A) terminal and ground.

		А	_	Continuity	
-	Connector	Terminal		Continuity	
-		2			
M85	3	Ground	No		
	11				
		12			

#### Are continuity results as specified?

YES >> GO TO 2

NO

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

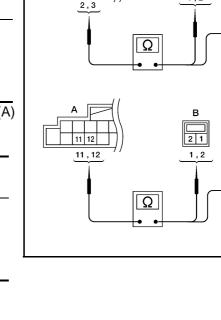
• Repair harness or connector.

# 2.FRONT DOOR SPEAKER SIGNAL CHECK

1. Connect audio unit connector and front speaker connector.

2. Turn ignition switch to ACC.

3. Push "POWER" switch.



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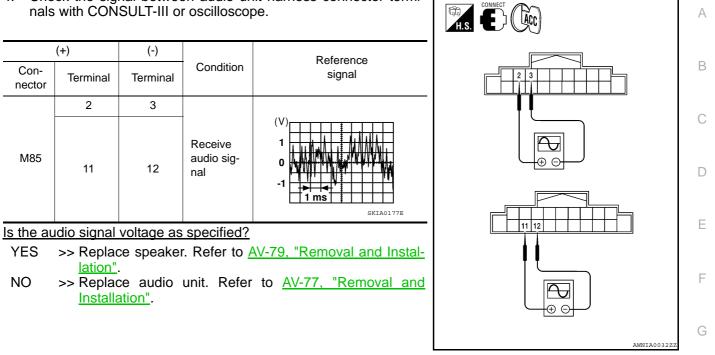
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# FRONT DOOR SPEAKER (SEDAN)

#### < COMPONENT DIAGNOSIS >

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

#### [BASE AUDIO]



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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**

Regarding Wiring Diagram information, refer to AV-56, "COUPE : Wiring Diagram".

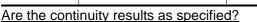
## **1.**HARNESS CHECK

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

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	M51	1	
M43	3	IVIS I	2	Yes
	11	MED	1	165
	12	M52	2	

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

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

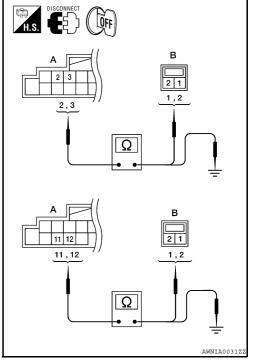


YES >> GO TO 2

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

• Repair harness or connector.

2.FRONT TWEETER SIGNAL CHECK

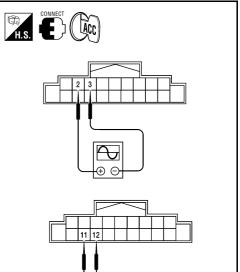


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# **FRONT TWEETER (COUPE)**

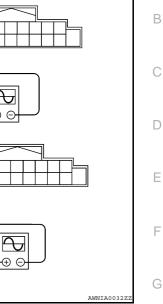
#### < COMPONENT DIAGNOSIS >

- 1. Connect audio unit connector and tweeter connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- Check the signal between audio unit harness connector termi-4. nals 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 5 KIA0177E	
Is the audio signal voltage as specified?					

- YES >> Replace tweeter. Refer to AV-78, "Removal and Installation".
- NO >> Replace audio unit. Refer to AV-77, "Removal and Installation".



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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**

Regarding Wiring Diagram information, refer to AV-63, "SEDAN : Wiring Diagram".

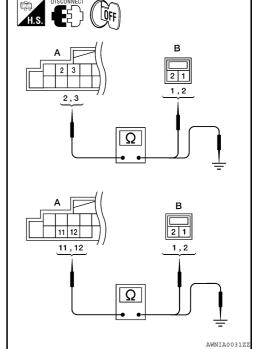
## **1.**HARNESS CHECK

- 1. Disconnect audio unit connector M85 (A) and suspect tweeter connector (B).
- 2. Check continuity between audio unit harness connector M85 (A) and suspect tweeter harness connector (B).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	M106	1	
M85	3		2	Yes
IVIOJ	11	M407	1	165
	12	M107	2	

3. Check continuity between audio unit harness connector M85 (A) and ground.

-		А		Continuity
-	Connector	Terminal		Continuity
-		2		No
	M85	3	Ground	
		11	Ground	NO
		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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[BASE AUDIO]

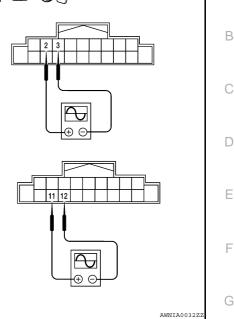
# **TWEETER (SEDAN)**

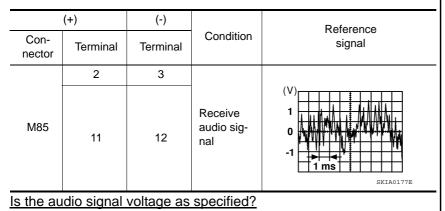
#### < COMPONENT DIAGNOSIS >

#### 1. Connect audio unit connector and tweeter connector.

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







- YES >> Replace tweeter. Refer to AV-78, "Removal and Installation".
- NO >> Replace audio unit. Refer to AV-77, "Removal and Installation".

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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

Regarding Wiring Diagram information, refer to <u>AV-56, "COUPE : Wiring Diagram"</u> or <u>AV-63, "SEDAN : Wiring Diagram"</u>.

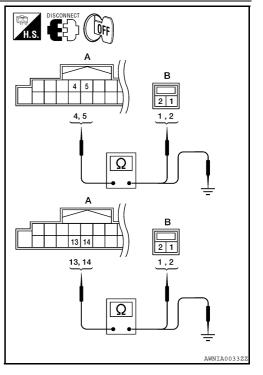
## **1.**HARNESS CHECK

- Disconnect audio unit connector M43 (coupe) or M85 (sedan) (A) and suspect speaker connector.
- Check continuity between audio unit harness connector M43 (coupe) or M85 (sedan) (A) and suspect speaker harness connector (B).

A		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M43	4	B26	1	
(coupe)	5		2	Yes
M85	or M85 13	B44	1	165
(sedan)	14	D44	2	

3. Check continuity between audio unit harness connector M43 (coupe) or M85 (sedan) (A) and ground.

	А		Continuity
Connector	Terminal		Continuity
M43	4	Ground	No
(coupe)	5		
or M85	13		
(sedan)	14		



Are the continuity results as specified?

YES >> GO TO 2 NO >> • Check c

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

2. REAR SPEAKER SIGNAL CHECK

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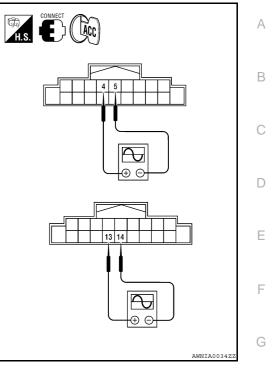
INFOID:000000005430097

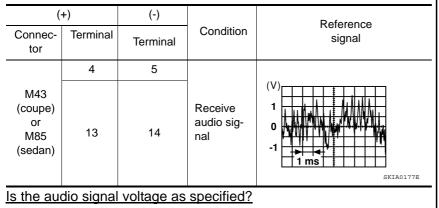
[BASE AUDIO]

# **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.





- YES >> Replace rear speaker. Refer to <u>AV-80, "Removal and</u> <u>Installation - Coupe"</u>.
- NO >> Replace audio unit. Refer to <u>AV-77, "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

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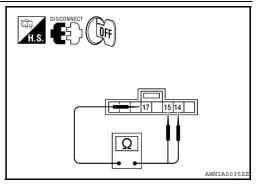
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Regarding Wiring Diagram information, refer to <u>AV-56, "COUPE : Wiring Diagram"</u> (coupe) or <u>AV-63, "SEDAN : Wiring Diagram"</u> (sedan).

# 1.CHECK STEERING SWITCH RESISTANCE

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

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



## Do the steering switches check OK?

YES >> GO TO 2

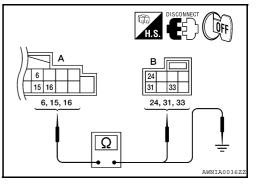
NO >> Replace steering switch. Refer to AV-253, "Removal and Installation".

2.CHECK HARNESS

## 1. Turn ignition switch OFF.

- 2. Disconnect audio unit connector M43 (coupe) or M85 (sedan) and spiral cable connector M30.
- Check continuity between audio unit harness connector M43 (coupe) or M85 (sedan) (A) and spiral cable harness connector M30 (B).

A			Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
M43	6	M30	24		
(coupe) or	16		31	Yes	
M85 (sedan)	15		33		



4. Check continuity between audio unit connector M43 (coupe) or M85 (sedan) (A) and ground.

	А		Continuity
Connector	Terminal		
M43	6		
(coupe) or	15	Ground	No
M85 (sedan)	16		

# **STEERING SWITCH**

#### < COMPONENT DIAGNOSIS >

Are the continuity results as specified?

YES >> GO TO 3

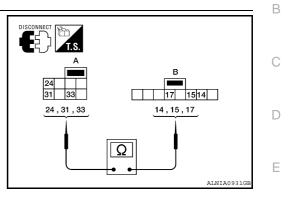
NO >> Repair harness.

# $3. {\sf SPIRAL CABLE CHECK}$

#### 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-7</u>, "Removal and Installation".



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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

Regarding Wiring Diagram information, refer to AV-56, "COUPE : Wiring Diagram".

# 1.CHECK HARNESS - 1

- 1. Turn ignition switch OFF.
- Disconnect satellite radio tuner (factory installed) connector B57 and audio unit connector M118.
- 3. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 28 and audio unit harness connector M118 (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

- NO >> Repair harness or connector.
- **2.**CHECK HARNESS 2
- 1. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 29 and audio unit harness connector M118 (B) terminal 39.

#### Continuity should exist.

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

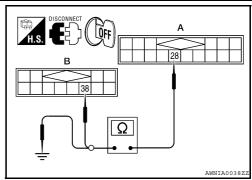
#### Continuity should not exist.

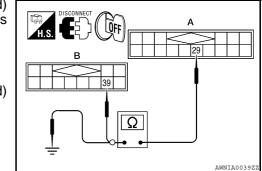
Are continuity results as specified?

YES >> GO TO 3

NO >> Repair harness or connector.

**3.**CHECK HARNESS - 3





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# COMMUNICATION SIGNAL CIRCUIT (COUPE)

#### < COMPONENT DIAGNOSIS >

1. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 30 and audio unit harness connector M118 (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.

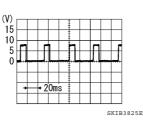
Are continuity results as specified?

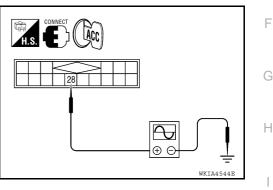
- YES >> GO TO 4
- NO >> Repair harness or connector.

4.CHECK REQ1 SIGNAL

- 1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
- 2. Turn ignition switch to ACC
- 3. Check signal between satellite radio tuner (factory installed) harness connector 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 AV-77, "Removal and Installation".

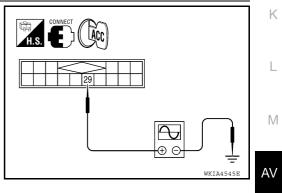
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#### 5.CHECK TXD SIGNAL

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

#### 29 - Ground

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#### Are the voltage readings as specified?

YES >> GO TO 6

NO >> Replace satellite radio tuner. Refer to AV-81, "Removal and Installation - Coupe". **O.**CHECK RXD SIGNAL

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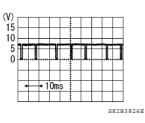
E

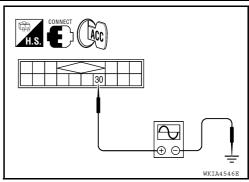
# **COMMUNICATION SIGNAL CIRCUIT (COUPE)**

#### < COMPONENT DIAGNOSIS >

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

#### 30 - Ground





[BASE AUDIO]

#### Are the voltage readings as specified?

- YES >> Replace satellite radio tuner. Refer to <u>AV-81, "Removal and Installation Coupe"</u>.
- NO >> Replace audio unit. Refer to <u>AV-77, "Removal and Installation"</u>.

COMMUNICATION SIGNAL CIRCUIT (SEDAN) < COMPONENT DIAGNOSIS > [BASE AUDIO]
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 communica- tion circuits.
SATELLITE RADIO TUNER : Diagnosis Procedure
Regarding Wiring Diagram information, refer to AV-63, "SEDAN : Wiring Diagram".
1.CHECK HARNESS - 1
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect satellite radio tuner (factory installed) connector B123 and audio unit connector M117.</li> <li>Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 28 and audio unit harness</li> </ol>
connector M117 (B) terminal 38.
<ul> <li>Continuity should exist.</li> <li>4. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 28 and ground.</li> </ul>
Continuity should not exist.
<u>Are continuity results as specified?</u> YES >> GO TO 2
NO >> Repair harness or connector.
2.CHECK HARNESS - 2
1. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 29 and audio unit harness connector M117 (B) terminal 39.
Continuity should exist.
2. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 29 and ground.
Continuity should not exist.
Are continuity results as specified?
NO >> Repair harness or connector.
3.CHECK HARNESS - 3

# **COMMUNICATION SIGNAL CIRCUIT (SEDAN)**

#### < COMPONENT DIAGNOSIS >

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

#### Continuity should exist.

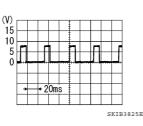
2. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 30 and ground.

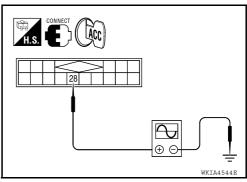
#### Continuity should not exist.

Are continuity results as specified?

- YES >> GO TO 4
- NO >> Repair harness or connector.
- **4.**CHECK REQ1 SIGNAL
- 1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
- 2. Turn ignition switch to ACC
- 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

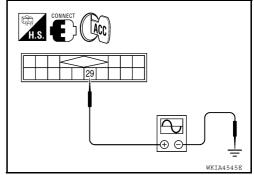
NO >> Replace audio unit. Refer to <u>AV-77, "Removal and Installation"</u>.

#### **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

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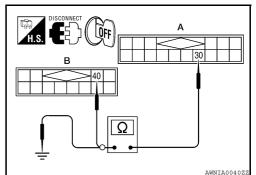


#### Are the voltage readings as specified?

YES >> GO TO 6

NO >> Replace satellite radio tuner. Refer to AV-81, "Removal and Installation - Sedan".

6.CHECK RXD SIGNAL



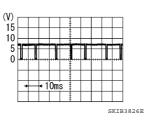
[BASE AUDIO]

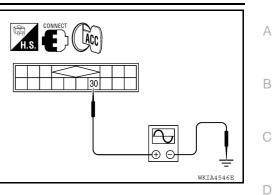
# COMMUNICATION SIGNAL CIRCUIT (SEDAN)

#### < COMPONENT DIAGNOSIS >

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

#### 30 - Ground





[BASE AUDIO]

Are the voltage readings as specified?

- YES >> Replace satellite radio tuner. Refer to AV-81, "Removal and Installation Sedan".
- NO >> Replace audio unit. Refer to <u>AV-77. "Removal and Installation"</u>.

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# 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

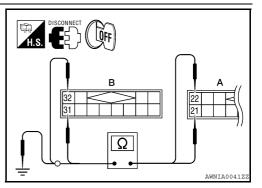
Regarding Wiring Diagram information, refer to AV-56, "COUPE : Wiring Diagram".

#### LEFT CHANNEL

#### **1.**CHECK HARNESS

- 1. Turn ignition switch OFF.
- Disconnect satellite radio tuner (factory installed) connector B57 and audio unit connector M118.
- Check continuity between satellite radio tuner (factory installed) connector B57 (A) and audio unit connector M118 (B).

A	۱.	E	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
B57	21	M118	31	Yes	
657	22	INITIO	32	165	



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

	А		Continuity	
Connector	Terminal			
B57	21	Ground	No	
657	22	Giouna	INO	

Are continuity results as specified?

YES >> GO TO 2

NO >> Repair harness or connector.

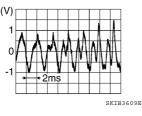
2. CHECK LEFT CHANNEL AUDIO SIGNAL

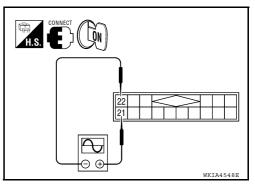
1. Connect satellite radio tuner (factory installed) and audio unit.

#### 2. Turn ignition switch ON.

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

#### 21 - 22





#### Are voltage readings as specified?

YES >> Replace audio unit. Refer to <u>AV-77, "Removal and Installation"</u>.

NO >> Replace satellite radio tuner. Refer to <u>AV-251, "Removal and Installation - Coupe"</u>.

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# SOUND SIGNAL CIRCUIT (COUPE)

#### < COMPONENT DIAGNOSIS >

#### **RIGHT CHANNEL**

#### **1.**CHECK HARNESS

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector B57 and audio unit connector M118.
- 3. Check continuity between satellite radio tuner (factory installed) connector B57 (A) and audio unit connector M118 (B).

A	١	E	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
D <i>E</i> 7	23	M118	33	Yes	
B57	24	IVITO	34	Tes	

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

	А		Continuity	
Connector	Terminal			
B57	23	Ground	No	
B37	24	Oround	NO	

Are continuity results as specified?

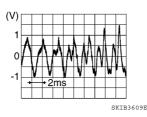
YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

- 1. Connect satellite radio tuner (factory installed) and audio unit.
- 2. Turn ignition switch ON.
- Check signal between satellite radio tuner (factory installed) 3. 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-77, "Removal and Installation".
- >> Replace satellite radio tuner. Refer to AV-251, "Removal and Installation Coupe". NO

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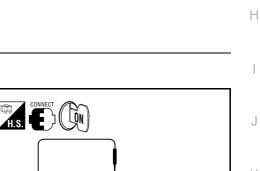
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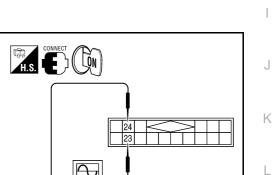
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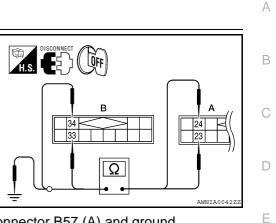


**Revision: September 2009** 





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# SOUND SIGNAL CIRCUIT (SEDAN)

# < 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

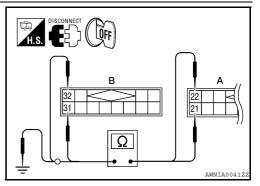
Regarding Wiring Diagram information, refer to AV-63, "SEDAN : Wiring Diagram".

#### LEFT CHANNEL

#### **1.**CHECK HARNESS

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

A	١	E	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
B123	21	M117	31	Yes	
B125	22		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.

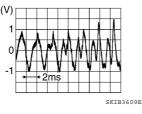
2. CHECK LEFT CHANNEL AUDIO SIGNAL

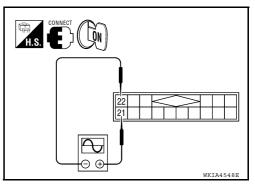
1. Connect satellite radio tuner (factory installed) and audio unit.

#### 2. Turn ignition switch ON.

 Check signal between satellite radio tuner (factory installed) connector B123 terminals 21 and 22 with CONSULT-III or oscilloscope.

#### 21 - 22





#### Are voltage readings as specified?

YES >> Replace audio unit. Refer to <u>AV-77, "Removal and Installation"</u>.

NO >> Replace satellite radio tuner. Refer to <u>AV-251, "Removal and Installation - Sedan"</u>.

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# SOUND SIGNAL CIRCUIT (SEDAN)

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#### < COMPONENT DIAGNOSIS >

#### **RIGHT CHANNEL**

**1.**CHECK HARNESS

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

A	١	E	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
B123	23	M117	33	Yes	
D123	24		34	Tes	

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

	А		Continuity	
Connector	Terminal			
B123	23	Ground	No	
0123	24	Oround		

Are continuity results as specified?

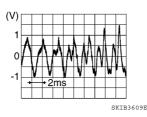
YES >> GO TO 2

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 <u>AV-77, "Removal and Installation"</u>.
- NO >> Replace satellite radio tuner. Refer to AV-251, "Removal and Installation Sedan".



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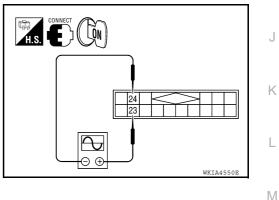
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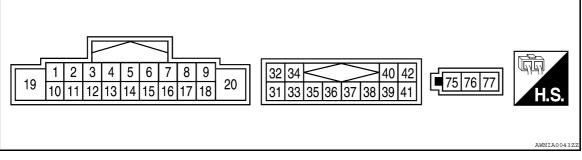
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# ECU DIAGNOSIS AUDIO UNIT (COUPE)

**Reference Value** 

INFOID:000000005430108

#### **TERMINAL LAYOUT**



# PHYSICAL VALUES

	Terminal (Wire color)		Signal in-		Condition	
+	-	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 5KIA0177E
4 (O/B)	5 (W/R)	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
					Press SOURCE switch	Approx. 0.0V
6 (W/G)	Ground	Ground Remote con- trol A	Input	ON	Press SEEK UP switch	Approx. 0.75V
(₩/ੳ)			inpac		Press VOL UP switch	Approx. 2.0V
					Except for above	Approx. 5.0V
7 (V/Y)	Ground	ACC signal	Input	ON	Ignition switch ACC or ON	Battery voltage
9 (R/L)	8 (R/Y)	ILL signal	Input	ON	Headlamps ON	Battery voltage

# AUDIO UNIT (COUPE)

#### < ECU DIAGNOSIS >

#### [BASE AUDIO]

	minal e color)	Itom	Signal in-		Condition	Reference value	А
+	_	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 -1 -1 -1 -1 -1 -1 -1 -1 -1	B C D
13 (L)	14 (B/W)	Audio sound signal rear RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 5 KIA0177E	E
15 (L/B)	-	Remote con- trol ground	Input	-	-	-	G
					Press SEEK DOWN switch	Approx. 0.75V	
16 (GR/L)	Ground	Remote con- trol B	Input	ON	Press VOL DOWN switch	Approx. 2.0V	Η
					Except for above	Approx. 5.0V	1
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	J K L
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	M

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# AUDIO UNIT (COUPE)

#### < ECU DIAGNOSIS >

#### [BASE AUDIO]

	ninal color)	Item	Signal in- put/out-		Condition	Reference value
+	_	nem	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 2 0 •••• 5ms SKIA4403E
40 (B)	Ground	Audio TX	Output		Operate audio vol- ume	(V) 6 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	-

# **AUDIO UNIT (SEDAN)**

#### < ECU DIAGNOSIS >

# AUDIO UNIT (SEDAN)

2 3 4 5

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10 11 12

**Reference Value** 

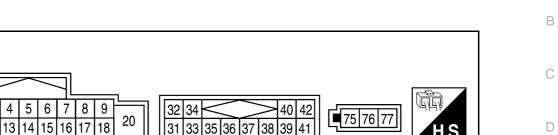
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[BASE AUDIO]

#### **TERMINAL LAYOUT**



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#### PHYSICAL VALUES

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	minal e color)	ltere	Signal in-		Condition	
+	-	- 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 1 1 1 1 1 1 1 1 1 1 1 1 1
6	Ground	Remote con-	Input	ON	Press SOURCE switch Press SEEK UP switch	Approx. 0.0V Approx. 0.75V
(W/G)	Cround	trol A	input		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

# AUDIO UNIT (SEDAN)

#### < ECU DIAGNOSIS >

#### [BASE AUDIO]

_		ninal color)		Signal in-		Condition	
_	+	-	ltem	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 ms 5 KIA0177E
	15 (L/B)	-	Remote con- trol ground	Input	-	_	-
	16 (GR/L)	Ground	Remote con- trol B	Input	ON	Press SEEK DOWN switch Press VOL DOWN switch	Approx. 0.75V Approx. 2.0V
	19 (Y/R)	Ground	Battery power	Input	_	Except for above	Approx. 5.0V Battery voltage
	32 (Y/L)	31 (G/B)	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
	34 (BR/W)	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
	38 (R/L)	Ground	Satellite radio tuner request to audio unit	Input		Turn audio unit ON	5V
_	39 (R/W)	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 0 • • • 2ms SKIA4402E

# AUDIO UNIT (SEDAN)

#### < ECU DIAGNOSIS >

# [BASE AUDIO]

	minal e color)	blor) S			Condition	Reference value	
+	-	- item	put/out- put	Ignition switch	Operation	Reference value	
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	_	

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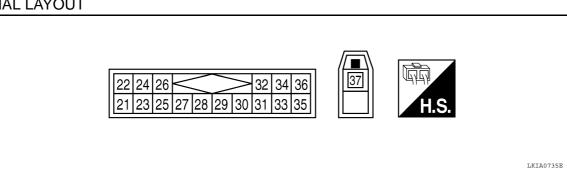
# SATELLITE RADIO TUNER (COUPE)

# **Reference Value**

TERMINAL LAYOUT

INFOID:000000005430112

[BASE AUDIO]



# PHYSICAL VALUES

Term (Wire)		ltem	Signal		Condition	Voltage
+	_	liem	input/ output	Ignition switch	Operation	(approx.)
22 (Y/L)	21 (W/L)	Audio signal LH	Output	ON	Receive audio signal.	(V) 1 0 -1 2 2 m M M M M M M M M M M M M M
24 (BR/L)	23 (Y/G)	Audio signal RH	Output	ON	Receive audio signal.	(V) 1 0 1 + 2ms SKIB3609E
28 (R/L)	Ground	REQ1 (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	(V) 10 0 0 0 0 0 0 0 0 0 0 0 0 0
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 0 0 0 0 0

# SATELLITE RADIO TUNER (COUPE)

#### < ECU DIAGNOSIS >

#### [BASE AUDIO]

Term (Wire			Signal		Condition	Voltage		
+	_	- Item input/ output Ignition Operation		Operation	(approx.)			
30 (B)	Ground	Communication signal (AUDIO-SAT)	Input	ON	Set to the satellite radio mode	(V) 10 0 10 10 10 10 10 10 10 10		
32 (Y/R)	Ground	Battery power supply		OFF		Battery voltage		
36 (GR/W)	Ciouna	ACC power supply	Input	ACC				
37 (B)	-	Antenna signal		_	-	_		

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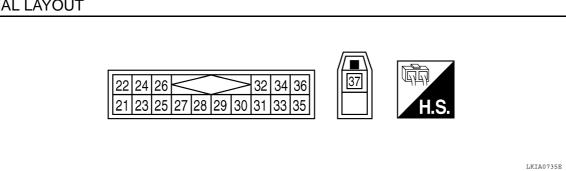
# SATELLITE RADIO TUNER (SEDAN)

#### **Reference Value**

**TERMINAL LAYOUT** 

INFOID:000000005775268

[BASE AUDIO]



#### PHYSICAL VALUES

Term (Wire		ltem	Signal input/		Condition	Voltage
+	_	llem	output	Ignition switch	Operation	(approx.)
22 (Y)	21 (W)	Audio signal LH	Output	ON	Receive audio signal.	(V) 1 0 1 2 2 M M M M M M M M M M M M M
24 (G)	23 (BR)	Audio signal RH	Output	ON	Receive audio signal.	(V) 1 0 1 2 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 1 1 1 1 1 1 1 1 1 1 1 1
28 (LG)	Ground	REQ1 (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	(V) 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
29 (R)	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 0 0 0 0 0

# SATELLITE RADIO TUNER (SEDAN)

#### < ECU DIAGNOSIS >

#### [BASE AUDIO]

	ninal color)		Signal		Condition	Voltage		
+	-	Item	Item input/ output Ignition Operation		Operation	(approx.)		
30 (B)	Ground	Communication signal (AUDIO-SAT)	Input	ON	Set to the satellite radio mode	(V) 15 10 5 0 + 10ms SKIB3826E		
32 (GR)	Ground	Battery power supply		OFF	_	Battery voltage		
36 (SB)		ACC power supply	Input	ACC				
37 (B)	-	Antenna signal		_	_	-		

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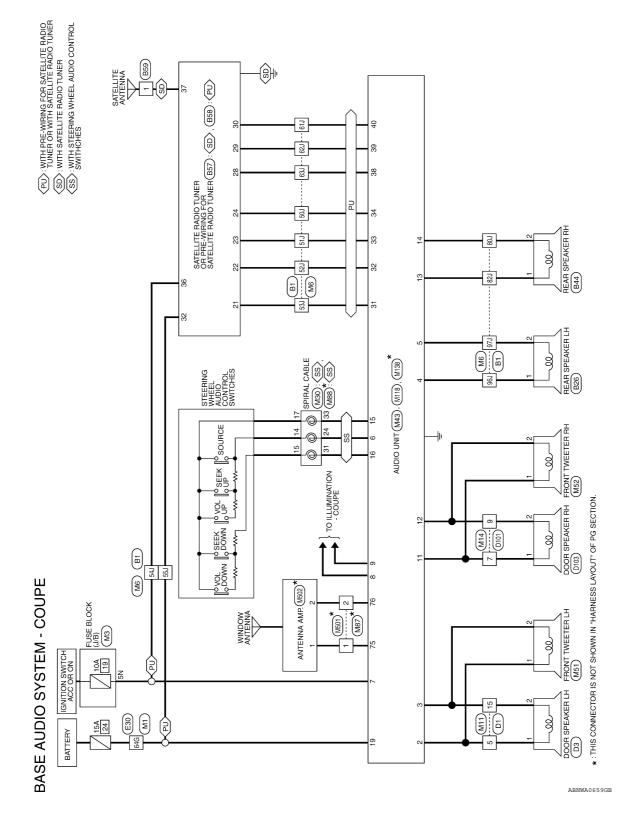
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#### [BASE AUDIO]

INFOID:000000005430109

# WIRING DIAGRAM BASE AUDIO SYSTEM COUPE

COUPE : Wiring Diagram



# **BASE AUDIO SYSTEM**

#### < WIRING DIAGRAM >

#### [BASE AUDIO]

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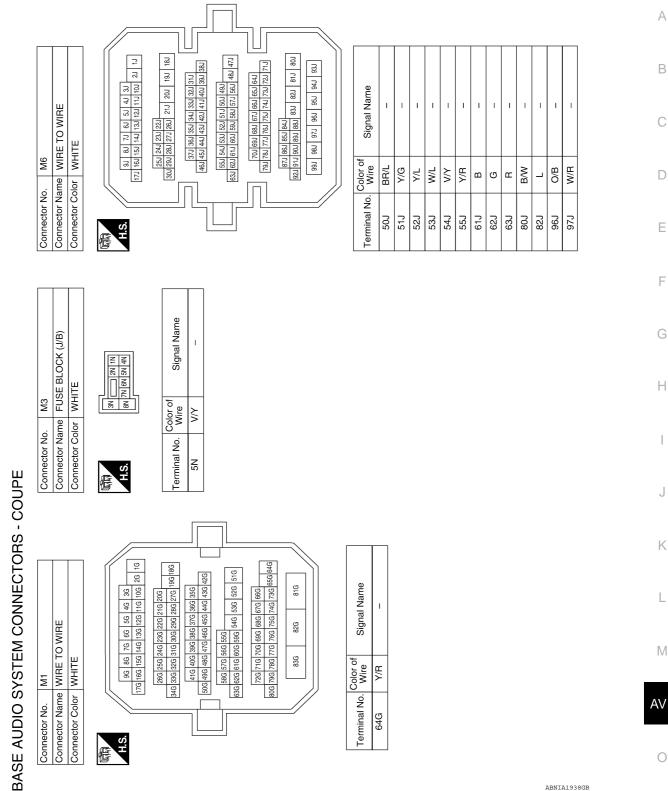
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#### < WIRING DIAGRAM >

# **BASE AUDIO SYSTEM**

# – (WITH BASE AUDIO SYSTEM) – (WITH BASE AUDIO SYSTEM)

Signal Name

Color of Wire ≥ മ

Terminal No.

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Connector No. M30 Connector Name spit.at. CARLE	Connector Color GRAY	(項) H.S. 31 22 23 34	Color of	I Erminal No. Mire Signal Name	24 W/G AUDIO_STRG_SW_	HEMOIE_A	31 GR/L AUDIO_STRG_SW_ REMOTE_B	33 L/B AUDIO_STRG_SW_GND		Connector No. M51	Connector Name FRONT TWEETER LH	(COUPE)	Connector Color BROWN
Connector No. M14 Connector Name Wurder TO WIDE		7 8 9 10 7 8 10		Signal Name		I	1			Cignal Mamo		STRG_SW_A	ACC
o. M14	olor WH	5         -1		Color of	. Mire	G/W	BR			<u> </u>	Wire	W/G	٨٧
Connector No.	Connector Color WHITE	H.S.		Terminal No		7	6			Torminal No		9	7
M11	WHITE	2 3 <b>6</b> 7 9 10 111 12 13 14 15 16		r of Signal Name		1	1			M43	Connector Name AUDIO UNIT (COUPE WITH	BASE AUDIO SYSTEM)	WHITE
Connector No. M11	Connector Color WHTE	H.S.	-	Terminal No William		2 2	15 B			Connector No.	Connector Name	_	Connector Color V

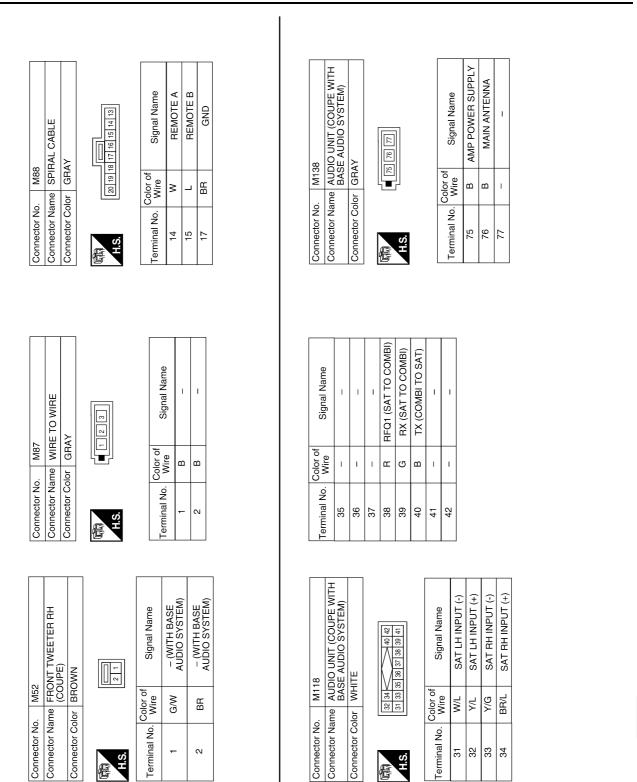
Signal Name	STRG_SW_A	ACC	ILL_CONT_OUT	TAIL/ILL_RLY	I	FR SP RH (+)	FR SP RH (-)	RR SP RH (+)	RR SP RH (-)	STRG_SW_GND	STRG_SW_B	I	I	BAT	I
Color of Wire	W/G	۲Ŋ	Rγ	R/L	I	G/W	BR	_	B/W	L/B	GR/L	I	I	Y/R	I
Terminal No.	9	7	80	6	10	÷	12	13	14	15	16	17	18	19	20



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

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#### < WIRING DIAGRAM >

[BASE AUDIO]

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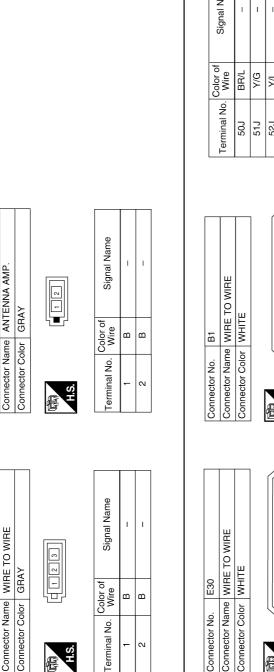
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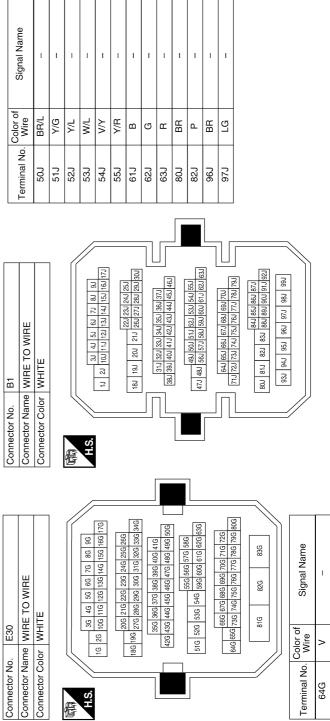
Connector No. M502

M501

Connector No.

#### [BASE AUDIO]

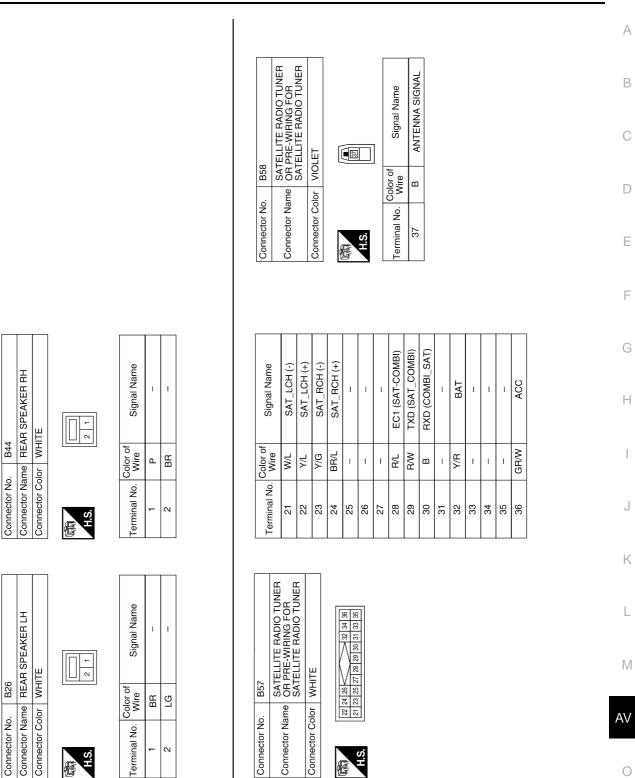




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< WIRING DIAGRAM >

#### [BASE AUDIO]

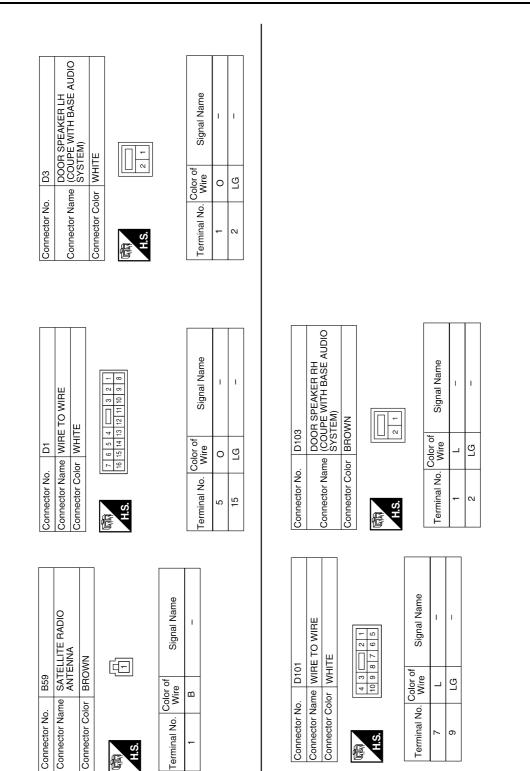


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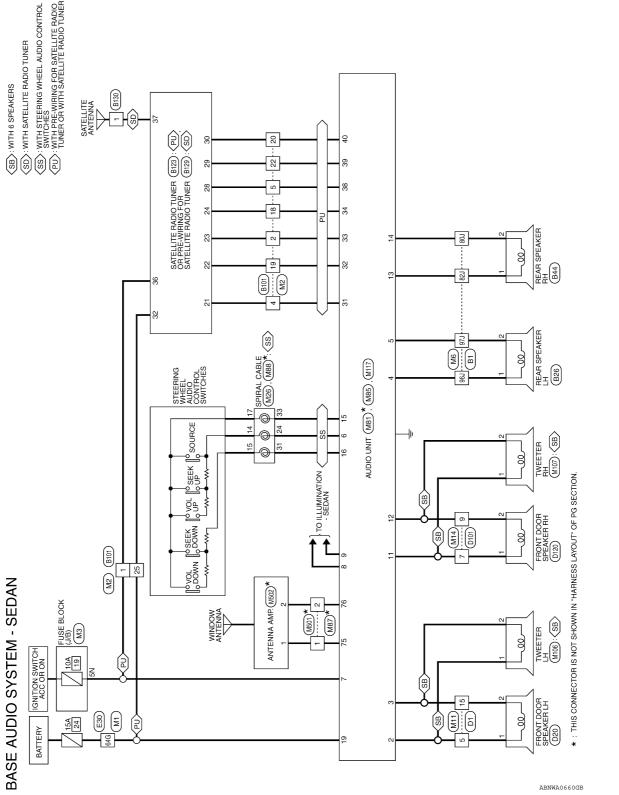


# SEDAN

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# Revision: September 2009





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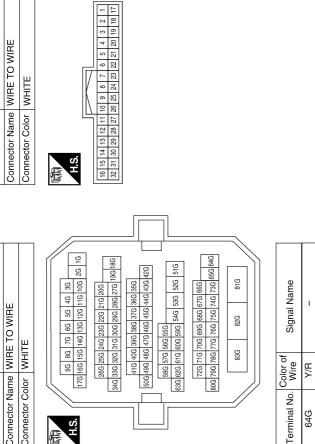
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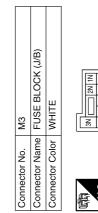
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SE AUDIO SYSTEM CONNECTORS - SEDAN         Connector No.       M1         Connector Name WIRE TO WIRE         Connector Name WIRE TO WIRE         Connector Name WIRE TO WIRE         Connector Color         MITE         Connector Color         WITE         Main         Seal 262 [sto 280 [sto 280] 210 [sto 160 [sto 16] [sto 16] [sto 11] [sto		Tor							
or No. M1 or No. M1 or Name WIRE TO WIRE or Color WHITE firstes is as			WIRE TO WIRE	WHITE				9876543	
or No. M1 or Name WIRE TO WIRE or Color WHITE 17561651550 246 256 246 255 246 255 246 256 256 246 256 256 256 256 256 256 256 256 256 25	DAN	Connector No.	Connector Name	Connector Color	佢		2	16 15 14 13 12 11	-
	UIO SYSTEM CONNECTORS - SE	or No. M1	or Name WIRE TO WIRE	or Color WHITE		96 86 76 66 56 46 36	176 166 156 146 136 126 116 106 26 16	266 256 246 236 226 216 206	





8N 7N 6N 5N 4N	Signal Name
BN	Color of Wire
H.S.	Terminal No.
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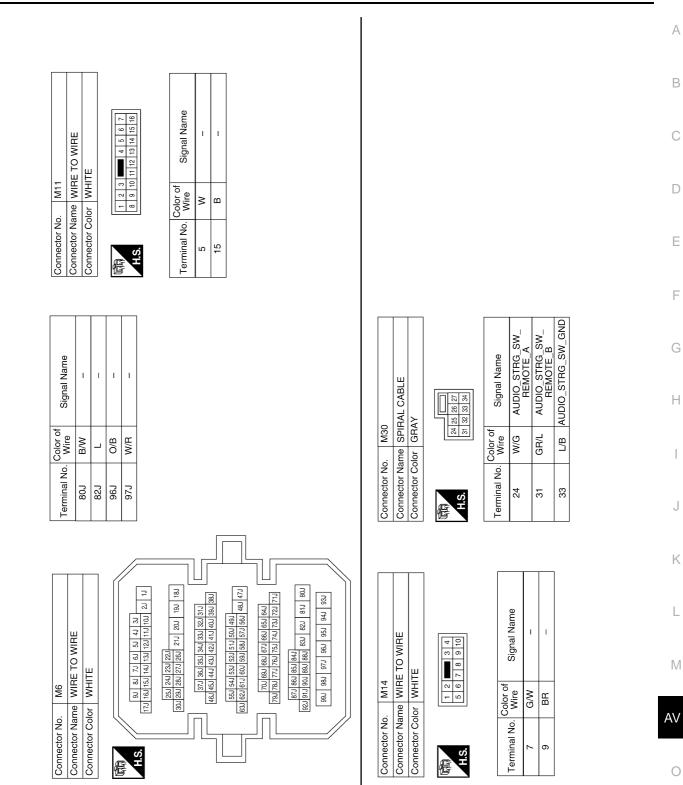
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# NV LUU BASE AUDIO SYSTEM CONNECTORS



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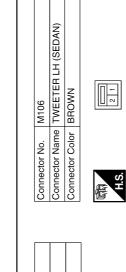
[BASE AUDIO]

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**Revision: September 2009** 

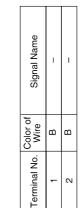
< WIRING DIAGRAM >

Color of Signal Name	W/G STRG_SW_A	V/Y ACC	R/Y ILL_CONT_OUT		1	G/W FR SP RH (+)	BR FRSPRH (-)	L RR SP RH (+)	B/W RR SP RH (-)	L/B STRG_SW_GND	GR/L STRG_SW_B	1	1	Y/R BAT	1		. M106	Connector Name TWEETER LH (SEDAN)	Connector Color BROWN
Terminal No.	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20		Connector No.	Connector Na	Connector Cc
Connector No. M85 Connector Name ALIDIO LINIT (SFDAN WITH		Connector Color WHITE		_ :  7 :	HS [19 10 11 12 13 14 15 16 17 18 20]			Terminal No Color of Signal Name	wire	1	8	3 B FR SP LH (-)	4 O/B RR SP LH (+)	5 W/R RRSPLH (-)			Connector No. M88	Connector Name SPIRAL CABLE	Connector Color GRAY
Connector No. M81 Connector Name ALIDIO LINIT (SEDAN WITH	BASE AUDIO SYSTEM)	Connector Color GRAY			HS		Color of	Terminal No. Wire Signal Name	75 B AMP POWER SUPPLY	76 B MAIN ANTENNA	22	-					Connector No. M87	Connector Name WIRE TO WIRE	Connector Color GRAY



Signal Name	- (WITH BASE AUDIO SYSTEM)	- (WITH BASE AUDIO SYSTEM)	
Color of Wire	M	В	
Terminal No. Wire	Ļ	2	

88 17 16 15 14 13	Signal Name	REMOTE A	REMOTE B	GND
20 19 18 17	Color of Wire	3	L	ВВ
国 H.S.	Terminal No.	14	15	17



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Signal Name	SAT LH INPUT (-)	SAT LH INPUT (+)	SAT RH INPUT (-)	SAT RH INPUT (+)	1	I	1	RFQ1 (SAT TO COMBI)	RX (SAT TO COMBI)	TX (COMBI TO SAT)	I	1		RE TO WIRE	TE	36 46 56 66 76 86 96 106 116 126 138 146 156 166 176	206 216 226 236 246 256 266	18G 19G 27G 28G 29G 30G 31G 32G 33G 34G	35G 36G 37G 38G 39G 40G 41G	420 430 440 430 400 410 470 480 430	0	334 344 59G 60G 61G 62G 63G	66G 67G 68G 69G 70G 71G 72G	64G 65G 73G 74G 75G 76G 77G 78G 79G 80G	826 836	 Signal Name	I
Color of Wire	G/B	λ/L	Y/G	BR/W	I	I	1	R/L	R/W	В	-	I	. E30	me WIF	lor WHITE	1G 2G 10G	200	18G 19G 27G	35G	420 430	10 200	510 570	99	64G 65G 73	816	Color of	>
Terminal No.	31	32	33	34	35	36	37	38	39	40	41	42	Connector No.	Connector Name WIRE TO WIRE	Connector Color	H.S.										Terminal No.	64G
Connector No. M117 Connector Name ALIDIO LINIT (SEDAN WITH		Connector Color WHITE	י ר	$\left( \right)$	H.S.								Connector No. M502	Connector Name ANTENNA AMP.	Connector Color GRAY	LT H.S.		Terminal No. Color of Signal Name	с- Г	2 B							
(SEDAN)							Name	1 RASE	SYSTEM)	H BASE								al Name			I						

Connector No. M117

Connector No.	M107
Connector Name	Connector Name TWEETER RH (SEDAN)
Connector Color BROWN	BROWN

2 1	Signal Nam	- (WITH BA
	Color of Wire	G/W
H.S.	Terminal No.	Ŧ

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

Connector No.	M501
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color GRAY	GRAY
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Signal Name	I	I	
Color of Wire	В	В	
Terminal No.	Ŧ	2	

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# < WIRING DIAGRAM >

# [BASE AUDIO]

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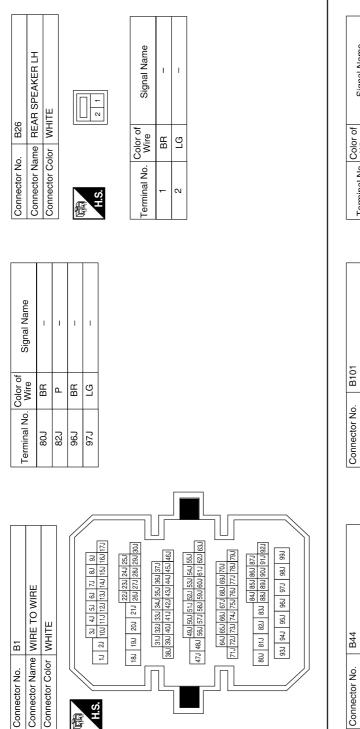
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#### < WIRING DIAGRAM >



Signal Name	1	1	1	I	1	1	1	I	1
Color of Wire	SB	BR	Μ	Ľ	თ	٨	В	æ	GR
Terminal No. Wire	-	2	4	5	18	19	20	22	25
					1 12 13 14 15 16 7 28 20 20 24 22	20 10 00 67 07			

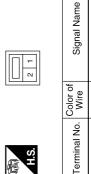


Connector Name REAR SPEAKER RH

WHITE

Connector Color





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	SATELLITE RADIO TUNER OR PRE-WIRING FOR	ITE RADIO TUNER						Cianol Nomo		ANTENNA SIGNAL				FRONT DOOR SPEAKER LH (SEDAN WITH BASE AUDIO SYSTEM)		Signal Name	1 1	
B129		-	WHITE		6			Color of		B			D20	-	WHITE	Color of Wire	0 5	
Connector No.	Connector Name		Connector Color	ł		H.S.		Tominol No. Co		37			Connector No.	Connector Name	Connector Color 航	Terminal No. Co	- 2	
Signal Name		1		REQ1 (SAT-COMBI)	TXD (SAT-COMBI)	RXD (COMBI-SAT)	I	BAT	I	I	1			RE	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	1	
				REQ1	TXD (	RXD (								WIRE TO WIRE WHITE	4 13 12 11	Sigr		
Color of		1	1	ГG	æ	в	-	GR	-	Ι	I		D1		7 6 5 16 15 14	Color of Wire O	LG	
Terminal No.	25	26	27	28	29	30	31	32	33	34	35		Connector No.	Connector Name Connector Color	际可 H.S.	Terminal No. 5	15	
[]												_			1		_	
	SATELLITE RADIO TUNER OR PRE-WIRING FOR	LITE RADIO TUNER		2	28 29 30 31 33 35		i	Signal Name	SAT_LCH (-)	SAT_LCH (+)	SAT_RCH (-)			SATELLITE RADIO TUNER WHITE		Signal Name		
B123		-	r WHITE	100	21 23 25 27 2		olor of	Wire	N	~	BB		B130			Color of Wire B		
Connector No.	Connector Name		Connector Color			Н.S.		l erminal No.	21	22	23		Connector No.	Connector Name Connector Color	品.S.H	Terminal No. C	-	

# **BASE AUDIO SYSTEM**

# < WIRING DIAGRAM >

#### [BASE AUDIO]



FRONT DOOR SPEAKER RH (SEDAN WITH BASE AUDIO SYSTEM)

Connector Name Connector Color

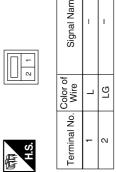
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Connector No.

BROWN

< WIRING DIAGRAM >

	Signal Name	I
	Color of Wire	L
Ч. С	Terminal No.	7



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Signal Name	I	I	
Color of Wire	Γ	ГG	
erminal No. Wire	Ŧ	2	

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2010 Altima

# AUDIO SYSTEM (COUPE)

#### < SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS AUDIO SYSTEM (COUPE) AUDIO UNIT

AUDIO UNIT : Symptom Table

INFOID:000000005430113

Symptom	Possible cause	Reference page
Inoperative	<ul><li>Audio unit power circuit</li><li>Audio unit</li></ul>	• <u>AV-20</u> • <u>AV-77</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-77</u>
All speakers do not sound	<ul><li>Audio unit power circuit</li><li>Audio unit</li></ul>	• <u>AV-20</u> • <u>AV-77</u>
One or several speakers do not sound	<ul><li>Door speaker</li><li>Front tweeter</li><li>Rear speaker</li></ul>	<u>AV-24</u> <u>AV-28</u> <u>AV-32</u>

# CD

# CD : Symptom Table

Symptom	Possible cause	Reference page	Н
CD cannot be inserted.			
CD cannot be ejected.	- Audio unit	AV-77	1
The CD cannot be played.		<u>AV-77</u>	1
The sound skips, stops suddenly, or is distorted.	-		

# SATELLITE RADIO TUNER

# SATELLITE RADIO TUNER : Symptom Table

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-251</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-42</u></li> <li><u>AV-42</u></li> <li><u>AV-251</u></li> </ul>	Ν

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# AUDIO SYSTEM (SEDAN) AUDIO UNIT

# AUDIO UNIT : Symptom Table

INFOID:000000005775269

Symptom	Possible cause	Reference page		
Inoperative	<ul><li>Audio unit power circuit</li><li>Audio unit</li></ul>	• <u>AV-22</u> • <u>AV-77</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-77</u>		
All speakers do not sound	<ul><li>Audio unit power circuit</li><li>Audio unit</li></ul>	• <u>AV-22</u> • <u>AV-77</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-26</u></li> <li><u>AV-30</u></li> <li><u>AV-32</u></li> </ul>		

CD

# CD : Symptom Table

Symptom	Possible cause	Reference page	
CD cannot be inserted.			
CD cannot be ejected.	Audio unit	A) / 77	
The CD cannot be played.		<u>AV-77</u>	
The sound skips, stops suddenly, or is distorted.			

# SATELLITE RADIO TUNER

# SATELLITE RADIO TUNER : Symptom Table

INFOID:000000005775271

INFOID:000000005775270

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-22</u></li> <li><u>AV-39</u></li> <li><u>AV-81</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-44</u></li> <li><u>AV-44</u></li> <li><u>AV-81</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.	<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 > PRECAUTION PRECAUTIONS

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

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

#### WARNING:

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

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### WARNING:

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

#### Precaution for Trouble Diagnosis

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#### AV COMMUNICATION SYSTEM

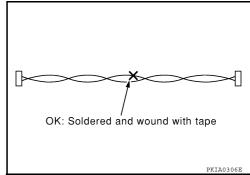
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

#### Precaution for Harness Repair

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#### AV COMMUNICATION SYSTEM

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

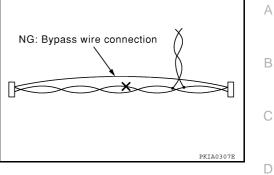


#### PRECAUTIONS

#### < PRECAUTION >

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





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#### PREPARATION

## < PREPARATION > PREPARATION

## PREPARATION

#### Special Service Tools

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

Tool number (Kent-Moore No.) Tool name		Description
 (J-46534) Trim Tool Set	AWJIA0483ZZ	Removing trim components

## **Commercial Service Tools**

	Description
Power tool	Loosening bolts and nuts

#### **AUDIO UNIT**

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

#### AUDIO UNIT

Removal and Installation

#### REMOVAL

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

- **Revision: September 2009**

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

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#### **INSTALLATION**

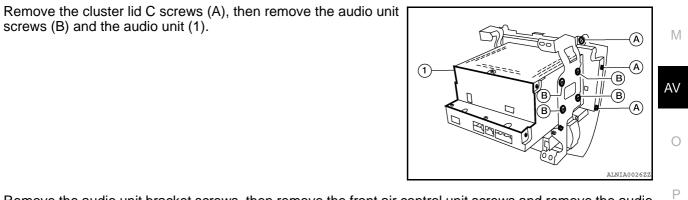
7.

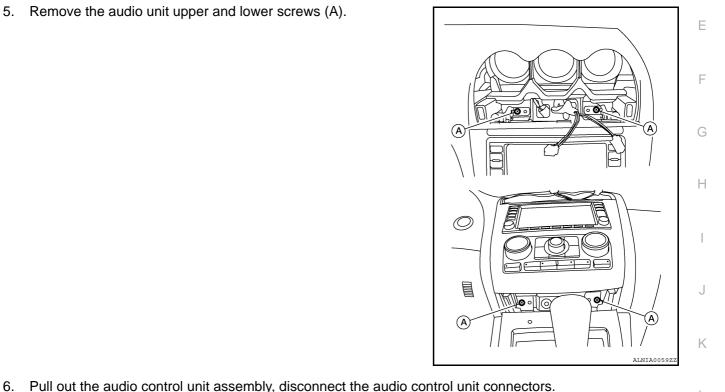
8.

Installation is in the reverse order of removal.

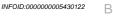
Disconnect the front air control unit connector.

screws (B) and the audio unit (1).





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#### FRONT TWEETER

< ON-VEHICLE REPAIR >

#### FRONT TWEETER

#### Removal and Installation

REMOVAL

- 1. Remove the front pillar finisher. Refer to <u>INT-14, "Removal and Installation"</u> (coupe) and <u>INT-37, "Removal and Installation"</u> (sedan).
- 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).

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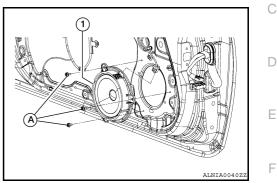
INSTALLATION Installation is in the reverse order of removal.

#### FRONT DOOR SPEAKER

#### **Removal and Installation**

#### REMOVAL

- 1. Remove the front door finisher. Refer to INT-11, "Removal and Installation" (coupe) and INT-31, "Removal and Installation" (sedan).
- 2. Remove the front door speaker screws (A), then disconnect the front door speaker connector and remove the front door speaker (1).



**INSTALLATION** 

Installation is in the reverse order of removal.

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< ON-VEHICLE REPAIR >

## **REAR SPEAKER**

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

#### REMOVAL

- 1. Remove the upper trunk finisher. Refer to INT-21, "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

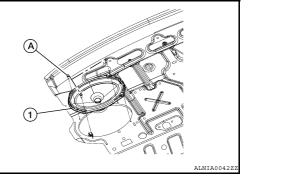
#### REMOVAL

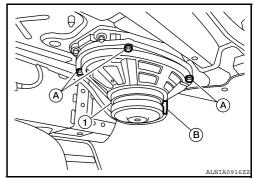
1. Remove the rear parcel shelf finisher. Refer to INT-39, "Removal and Installation".

**AV-80** 

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.





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2010 Altima

[BASE AUDIO]

Revision: September 2009

#### SATELLITE RADIO TUNER

## SATELLITE RADIO TUNER

< ON-VEHICLE REPAIR >

#### 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, "Removal and Installation".
- 3. Remove the LH trunk floor spacer.
- Remove the satellite radio tuner assembly nuts (B), and satellite radio tuner screw (C), disconnect the satellite radio tuner harness connectors and remove the satellite radio tuner and bracket assembly (1 and 2), then remove the satellite radio tuner screws (A) and remove satellite radio tuner (1) from the bracket (2).

#### INSTALLATION

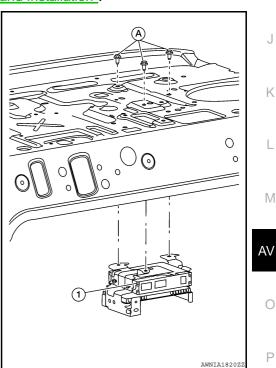
Installation is in the reverse order of removal.

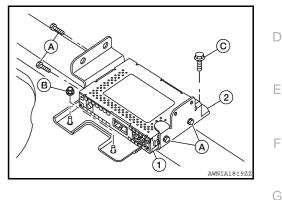
#### Removal and Installation - Sedan

#### REMOVAL

- 1. Disconnect the battery negative terminal.
- 2. Remove the rear parcel shelf finisher. Refer to INT-39, "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).

INSTALLATION Installation is in the reverse order of removal.





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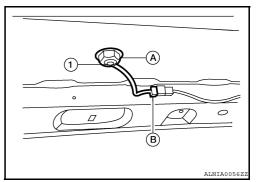
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## SATELLITE RADIO ANTENNA

#### Removal and Installation

#### REMOVAL

- 1. Lower the headliner at the rear. Refer to <u>INT-18</u>, "Removal and Installation" (coupe) and <u>INT-43</u>, <u>"Removal and Installation"</u> (sedan).
- 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.

#### **STEERING SWITCH**

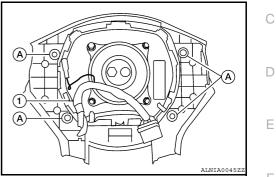
#### < ON-VEHICLE REPAIR >

## 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.

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#### < ON-VEHICLE REPAIR >

#### ANTENNA AMP.

Removal and Installation - Coupe

Installation is in the reverse order of removal. Removal and Installation - Sedan

#### REMOVAL

- 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).

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#### REMOVAL

INSTALLATION

**CAUTION:** 

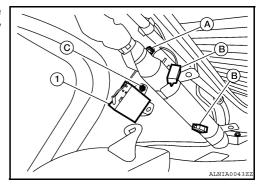
- Before servicing, turn ignition switch OFF, disconnect both battery terminals and wait at least three minutes.
- 1. Disconnect the negative and positive battery terminals, then wait at least three minutes.
- 2. Remove the rear pillar finisher RH. Refer to INT-18, "Removal and Installation".
- Partially remove the side curtain air bag module RH to gain access to the antenna amp. Refer to <u>SR-11.</u> <u>"Removal and Installation"</u>.

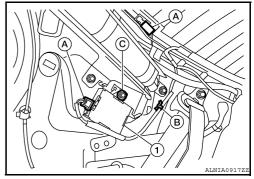
**AV-84** 

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).

Revision: September 2009

INSTALLATION Installation is in the reverse order of removal.





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

#### < ON-VEHICLE REPAIR >

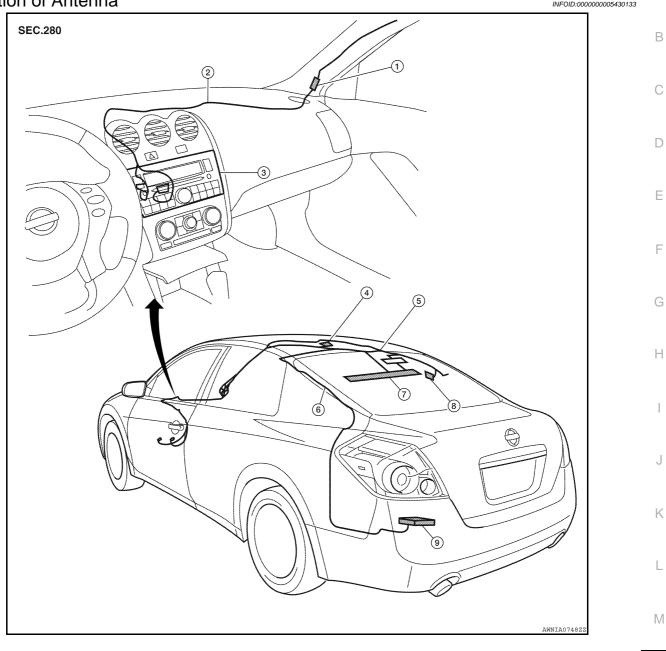
## AUDIO ANTENNA (COUPE)

#### Location of Antenna



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

#### Window Antenna Repair

#### ELEMENT CHECK

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

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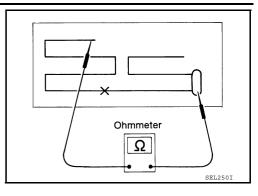
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### **AUDIO ANTENNA (COUPE)**

#### < ON-VEHICLE REPAIR >

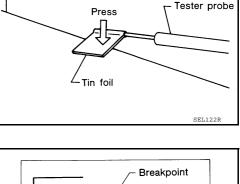
#### [BASE AUDIO]

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

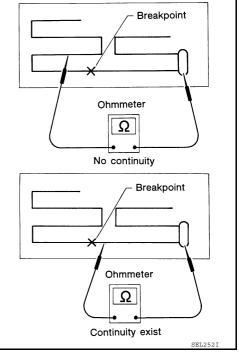


- Heat wire

• 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 gunAlcohol
- 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.

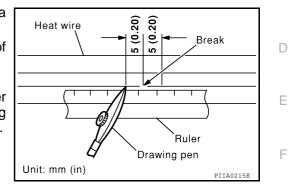
- 3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.
- 4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

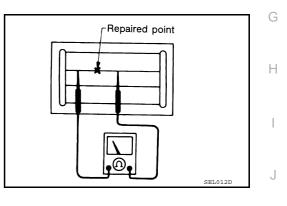
Do not touch repaired area while test is being conducted.

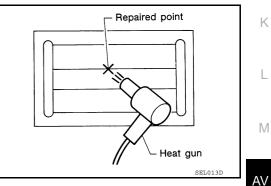
5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet.

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

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

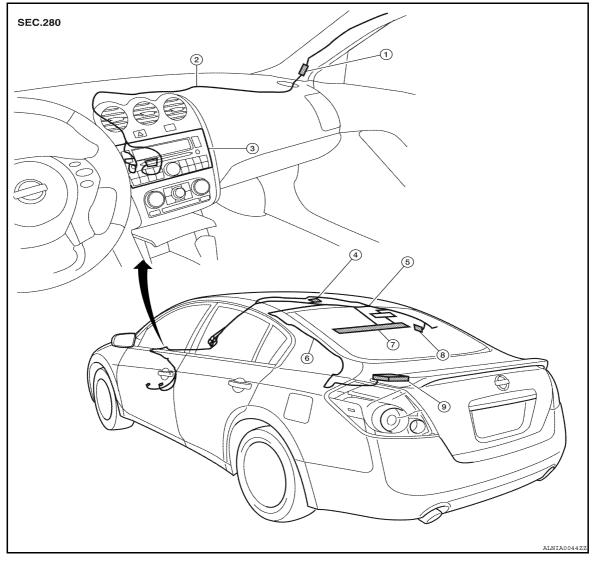
#### < ON-VEHICLE REPAIR >

## AUDIO ANTENNA (SEDAN)

#### Location of Antenna

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[BASE AUDIO]



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

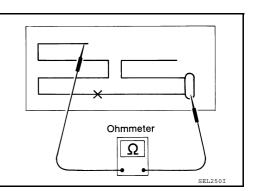
- Audio unit harness 2.
- 5. Audio antenna feeder Antenna amp.
- Audio unit 3.
- Satellite radio antenna feeder 6.
- 9. Satellite radio tuner
- INFOID:000000005430136

Window Antenna Repair

#### **ELEMENT CHECK**

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

8.



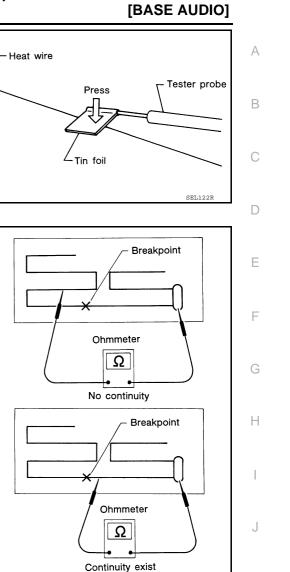
#### **AUDIO ANTENNA (SEDAN)**

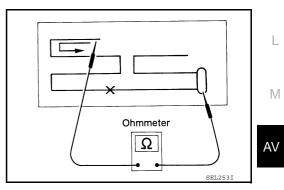
#### < ON-VEHICLE REPAIR >

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

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

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





#### **REPAIR EQUIPMENT**

Conductive silver composition (DuPont No. 4817 or equivalent)

**AV-89** 

- 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 >

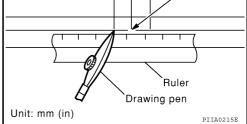
composition is deposited.

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

Shake silver composition container before use.

Place ruler on glass along broken line. Deposit conductive silver 3. 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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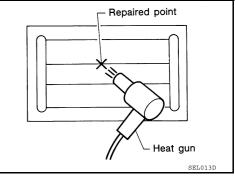
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Heat wire

- 4. After repair has been completed, check repaired wire for conti-Repaired point 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.



## [BASE AUDIO]

Break

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## BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

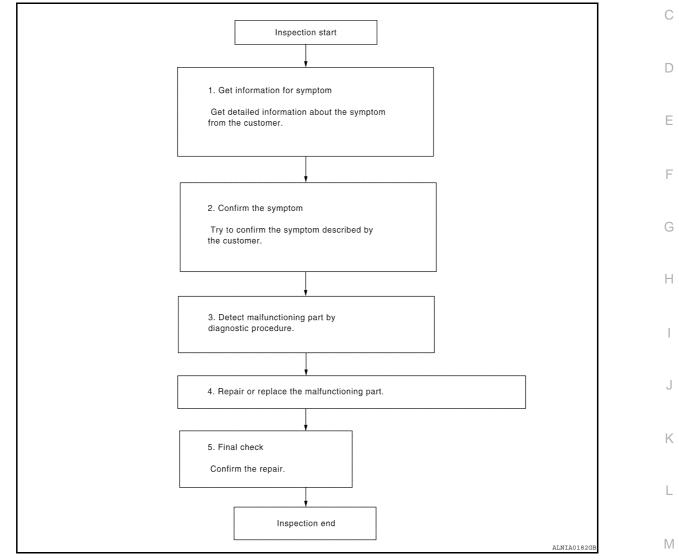
#### Work Flow

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[BOSE AUDIO WITHOUT NAVIGATION]

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 >

## [BOSE AUDIO WITHOUT NAVIGATION]

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>Was the repair confirmed?</u>

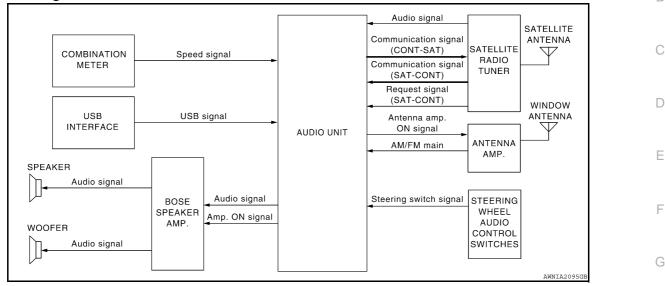
YES >> Inspection End.

NO >> GO TO 2

#### [BOSE AUDIO WITHOUT NAVIGATION]

## FUNCTION DIAGNOSIS AUDIO SYSTEM (COUPE)

#### System Diagram



## System Description

#### 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.

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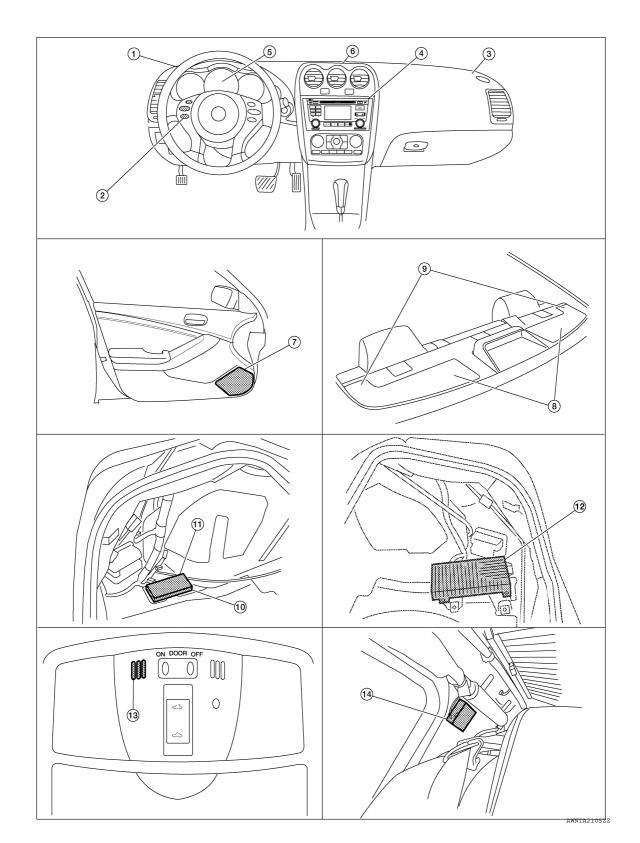
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#### < FUNCTION DIAGNOSIS >

#### **Component Parts Location**



15. Rear view camera T7

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Fi	ont tweeter LH M51	2.	Steering wheel audio control switches	3.	Front tweeter RH M52	F
	udio unit M132, M133, M134, M135, 136, M137	5.	Combination meter M24	6.	Center speaker M151	
D Li	bor speaker H D21 H D121	8.	Rear subwoofer LH B25 RH B47	9.	Rear tweeter LH B16 RH B100	G
(v	atellite radio tuner B57, B67 iewed with trunk carpet and LH oor spacer removed)	11.	Bluetooth control unit B55, B56, B63	12.	BOSE speaker amp B121, B122 (view with trunk carpet and RH floor spacer removed)	Η

13. Microphone R7

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16. USB interface M205

#### **Component Description**

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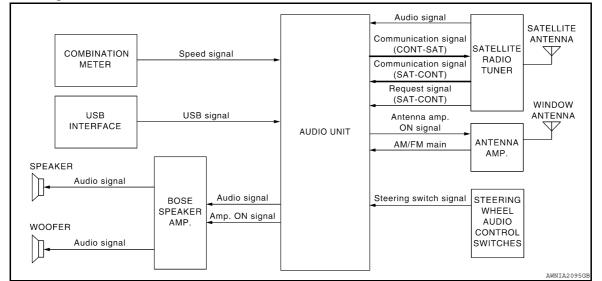
Part name	Description	
Audio unit	Controls audio system and satellite radio system functions	
BOSE speaker amp. Receives power (amp ON) and audio signals from audio unit, and outp dio signals to each speaker.		
Steering wheel audio control switches	<ul><li>Each audio operation can be operated</li><li>Steering 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.	

14. Antenna AMP. M502

#### < 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
- 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 speaker ers, tweeters, center speaker, rear door speakers and rear subwoofers.

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

#### SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components

- Roof antenna (satellite)
- Satellite radio tuner

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

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

#### SPEED SENSITIVE VOLUME SYSTEM

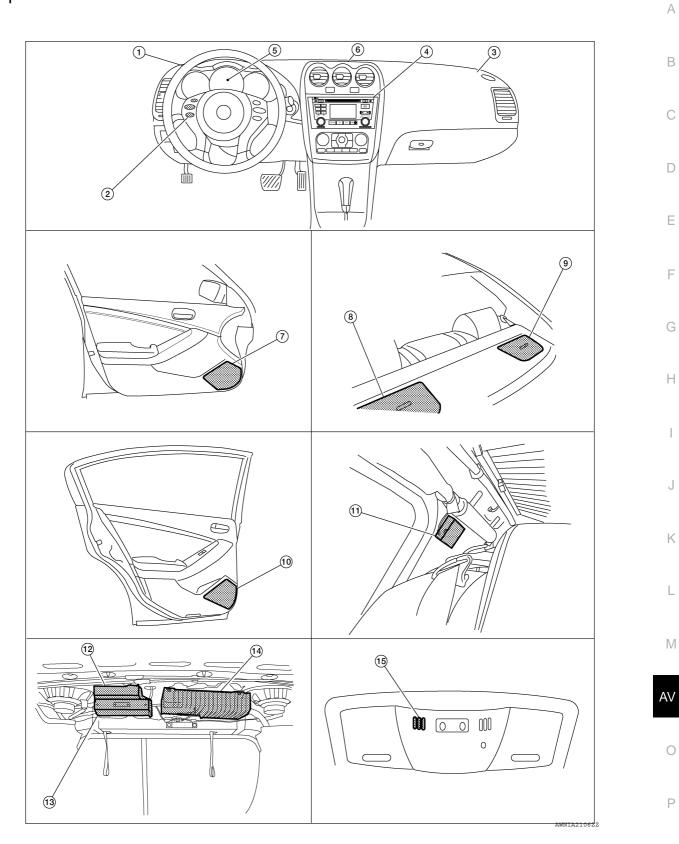
Volume level of this system goes up and down automatically in proportion to the vehicle speed. The control level can be selected by the customer. Refer to Owner's Manual for operating instructions.

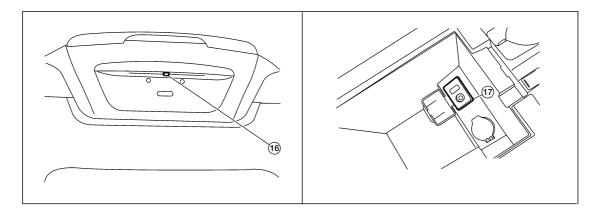
#### < FUNCTION DIAGNOSIS >

## AUDIO SYSTEM (SEDAN)

[BOSÉ AUDIO WITHOUT NAVIGATION]

#### **Component Parts Location**





AWNIA2108ZZ

1.	Tweeter LH M106	2.	Steering wheel audio control switches	3.	Tweeter RH M107
4.	Audio unit M44, M45, M46, M47, M96, M97	5.	Center speaker M151	6.	Combination meter M24
7.	Front door speaker LH D22 RH D122	8.	Rear subwoofer LH B120	9.	Rear subwoofer RH B124
10.	Rear door speaker LH D202 RH D302	11.	Antenna amp. M502	12.	Satellite radio tuner B123, B129
13.	Bluetooth control unit B125, B126, B132	14.	BOSE speaker amp. B121, B122	15.	Microphone R7
16.	Rear view camera B35	17.	USB interface M205		
0					

#### **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>
Satellite antenna	Audio signal (satellite radio) is received and output to audio unit.

#### < FUNCTION DIAGNOSIS >

## **REAR VIEW MONITOR SYSTEM**

#### System Diagram

Communication signal			E
Camera ON signal CAMERA CAMERA	AUDIO UNIT		C
		AWNIA2109GB	

#### System Description

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

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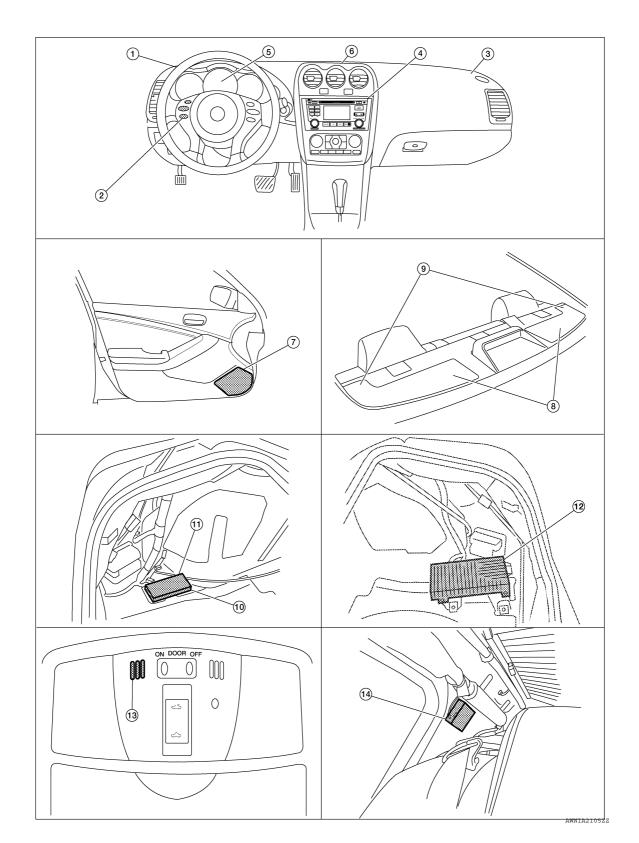
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[BOSE AUDIO WITHOUT NAVIGATION]

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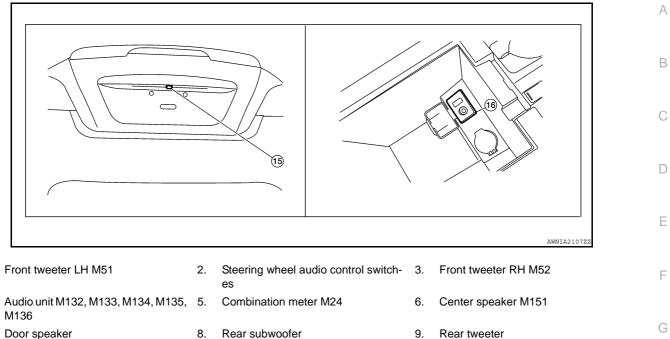
< FUNCTION DIAGNOSIS >

Component Parts Location (Coupe)



#### < FUNCTION DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]



Door speaker 7. LH D21 RH D121

1.

4.

- 10. Satellite radio tuner B57, B58 (viewed with trunk carpet and LH floor spacer removed)
- 13. Microphone R7
- 16. USB interface M205

**RH B47** 

14. Antenna AMP. M502

LH B25

Rear tweeter 9. LH B16 RH B100 11. Bluetooth control unit B55, B56, B63 12. BOSE speaker amp B121, B122 (view with trunk carpet and RH floor spacer removed)

15. Rear view camera T7

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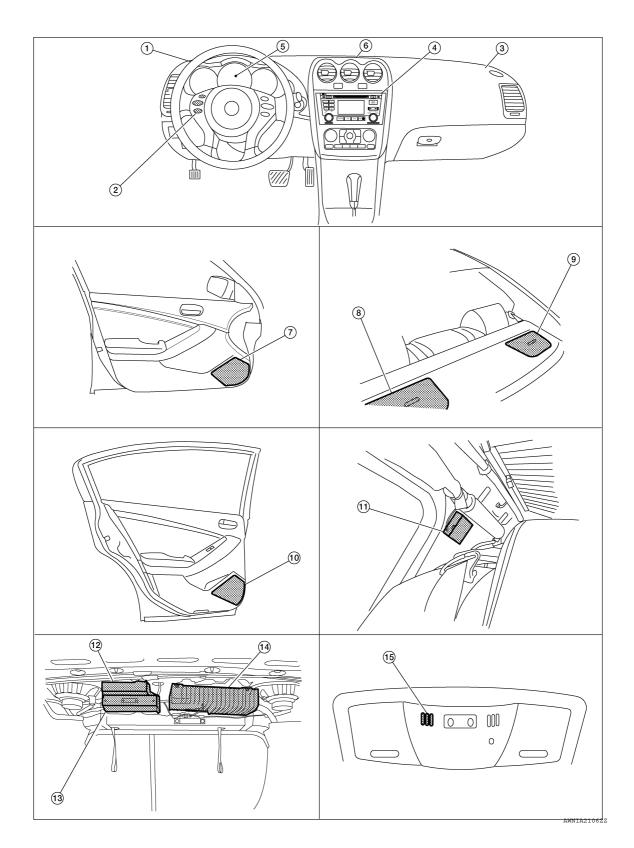
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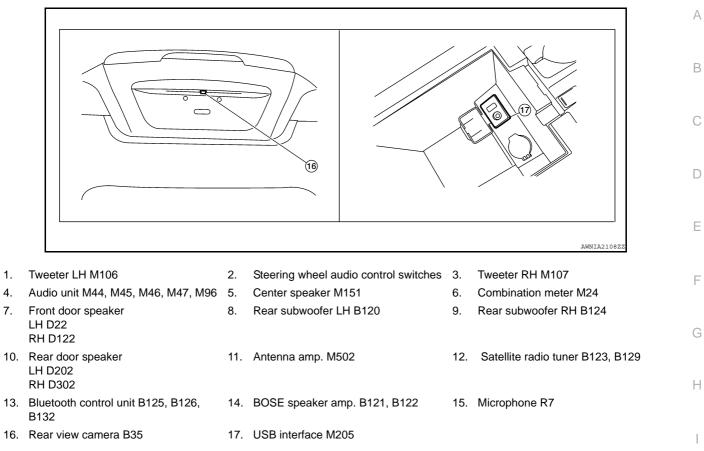
#### < FUNCTION DIAGNOSIS >

#### Component Parts Location (Sedan)



#### < FUNCTION DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]



#### **Component Description**

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Part name	Description	
Audio unit	<ul> <li>Sends camera ON signal to the rear view camera</li> <li>Receives camera image signal from the rear view camera</li> <li>Displays camera image</li> </ul>	ł
Rear view camera	<ul><li>Receives camera ON signal from the audio unit</li><li>Sends image signal to the audio unit</li></ul>	l

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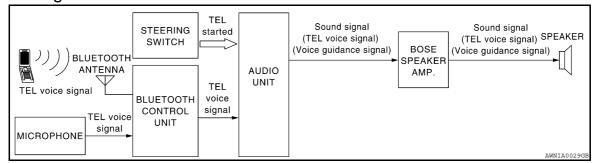
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#### HANDS FREE PHONE SYSTEM (COUPE)

#### < FUNCTION DIAGNOSIS >

## HANDS FREE PHONE SYSTEM (COUPE)

#### System Diagram



#### System Description

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INFOID:000000005430146

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.

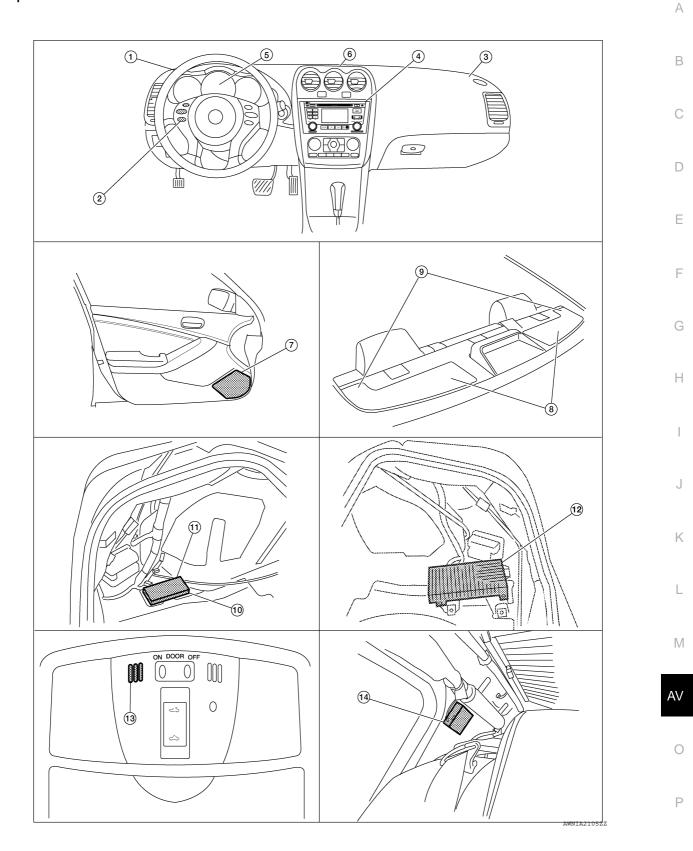
#### AUDIO UNIT

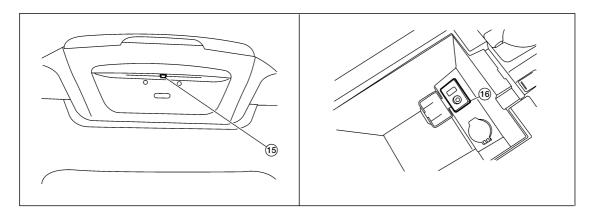
The audio unit receives signals from the Bluetooth control unit and sends audio signals to the speakers.

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

#### < FUNCTION DIAGNOSIS >

## Component Parts Location





AWNIA2107ZZ

- Front tweeter LH M51 1.
- Audio unit M132, M133, M134, M135, 5. 4. M136, M137

2.

- 7. Door speaker LH D21 RH D121
- 10. Satellite radio tuner B57, B67 (viewed with trunk carpet and LH floor spacer removed)
- 13. Microphone R7
- 16. USB interface M205

#### **Component Description**

	es		
5.	Combination meter M24	6.	Center speaker M151
8.	Rear subwoofer LH B25 RH B47	9.	Rear tweeter LH B16 RH B100
11.	Bluetooth control unit B55, B56, B63	12.	BOSE speaker amp B121, B122 (view with trunk carpet and RH floor spacer removed)
14.	Antenna AMP. M502	15.	Rear view camera T7

Steering wheel audio control switch- 3. Front tweeter RH M52

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 output signal to each speaker.		
Door speaker		
Front tweeter	Receives telephone voice and voice guidance signals from BOSE speaker amp.	
Center speaker		
Steering wheel audio control switches	<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	

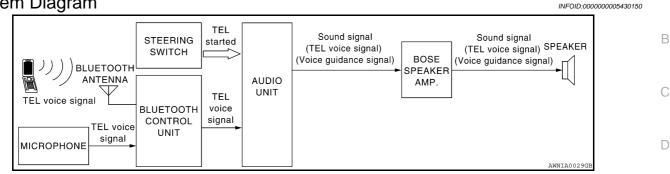
#### HANDS FREE PHONE SYSTEM (SEDAN)

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

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- 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

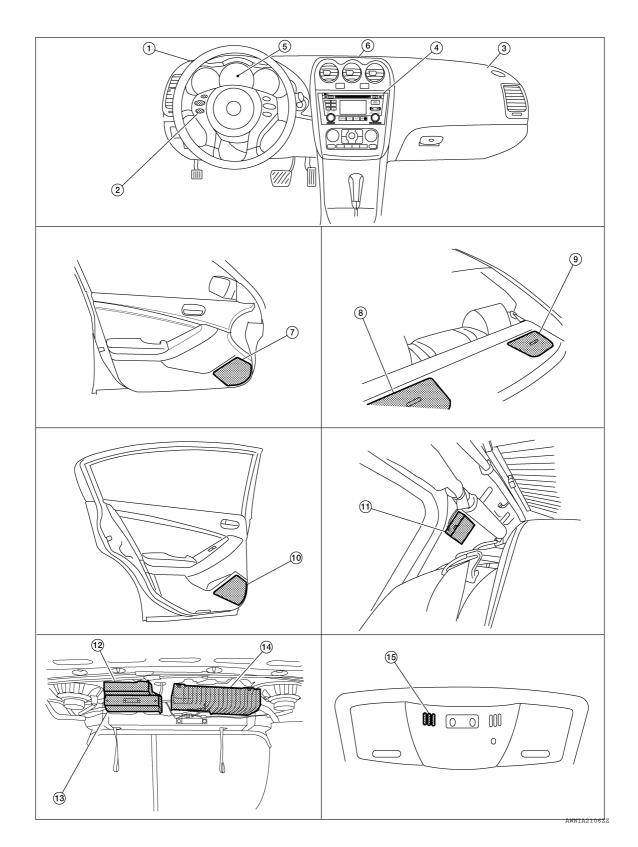
The audio unit receives signals from the Bluetooth control unit and sends audio signals to the speakers.

## HANDS FREE PHONE SYSTEM (SEDAN)

#### < FUNCTION DIAGNOSIS >

## [BOSE AUDIO WITHOUT NAVIGATION]

#### **Component Parts Location**



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1.	Tweeter LH M106	2.	Steering wheel audio control switches	3.	Tweeter RH M107	F
4.	Audio unit M44, M45, M46, M47, M96, M97	5.	Center speaker M151	6.	Combination meter M24	Г
7.	Front door speaker LH D22 RH D122	8.	Rear subwoofer LH B120	9.	Rear subwoofer RH B124	G
10.	Rear door speaker LH D202 RH D302	11.	Antenna amp. M502	12.	Satellite radio tuner B123, B129	Н
13.	Bluetooth control unit B125, B126, B132	14.	BOSE speaker amp. B121, B122	15.	Microphone R7	
16.	Rear view camera B35	17.	USB interface M205			
Cor	monent Description					

**Component Description** 

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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 sound signal to each speaker.	
Front door speaker		
Tweeter	<ul> <li>Receives telephone voice and voice guidance signals from BOSE speaker</li> <li>amp.</li> </ul>	
Center speaker		
Steering wheel audio control switches	<ul> <li>Start a voice recognition session</li> <li>Answer and end telephone calls</li> <li>Adjust the volume level</li> </ul>	
Microphone	Sends voice signals to Bluetooth control unit	
Bluetooth control unit	Controls hands-free phone functions	
Bluetooth antenna	Sends telephone voice signal to bluetooth control unit	

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# DIAGNOSIS SYSTEM (AUDIO UNIT)

[BOSE AUDIO WITHOUT NAVIGATION]

INFOID:000000005774628

# DIAGNOSIS SYSTEM (AUDIO UNIT)

### **Diagnosis Description**

ON BOARD DIAGNOSIS

Description

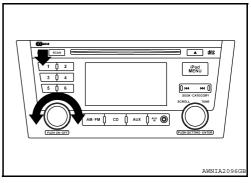
- The trouble diagnosis function has a self-diagnosis mode for conducting trouble diagnosis automatically and a confirmation/adjustment mode for operating manually.
- Self-diagnosis mode performs the audio unit diagnosis and the connection diagnosis between each of the units that make up the system,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

On Board Diagnosis Item

	Mode	Description	
	Self-Diagnosis	<ul><li>audio unit diagnosis</li><li>Perform the connection diagnosis between each of the units.</li></ul>	
	Display Diagnosis	The confirmation of the tint with the color spectrum bar display and shad- ing of color with the gradation bar display can be performed.	
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, lights, reverse and EQ pin.	
	Speaker Test	The connection of a speaker can be confirmed by test tone.	
Confirmation/ Adjustment	Error History (Detailed)	System malfunctions and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.	
	Camera System	The guiding line position that overlaps rear view camera image can be adjusted.	
	AV COMM Diagnosis	The communication condition of each unit can be monitored.	
	Delete Unit Connection Log	Erase the connection history of unit and error history	
	Initialize Settings	Initializes the audio unit memory.	

### STARTING PROCEDURE

- 1. Start the engine.
- 2. Turn the audio system OFF.
- 3. While pressing the number 1 button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)
  - Use the SCROLL and TUNE dial to go up and down the menu screen.
  - Push the enter button to select an item on the menu screen.
  - Push the iPOD MENU button to go back from screen to screen.



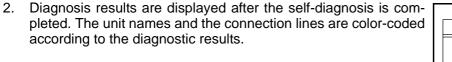
# **DIAGNOSIS SYSTEM (AUDIO UNIT)**

### < FUNCTION DIAGNOSIS >

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

### SELF-DIAGNOSIS MODE

- Start the self-diagnosis function and select "Self-diagnosis". 1.
- Self-diagnosis subdivision screen is displayed, and the selfdiagnosis mode starts.
- The bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.



Diagnosis results	Unit	nection line	
Normal	Green	Green	
<b>Connection malfunction</b>	Gray	Yellow	
Unit malfunction Note	Red	Green	

### NOTE:

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

Image: System Diagnostic Menu > Error Information       Connection is normal	AV
Please refer to the Confirmation / Adjustment function or service manual for more detailed diagnosis information.	O
AWNIA1960GB	

### SELF-DIAGNOSIS RESULTS

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

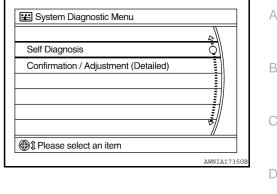
# 2010 Altima

**System Diagnostic Menu** 

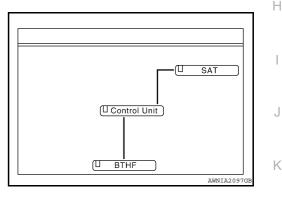
Please select an item

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Running self diagnosis.



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### < FUNCTION DIAGNOSIS >

# DIAGNOSIS SYSTEM (AUDIO UNIT)

### [BOSE AUDIO WITHOUT NAVIGATION]

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

### Self-diagnosis Result Chart

Diagnosis results	Detection logic	Possible malfunction location / Action to take
NOTE: When a control unit malfunction is detected (red in unit display), connection malfunctions with other connection unit may be displayed. "Self-Diagnosis did not run because of a control unit malfunction"	Malfunction is detected in audio unit power supply and ground circuits.	Check audio unit power supply and ground circuits. When detecting no malfunction in those components, re- place audio unit.
C SAT SAT SAT SAT SAT SAT SAT SAT	<ul> <li>When any one of the following items is detected:</li> <li>satellite radio tuner power supply and ground circuits are malfunctioning.</li> <li>serial communication circuits between audio unit and satellite radio tuner are malfunctioning.</li> <li>serial communication or request signal between audio unit and satellite radio tuner is malfunctioning.</li> <li>request signal circuit between audio unit and satellite radio tuner is malfunctioning.</li> </ul>	<ul> <li>Satellite radio tuner power supply and ground circuits.</li> <li>Serial communication circuits be- tween audio unit and satellite radio tuner.</li> <li>Request signal circuit between audio unit and satellite radio tuner.</li> </ul>
Control Unit Control Unit	<ul> <li>When any one of the following items is detected:</li> <li>Bluetooth control unit power supply and ground circuits are malfunctioning.</li> <li>AV communication signal between audio unit and Bluetooth control unit is malfunctioning.</li> </ul>	<ul> <li>Bluetooth control unit power supply and ground circuits.</li> <li>AV communication circuits between audio unit and Bluetooth control unit</li> </ul>

### NOTE:

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

### CONFIRMATION/ADJUSTMENT MODE

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

### DIAGNOSIS SYSTEM (AUDIO UNIT) [BOSE AUDIO WITHOUT NAVIGATION]

### < FUNCTION DIAGNOSIS >

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

# System Diagnostic Menu > Confirmation / Adjustment UP Display Diagnosis Vehicle Signals Speaker Test Error History CAMERA SYSTEM 1/8

இĴ Please select an item

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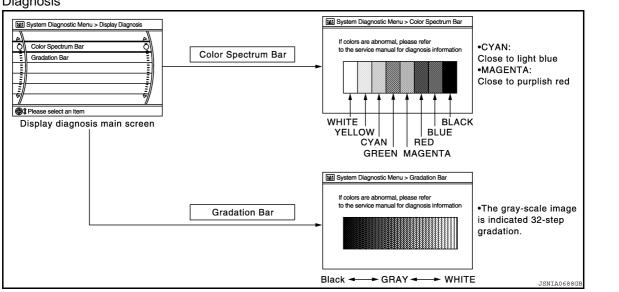
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### **Display Diagnosis**



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

R (red) signal error

### : Light blue (Cyan) tint

: Purple (Magenta) tint

: Yellow tint

G (green) signal error B (blue) signal error

### Vehicle Signals

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

Vehicle speed	OFF	
Lights	OFF	
Reverse	OFF	
EQ Pin	1	

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

# DIAGNOSIS SYSTEM (AUDIO UNIT)

### < FUNCTION DIAGNOSIS >

	,		
[BOSE	AUDIO	WITHOUT	NAVIGATION]

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

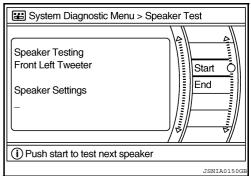
### Speaker Test

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

### NOTE:

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

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



### Error History

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

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

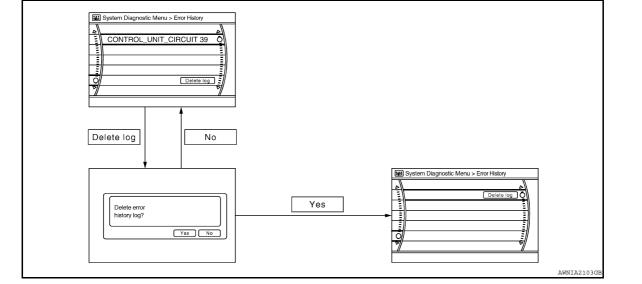
### Count up method A

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

### Count up method B

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

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



### Error Item

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

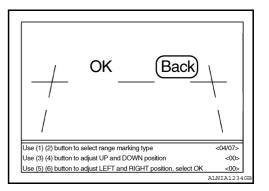
Error item	Description	Possible malfunction factor/Action to take
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	audio unit malfunction is detected.	
SAT Connection Error	<ul> <li>When any one of the following items is detected:</li> <li>satellite radio tuner power supply and ground circuits are malfunctioning.</li> <li>serial communication circuits between audio unit and satellite radio tuner are malfunctioning.</li> <li>serial communication or request signal between audio unit and satellite radio tuner is malfunctioning.</li> <li>request signal circuit between audio unit and satellite radio tuner is malfunctioning.</li> </ul>	<ul> <li>Satellite radio tuner power supply and ground circuits.</li> <li>Serial communication circuits between audio unit and satellite radio tuner.</li> <li>Request signal circuit between audio unit and satellite radio tuner.</li> </ul>

### Camera System

The function of "Adjust Offset of Rear View Camera" is available.

### ADJUST OFFSET OF REAR VIEW CAMERA

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

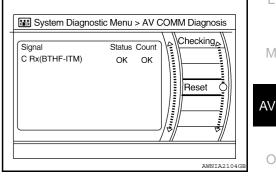


**AV COMM Diagnosis** 

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

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

**Delete Unit Connection Log** 



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# DIAGNOSIS SYSTEM (AUDIO UNIT)

### < FUNCTION DIAGNOSIS >

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

# [BOSE AUDIO WITHOUT NAVIGATION]

Delete connection log?	
Yes No	
JSNIA0154	GB

Initialize Settings Eliminates the memory settings of audio system.

The memory of a system is eliminated. Are you sure? Yes No
ALNIA1235GB

# 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**

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

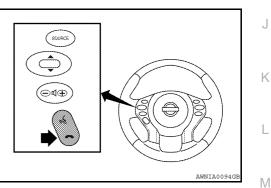
- While the prompt is playing, press and hold the steering wheel 4. audio control switch END button until you hear the "Diagnostics mode" prompt. The Bluetooth system will sound a 5 second beep.
- 5. While the beep is sounding, press and hold the steering wheel audio control switch END button again until you hear prompts.
- The Bluetooth system has now entered into the diagnostic 6. mode. Results of the diagnostic checks will be verbalized to the technician. Refer to AV-117, "Work Flow".
- 7. After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails refer to AV-117, "Work Flow".
- 8. Self-diagnosis mode is complete when the voice prompt says "All diagnostic functions completed".

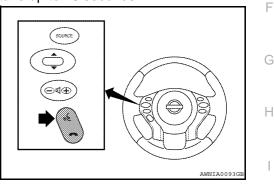
### Work Flow

INFOID:000000005430156

Failure Message	Action		
"Internal failure"	Replace Bluetooth control unit. For coupe, refer to <u>AV-263, "Removal and Installa-</u> tion - Coupe". For sedan, refer to <u>AV-263, "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-262, "Removal and Instal- lation - Coupe"</u>. For sedan, refer to <u>AV-262, "Removal and Installation - Se- dan"</u>.</li> </ol>		
"Phone/Send for Hands Free System is stuck"	Check steering wheel audio control switches. Refer to AV-159, "Diagnosis Proce-		
"Phone/End for the Hands Free System is stuck"	dure".		
"Microphone test" (failed interactive test)	<ol> <li>Inspect harness between Bluetooth control unit and microphone.</li> <li>Replace microphone. Refer to <u>AV-261, "Removal and Installation"</u>.</li> </ol>		







INFOID:000000005430155

[BOSE AUDIO WITHOUT NAVIGATION]

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### < COMPONENT DIAGNOSIS >

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

AUDIO UNIT : Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>AV-195, "COUPE : Wiring Diagram"</u>.

# 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?

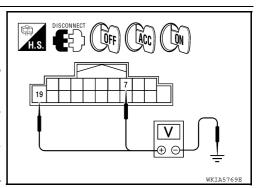
YES >> GO TO 2

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 M132.
- Check voltage between the audio unit connector M132 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal	(-)	OIT	ACC	ON
M132	19	Ground	Battery voltage	Battery voltage	Battery voltage
101132	7	Ground	0V	Battery voltage	Battery voltage



### Are the voltage results as specified?

YES >> GO TO 3

NO

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

• Repair harness or connector.

# 3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect audio unit connectors M132 and M133.

3. Check continuity between audio unit harness connectors M132, M133 and ground.

(+)		(-)	Continuity	
Connector	Terminal	(-)	Continuity	
M132	20		Yes	
M133	27	- Ground		
	40			
	48			

### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

BOSE SPEAKER AMP

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### < COMPONENT DIAGNOSIS >

# BOSE SPEAKER AMP : Diagnosis Procedure

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[BOSE AUDIO WITHOUT NAVIGATION]

Regarding Wiring Diagram information, refer to AV-195, "COUPE : Wiring Diagram".

# 1.CHECK FUSE

Check for blown fuses.

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

Are the fuses OK?

YES >> GO TO 2

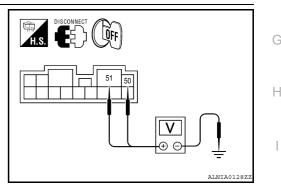
NO >> Be sure to eliminate cause of malfunction before installing new fuse.

# 2. CHECK POWER SUPPLY CIRCUIT

### 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 (-) Voltage (approx.)	
B122 50 Ground Battery voltage	
51 Ground Ballery 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	
D122	52	Ground	165	

### Does continuity exist?

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

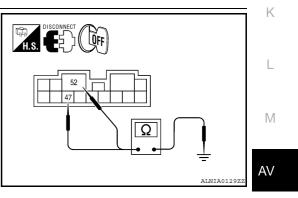
SATELLITE RADIO TUNER

# SATELLITE RADIO TUNER : Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-195. "COUPE : Wiring Diagram".

# 1.CHECK FUSES

Check that the following fuses are not blown.





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### < COMPONENT DIAGNOSIS >

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 B57.
- 3. Check voltage between the satellite radio tuner (factory installed) and ground.

(	+)	(-)	OFF	ACC	ON
Connector	Terminal	()	OIT	7,000	
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.

### REAR VIEW CAMERA

# **REAR VIEW CAMERA : Diagnosis Procedure**

Regarding Wiring Diagram information, refer to AV-195, "COUPE : Wiring Diagram".

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

- 1. Turn ignition switch ON.
- 2. Shift transmission into Reverse.
- Check voltage between rear view camera harness connector T7 and ground.

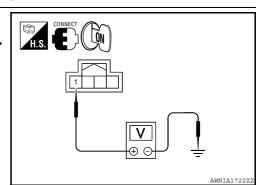
	(+)	(-)	Transmission	Value (Approx.)
Connector	Terminal	(-)	position	value (Applox.)
T7	1	Ground	Reverse	6V

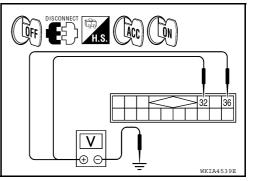
Is voltage reading approximately 6 volts?

YES >> GO TO 4.

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)





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### < COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

OFF

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- 1. Turn ignition switch OFF.
- 2. Disconnect rear view camera and audio unit connectors.
- Check continuity between rear view camera harness connector T7 (A) terminal 1 and audio unit harness connector M133 (B) terminal 70.

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
T7	1	M133	34	Yes

4. Check continuity between rear view camera harness connector T7 (A) terminal 1 and ground.

	A	_	Continuity
Connector Terminal			Continuity
T7	1	Ground	No
A		(; )O	

### Are continuity test results as specified?

- YES >> GO TO 3.
- NO >> Repair harness or connector.
- 3. CHECK POWER SUPPLY CIRCUIT (AUDIO UNIT SIDE)
- 1. Connect rear view camera harness connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between audio unit harness connector M133 and ground.

(+	-)	(-)	Transmission	Value (Approx.)
Connector	Terminal	(-)	position	value (Applex.)
M133	34	Ground	Reverse	6V

### Is voltage reading approximately 6 volts?

- YES >> Inspection End.
- NO >> Replace audio unit. Refer to <u>AV-242, "Removal and</u> <u>Installation"</u>.

### **4.**CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect rear view camera harness connector.
- 3. Check continuity between rear view camera harness connector T7 terminal 2 and ground.

Connector	Terminal	—	Continuity
Τ7	2	Ground	Yes

### Does continuity exist?

YES >> Inspection End.

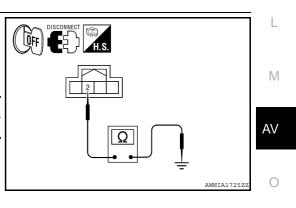
NO >> Repair harness or connector. BLUETOOTH CONTROL UNIT

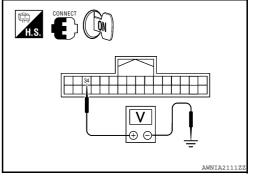
# **BLUETOOTH CONTROL UNIT : Diagnosis Procedure**

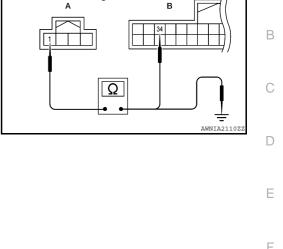
Regarding Wiring Diagram information, refer to <u>AV-195, "COUPE : Wiring Diagram"</u>.

# **1.**CHECK FUSE

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### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

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

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

### Are the fuses OK?

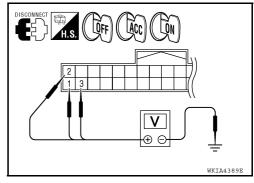
YES >> GO TO 2

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

### 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between Bluetooth control unit harness connector and ground.

(	+)	(-)	Ignition switch	Value (Approx.)
Connector	Terminal	(-)	position	value (Applox.)
	1		OFF	
B55	2	Ground	ACC	Battery voltage
	3		ON	



Are the voltage results as specified?

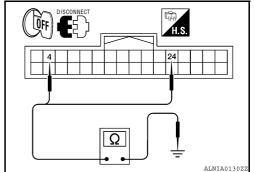
YES >> GO TO 3

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

# 3.CHECK GROUND CIRCUIT

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

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



Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

MICROPHONE

**MICROPHONE : Diagnosis Procedure** 

Regarding Wiring Diagram information, refer to AV-195. "COUPE : Wiring Diagram".

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

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### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

Check voltage between microphone harness connector and ground.

(*	+)		Ignition switch po-	Value (Approx.)
Connector	Terminal	(-)	sition	value (Applox.)
R7	4	Ground	ON	5V
	1.			

### 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 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.

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

- 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	
B55	29	Ground	ON	5V

### Is proper voltage present?

- YES >> Inspection End.
- NO >> Replace Bluetooth control unit. Refer to <u>AV-263</u>. <u>"Removal and Installation - Coupe"</u>.

# 4.CHECK GROUND CIRCUIT

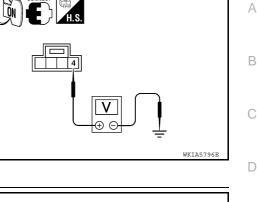
- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit and microphone connectors.
- 3. Check continuity between microphone harness connector R7 terminal 2 and Bluetooth control unit harness connector B126 terminal 8.

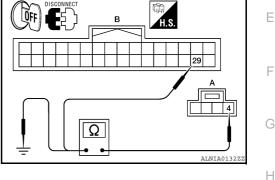
Signal name	Continuity		
Microphone ground	Continuity should exist.		

### Is continuity present?

YES >> Inspection End.



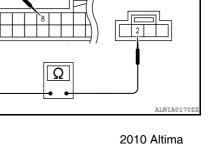






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NO >> Repair harness or connector.

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POWER AUDIO UI		AND	GROUN	D CIF	RCUIT (SE	DAN)	Ą
	NIT : Diagi	nosis P	rocedure				INFOID:000000005430162
Regarding W	0 0	n informa	tion, refer to	o <u>AV-216</u>	6. "SEDAN : W	iring Diagram".	C
Check that th		uses are	not blown.				C
	Unit		Terminals 19		Signa Battery power	al name	Fuse No. E
Audio unit			7		Ignition switch A	CC or ON	19
$\frac{NO >> 1}{2.POWER}$	GO TO 2 f fuse is blow SUPPLY CIR ect audio uni	CUIT CH	ECK or M44.		e of malfunction		
ground.	0					H.S. <b>E</b> Q	
(- Connector	-) Terminal	(-)	OFF	ACC	ON		
M44	19	Ground	Battery voltage	Batter voltag			
	7	Ground	0V	Batter voltag			WKIA5769E
	GO TO 3			sconne	cted or loose te	erminals.	k
	Repair harr	ness or co					L
2. Disconne	ition switch C ect audio uni ontinuity betv	t connect			nectors M44, N	45 and ground.	Ν
	(+)		(-)		Continuity		AV
Connector		minal	( )				
M44		20 27	Ground		Yes		C
M45		40	Ground		162		
	<u>lity exist?</u> nspection E Repair harne	nd. ss or con	nector.				F

INFOID:000000005430163

### < COMPONENT DIAGNOSIS >

[BOSE AUDIO WITHOUT NAVIGATION]

Regarding Wiring Diagram information, refer to <u>AV-216. "SEDAN : Wiring Diagram"</u>.

# 1.CHECK FUSE

Check for blown fuses.

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

### Are the fuses OK?

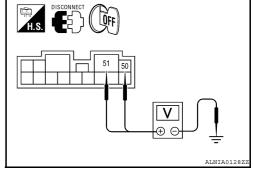
YES >> GO TO 2

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

### 2.CHECK POWER SUPPLY CIRCUIT

- 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	(-)		
B122	50	Ground	Battory voltago	
	51	Ground	Battery voltage	



### Is battery voltage present?

YES >> GO TO 3

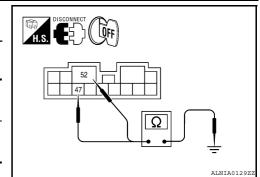
NO >> Check harness between BOSE speaker amp and fuse.

# 3. CHECK GROUND CIRCUIT

### 1. Turn ignition switch OFF.

- 2. Disconnect BOSE speaker amp connector.
- 3. Check continuity between BOSE speaker amp harness connector and ground.

(	+)	(-)	Continuity
Connector	Terminal	(-)	Continuity
B122	47	Ground	Yes
	52	Ground	165



### Does continuity exist?

YES >> INSPECTION END.

NO >> Repair harness or connector.

SATELLITE RADIO TUNER

# SATELLITE RADIO TUNER : Diagnosis Procedure

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Regarding Wiring Diagram information, refer to <u>AV-216. "SEDAN : Wiring Diagram"</u>.

# **1.**CHECK FUSES

Check that the following fuses are not blown.

### < COMPONENT DIAGNOSIS >

# BOSE AUDIO WITHOUT NAVIGATION]

	Unit		Terminals		Signa	al name	Fuse No.
Satellite radio	tuner (factory in-		32		Battery power		24
stalled)			36		Ignition switch A	CC or ON	19
NO >>	GO TO 2			te cause	of malfunctior	n before installing	new fuse.
2. Disconn		adio tuner			onnector B123 ctory installed)		
(	+)	(-)	OFF	ACC	ON		(Acc) (Fin
Connector	Terminal	(-)		700			
B123	32	Ground	Battery voltage	Battery voltage			
	36	Ground	0V	Battery voltage	,		32 36
YES >>		·		disconne	cted or loose		WKIA4539E
-	terminals. • Repair harn		nector.				
-	lite radio tune round pass in		nstalled) c	ase grou	ind.		
YES >> NO >>	Inspection En	d. e radio tur	ner (factory	<sup>,</sup> installed	d) case ground	J.	
REAR VIE	EW CAMEI	RA : Dia	gnosis F	Procedu	ure		INFOID:000000005778694
Regarding W	/iring Diagran	n informati	on, refer to	0 <u>AV-216</u>	, "SEDAN : Wi	iring Diagram".	
<b>1.</b> СНЕСК F			JIT (REAR	R VIEW C	AMERA SIDE	Ξ)	

### 1. Turn ignition switch ON.

- 2. Shift transmission into Reverse.
- 3. Check voltage between rear view camera harness connector B35 and ground.

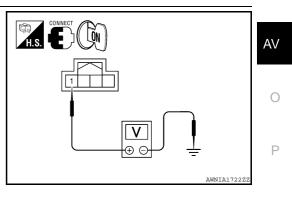
	(+)		Transmission	Value (Approx.)
Connector	Terminal	(-)	position	
B35	1	Ground	Reverse	6V

Is voltage reading approximately 6 volts?

YES >> GO TO 4.

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)



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

### < COMPONENT DIAGNOSIS >

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

ector 5 (B)	
iuity	
ector	awnia21

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

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

ŀ	٩		Continuity	
Connector	Terminal		Continuity	
B35	1	Ground	No	
A 11 11 1		( IO		

Are continuity test results as specified?

- YES >> GO TO 3.
- NO >> Repair harness or connector.
- **3.**CHECK POWER SUPPLY CIRCUIT (AUDIO UNIT SIDE)
- 1. Connect rear view camera harness connector.
- 2. Turn ignition switch ON.
- Check voltage between audio unit harness connector M45 and ground.

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

### Is voltage reading approximately 6 volts?

YES >> Inspection End.

NO >> Replace audio unit. Refer to <u>AV-242, "Removal and</u> <u>Installation"</u>.

# 4.CHECK GROUND CIRCUIT

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

Connector	Terminal	—	Continuity
B35	2	Ground	Yes

### Does continuity exist?

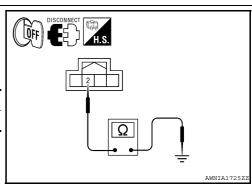
YES >> Inspection End.

NO >> Repair harness or connector. BLUETOOTH CONTROL UNIT

# **BLUETOOTH CONTROL UNIT : Diagnosis Procedure**

Regarding Wiring Diagram information, refer to <u>AV-216. "SEDAN : Wiring Diagram"</u>.





### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

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

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

### Are the fuses OK?

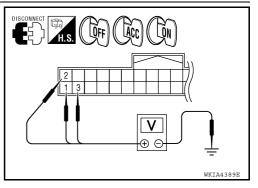
YES >> GO TO 2

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



Are the voltage results as specified?

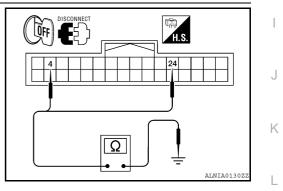
YES >> GO TO 3

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

# 3. CHECK GROUND CIRCUIT

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

(+)		(-)	Continuity	
Connector	Terminal	(-)	Continuity	
B126	4	Ground	Yes	
0120	24	Crodina	103	



Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

### MICROPHONE

**MICROPHONE : Diagnosis Procedure** 

Regarding Wiring Diagram information, refer to AV-216. "SEDAN : Wiring Diagram".



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### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

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Check voltage between microphone harness connector and ground.

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

### Is proper voltage present?

YES >> GO TO 4

>> GO TO 2 NO

# 2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

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

Signal name	Continuity	
Microphone VCC signal	Continuity should exist.	

4. 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)

- 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	
B126	29	Ground	ON	5V

### Is proper voltage present?

- YES >> Inspection End.
- >> Replace Bluetooth control unit. Refer to AV-263. NO "Removal and Installation - Sedan".

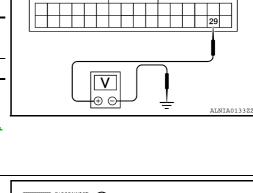
### 4.CHECK GROUND CIRCUIT

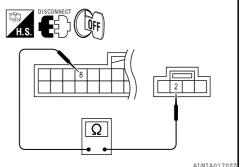
- Turn ignition switch OFF. 1.
- 2. Disconnect Bluetooth control unit and microphone connectors.
- 3. Check continuity between microphone harness connector R7 terminal 2 and Bluetooth control unit harness connector B126 terminal 8.

Signal name	Continuity	
Microphone ground	Continuity should exist.	

### Is continuity present?

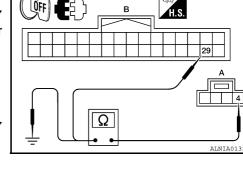
YES >> Inspection End.







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### < COMPONENT DIAGNOSIS >

NO >> Repair harness or connector.

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# 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

INFOID:000000005430168

Regarding Wiring Diagram information, refer to AV-195. "COUPE : Wiring Diagram".

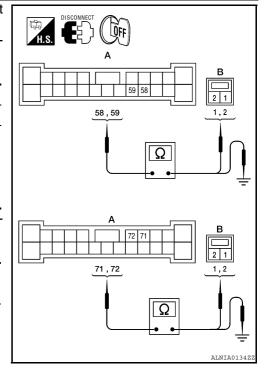
# **1.**HARNESS CHECK

- 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).

А		В		Continuity
Connector	Terminal	Connector	Terminal	
	58	D21	1	
B121	59	DZT	2	Yes
	71	DAGA	1	165
	72	D121	2	

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

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



### Are continuity test results as specified?

YES >> GO TO 2

NO

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

Repair harness or connector.

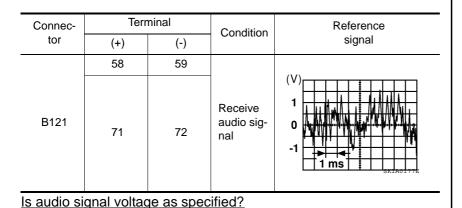
2.DOOR SPEAKER SIGNAL CHECK

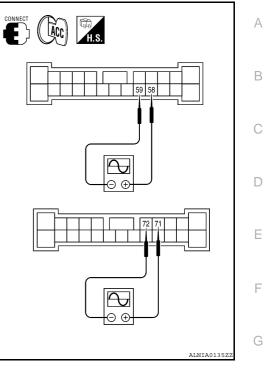
INFOID:000000005430167

# DOOR SPEAKER (COUPE)

### [BOSE AUDIO WITHOUT NAVIGATION]

- 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.





# **3.**HARNESS CHECK

>> GO TO 3

and Installation".

YES

NO

1. Disconnect audio unit connector M134 and BOSE speaker amp. connector B121.

>> Replace suspect speaker. Refer to AV-247, "Removal

 Check continuity between audio unit harness connector M134 (A) and BOSE speaker amp. harness connector B121 (B).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	53		76	
M134	57	B121	74	Yes
WI154	59		75	- 103
	63		73	

3. Check continuity between audio unit harness connector M134 (A) and ground.

	А		Continuity
Connector	Terminal		Continuity
	53		
M134	57	Ground	No
111134	59	Giouna	
	63		

### Are continuity test results as specified?

YES >> GO TO 4

NO

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

**4.**DOOR SPEAKER SIGNAL CHECK

1. Connect audio unit connector and BOSE speaker amp. connector.

2. Turn ignition switch ACC.

3. Push "POWER" switch.

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

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Connector	Terminals		Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	59	53			
M134	63	57	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E	

Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to AV-243, "Removal and Installation - Coupe".

NO >> Replace audio unit. Refer to <u>AV-242, "Removal and Installation"</u>.

# 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**

Regarding Wiring Diagram information, refer to AV-216. "SEDAN : Wiring Diagram".

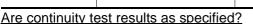
# 1.HARNESS CHECK

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

А		В		Continuity
Connector	Terminal	Connector	Terminal	
B121	58	D22	1	
	59		2	Yes
	71	D122	1	Tes
	72		2	

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

	А	В	Continuity	
Connector	Connector Terminal		Continuity	
	58		No	
B121	59	Ground		
DIZI	71			
	72			



YES >> GO TO 2

NO

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

2.FRONT DOOR SPEAKER SIGNAL CHECK

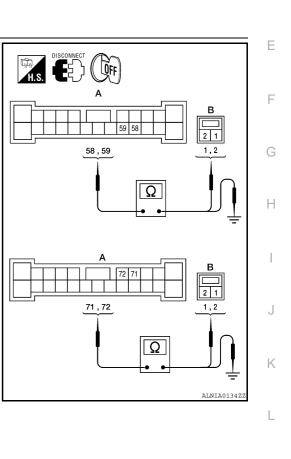
[BOSE AUDIO WITHOUT NAVIGATION]

INFOID:000000005430169

INFOID:000000005430170

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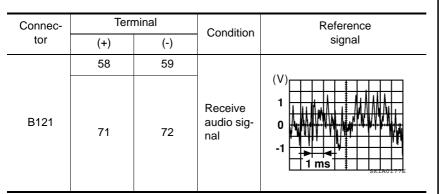
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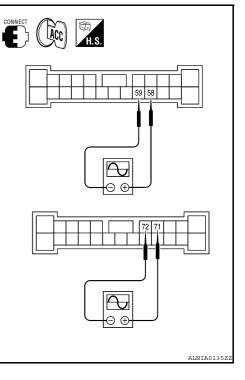
# FRONT DOOR SPEAKER (SEDAN)

### < 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.
- 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 <u>AV-247</u>, "<u>Removal</u> <u>and Installation</u>".

NO >> GO TO 3

# **3.**HARNESS CHECK

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

A		В		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	53		76		
M46	57	B121	74	Yes	
10140	59		75	Tes	
	63		73		

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

	А		Continuity	
Connector Terminal			Continuity	
	53	Ground	No	
M46	57			
10140	59			
	63			

### Are continuity test results as specified?

YES >> GO TO 4

NO

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

### **4.**FRONT DOOR SPEAKER SIGNAL CHECK

1. Connect audio unit connector and BOSE speaker amp. connector.

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

# FRONT DOOR SPEAKER (SEDAN)

### < COMPONENT DIAGNOSIS >

ER (SEDAN) [BOSE AUDIO WITHOUT NAVIGATION]

Connector         (+)         (-)         Connector         signal           59         53	Connector	Term	ninals	Condition	Reference
M46 63 57 Receive audio sig- nal (V) 1 1 1 1 1 1 1 1 1		(+)	(-)	Condition	signal
M46 63 57 Receive audio sig- nal -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1		59	53		
	M46	63	57	audio sig-	

Are the audio signal voltage readings as specified?

YES	>> Replace BOSE speaker amp. Refer to AV-243, "Removal and Installation - Coupe".
NO	>> Replace audio unit. Refer to AV-242, "Removal and Installation".

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# 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

INFOID:000000005430172

INFOID:000000005430171

Regarding Wiring Diagram information, refer to AV-195. "COUPE : Wiring Diagram".

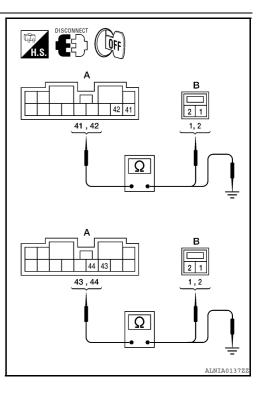
# **1.**HARNESS CHECK

- 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).

А			В	Continuity
Connector	Terminal	Connector Terminal		Continuity
	41	M51	1	
B122	42		2	Yes
	44	M52	1	Tes
	43		2	

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

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



Are continuity test results as specified?

YES >> GO TO 2

NO

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

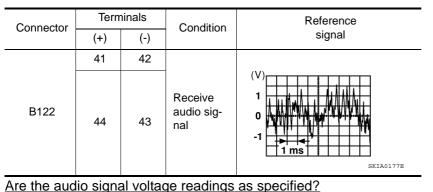
2.FRONT TWEETER SIGNAL CHECK

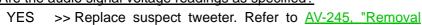
# FRONT TWEETER (COUPE)

### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

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





and Installation".

# **3.**HARNESS CHECK

- 1. Disconnect audio unit connector M134 and BOSE speaker amp. connector B121.
- Check continuity between audio unit harness connector M134 (A) and BOSE speaker amp. harness connector B121 (B).

А		В		Continuity
Connector	Terminal	I Connector Termina		Continuity
	53		76	
M134	57	B121	74	Yes
101134	59		75	Tes
	63		73	

3. Check continuity between audio unit harness connector M134 (A) and ground.

	A		Continuity
Connector	Terminal		Continuity
	53		No
M134	57	Ground	
	59	Giouna	
	63		

### Are continuity test results as specified?

YES >> GO TO 4

NO

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

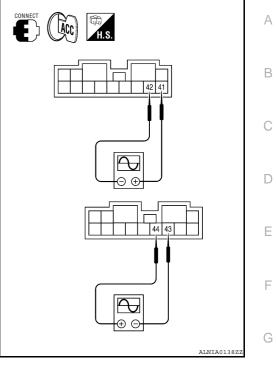
**4.**DOOR SPEAKER SIGNAL CHECK

1. Connect audio unit connector and BOSE speaker amp. connector.

2. Turn ignition switch ACC.

3. Push "POWER" switch.

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



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Connector	Terminals		Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	59	53			
M134	63	57	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	

Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to AV-243, "Removal and Installation - Coupe".

NO >> Replace audio unit. Refer to <u>AV-242, "Removal and Installation"</u>.

# 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**

Regarding Wiring Diagram information, refer to AV-216. "SEDAN : Wiring Diagram".

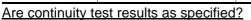
# **1.**HARNESS CHECK

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

	A	В		Continuity
Connector	Connector Terminal		Terminal	Continuity
	41	M106	1	
B122	42	IVI I UU	2	Yes
	44	M107	1	Tes
	43	WITO7	2	

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

_		A		Continuity	
	Connector	Terminal		Continuity	
_		41		No	
	B122	42	Ground		
DIZ	DIZZ	44			
		43	-		



YES >> GO TO 2

NO

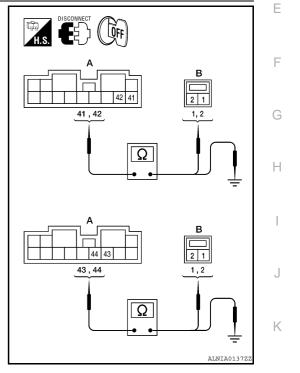
- >> Check connector housings for disconnected or loose terminals.
- Repair harness or connector.
- **2.**TWEETER SIGNAL CHECK

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INFOID:000000005430174

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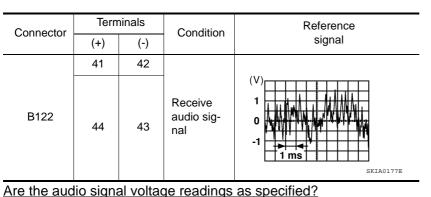
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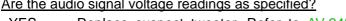
# **TWEETER (SEDAN)**

### < COMPONENT DIAGNOSIS >

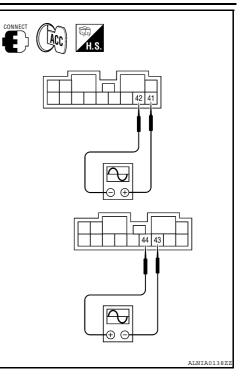
# [BOSE AUDIO WITHOUT NAVIGATION]

- 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.





YES >> Replace suspect tweeter. Refer to <u>AV-245. "Removal</u> <u>and Installation"</u>. NO >> GO TO 3



# **3.**HARNESS CHECK

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

	A	В		Continuity
Connector Terminal		Connector	Terminal	Continuity
	53		76	
M46	57 B121	74	Yes	
10140	59	DIZI	75	165
	63		73	

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

	А		Continuity	
Connector Terminal			Continuity	
	53	- Ground	No	
M46	57			
10140	59			
	63			

### Are continuity test results as specified?

YES >> GO TO 4

NO

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

### **4.**TWEETER SIGNAL CHECK

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

# **TWEETER (SEDAN)**

### < COMPONENT DIAGNOSIS >

Connector	Term	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	59	53		
M46	63	57	Receive audio sig- nal	$ \begin{array}{c} (V) \\ 1 \\ 0 \\ -1 \\ \hline \end{array} $
				SKIA0177E
	-			s as specified?
(ES >> NO >>	· Repla · Repla	ice BO ice auc	SE speaker lio unit. Ref	amp. Refer to <u>AV-243, "Removal and Installation - Coupe"</u> . er to <u>AV-242, "Removal and Installation"</u> .

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# CENTER SPEAKER

# Description

INFOID:000000005430175

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

### **Diagnosis** Procedure

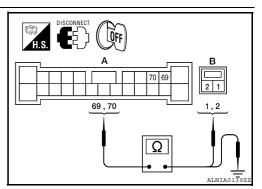
INFOID:000000005430176

Regarding Wiring Diagram information, refer to <u>AV-195, "COUPE : Wiring Diagram"</u> (coupe) or <u>AV-216,</u> <u>"SEDAN : Wiring Diagram"</u> (sedan).

# **1.**HARNESS CHECK

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

	A	В		Continuity
Connector Terminal		Connector	Terminal	
B121	69	M151	1	Yes
DIZI	70	MITST	2	165



[BOSE AUDIO WITHOUT NAVIGATION]

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

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

Are continuity test results as specified?

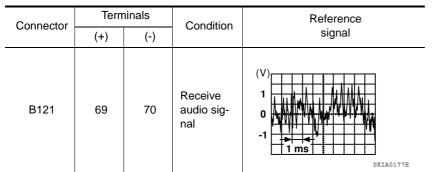
YES >> GO TO 2

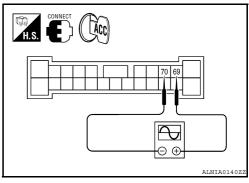
NO

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

# 2.CENTER SPEAKER SIGNAL CHECK

- 1. Connect BOSE speaker amp. connector 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?

# **CENTER SPEAKER**

### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

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YES >> Replace center speaker. Refer to <u>AV-246, "Removal and Installation"</u>.

# NO >> GO TO 3

# **3.**HARNESS CHECK

- Disconnect audio unit connector M46 (Sedan) or M134 (Coupe) and BOSE speaker amp. connector B121.
- 2. Check continuity between audio unit harness connector M46 (Sedan) or M134 (Coupe) (A) and BOSE speaker amp. harness connector B121 (B).

А		В		Orationity
Connector	Terminal	Connector	Terminal	Continuity
M46	53		76	
(Sedan)	57	B121	74	Yes
or M134	59	DIZI	75	Tes
(Coupe)	632		73	

### 3. Check continuity between audio unit harness connector M46 (Sedan) or M134 (Coupe) (A) and ground.

A			Operationsity
Connector	Terminal		Continuity
M46	53		
(Sedan) or M134 (Coupe)	57	Ground	No
	59		
	63		

### 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.**CENTER SPEAKER SIGNAL CHECK

- 1. Connect audio unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio unit harness connector M46 (Sedan) or M134 (Coupe) terminals with CONSULT-III or oscilloscope.

Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-243. "Removal and Installation - Coupe"</u> or <u>AV-243.</u> <sup>P</sup> <u>"Removal and Installation - Sedan"</u>.

NO >> Replace audio unit. Refer to <u>AV-242</u>, "Removal and Installation".

# 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

INFOID:000000005430178

Regarding Wiring Diagram information, refer to AV-195. "COUPE : Wiring Diagram".

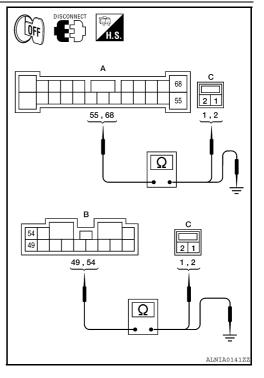
# **1.**HARNESS CHECK

- 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			Yes
B: B122	49	C: D302	2	165
D. D122	54	C. D302	1	

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

Connector	Terminal	-	Continuity	
A: B121	55			
A. DIZT	68	Ground	No	
B: B122	49	Ground		
D. D122	54			



Are the continuity test results as specified?

YES >> GO TO 2 NO >> • Check c

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

2.REAR TWEETER SIGNAL CHECK

INFOID:000000005430177

# **REAR TWEETER (COUPE)**

Reference

signal

### < COMPONENT DIAGNOSIS >

# [BOSÉ 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".

3. Push "POWER" switch.

(+)

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>> GO TO 3

Connector

A: B121

B: B122

YES

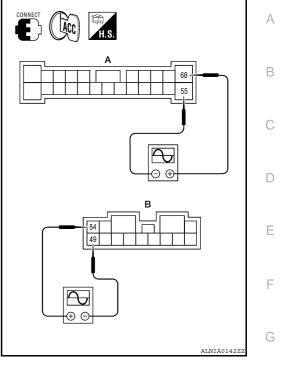
NO

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

Condition

Receive audio sig-

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# **3.**HARNESS CHECK

1. Disconnect audio unit connector M134 and BOSE speaker amp. connector B121.

>> Replace suspect tweeter. Refer to AV-249, "Removal

 Check continuity between audio unit harness connector M134 (A) and BOSE speaker amp. harness connector B121 (B).

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	A	E	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
	54		63	
M134	58	58 B121		Yes
111134	60	DIZI	64	
	64		66	

3. Check continuity between audio unit harness connector M134 (A) and ground.

	А		Continuity	
Connector	Terminal		Continuity	
	54	Ground	No	
M404	58			
M134	60			
	64			

Are the 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

- 1. Connect audio unit connector M134 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 M134 terminals with CONSULT-III or oscilloscope.

# AV-147

### < COMPONENT DIAGNOSIS >

Connector	Terminals		Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	60	54			
M134	64	58	Receive audio sig- nal	(V) 1 0 -1 1 ms skia0177E	

Is the audio signal voltage reading as specified?

>> Replace BOSE speaker amp. Refer to <u>AV-243, "Removal and Installation - Coupe"</u>. >> Replace audio unit. Refer to <u>AV-242, "Removal and Installation"</u>. YES

NO

# 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**

Regarding Wiring Diagram information, refer to AV-216. "SEDAN : Wiring Diagram".

# **1.**HARNESS CHECK

1.

2.

3.

Disconnect BOSE speaker amp. connectors B121, B122 and suspect speaker connector. ( QFF) Check continuity between BOSE speaker amp. harness connectors B121 (A) and B122 (B) and suspect speaker harness connector (C). 55 2 1 Connector Terminal Connector Terminal Continuity 55,68 1.2 55 2 A: B121 C: D202 1 68 Yes Ω 2 49 B: B122 C: D302 1 54 Check continuity between BOSE speaker amp. harness connectors B121 (A) and B122 (B) and ground. 54 49 2 1 49.54 1,2 Connector Terminal -Continuity 55 A: B121 68 Ground No 49

Are the continuity test results as specified?

YES >> GO TO 2 NO >> • Check c

B: B122

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

• Repair harness or connector.

54

2.REAR DOOR SPEAKER SIGNAL CHECK

ALNIA0141Z

INFOID:000000005430179

INFOID:000000005430180

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# REAR DOOR SPEAKER (SEDAN)

Reference

signal

### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

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

Terminals

(-)

55

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3. Push "POWER" switch.

(+)

68

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Connector

A: B121

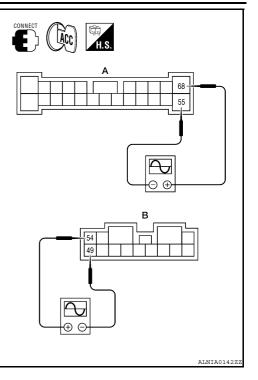
B: B122

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

Condition

Receive audio sig-

nal



# Are audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to <u>AV-248, "Removal</u> and Installation - Sedan".

NO >> GO TO 3

# 3.HARNESS CHECK

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

SKIA0177E

	A		Continuity	
Connector	onnector Terminal		Terminal	Continuity
	54		63	
M46	58	B121	65	Yes
10140	60	DIZI	64	
	64		66	

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

	А		Continuity	
Connector	Terminal		Continuity	
	54	- Ground	No	
M46	58			
10140	60			
	64			

### Are the 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 DOOR SPEAKER SIGNAL CHECK

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

# < COMPONENT DIAGNOSIS >

REAR DOOR SPEAKER (SEDAN) > [BOSE AUDIO WITHOUT NAVIGATION]

Connector	Terminals		Condition	Reference			
	(+)	(-)	Condition	signal			
	60	54					
M46	64	58	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E			
Is the audio	o signa	l volta	ge reading	as specified?			
YES >>	Repla	ace BC		er amp. Refer to <u>AV-243</u> , " <u>Removal and Installation - Sedan</u> ".			

NO >> Replace audio unit. Refer to <u>AV-242, "Removal and Installation"</u>.

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# SUBWOOFER (COUPE)

# Description

INFOID:000000005430181

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

### Diagnosis Procedure

INFOID:000000005430182

Regarding Wiring Diagram information, refer to AV-195. "COUPE : Wiring Diagram".

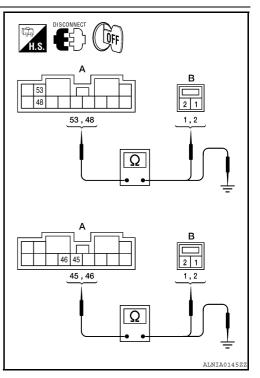
# **1.**HARNESS CHECK

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

	A	I	В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	53	B25	1	
B122	48	B25	2	Yes
DIZZ	45	B47	1	
	46	D47	2	

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

	А		Continuity	
Connector	Terminal			
	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

# SUBWOOFER (COUPE)

### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

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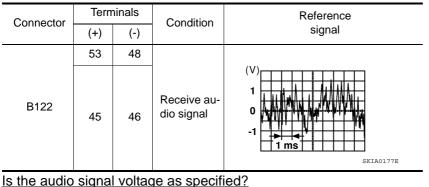
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- 1. Connect BOSE speaker amp. connector B122 and suspect rear subwoofer connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- Check the signal between BOSE speaker amp. harness connec-4 tor B122 terminals with CONSULT-III or oscilloscope.



YES >> Replace suspect rear subwoofer. Refer to AV-250. "Removal and Installation". NO >> GO TO 3

# **3.**HARNESS CHECK

- 1. Disconnect audio unit connector M134 and BOSE speaker amp. connector B121.
- 2. Check continuity between audio unit harness connector M134 (A) and BOSE speaker amp. harness connector B121 (B).

A			Continuity	
Connector	Terminal	Connector	Terminal	Continuity
	54		63	
M134	58	B121	65	Yes
101134	60	DIZI	64	165
	64		66	

Check continuity between audio unit harness connector M134 (A) and ground. 3.

	A		Continuity	
Connector	Terminal		Continuity	
	54			
M134	58	Ground No	No	
101134	60			
	64			

### Are the continuity test results as specified?

YES >> GO TO 4

NO

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

### **4.**REAR SUBWOOFER SIGNAL CHECK

Connect audio unit connector M134 and BOSE speaker amp. connector B121. 1.

2. Turn ignition switch to ACC.

3. Push "POWER" switch.

4. Check the signal between audio unit harness connector M134 terminals with CONSULT-III or oscilloscope.

# AV-153

### < COMPONENT DIAGNOSIS >

Connector	Term	ninals	Condition	Reference signal	
Connector	(+)	(-)	Condition		
	60	54			
M134	64	58	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E	

Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to <u>AV-243, "Removal and Installation - Coupe"</u>.

NO >> Replace audio unit. Refer to <u>AV-242, "Removal and Installation"</u>.

# SUBWOOFER (SEDAN)

# 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.

**SUBWOOFER (SEDAN)** 

# **Diagnosis** Procedure

Regarding Wiring Diagram information, refer to AV-216, "SEDAN : Wiring Diagram".

# **1.**HARNESS CHECK

rear subwoofer connector.

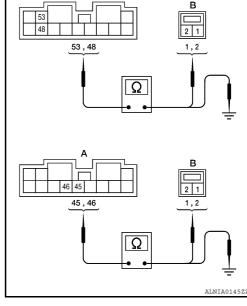
1.

Check continuity between BOSE speaker amp. harness connec-2. tor B122 (A) and suspect rear subwoofer harness connector (B). А в Continuity Connector Terminal Connector Terminal 1 53 B120 2 48 B122 Yes 45 1 B124 46 2

Disconnect BOSE speaker amp. connector B122 and suspect

Check continuity between BOSE speaker amp. harness connec-3. tor B122 (A) and ground.

_	Α			Continuity
	Connector	Terminal		Continuity
-		53		
	B122	48	Ground	No
	DIZZ	45	Ground	No
		46		



Are the continuity test results as specified?

YES >> GO TO 2

NO

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

2. REAR SUBWOOFER SIGNAL CHECK

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# SUBWOOFER (SEDAN)

### < COMPONENT DIAGNOSIS >

# [BOSE AUDIO WITHOUT NAVIGATION]

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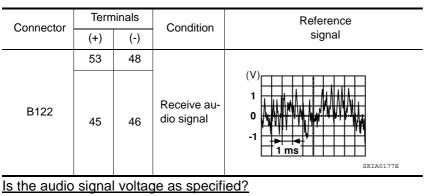
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- Connect BOSE speaker amp. connector B122 and suspect rear subwoofer connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between BOSE speaker amp. harness connector B122 terminals with CONSULT-III or oscilloscope.



YES >> Replace suspect rear subwoofer. Refer to <u>AV-250.</u> "Removal and Installation".

NO >> GO TO 3

# **3.**HARNESS CHECK

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

	А		В		
Connector	Terminal	Connector	ector Terminal Con		
	54		63		
M46	58	B121	65	Yes	
	60		64	165	
	64		66		

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

	А		Continuity	
Connector	Terminal			
	54			
M46	58	Ground	No	
10140	60	Ground		
	64			

### Are continuity test results as specified?

YES >> GO TO 4

NO

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

**4.**REAR SUBWOOFER SIGNAL CHECK

1. Connect audio unit connector M46 and BOSE speaker amp. connector B121.

2. Turn ignition switch to ACC.

3. Push "POWER" switch.

4. Check the signal between audio unit harness connector M46 terminals with CONSULT-III or oscilloscope.

# AV-156

# SUBWOOFER (SEDAN)

# < COMPONENT DIAGNOSIS >

IS the audio signal voltage as specified?

YES	>> Replace	BOSE	speaker a	mp. Refer to AV	/-243, '	"Removal	and Inst	tallation -	Sedan".	
	<b>–</b> –		·							

NO >> Replace audio unit. Refer to AV-242, "Removal and Installation".

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### < COMPONENT DIAGNOSIS >

# 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

INFOID:000000005430186

Regarding Wiring Diagram information, refer to AV-195, "COUPE : Wiring Diagram" (coupe) or AV-216, "SEDAN : Wiring Diagram" (sedan).

1.CHECK AMP ON SIGNAL (BOSE SPEAKER AMP) 1. Turn audio system ON. Check voltage between BOSE speaker amp. harness connector 2. B121 terminal 60 and ground. ÔN R 60 - Ground : More than approx. 6.5V Is voltage greater than 6.5V? YES >> Inspection End. NO >> GO TO 2 ALNIA0147ZZ 2. CHECK AMP ON SIGNAL (AUDIO UNIT) Check voltage between audio unit harness connector M44 (Sedan) or M132 (Sedan) terminal 1 and ground. 1 - Ground : More than approx. 6.5V Is voltage greater than 6.5V? YES >> Repair harness or connector. NO >> Replace audio unit. Refer to AV-242, "Removal and Installation".

# **Revision: September 2009**

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INFOID:000000005430185

# **STEERING SWITCH (COUPE)**

### < COMPONENT DIAGNOSIS >

# 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.

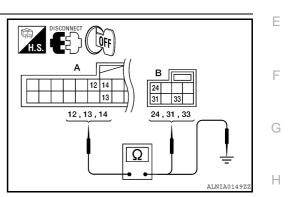
### **Diagnosis Procedure**

Regarding Wiring Diagram information, refer to AV-195. "COUPE : Wiring Diagram".

# **1.**CHECK HARNESS

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

А		E	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
	12		24		
B55	13	M30	31	Yes	
	14		33	1	



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 M132 (A) terminals and Bluetooth control unit connector B55 (B) terminals.

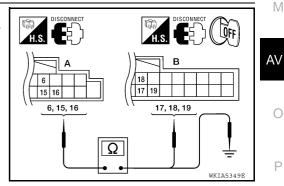
A	l l	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	6		17	
M132	15	B55	19	Yes
	16		18	

Are the continuity test results as specified?

YES >> GO TO 3

NO >> Repair harness.

**3.**SPIRAL CABLE CHECK



[BOSE	ÂUDIO	WITHOUT	NAVIGA	TION]

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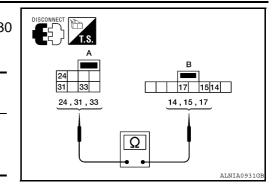
### STEERING SWITCH (COUPE) [BOSE AUDIO WITHOUT NAVIGATION]

### < COMPONENT DIAGNOSIS >

### 1. Disconnect spiral cable connector M88.

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

		A	l	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-7, "Removal and Installation"</u>.

**4.**CHECK STEERING SWITCH

Check steering switch. Refer to AV-160. "Component Inspection".

Does the steering switch pass inspection?

- YES >> Replace Bluetooth control unit. Refer to AV-263, "Removal and Installation Coupe"
- NO >> Replace steering switch. Refer to <u>AV-253, "Removal and Installation"</u>.

**Component Inspection** 

INFOID:000000005430189

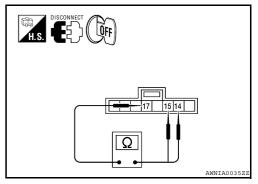
Measure the resistance between the steering switch connector terminals 14 to 17 and 15 to 17.

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
տչ≦ switch ON	<b>: 323 – 337</b> Ω
SOURCE switch ON	<b>: 990 – 1030</b> Ω



### < COMPONENT DIAGNOSIS >

# STEERING SWITCH (SEDAN)

# Description

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

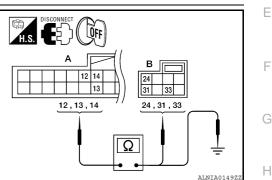
### **Diagnosis** Procedure

Regarding Wiring Diagram information, refer to AV-216, "SEDAN : Wiring Diagram".

# 1.CHECK HARNESS

- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit connector B126 and spi cable connector M30.
- 3. Check continuity between Bluetooth control unit connector B1 (A) terminals and spiral cable connector M30 (B) terminals.

A	١	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	12		24	
B126	13	M30	31	Yes
	14		33	



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

	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.

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

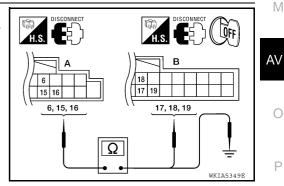
A	۱.		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	6		17	
M44	15	B126	19	Yes
	16		18	

Are the continuity test results as specified?

YES >> GO TO 3

NO >> Repair harness.

3.SPIRAL CABLE CHECK



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INFOID:000000005430191

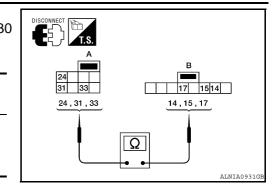
### STEERING SWITCH (SEDAN) [BOSE AUDIO WITHOUT NAVIGATION]

### < 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-7, "Removal and Installation"</u>.

**4.**CHECK STEERING SWITCH

Check steering switch. Refer to AV-162. "Component Inspection".

Does the steering switch pass inspection?

- YES >> Replace Bluetooth control unit. Refer to <u>AV-263</u>, "Removal and Installation Sedan"
- NO >> Replace steering switch. Refer to <u>AV-253, "Removal and Installation"</u>.

**Component Inspection** 

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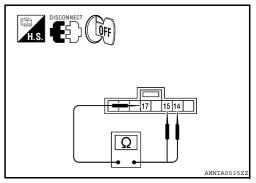
Measure the resistance between the steering switch connector terminals 14 to 17 and 15 to 17.

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
տչ switch ON	<b>: 323 – 337</b> Ω
SOURCE switch ON	: <b>990 – 1030</b> Ω



<pre>COMMUNICATION SIGNAL CIRCU &lt; COMPONENT DIAGNOSIS &gt; [BO</pre>	JIT (COUPE) SE AUDIO WITHOUT NAVIGATION]
COMMUNICATION SIGNAL CIRCUIT (COUPE)	
SATELLITE RADIO TUNER	
SATELLITE RADIO TUNER : Description	INFO/D:00000005430193
Communication signals are exchanged between the audio unit and sa	atellite radio tuner using the communica-
tion circuits.	
SATELLITE RADIO TUNER : Diagnosis Procedure	INFOID:00000005430194
Regarding Wiring Diagram information, refer to <u>AV-195, "COUPE : Wi</u>	ring Diagram".
<b>1.</b> CHECK HARNESS - 1	
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect satellite radio tuner (factory installed) connector B57</li> </ol>	
and audio unit connector M135.	
3. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 28 and audio unit harness	
connector M135 (B) terminal 72.	
Continuity should exist.	
4. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 28 and ground.	
Continuity should not exist.	AWNIA2112ZZ
Are continuity results as specified?	
YES >> GO TO 2 NO >> Repair harness or connector.	
2.CHECK HARNESS - 2	
1. Check continuity between satellite radio tuner (factory installed)	
harness connector B57 (A) terminal 29 and audio unit harness connector M135 (B) terminal 73.	
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?	AWNIA2113ZZ
YES >> GO TO 3	
NO >> Repair harness or connector. 3.CHECK HARNESS - 3	

# COMMUNICATION SIGNAL CIRCUIT (COUPE)

### < COMPONENT DIAGNOSIS >

1. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 30 and audio unit harness connector M135 (B) terminal 74.

### Continuity should exist.

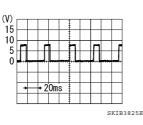
2. Check continuity between satellite radio tuner (factory installed) harness connector B57 (A) terminal 30 and ground.

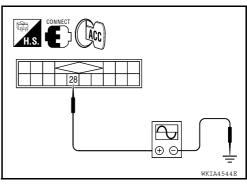
### Continuity should not exist.

Are continuity results as specified?

- YES >> GO TO 4
- NO >> Repair harness or connector.
- 4.CHECK REQ1 SIGNAL
- 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?

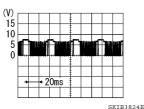
YES >> GO TO 5

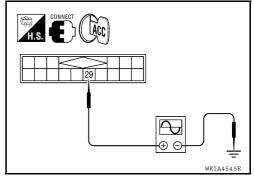
NO >> Replace audio unit. Refer to <u>AV-242, "Removal and Installation"</u>.

### **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. Refer to AV-251, "Removal and Installation - Coupe".

6.CHECK RXD SIGNAL

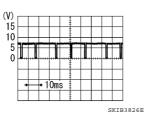
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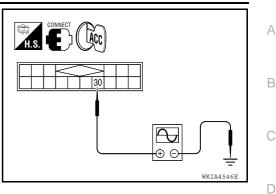
### COMMUNICATION SIGNAL CIRCUIT (COUPE) BNOSIS > [BOSE AUDIO WITHOUT NAVIGATION]

### < COMPONENT DIAGNOSIS >

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. Refer to AV-251, "Removal and Installation Coupe".
- NO >> Replace audio unit. Refer to <u>AV-242, "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

Regarding Wiring Diagram information, refer to AV-216, "SEDAN : Wiring Diagram".

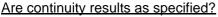
# 1.CHECK HARNESS - 1

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

### Continuity should exist.

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

### Continuity should not exist.



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

- 2.CHECK HARNESS 2
- 1. Check continuity between satellite radio tuner (factory installed) harness connector B123 (A) terminal 29 and audio unit harness connector M47 (B) terminal 73.

### Continuity should exist.

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

### Continuity should not exist.

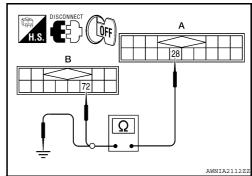
Are continuity results as specified?

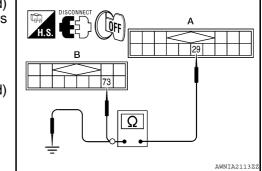
YES >> GO TO 3

NO >> Repair harness or connector.

**3.**CHECK HARNESS - 3

**Revision: September 2009** 





[BOSE AUDIO WITHOUT NAVIGATION]

INF0ID:000000005430196

INFOID:00000005430195

# **COMMUNICATION SIGNAL CIRCUIT (SEDAN)**

### < COMPONENT DIAGNOSIS >

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

### Continuity should exist.

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

### Continuity should not exist.

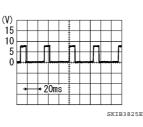
Are continuity results as specified?

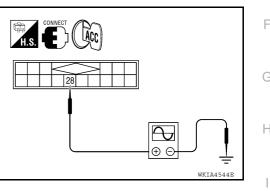
- YES >> GO TO 4
- NO >> Repair harness or connector.

4.CHECK REQ1 SIGNAL

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

### 28 - Ground





### Are voltage readings as specified?

YES >> GO TO 5

NO >> Replace audio unit. Refer to AV-242, "Removal and Installation".

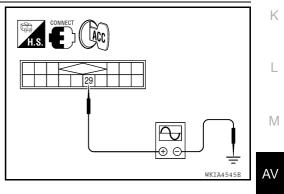
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### 5.CHECK TXD SIGNAL

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

### 29 - Ground

) 5 –							
	W	Ì		Π	ſ	Ì	
	+ 2	Om	S				
							KIE

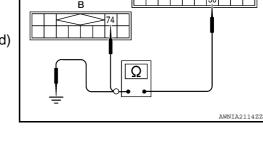


### Are the voltage readings as specified?

YES >> GO TO 6

NO >> Replace satellite radio tuner. Refer to AV-251, "Removal and Installation - Sedan".

**O.**CHECK RXD SIGNAL



[BOSE AUDIO WITHOUT NAVIGATION]

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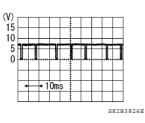
E

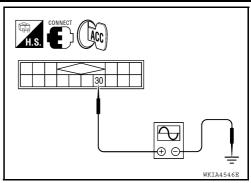
### COMMUNICATION SIGNAL CIRCUIT (SEDAN) BNOSIS > [BOSE AUDIO WITHOUT NAVIGATION]

### < COMPONENT DIAGNOSIS >

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

### 30 - Ground





Are the voltage readings as specified?

- YES >> Replace satellite radio tuner. Refer to <u>AV-251, "Removal and Installation Sedan"</u>.
- NO >> Replace audio unit. Refer to <u>AV-242, "Removal and Installation"</u>.

			SIGNAL		COUPE) DSE AUDIO WITHOUT NAVIGATION]	
				[BU	SE AUDIO WITHOUT NAVIGATION]	
SOUND S		•	COUPE)			А
SATELLITE	E RADIO <sup>-</sup>	TUNER : D	escription		INFOID:000000005430197	D
Left and right sound signal of		lio signals are	supplied from	m the satellite r	radio tuner to the audio unit through the	В
SATELLITE		TUNER : D	iagnosis P	rocedure	INFOID:000000005430198	С
			-			
Regarding Wi	ring Diagram	information, r	efer to <u>AV-19</u>	<u>5, "COUPE : W</u>	iring Diagram".	D
LEFT CHAN	NEL					Е
<b>1.</b> CHECK HA	ARNESS					
2. Disconne and audic	o unit connec	dio tuner (facto tor M135.	, ,	connector B57		F
	<ol> <li>Check continuity between satellite radio tune connector B57 (A) and audio unit connector M</li> </ol>					G
Α		В		Continuity		
Connector	Terminal 21	Connector	Terminal 65			Н
B57	21	M135	66	Yes		
4. Check co	ntinuity betw	een satellite ra	idio tuner (fac	ctory installed) o	connector B57 (A) and ground.	I
	A			<u> </u>		1
Connector	7	Ferminal		Continuity		0
B57		21	Ground	No		
		22				K
Are continuity YES >> G	<u>results as sp</u> O TO 2	<u>Decined ?</u>				
NO >> R	epair harnes	s or connector				L
2.CHECK LE						
	satellite radio ion switch Ol	tuner (factory	installed) and	d audio unit.		Μ
3. Check sig	gnal betwee	n satellite rad		tory installed). T-III or oscillo-		
scope.		ais 21 anu 22 v				AV
21 - 22	2					
		(V				0
		-				
			→ +2ms			Ρ
				SKIB3609E	WKIA4548E	
Are voltage re	• ·					
YES >> R NO >> R	eplace audic eplace satell	unit. Refer to ite radio tuner.	AV-242, "Rer Refer to AV-2	<u>moval and Insta</u> 251, "Removal	<u>Illation"</u> . <u>and Installation - Coupe"</u> .	

AV-169

# SOUND SIGNAL CIRCUIT (COUPE)

### < COMPONENT DIAGNOSIS >

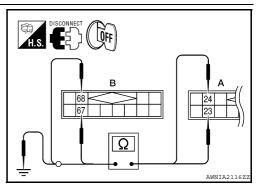
# [BOSE AUDIO WITHOUT NAVIGATION]

# **RIGHT CHANNEL**

**1.**CHECK HARNESS

- 1. Turn ignition switch OFF.
- Disconnect satellite radio tuner (factory installed) connector B57 and audio unit connector M135.
- 3. Check continuity between satellite radio tuner (factory installed) connector B57 (A) and audio unit connector M135 (B).

А		E	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
B57	23	M135	67	Vaa
007	24	11133	68	Yes



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

	А		Continuity	
Connector	Terminal			
B57	23	Ground	No	
	24	Oround	110	

Are continuity results as specified?

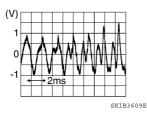
YES >> GO TO 2

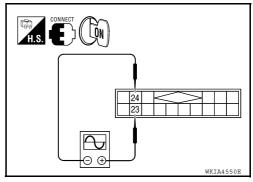
NO >> Repair harness or connector.

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

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

23 - 24





Are voltage readings as specified?

- YES >> Replace audio unit. Refer to <u>AV-242, "Removal and Installation"</u>.
- NO >> Replace satellite radio tuner. Refer to <u>AV-251, "Removal and Installation Coupe"</u>.

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SOUND S			SEDAN)	<u> </u>	•	
SATELLIT	E RADIO	TUNER	,			А
SATELLITE	E RADIO <sup>-</sup>	TUNER : D	escription		INFOID:000000005430199	D
Left and right sound signal of		dio signals are	supplied from	m the satellite r	adio tuner to the audio unit through the	В
SATELLITE		TUNER : D	iagnosis P	rocedure	INFOID:00000005430200	С
Regarding Wi	ring Diagram	information, r	efer to AV-21	<u>6, "SEDAN : Wi</u>	ring Diagram".	D
LEFT CHAN						Е
<b>1.</b> CHECK H/						_
2. Disconne B123 and	audio unit c	radio tuner (f onnector M47.	-	ed) connector ctory installed)	H.S. DISCONNECT	F
		nd audio unit c				G
Α		E		Continuity		
Connector B123	Terminal 21	Connector M47	Terminal 65	Yes		Н
4. Check co	22 ntinuity betw	een satellite ra	66 adio tuner (fac	ctory installed) c	connector B123 (A) and ground.	I
Connector	A	Ferminal		Continuity		J
		21	Ground	No		
B123		22	- Ground	No		Κ
Are continuity YES >> G	<u>results as s</u> O TO 2	pecified?				
NO >> R	epair harnes	s or connector				L
		EL AUDIO SIG				
	satellite radic ion switch Ol	o tuner (factory N.	installed) and	d audio unit.		Μ
				ctory installed) JLT-III or oscil-		a v
21 - 22	2					
		(V				0
		(	$\Lambda \Lambda \Lambda M M$			D
		-	1 <b>→</b> + 2ms		WKIA4548E	Ρ
Are voltage re	adings as er	ecified?		SKIB3609E		
YES >> R	eplace audic	unit. Refer to	<u>AV-242, "Rer</u>	moval and Insta	<u>llation"</u> .	
NO >> R	eplace satell	ite radio tuner.	. Reter to <u>AV-</u>	<u>251, "Removal :</u>	and Installation - Sedan".	

# SOUND SIGNAL CIRCUIT (SEDAN)

### < COMPONENT DIAGNOSIS >

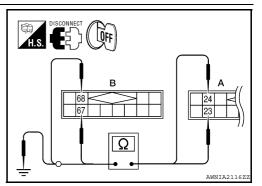
# [BOSE AUDIO WITHOUT NAVIGATION]

# **RIGHT CHANNEL**

**1.**CHECK HARNESS

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

А		E	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
B123	23	M47	67	Yes
D123	24	10147	68	



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

	А		Continuity	
Connector	Terminal			
B123	23	Ground	No	
D123	24	Cround	NO	

Are continuity results as specified?

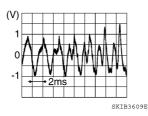
YES >> GO TO 2

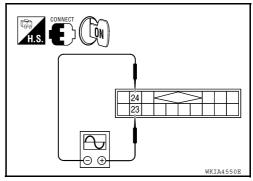
NO >> Repair harness or connector.

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

- 1. Connect satellite radio tuner (factory installed) and audio unit.
- 2. Turn ignition switch ON.
- 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-242, "Removal and Installation".
- NO >> Replace satellite radio tuner. Refer to AV-251, "Removal and Installation Sedan".

# 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.

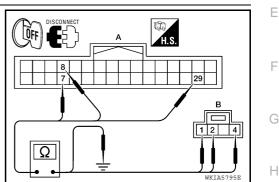
# **Diagnosis Procedure**

Regarding Wiring Diagram information, refer to AV-195. "COUPE : Wiring Diagram".

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

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

Α					
Connector	Terminal	Connector	Terminal	Continuity	
	7		1		
B55	8	R7	2	Yes	
	29		4		



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

	А		Continuity	
Connector	Terminal		Continuity	
	7		No	
B55	8	Ground		
	29			

Are the continuity test results as specified?

YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK MICROPHONE POWER SUPPLY

Μ 1 Connect Bluetooth control unit connector and microphone con-(LĨN) nector. 2. Turn ignition switch ON. Check voltage between microphone harness connector R7 ter-3. AV minal 4 and ground. 4 - Ground : Approx. 5V Is voltage reading approx. 5 volts? YES >> GO TO 3 NO >> Replace Bluetooth control unit. Refer to AV-263, Ρ WKTA5796F "Removal and Installation - Coupe".

**3.**CHECK MICROPHONE SIGNAL

Revision: September 2009

[BOSE AUDIO WITHOUT NAVIGATION]

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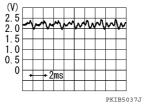
### MICROPHONE SIGNAL CIRCUIT (COUPE) OSIS > [BOSE AUDIO WITHOUT NAVIGATION]

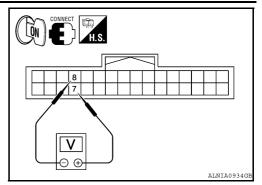
### < COMPONENT DIAGNOSIS >

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 <u>AV-263, "Removal and Installation Coupe"</u>.
- NO >> Replace microphone. Refer to AV-261, "Removal and Installation".

# 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.

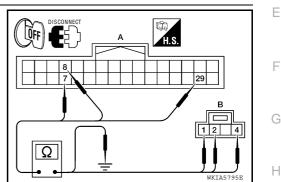
# **Diagnosis Procedure**

Regarding Wiring Diagram information, refer to AV-216. "SEDAN : Wiring Diagram".

# 1. CHECK HARNESS BETWEEN BLUETOOTH CONTROL UNIT AND MICROPHONE

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

А			Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
	7		1		
B126	8	R7	2	Yes	
	29		4	-	



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

	A		Continuity	
Connector	Terminal		Continuity	
	7		No	
B126	8	Ground		
	29			

Are the continuity test results as specified?

YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK MICROPHONE POWER SUPPLY

1.	nector.	ol unit connector and mic	rophone con-		Μ
2. 3.	Turn ignition switch ON. Check voltage between minal 4 and ground.	microphone harness conr	nector R7 ter-		AV
	4 - Ground	: Approx. 5V			0
<u>اs</u> ۱	oltage reading approx. 5	<u>/olts?</u>			
Y	ES >> GO TO 3				
Ν		oth control unit. Refer <u>stallation - Sedan"</u> .	to <u>AV-263,</u>	 WKIA5796E	Ρ
3.	CHECK MICROPHONE S	IGNAL			

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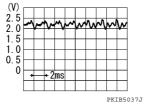
### MICROPHONE SIGNAL CIRCUIT (SEDAN) OSIS > [BOSE AUDIO WITHOUT NAVIGATION]

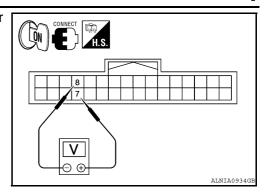
### < COMPONENT DIAGNOSIS >

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

### 7 - 8:

### When giving a voice





Are voltage readings as specified?

- YES >> Replace Bluetooth control unit. Refer to <u>AV-263, "Removal and Installation Sedan"</u>.
- NO >> Replace microphone. Refer to <u>AV-261</u>, "<u>Removal and Installation</u>".

# ECU DIAGNOSIS AUDIO UNIT (COUPE)

# **Reference Value**

INFOID:000000005430205

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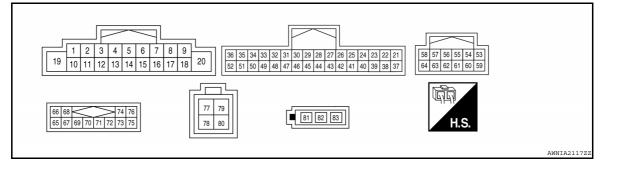
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# **TERMINAL LAYOUT**



### PHYSICAL VALUES

Terminal (Wire color)			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							
6 (W/G)	Ground	Remote con- trol A		ON	Press SEEK DOWN switch.	0.7 V							
			Input		Press SEEK UP switch.	1.3 V							
					Press 🚗 switch.	2.0 V							
					Except for above.	3.3 V							
7 (V/Y)	Ground	ACC signal	Input	ON	Ignition switch ACC or ON	Battery voltage							
8 (R/Y)	-	Illumination control ground	Input	_	-	-							
9 (R/L)	Ground	Illumination signal	Input	OFF	Lighting switch is OFF	0V							
					Lighting switch is ON	Battery voltage							
15 (L/B)	-	Remote con- trol ground	Input	_	-	-							
16 (GR/L)	Ground	Remote con- trol B			Press SOURCE switch.	0 V							
			on- Input									Press 🔬 switch.	0.7 V
				Input ON	Press VOL UP switch.	1.3 V							
						Press VOL DOWN switch	2 V						
					Except for above.	3.3 V							

# AUDIO UNIT (COUPE)

# AUDIO UNIT (COUPE)

### < ECU DIAGNOSIS >

	minal e color)		Signal in-	Condition		Reference value
+	-	- 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 FKIA1935E
19 (Y/R)	Ground	Battery power	Input	_	_	Battery voltage
20 (B)	-	Ground	_	_	_	_
25 (BR)	24 (Y)	Telephone au- dio in	_	_	_	_
26	_	Tel. Shield	_	_	_	Approx. 0V
27 (B)	-	Ground	_	-	_	-
28 (B/R)	-	M-CAN A+	_	-	_	_
29 (W/R)	-	M-CAN A-	_	-	_	-
30	-	Shield	-	-	_	Approx. 0V
31 (B/R)	-	M-CAN B+	-	-	_	-
32 (W/R)	-	M-CAN B-	_	-	_	-
33 (B)	Ground	RV_CAM_GN D		_	_	_
34 (GR)	Ground	RV_CAM_SIG	Output	Ignition switch ACC	Shift selector is in R position	6V
35 (Y)	Ground	Rear view camera video in (+)	Input	Ignition switch ON	With rear view camera ON	$ \begin{pmatrix} (V) \\ 0.4 \\ 0 \\ -0.4 \\ \hline  + 40\mu s \\ 5 \\ KIB2251J $
36	—	Shield			—	_
40 (B)	_	Ground	_	_	_	
41 (R/W)	Ground	Telephone ON signal	Input	ON	_	-
48 (B)		Ground				
50 (P/B)	Ground	Reverse sig- nal	Input	Ignition switch ON	R position Other than R posi- tion	Battery voltage 0V
55	_	Shield	_	_	_	Approx. 0V

### < ECU DIAGNOSIS >

# AUDIO UNIT (COUPE)

Terminal (Wire color)			Signal in-	Condition			А
+	_	Item	put/out- put	Ignition switch	Operation	Reference value	
59 (G)	53 (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	B C D
60 (GR/V)	54 (W/L)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 5 KIA0177E	E F
61	_	Shield	_	_	_	Approx. 0V	G
63 (B)	57 (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	Η
64 (V)	58 (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	J
66 (Y/L)	65 (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	M
68 (BR/L)	67 (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	O P
69	_	Shield ground (audio signal)	_	_	_	OV	
70	_	Shield ground (data)	_	_	_	OV	

# AUDIO UNIT (COUPE)

### < ECU DIAGNOSIS >

	ninal color)	Item	Signal in- put/out-	Condition		Reference value	
+	-	nem	putout	Ignition switch Operation			
72 (R)	Ground	Satellite radio tuner request to audio unit	Input		Turn audio unit ON	5V	
73 (G)	Ground	Audio RX	Input	ON	Operate audio vol- ume	(V) 6 4 2 0 •••• 5ms SKIA4403E	
74 (B)	Ground	Audio TX	Output		Operate audio vol- ume	(V) 6 2 0 •••••••••••••••••••••••••••••••••	
77 (B)	_	USB ground	—	—	_	_	
78 (W)	_	USB D-		_	_	_	
79 (R)	_	V BUS signal	—	_	_	_	
80 (G)	_	USB D+	—	_	_	_	
81 (B)	Ground	Antenna amp power supply	Output	ON	Turn audio unit ON	Battery voltage	
82 (B)	Ground	Main antenna	Input	ON	Turn audio unit ON	_	

## AUDIO UNIT (SEDAN)

5

78 80

2 3 4

 66
 68
 74
 76

 65
 67
 69
 70
 71
 72
 73
 75

1

10 11

19

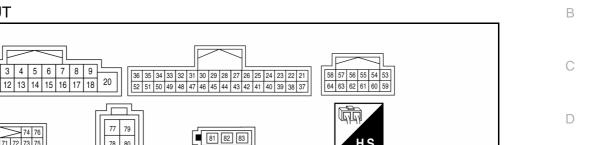
#### **Reference Value**

#### **TERMINAL LAYOUT**



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[BOSE AUDIO WITHOUT NAVIGATION]



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#### PHYSICAL VALUES

	minal e color)	lán an	Signal in-		Condition	Defense and a	
+	-	Item	put/out- put	Ignition switch	Operation	Reference value	
1 (B/P)	Ground	Amp. ON sig- nal	Output	ON	-	More than approx. 6.5V	
				Press SEEK DOWN switch.	0.7 V		
6 (W/G)	Ground	Remote con- trol A	con- Input ON		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	
8 (R/Y)	-	Illumination control ground	Input	_	-	-	
9	Ground	Illumination	loout		Lighting switch is OFF	OV	
(R/L)	Giouna	signal	Input	OFF	Lighting switch is ON	Battery voltage	
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	

**AUDIO UNIT (SEDAN)** 

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### AUDIO UNIT (SEDAN)

#### < ECU DIAGNOSIS >

### [BOSE AUDIO WITHOUT NAVIGATION]

	minal e color)	ltere	Signal in-		Condition	Deference using
+	_	- 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 •••20ms ••••20ms ••••20ms
19 (Y/R)	Ground	Battery power	Input	_	_	Battery voltage
20 (B)	-	Ground	_	-	_	-
25 (BR)	24 (Y)	Telephone au- dio in	_	-	_	-
26	-	Tel. Shield	_	_	_	Approx. 0V
27 (B)	_	Ground	_	_	_	_
28 (B/R)	-	M-CAN A+	_	-	_	-
29 (BR)	-	M-CAN A-	_	-	_	-
30	-	Shield	-	_	_	Approx. 0V
31 (B/R)	-	M-CAN B+	_	_	_	_
32 (W/R)	-	M-CAN B-	_	_	_	-
33 (B)	Ground	RV_CAM_GN D	_	—	—	_
34 (GR)	Ground	RV_CAM_SIG	Output	Ignition switch ACC	Shift selector is in R position	6V
35 (Y)	Ground	Rear view camera video in (+)	Input	Ignition switch ON	With rear view camera ON	$\begin{pmatrix} (V) \\ 0.4 \\ 0 \\ -0.4 \\ \hline \\ $
36	-	Shield	—		—	_
40 (B)	_	Ground	—	_	—	_
41 (R/W)	Ground	Telephone ON signal	Input	ON	_	-
50		Reverse sig-		Ignition	R position	Battery voltage
(P/B)	Ground	nal	Input	switch ON	Other than R posi- tion	٥V

#### < ECU DIAGNOSIS >

## AUDIO UNIT (SEDAN)

#### [BÓSE AUDIO WITHOUT NAVIGATION]

	ninal color)	ltore	Signal in-	Condition			А
+	-	Item	put/out- put	Ignition switch	Operation	Reference value	
59 (G)	53 (R)	Audio sound signal front LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E	B C D
60 (GR)	54 (R)	Audio sound signal rear LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E	E
63 (B)	57 (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	G
64 (V)	58 (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	J
66 (Y/L)	65 (W)	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	M
68 (BR/W)	67 (G/O)	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	AV O P

## AUDIO UNIT (SEDAN)

#### < ECU DIAGNOSIS >

### [BÓSE AUDIO WITHOUT NAVIGATION]

	ninal color)	Item	Signal in- put/out-	t		Reference value
+	_	nem	putout	Ignition switch	Operation	
72 (R/L)	Ground	Satellite radio tuner request to audio unit	Input		Turn audio unit ON	5V
73 (R/W)	Ground	Audio RX	Input	ON	Operate audio vol- ume	(V) 6 2 0 •••• 5ms SKIA4403E
74 (B)	Ground	Audio TX	Output		Operate audio vol- ume	(V) 6 2 0 •••••••••••••••••••••••••••••••••
77 (B)	—	USB ground	—	—	_	_
78 (W)	—	USB D-	—	—	—	_
79 (R)	—	V BUS signal	—	_	_	_
80 (G)	—	USB D+		_	—	_
81 (B)	Ground	Antenna amp power supply	Output	ON	Turn audio unit ON	Battery voltage
82 (B)	Ground	Main antenna	Input	ON	Turn audio unit ON	_

#### BOSE SPEAKER AMP

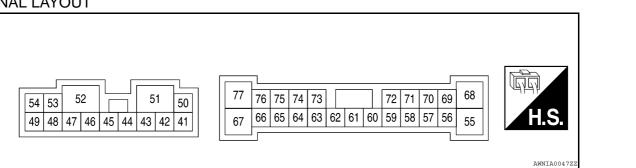
#### [BOSE AUDIO WITHOUT NAVIGATION]

## BOSE SPEAKER AMP

#### **Reference Value**

INFOID:000000005430209

TERMINAL LAYOUT



#### PHYSICAL VALUES

	ninal color)	ltem	Signal in-		Condition	Reference value
+	-	- item	put/out- put	Ignition switch	Operation	Reference value
41 (L) *1 (LG) *2	42 (R) *1 (V) *2	Front tweeter LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E
44 (BR)	43 (GR)	Front tweeter RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
45 (O)	46 (SB)	Subwoofer RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
47 (B)	Ground	Ground	_	ON	_	-
50 (SB) 51 (G)	Ground	Battery	Input	_	_	Battery voltage
52 (B)	Ground	Ground	_	ON	_	_

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### **BOSE SPEAKER AMP**

#### < ECU DIAGNOSIS >

#### [BOSE AUDIO WITHOUT NAVIGATION]

	minal color)	14	Signal in-		Condition	Deference unles
+	-	Item	put/out- put	Ignition switch	Operation	Reference value
53 (W)	48 (G) *1 (L) *2	Subwoofer LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E
54 (V)	49 (P)	Rear tweeter RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 5 5 5 5 5 5 5 5 5 5 5 5 5
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
60 (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 0 -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 -1 -1 -1 -1 -1 -1 -1 -1 -1
68 (L)	55 (R)	Rear tweeter LH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 SKIAUT7E

## **BOSE SPEAKER AMP**

#### < ECU DIAGNOSIS >

#### [BOSE AUDIO WITHOUT NAVIGATION]

	ninal color)	Item	Signal in- put/out-		Condition	Reference value	A
+	_	liem	pul/out- put	Ignition switch	Operation	- Reference value	
69 (P)	70 (V)	Center speaker	Output	ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	B C D
71 (O)	72 (SB)	Door speaker RH	Output	ON	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1	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

\*1 With coupe

\*2 With sedan

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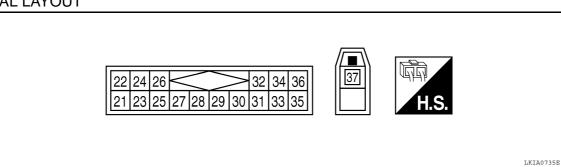
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## SATELLITE RADIO TUNER (COUPE)

#### **Reference Value**

**TERMINAL LAYOUT** 

INFOID:000000005430210



#### PHYSICAL VALUES

Term (Wire		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 2 2 ms 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 (B)	Ground	REQ1 (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	(V) 15 0 • 20ms SKIB3825E	
29 (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 0 0 0 0 0	

#### < ECU DIAGNOSIS >

#### SATELLITE RADIO TUNER (COUPE) [BOSE AUDÍO WITHOUT NAVIGATION]

Term (Wire		li e e e	Signal			Voltage	
+	_	ltem	input/ output	Ignition switch	Operation	(approx.)	
30 (R)	Ground	Communication signal (AUDIO-SAT)	Input	ON	Set to the satellite radio mode	(V) 15 10 5 0 • • 10ms SKIB3826E	
32 (SB)	Ground	Battery power supply		OFF		Battery voltage	
36 (P)	Ciouna	ACC power supply	Input	ACC		Dattery Voltage	
37 (B)	-	Antenna signal		_	_	_	

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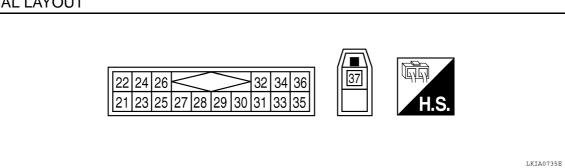
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## SATELLITE RADIO TUNER (SEDAN)

#### **Reference Value**

TERMINAL LAYOUT

INFOID:000000005430211



#### PHYSICAL VALUES

Term (Wire		ltore	Signal		Condition	Voltage	
+	_	Item	input/ output	Ignition switch	Operation	(approx.)	
22 (Y)	21 (W)	Audio signal LH	Output	ON	Receive audio signal.	(V) 1 0 1 2 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 2 m 1 1 1 1 1 1 1 1 1 1 1 1 1	
24 (G)	23 (BR)	Audio signal RH	Output	ON	Receive audio signal.	(V) 1 0 -1 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2	
28 (LG)	Ground	REQ1 (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	
29 (R)	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	

#### < ECU DIAGNOSIS >

#### SATELLITE RADIO TUNER (SEDAN) [BOSE AUDIO WITHOUT NAVIGATION]

Tern (Wire			Signal	-		Voltage	
+	-	ltem	input/ output	Ignition switch	Operation	(approx.)	
30 (B)	Ground	Communication signal (AUDIO-SAT)	Input	ON	Set to the satellite radio mode	(V) 15 10 5 0 • • 10ms SKIB3826E	
32 (GR)	Ground	Battery power supply		OFF		Battery voltage	
36 (SB)	Giouna	ACC power supply	Input	ACC	_	Ballery vollage	
37 (B)	-	Antenna signal		_	_	_	

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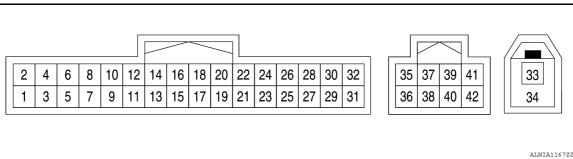
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## **BLUETOOTH CONTROL UNIT**

#### **Reference Value**

**TERMINAL LAYOUT** 

INFOID:000000005430212



#### PHYSICAL VALUES

Term (Wire		Item	Signal input/		Condition	Reference value
+	_	nem	output	Ignition switch	Operation	(Approx.)
1 (V)	Ground	Battery power	Input	_	-	Battery voltage
2 (W) *1 (G) *2	Ground	ACC power	Input	ACC/ON	-	Battery voltage
3 (O)	Ground	IGN power	Input	ON/ START	-	Battery voltage
4 (B)	_	Ground	_	_	_	_
6	-	Shield	-	-	_	_
7 (B) *1 (B/R) *2	8 (R/W) *1 (R/B) *2	Mic-in signal	Input	_	_	_
9 (BR)	10 (Y)	Audio out	Output	ACC/ON	Bluetooth control unit sends audio sig- nal	(V) 1 0 1 2 2 ms 1 5 KIB3609E
11 (SB)	_	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]

Term (Wire		ltom	Signal		Condition	Reference value
+	_	Item	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	Steeringswitch 1	Output	ACC/ON	Press SEEK UP switch.	1.3 V
(					Pressing <b>A</b> 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	_	-	-
22 (B) *2	_	Ground	_	_	-	-
23 (B) *2	_	Ground	_	_	-	-
28 (G) *1 (P) *2	_	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	-	_	_
33 (B)	_	Bluetooth an- tenna	_	_		_
34	-	Shield	-	-		-
35 (L)	_	M-CAN (+)	_	_		_
36 (P)	_	M-CAN (-)	_	_		_
37	_	Shield ground	-	-		

\*1: With coupe

## [BOSE AUDIO WITHOUT NAVIGATION]

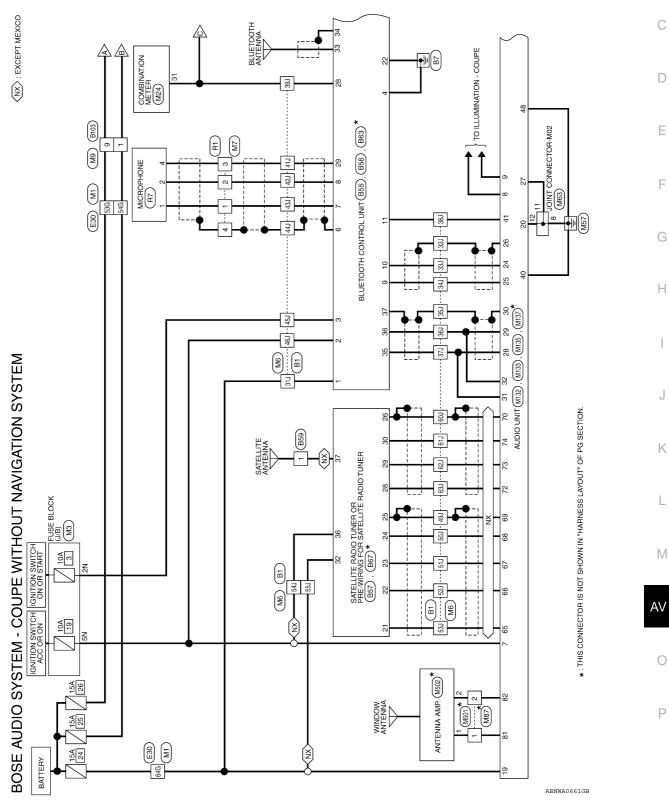
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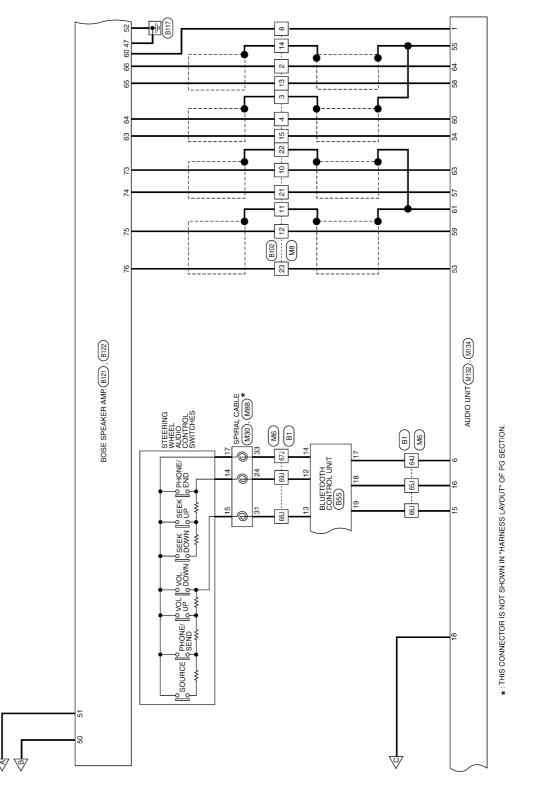
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## WIRING DIAGRAM BOSE AUDIO WITHOUT NAVIGATION COUPE

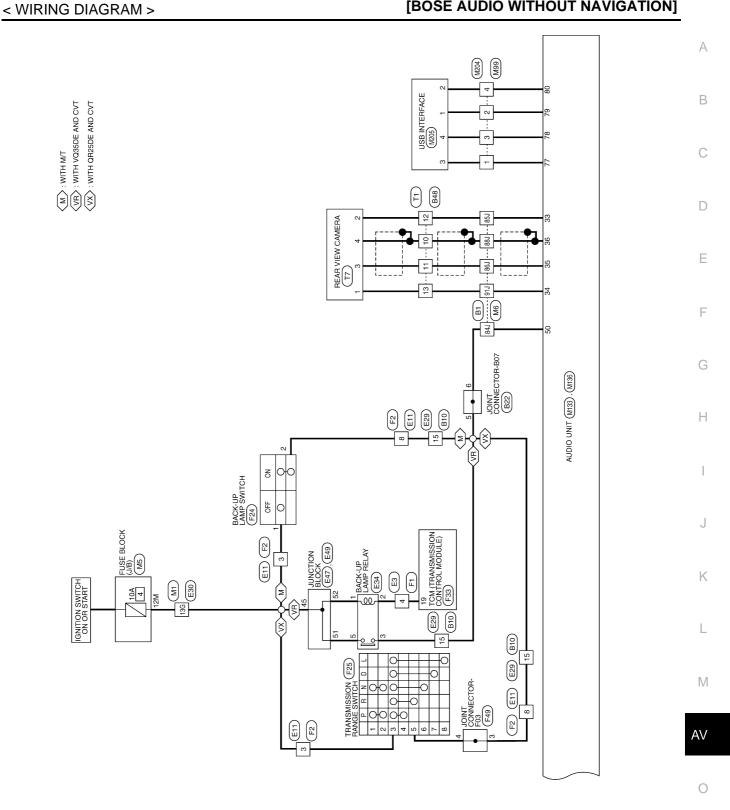
COUPE : Wiring Diagram



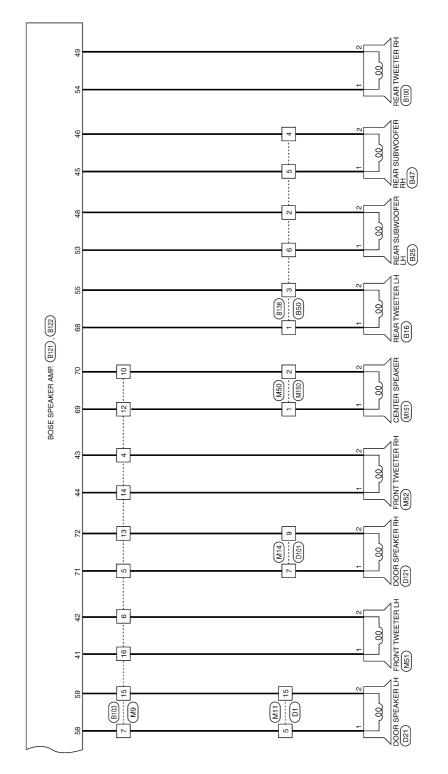


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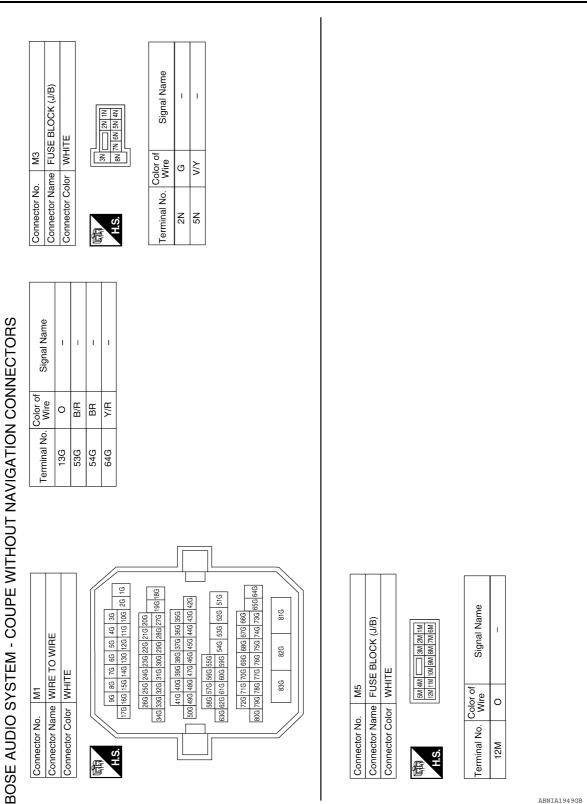
#### BOSE AUDIO WITHOUT NAVIGATION [BOSE AUDIO WITHOUT NAVIGATION]



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**BOSE AUDIO WITHOUT NAVIGATION** 

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**Revision: September 2009** 

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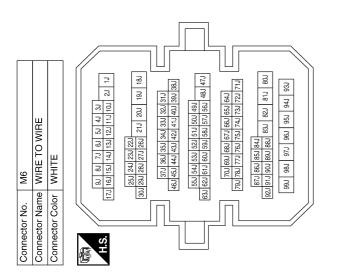
#### **BOSE AUDIO WITHOUT NAVIGATION** [BOSE AUDIO WITHOUT NAVIGATION]

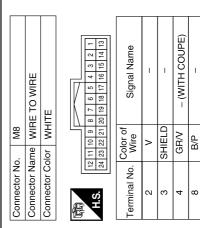
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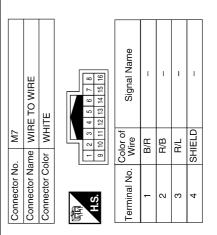
		-		-			_								_	_					-	. 1		
Signal Name	I	I	I	I	1	1	I	I	I	1	I	I	I	I	I	I	I	I	I	I	I		Signal Name	I
Color of Wire	BR/L	Y/G	۲/۲	W/L	۲V	Y/R	SHIELD	m	σ	œ	D/M	GR/L	L/B	L/B	GR/L	W/G	P/B	в	≻	SHIELD	GR		Color of Wire	в
Terminal No.	50J	51J	52J	53J	54J	55J	F09	61J	62J	63J	64J	65J	66J	C73	68J	69J	84J	85J	86J	88J	91J		Terminal No.	10

								_	
Signal Name	I	I	I	I	I	– (WITH COUPE)	I	I	-
Color of Wire	В	SHIELD	თ	ГG	SHIELD	W/L	×	SHIELD	н
Terminal No.	10	11	12	13	14	15	21	22	23

Signal Name	I	I	I	1	I	I	I	I	I	I	I	1	1	I	1	1
Color of Wire	Y/R	SHIELD	≻	BR	SHIELD	W/R	B/R	R/N	W/N	R/L	R/B	B/R	SHIELD	σ	۲/۷	SHIELD
Terminal No.	31J	32J	33J	34J	35J	36J	37J	38J	39J	41J	42J	43J	44J	45J	46J	49J

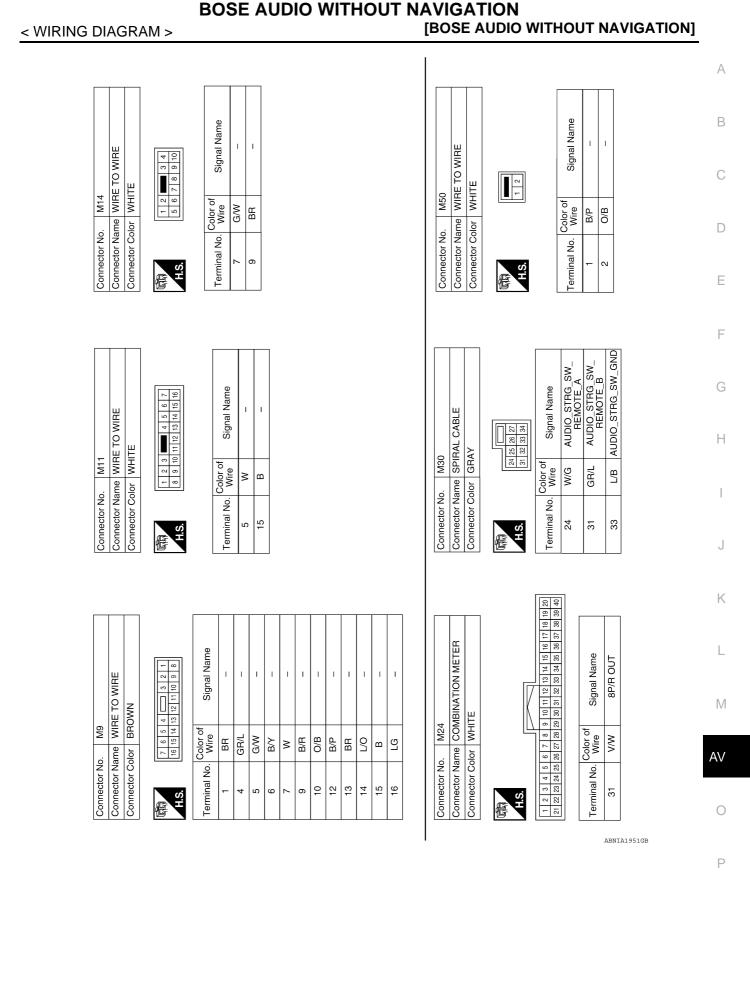






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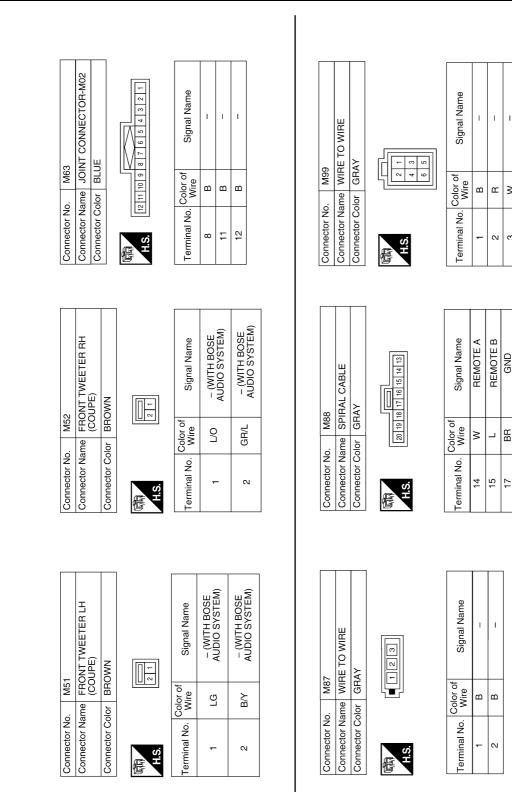
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#### **BOSE AUDIO WITHOUT NAVIGATION** [BOSE AUDIO WITHOUT NAVIGATION]

Signal Name	I	I	I	I	GND	I	REVERSE SGN	I	I
Color of Wire	I	I	I	I	в	I	P/B	I	I
Terminal No. Color of Wire	44	45	46	47	48	49	50	13	52

AUDIO UNIT (COUPE WITH BOSE AUDIO SYSTEM WITHOUT NAVI)

Connector Name Connector Color

M133

Connector No.

WHITE

8 37																								
22 31 30 29 28 27 26 25 24 23 22 48 47 46 45 44 43 42 41 40 39 38	Signal Name	I	I	I	- TEL I/F -	+ 1/I TIL	TEL SHIELD	GND	MCAN A+	MCAN A-	MULTMEDIA CAN SHIELD	MCAN B+	MCAN B-	GND	CAMERA ON	COMP+	COMP-	I	-	Ι	TEL GND	TEL ON	I	I
35 34 33 3 51 50 49 4	Color of Wire	I	I	I	≻	BR	SHIELD	В	B/R	W/R	SHIELD	B/R	W/R	ш	GR	٢	SHIELD	T	Ι	I	В	R/W	I	I
H.S.	Terminal No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43

M132	AUDIO UNIT (COUPE WITH BOSE AUDIO SYSTEM WITHOUT NAVI)	WHITE	1         2         4         5         6         7         8         9           1         12         13         14         15         16         17         18         20	r of Signal Name	P AMP ON	I	I	I	I	G STRG SW A	/ ACC	Y ILL CONT OUT	- TAIL/ILL RLY	I	I	I	I	I	3 STRG SW GND	/L STRG SW B	I	V SPEED SIGNAL	R BAT	GND
			10 11	Color of Wire	B/P	I	ı	I	Ι	W/G	۲/۷	R/Y	R/L	I	I	I	I	I	L/B	GR/L	I	V/W	Y/R	в
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	-	2	e	4	5	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20

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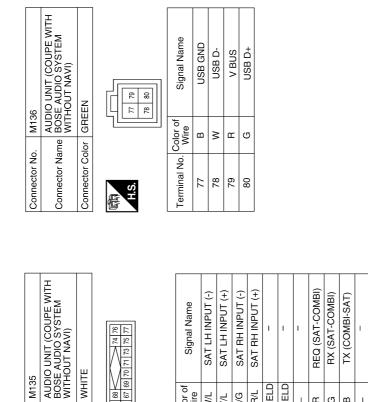
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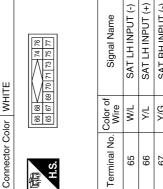
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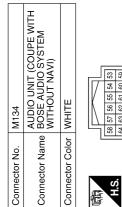
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Signal Name	SAT LH INPUT (-)	SAT LH INPUT (+)	SAT RH INPUT (-)	SAT RH INPUT (+)	I	I	I	REQ (SAT-COMBI)	RX (SAT-COMBI)	TX (COMBI-SAT)	1	I
Color of Wire	W/L	7//	Y/G	BR/L	SHIELD	SHIELD	I	œ	σ	в	I	I
Terminal No.	65	66	67	68	69	70	71	72	73	74	75	76



M135

Connector Name Connector No.

< WIRING DIAGRAM >

_			_	
	53	59		
17	54	60		
11/	55	61		
IN	56	62		
$  \rangle$	57	63		
	58	64		
L			1	
				ľ
	S S	2		

Signal Name	FR SP LH (-)	RR SP LH (-)	Ι	I	FR SP RH (-)	RR SP RH (-)	FR SP LH (+)	RR SP LH (+)	I	I	FR SP RH (+)	RR SP RH (+)
Color of Wire	н	W/L	SHIELD	-	M	LG	σ	GR/V	SHIELD	Ι	В	٨
Terminal No.	53	54	22	99	25	58	59	60	61	62	63	64

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WIRING DIAGRAM >	[BOSE AUDIO WITHOUT NAVIGATION]
Connector No.     M151       Connector Name     CENTER SPEAKER       Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name	Connector No.     M501       Connector Name     WIRE TO WIRE       Connector Name     WIRE TO WIRE       Connector Color     GRAY       Terminal No.     Color of       Terminal No.     Signal Name       2     B     -
Connector No.     M150       Connector Name     WIRE TO WIRE       Connector Name     WIRE TO WIRE       Connector Name     Image: Signal Name       Terminal No.     Color of Wire     Signal Name       2     O/B     -	Connector No.     M205       Connector Name     USB INTERFACE       Connector Color     GREEN       Connector Color     Grant       Color     Grant       Color     Signal Name       1     R     V BUS       2     G     USB (D+)       3     B     USB GND       4     W     USB (D-)
Connector No.     M137       Connector Name     AUDIO UNIT (COUPE WITH AUDIO SYSTEM WITHOUT NAVI)       Connector Color     GRAY       Connector Color     GRAY       Terminal No.     Color of Wire     Signal Name       81     B     AMP SUPPLY       83     -     -	Connector No.     M204       Connector Name     WIRE TO WIRE       Connector Name     WIRE TO WIRE       Connector Name     Wire       Terminal No.     Color of Wire     Signal Name       3     W     -       4     G     -

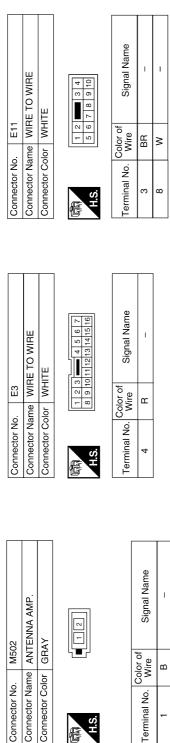
Revision: September 2009

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# **BOSE AUDIO WITHOUT NAVIGATION**

< WIRING DIAGRAM >

## [BOSE AUDIO WITHOUT NAVIGATION]



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Signal Name		I	I	1	I					
Color of	ANIE	BR	GR	BR	>					
Terminal No. Witto		13G	53G	54G	64G					
Connector No. E30	Connector Name   WIRF TO WIRF	Connector Color WHITE			36 46 56 66 76 86 96	16 26 106 116 126 136 146 156 166 176	206 216 226 236 246 256 266	18G <sup>19G</sup> 27G 28G 29G 30G 31G 32G 33G 34G	356 366 376 386 396 406 416	

ABNIA1956GB

80G

83G

82G

81G

 66G
 67G
 68G
 67G
 68G
 71G
 71G

 64G
 65G
 73G
 74G
 75G
 76G
 77G
 79G

 55G 56G 57G 58G
 57G 58G

 51G 52G 53G 53G 53G 60G 61G 62G 63G

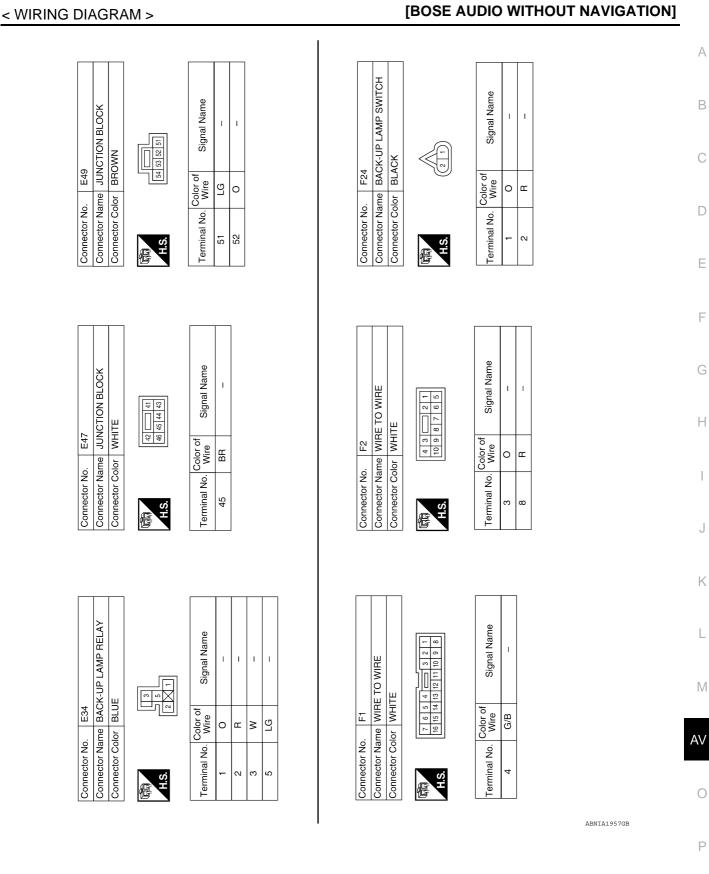
Connector Name WIRE TO WIRE

E29

Connector No.

WHITE

Connector Color



Revision: September 2009

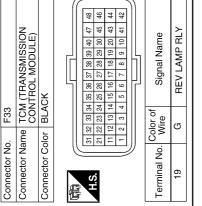
#### < WIRING DIAGRAM >

# **BOSE AUDIO WITHOUT NAVIGATION**

Connector Name JOINT CONNECTOR-F03 BLACK F49 Connector Color Connector No. E



Signal Name	I	I	I	I	I	I	I	I	I	I	I	-	-	Ι	I	I	I	-	I	I	I	
Color of Wire	BR/L	Y/G	۲/۲	M/L	٩	SB	SHIELD	æ	×	в	W/G	GR/L	L/B	L/B	GR/L	W/G	P/B	в	۲	SHIELD	_	
Terminal No.	50J	51J	52J	53J	54J	55J	60J	61J	62J	63J	64J	65J	66J	67J	68J	C69	84J	85J	86J	88J	91J	

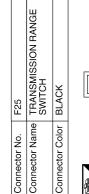


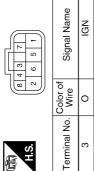
	Signal Name	I	I	I	I	I	I	I	I	I	I	I	1	I	I	I	I	
ס	Color of Wire	>	SHIELD	≻	ВВ	SHIELD	٩	_	SB	U	R/L	R/W	ш	SHIELD	0	3	SHIELD	
13	Terminal No.	31J	32J	33J	34J	35J	36J	37J	38J	39J	41J	42J	43J	44J	45J	46J	49J	

 22J
 23J
 24J
 25J

 19J
 20J
 21J
 26J
 27J
 28J
 30J

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## [BOSE AUDIO WITHOUT NAVIGATION]

84J 85J 86J 87J 83J 88J 89J 90J 91J 92J

80J 81J 82J

1961 991

67 ا

96J

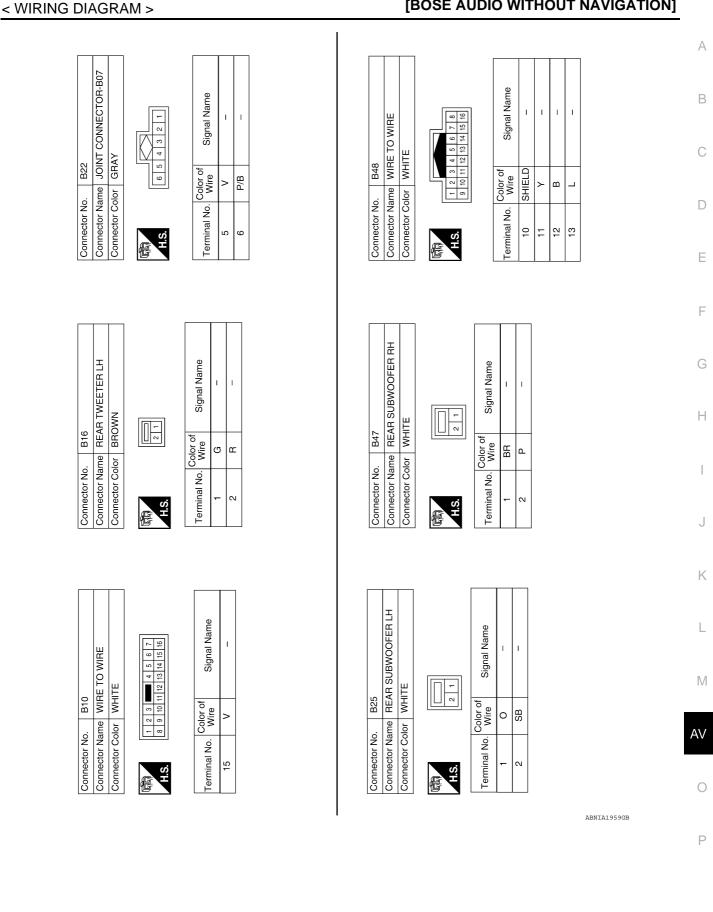
95J

93J 94J

47J 48J 56J 57J 52J 53J 54J 55J 47J 48J 56J 57J 58J 59J 60J 61J 62J 63J

31J 32J 33J 34J 35J 35J 37J 38J 39J 40J 41J 42J 43J 44J 45J 46J

64J 65J 66J 67J 68J 69J 70J 71J 72J 73J 74J 75J 76J 77J 78J 79J



#### BOSE AUDIO WITHOUT NAVIGATION [BOSE AUDIO WITHOUT NAVIGATION]

Revision: September 2009

Terminal No.

BLUETOOTH CONTROL UNIT

Connector Name Connector Color

B55

Connector No.

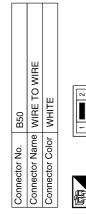
WHITE

33 30 29 28

< WIRING DIAGRAM >

	SPEED SIGNAL	MIC_POWER	I	I	I
Color of Wire	σ	R/L	I	I	I

30 32 29 31																												
12 14 16 18 20 22 24 26 28 3 11 13 15 17 19 21 23 25 27 2	Signal Name	BAT	ACC	IGN	GND	I	MIC SHIELD	MIC_IN_+	MIC_IN	AUDIO_OUT(+)	AUDIO_OUT(-)	MUTE_CONTROL	LAD_IN1	LAD_IN2	LAD_GND	I	I	LAD_OUT_1	LAD_OUT_2	LAD_GND	I	I	CONT 1	1	I	I	I	1
4 6 8 10 3 5 7 9	Color of Wire	>	8	0	В	I	SHIELD	в	R/W	BR	۲	SB	W/G	GR/L	L/B	I	I	W/G	GR/L	L/B	I	I	в	I	I	I	I	ı
所 H.S.	Terminal No.	-	2	3	4	5	9	2	œ	6	10	11	12	13	14	15	16	17	18	19	20	12	22	23	54	25	56	27



H.S

Signal Name	I	I	I	I	T
Color of Wire	σ	SB	н	Ч	BR
Terminal No.	۰	2	e	4	5

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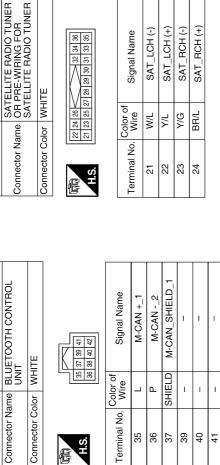
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#### **BOSE AUDIO WITHOUT NAVIGATION** [BOSE AUDIO WITHOUT NAVIGATION]

DATA (WITH BOSE AUDIO SYSTEM WITHOUT BNAVI) SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER REQ1 (SAT - COMBI) RXD (COMBI\_SAT) TXD (SAT\_COMBI) ANTENNA SIGNAL Signal Name BAT ACC I 1 I VIOLET SHIELD B67 Color of Wire ≥ SB ш ۳ ш I Т ۵ T T T Connector Name Connector Color Connector No. Terminal No. 26 27 28 29 30 3 32 33 34 35 36 37 H.S. 佢 SHIELD BT ANTENNA SHIELD BLUETOOTH CONTROL UNIT **BT ANTENNA** Signal Name 35 36



ITE	33 40 42	Signal Name	M-CAN +_1	M-CAN2	M-CAN_SHIELD_1	I	I	-	I	
lor WHITE	38	Color of Wire	_	٩	SHIELD	I	I	I	I	
Connector Color	S:H	Terminal No.	35	36	37	39	40	41	42	

B59	Connector Name SATELLITE RADIO ANTENNA	BROWN	Ē
Connector No.	Connector Name	Connector Color BROWN	际局 H.S.

BLACK

B63

Connector No.

Connector Name Connector Color ह्र छ

H.S.

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Color of Wire

Ferminal No.

ш

34 33

Signal Name	I
Color of Wire	В
Terminal No.	t

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SHIELD BOSE AUDIO SYSTEM WITHOUT BNAVI)

25

Signal Name

Color of Wire

Terminal No.

B57

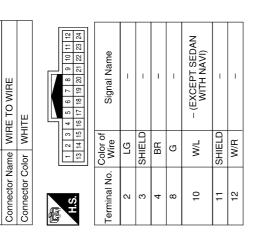
Connector No.

B56

Connector No.

BOSE AUDIO WITHOUT NAVIGATION
[BOSE AUDIO WITHOUT NAVIGATION]

Signal Name	I	I	-	- (EXCEPT SEDAN WITH NAVI)	I	I
Color of Wire	>	SHIELD	Y	GR/V	SHIELD	B/R
Terminal No.	13	14	15	21	22	23



Connector No. B100 Connector Name REAR TWEETER RH Connector Color BROWN		
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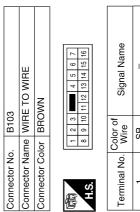
B102

Connector No.

Sign
Color of Wire
Terminal No.

Signal Name	I	-	
Color of Wire	>	Ч	
Terminal No.	F	2	

	-		_			_		
Signal Name	I	Н	Ξ	I	I	-	I	– (WITHOUT NAVI)
Color of Wire	×	თ	>	٩	SB	ВВ	в	_
Terminal No.	7	6	10	12	13	14	15	16

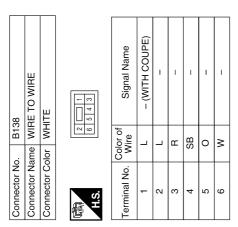


		_		_	1
Signal Name	I	I	I	1	
Color of Wire	SB	GR	0	Н	
Terminal No.	+	4	5	9	

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B122 

Connector No.



POSE SPEAKED AND	DOJE OF EANEN AIMF.	NINO	52 51 50 51 50 146 45 44 43 42 41	•	Signal Name	FR TWDR LH + OUT (COUPE WITHOUT NAVI)	FR TWDR LH - OUT (COUPE WITHOUT NAVI)	FR TWDR RH - OUT	FR TWDR RH + OUT	RH WOOFER + OUT	RH WOOFER - OUT	GND	LH WOOFER - OUT (COUPE WITHOUT NAVI)	TWTR RR PSHELF RH - OUT	BAT	BAT	GND	LH WOOFER + OUT	TWTR RR PSHELF RH + OUT	
		_	54 53 5 49 48 47		Color of Wire	_	В	GR	ВВ	0	SB	В	U	٩	SB	ŋ	В	Μ	>	
Connector Momo	Connector Co		品 H.S.		Terminal No.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	

1	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	1	I	FR DOOR LH + OUT	FR DOOR LH - OUT	AMP ON	I	I	RR LH - IN	RR LH + IN	RR RH - IN	RR RH + IN	I	TWTR RR PSHELF LH + OUT	INST CTR TWDR + OUT	INST CTR TWDR - OUT	FR DOOR RH + OUT	FR DOOR RH - OUT	FR RH + IN (WITHOUT NAVI)	FR RH - IN (WITHOUT NAVI)	FR LH + IN	FR LH - IN	I
B121		_		76 75 74 <sup>-</sup>	Color of Wire	н	ı	I	M	В	G	Ι	I	Y	BR	٧	LG	-		Р	٧	0	SB	W/L	GR/V	W/R	B/R	I
Connector No.	Connector Name Connector Color		E Contraction of the second se	H.S. 67	Terminal No.	55	56	57	58	59	60	61	62	63	64	65	99	67	68	69	70	71	72	73	74	75	76	77

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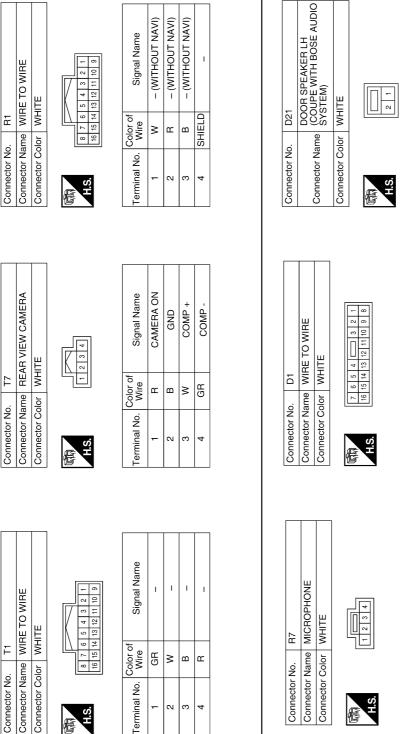
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#### < WIRING DIAGRAM >

#### **BOSE AUDIO WITHOUT NAVIGATION** [BOSE AUDIO WITHOUT NAVIGATION]



Color of Wire

Terminal No.

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GND (WITHOUT NAVI) VCC (WITHOUT NAVI) SIG (WITHOUT NAVI) Signal Name Color of Wire ≥ ш m Terminal No.

-N 4

H.S.

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Signal Name I Т

Color of Wire

Terminal No.

Signal Name

Color of Wire

Terminal No.

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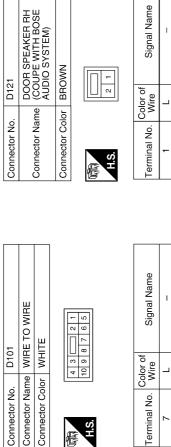
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Connector No.

Connector No.



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WHITE

Connector Color

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Connector No.

Signal Name	I	-
Color of Wire	L	ГG
Terminal No.	2	6

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## SEDAN

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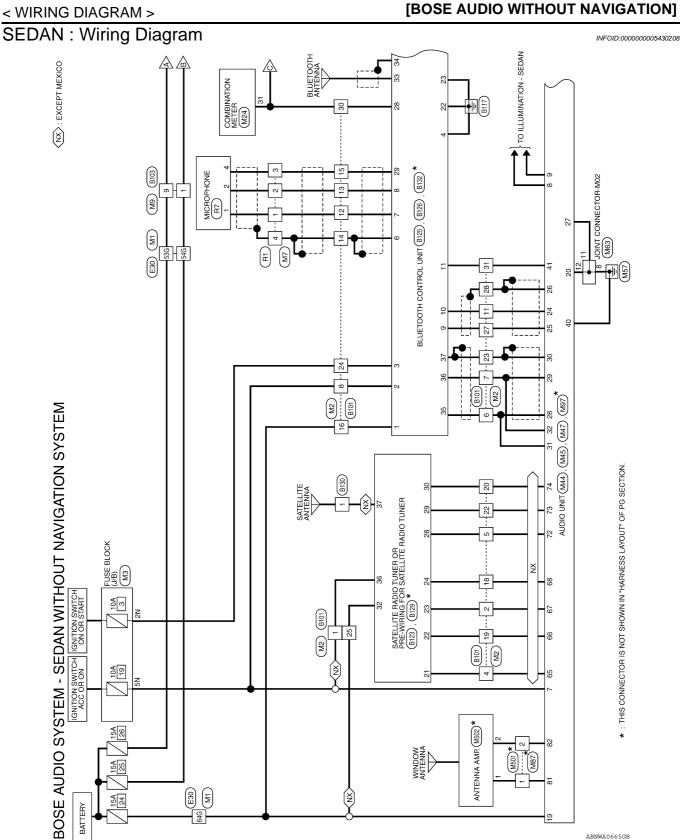
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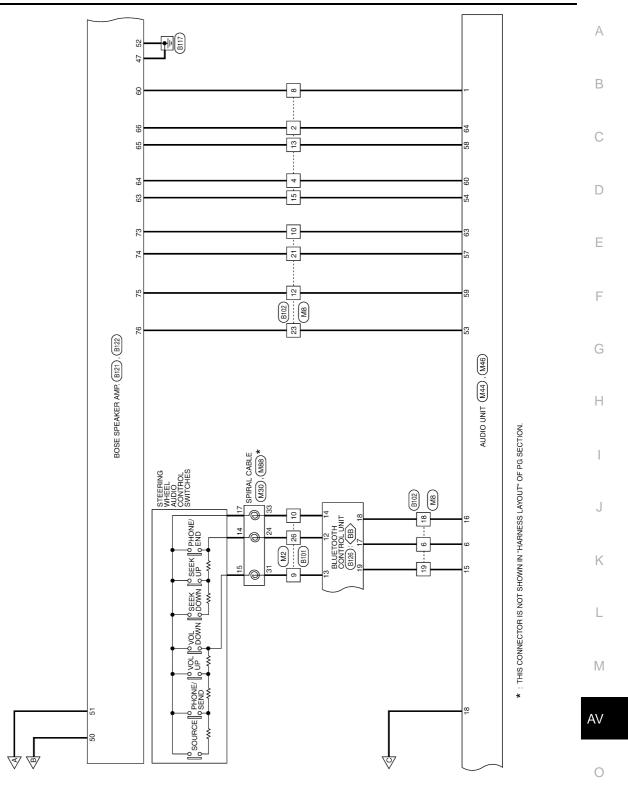
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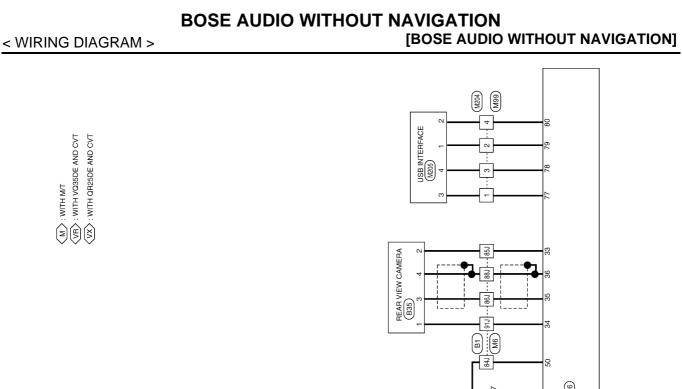
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## BOSE AUDIO WITHOUT NAVIGATION





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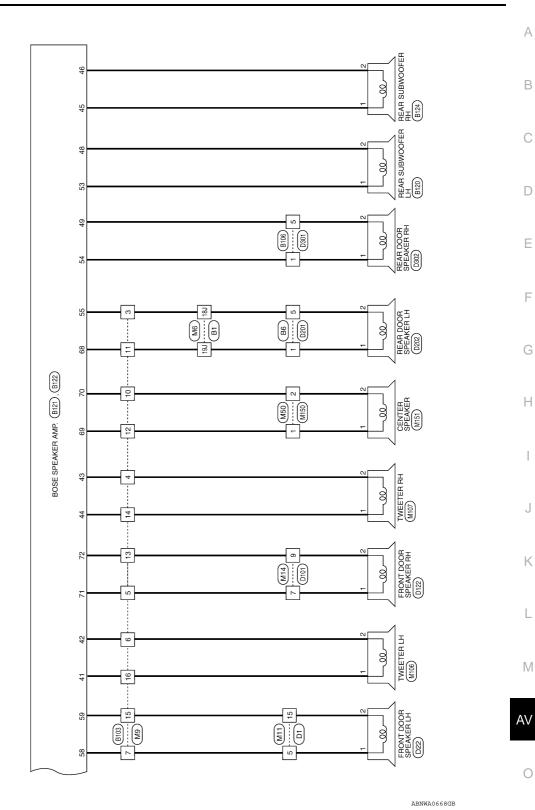


 
 M
 : with M/T

 VR
 : with vosed and cvt

 VX
 : with oreed and cvt
 JOINT CONNECTOR-B07 (B22) AUDIO UNIT (M45), (M96) E11 B10 c (۳ S 0 BACK-UP LAMP SWITCH F24 9FF C FUSE BLOCK (J/B) M5 TCM (TRANSMISSION CONTROL MODULE) (F33) E11 F2 BACK-UP E49 ო E30 E34 (E) [III IGNITION SWITCH ON OR START Ę [≥ 10A 2M ىك <u>1</u> E29 B10 íš 15 E29 B10 15 00 F25 D LOINT CONNECTOR-F03 (F49) FRANSMISSION <u> 2000</u> Ю F2 E11 C œ (E) [₽ α ∾| ∞| 4 - Q 2

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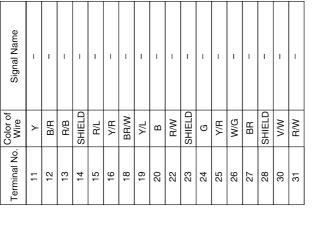
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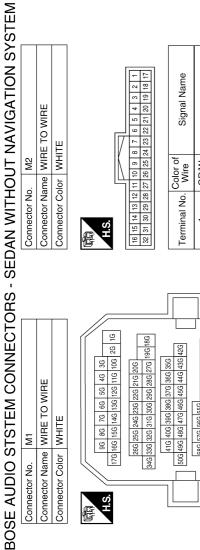
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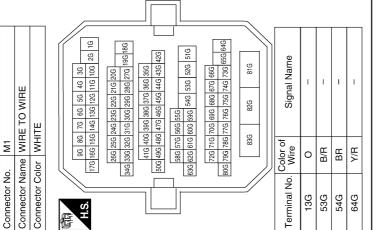
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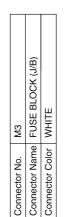
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Signal Name	I	I	I	I	I	I	I	I	I	
Color of Wire	GR/W	G/O	G/B	R/L	B/R	ВВ	٨/٧	GR/L	L/B	
Terminal No.	-	2	4	2	9	7	80	6	10	





FUSE BLOCK (J/B)

Connector Name

M5

Connector No.

WHITE

Connector Color

5M 4M 3M 2M 1M 12M 11M 10M 9M 8M 7M 6M

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Signal Name	I	I	
Color of Wire	ŋ	٨Ŋ	
Terminal No.	2N	5N	

Signal Name

Color of Wire

> Ferminal No. 12M

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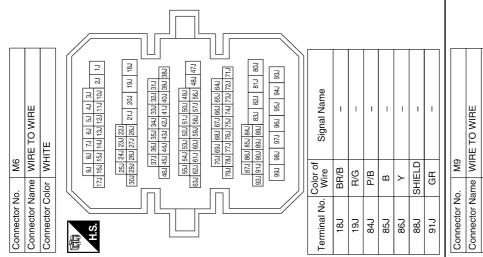
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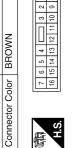
#### BOSE AUDIO WITHOUT NAVIGATION IBOSE AUDIO W

< WIRING DIAGRAM >

[BOSE AUDIO WITHOUT NAVIGATION]

M8 WIRE TO WIRE WHITE	8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13	Signal Name	I	– (WITH SEDAN )	I	I	I	1 1	- (WITH SEDAN )	I	I	I	I
	11 10 9 23 22 21	Color of Wire	>	GR	M/G	B/P	шU	2	œ	GR/L	L/B	M	œ
Connector Name Connector Color	雨朝 H.S.	Terminal No.	2	4	9	8	10	13	15	18	19	21	23
0 0					1	1 1							
O WIRE	5 6 7 8 13 14 15 16	Signal Name											
	6 7 8 14 15 16												





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# **BOSE AUDIO WITHOUT NAVIGATION**

< WIRING DIAGRAM >

# [BOSE AUDIO WITHOUT NAVIGATION]

#### < WIRING DIAGRAM >

### **BOSE AUDIO WITHOUT NAVIGATION** [BOSE AUDIO WITHOUT NAVIGATION]

Color of Wire

Terminal No.

M44

nector No.

В/Г I I T I I

6

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4 13 4 15 16 17

			19 20	39 40	[		
	Connector Name COMBINATION METER	ITE	0         110         112         126         17         180	21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39	Cianal Mamo		8P/R OUT
M24	le COI	or WH	8 2 9	6 27 28	Color of	Wire	M/N
Connector No.	Connector Nam	Connector Color WHITE	H.S.	21 22 23 24 25 2	Torminal No. Color of		31
Connector No. M14	Connector Name WIRE TO WIRE	Connector Color WHITE	国 HS	Terminal No. Color of Signal Name	7 G/W –	9 BR I	

7 8 9 10	Signal Name	I	I
1 2 5 6	Color of Wire	G/W	BR
国 H.S.	Terminal No.	2	6

Connector Color WHITE	2	Į	lμ					
			1					
悟	1 2	0		4	2	9	~	
Ч	8	2	9 10 11 12 13 14 15 16	122	7	15	16	
ò								-
	Color of	70						

Connector No. M11 Connector Name WIRE TO WIRE

Signal Name	I	I
Color of Wire	M	В
Terminal No.	9	15

Connector No.	M30	Con
Connector Name SPIRAL CABLE	SPIRAL CABLE	
Connector Color GRAY	GRAY	Con
H		Con
H.S.	24 25 26 27 31 32 33 34	E
		H

Signal Name	AUDIO_STRG_SW_ REMOTE_A	AUDIO STRG SW
Color of Wire	W/G	
°. N		

				1
Signal Name	AUDIO_STRG_SW_ REMOTE_A	AUDIO_STRG_SW_ REMOTE_B	L/B AUDIO_STRG_SW_GND	
Color of Wire	W/G	GR/L	L/B	
Terminal No. Wire	54	31	33	

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#### STRG SW GND SPEED SIGNAL STRG SW B Signal Name TAIL/ILL RLY BAT GND Т I T T I T

AUDIO UNIT (SEDAN WITH BOSE AUDIO SYSTEM - WITHOUT NAVI)	ΠE		Signal Name	AMP ON	I	I	I
	lor WHITE		Color of Wire	B/P	ı	ı	I
nnector Name	nnector Color	L.S.	rminal No.	1	2	e	4

GR/L L/B

W/۸ Y/R

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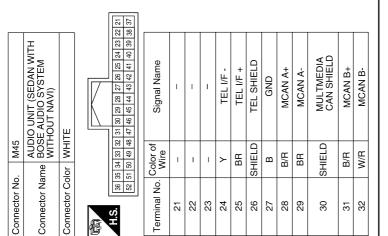
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Signal Name	NO AMP ON	-	I	I	I	STRG SW A	ACC	ILL CONT OUT
Color of Wire	B/P	-	I	I	I	W/G	٨٧	Яγ
Terminal No. Color of Wire	1	2	с	4	5	9	2	8

< WIRING DIAGRAM >	>
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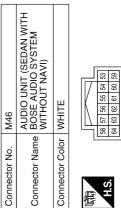
### BOSE AUDIO WITHOUT NAVIGATION [BOSE AUDIO WITHOUT NAVIGATION]

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



Signal Name	FR SP LH (+)	RR SP LH (+)	I	Ι	FR SP RH (+)	RR SP RH (+)
Color of Wire	თ	GR	I	I	в	>
Terminal No. Color of Wire	59	09	61	62	63	64

Terminal No. Color of 53 R 54 R 55 - 56 - 56 - 58 LG	Signal Name	FR SP LH (-)	RR SP LH (-)	I	I	FR SP RH (-)	RR SP RH (-)
al No.	Color of Wire	œ	щ	-	I	Μ	ŋ
Termin 55 57 57 57	Terminal No.	53	54	22	56	22	58



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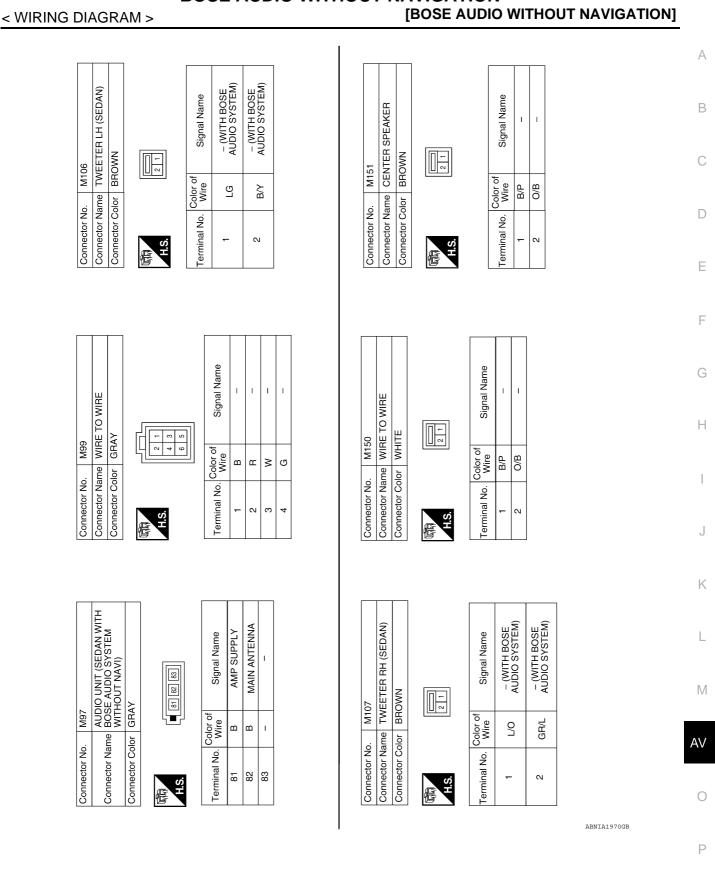
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I-M02		υ												WITH					Φ				
M63 JOINT CONNECTOR-M02 BLUE	8 7 6 5 4 3 2	Signal Name	I	· 1										IO UNIT (SEDAN	BUSE AUDIU SYSTEM WITHOUT NAVI)	EN			Signal Name	USB GND	USB D-	V BUS	LISB D+
	12 11 10 9 8	Color of Wire	m	<u>م</u> م	2								. M96	_		lor GREEN	٦٢		Color of	B	≥	œ	G
Connector No. Connector Name Connector Color	H.S.	Terminal No.		<del>.</del> 5	4								Connector No.		Connector Name	Connector Color	E E E E E E E E E E E E E E E E E E E	ļ	Terminal No.	17	78	79	80
M50 WIRE TO WIRE WHITE		Signal Name	1	I										AL CABLE			7 16 15 14 13	Signal Name	REMOTE A	REMOTE B	GND		
	1 2	Color of Wire	B/P	n D									M88		or GRAY		20 19 18 17 16	Color of Wire	8	_	BR		
Connector No. Connector Name Connector Color	H.S.	Terminal No.	c	V									Connector No.	Connector Name	Connector Color		HIS.	Terminal No.	14	15	17		
							_																
M47 AUDIO UNIT (SEDAN WITH BOSE AUDIO SYSTEM WITHOUT NAVI) WHITE	66         68         71         73         75         77           65         67         70         71         73         75         77	Signal Name	SAT LH INPUT (-)	SAT RH INPUT (-)	SAT RH INPUT (+)	I	I	PEO (SAT-COMBI)	RX (SAT-COMBI)	TX (COMBI-SAT)	I	I		WIRE TO WIRE	~			Signal Name	1	I			
	66 68	Color of Wire	∧  >	G/O	BR/W	1	1	- 1		р В	I	1	. M87		lor GRAY			Color of Wire	m	В			
Connector No. Connector Name Connector Color	品.S.H	Terminal No.	65	67	68	69	20	71	2/	74	75	76	Connector No.	Connector Name	Connector Color		H.S.	Terminal No.	-	2			
												_					_		_				

### **BOSE AUDIO WITHOUT NAVIGATION** [BOSE AUDIO WITHOUT NAVIGATION]

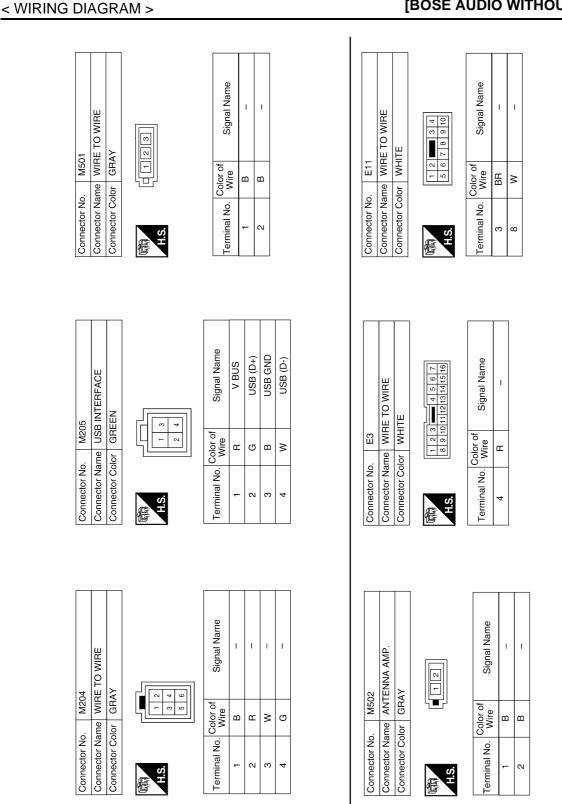
Revision: September 2009



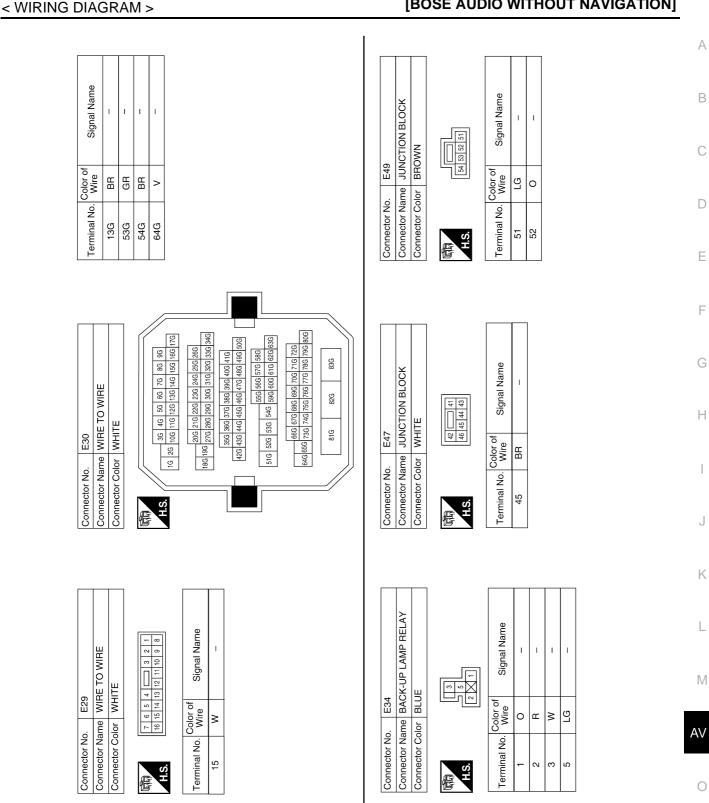
# **BOSE AUDIO WITHOUT NAVIGATION**

**Revision: September 2009** 

2010 Altima

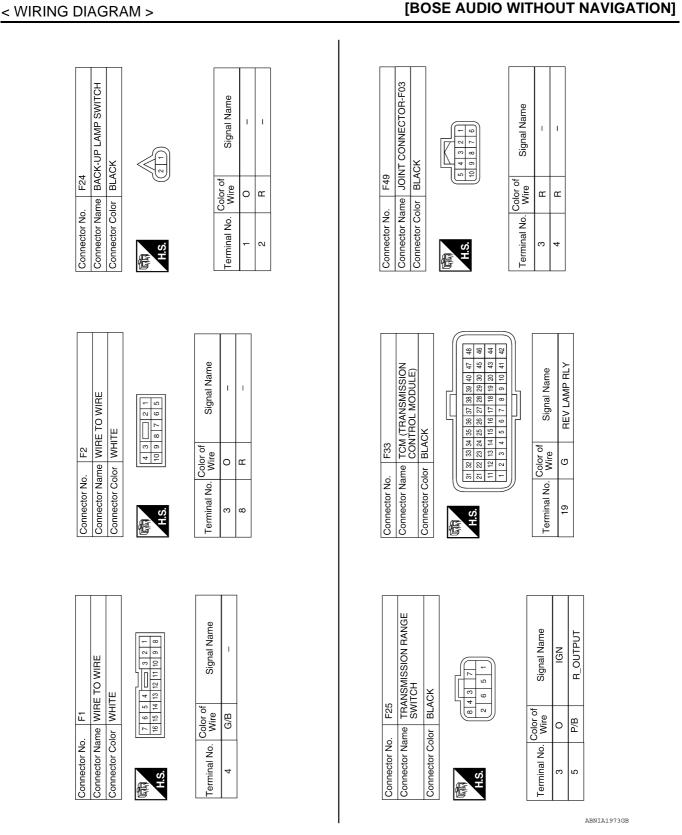


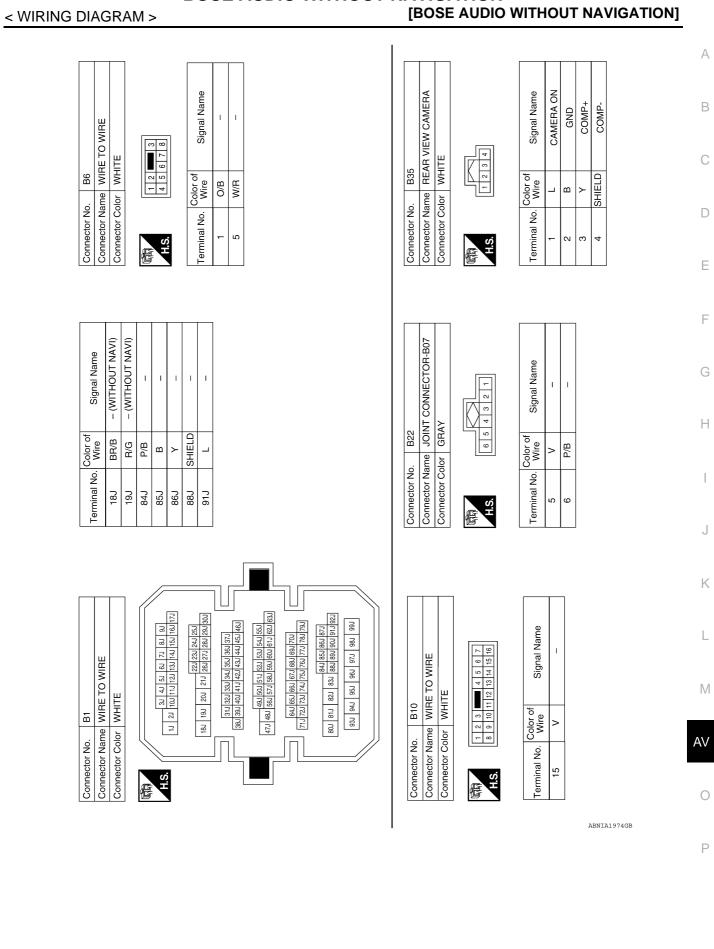
ABNIA1971GB



ABNIA1972GB

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# BOSE AUDIO WITHOUT NAVIGATION

**Revision: September 2009** 

2010 Altima

BOSE AUDIO WITHOUT NAVIGATION
[BOSE AUDIO WITHOUT NAVIGATION]

Signal Name

Color of Wire

Terminal No.

T Т Ţ

Signal Name	I	I	I	I	I	I	I	I	I	I
Color of Wire	в	н	SHIELD	0	GR	W/G	ВВ	SHIELD	Ч	SB
Terminal No. Color of Wire	20	22	23	24	25	26	27	28	30	31

Signal Name	I	1	I	I	I	I	I	I	Ι	I	I	I
Color of Wire	٩	IJ	GR/L	L/B	≻	B/R	R/B	SHIELD	R/L	^	G	Y
Terminal No.	7	8	6	10	1	12	13	14	15	16	18	19

H.S. 佢

Signal Name	I	1	I	I	I	
Color of Wire	SB	BR	Μ	ГG	Γ	
Terminal No. Color of Wire	÷	2	4	5	6	

Connector Color WHITE	နာ ပိ	Connector Name Connector Color	Connector No. B102 Connector Name WIRE TO WIRE Connector Color WHITE	민회회	WIRE WIRE	<u>E</u>   <u>µ</u>	lo l	l <b>≥</b>				
H.S.	- 5	7 12	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	4 6	12	6 6	19	S @	50	5 5	3 =	24 12

- (EXCEPT SEDAN WITH NAVI)

GR/V ЦB

> 21 23

I

B/B

I

GR/L

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13 13 19

Signal Name	I	I	I	I	– (EXCEPT SEDAN WITH NAVI)	I
Color of Wire	ГG	BR	٢	W/G	M/L	W/R
Terminal No.	2	4	9	8	10	12

ABNIA1975GB

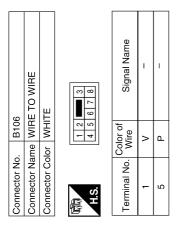
Connector Name WIRE TO WIRE

Connector No. B101

Connector Color WHITE

#### < WIRING DIAGRAM >

### **BOSE AUDIO WITHOUT NAVIGATION** [BOSE AUDIO WITHOUT NAVIGATION]



Signal Name	I	I	1	I	I	I	I	I	– (WITHOUT NAVI)	
Color of Wire	Μ	U	>	L	٩	SB	ВВ	в	Γ	
Terminal No.	7	6	10	11	12	13	14	15	16	

Connector Name WIRE TO WIRE	me WIR	E TO WIRE
Connector Color	lor BROWN	NMO
	-	
L E	1 2 3	4 5 6 7
H.S.	8 9 10 1	10 11 12 13 14 15 16
Terminal No.	Color of Wire	Signal Name
-	SB	1
3	Я	I
4	GR	1
5	0	I

			1
B120	Connector Name REAR SUBWOOFER LH	WHITE	
Connector No.	Connector Name	Connector Color	

BOSE SPEAKER AMP.

Connector Name Connector No.

B121

H.S.	

Signal Name	I	I	
Color of Wire	Μ	_	
Terminal No. Wire	÷	2	

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Ο

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AV

Signal Name	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 (WITHOUT NAVI)	FR RH - IN (WITHOUT NAVI)	FR LH + IN	FR LH - IN	Ι
Color of Wire	>	LG	I	_	٩	>	0	SB	M/L	GR/V	W/R	B/B	I
Terminal No.	<u> </u>	66	29	68	69	20	12	72	73	<del>7</del> 4	75	92	22

BROWN	74 73 73 72 71 70 69 68 64 68 64 68 57 56 55 56 55	Signal Name	RR DOOR LH - OUT	-	-	FR DOOR LH + OUT	FR DOOR LH - OUT	AMP ON	-	Ι	RR LH - IN	RR LH + IN
	67 66 65	Color of Wire	æ	Ι	I	Μ	В	ŋ	I	I	٢	BR
Connector Color	际 H.S.	Terminal No.	55	99	22	28	69	09	19	62	63	64

1	1		20	REAR SUBWOOFER LH	WHITE	
0	>		B120	ВЕ	٨H	

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B103

Connector No.

# **BOSE AUDIO WITHOUT NAVIGATION**

Connector No.	. B123	œ
Connector Name		SATELLITE RADIO TUNER OR PRE-WIRING FOR SATELLITE RADIO TUNER
Connector Color WHITE	lor WHI	TE
	22 24 26 <	32 34 36
H.S.H	21 23 25 27 28	28 29 30 31 33 35
Terminal No.	Color of Wire	Signal Name
21	Μ	SAT_LCH (-)
22	Y	SAT_LCH (+)

< WIRING DIAGRAM >

		1	-	r				[										
28 29 30 31 33 35	Signal Name	SAT_LCH (-)	SAT_LCH (+)	SAT_RCH (-)	SAT_RCH (+)	-	-	-	REQ1 (SAT - COMBI)	TXD (SAT-COMBI)	RXD (COMBI-SAT)	-	BAT	-	-	-	ACC	
21 23 25 27	Color of Wire	N	≻	BR	თ	I	I	T	ГG	н	В	T	GR	I	Ι	T	SB	
H.S.	Terminal No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	

							_
Signal Name	M-CAN +_1	M-CAN2	M-CAN_SHIELD_1	Ι	I	-	Ι
Color of Wire	_	٩.	SHIELD	ī	ı	I	I
Terminal No.	35	96	37	39	40	41	42
	Terminal No. Color of Signal Name	S	Si				

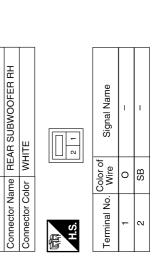
Signal Name	RR DOOR RH - OUT	BAT	BAT	GND	LH WOOFER + OUT	RR DOOR RH + OUT	
Color of Wire	٩	SB	g	В	M	>	
Terminal No.	49	50	51	52	53	54	

KER AMP.		51 51 142 41	Signal Name	JR LH + OUT PT COUPE OUT NAVI)	DR LH - OUT PT COUPE OUT NAVI)	FR TWDR RH - OUT	FR TWDR RH + OUT	RH WOOFER + OUT	RH WOOFER - OUT	GND	H WOOFER - OUT (EXCEPT COUPE WITHOUT NAVI)
B122 BOSE SPEAKER AMP.	BROWN	8 52 5 8 47 46 45 44 43		FR TWDR LH (EXCEPT CO WITHOUT I	FR TWDR L (EXCEPT ( WITHOUT						LH WOOFER (EXCEPT CC WITHOUT N
l e	olor	54         53           49         48	Color of Wire	ΓC	>	GR	BR	0	SB	В	
Connector No. Connector Name	Connector Color	R.S.H	Terminal No.	41	42	43	44	45	46	47	48

	Connector No. B125	Connector Name BLUETOOTH CONTROL UNIT	Connector Color WHITE		Connector No. 1 Connector Name 1 Connector Color 1	B125 BLUETOOTH CONTROL UNIT WHITE
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B124

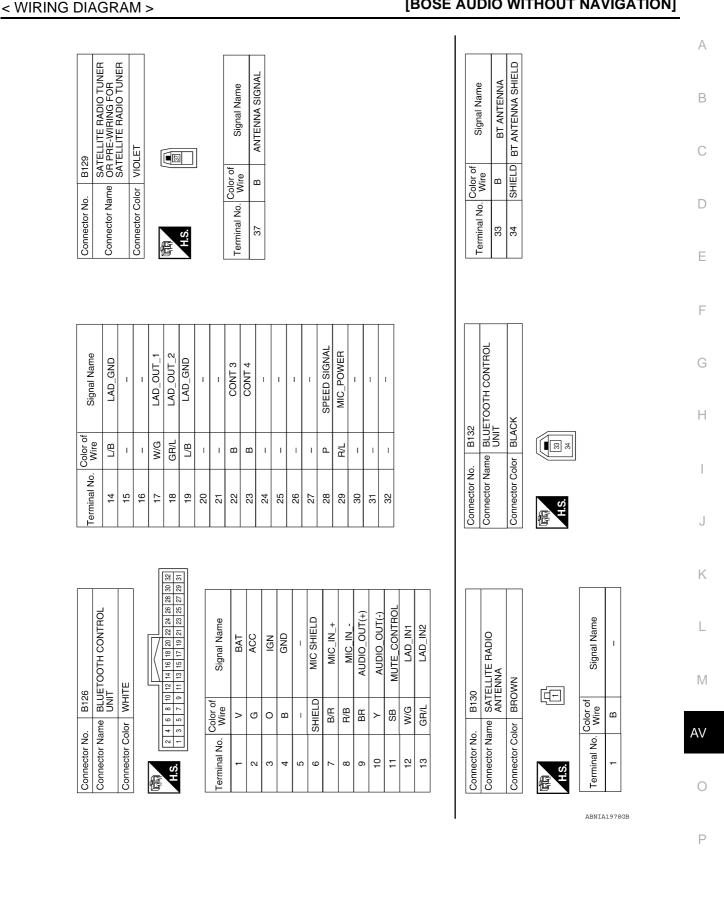
Connector No.



H.S.

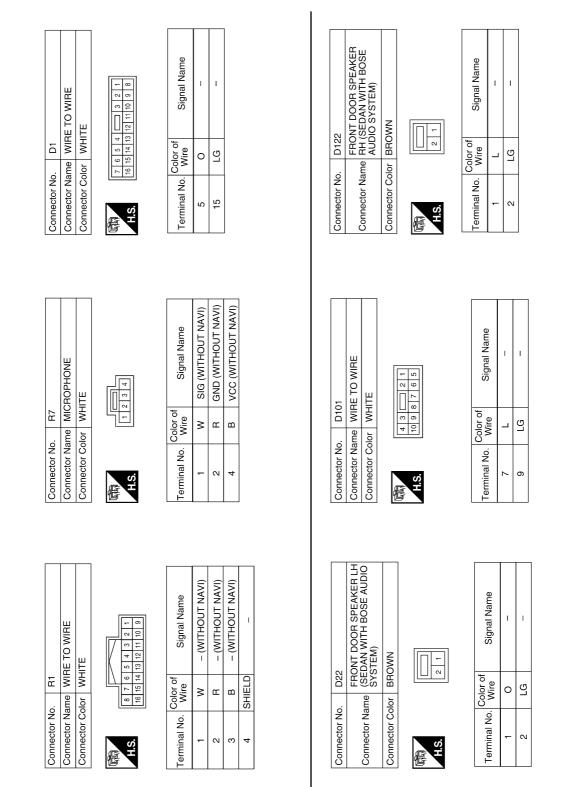
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# [BOSE AUDIO WITHOUT NAVIGATION]



### BOSE AUDIO WITHOUT NAVIGATION [BOSE AUDIO WITHOUT NAVIGATION]

**Revision: September 2009** 



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G DIAGRAM >	[BOSE AUDIO WITHOUT NAVIGATION]
Connector No.     D301       Connector Name     WIRE TO WIRE       Connector Color     WHITE       Image: State of the state of t	
Connector No.     D202       Connector Name     REAR DOOR SPEAKER LH       Connector Color     BROWN       Image: Signal Name     2       Terminal No.     Wire       2     L	
D202 REAR DOOR: BROWN fire of Sig	
Connector No. D200 Connector Name REA Connector Color BRC Terminal No. Color of Terminal No. Wite	
Connector Nar. Connector Narr Connector Colo A.S. Terminal No. C	
Signal Name	D302 REAR DOOR SPEAKER RH BROWN re 
Connector Nan Connector Nan Connector Col HS Terminal No.	Connector No. Connector Nam Connector Colo 1 2 2 2
	AENIA1980GB

# **BOSE AUDIO WITHOUT NAVIGATION**

< WIRING DIAGRAM :

# **IBOSE AUDIO WITHOUT NAVIGATION1**

Revision: September 2009

## SYMPTOM DIAGNOSIS AUDIO SYSTEM (COUPE)

### Symptom Table

INFOID:000000005430213

### AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul><li>Audio unit power circuit</li><li>Audio unit</li></ul>	• <u>AV-118</u> • <u>AV-242</u>
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>Audio unit</li></ul>	• <u>AV-159</u> • <u>AV-242</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>	<ul> <li><u>AV-242</u></li> <li><u>AV-118</u></li> <li><u>AV-158</u></li> <li><u>AV-119</u></li> <li><u>AV-243</u></li> </ul>
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-132</u></li> <li><u>AV-138</u></li> <li><u>AV-144</u></li> <li><u>AV-146</u></li> <li><u>AV-152</u></li> </ul>

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.		
CD cannot be ejected.	Audio unit	<u>AV-242</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-126</u> • <u>AV-163</u> • <u>AV-251</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>	<ul> <li><u>AV-169</u></li> <li><u>AV-169</u></li> <li><u>AV-251</u></li> </ul>

### 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>	<ul> <li><u>AV-128</u></li> <li><u>AV-263</u></li> </ul>
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>Bluetooth control unit</li></ul>	• <u>AV-159</u> • <u>AV-263</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-173</u></li> <li><u>AV-159</u></li> <li><u>AV-263</u></li> </ul>

### AUDIO SYSTEM (SEDAN)

### Symptom Table

### AUDIO SYSTEM

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[BOSE AUDIO WITHOUT NAVIGATION]

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Symptom	Possible cause	Reference page
Inoperative	Audio unit power circuit     Audio unit	• <u>AV-125</u> • <u>AV-242</u>
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>Audio unit</li></ul>	• <u>AV-161</u> • <u>AV-242</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-242     AV-125     AV-158     AV-125     AV-125     AV-243
One or several speakers do not sound	<ul> <li>Front door speaker</li> <li>Tweeter</li> <li>Center speaker</li> <li>Rear door speaker</li> <li>Subwoofer</li> </ul>	AV-135     AV-141     AV-144     AV-149     AV-152

AUDIO SYSTEM (SEDAN)

CD

Symptom	Possible cause	Reference page	Н
CD cannot be inserted.			
CD cannot be ejected.	Audio unit	AV ( 242	
The CD cannot be played.		<u>AV-242</u>	
The sound skips, stops suddenly, or is distorted.			
SATELLITE RADIO			J

### 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>	<ul> <li><u>AV-126</u></li> <li><u>AV-166</u></li> <li><u>AV-251</u></li> </ul>	k
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-171</u> • <u>AV-171</u> • <u>AV-251</u>	L

### 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-128</u> • <u>AV-117</u>	AV
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>Bluetooth control unit</li></ul>	• <u>AV-161</u> • <u>AV-117</u>	C
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-173</u> • <u>AV-161</u> • <u>AV-117</u>	F

### NORMAL OPERATING CONDITION

#### < SYMPTOM DIAGNOSIS >

### NORMAL OPERATING CONDITION

### Description

INFOID:000000005430215

[BOSE AUDIO WITHOUT NAVIGATION]

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

#### NOISE

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

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

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

#### NOTE:

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

Type of Noise and Possible Cause

C	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	Fuel pump condenser	
Noise only occurs when various electrical components are oper-	A cracking or snapping sound occurs with the operation of various switches.	Relay malfunction, audio unit malfunction
ating.	The noise occurs when various motors are operat- ing.	<ul><li>Motor case ground</li><li>Motor</li></ul>
The noise occurs constantly, not j	<ul><li>Rear defogger coil malfunction</li><li>Open circuit in printed heater</li><li>Poor ground of antenna feeder line</li></ul>	
A cracking or snapping sound 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>	

# < PRECAUTION > PRECAUTION PRECAUTIONS

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

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

#### WARNING:

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

### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### WARNING:

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

### **Precaution for Trouble Diagnosis**

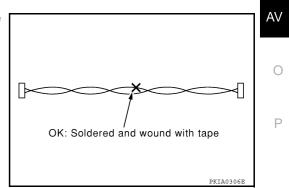
#### AV COMMUNICATION SYSTEM

- 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).]



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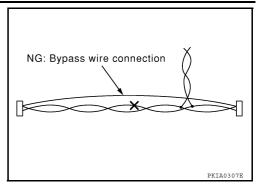
INFOID:000000005430219

### PRECAUTIONS

#### < PRECAUTION >

### [BOSE AUDIO WITHOUT NAVIGATION]

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



### PREPARATION

<	PR	EΡ	AR.	ATI	ON	>
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## PREPARATION

### PREPARATION

### Special Service Tools

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

Tool number (Kent-Moore No.) Tool name		Description	C
_		Removing trim components	D
(J-46534) Trim Tool Set			
			E
	AWJIA0483ZZ		F
Commercial Service Tools		INFOID:00000005430220	_
			G
Tool name		Description	

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

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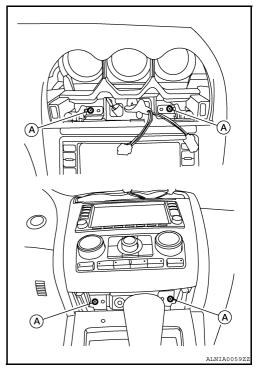
# < ON-VEHICLE REPAIR > ON-VEHICLE REPAIR AUDIO UNIT

Removal and Installation

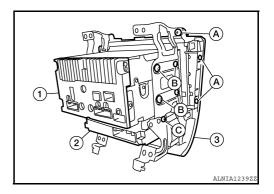
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REMOVAL

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



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



9. Remove the audio unit brackets.

### INSTALLATION

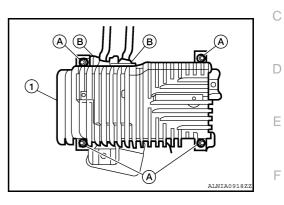
Installation is in the reverse order of removal.

### BOSE SPEAKER AMP

### Removal and Installation - Coupe

### REMOVAL

- 1. Remove the trunk floor carpet and spare tire cover. Refer to INT-21, "Removal and Installation".
- 2. Remove the RH trunk floor spacer.
- 3. Remove the Bose speaker amp. screws (A), then disconnect the Bose speaker amp. connectors (B) and remove the Bose speaker amp. (1).



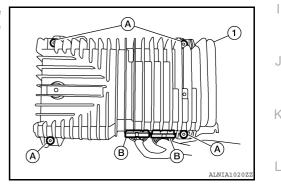
### INSTALLATION

Installation is in the reverse order of removal.

### Removal and Installation - Sedan

#### REMOVAL

- 1. Open the trunk lid.
- 2. 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.

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Revision: September 2009

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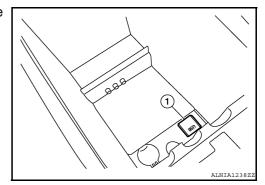
### USB CONNECTOR

### Removal and Installation

INFOID:000000005806061

Removal

- 1. Disconnect the battery negative terminal.
- 2. Remove the center console assembly. Refer to IP-14, "Removal and Installation".
- 3. Push the pawl from the back of the center console to remove the USB connector (1).



[BOSE AUDIO WITHOUT NAVIGATION]

Installation Installation is in the reverse order of removal.

### **FRONT TWEETER**

< ON-VEHICLE REPAIR >

### FRONT TWEETER

### **Removal and Installation**

#### REMOVAL

- 1. Remove the front pillar finisher. Refer to INT-18, "Removal and Installation" (coupe) and INT-43, "Removal and Installation" (sedan).
- 2. Remove tweeter speaker grille. Refer to IP-11, "Removal and Installation".
- Remove the tweeter speaker screws (A), disconnect the tweeter 3. speaker connector and remove the tweeter speaker (1).

(A)D (1)Е F ALNIA00502

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

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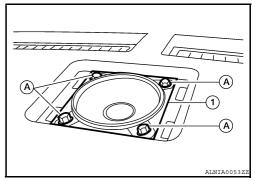
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### CENTER SPEAKER

### Removal and Installation

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 WITHOUT NAVIGATION]

INSTALLATION Installation is in the reverse order of removal.

### FRONT DOOR SPEAKER

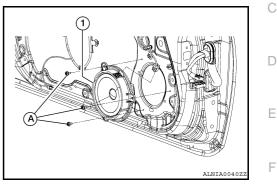
### [BOSE AUDIO WITHOUT NAVIGATION]

### FRONT DOOR SPEAKER

### Removal and Installation

#### REMOVAL

- 1. Remove the front door finisher. Refer to <u>INT-11, "Removal and Installation"</u> (coupe) and <u>INT-31, "Removal and Installation"</u> (sedan).
- 2. Remove the front door speaker screws (A), then disconnect the front door speaker connector and remove the front door speaker (1).



#### INSTALLATION

Installation is in the reverse order of removal.

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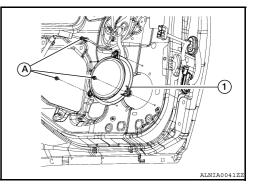
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### REAR DOOR SPEAKER

Removal and Installation - Sedan

#### REMOVAL

- 1. Remove the rear door finisher. Refer to INT-31, "Removal and Installation".
- 2. Remove the rear door speaker screws (A), then disconnect the rear door speaker connector and remove the rear door speaker (1).



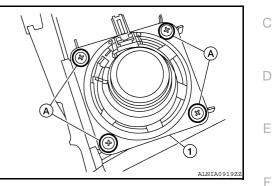
INSTALLATION Installation is in the reverse order of removal. INFOID:000000005430227

### REAR TWEETER

Removal and Installation - Coupe

### REMOVAL

- 1. Remove the rear parcel shelf finisher. Refer to INT-15, "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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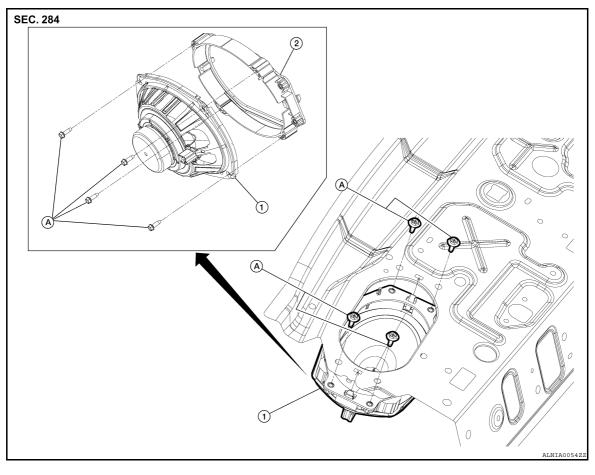
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# < ON-VEHICLE REPAIR > SUBWOOFER

### Components

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[BOSE AUDIO WITHOUT NAVIGATION]



1. Subwoofer speaker

**Removal and Installation** 

2. Spacer

INFOID:000000005430230

#### REMOVAL

1. Remove the rear parcel shelf finisher. Refer to <u>INT-15, "Removal and Installation"</u> (coupe) and <u>INT-39,</u> <u>"Removal and Installation"</u> (sedan).

Α.

Screws

- 2. Remove the upper trunk finisher. Refer to <u>INT-21, "Removal and Installation"</u> (coupe) and <u>INT-47, "Removal and Installation"</u> (sedan).
- 3. Remove the subwoofer speaker screws from the top, disconnect the subwoofer speaker harness connector and remove the subwoofer speaker and spacer assembly.
- 4. Remove the spacer screws and remove the subwoofer speaker from the spacer.

#### INSTALLATION

Installation is in the reverse order of removal.

### SATELLITE RADIO TUNER

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

### REMOVAL

- 1. Disconnect the battery negative terminal.
- Remove the trunk floor carpet and spare tire cover. Refer to <u>INT-21, "Removal and Installation"</u>.
- 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).
- 5. 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

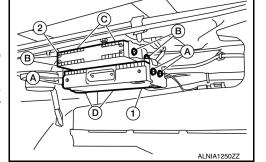
- 1. Disconnect the battery negative terminal.
- 2. Remove the Bluetooth control unit screws (A), disconnect the Bluetooth control unit connectors (D) and remove the Bluetooth control unit (1). NOTE:

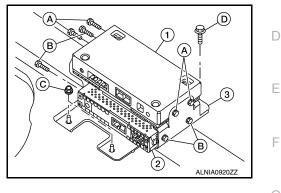
Bluetooth control unit (1) is removed to access the satellite radio tuner unit (if equipped).

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

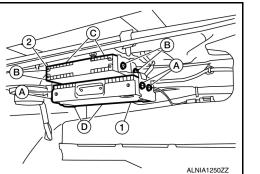
#### INSTALLATION

Installation is in the reverse order of removal.





[BOSE AUDIO WITHOUT NAVIGATION]



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### SATELLITE RADIO ANTENNA

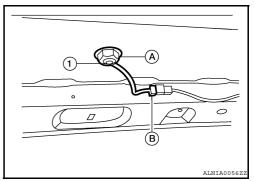
INFOID:000000005430233

### SATELLITE RADIO ANTENNA

### Removal and Installation

REMOVAL

- 1. Lower the headliner at the rear. Refer to <u>INT-18, "Removal and Installation"</u> (coupe) and <u>INT-43,</u> <u>"Removal and Installation"</u> (sedan).
- 2. Remove the satellite radio antenna nut (A), then disconnect the satellite radio antenna connector (B) and remove the satellite radio antenna (1).



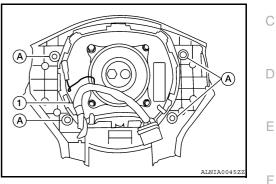
INSTALLATION Installation is in the reverse order of removal.

### 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.

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### [BOSE AUDIO WITHOUT NAVIGATION]

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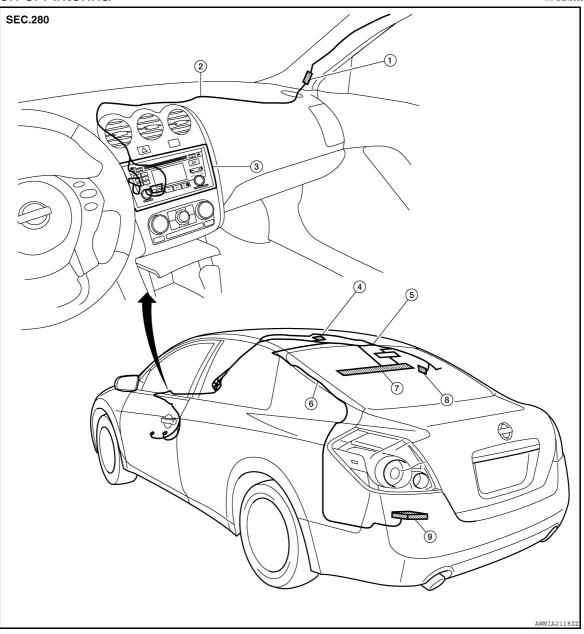
#### < ON-VEHICLE REPAIR >

### [BOSE AUDIO WITHOUT NAVIGATION]

# AUDIO ANTENNA (COUPE)

Location of Antenna

INFOID:000000005430235



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

### Window Antenna Repair

#### **ELEMENT CHECK**

- Audio unit harness 2.

- Audio unit 3.
- Satellite radio antenna feeder 6.
- 9. Satellite radio tuner

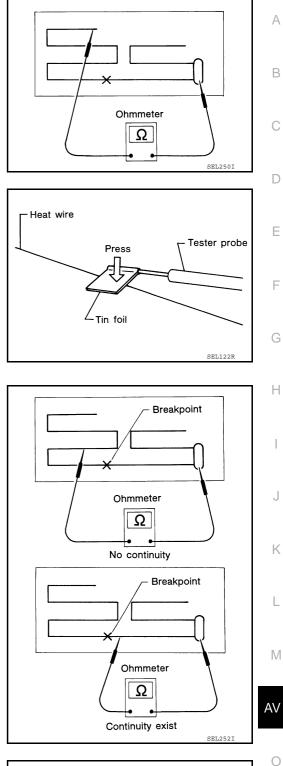
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- 5. Audio antenna feeder
- 8. Antenna amp.

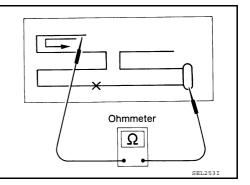
#### < ON-VEHICLE REPAIR >

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

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



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



• 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.

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### AUDIO ANTENNA (COUPE)

#### < ON-VEHICLE REPAIR >

# [BOSE AUDIO WITHOUT NAVIGATION]

#### **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.

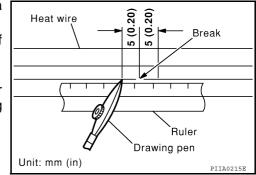
Shake silver composition container before use.

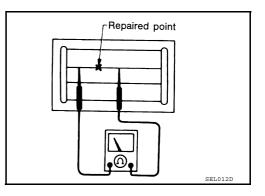
 Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.

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

Do not touch repaired area while test is being conducted.

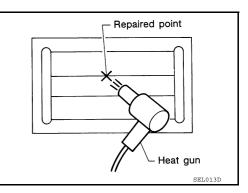
nuity. This check should be conducted 10 minutes after silver





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)

### [BOSE AUDIO WITHOUT NAVIGATION]

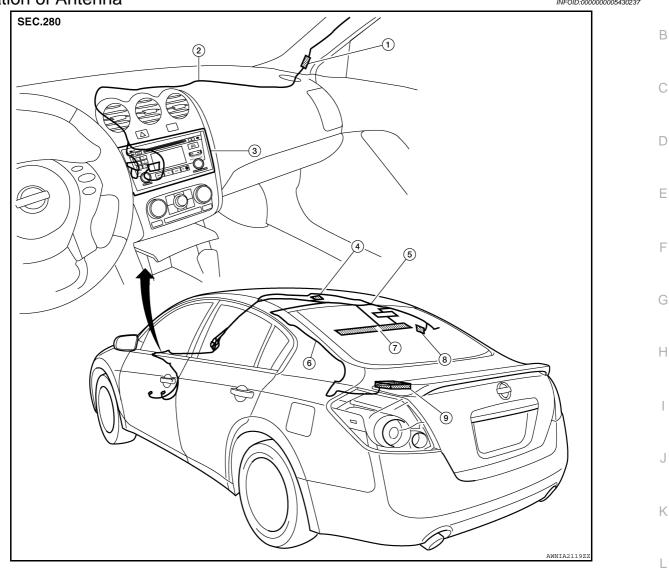
### Location of Antenna



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

Audio unit harness 2.

Antenna amp.

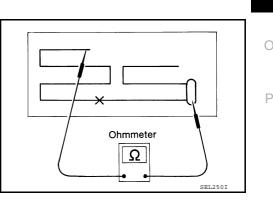
- 5. Audio antenna feeder
- Audio unit 3. Satellite radio antenna feeder 6.
- Satellite radio tuner 9.

### Window Antenna Repair

#### **ELEMENT CHECK**

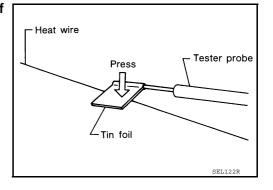
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.

8.

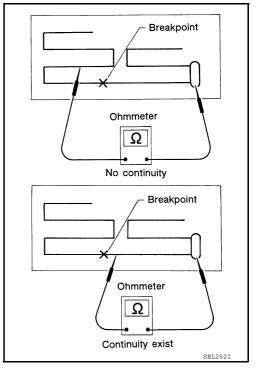


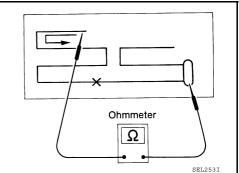
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• When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



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





#### **REPAIR EQUIPMENT**

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

To locate a break, move probe along element. Tester indication 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**

#### < ON-VEHICLE REPAIR >

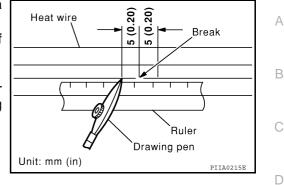
### AUDIO ANTENNA (SEDAN)

#### [BOSE AUDIO WITHOUT NAVIGATION]

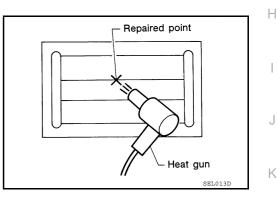
- 1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
- 2. Apply a small amount of conductive silver composition to tip of drawing pen.

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.



ntiver Repaired point



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.

Do not touch repaired area while test is being conducted.

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

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

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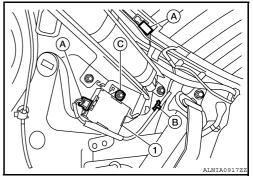
< ON-VEHICLE REPAIR >

### ANTENNA AMP.

### Removal and Installation - Coupe

#### REMOVAL

- 1. Remove the rear pillar finisher RH. Refer to INT-18, "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).



#### INSTALLATION

Installation is in the reverse order of removal.

Removal and Installation - Sedan

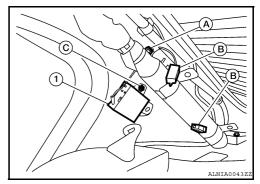
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#### REMOVAL

#### CAUTION:

- Before servicing, turn ignition switch OFF, disconnect both battery terminals and wait at least three minutes.
- 1. Disconnect the negative and positive battery terminals, then wait at least three minutes.
- 2. Remove the rear pillar finisher RH. Refer to INT-43, "Exploded View".
- Partially remove the side curtain air bag module RH to gain access to the antenna amp. Refer to <u>SR-11</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.

### MICROPHONE

### < ON-VEHICLE REPAIR >

# MICROPHONE

### Removal and Installation

### REMOVAL

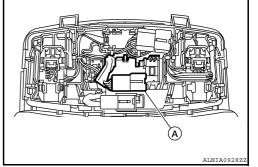
- 1. Remove the room/map lamp assembly. Refer to <u>INL-108, "Removal and Installation"</u>.
- 2. Detach the microphone connector (A).

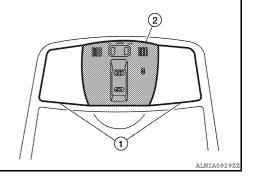
3. Remove the map lamp covers (1), then remove the map lamp assembly cover (2).

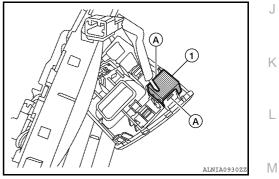
4. Release the microphone tabs (A), then remove the microphone (1).











INSTALLATION Installation is in the reverse order of removal.

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< ON-VEHICLE REPAIR >

### TEL ANTENNA

#### Removal and Installation - Coupe

#### REMOVAL

- 1. Remove the upper trunk finisher, trunk floor carpet and spare tire cover. Refer to INT-20, "Exploded View".
- 2. Remove the LH trunk floor spacer.
- 3. Remove the rear pillar LH. Refer to INT-18. "Exploded View".
- 4. Remove the rear parcel shelf. Refer to INT-15, "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

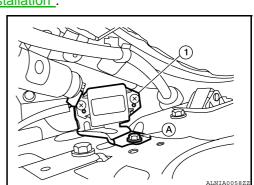
REMOVAL

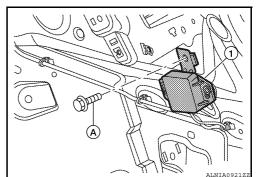
- 1. Remove the rear parcel shelf. Refer to INT-39, "Removal and Installation".
- 2. Remove the Bluetooth antenna screw (A), fold down the rear seat, disconnect the Bluetooth antenna connector and remove the Bluetooth antenna (1).

INSTALLATION Installation is in the reverse order of removal.







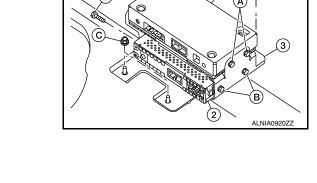


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### Removal and Installation - Coupe

### REMOVAL

- 1. Disconnect the battery negative terminal.
- 2. Remove the trunk floor carpet and spare tire cover. Refer to INT-20, "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)
  - Satellite radio tuner bracket screw (D)



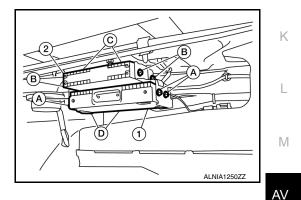
Installation is in the reverse order of removal. Removal and Installation - Sedan

#### REMOVAL

INSTALLATION

- 1. Disconnect the battery negative terminal.
- 2. Remove the Bluetooth control unit screws (A), disconnect the Bluetooth control unit connectors (D), then remove the Bluetooth control unit (1).
  - Satellite radio tuner (2)
  - Satellite radio tuner screws (B)
  - Satellite radio tuner connectors (C)





INSTALLATION Installation is in the reverse order of removal.

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## **REAR VIEW CAMERA**

### **Removal and Installation**

### REMOVAL

- 1. Remove the license plate finisher. Refer to EXT-24, "Removal and Installation" (coupe) and EXT-48, "Removal and Installation" (sedan).
- 2. Remove trunk lid finisher. Refer to INT-20, "Exploded View".
- 3. Remove the rear view camera by performing the following:
  - For coupe models, release the clip (A), then pull out the rear view camera connector, disconnect the rear view camera connector, press the rear view camera tab (B) and remove the rear view camera (1).

 For sedan models, disconnect the rear view camera connector (B), press the rear view camera tab (A) and remove the rear view camera (1).

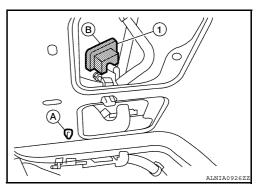
INSTALLATION Installation is in the reverse order of removal.

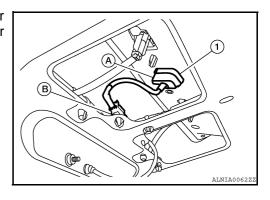
### Adjustment

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#### **REAR VIEW MONITOR**

For adjustment on the rear view camera, refer to AV-265, "Work Flow".





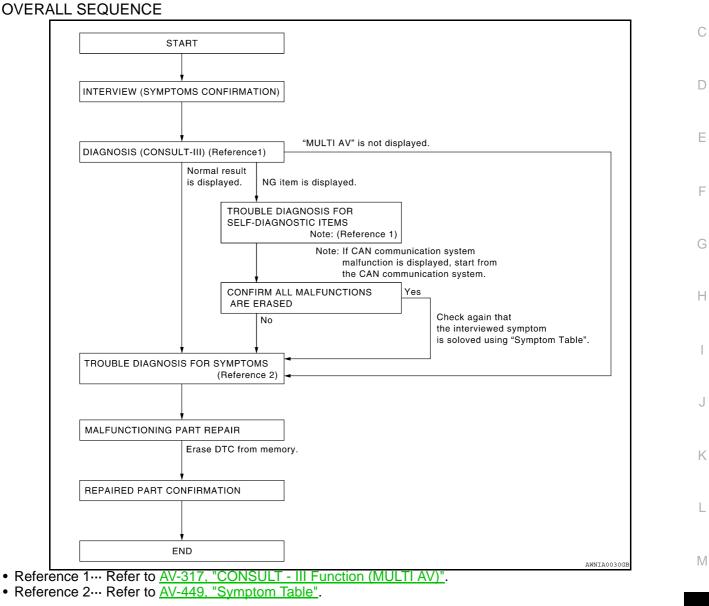
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# BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

### Work Flow

INFOID:000000005430246 B

[BOSE AUDIO WITH NAVIGATION]



### DETAILED FLOW

**1.**CHECK SYMPTOM

Check the malfunction symptoms by performing the following items.

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

>> GO TO 2

2. SELF-DIAGNOSIS (CONSULT-III)

- Connect CONSULT-III and perform "SELF-DIAGNOSIS" for "MULTI AV". NOTE:
   Skip to stop 4 of the diagnosis precedure if "MULTI AV" is not diaplayed.
  - Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed. Check if any DTC No. is displayed in the self-diagnosis results.
  - Revision: September 2009

2.

### AV-265

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### DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[BOSE AUDIO WITH NAVIGATION]

Is any DTC No. displayed?

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

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

1. Check the DTC No. indicated in the self-diagnosis results.

Perform the relevant diagnosis referring to the DTC No. list. Refer to AV-398, "DTC Index". 2. NOTE:

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

>> GO TO 5

#### **4.**PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-449, "Symptom Table".

>> GO TO 5

5.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts. NOTE:

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

>> GO TO 6

6.CHECK AFTER REPAIR

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

Is any DTC No. displayed?

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

**7.**FINAL CHECK

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

Are any symptoms present?

YES >> GO TO 4

NO >> Inspection End.

<pre>INSPECTION AND ADJUSTMENT &lt; BASIC INSPECTION &gt; [BOSE AUDIO WITH NAVIGATION]</pre>	
INSPECTION AND ADJUSTMENT	
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT	А
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description	В
BEFORE REPLACEMENT When replacing AV control unit, save or print current vehicle specification with CONSULT-III configuration before replacement. AFTER REPLACEMENT CAUTION: When replacing AV control unit, you must perform "WRITE CONFIGURATION" with CONSULT-III.	C
<ul> <li>Complete the procedure of "WRITE CONFIGURATION" in order.</li> <li>If you set incorrect "WRITE CONFIGURATION", incidents might occur.</li> <li>Configuration is different for each vehicle model. Confirm configuration of each vehicle model.</li> </ul>	E
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Re-	
quirement	F
1. SAVING VEHICLE SPECIFICATION	
<ul> <li>CONSULT-III Configuration</li> <li>Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>AV-267, "CONFIG-URATION (AV CONTROL UNIT) : Description"</u>.</li> <li>NOTE:</li> <li>If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection".</li> </ul>	G
>> GO TO 2.	I
2. REPLACE AV CONTROL UNIT	
Replace AV control unit. Refer to AV-462, "Removal and Installation".	J
>> GO TO 3	
3. WRITING VEHICLE SPECIFICATION	Κ
CONSULT-III Configuration     Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write     vehicle specification. Refer to <u>AV-268, "CONFIGURATION (AV CONTROL UNIT) : Special Repair Require-</u> <u>ment</u> ".	L
>> GO TO 4.	Μ
4. OPERATION CHECK	
Check that the operation of the AV control unit and camera images (fixed guide lines and predictive course lines) are normal.	AV
>> WORK END CONFIGURATION (AV CONTROL UNIT)	0
CONFIGURATION (AV CONTROL UNIT) : Description	Ρ
<ul> <li>Since vehicle specifications are not included in the AV control unit after replacement, it is required to write vehicle specifications with CONSULT-III.</li> <li>Configuration has three functions as follows.</li> </ul>	

### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

Function	Description
READ CONFIGURATION	<ul><li>Reads the vehicle configuration of current AV control unit.</li><li>Saves the read vehicle configuration.</li></ul>
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.

### CONFIGURATION (AV CONTROL UNIT) : Special Repair Requirement

INFOID:000000005781296

### **1.**WRITING MODE SELECTION

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

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

2.PERFORM "WRITE CONFIGURATION-CONFIG FILE"

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

>> WORK END

**3.** PERFORM "WRITE CONFIGURATION-MANUAL SELECTION"

CONSULT-III Configuration

Select "WRITE CONFIGURATION-Manual selection" to write vehicle specifications into the AV control unit. For data to write, refer to <u>AV-268, "CONFIGURATION (AV CONTROL UNIT) : Configuration List"</u>.

>> GO TO 4.

**4.**OPERATION CHECK

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

>> WORK END

### CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:000000005781297

#### **CAUTION:**

Check vehicle specifications before servicing.

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



## INSPECTION AND ADJUSTMENT

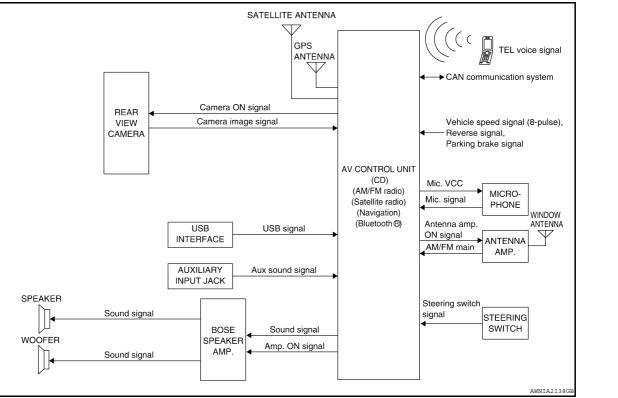
#### < BASIC INSPECTION >

MANUAL S	ETTING ITEM	Note
Items	Setting value	NOLE
4WAS	WITHOUT	—
40043	WITH	_
	BASE	_
SOUND SYSTEM	BOSE	_
ANTENNA TYPE	ROD TYPE	_
ANTENNA TYPE	LONG TYPE	_
DUAL-ZONE AUTO	WITHOUT	_
TEMP	WITH	_
	WITHOUT	_
DVD PLAY FUNCTION	WITH	—
	SED 2DR	SEDAN 2 DOOR
	SED 4DR 1	SEDAN 4 DOOR
	SED 4DR 2	SEDAN 4 DOOR (WIDE)
	H/B 2DR	H/B 2 DOOR
	H/B 4DR	H/B 4 DOOR
	COUPE 2DR	COUPE 2 DOOR
	COUPE T	COUPE T BAR
	WGN 4DR 2	49H WAGON 4 DOOR (WIDE)
	H/T 2DR 1	H/T 2 DOOR
	H/T 2DR 2	H/T 2 DOOR (HIGH- ROOF)
BODY TYPE	H/T 4DR 1	H/T 4 DOOR
	H/T 4DR 2	H/T 4 DOOR (WIDE)
	WGN 2DR	WAGON 2 DOOR
	WGN 4DR 1	WAGON 4 DOOR
	WGN 4DR 3	WAGON 4 DOOR (HIGH- ROOF)
	WGN 4DR 4	56H WAGON 4 DOOR (WIDE)
	VAN 2DR	VAN 2 DOOR
	VAN 4DR 1	VAN 4 DOOR
	VAN 4DR 2	VAN 4 DOOR (HIGH- ROOF)
	CONV	CONVERTIBLE

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# FUNCTION DIAGNOSIS MULTI AV SYSTEM (COUPE)

### System Diagram



### System Description

INFOID:000000005430250

INFOID:000000005430249

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-279</u>
Audio system	<u>AV-295</u>
Rear view monitor system	<u>AV-289</u>
Hands-free phone system	<u>AV-301</u>

#### **VOICE RECOGNITION**

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

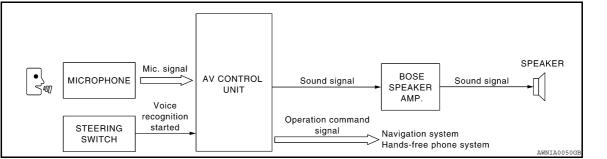
Navigation system

# MULTI AV SYSTEM (COUPE)

### < FUNCTION DIAGNOSIS >



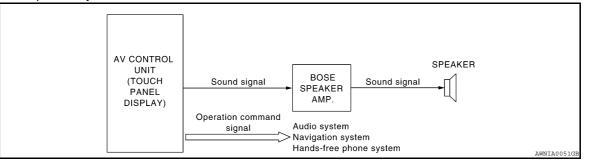
#### Hands-free phone system



#### **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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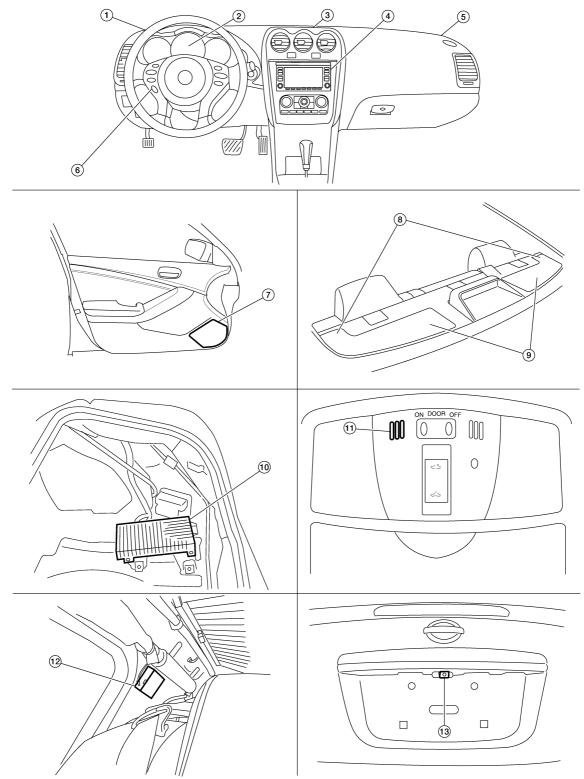
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#### < FUNCTION DIAGNOSIS >

### MULTI AV SYSTEM (COUPE)

### **Component Parts Location**

INFOID:000000005783009



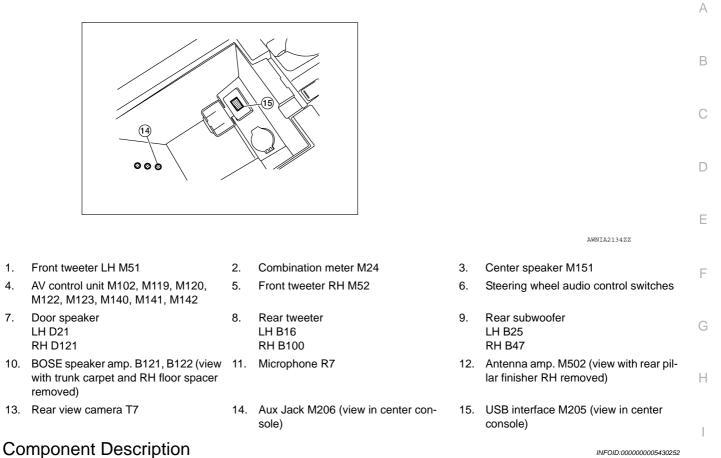
AWNIA2133ZZ

#### < FUNCTION DIAGNOSIS >

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INFOID:000000005430252

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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.
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	<ul><li>Receives camera ON signal from AV control unit</li><li>Sends image signal to AV 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.

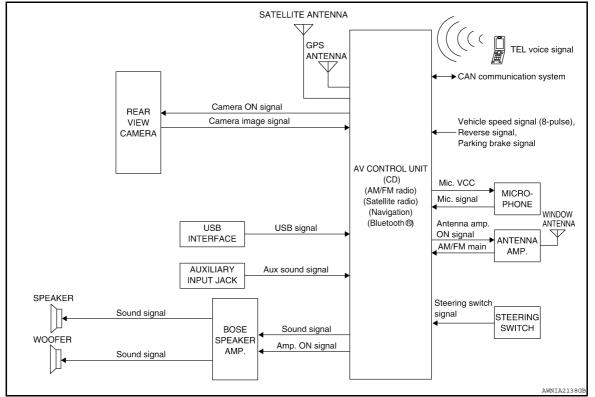
#### < FUNCTION DIAGNOSIS >

## MULTI AV SYSTEM (SEDAN)

INFOID:000000005783155

INFOID:000000005430254

### System Diagram



### System Description

- The multi AV system consists of the following systems.
- Navigation system
- Audio system
- Rear view monitor
- Hands-free phone system

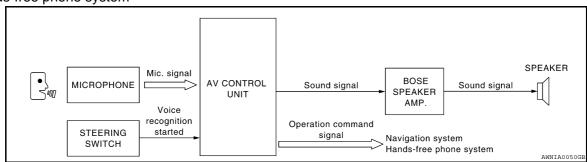
Refer to the following table for multi AV system descriptions.

System	Reference page
Navigation system	<u>AV-284</u>
Audio system	<u>AV-298</u>
Rear view monitor system	<u>AV-289</u>
Hands-free phone system	<u>AV-304</u>

### VOICE RECOGNITION

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

- Navigation system
- · Hands-free phone system

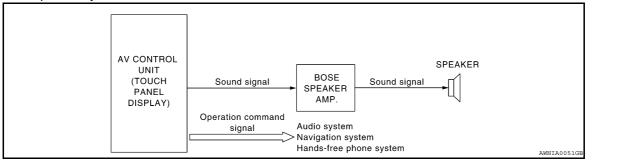


< FUNCTION DIAGNOSIS >

#### 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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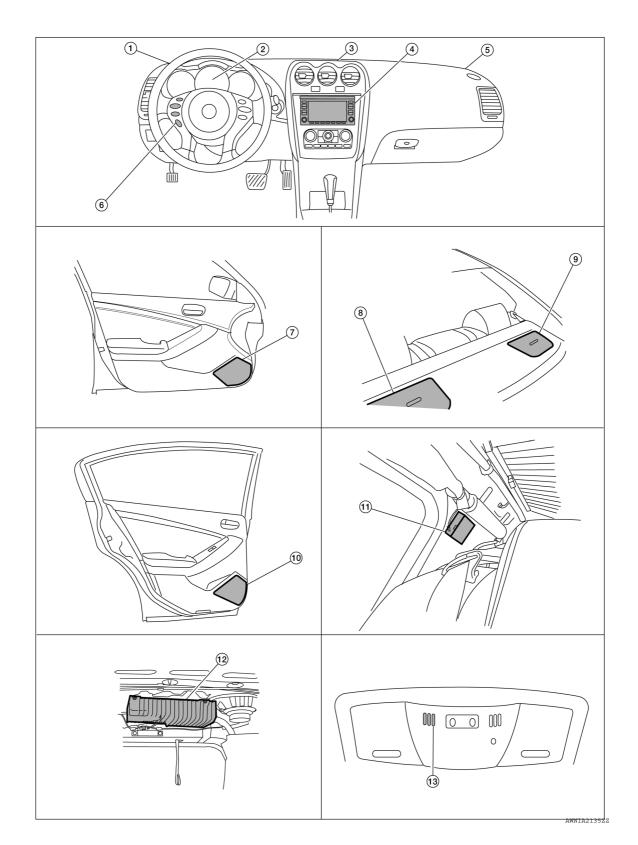
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### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

### **Component Parts Location**

INFOID:000000005783156



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1.	Tweeter LH M106	2.	Combination meter M24	3.	Center speaker M151	
4.	AV control unit M90, M91,M98, M100, M101, M102, M103, M104		Tweeter RH M107	5. 6.	Steering wheel audio control switches	F
7.	Front door speaker LH D22 RH D122	8.	Rear subwoofer LH B120	9.	Rear subwoofer RH B124	G
10.	Rear door speaker LH D202 RH D302	11.	Antenna amp M502 (view with rear pil- lar finisher RH removed)	12.	BOSE speaker amp. B121, B122	Н
13.	Microphone R7	14.	Rear view camera B35	15.	AUX jack M206 (view in center con- sole)	
16.	USB interface M205 (view in center console)					I
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### **Component Description**

INFOID:000000005430256 J

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.
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	<ul> <li>Receives camera ON signal from the AV control unit</li> <li>Sends image signal to the AV 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.

#### < FUNCTION DIAGNOSIS >

### [BÓSE AUDIO WITH NAVIGATION]

Part name	Description
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.

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

#### < FUNCTION DIAGNOSIS >

### NAVIGATION SYSTEM (COUPE)

**Revision: September 2009** 

System Diagram **GPS ANTENNA** CAN communication system AV CONTROL Vehicle speed signal (8-pulse) UNIT Reverse signal Parking brake signal SPEAKER BOSE Voice guidance signal Voice guidance signal SPEAKER AMP Steering switch signal STEERING SWITCH AWNIA00530

### System Description

#### NOTE:

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

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

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

By comparing the vehicle position detection results found by the GPS and by map-matching, more accurate vehicle position data can be used.

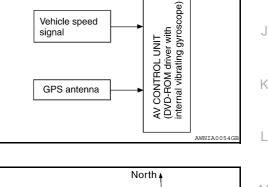
The current vehicle position will be calculated by detecting the distance the vehicle moved from the previous calculation point and its direction.

#### TRAVEL DISTANCE

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

#### TRAVEL DIRECTION

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



#### Μ $(\theta + \phi)^{\circ}$ North Current position Previous AV position θ°: Previous forward direction of vehicle φ°: Change in current forward direction of vehicle ℓ: Distance traveled from previous position SEL684V



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### NAVIGATION SYSTEM (COUPE)

#### < 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.
GPS antenna (GPS information)	<ul> <li>Can detect the vehicle's travel direction (North/South/East/West).</li> </ul>	Correct direction cannot be detected when the vehicle speed is low.

#### MAP-MATCHING

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

Therefore, the vehicle position may not be corrected after the vehicle is driven over a certain distance or time in which GPS information is hard to receive. In this case, the current-location mark on the display must be corrected manually.

#### CAUTION:

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

• In map-matching, alternative routes to reach the destination will be shown and prioritized, after the road on which the vehicle is currently driven has been judged and the current-location mark has been repositioned.

If there is an error in distance and/or direction, the alternative routes will be shown in different order of priority, and the wrong road can be avoided.

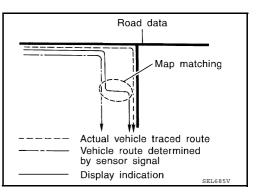
If two roads are running in parallel, they are of the same priority. Therefore, the current-location mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.

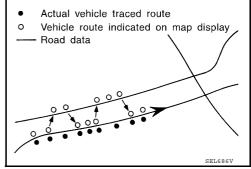
 Map-matching does not function correctly when the road on which the vehicle is driving is new and not recorded in the map DVD-ROM, or when the road pattern stored in the map data and the actual road pattern are different due to repair.

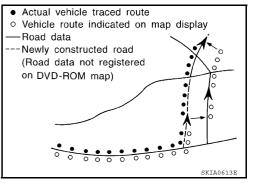
When driving on a road not present in the map, the map-matching function may find another road and position the current-location mark on it. Then, when the correct road is detected, the current-location mark may leap to it.

• Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the map DVD-ROM is limited. Therefore, when there is an excessive gap between the current vehicle position and the position on the map, correction by map-matching is not possible.

GPS (GLOBAL POSITIONING SYSTEM)



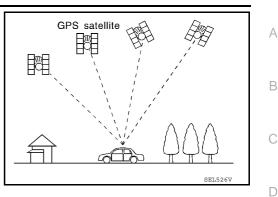




### **NAVIGATION SYSTEM (COUPE)**

#### < 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]

Accuracy of the GPS will deteriorate under the following conditions.

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

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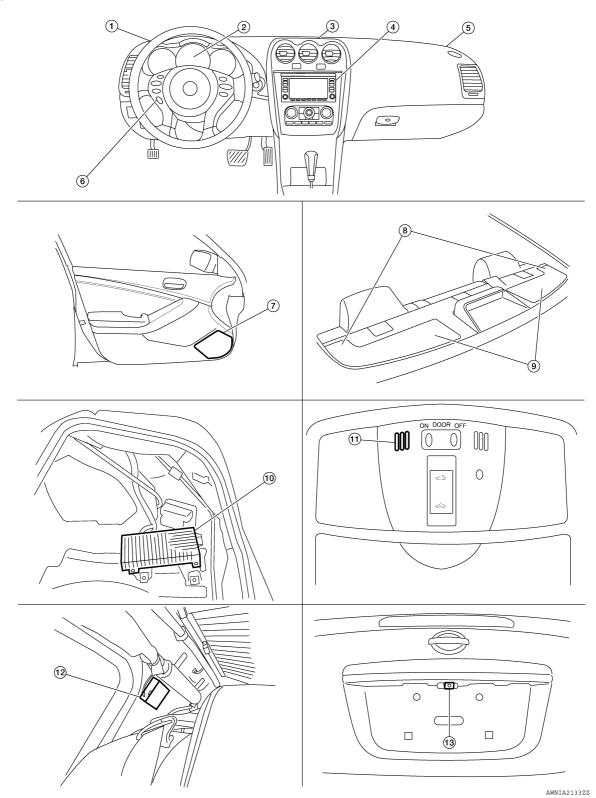
### **NAVIGATION SYSTEM (COUPE)**

### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

### **Component Parts Location**

INFOID:000000005430259

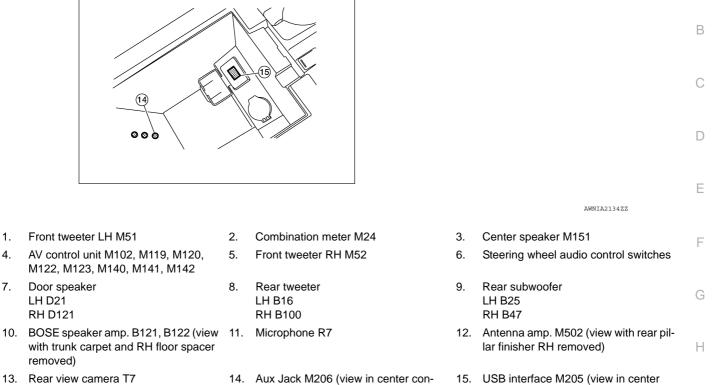


Revision: September 2009

#### < FUNCTION DIAGNOSIS >

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

console)



### **Component Description**

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14. Aux Jack M206 (view in center console)

INFOID:000000005430260

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.

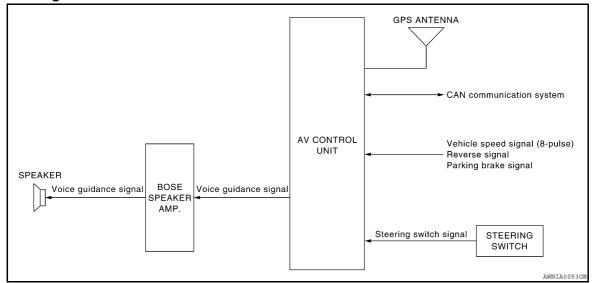
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#### < FUNCTION DIAGNOSIS >

### NAVIGATION SYSTEM (SEDAN)

[BOSE AUDIO WITH NAVIGATION]

System Diagram



### System Description

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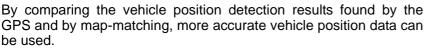
INFOID:000000005430261

#### NOTE:

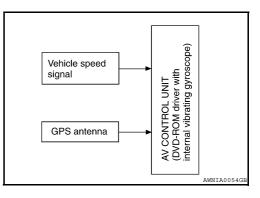
Refer to NAVI System Owner's Manual for system operation.

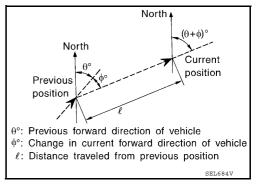
The navigation system periodically calculates the vehicle's current position according to the following three signals: Travel distance of the vehicle as determined by the vehicle speed sensor, turning angle of the vehicle as determined by the gyroscope (angular velocity sensor), and the direction of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

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



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



#### < 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.

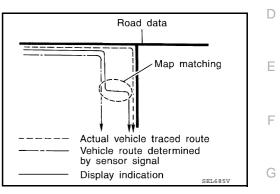
If two roads are running in parallel, they are of the same priority. Therefore, the current-location mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.

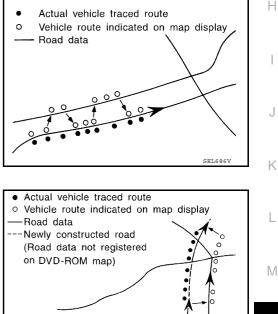
 Map-matching does not function correctly when the road on which the vehicle is driving is new and not recorded in the map DVD-ROM, or when the road pattern stored in the map data and the actual road pattern are different due to repair.

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)

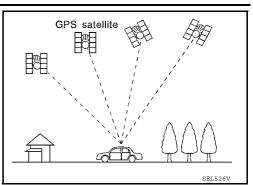




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#### < FUNCTION DIAGNOSIS >

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).



[BOSE AUDIO WITH NAVIGATION]

Accuracy of the GPS will deteriorate under the following conditions.

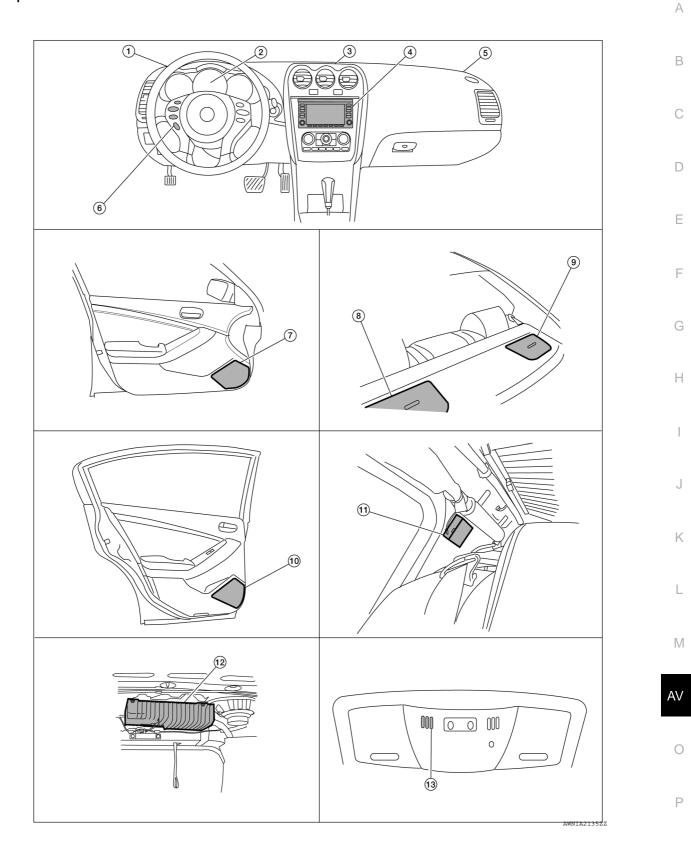
- In two-dimensional positioning, the GPS accuracy will deteriorate when the altitude of the vehicle position changes.
- There may be an error of approximately 10 m (30 ft.) in position detected by three-dimensional positioning, which is more accurate than two-dimensional positioning. The accuracy can 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 >

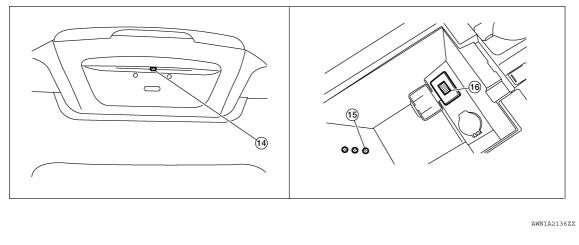
# [BOSE AUDIO WITH NAVIGATION]

### **Component Parts Location**

INFOID:000000005430263



Revision: September 2009



Tweeter LH M106 2. Combination meter M24 3. Center speaker M151 1. 4. AV control unit M90, M91, M98, M100, 5. Tweeter RH M107 6. Steering wheel audio control switches M101, M102, M103, M104 Front door speaker Rear subwoofer LH B120 9. Rear subwoofer RH B124 7. 8. LH D22 RH D122 10. Rear door speaker 11. Antenna amp M502 (view with rear pil- 12. BOSE speaker amp. B121, B122 LH D202 lar finisher RH removed) RH D302 13. Microphone R7 15. AUX jack M206 (view in center con-14. Rear view camera B35 sole) 16. USB interface M205 (view in center console)

### **Component Description**

INFOID:000000005430264

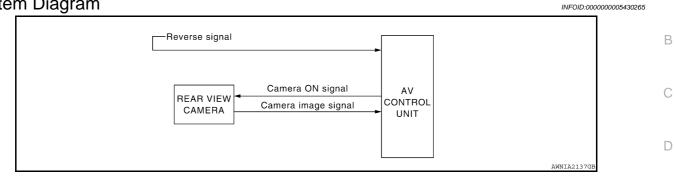
Part name	Description	
AV control unit	<ul> <li>Controls each operation of the navigation system</li> <li>DVD-ROM drive is built in</li> <li>Voice guidance signal is output to BOSE speaker amp.</li> </ul>	
BOSE speaker amp.	Voice guidance signal is input from AV control unit, and it is output to speakers.	
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 AV control unit shows a view to the rear of the vehicle. Lines which indicate the vehicle clearance and distances are also displayed.

#### AV COMMUNICATION LINE

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

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[BOSE AUDIO WITH NAVIGATION]

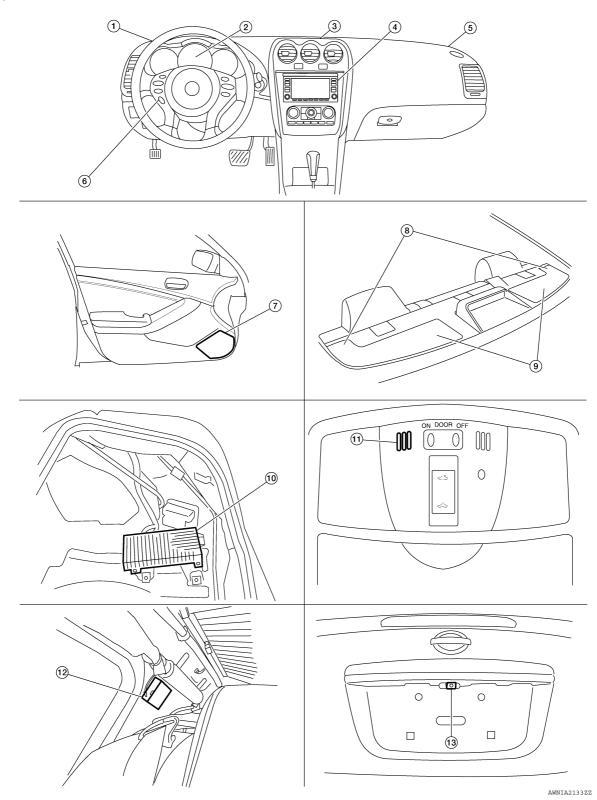
# REAR VIEW MONITOR SYSTEM (COUPE)

#### < FUNCTION DIAGNOSIS >

#### EIVI (COUPE) [BOSE AUDIO WITH NAVIGATION]

# **Component Parts Location**

INFOID:000000005783004



#### **REAR VIEW MONITOR SYSTEM (COUPE)** [BOSE AUDIO WITH NAVIGATION] < FUNCTION DIAGNOSIS >

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- 1. Front tweeter LH M51
- 4. AV control unit M102, M119, M120, M122, M123, M140, M141, M142
- Door speaker 7. LH D21 RH D121
- 10. BOSE speaker amp. B121, B122 (view 11. Microphone R7 with trunk carpet and RH floor spacer removed)
- 13. Rear view camera T7

# **Component Description**

- 2. Combination meter M24 5. Front tweeter RH M52
- 8. Rear tweeter LH B16 RH B100
- 14. Aux Jack M206 (view in center console)
- 6. Steering wheel audio control switches 9. Rear subwoofer

Center speaker M151

lar finisher RH removed)

3.

- G LH B25 RH B47 12. Antenna amp. M502 (view with rear pil-
- 15. USB interface M205 (view in center console)

INFOID:000000005430268

Part name	Description	
AV control unit	<ul><li>Sends camera ON signal to rear view camera</li><li>Receives image signal from rear view camera</li></ul>	K
Rear view camera	<ul><li>Receives camera ON signal from AV control unit</li><li>Sends image signal to the AV control unit</li></ul>	

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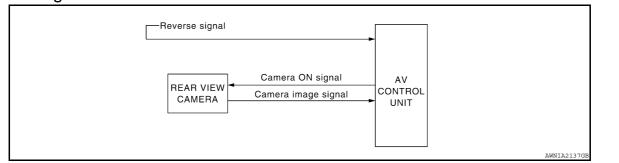
# **REAR VIEW MONITOR SYSTEM (SEDAN)**

#### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

# REAR VIEW MONITOR SYSTEM (SEDAN)

# System Diagram



# System Description

INFOID:000000005783047

INFOID:000000005783046

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

#### AV COMMUNICATION LINE

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

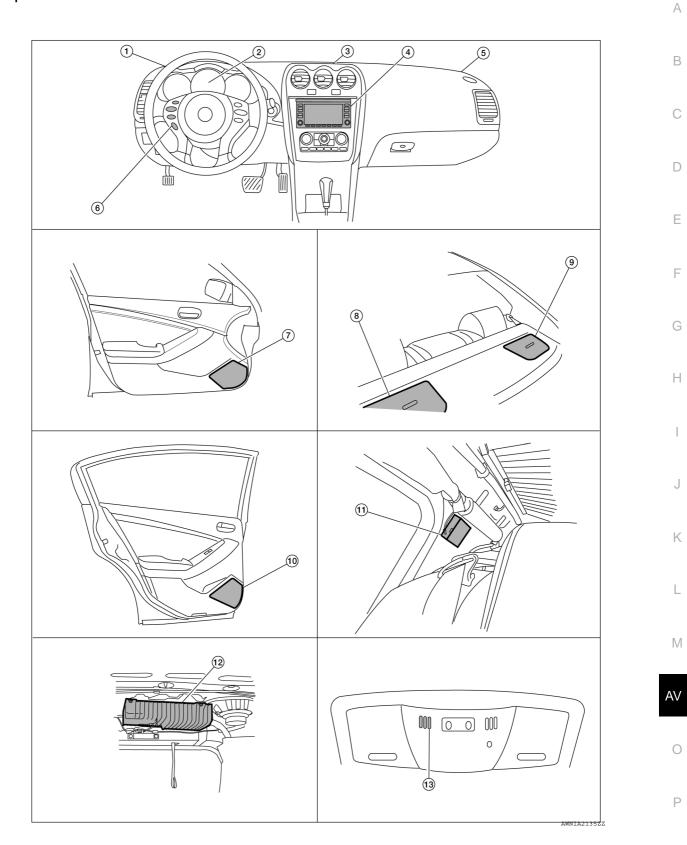
# REAR VIEW MONITOR SYSTEM (SEDAN)

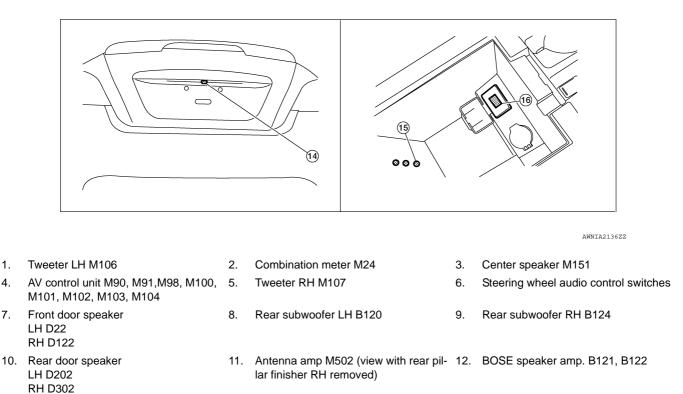
#### < FUNCTION DIAGNOSIS >

# BOSE AUDIO WITH NAVIGATION

# **Component Parts Location**

INFOID:000000005783157





15. AUX jack M206 (view in center console)

16. USB interface M205 (view in center console)

# **Component Description**

13. Microphone R7

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INFOID:000000005783048

Part name	Description	
AV control unit	<ul> <li>Sends camera ON signal to rear view camera</li> <li>Receives image signal from rear view camera</li> </ul>	
Rear view camera	<ul><li>Receives camera ON signal from AV control unit</li><li>Sends image signal to the AV control unit</li></ul>	

14. Rear view camera B35

# AUDIO SYSTEM (COUPE)

#### < FUNCTION DIAGNOSIS >

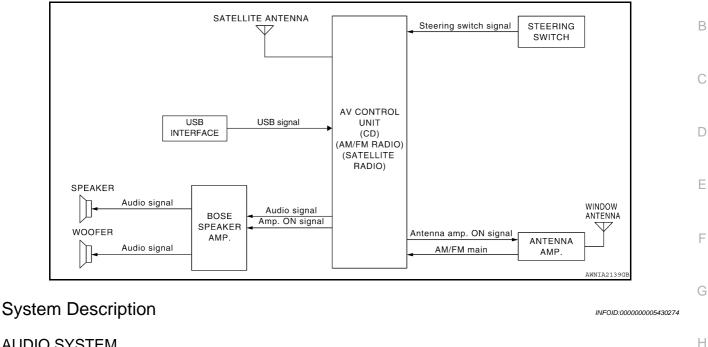
# AUDIO SYSTEM (COUPE)



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INFOID:000000005430273

System Diagram



## 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

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.

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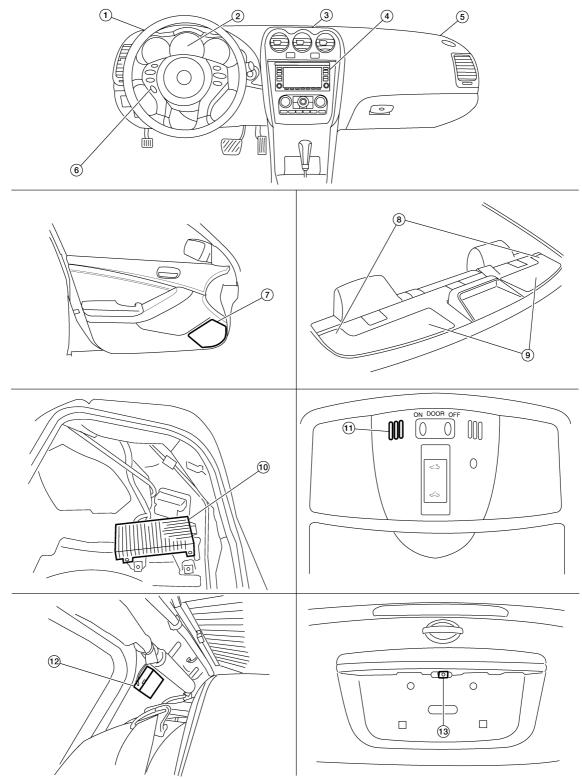
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## < FUNCTION DIAGNOSIS >

# AUDIO SYSTEM (COUPE)

# **Component Parts Location**

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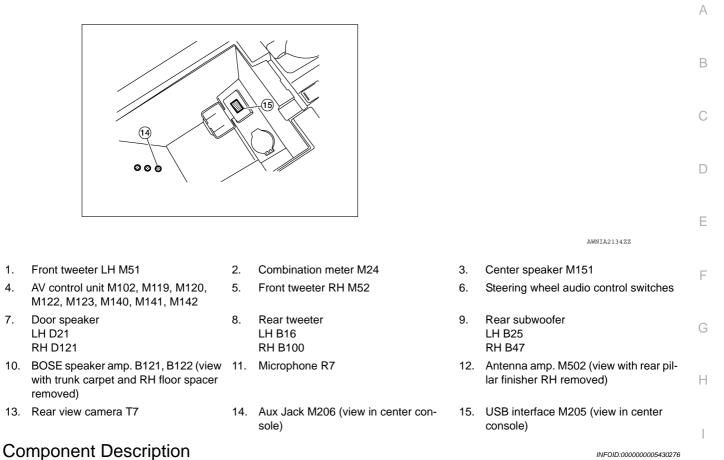
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#### **AUDIO SYSTEM (COUPE)** [BOSE AUDIO WITH NAVIGATION]

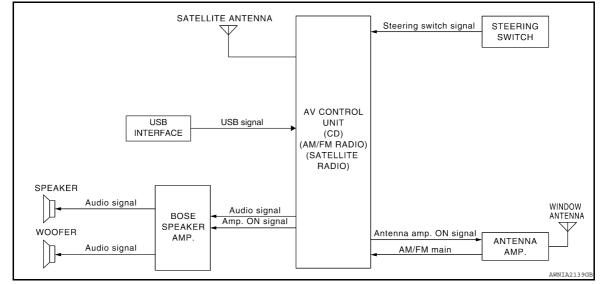


INFOID:000000005430276

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.
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)

System Diagram



# System Description

INFOID:000000005430278

INFOID:000000005783158

# 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

When the audio system is on, radio signals are received by the window antenna. These signals are amplified 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. 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 level can be selected by the customer. Refer to Owner's Manual for operating instructions.

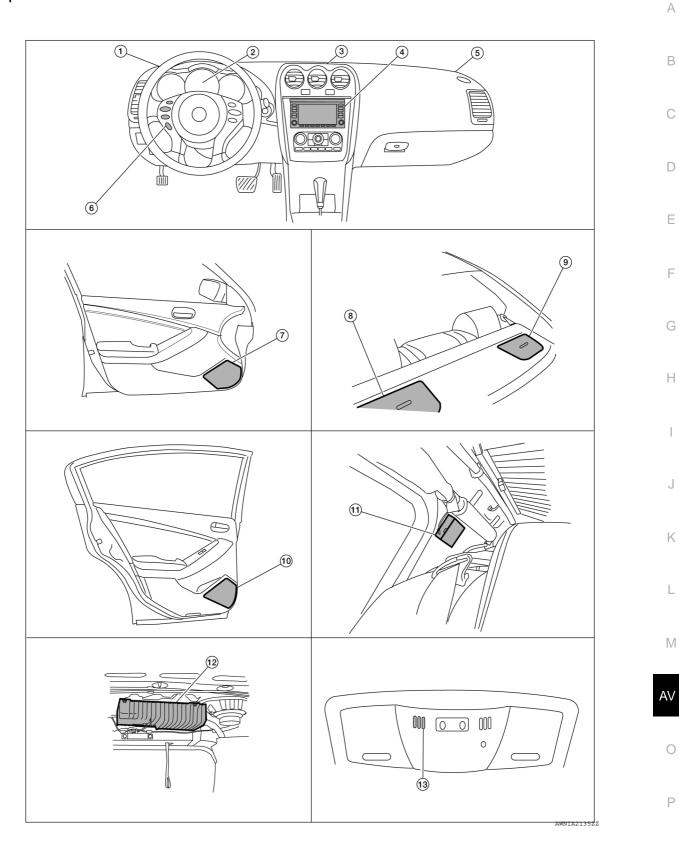
## < FUNCTION DIAGNOSIS >

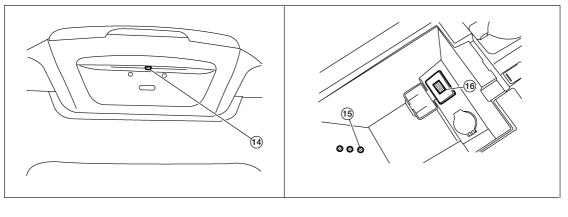
# AUDIO SYSTEM (SEDAN)

# [BOSE AUDIO WITH NAVIGATION]

# **Component Parts Location**

INFOID:000000005783159





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Tweeter LH M106 1. 2. Combination meter M24 3. Center speaker M151 4. AV control unit M90, M91, M98, M100, 5. Tweeter RH M107 6. Steering wheel audio control switches M101, M102, M103, M104 Front door speaker Rear subwoofer LH B120 9. Rear subwoofer RH B124 7. 8. LH D22 RH D122 10. Rear door speaker 11. Antenna amp M502 (view with rear pil- 12. BOSE speaker amp. B121, B122 LH D202 lar finisher RH removed) RH D302 13. Microphone R7 15. AUX jack M206 (view in center con-14. Rear view camera B35 sole) 16. USB interface M205 (view in center console)

# **Component Description**

INFOID:000000005430280

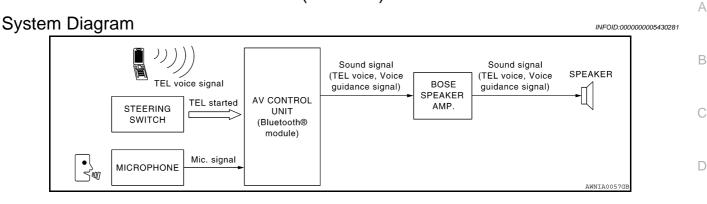
Part name	Description		
AV control unit	<ul> <li>Controls audio system and satellite radio system functions</li> <li>Audio information is displayed on display screen</li> </ul>		
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit, and outputs audio signals to each speaker.		
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>		
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>		
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.		

# HANDS FREE PHONE SYSTEM (COUPE)

#### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

# HANDS FREE PHONE SYSTEM (COUPE)



# System Description

INFOID:000000005430282

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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 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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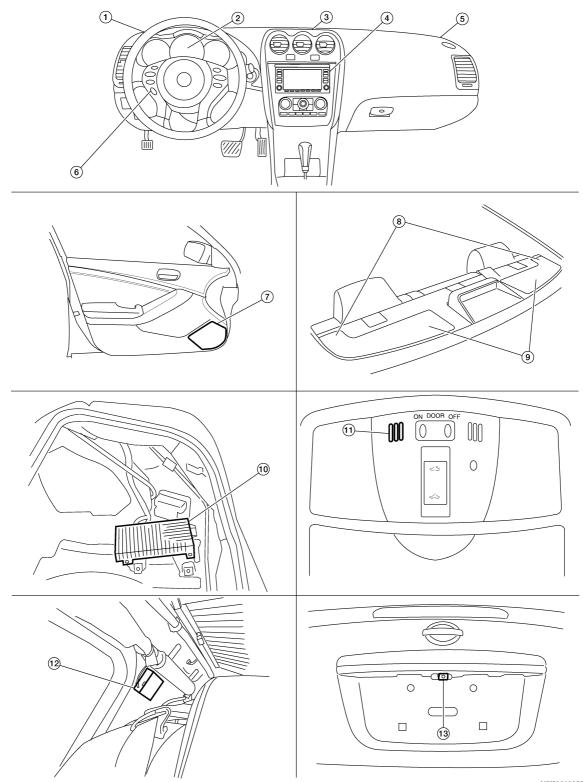
# HANDS FREE PHONE SYSTEM (COUPE)

#### < FUNCTION DIAGNOSIS >

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

# **Component Parts Location**

INFOID:000000005783006



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# HANDS FREE PHONE SYSTEM (COUPE)

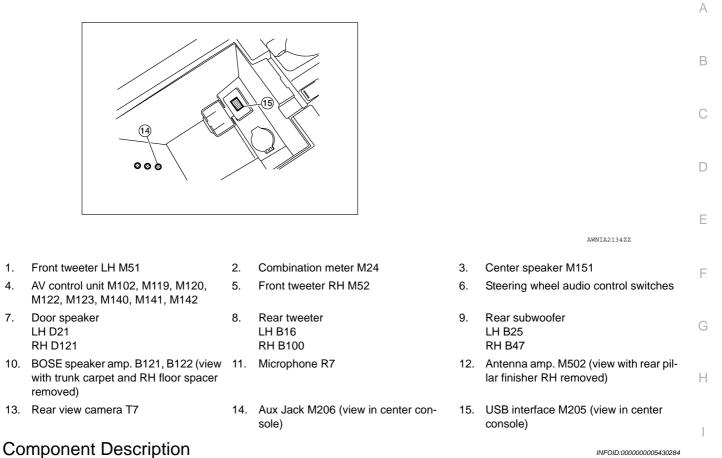
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# [BOSE AUDIO WITH NAVIGATION]



INFOID:000000005430284

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 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		

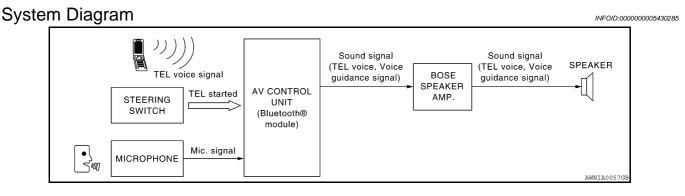
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# HANDS FREE PHONE SYSTEM (SEDAN)

#### < FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

# HANDS FREE PHONE SYSTEM (SEDAN)



# System Description

INFOID:000000005430286

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

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

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

## AV CONTROL UNIT

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

## STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

## MICROPHONE

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

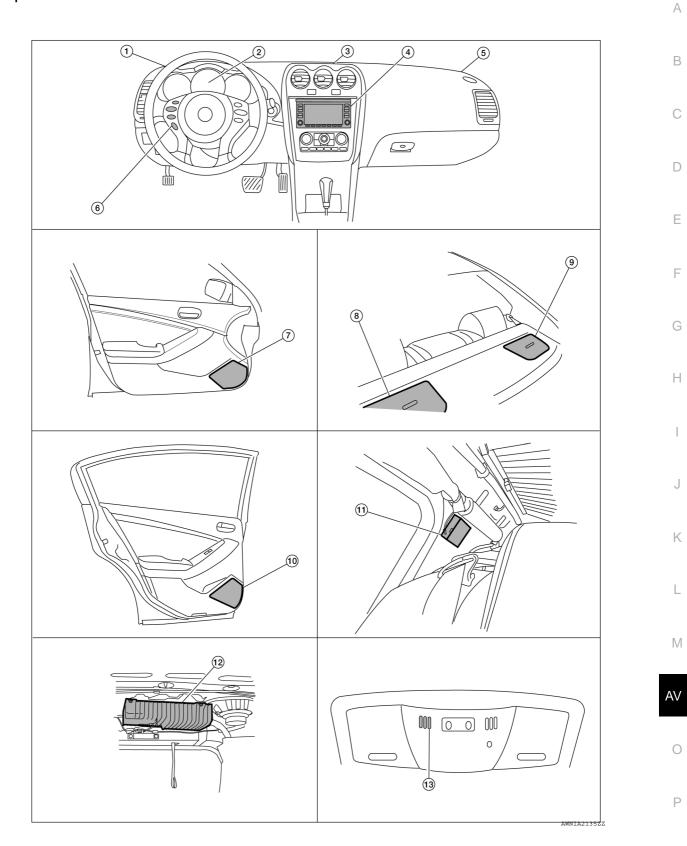
# HANDS FREE PHONE SYSTEM (SEDAN)

#### < FUNCTION DIAGNOSIS >

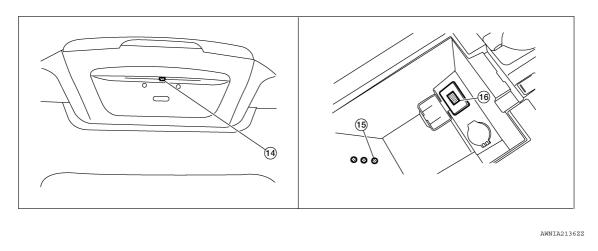
# [BOSE AUDIO WITH NAVIGATION]

# **Component Parts Location**

INFOID:000000005783160



**Revision: September 2009** 



1.	Tweeter LH M106	2.	Combination meter M24	3.	Center speaker M151
4.	AV control unit M90, M91,M98, M100, M101, M102, M103, M104	5.	Tweeter RH M107	6.	Steering wheel audio control switches
7.	Front door speaker LH D22 RH D122	8.	Rear subwoofer LH B120	9.	Rear subwoofer RH B124
10.	Rear door speaker LH D202 RH D302	11.	Antenna amp M502 (view with rear pil- lar finisher RH removed)	12.	BOSE speaker amp. B121, B122
13.	Microphone R7	14.	Rear view camera B35	15.	AUX jack M206 (view in center con- sole)
16.	USB interface M205 (view in center console)				

# **Component Description**

INFOID:000000005430288

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.		
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>		
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		

#### < FUNCTION DIAGNOSIS >

# DIAGNOSIS SYSTEM (AV CONTROL UNIT)

## Description

- The AV control unit diagnosis function starts up performs a diagnosis for each unit in the system during the on board diagnosis.
- Perform a CONSULT-III diagnosis if the on board diagnosis does not start, e.g., or if the screen does not display anything, etc.

#### On Board Diagnosis Function

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

On Board Diagnosis Item

Mode	Description	
Self Diagnosis	<ul> <li>AV control unit diagnosis.</li> <li>Diagnoses the connections across system components, between AV control unit and GPS antenna.</li> </ul>	I

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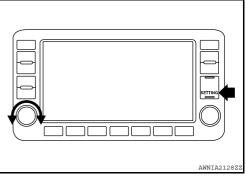
< FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

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

#### STARTING PROCEDURE

- 1. Start the engine.
- 2. Turn the audio system OFF.
- 3. While pressing the "SETTING" button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)



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

#### < FUNCTION DIAGNOSIS >

#### SELF-DIAGNOSIS MODE

System Diagnostic Menu	Back
\ <u>\</u>	
Self Diagnosis	
Comfirmation/Adjustment	
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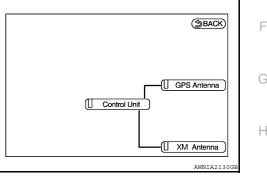
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- Start the self-diagnosis function and select "Self Diagnosis". 1.
- Self-diagnosis subdivision screen is displayed, and the self-diagnosis mode starts.
- The bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.
- 2. Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

Diagnosis results	Unit	Connec- tion line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction Note	Red	Green



#### NOTE:

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

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

Connection is normal Please refer to the Confirmation / Adjustment function or service manual for more detailed diagnosis information.	
--	--

Detection Range of Self-diagnosis Mode

- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between AV control unit and each unit and the internal operation of the AV control unit.
- Because the start condition of diagnosis function is a switch operation, the on board diagnosis function cannot be started up if any malfunction is detected in the communication circuit between AV control unit and multifunction switch.

#### SELF-DIAGNOSIS RESULTS

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

Only Unit Part Is Displayed In Red.

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#### < FUNCTION DIAGNOSIS >

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

A Connecting Cable Between Units Is Displayed In Yellow.

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

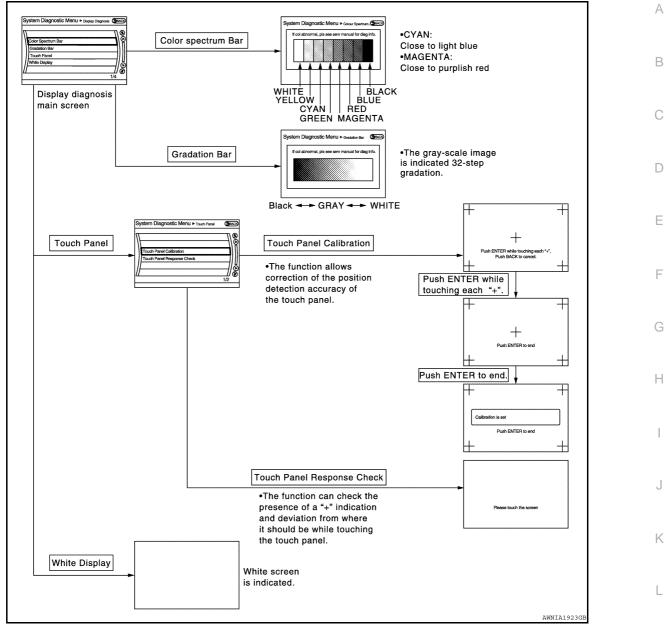
#### CONFIRMATION/ADJUSTMENT MODE

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

	_
System Diagnostic Menu Confirmation/Ad (	Back
Display Diagnosis	(1)
Vehicle Signals	
Speaker Test	
Navigation	
//Error History	۵I
//Synchronise FES Clock • ON//	Ì
1/14	
JSN	IA2483ZZ

#### < FUNCTION DIAGNOSIS >

#### **Display Diagnosis**



#### Vehicle Signals

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

Parking brakeONLightsOFFIgnitionONReverseOFF	Vehicle speed	OFF
Ignition ON	•	
0	0	- · ·
	0	•
Side view Switch -		-
Room Lamp OFF	Room Lamp	OFF

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#### < FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

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

#### Speaker Test

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

System Diagnostic Menu≻ <sub>Spe</sub> Speaker Testing Left Front Tweeter Speaker Settings 22	Aker Test Back
	JSNIA2178Z

Navigation STEERING ANGLE ADJUSTMENT

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

S	System Diagnosti	C Menu⊳Steering Angle_ Steering Angle_
\\		
$  \rangle$	Left turn	(
	Right turn	(
	Set	
11/		
		1/3
		JSNIA2179Z

#### SPEED CALIBRATION

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

System Diagnostic Menu > Speed Calibration Back
Speed Calibration (-2.5%)+>
Set
// // ⑧
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JSNIA2180Z

#### < FUNCTION DIAGNOSIS >

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#### Error History

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

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

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

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

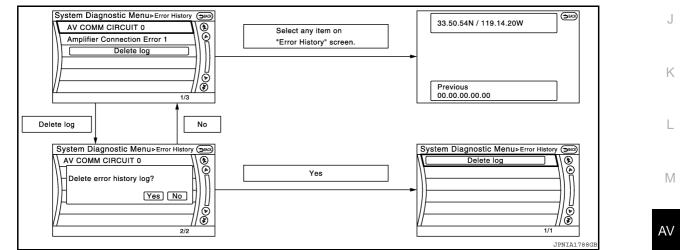
Count up method A

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

#### Count up method B

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

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



Error item

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detect- ed.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts accord- ing to the diagnosis results. Refer to <u>AV-317, "CONSULT - III Function</u> ( <u>MULTI AV)"</u> .

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#### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Error item	Description	Possible malfunction factor/Action to take	
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.		
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.		
FLASH-ROM Error Of Control Unit			
Connection Of Gyro	-	Poplace the AV control unit if the malfune	
Connection of G Sensor	-	Replace the AV control unit if the malfunc- tion occurs constantly.	
CAN Controller Memory Error	A)/ control unit molfunction is data at a		
Bluetooth Module Connection Error	AV control unit malfunction is detected.		
Sub CPU Connection Error	-		
iPod authentification chip error	-		
Audio connection error	-		
DSP Connection Error		• If a disc can be played, then there is a	
DSP Communication Error	AV control unit malfunction is detected.	<ul><li>possibility of the detection of a temporary malfunction.</li><li>Replace the AV control unit if the malfunction occurs constantly.</li></ul>	
HDD Connection Error			
HDD Read Error	-	<ul> <li>If the music box function has no malfunc- tions, then there is a possibility of the de-</li> </ul>	
HDD Write Error	AV control unit malfunction is detected.	tection of a temporary malfunction.	
HDD Communication Error	-	<ul> <li>Replace the AV control unit if the mal- function occurs constantly.</li> </ul>	
HDD Access Error	-	function occurs constantly.	
GPS Communication Error		An intermittent error caused by strong radio	
GPS ROM Error	-	interference may be detected unless any symptom (GPS reception error, etc.) oc-	
GPS RAM Error	GPS malfunction is detected.	curs.	
GPS RTC Error		Replace the AV control unit if the malfunc- tion occurs constantly.	
Unfinished configuration	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.	
USB Controller Communication Error	USB connection malfunction is detected.	Check that the connection to the USB con- nector is normal.	
DVD Mechanism Communication Error	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>	
USB electric current Error	Detection of over current in USB interface.	Check USB harness between the AV con- trol unit and USB interface.	
GPS Antenna Error	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.	

Vehicle CAN Diagnosis

- CAN communication status and error counter is displayed.
- The error counter displays "OK" if any malfunction was not detected in the past and displays "0" if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle. The upper limit of the counter is 39.
- The error counter is erased if "Reset" is pressed.

Items	Display (Current)	Malfunction counter (Past)
Rx(ECM)	OK / ???	OK / 0 – 39

System Diag	nostic M	enu ⊳ vehi	cle CAN Dia 🗩
Signal	Status	Count.	
Rx(ECM)		OK	
· /			
			Reset
(	<u> </u>		

< FUNCTION DIAGNOSIS >

#### NOTE:

"???" indicates UNKWN

AV COMM Diagnosis

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

Hands-Free Phone

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

System Diagnostic Menu >Hands-free phone Adjustment

System Diagnostic Menu> Camera Cont.

Alter/Confirm Configuration Reset Configuration

Camera Syst Type

Correct Draw Line Of Rear View Camera

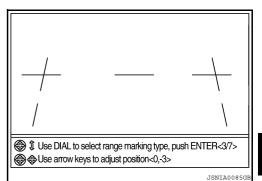
[BOSE AUDIO WITH NAVIGATION]

Camera

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

Correct Draw Line of Rear View Camera

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



Alter/Confirm Configuration

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

#### Configuration list

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

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Rear Camera

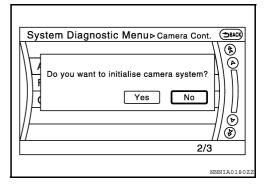
1/3

#### < FUNCTION DIAGNOSIS >

Setting item	Setting	Setting item	Setting
Rear Coeff. P2	0.0000000	Side Coeff. F	0.0000000
Rear Coeff. C1	0.0000000	Side Coeff. P1	0.0000000
Rear Coeff. C2	0.0000000	Side Coeff. P2	0.0000000
Rear Coeff. D1	0.0000000	Side Coeff. C1	0.0000000
Rear Coeff. D2	0.0000000	Side Coeff. C2	0.0000000
Car Width	0.0000000	Side Coeff. D1	0.0000000
Rear Offset	0.0000000	Side Coeff. D2	0.0000000
Rear Height	0.0000000	Side Offset	0.0000000
Rear L/R Angle	0.0000000	Overall Height	0.0000000
Rear Up/Dn Angle	0.0000000	Side L/R Angle	0.0000000
Rear Roll Angle	0.0000000	Side Up/Dn Angle	0.0000000
Bumper Rear Dist.	0.0000000	Side Roll Angle	0.0000000
Bumper Rear Ax Dist	0.0000000	Side Front End Dist	0.0000000
Steer. Max Angle	0.0000000	Total Width	0.0000000
Min. Turning Red.	0.0000000	—	—

**Reset Configuration** 

• Configuration stored in the AV control unit can be initialized.



Camera Syst Type • Type of camera system is selectable.

System Diagnostic Menu ⊳ Camera Syst Type (Эвас)
System Diagnostic Menu D camera syst Type Concerned
Without Camera •ON
With Rearview Camera • ON
With Rear + Sideview Camera • ON
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- Change Channel
- Any necessary channels required to receive traffic information from the satellite radio system can be set.
- Change Application ID

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

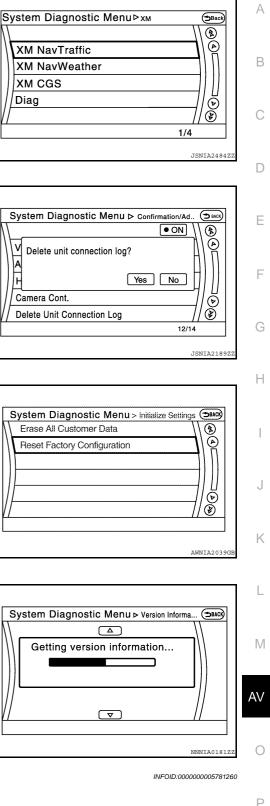
XM NavTraffic XM NavWeather XM CGS Diag

Camera Cont.

Erase All Customer Data

#### < FUNCTION DIAGNOSIS >

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



**Delete Unit Connection Log** 

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

**Initialize Settings** 

Version Information

"Erase All Customer Data" and "Reset Factory Configuration" are possible.

**CAUTION:** 

- Never perform Reset Factory Configuration except when configuration is unsuccessful.
- Factory Configuration Initialize requires configuration. For details, refer to AV-307, "Description".

System Diagnostic Menu > Version Informa... Getting version information... 

# CONSULT - III Function (MULTI AV)

Version information of the AV control unit is displayed.

## APPLICATION ITEMS

CONSULT-III performs the following functions via the communication with the AV control unit.

Diagnosis mode	Description
Ecu Identification	The part number of AV control unit can be checked.
Self Diagnostic Result	Performs a diagnosis on the AV control unit and a connection diagnosis for the communication circuit of the Multi AV system, and displays the current and past malfunctions collectively.

#### < FUNCTION DIAGNOSIS >

[BOSE AUDIO WITH NAVIGATION]

Diagnosis mode	Description
Data Monitor	The diagnosis of vehicle signal that is input to the AV control unit can be performed.
Configuration	<ul><li>Read and save the vehicle specification.</li><li>Write the vehicle specification when replacing AV control unit.</li></ul>

#### **AV Communication**

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

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

#### ECU IDENTIFICATION

The part number of AV control unit is displayed.

#### SELF DIAGNOSIS RESULT

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

#### Self-diagnosis Results Display Item

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts ac- cording to the diagnosis results. Refer to <u>AV-321, "Diagnosis Procedure"</u>
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	
Cont Unit [U1200]		
GYRO NO CONN [U1201]		Deploce the AV control with if the moliting
G-SENSOR NO CONN [U1202]		<ul> <li>Replace the AV control unit if the malfunction occurs constantly.</li> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>
CAN CONT [U1216]	AV control unit malfunction is detected.	
BLUETOOTH MODULE [U1217]	AV control unit manufaction is detected.	
SUB CPU CONN [U1228]		
iPod CERTIFICATION [U1229]		
Built-in AUDIO CONN [U122E]		
HDD CONN [U1218]		
HDD READ [U1219]		
HDD WRITE [U121A]	AV control unit malfunction is detected.	
HDD COMM [U121B]		
HDD ACCESS [U121C]		
GPS COMM [U1204]		An intermittent error caused by strong ra-
GPS ROM [U1205]		dio interference may be detected unless any symptom (GPS reception error, etc.)
GPS RAM [U1206]	GPS malfunction is detected.	occurs.
GPS RTC [U1207]		Replace the AV control unit if the malfunc- tion occurs constantly.
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB con- nector is normal.

#### < FUNCTION DIAGNOSIS >

# [BOSE AUDIO WITH NAVIGATION]

Error item	Description	Possible malfunction factor/Action to take
DSP CONN [U121D]		• If a disc can be played, then there is a possibility of the detection of a tempo-
DSP COMM [U121E]	AV control unit malfunction is detected.	<ul><li>rary malfunction.</li><li>Replace the AV control unit if the mal- function occurs constantly.</li></ul>
DVD COMM [U1227]	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly.</li> </ul>
CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with CONSULT- III.
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
USB OVERCURRENT [U1263]	Detection of over current in USB connect- er.	Check USB harness between the AV con- trol unit and USB connector.

#### DATA MONITOR

ALL SIGNALS

• Displays the status of the following vehicle signals inputted into the AV control unit.

• For each signal, actual signal can be compared with the condition recognized on the system.

Display Item	Display	Vehicle status	Remarks	
VHCL SPD SIG	On	Vehicle speed >0 km/h (0 MPH)		
VICE SPD SIG	Off	Vehicle speed =0 km/h (0 MPH)	Changes in indication may be delayed. This is	
PKB SIG	On	Parking brake is applied.	normal.	
PKB 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.		
	Off	Expose the auto light optical sensor to light when the light SW is OFF or ON.		
	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	<ul> <li>Changes in indication may be delayed. This normal.</li> </ul>	
SIDE VIEW SW	Off	This item is displayed, but cannot be monitored.	_	
ROOM LAMP	Off	This item is displayed, but not used.	_	

#### SELECTION FROM MENU

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

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

## CONFIGURATION

Configuration has three functions as follows.

Function	Description	
READ CONFIGURATION	<ul><li>Reads the vehicle configuration of current AV control unit.</li><li>Saves the read vehicle configuration.</li></ul>	
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.	
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.	

# **COMPONENT DIAGNOSIS** А **U1000 CAN COMM CIRCUIT** Description INFOID:000000005430291 В Refer to AV-270, "System Description". **DTC** Logic С INFOID:000000005430292 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. Ε **Diagnosis Procedure** INFOID:000000005430293 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-17, "Trouble Diagnosis Flow Chart". Н Κ Μ AV

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# **U1010 CONTROL UNIT (CAN)**

## < COMPONENT DIAGNOSIS >

# U1010 CONTROL UNIT (CAN)

## Description

Refer to LAN-9, "Description".

**DTC** Logic

INFOID:000000005430295

INFOID:000000005430296

INFOID:000000005430294

#### 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-17, "Trouble Diagnosis Flow Chart".

**Revision: September 2009** 

# < COMPONENT DIAGNOSIS >

# U1200 AV CONTROL UNIT

# Description

Refer to AV-270, "System Description".

# DTC Logic

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-462</u> , "Removal and Instal- lation".	D
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INFOID:000000005430298

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## < COMPONENT DIAGNOSIS >

# U1201 AV CONTROL UNIT

# Description

Refer to AV-270, "System Description".

DTC Logic

INFOID:000000005430300

INFOID:000000005430299

# 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-462, "Removal and Instal- lation"</u> .

### **U1202 AV CONTROL UNIT**

#### < COMPONENT DIAGNOSIS >

### **U1202 AV CONTROL UNIT**

INFOID:000000005781261

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### DTC Logic

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor	D
U1202	G-SENSOR NO CONN [U1202]	AV control unit malfunction is detected.	Replace the AV control unit if the mal- function occurs constantly. Refer to AV-462, "Removal and Installation".	С

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## U1204 GPS COMM

### Description

Refer to AV-270, "System Description".

DTC Logic

INFOID:000000005430302

INFOID:000000005430301

#### 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-462, "Removal and Instal-</u> lation".

### U1205 GPS ROM

### Description

Refer to AV-270. "System Description".

### DTC Logic

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-462</u> , "Removal and Instal- lation".	D
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AV-327

INFOID:000000005430303

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INFOID:000000005430304

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### U1206 GPS RAM

### Description

Refer to AV-270, "System Description".

DTC Logic

INFOID:000000005430306

INFOID:000000005430305

### 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-462, "Removal and Instal-</u> lation".

## U1207 GPS RTC

### Description

Refer to AV-270, "System Description".

### DTC Logic

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-462</u> , " <u>Removal and Instal- lation</u> ".	D
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### U1216 AV CONTROL UNIT

### Description

Refer to AV-270, "System Description".

DTC Logic

INFOID:000000005430340

INFOID:000000005430339

#### 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-462</u> , "Removal and Instal- lation".

### **U1217 AV CONTROL UNIT**

#### < COMPONENT DIAGNOSIS >

### U1217 AV CONTROL UNIT

### Description

Refer to AV-270, "System Description".

DTC Logic

### DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition	Action to take
U1217	BLUETOOTH CONN [U1217]	An internal malfunction is detected in AV control unit.	Replace AV control unit. Refer to <u>AV-462</u> , "Removal and Instal- lation".

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INFOID:000000005430342

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#### U1218 AV CONTROL UNIT [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

### U1218 AV CONTROL UNIT

### DTC Logic

INFOID:000000005781262

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to <u>AV-462</u>, "<u>Removal and Installation</u>".</li> </ul>

### **Diagnosis Procedure**

INFOID:000000005781263

## **1.**CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to <u>AV-462, "Removal and Installation"</u>.

### **U1219 AV CONTROL UNIT**

#### < COMPONENT DIAGNOSIS >

### **U1219 AV CONTROL UNIT**

### DTC Logic

INFOID:000000005781264

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DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to <u>AV-462</u>, "<u>Removal and Installation</u>".</li> </ul>
liagn	osis Procedure		INFOID:000000005781265
Ũ	OSIS Procedure	NCTION	INFOID:00000005781265
.CHE	CK MUSIC BOX FU		INFOID:000000005781265
.CHE	CK MUSIC BOX FUN		
.CHE <u>musi</u> (ES	CK MUSIC BOX FUN	? be detected intermittently.	
.CHE <u>musi</u> ′ES	CK MUSIC BOX FUN	? be detected intermittently.	
.CHE <u>musi</u> /ES	CK MUSIC BOX FUN	? be detected intermittently.	

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#### U121A AV CONTROL UNIT [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

### **U121A AV CONTROL UNIT**

### DTC Logic

INFOID:000000005781266

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to <u>AV-462</u>, "<u>Removal and Installation</u>".</li> </ul>

### **Diagnosis Procedure**

INFOID:000000005781267

## **1.**CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to <u>AV-462, "Removal and Installation"</u>.

### **U121B AV CONTROL UNIT**

#### < COMPONENT DIAGNOSIS >

### U121B AV CONTROL UNIT

### DTC Logic

INFOID:000000005781268

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DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-462, "Removal and Installation".</li> </ul>
Diagn	osis Procedure		INFOID:00000005781269
1.сне	CK MUSIC BOX FUN	ICTION	
YES	>> Malfunction may	$\frac{?}{2}$ be detected intermittently.	tallation"
	>> Malfunction may		<u>tallation"</u> .
	>> Malfunction may	be detected intermittently.	<u>tallation"</u> .
	>> Malfunction may	be detected intermittently.	<u>tallation"</u> .
	>> Malfunction may	be detected intermittently.	<u>tallation"</u> .
YES NO	>> Malfunction may	be detected intermittently.	<u>tallation"</u> .

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#### U121C AV CONTROL UNIT [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

### **U121C AV CONTROL UNIT**

### DTC Logic

INFOID:000000005781270

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	<ul> <li>If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to <u>AV-462</u>, "<u>Removal and Installation</u>".</li> </ul>

### **Diagnosis Procedure**

INFOID:000000005781271

### **1.**CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to <u>AV-462, "Removal and Installation"</u>.

### **U121D AV CONTROL UNIT**

#### < COMPONENT DIAGNOSIS >

### **U121D AV CONTROL UNIT**

### DTC Logic

INFOID:000000005781272

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DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor	
U121D	DSP CONN [U121D]	AV control unit malfunction is detected.	<ul> <li>If a disc can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to AV-462, "Removal and Installation".</li> </ul>	C
Diagn	osis Procedure		INFOID:00000005781273	Е
<b>1.</b> CHE	CK PLAYBACK OF A	DISK (CD)		

#### Can a disk (CD) be played?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to AV-462, "Removal and Installation".

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#### U121E AV CONTROL UNIT [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

### **U121E AV CONTROL UNIT**

### DTC Logic

INFOID:000000005781274

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	AV control unit malfunction is detected.	<ul> <li>If a disc can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to <u>AV-462</u>, "<u>Removal and Installation</u>".</li> </ul>

### **Diagnosis Procedure**

INFOID:000000005781275

### **1.**CHECK PLAYBACK OF A DISK (CD)

#### Can a disk (CD) be played?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to <u>AV-462, "Removal and Installation"</u>.

### **U1225 AV CONTROL UNIT**

### < COMPONENT DIAGNOSIS >

### U1225 AV CONTROL UNIT

### DTC Logic

DTC DETECTION LOGIC

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

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[BOSE AUDIO WITH NAVIGATION]

INFOID:000000005779661

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#### U1227 AV CONTROL UNIT [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

### U1227 AV CONTROL UNIT

### DTC Logic

INFOID:000000005781276

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1227	DVD COMM [U1227]	AV control unit malfunction is detected.	<ul> <li>If DVD can be played, then there is a possibility of the detection of a temporary malfunction.</li> <li>Replace the AV control unit if the malfunction occurs constantly. Refer to <u>AV-462</u>, "<u>Removal and Installation</u>".</li> </ul>

### **Diagnosis Procedure**

INFOID:000000005781277

### **1.**CHECK PLAYBACK OF A DISK (DVD)

#### Can a disc (DVD) be played?

YES >> Malfunction may be detected intermittently.

NO >> Replace AV control unit. Refer to <u>AV-462, "Removal and Installation"</u>.

### **U1228 AV CONTROL UNIT**

### < COMPONENT DIAGNOSIS >

### U1228 AV CONTROL UNIT

### DTC Logic

DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-III	DTC detection condition	Possible malfunction factor	С
U1228	SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to <u>AV-462, "Removal and Installation"</u> .	D

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[BOSE AUDIO WITH NAVIGATION]

INFOID:000000005781278

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### **U1229 AV CONTROL UNIT**

#### < COMPONENT DIAGNOSIS >

### U1229 AV CONTROL UNIT

### DTC Logic

INFOID:000000005779662

#### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-III	DTC detection condition	Possible malfunction factor
U1229	iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to <u>AV-462</u> , " <u>Removal</u> and Installation".

### **U122A AV CONTROL UNIT**

#### < COMPONENT DIAGNOSIS >

### **U122A AV CONTROL UNIT**

### DTC Logic

INFOID:000000005781279

Diagno:	CONFIG UNFINISH [U122A] sis Procedure	The writing of configuration data is incomplete.	Write configuration data with "MULTI
.PERF	sis Procedure		AV" of CONSULT-III.
			INFOID:00000005781280
Vhen U1	ORM THE SELF-DI	AGNOSIS	
	22A is detected, write	e configuration data with "MULTI AV" of CONS	SULT-III.
:	>> Write configuration	on data with "MULTI AV" of CONSULT-III. Ref NIT) : Special Repair Requirement".	er to <u>AV-268, "CONFIGURATION</u>

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### **U122E AV CONTROL UNIT**

#### < COMPONENT DIAGNOSIS >

### **U122E AV CONTROL UNIT**

### DTC Logic

INFOID:000000005779668

### DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-III	DTC detection condition	Possible malfunction factor
U122E	Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to <u>AV-462</u> , " <u>Removal</u> and Installation".

### U1244 GPS ANTENNA

### [BOSE AUDIO WITH NAVIGATION]

U1244 GPS ANTENNA							
Descriptio	Description						
Refer to AV-	270, "System Descrip	otion".	В				
DTC Logi	С	INFOID:0000000543034	5				
DTC DETE	CTION LOGIC		С				
DTC	CONSULT-III display	Detection condition	_				
U1244	GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	D				
Diagnosis	Procedure	INFOID:0000000543034	7 E				
Regarding V ing Diagram		nation, refer to <u>AV-409, "COUPE : Wiring Diagram"</u> or <u>AV-429, "SEDAN : Wir</u> -	F				
<b>1.</b> GPS AN	TENNA CHECK		G				
•		a feeder for damage or poor connection.					
	<u>antenna and feeder cl</u> GO TO 2	lean and undamaged?	Н				
	Repair or replace ma	Ifunctioning parts.					
2.CHECK	AV CONTROL UNIT \	VOLTAGE	I				
2. Check	nition switch ON. voltage between AV c ) (coupe) terminal 10	control unit connector M90 (sedan) 5 and ground.	J				
73 -	Ground	: Approx. 5V					
-	e reading as specified Replace GPS antenr	d? na. Refer to <u>AV-473, "Removal and</u>	K				
NO >>	Installation". Replace AV control u Installation".	nit. Refer to <u>AV-462, "Removal and</u>	L				
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< COMPONENT DIAGNOSIS >

### < COMPONENT DIAGNOSIS > U1263 USB

# DTC Logic

INFOID:000000005779665

[BOSE AUDIO WITH NAVIGATION]

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

### **Diagnosis Procedure**

INFOID:000000005779666

### 1. CHECK USB HARNESS

Visually check USB harness.

Is the inspection result normal?

YES >> Replace AV control unit. Refer to <u>AV-462, "Removal and Installation"</u>.

NO >> Replace USB harness.

#### U1310 AV CONTROL UNIT [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

### U1310 AV CONTROL UNIT

DTC Logic

INFOID:00000000578	31281

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DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor	_
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit. If the mal- function occurs constantly. Refer to AV-462, "Removal and Installation".	С

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# POWER SUPPLY AND GROUND CIRCUIT (COUPE) < COMPONENT DIAGNOSIS > [BOSE AUDIO WITH NAVIGATION]

### POWER SUPPLY AND GROUND CIRCUIT (COUPE) AV CONTROL UNIT

## AV CONTROL UNIT : Diagnosis Procedure

INFOID:000000005779669

Regarding Wiring Diagram information, refer to AV-409. "COUPE : Wiring Diagram".

### 1.CHECK FUSES

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

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

#### Are the fuses OK?

YES >> GO TO 2.

٥V	>> If fuse is blown,	be sure to eliminate	cause of malfunction	before installing new fuse.
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### 2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect AV control unit connectors M119 and M121.

 Check voltage between the AV control unit connectors M119 and M121 and ground.

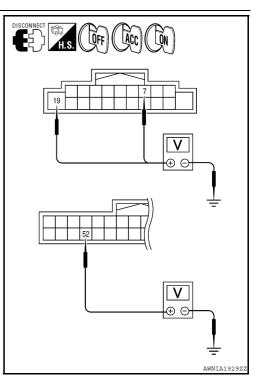
	`				
(+)		(-)	OFF	ACC	ON
Connector	Terminal	()	011	100	<u>on</u>
M119	7	Ground	0V	Battery voltage	Battery voltage
	19	Ground	Battery voltage	Battery voltage	Battery voltage
M121	52	Ground	0V	0V	Battery voltage

Are the voltage results as specified?

YES >> GO TO 3.

NO

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



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

### POWER SUPPLY AND GROUND CIRCUIT (COUPE)

#### < COMPONENT DIAGNOSIS >

#### 1. Turn ignition switch OFF.

2. Check continuity between AV control unit harness connector M119 and ground.

-	(+)		(-)	Continuity	
	Connector	Terminal	(-)	Continuity	
	M119	20	Ground	Yes	

Are the continuity results as specified?

YES >> Inspection End.

NO >> Repair AV control unit ground.

BOSE SPEAKER AMP

### BOSE SPEAKER AMP : Diagnosis Procedure



### 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	Ballery 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

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

(1	+)	– (-) Volta	Voltage (approx.)
Connector	Terminal		voltage (approx.)
B122	50	Ground	Battery voltage
0122	51	Ground	Ballery Vollage

#### Are the voltage readings as specified?

YES >> GO TO 3

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

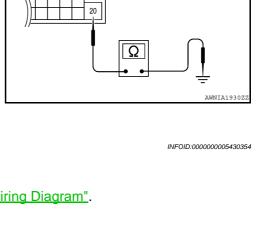
#### $\mathbf{3.}$ CHECK GROUND CIRCUIT

- 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.





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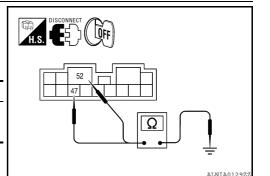
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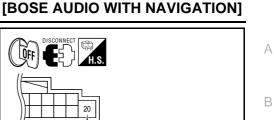


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### POWER SUPPLY AND GROUND CIRCUIT (COUPE)

#### < COMPONENT DIAGNOSIS >

#### NO >> Repair harness or connector. REAR VIEW CAMERA

### **REAR VIEW CAMERA : Diagnosis Procedure**

Regarding Wiring Diagram information, refer to <u>AV-409, "COUPE : Wiring Diagram"</u>.

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

- 1. Turn ignition switch ON.
- 2. Shift transmission into Reverse.
- Check voltage between rear view camera harness connector T7 and ground.

(+)		(-)	Transmission	Value (Approx.)
Connector	Terminal	()	position	value (Applox.)
T7	1	Ground	Reverse	6V

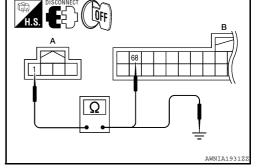
Is voltage reading approximately 6 volts?

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 AV control unit connectors.
- Check continuity between rear view camera harness connector T7 (A) terminal 1 and AV control unit harness connector M122 (B) terminal 68.



1	A		В	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
T7	1	M122	68	Yes	
4 Charles	1 Charly continuity between recruitivy compare homeon comparts				

 Check continuity between rear view camera harness connector T7 (A) terminal 1 and ground.

	٩		Continuity	
Connector	Connector Terminal		Continuity	
T7	1	Ground	No	

Are continuity test results as specified?

YES >> GO TO 3.

NO >> Repair harness or connector.

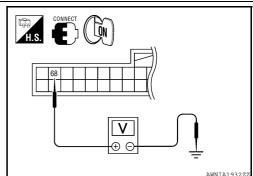
### 3. CHECK POWER SUPPLY CIRCUIT (AV CONTROL UNIT SIDE)

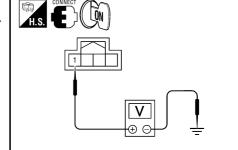
- 1. Connect rear view camera control unit harness connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector M122 and ground.

(+)		(-)	Transmission	Value (Approx.)
Connector	Terminal	(-)	position	
M122	68	Ground	Reverse	6V

Is voltage reading approximately 6 volts?

YES >> Inspection End.





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#### POWER SUPPLY AND GROUND CIRCUIT (COUPE) [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

NO >> Replace AV control unit. Refer to <u>AV-462</u>, "<u>Removal and Installation</u>".

### **4.**CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect rear view camera harness connector.
- Check continuity between rear view camera harness connector T7 terminal 2 and ground.

Connector	Terminal		Continuity
T7	2	Ground	Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

#### MICROPHONE

### **MICROPHONE : Diagnosis Procedure**

Regarding Wiring Diagram information, refer to AV-409, "COUPE : Wiring Diagram".

### 1. CHECK POWER SUPPLY CIRCUIT

Check voltage between microphone harness connector R7 terminal 4 and ground.

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

Is approximately 5V present?

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

## 2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

- 1. Turn ignition switch OFF.
- 2. Disconnect microphone and AV control unit harness connectors.
- Check continuity between microphone harness connector R7 (A) terminal 4 and AV control unit harness connector M121 (B) terminal 44.

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
R7	4	M121	44	Yes

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

A			Continuity
Connector Terminal			Continuity
R7	4	Ground	No

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

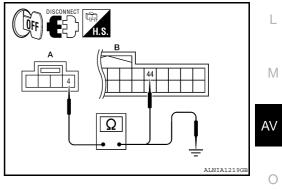
YES >> Replace the AV control unit. Refer to <u>AV-462</u>, "Removal and Installation".

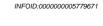
NO >> Repair harness or connector.

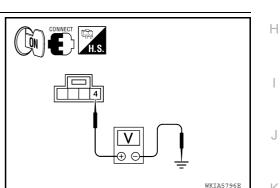
#### 3.CHECK GROUND CIRCUIT



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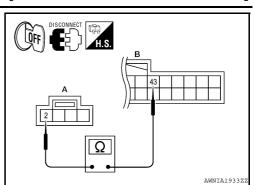
#### POWER SUPPLY AND GROUND CIRCUIT (COUPE) IAGNOSIS > [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

#### 1. Turn ignition switch OFF.

- 2. Disconnect microphone harness connector R7 and AV control unit harness connector M121.
- Check continuity between microphone harness connector R7 (A) terminal 2 and AV control unit harness connector M121 (B) terminal 43.

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
R7	2	M121	43	Yes



#### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

# POWER SUPPLY AND GROUND CIRCUIT (SEDAN) < COMPONENT DIAGNOSIS > [BOSE AUDIO WITH NAVIGATION]

POWER SUPPLY AND GROUND CIRCUIT (SEDAN) AV CONTROL UNIT

#### **AV CONTROL UNIT : Diagnosis Procedure**

Regarding Wiring Diagram information, refer to AV-429, "SEDAN : Wiring Diagram".

### **1.**CHECK FUSES

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

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

Are the fuses OK?

YES >> GO TO 2.

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

2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect AV control unit connectors M100 and M102.

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

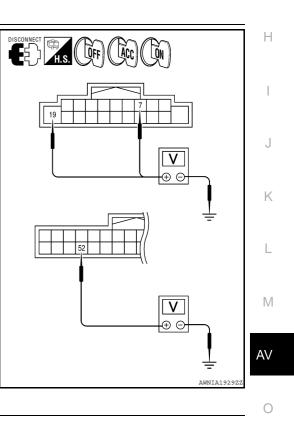
(+)		(-)	OFF	ACC	ON
Connector	Terminal	()	OTT	100	ON
M100	7	Ground	0V	Battery voltage	Battery voltage
WI TOO	19	Ground	Battery voltage	Battery voltage	Battery voltage
M102	52	Ground	0V	0V	Battery voltage

Are the voltage results as specified?

YES >> GO TO 3.

NO

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



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

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#### POWER SUPPLY AND GROUND CIRCUIT (SEDAN) [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

#### Turn ignition switch OFF. 1.

2. Check continuity between AV control unit harness connector M100 and ground.

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

Are the continuity results as specified?

>> Inspection End. YES

NO >> Repair AV control unit ground.

BOSE SPEAKER AMP

### BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:000000005430360

Regarding Wiring Diagram information, refer to AV-429, "SEDAN : Wiring Diagram".

### 1.CHECK FUSE

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

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

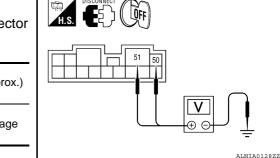
#### Are the fuses OK?

YES >> GO TO 2

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

### 2. CHECK POWER SUPPLY CIRCUIT

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



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

#### Are the voltage readings as specified?

YES >> GO TO 3

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

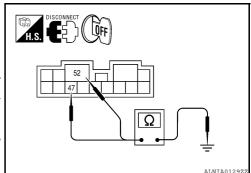
#### ${f 3.}$ CHECK GROUND CIRCUIT

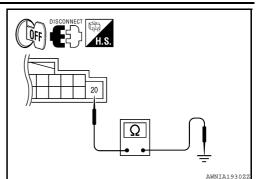
- Turn ignition switch OFF. 1.
- 2. Disconnect BOSE speaker amp connector.
- 3. Check continuity between BOSE speaker amp harness connector and ground.

Connector	Terminal	_	Continuity	
B122	47	Ground	Yes	
BIZZ	52	Crodina	Tes	

#### Are continuity test results as specified?

YES >> Inspection End.





#### POWER SUPPLY AND GROUND CIRCUIT (SEDAN) IAGNOSIS > [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

#### NO >> Repair harness or connector. REAR VIEW CAMERA

### **REAR VIEW CAMERA : Diagnosis Procedure**

Regarding Wiring Diagram information, refer to <u>AV-429, "SEDAN : Wiring Diagram"</u>.

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

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

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

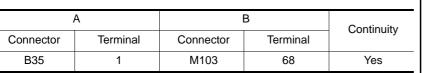
Is voltage reading approximately 6 volts?

YES >> GO TO 4.

NO >> GO TO 2.

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

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



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

	A		Continuity	
Connector	Terminal		Continuity	
B35	1	Ground	No	

Are continuity test results as specified?

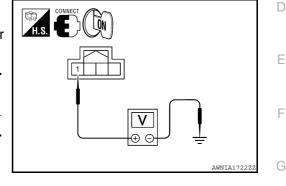
YES >> GO TO 3.

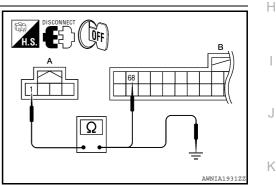
- NO >> Repair harness or connector.
- **3.**CHECK POWER SUPPLY CIRCUIT (AV CONTROL UNIT SIDE)
- 1. Connect rear view camera control unit harness connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between AV control unit harness connector M103 and ground.

(+)		(-)	Transmission	Value (Approx.)
Connector	Terminal	(-)	position	
M103	68	Ground	Reverse	6V

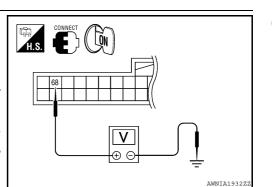
Is voltage reading approximately 6 volts?

YES >> Inspection End.









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### POWER SUPPLY AND GROUND CIRCUIT (SEDAN)

#### < COMPONENT DIAGNOSIS >

#### NO >> Replace AV control unit. Refer to <u>AV-462, "Removal and Installation"</u>.

### **4.**CHECK GROUND CIRCUIT

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

Connector	Connector Terminal		Continuity
B35	2	Ground	Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

#### MICROPHONE

### **MICROPHONE : Diagnosis Procedure**

Regarding Wiring Diagram information, refer to AV-429, "SEDAN : Wiring Diagram".

### **1.**CHECK POWER SUPPLY CIRCUIT

Check voltage between microphone harness connector R7 terminal 4 and ground.

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

Is approximately 5V present?

YES >> GO TO 3.

NO >> GO TO 2.

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

- 1. Turn ignition switch OFF.
- 2. Disconnect microphone and AV control unit harness connectors.
- Check continuity between microphone harness connector R7 (A) terminal 4 and AV control unit harness connector M102 (B) terminal 44.

	А		В	Continuity
Connector	Terminal	Connector Terminal		Continuity
R7	4	M102	44	Yes

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

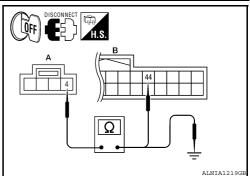
	A		Continuity	
Connector	Terminal		Continuity	
R7	4	Ground	No	

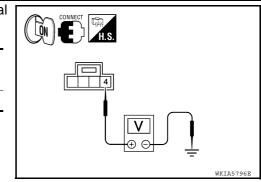
#### Are the continuity test results as specified?

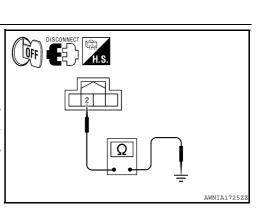
YES >> Replace the AV control unit. Refer to <u>AV-462, "Removal and Installation"</u>.

NO >> Repair harness or connector.

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







[BOSE AUDIO WITH NAVIGATION]

INFOID:000000005779674

#### POWER SUPPLY AND GROUND CIRCUIT (SEDAN) IAGNOSIS > [BOSE AUDIO WITH NAVIGATION]

#### < COMPONENT DIAGNOSIS >

#### 1. Turn ignition switch OFF.

- 2. Disconnect microphone harness connector R7 and AV control unit harness connector M102.
- Check continuity between microphone harness connector R7 (A) terminal 2 and AV control unit harness connector M102 (B) terminal 43.

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A		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
R7	2	M102	43	Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.



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### 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

INFOID:000000005430364

Regarding Wiring Diagram information, refer to AV-409. "COUPE : Wiring Diagram".

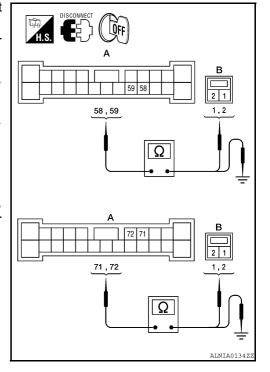
### **1.**HARNESS CHECK

- 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	
	58	D21	DOA	1	
B121	59		2	Yes	
DIZI	71	D121	1	Tes	
	72	DIZI	2		

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

	А		Continuity	
Connector	Terminal		Continuity	
	58		No	
B121	59	Ground		
DIZI	71			
	72			



#### Are continuity test results as specified?

YES >> GO TO 2

NO

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

Repair harness or connector.

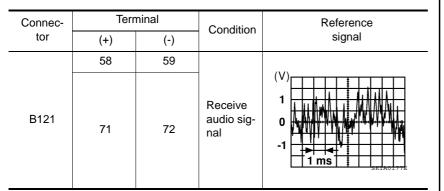
2.DOOR SPEAKER SIGNAL CHECK

INFOID:000000005430363

### DOOR SPEAKER (COUPE)

#### < 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 <u>AV-468</u>, "<u>Removal</u> and Installation".

NO >> GO TO 3

### **3.**HARNESS CHECK

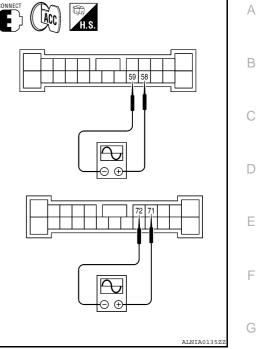
- 1. Disconnect AV control unit connector M119 and BOSE speaker amp. connector B121.
- Check continuity between audio unit harness connector M119 (A) and BOSE speaker amp. harness connector B121 (B).

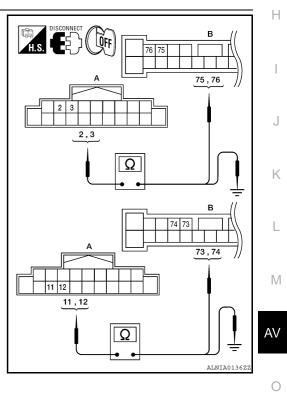
	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	B121	75	
M119	3		76	Yes
WITS	11		73	Tes
	12		74	

 Check continuity between AV control unit harness connector M119 (A) and ground.

		А		Continuity
-	Connector	Connector Terminal		Continuity
-		2	Ground	No
	M119	3		
	101119	11	Giouna	INO
		12	-	

# [BOSE AUDIO WITH NAVIGATION]





#### 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

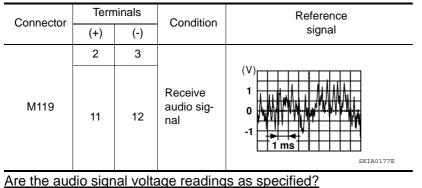
Revision: September 2009

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### DOOR SPEAKER (COUPE)

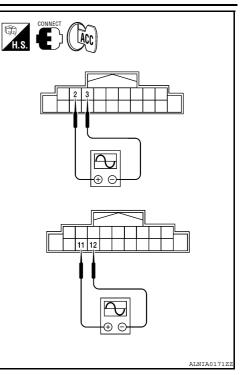
#### < COMPONENT DIAGNOSIS >

- 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-463</u>, <u>"Removal and Installation - Coupe"</u>.
- NO >> Replace AV control unit. Refer to <u>AV-462</u>, "<u>Removal and</u> <u>Installation</u>".

#### [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 В signals before sending them to the front door speakers using the audio signal circuits.

### **Diagnosis** Procedure

Regarding Wiring Diagram information, refer to AV-429, "SEDAN : Wiring Diagram".

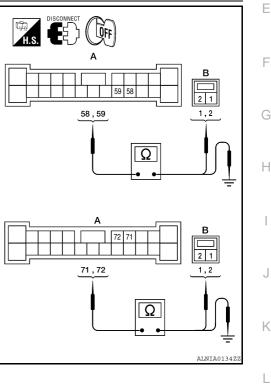
# **1.**HARNESS CHECK

- 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	
	58	D22	Doo	1	
B121	59		2	Yes	
	71	D400	1	Tes	
	72	D122	2		

Check continuity between BOSE speaker amp. harness connec-3. tor B121 (A) and ground.

-			1	
	A			Continuity
	Connector	Terminal		Continuity
_	B121	58		No
		59	Ground	
		71		
		72	1	



Are continuity test results as specified?

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

2.FRONT DOOR SPEAKER SIGNAL CHECK

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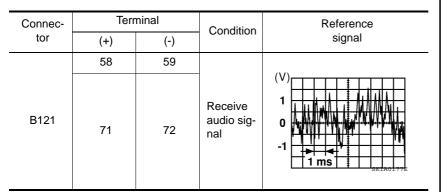
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[BOSE AUDIO WITH NAVIGATION]

### 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 <u>AV-468</u>, "<u>Removal</u> <u>and Installation</u>".

NO >> GO TO 3

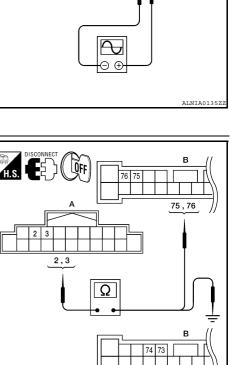
### **3.**HARNESS CHECK

- 1. Disconnect AV control unit connector M100 and BOSE speaker amp. connector B121.
- Check continuity between audio unit harness connector M100 (A) and BOSE speaker amp. harness connector B121 (B).

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	2	B121	75	
M100	3		76	Yes
	11		73	165
	12	†	74	

 Check continuity between AV control unit harness connector M100 (A) and ground.

		А		Continuity
	Connector	Terminal		
-	M100	2	Ground	No
		3		
		11		
		12		



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#### Are continuity test results as specified?

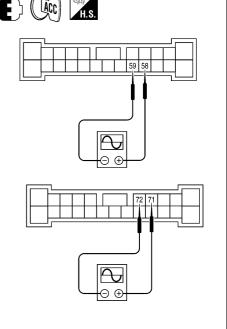
YES >> GO TO 4

NO

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

**4.**FRONT DOOR SPEAKER SIGNAL CHECK





[BOSE AUDIO WITH NAVIGATION]

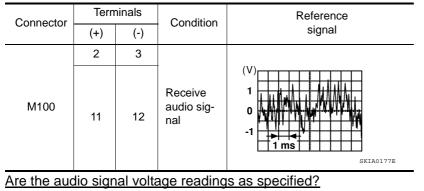
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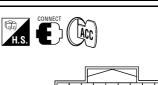
#### FRONT DOOR SPEAKER (SEDAN) [BOSE AUDIO WITH NAVIGATION]

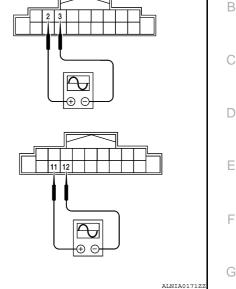
#### < COMPONENT DIAGNOSIS >

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



- YES >> Replace BOSE speaker amp. Refer to <u>AV-463.</u> <u>"Removal and Installation - Sedan"</u>.
- NO >> Replace AV control unit. Refer to <u>AV-462</u>, "<u>Removal and</u> <u>Installation</u>".





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### 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**

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INFOID:000000005430367

Regarding Wiring Diagram information, refer to AV-409. "COUPE : Wiring Diagram".

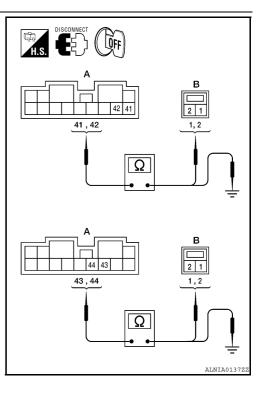
### **1.**HARNESS CHECK

- 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	N/C 4	1	
B122	42		2	Yes	
	44	M52	1	Tes	
	43		2		

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

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



Are continuity test results as specified?

YES >> GO TO 2

NO

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

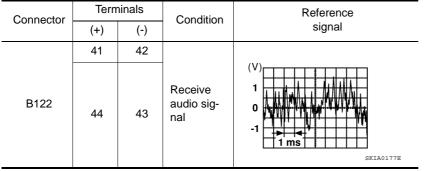
Repair harness or connector.

2.FRONT TWEETER SIGNAL CHECK

### 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 AV-466, "Removal and Installation".

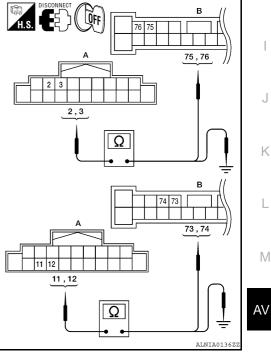
# **3.**HARNESS CHECK

- 1. Disconnect AV control unit connector M119 and BOSE speaker amp, connector B121.
- Check continuity between AV control unit harness connector (A) 2. M119 and BOSE speaker amp. harness connector B121 (B).

	A	В		
Connector	Terminal	Connector	Terminal	Continuity
	2	B121	75	
M119	3		76	Vac
	11		73	Yes
	12		74	

3. Check continuity between AV control unit harness connector B121 (A) and ground.

	A			Continuity
	Connector	Terminal		Continuity
	M119	2	Ground	No
		3		
IVI I 9	11	Giouna	NO	
		12		



#### Are continuity test results as specified?

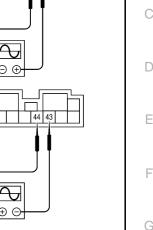
>> GO TO 4 YES

NO

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

**4.**FRONT TWEETER SIGNAL CHECK

[BOSE AUDIO WITH NAVIGATION]



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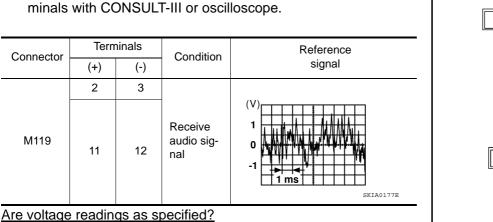
### **FRONT TWEETER (COUPE)**

#### < COMPONENT DIAGNOSIS >

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

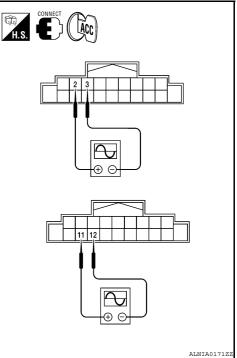
M119

Check the signal between AV control unit harness connector ter-4. minals with CONSULT-III or oscilloscope.



- YES >> Replace BOSE speaker amp. Refer to <u>AV-463,</u> "Removal and Installation - Coupe".
- NO >> Replace AV control unit. Refer to AV-462, "Removal and Installation".

#### [BOSE AUDIO WITH NAVIGATION]



# 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**

Regarding Wiring Diagram information, refer to AV-429. "SEDAN : Wiring Diagram".

# 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	I	В		
Connector	Terminal	Connector	Terminal		
	41	M106	M106	1	
B122	42		2	Yes	
DIZZ	44	M107	1	Tes	
	43	101107	2		

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

	Terminals				
	А		Continuity		
Connector	Terminal				
	41	Ground	No		
B122	42				
DIZZ	44	Ground			
	43	1			

#### 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



### 2010 Altima



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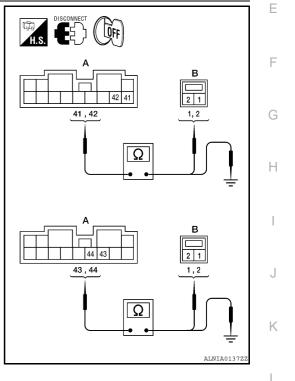
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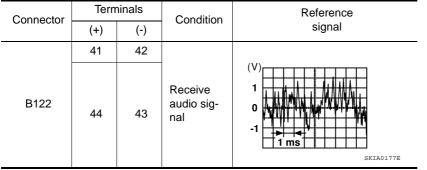
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### **TWEETER (SEDAN)**

#### < 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-466. "Removal</u> and Installation".

NO >> GO TO 3

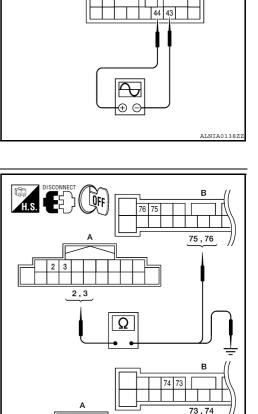
### **3.**HARNESS CHECK

- 1. Disconnect AV control unit connector M100 and BOSE speaker amp. connector B121.
- Check continuity between AV control unit harness connector (A) M100 and BOSE speaker amp. harness connector B121 (B).

Terminals				
	A		В	Continuity
Connector	Terminal	Connector	Terminal	
M100	2	B121	75	
	3		76	Yes
	11		73	163
	12	-	74	

 Check continuity between AV control unit harness connector B121 (A) and ground.

	А		Continuity
Connector	Terminal		
	2	Ground	No
M100	3		
MTOO	11		
	12		



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#### Are continuity test results as specified?

YES >> GO TO 4

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

Repair harness or connector.

**4.**TWEETER SIGNAL CHECK

# [BOSE AUDIO WITH NAVIGATION]

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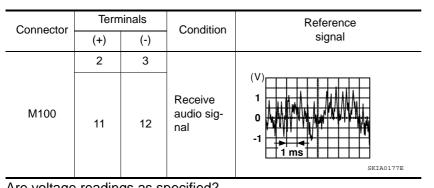
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### **TWEETER (SEDAN)**

#### < 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.

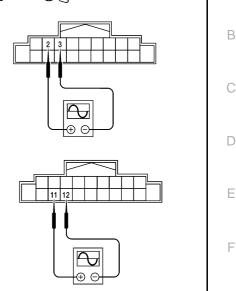


#### Are voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to <u>AV-463</u>. "Removal and Installation - Sedan".
- NO >> Replace AV control unit. Refer to <u>AV-462</u>, "<u>Removal and</u> <u>Installation</u>".

### [BOSE AUDIO WITH NAVIGATION]





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### CENTER SPEAKER

### Description

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

#### **Diagnosis** Procedure

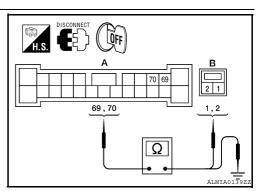
INFOID:000000005430372

Regarding Wiring Diagram information, refer to <u>AV-409</u>, "COUPE : Wiring Diagram" or <u>AV-429</u>, "SEDAN : Wiring Diagram".

### **1.**HARNESS CHECK

- Disconnect BOSE speaker amp. connector B121 and center speaker connector M151.
- 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	MITST	2	165



[BOSE AUDIO WITH NAVIGATION]

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

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

Are continuity test results as specified?

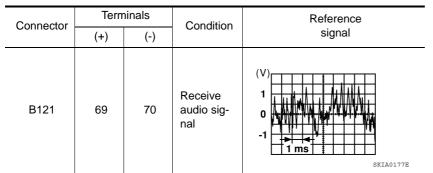
YES >> GO TO 2

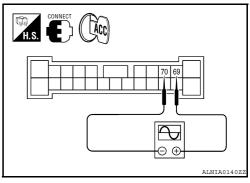
NO

>> • 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?

### **CENTER SPEAKER**

#### < COMPONENT DIAGNOSIS >

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YES >> Replace center speaker. Refer to AV-246, "Removal and Installation".

#### NO >> GO TO 3

# **3.**HARNESS CHECK

- 1. Disconnect audio unit connector M100 (Sedan) or M119 (Coupe) and BOSE speaker amp. connector B121.
- Check continuity between audio unit harness connector M100 2. (Sedan) or M119 (Coupe) (A) and BOSE speaker amp. harness connector B121 (B).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M100	2		75	
(Sedan) or	3	B121 -	76	Yes
M119	11		73	Tes
(Coupe)	12		74	

3. Check continuity between audio unit harness connector M100 (Sedan) or M119 (Coupe) (A) and ground.

	A		Continuity
Connector	Terminal		Continuity
M100	2		
(Sedan)	3	Ground	No
or M119	11	Giouna	INU
(Coupe)	12		

### R ŨFF 76 75.76 2 3 D 2,3 Ω 74 73 73,74 11 12 11,12 Ω Н ALNIA01362

#### Are continuity test results as specified?

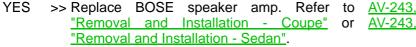
YES >> GO TO 4 NO

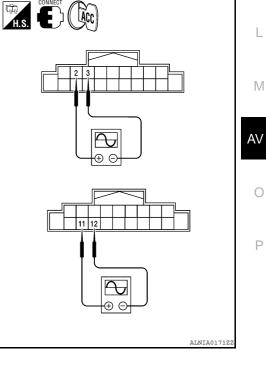
- >> Check connector housings for disconnected or loose terminals.
  - · Repair harness or connector.

#### **4**.CENTER SPEAKER SIGNAL CHECK

- 1. Connect audio unit connector and BOSE speaker amp. connector.
- 2. Turn ignition switch ACC.
- Push "POWER" switch. 3.
- Check the signal between audio unit harness connector M100 4. (Sedan) or M119 (Coupe) terminals with CONSULT-III or oscilloscope.

Connector	Terminals		Condition	Reference
Connector	(+)	(-)	Condition	signal
	2	3		
M100 (Sedan) or M119 (Coupe)	11	12	Receive audio sig- nal	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1
Are the audio signal voltage readings as specified?				
YES >>	Repla		SE speak	er amp. Refer to <u>AV-243,</u>





### **CENTER SPEAKER**

#### < COMPONENT DIAGNOSIS >

NO >> Replace audio unit. Refer to <u>AV-462, "Removal and Installation"</u>.

# **REAR TWEETER (COUPE)**

### 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 rear tweeters using the audio signal circuits.

#### **Diagnosis** Procedure

Regarding Wiring Diagram information, refer to AV-409, "COUPE : Wiring Diagram".

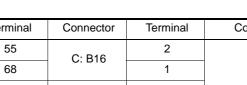
### **1**.HARNESS CHECK

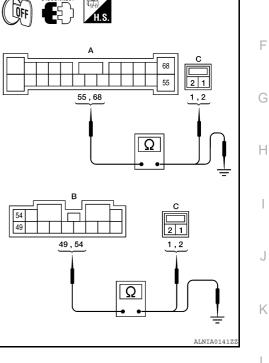
- 1. Disconnect BOSE speaker amp. connectors B121, B122 and suspect tweeter connector. 2.
- Check continuity between BOSE speaker amp. harness connectors B121 (A) and B122 (B) and suspect tweeter harness connector (C).

Connector	Terminal	Connector	Terminal	Continuity
A: B121	55	C: B16	2	
	68	0.010	1	Yes
B: B122	49	C: B100	2	163
	54	C. B100	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. D122	54			





Are the continuity test results as specified?

YES >> GO TO 2 NO

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

2.REAR TWEETER SIGNAL CHECK

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# **REAR TWEETER (COUPE)**

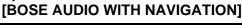
Reference

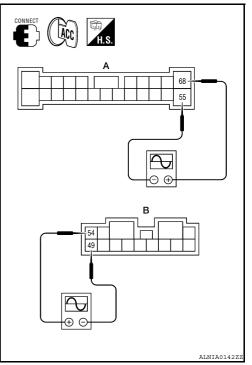
#### < COMPONENT DIAGNOSIS >

- 1. Connect BOSE speaker amp. connectors B121, B122 and suspect tweeter connector.
- 2. Turn ignition switch to ACC.

Terminals

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





# Connector Iteration Condition Reference signal A: B121 68 55 B: B122 54 49 Receive audio signal (V) 1 0 -1 B: B122 54 49

Is the audio signal voltage readings as specified?

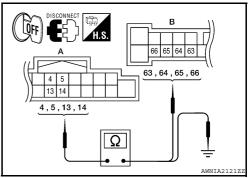
YES >> Replace suspect tweeter. Refer to <u>AV-470, "Removal</u> and Installation - Coupe".

NO >> GO TO 3.

### **3.**HARNESS CHECK

- 1. Disconnect AV control unit connector M119 and BOSE speaker amp. connector B121.
- Check continuity between AV control unit harness connector M119 (A) and BOSE speaker amp. harness connector B121 (B).

А		В		Continuity
Connector	Terminal	Connector Terminal		Continuity
	4	B121	64	
M119	5		63	Yes
WIT9	13		66	165
	14		65	



 Check continuity between AV control unit harness connector M119 (A) and ground.

	А		Continuity
Connector	Terminal		Continuity
	4	- Ground	No
M119	5		
WIT9	13		
	14		

#### 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 TWEETER SIGNAL CHECK

### **REAR TWEETER (COUPE)**

#### < COMPONENT DIAGNOSIS >

- 1. Connect AV control unit connector M119 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 M119 terminals with CONSULT-III or oscilloscope.

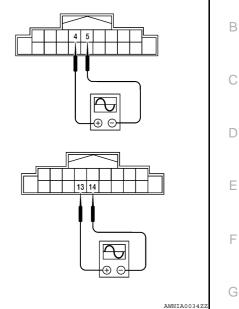
Connector	Term	ninals	Condition	Reference	
Connector	(+)	(-)	Condition	signal	
	4	5			
M119	13	14	Receive audio signal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	

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

- YES >> Replace BOSE speaker amp. Refer to <u>AV-463.</u> <u>"Removal and Installation - Coupe"</u>.
- NO >> Replace AV control unit. Refer to <u>AV-462</u>, "<u>Removal and</u> <u>Installation</u>".

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### 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

INFOID:000000005430376

Regarding Wiring Diagram information, refer to AV-429, "SEDAN : Wiring Diagram".

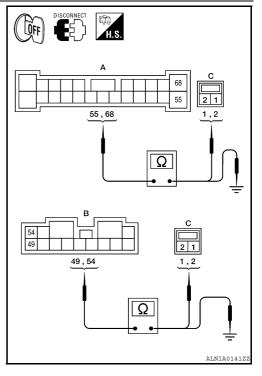
### **1.**HARNESS CHECK

- 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	
	68	0. 0202	1	Yes
B: B122	49	C: D302	2	165
	54	C. D302	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		NO	
B: B122	54			



Are the continuity test results as specified?

YES >> GO TO 2 NO >> • Check c

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

• Repair harness or connector.

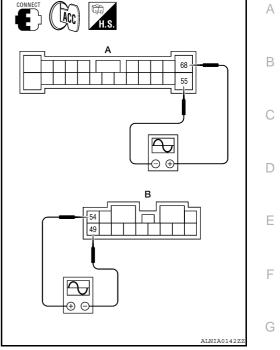
2.REAR DOOR SPEAKER SIGNAL CHECK

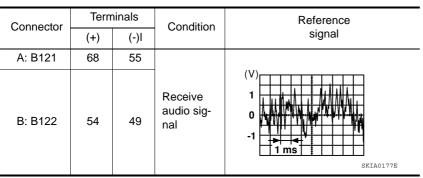
INFOID:000000005430375

### REAR DOOR SPEAKER (SEDAN)

#### < COMPONENT DIAGNOSIS >

- [BOSÉ AUDIO WITH NAVIGATION]
- Connect BOSE speaker amp. connectors B121, B122 and suspect speaker connector.
   Turn institute 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.





Is the audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to <u>AV-469</u>, "<u>Removal</u> and Installation - Sedan".

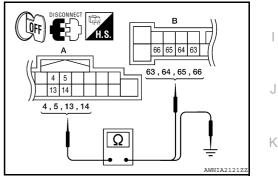
NO >> GO TO 3.

### **3.**HARNESS CHECK

1. Disconnect AV control unit connector M100 and BOSE speaker amp. connector B121.

2. Check continuity between AV control unit harness connector M100 (A) and BOSE speaker amp. harness connector B121 (B).

	A	В		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	4		64		
M100	5	B121	63	Yes	
	13		66	Tes	
	14		65		



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 Check continuity between AV control unit harness connector M100 (A) and ground.

	А		Continuity	
Connector	Terminal		Continuity	
	4		No	
M100	5	Ground		
WITCO	13	Giouna		
	14			

#### Are continuity test results as specified?

YES >> GO TO 4

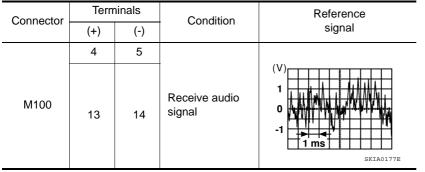
NO

- >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.
- **4.**REAR DOOR SPEAKER SIGNAL CHECK

### REAR DOOR SPEAKER (SEDAN)

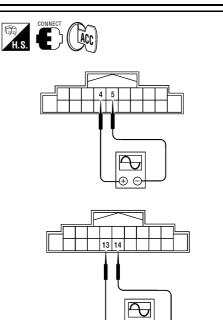
#### < COMPONENT DIAGNOSIS >

- [BOSÉ AUDIO WITH NAVIGATION]
- 1. Connect AV control unit connector M100 and BOSE speaker amp. connector B121.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between AV control unit harness connector M100 terminals with CONSULT-III or oscilloscope.



Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to <u>AV-463.</u> <u>"Removal and Installation - Sedan"</u>.
- NO >> Replace AV control unit. Refer to <u>AV-462</u>, "<u>Removal and</u> <u>Installation</u>".



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# SUBWOOFER (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 subwoofers using the audio signal circuits.

#### **Diagnosis** Procedure

Regarding Wiring Diagram information, refer to AV-409, "COUPE : Wiring Diagram".

### **1**.HARNESS CHECK

- 48 53,48 1,2 Ω 46 45 45,46 Ω
- 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	
Connector	Terminal	Connector	Terminal	Continuity
	53	B25	1	
B122	48	D25	2	Yes
	45	B47	1	165
	46		2	

Check continuity between BOSE speaker amp. harness connec-3. tor B122 (A) and ground.

	А		Continuity
Connector	Terminal		Continuity
	53		No
B122	48	Ground	
	45	Ground	
	46	1	



YES >> GO TO 2

NO

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

2. REAR SUBWOOFER SIGNAL CHECK

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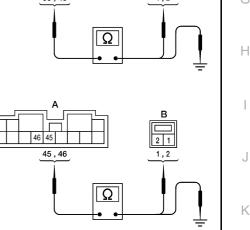
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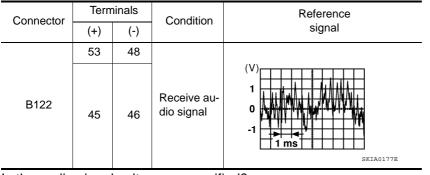




# SUBWOOFER (COUPE)

#### < 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.



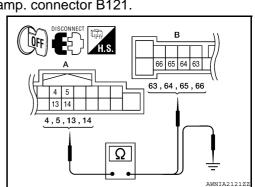
#### Is the audio signal voltage as specified?

YES >> Replace suspect rear subwoofer. Refer to <u>AV-471</u>. <u>"Removal and Installation"</u>.

### **3.**HARNESS CHECK

- 1. Disconnect AV control unit connector M119 and BOSE speaker amp. connector B121.
- 2. Check continuity between AV control unit harness connector M119 (A) and BOSE speaker amp. harness connector B121 (B).

	A	В.		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M119	4	B121	64		
	5		63	Yes	
	13		66	Tes	
	14	•	65		



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 Check continuity between AV control unit harness connector M119 (A) and ground.

	А		Continuity
Connector	Terminal		
	4		
M119	5	Ground	No
10119	13	Giouna	NO
	14		

#### 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 SUBWOOFER SIGNAL CHECK

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### SUBWOOFER (COUPE)

#### < COMPONENT DIAGNOSIS >

- 1. Connect AV control unit connector M119 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 M119 terminals with CONSULT-III or oscilloscope.

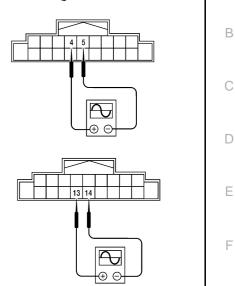
Connector	Tern	ninals	Condition	Reference
Connector	(+)	(-)	Condition	signal
	4	5		
M119	13	14	Receive audio signal	(V) 1 0 -1 SKIA0177E
		1 14		10 10

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

- YES >> Replace BOSE speaker amp. Refer to <u>AV-243.</u> <u>"Removal and Installation - Coupe"</u>.
- NO >> Replace AV control unit. Refer to <u>AV-462</u>, "<u>Removal and</u> <u>Installation</u>".

#### [BOSE AUDIO WITH NAVIGATION]





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### SUBWOOFER (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 subwoofers using the audio signal circuits.

### Diagnosis Procedure

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INFOID:000000005430379

Regarding Wiring Diagram information, refer to AV-429. "SEDAN : Wiring Diagram".

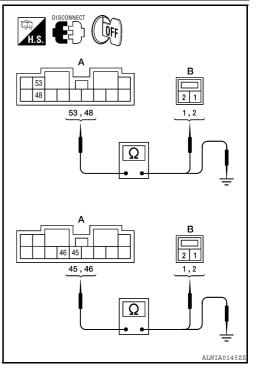
### **1.**HARNESS CHECK

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

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	53	B120	1	
B122	48	DIZU	2	Yes
	45	B124	1	Tes
	46		2	

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

	А		Continuity
Connector	Terminal		Continuity
	53	Ground	No
B122	48		
DIZZ	45	Ground	NO
	46		



Are the continuity test results as specified?

YES >> GO TO 2

NO

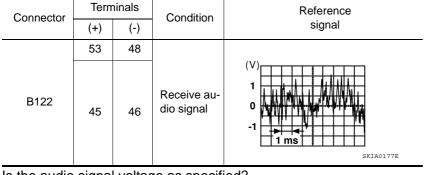
- >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

2.REAR SUBWOOFER SIGNAL CHECK

### SUBWOOFER (SEDAN)

#### < 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.



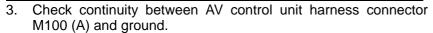
#### Is the audio signal voltage as specified?

YES >> Replace suspect rear subwoofer. Refer to <u>AV-471.</u> "Removal and Installation".

### **3.**HARNESS CHECK

- 1. Disconnect AV control unit connector M100 and BOSE speaker amp. connector B121.
- 2. Check continuity between AV control unit harness connector M100 (A) and BOSE speaker amp. harness connector B121 (B).

	A	В.		Continuity
Connector	Terminal	Connector	Connector Terminal	
	4	B121	64	
M100	5		63	Yes
	13		66	Tes
	14		65	

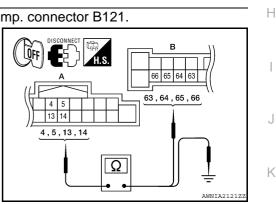


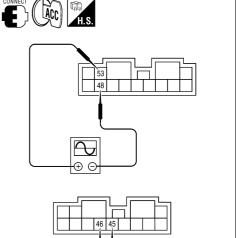
	А		Continuity
Connector	Terminal		Continuity
	4	Ground	No
M100	5		
WITCO	13	Giouna	
	14		

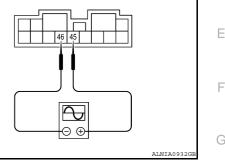
#### Are continuity test results as specified?

- >> 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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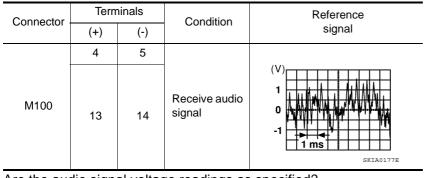
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### SUBWOOFER (SEDAN)

#### < COMPONENT DIAGNOSIS >

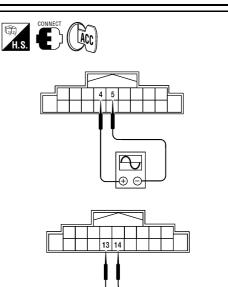
- 1. Connect AV control unit connector M100 and BOSE speaker amp. connector B121.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between AV control unit harness connector M100 terminals with CONSULT-III or oscilloscope.



Are the audio signal voltage readings as specified?

- YES >> Replace BOSE speaker amp. Refer to <u>AV-463.</u> <u>"Removal and Installation - Sedan"</u>.
- NO >> Replace AV control unit. Refer to <u>AV-462</u>, "<u>Removal and</u> <u>Installation</u>".

#### [BOSE AUDIO WITH NAVIGATION]



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### STEERING SWITCH

### Description

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

### Diagnosis Procedure

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Regarding Wiring Diagram information, refer to AV-409, "COUPE : Wiring Diagram" or AV-429, "SEDAN : Wiring Diagram".

# 1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

- 1. Turn ignition switch OFF.
- 2. Disconnect steering wheel audio control switch connector M88.
- Check resistance between steering switch connector terminals. 3.

Terr	minal	Signal name	Condition	Resistance (Ω) (Approx.)
		Enter	Depress ENTER switch.	2003-2043
		Voice recognition	Depress 🕵 switch.	716-730
14	14	Menu (down)	Depress ∇ switch.	318-324
	17	Menu (up)	Depress $\Delta$ switch.	120-122
	17	Source	Depress SOURCE switch.	0
		Menu back	Depress the back switch.	716-730
15		Phone	Depress 🌾 switch.	318-324
		Volume (up)	Depress VOL up switch.	120-122
		Volume (down)	Depress VOL down switch.	0

Do the steering wheel audio control switches check OK?

YES >> GO TO 2. NO

>> Replace steering wheel audio control switch. Refer to AV-474, "Removal and Installation".

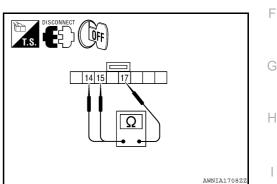
### 2.CHECK HARNESS

- Disconnect AV control unit connector M100 (sedan) or M119 1. (coupe) and spiral cable connector M30.
- 2. Check continuity between AV control unit harness connector M100 (sedan) or M119 (coupe) (A) and spiral cable harness connector M30 (B).

Δ	١		Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M100	6		24	
(sedan) or	15	M30	33	Yes
M119 (coupe)	16		31	

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3. Check continuity between AV switch connector M100 (sedan) or M119 (coupe) (A) and ground.



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### **STEERING SWITCH**

#### < COMPONENT DIAGNOSIS >

	A		Continuity
Connector	Terminal		Continuity
M100	6		
(sedan) or	15	Ground	No
M119 (coupe)	16		

Are the continuity results as specified?

YES >> GO TO 3.

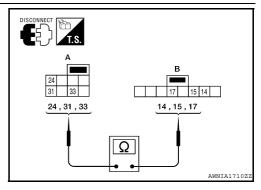
NO >> Repair harness.

3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M88.

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

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



Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to <u>AV-474, "Removal and Installation"</u>.

### AMP ON SIGNAL CIRCUIT

#### < COMPONENT DIAGNOSIS >

### 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 B amp. When this signal is received, the BOSE speaker amp. will turn on.

#### **Diagnosis** Procedure

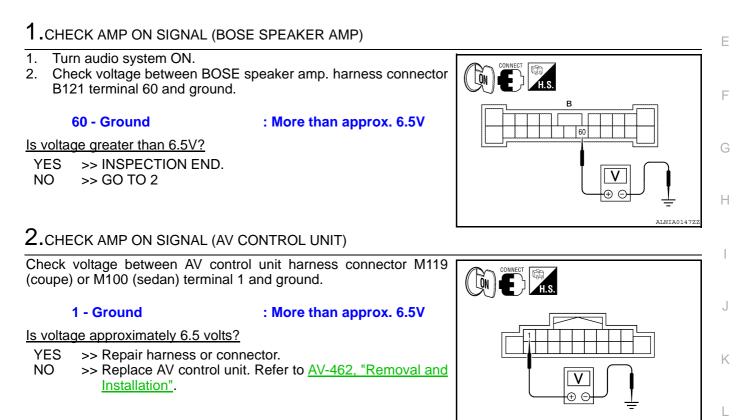
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Regarding Wiring Diagram information, refer to AV-409, "COUPE : Wiring Diagram" or AV-429, "SEDAN : Wiring Diagram".



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[BOSE AUDIO WITH NAVIGATION]

### AUX IMAGE SIGNAL CIRCUIT

#### < COMPONENT DIAGNOSIS >

### AUX IMAGE SIGNAL CIRCUIT

### Description

• Transmits the image signal of AUX device from auxiliary input jacks to AV control unit.

• AV control unit transmits the image signal that is input to the display unit.

#### **Diagnosis Procedure**

INFOID:000000005779682

INFOID:000000005779681

Regarding Wiring Diagram information, refer to <u>AV-409</u>, "COUPE : Wiring Diagram" or <u>AV-429</u>, "SEDAN : Wiring Diagram".

### 1. CHECK CONTINUITY AUX IMAGE SIGNAL CIRCUIT

Connector

M103

(sedan)

or M122 (coupe)

1. Turn ignition switch OFF.

Α

Terminal

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Connector

M206

- 2. Disconnect auxiliary input jack connector M206 and AV control unit connector M103 (sedan) or M122 (coupe).
- Check continuity between auxiliary input jack harness connector M206 (A) terminal 8 and AV control unit harness connector M103 (sedan) or M122 (coupe) (B) terminal 76.

в

Terminal

76

ness connector		
ness connector		
Continuity		
	ALNIA1220	GB

4	. Check of	continuity b	etween auxi	liary input ja	ack harness	connector	M206 (A)	terminal 8	and ground.

Yes

	Ą		Continuity
Connector	Terminal		Continuity
M206	8	Ground	No

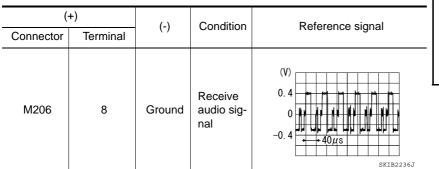
Is the inspection result normal?

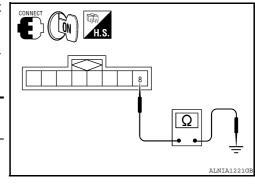
YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK AUX IMAGE SIGNAL

- 1. Connect auxiliary input jack connector M206 and AV control unit connector M103 (sedan) or M122 (coupe).
- 2. Turn ignition switch ON.
- Check signal between auxiliary input jack connector M206 terminal 8 and ground.





Is the inspection result normal?

# **AUX IMAGE SIGNAL CIRCUIT**

VIGATION]	/PONENT DIAGNOSIS > [BOSE AUDIO WITH N/
	>> Replace AV control unit. Refer to <u>AV-462, "Removal and Installation"</u> . > Check that there is no malfunction in the external device.
	>> Check that there is no manufiction in the external device.

### **MICROPHONE SIGNAL CIRCUIT**

### Description

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

#### **Diagnosis Procedure**

INFOID:000000005779680

INFOID:000000005779679

Regarding Wiring Diagram information, refer to <u>AV-409</u>, "COUPE : Wiring Diagram" or <u>AV-429</u>, "SEDAN : Wiring Diagram".

### **1.**CHECK HARNESS BETWEEN AV CONTROL UNIT AND MICROPHONE

- 1. Turn ignition switch OFF.
- Disconnect AV control unit connector and microphone connector.
- 3. Check continuity between AV control unit harness connector M102 (sedan) or M121 (coupe) (A) and microphone harness connector R7 (B).

	A		В		
Connector	Terminal	Connector	Terminal	Continuity	
M102	59		1		
(sedan) or	43	R7	2	Yes	
M121 (coupe)	44		4		

 Check continuity between AV control unit harness connector M102 (sedan) or M121 (coupe) (A) and ground.

	A		Continuity
Connector	Terminal		Continuity
M102	44		
(sedan) or	43	Ground No	No
M121 (coupe)	59		

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

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

#### 2. CHECK MICROPHONE POWER SUPPLY

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

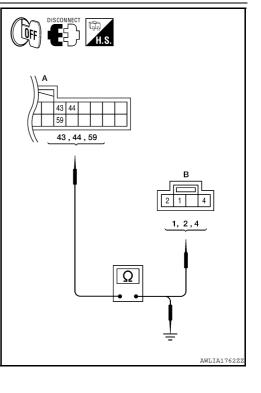
(1	+)	(-)	Voltage (approx)	
Connector	Terminal	(-)		
R7	4	Ground	5V	

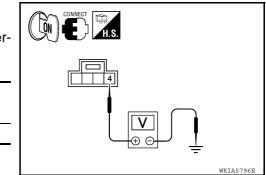
### Is voltage reading approx. 5 volts?

YES >> GO TO 3.

NO >> Replace AV control unit. Refer to <u>AV-462, "Removal and Installation"</u>.

**3.**CHECK MICROPHONE SIGNAL





### **MICROPHONE SIGNAL CIRCUIT**

Reference signal

While speaking into MIC

mmm

PKIB5037J

#### < COMPONENT DIAGNOSIS >

(+)

Terminal

59

Connector

M102

(sedan)

or

M121

(coupe)

Check signal between AV control unit harness connector M102 (sedan) or M121 (coupe) terminals 43 and 59.

(-)

43

Terminal

### [BOSE AUDIO WITH NAVIGATION]

CONNECT CONTECT A

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to <u>AV-462, "Removal and Installation"</u> .	YES	>> Replace AV	control unit. F	Refer to A	AV-462,	"Removal	and Installation".
--	-----	---------------	-----------------	------------	---------	----------	--------------------

(V)

2.5

2.0

1.5

1.0

0.5

0

-1

NO >> Replace microphone. Refer to <u>AV-482, "Removal and Installation"</u>.

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### **CAMERA IMAGE SIGNAL CIRCUIT**

#### < COMPONENT DIAGNOSIS >

### CAMERA IMAGE SIGNAL CIRCUIT

#### Description

Rear view camera images are transmitted to the AV control unit using the camera image signal circuits.

#### **Diagnosis** Procedure

INFOID:000000005430389

INFOID:000000005430388

Regarding Wiring Diagram information, refer to <u>AV-409</u>, "COUPE : Wiring Diagram" or <u>AV-429</u>, "SEDAN : Wiring Diagram".

### 1. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector and rear view camera connector.
- Check continuity between AV control unit harness connector M103 (sedan) or M122 (coupe) (A) terminals 65, 66 and rear view camera harness connector B35 (sedan) or T7 (coupe) (B) terminals 3, 4.
  - 65 4
  - 66 3

#### : Continuity should exist.

- : Continuity should exist.
- 4. Check continuity between AV control unit harness connector M103 (sedan) or M122 (coupe) (A) terminals 9, 10 and ground.

65, 66 - Ground

: Continuity should not exist.

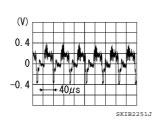
### Is inspection result OK?

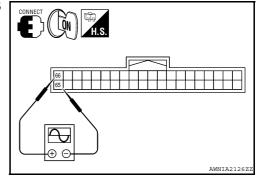
YES >> GO TO 2

- NO >> Repair harness or connector.
- 2.CHECK CAMERA IMAGE SIGNAL
- 1. Connect AV control unit connector and rear view camera connector.
- 2. Turn ignition switch ON.
- 3. Check signal between AV control unit harness connector M103 (sedan) or M122 (coupe) terminals 65 and 66.

t

65 - 66





#### Is inspection result OK?

- YES >> Replace AV control unit. Refer to AV-462, "Removal and Installation".
- NO >> Replace rear view camera. Refer to AV-483, "Removal and Installation".

### **REVERSE SIGNAL CIRCUIT**

# < COMPONENT DIAGNOSIS >

### **REVERSE SIGNAL CIRCUIT**

#### Description

A reverse signal is supplied from the back-up lamp relay (with VQ35DE and CVT), transmission range switch (with QR25DE and CVT) or back-up lamp switch (with M/T) to the AV control unit. When this signal is received, the display shows a view to the rear of the vehicle.

#### **Diagnosis Procedure**

Regarding Wiring Diagram information, refer to <u>AV-409, "COUPE : Wiring Diagram"</u> or <u>AV-429, "SEDAN : Wir-</u> <u>Diagram"</u>.

#### **1.**BACK-UP LAMP INSPECTION

1. Turn ignition switch ON.

2. Shift selector lever to R position.

Does back-up lamp illuminate?

YES >> GO TO 2

NO >> Check back-up lamp system. Refer to EXL-4, "Work Flow".

2. CHECK REVERSE POSITION INPUT SIGNAL

#### With CONSULT-III

Select "DATA MONITOR" of "MULTI AV". Operate ignition switch with "REV SIG" of "DATA MONITOR" and <sup>H</sup> check operate status.

#### Without CONSULT-III

- 1. Turn ignition switch OFF.
- 2. Disconnect AV control unit connector.
- 3. Turn ignition switch ON.
- 4. Shift selector lever to R position.
- 5. Check voltage between AV control unit harness connector M102 (sedan) or M121 (coupe) terminal 52 and ground.

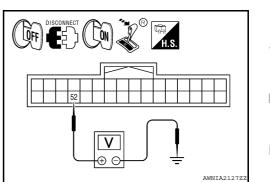
#### Battery voltage should exist.

#### Does battery voltage exist?

YES >> Inspection End.

NO >> Check harness for open or short between AV control

unit and back-up lamp relay (with VQ35DE and CVT), transmission range switch (with QR25DE and CVT) or back-up lamp switch (with M/T).



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INFOID:000000005430398

INFOID-000000005430399

AV

# ECU DIAGNOSIS AV CONTROL UNIT (COUPE)

### **Reference Value**

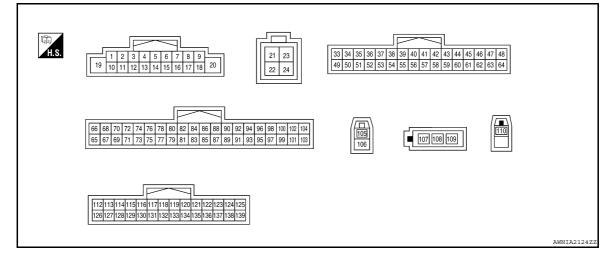
INFOID:000000005779683

### VALUES ON THE DIAGNOSIS TOOL

#### CONSULT-III data monitor item

Display Item	Dis- play	Vehicle status	Remarks	
VHCL SPD SIG	ON	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.	
VICE OF DISIG	OFF	Vehicle speed =0 km/h (0 MPH)		
PKB SIG	ON	Parking brake is applied.	Changes in indication may be delayed. This is	
	OFF	Parking brake is released.	normal.	
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON.	_	
	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.		
IGN SIG	ON	Ignition switch ON		
	OFF	Ignition switch in ACC position		
	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

# AV CONTROL UNIT (COUPE)

< ECU DIAGNOSIS >

	ninal color)	Description			Condition	Reference value
+	_	Signal name	Input/		(Approx.)	
1 (B/P)	Ground	Amp. ON signal	Output	Ignition switch ON	_	Battery voltage
2 (G)	3 (R)	Pre-amp. audio signal front LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 SKIB3609E
4 (GR/V)	5 (V)	Pre-amp. audio signal rear LH	Output	lgnition switch ON	Audio output	(V) 1 0 -1 • 2ms SKIB3609E
				Ignition	Depress ENTER switch.	2023Ω
-					Depress 📢 switch.	723Ω
6 15 (W/G) (L/B)	Steering switch signal A	Input	switch	Depress ∇ switch.	321Ω	
				OFF	Depress $\Delta$ switch.	121Ω
					Depress SOURCE switch.	0Ω
7 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
9	Ground	Illumination signal	Input	OFF	Lighting switch is OFF	0V
(R/L)	R/L) Ground Illumination signal		mput	011	Lighting switch is ON	Battery voltage
10	—	Shield	_	—		_
11 (B)	12 (W)	Pre-amp. audio signal front RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 * 2ms SKIB3609E
13 (V)	14 (LG)	Audio signal rear RH	Output	lgnition switch ON	Audio output	(V) 1 0 -1 • 2ms SKIB3609E
15 (L/B)	Ground	Steering switch signal ground	_	lgnition switch ON	_	٥V

# AV CONTROL UNIT (COUPE)

#### < ECU DIAGNOSIS >

### [BOSE AUDIO WITH NAVIGATION]

	minal color)	Description			Condition	Reference value	
+	-	Signal name	Input/ Output	Condition		(Approx.)	
					Depress the back switch.	723Ω	
16 15		Steering switch signal B	Input	Ignition switch ON	Depress 🌾 switch.	321Ω	
(GR/L)	(L/B)				Depress VOL up switch.	121Ω	
					Depress VOL down switch.	0Ω	
19 (Y/R)	Ground	Battery power supply	Input	lgnition switch OFF	_	Battery voltage	
20 (B)	Ground	Ground	_	lgnition switch ON	_	OV	
21 (B)		USB ground	_		_	_	
22 (W)		USB D-	_		_	_	
23 (R)		V BUS signal	_		_	_	
24 (G)	—	USB D+	_	—	_	_	
37		Parking brake signal	Input	lgnition switch ON	Parking brake is ON.	5.0 V	
(G/R)	Ground				Parking brake is OFF.	0 V	
44 (R/L)	43 (R/B)	Microphone VCC	Output	Ignition switch ON	_	5.0 V	
46 (P)	_	CAN-L	Input/ Output	_	_	_	
51	Oneveral			Ignition	Lighting switch is OFF.	0 V	
(R/L)	Ground	Illumination signal	Input	switch OFF	Lighting switch is ON.	12.0 V	
52 (G)	Ground	Ignition signal	Input	lgnition switch ON	_	Battery voltage	
53				Ignition	R position	12.0 V	
(P/B)	Ground	Reverse signal	Input	switch ON	Other than R position	0 V	
54 (V/W)	Ground	Vehicle speed signal (8- pulse)	Input	lgnition switch ON	When vehicle speed is ap- prox. 40 km/h (25 MPH)	NOTE: Maximum voltage may be 12.0 V due to specifications (connected units). (V) 4 2 0 4 2 0 4 2 0 4 2 0 5 8 12.0 V due to specifications (connected units). (V) 4 2 0 4 2 0 12.0 V due to specifications (connected units). (V) 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	

## AV CONTROL UNIT (COUPE)

#### < ECU DIAGNOSIS >

## [BOSE AUDIO WITH NAVIGATION]

	minal e color)	Description		Condition		Reference value	А
+	_	Signal name	Input/ Output		Condition	(Approx.)	_
59 (B/R)	Ground	Microphone signal	Input	Ignition switch ON	Give a voice	(V) 2.5 2.0 1.5 1.5 0.5 0 0.5 0 PKIB5037J	B C D
62 (L)	_	CAN-H	Input/ Output	_	_	_	
65		Shield			_	_	E
66 (Y)	Ground	Camera image signal	Input	lgnition switch ON	Camera image is dis- played.	$\begin{pmatrix} (V) \\ 0, 4 \\ 0 \\ -0, 4 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	F
67 (B)	Ground	Rear view camera ground		Ignition switch ON		0 V	Н
68 (GR)	Ground	Camera ON signal	Output	Ignition switch ON	R position. Other than R position.	6.0 V 0 V	I
75 (P)	Ground	AUX image signal ground	_	Ignition switch ON	_	0 V	J
76 (B/W)	75 (P)	AUX image signal	Input	Ignition switch ON	At AUX image is displayed.	(V) 0.4 0 -0.4 -0.4 -0.4 -0.4 -0.4 -0.4 -0.	K
77	_	Shield			_		$\mathbb{M}$
105 (B)	_	GPS antenna signal	—	_	_	_	
106	_	Shield	_	_			AV
107 (B)		Amplified window antenna signal	Input		_	_	~
108 (B)	Ground	Antenna amp. ON signal	Output	Ignition switch ACC	_	Battery voltage	0
110 (B)	_	Satellite antenna signal	_	_	_	_	Ρ

## AV CONTROL UNIT (COUPE)

#### < ECU DIAGNOSIS >

	ninal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
115 (W)	130 (B)	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is select- ed.	(V) 1 0 -1 2ms SKIB3609E	
128		Shield			_	_	
129 (R)	130 (B)	AUX sound signal RH	Input	lgnition switch ON	When AUX mode is select- ed.	(V) 1 0 -1 + 2ms SKIB3609E	

## DTC Index

INFOID:000000005781282

#### SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	<u>AV-321</u>
U1010	CONTROL UNIT (CAN) [1010]	<u>AV-322</u>
U1200	Cont Unit [U1200]	<u>AV-323</u>
U1201	GYRO NO CONN [U1201]	<u>AV-324</u>
U1202	G-SENSOR NO CONN [U1202]	<u>AV-325</u>
U1204	GPS COMM [U1204]	<u>AV-326</u>
U1205	GPS ROM [U1205]	<u>AV-327</u>
U1206	GPS RAM [U1206]	<u>AV-328</u>
U1207	GPS RTC [U1207]	<u>AV-329</u>
U1216	CAN CONT [U1216]	<u>AV-330</u>
U1217	BLUETOOTH MODULE [U1217]	<u>AV-331</u>
U1218	HDD CONN [U1218]	<u>AV-332</u>
U1219	HDD READ [U1219]	<u>AV-333</u>
U121A	HDD WRITE [U121A]	<u>AV-334</u>
U121B	HDD COMM [U121B]	<u>AV-335</u>
U121C	HDD ACCESS [U121C]	<u>AV-336</u>
U121D	DSP CONN [U121D]	<u>AV-337</u>
U121E	DSP COMM [U121E]	<u>AV-338</u>
U1225	USB CONTROLLER [U1225]	<u>AV-339</u>
U1227	DVD COMM [U1227]	<u>AV-340</u>
U1228	SUB CPU CONN [U1228]	<u>AV-341</u>
U1229	iPod CERTIFICATION [U1229]	<u>AV-342</u>
U122A	CONFIG UNFINISH [U122A]	<u>AV-343</u>
U122E	Built-in AUDIO CONN [U122E]	<u>AV-344</u>

AV-398

## **AV CONTROL UNIT (COUPE)**

#### < ECU DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

DTC	Display item	Refer to	^
U1244	GPS ANTENNA CONN [U1244]	<u>AV-345</u>	A
U1263	USB OVERCURRENT [U1263]	<u>AV-346</u>	
U1310	CONTROL UNIT (AV) [U1310]	<u>AV-347</u>	В

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[BOSE AUDIO WITH NAVIGATION]

INFOID:000000005779684

## AV CONTROL UNIT (SEDAN)

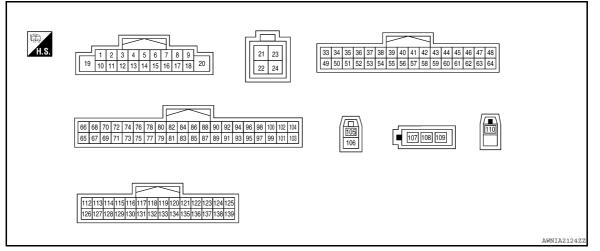
## **Reference Value**

#### VALUES ON THE DIAGNOSIS TOOL

#### CONSULT-III data monitor item

Display Item	Dis- play	Vehicle status	Remarks	
VHCL SPD SIG	ON	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is	
VICL SPD SIG	OFF	Vehicle speed =0 km/h (0 MPH)	normal.	
PKB SIG	ON	Parking brake is applied.	Changes in indication may be delayed. This is	
FRD SIG	OFF	Parking brake is released.	normal.	
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON.		
	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	Changes in indication may be delayed. This is normal.	

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

< ECU DIAGNOSIS >

Terminal (Wire color)		Description				Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (B/P)	Ground	Amp. ON signal	Output	Ignition switch ON	_	Battery voltage
2 (G)	3 (R)	Pre-amp. audio signal front LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 2ms SKIE3609E
4 (GR)	5 (V)	Pre-amp. audio signal rear LH	Output	lgnition switch ON	Audio output	(V) 1 0 -1 * 2ms SKIB3609E
					Depress ENTER switch.	2023Ω
c				Ignition	Depress 🏑 switch.	723Ω
6 (W/G)	15 (L/B)	Steering switch signal A	Input	switch OFF	Depress ∇ switch.	321Ω
					Depress $\Delta$ switch.	121Ω
					Depress SOURCE switch.	0Ω
7 (V/Y)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
9	Ground	Illumination signal	Input	OFF	Lighting switch is OFF	0V
(R/L)	Ground		input		Lighting switch is ON	Battery voltage
10		Shield			—	
11 (B)	12 (W)	Pre-amp. audio signal front RH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 * 2ms SKIB3609E
13 (V)	14 (LG)	Audio signal rear RH	Output	lgnition switch ON	Audio output	(V) 1 0 -1 • 2ms SKIB3609E
15 (L/B)	Ground	Steering switch signal ground	_	Ignition switch ON	_	0V

#### < ECU DIAGNOSIS >

## [BÓSE AUDIO WITH NAVIGATION]

	minal color)	Description		Condition		Reference value	
+	-	Signal name	Input/ Output			(Approx.)	
					Depress the back switch.	723Ω	
16	15	Steering switch signal B	Input	Ignition switch	Depress 🌾 switch.	321Ω	
(GR/L)	(L/B)			ON	Depress VOL up switch.	121Ω	
					Depress VOL down switch.	0Ω	
19 (Y/R)	Ground	Battery power supply	Input	lgnition switch OFF	_	Battery voltage	
20 (B)	Ground	Ground	_	lgnition switch ON	_	0V	
21 (B)	_	USB ground	_		_	_	
22 (W)	_	USB D-	_	_	_	_	
23 (R)		V BUS signal	_		_	_	
24 (G)	—	USB D+	_	—	_	_	
37				lgnition t switch ON	Parking brake is ON.	5.0 V	
(G/R)	Ground	Parking brake signal	Input		Parking brake is OFF.	0 V	
44 (R/L)	43 (R/B)	Microphone VCC	Output	lgnition switch ON	_	5.0 V	
46 (P)	_	CAN-L	Input/ Output	_	_	_	
51		III. a tractica a tracat		Ignition	Lighting switch is OFF.	0 V	
(R/L)	Ground	Illumination signal	Input	switch OFF	Lighting switch is ON.	12.0 V	
52 (G)	Ground	Ignition signal	Input	lgnition switch ON	_	Battery voltage	
53	0	Deverse	1	Ignition	R position	12.0 V	
(P/B)	Ground	Reverse signal	Input	switch ON	Other than R position	0 V	
54 (V/W)	Ground	Vehicle speed signal (8- pulse)	Input	Ignition switch ON	When vehicle speed is ap- prox. 40 km/h (25 MPH)	NOTE: Maximum voltage may be 12.0 V due to specifications (connected units).	

#### < ECU DIAGNOSIS >

## [BÓSE AUDIO WITH NAVIGATION]

	minal e color)	Description	-		Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	_
59 (B/R)	Ground	Microphone signal	Input	Ignition switch ON	Give a voice	(V) 2.0 1.5 1.0 0.5 0 0.5 0 PKIES037J	B C D
62 (L)	_	CAN-H	Input/ Output	_	_	_	_
65	—	Shield	—	—	—	—	E
66 (Y)	Ground	Camera image signal	Input	Ignition switch ON	Camera image is dis- played.	(V) 0.4 0 -0.4 ••40µs sktB2251J	F
67 (B)	Ground	Rear view camera ground	_	Ignition switch ON	_	0 V	Н
68 (GR)	Ground	Camera ON signal	Output	Ignition switch ON	R position. Other than R position.	6.0 V 0 V	I
75 (P)	Ground	AUX image signal ground	_	Ignition switch ON	_	0 V	J
76 (L)	75 (P)	AUX image signal	Input	Ignition switch ON	At AUX image is displayed.	(V) 0.4 0 −0.4 •••40µs skiB2251j	K
77	_	Shield	_		_		M
105 (B)	_	GPS antenna signal	_	—	_	_	
106	_	Shield	_		_		AV
107 (B)		Amplified window antenna signal	Input	_	_		0
108 (B)	Ground	Antenna amp. ON signal	Output	Ignition switch ACC	_	Battery voltage	0
110 (B)	_	Satellite antenna signal	_		_	_	Ρ

#### < ECU DIAGNOSIS >

	ninal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
115 (W)	130 (B)	AUX sound signal LH	Input	lgnition switch ON	When AUX mode is select- ed.	(V) 1 0 -1 2ms SKIB3CO2E	
128		Shield			_	_	
129 (R)	130 (B)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is select- ed.	(V) 1 0 1 2 ms SKIB3609E	

## DTC Index

INFOID:000000005781283

#### SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	<u>AV-321</u>
U1010	CONTROL UNIT (CAN) [1010]	<u>AV-322</u>
U1200	Cont Unit [U1200]	<u>AV-323</u>
U1201	GYRO NO CONN [U1201]	<u>AV-324</u>
U1202	G-SENSOR NO CONN [U1202]	<u>AV-325</u>
U1204	GPS COMM [U1204]	<u>AV-326</u>
U1205	GPS ROM [U1205]	<u>AV-327</u>
U1206	GPS RAM [U1206]	<u>AV-328</u>
U1207	GPS RTC [U1207]	<u>AV-329</u>
U1216	CAN CONT [U1216]	<u>AV-330</u>
U1217	BLUETOOTH MODULE [U1217]	<u>AV-331</u>
U1218	HDD CONN [U1218]	<u>AV-332</u>
U1219	HDD READ [U1219]	<u>AV-333</u>
U121A	HDD WRITE [U121A]	<u>AV-334</u>
U121B	HDD COMM [U121B]	<u>AV-335</u>
U121C	HDD ACCESS [U121C]	<u>AV-336</u>
U121D	DSP CONN [U121D]	<u>AV-337</u>
U121E	DSP COMM [U121E]	<u>AV-338</u>
U1225	USB CONTROLLER [U1225]	<u>AV-339</u>
U1227	DVD COMM [U1227]	<u>AV-340</u>
U1228	SUB CPU CONN [U1228]	<u>AV-341</u>
U1229	iPod CERTIFICATION [U1229]	<u>AV-342</u>
U122A	CONFIG UNFINISH [U122A]	<u>AV-343</u>
U122E	Built-in AUDIO CONN [U122E]	<u>AV-345</u>

#### < ECU DIAGNOSIS >

## [BÓSE AUDIO WITH NAVIGATION]

DTC	Display item	Refer to	٨
U1244	GPS ANTENNA CONN [U1244]	<u>AV-345</u>	А
U1263	USB OVERCURRENT [U1263]	<u>AV-346</u>	
U1310	CONTROL UNIT (AV) [U1310]	<u>AV-347</u>	В

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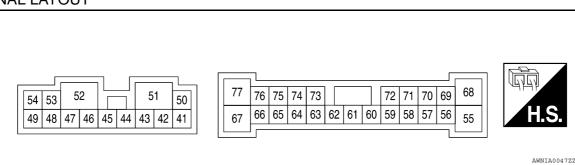
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## **BOSE SPEAKER AMP**

#### **Reference Value**

INFOID:000000005430406





## PHYSICAL VALUES

	ninal color)	Description		Condition	Reference value
+	_	Signal name	Input/Output		(Approx.)
41 (LG)	42 (V)	Sound signal front tweeter LH	Output	Ignition switch ON	(V) 1 0 -1 • 2ms SKIB3609E
44 (BR)	43 (GR)	Sound signal front tweeter RH	Output	Ignition switch ON	(V) 1 -1 -2 ms SKIB3609E
45 (O)	46 (SB)	Sound signal subwoofer RH	Output	Ignition switch ON	(V) 1 0 -1 * 2ms SKIB3609E
47 (B)	Ground	GND	—	Ignition switch ON	0V
50 (SB)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
51 (G)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
52 (B)	Ground	GND	_	Ignition switch ON	0V

## **BOSE SPEAKER AMP**

### [BOSE AUDIO WITH NAVIGATION]

Terminal (Wire color) + –		Description		Condition	Reference value	
+	_	Signal name	Input/Output		(Approx.)	
53 (W)	48 (L)	Sound signal subwoofer LH	Output	Ignition switch ON	(V) 1 0 -1 • 2ms SKIB3609E	
54 (V)	49 (P)	Sound signal rear tweeter RH	Output	Ignition switch ON	(V) 1 0 -1 -2ms SKIEJ609E	
58 (W)	59 (B)	Sound signal door speaker LH	Output	Ignition switch ON	(V) 1 0 -1 • 2ms SKIB3609E	
60 (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 • • 2ms skib3609E	
68 (L)	55 (R)	Sound signal rear tweeter LH	Output	Ignition switch ON	(V) 1 0 -1 • 2ms SKIB3609E	

< ECU DIAGNOSIS >

## **BOSE SPEAKER AMP**

## [BOSE AUDIO WITH NAVIGATION]

	minal color)	Description		Condition	Reference value
+	-	Signal name	Input/Output		(Approx.)
69 (P)	70 (V)	Sound signal center speaker	Output	Ignition switch ON	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
71 (O)	72 (SB)	Sound signal door speaker RH	Output	Ignition switch ON	(V) 1 -1 + 2ms SKIB3609E
73 (GR)	74 (L)	Sound signal front RH	Input	Ignition switch ON	(V) 1 0 -1 • 2ms SKIB3609E
75 (W/R)	76 (B/R)	Sound signal front LH	Input	Ignition switch ON	(V) 1 0 -1 2 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5

< ECU DIAGNOSIS >

< WIRING DIAGRAM >

## [BOSE AUDIO WITH NAVIGATION]

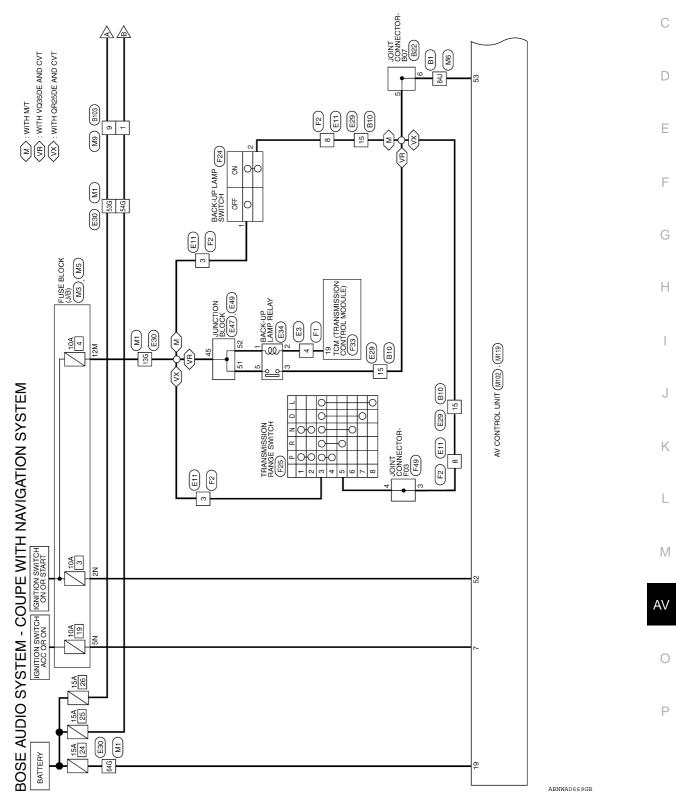
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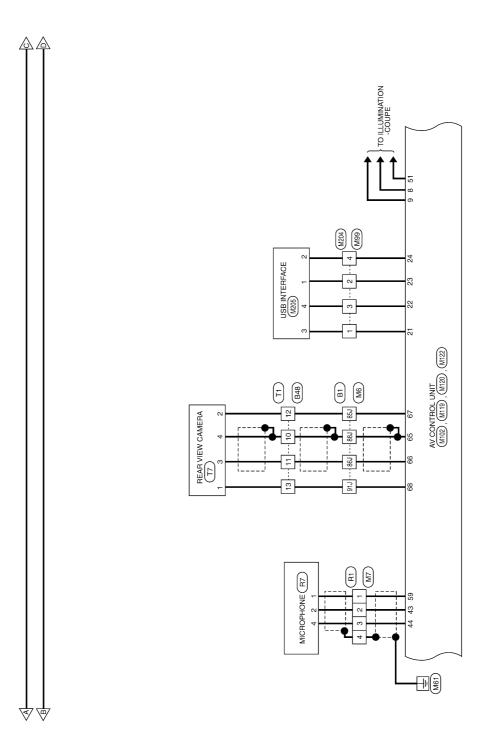
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## WIRING DIAGRAM BOSE AUDIO WITH NAVIGATION SYSTEM COUPE

COUPE : Wiring Diagram

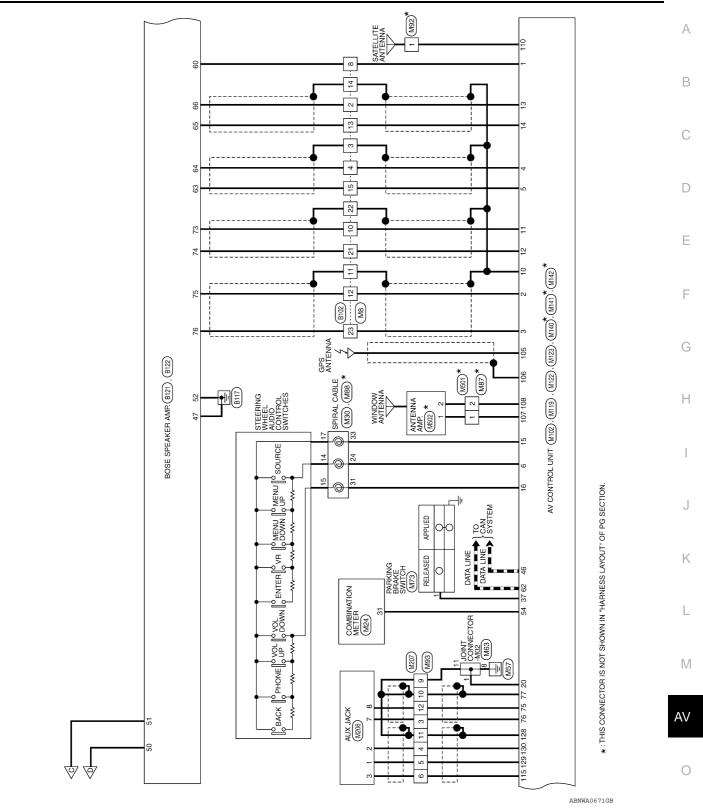




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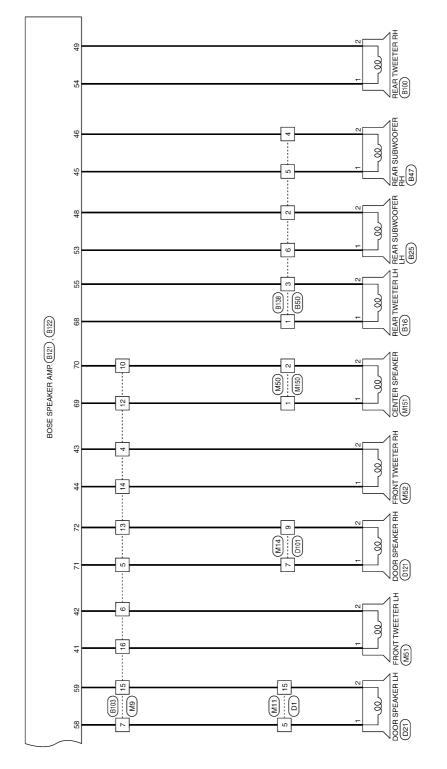
< WIRING DIAGRAM >

## [BOSE AUDIO WITH NAVIGATION]

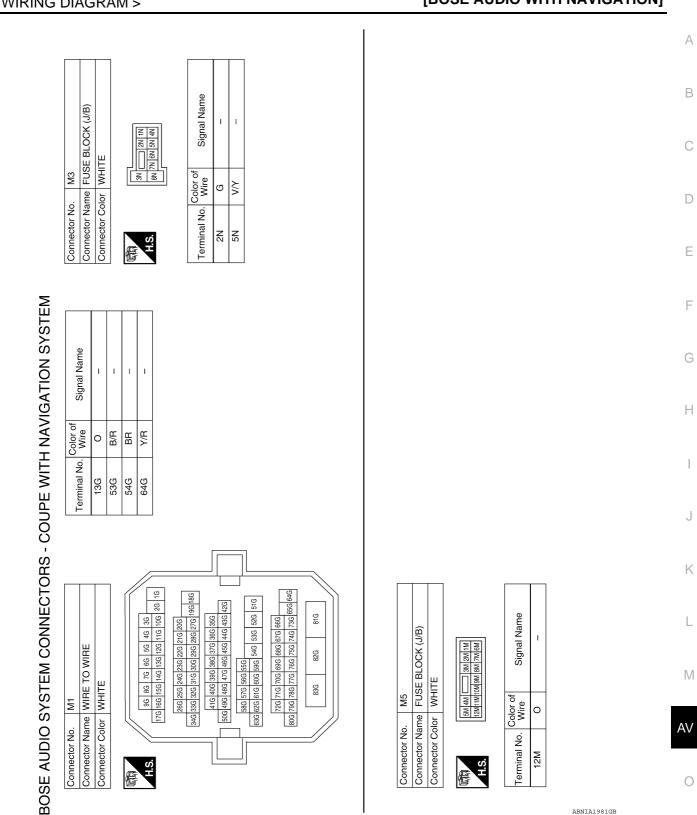


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## [BOSE AUDIO WITH NAVIGATION]

**Revision: September 2009** 

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	Connector No. M7 Connector Name WIRE TO WIRE	Connector Color WHITE	-			9 10 11 12 13 14 15	Terminal No. Volor of Signal Name	1 B/R –	2 R/B –	3 R/L –	4 SHIELD –														
	Signal Name	I	I	I	I										Nome N		I	I	<ul> <li>(WITH COUPE)</li> </ul>	1	I	1	I	1	I
	Color of Wire	P/B	в	≻	SHIELD	GR									Color of	Wire	>	SHIELD	GR/V	B/P	в	SHIELD	σ	ГG	SHIELD
	Terminal No.	84J	85J	86J	88J	91J									T T T T T T T		N	ო	4	8	10	÷	12	13	14
-	Connector No. M6 Connector Name WIRE TO WIRE	Connector Color WHITE				17J 16J 15J 14J 13J 12J 11J	251/241/220/220 301/220/220/272/250/211/200/191/181			[55J] 54J] 52J] 52J [51J [50J   49]	[53] [52] [61] [60] [59] [55] [57] [56] 48J 47J	700 [602] [602] [602] [602] [602] [602] [602] [602] [703] [7	87.7 86.9 85.1 84.1 22.1 91.1 30.1 85.1 85.1 82.1 81.1 80.1	97J 96J 95J 94J 93	Connector No. M8	Connector Name WIRE TO WIRE	Connector Color WHITE			S 12 11 10 9 8 7 6 5 4 3					

< WIRING DIAGRAM >

## [BOSE AUDIO WITH NAVIGATION]

- (WITH COUPE)

M/L

22 21 15 14

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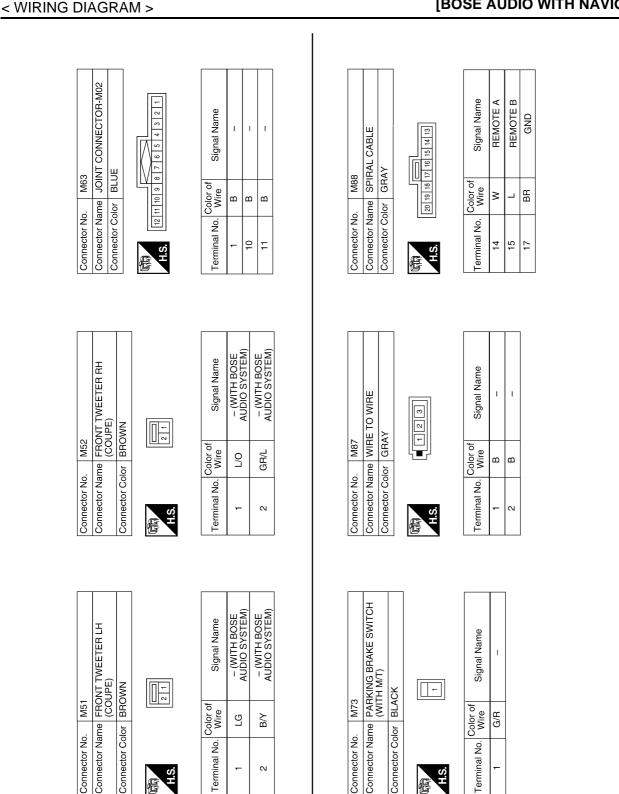
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RING DIAGRAM >		[BOSE AUDIO WITH NAVIGATIO
M14 WIRE TO WIRE WHITE 5 6 7 8 9 10	Signal Name	50 IRE TO WIRE HITE Signal Name
	Color of Wire G/W BR	o.     M50       ame     WIRE T       olor     WHITE       Oor     WHITE       B/P     O/B
Connector No. Connector Name Connector Color	Terminal No.	Connector No.     M50       Connector Name     WIRE TO WIRE       Connector Color     WHITE       Terminal No.     Color of       1     B/P       2     O/B
M11 M11 WIRE TO WIRE WHITE 8 9 10 11 12 13 14 15 16	Signal Name	M30 SPIRAL CABLE GRAY GRAY of Signal Name d AUDIO_STRG_SW_ ALDIO_STRG_SW_ AUDIO_STRG_SW_ AUDIO_STRG_SW_ B AUDIO_STRG_SW_GND
M11 MIE T WIRE T MITE 8 9 10 11	Color of Wire B B	AB NA30 AB NC OF CAR
Connector No. Connector Name Connector Color	Terminal No. Co	Connector No. Connector Name Connector Color Hand No. 24 W 33 L 33 L
		33 13
M9 ne WIRE TO WIRE Dr BROWN 7 6 5 4 1 3 2 1 16 15 14 13 12 11 10 9 8	Signal Name	Connector No.         M24           Connector Name         COMBINATION METER           Connector Color         WHITE           Connector Color         WHITE           Main         1112         1114         16         1718         18           Mis         21         28         28         30         31         38         37         38           Terminal No.         Color of Wire         Signal Name         Signal Name         1         V/W         BP/R OUT
M9 M9 Dr BROWN 7 6 5 4 ( 16 15 14 13 12	Color of Wire BR GR/L G/W B/Y B/R B/R B/R B/R B/R B/R B/R L/O L/O L/O L/O	M24           ame         COMBIN           blor         WHITE           26         7           28         23           28         23           VIW         VIM
Connector No. Connector Name Connector Color	Terminal No. C	Connector No. Connector Name Connector Color H.S. Terminal No. Color Terminal No. Color Terminal No.
		ABNIA1983GB

#### BOSE AUDIO WITH NAVIGATION SYSTEM [BOSE AUDIO WITH NAVIGATION]

Revision: September 2009



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#### BOSE AUDIO WITH NAVIGATION SYSTEM [BOSE AUDIO WITH NAVIGATION]

Revision: September 2009

< WIRING DIAGRAM >

## [BOSE AUDIO WITH NAVIGATION]

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Connector Name WIRE TO WIRE	Connector Color GRAY			I No. Color of Signal Name Wire	С. С			י ט	_			I No. Color of Signal Name		P/B REVERSE SIG	V/W SPEED	1	1	1	1	B/R MIC SIG	1	1	L CAN-H	1	1
Connector No.	Connect	国 H.S.		Terminal No.	-		။ က	4				Terminal No.	52	53	54	55	56	57	58	59	60	61	62	63	64
E TO WIRE	щ	4 5 6 10 11 12	Signal Name	I	1	1	I	I	I	I	- (WITH COUPE)	Signal Name	1	1	I	I	MIC GND	MIC +B	I	CAN-L	I	I	I	I	MR OUTPUT
ame WIRE	olor WHIT	1         2           8         9	Color of Wire		в	æ	>	в	SHIELD	SHIELD	B/W	Color of		1	I	I	R/B	R/L	1	٩.	I	I	I	I	R/L
Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No.	ю	4	£	ە	6	10	11	12	Terminal No.	39	40	41	42	43	44	45	46	47	48	49	50	51
		1	Г			7							N				6 47 48	2 63 64	)   r				-		
													JNIT JDIO SYSTE			17	1 42 43 44 45 4	7 58 59 60 61 62 63 6		Signal Name	1				טוט שאם
ELLITE RADIO	ENNA WN	Ē		Signal Name								0	CONTROL L	H NAVI)	<u> </u>		17 38 39 40 4	3 54 55 56 5		Sign					
Connector Name SATELLITE RADIO	Connector Color BROWN	Ē	-	Terminal No. Vire Signal Name	н В	-						Connector No. M102	Connector Name (WITH BOSE AUDIO SYSTEM			K	33 34 35 36 37 38 39 40 4	49 50 51 52 53 54 55 56 57 58 59		Terminal No. Color of Sign			1	1	

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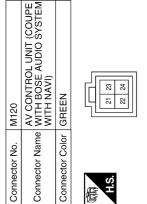
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#### < WIRING DIAGRAM >

#### **BOSE AUDIO WITH NAVIGATION SYSTEM** [BOSE AUDIO WITH NAVIGATION]

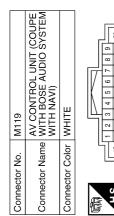


Signal Name	USB GRN	USB D-	SN8-A	USB D+	
Color of Wire	в	Ν	Н	U	
Terminal No. Color of Wire	21	22	23	24	a 

Signal Name	1	I	I	I	I	I	I	I
Color of Wire	I	I	-	I	-	-	I	-
Terminal No. Color of Wire	85	86	87	88	89	06	91	92

Signal Name	ACC	ILL CONT	ILL	SHIELD	FR RH PRE+	FR RH PRE-	RR RH PRE+	RR RH PRE-	STRG SW GND	STRG SW B	I	I	+B	GND
Color of Wire	۲/۷	RУ	R/L	SHIELD	В	Ν	٨	РС	L/B	GR/L	I	I	Y/R	в
Terminal No.	7	8	6	10	11	12	13	14	15	16	17	18	19	20

Signal Name	I	Ι	Ι	I	Ι	AUX VIDEO-	AUX VIDEO+	VIDEO SHIELD	I	I	I	I	I	I	I
Color of Wire	I	-	-	I	-	٩	B/W	SHIELD	Ι	Ι	I	-	Ι	I	ı
Terminal No.	20	12	72	73	74	75	76	77	78	79	80	81	82	83	84



	20		۵		+
6	18		Signal Name	z	FR LH PRE+
8	17		2 Ž	AMP ON	Ъ
7	16		<u>a</u>	μ	H
9	15		ig.	A	Ы
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4	13				
2	12				
2	10 11 12 13 14 15 16 17 18		° of		
t	10		Color of Wire	B/P	G
1	19		Color of Wire	ш	
	H.S.	J	Terminal No.	+	2

RR LH PRE+ RR LH PRE-STRG SW A

**GR/V** 

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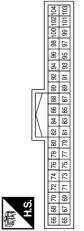
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FR LH PRE-

-1

Connector No. M122 Connector Name WITH BOSE AUDIO SYSTEM WITH NAVI) Connector Color WHITE
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Signal Name	R CAMERA SHIELD	R CAMERA COMP	CAMERA GND	CAMERA V+	I	
Color of Wire	SHIELD	≻	В	GR	I	
Terminal No. Color of Wire	65	99	29	89	69	

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**Revision: September 2009** 

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#### **BOSE AUDIO WITH NAVIGATION SYSTEM** [BOSE AUDIO WITH NAVIGATION]

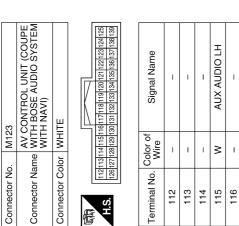
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Signal Name	I	I	I	I	I	I	I	I	-
Color of Wire	I	I	I	I	I	I	Ι	I	I
Terminal No. Color of Wire	131	132	133	134	135	136	137	138	139

of Signal Name	I	I	1	1	1	I	1	1	-	-	I	D AUX SHIELD	AUX AUDIO RH	AUX AUDIO-
Color Wire	Ι	I	I	-	I	I	-	I	Ι	-	Ι	SHIELD	œ	В
Terminal No. Color of Wire	117	118	119	120	121	122	123	124	125	126	127	128	129	130



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Signal Name	-	I
Color of Wire	В	в
Terminal No.	105	106
	Terminal No. Wire Signal Name	Color of Wire B

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Connector Name

Connector No.

Connector Color

#### **BOSE AUDIO WITH NAVIGATION SYSTEM** [BOSE AUDIO WITH NAVIGATION] < WIRING DIAGRAM >

Signal Name Т Т Т Т Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE 9 ъ E 2 3 4 8 9 10 1 1 2 3 4 5 6 Connector Color WHITE Connector Color GRAY M207 Color of Wire - ш വ മ ≥ Connector No. Connector No. Terminal No. N ო 4 -H.S. H.S. E E AUX AUDIO-(WITH COUPE) AUX AUDIO RH (WITH COUPE) AUX AUDIO LH (WITH COUPE) Signal Name œ Signal Name Connector Name CENTER SPEAKER Connector Color BROWN 7 T I 9 ŝ 5 Connector Name AUX JACK 4 Connector Color | WHITE M206 e M151 Color of Wire Color of Wire 1 2 O/B R/B B/B B/P RL Connector No. Connector No. Terminal No. Terminal No. N С N H.S. ALS. E 佢 Signal Name USB GND USB (D+) USB (D-) Signal Name V BUS Connector Name USB INTERFACE I. Т Connector Name WIRE TO WIRE 2 e 4 Connector Color WHITE Connector Color GREEN M150 M205 ŝ Color of Wire Color of Wire

B/P O/B

N

Terminal No.

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M204

**Revision: September 2009** 

Connector No.

Connector No.

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Signal Name	1	I	I	I	I	I	I	I
Color of Wire	_	R/L	R/B	B/R	GR	в	SHIELD	B/W
Terminal No. Color of Wire	3	4	5	9	6	10	11	12

AUX VIDEO+

AUX VIDEO-

B/V

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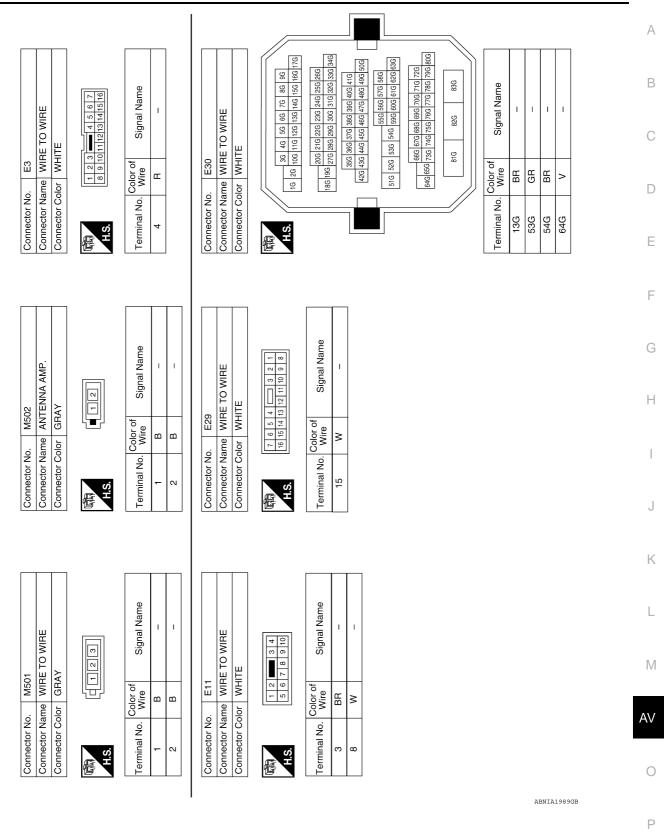
Terminal No.

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#### < WIRING DIAGRAM >

## [BOSE AUDIO WITH NAVIGATION]



Connector Name BACK-UP LAMP SWITCH Signal Name Signal Name Connector Name JUNCTION BLOCK I T T T 54 53 52 Connector Color BROWN Connector Color BLACK E49 F24 Color of Wire Color of Wire ŋ 0 0 🗠 Connector No. Connector No. Terminal No. Terminal No. 51 52 N H.S.H. H.S. E E Signal Name Signal Name Connector Name JUNCTION BLOCK 1 I T Connector Name WIRE TO WIRE 
 4
 3
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 1

 10
 9
 8
 7
 6
 5
 42 41 41 41 46 45 44 43 Connector Color WHITE Connector Color WHITE E47 Color of Wire Color of Wire F2 BB 0 1 Connector No. Connector No. Terminal No. Terminal No. 45 ო ω AHS. H.S. E 佢 Γ Connector Name BACK-UP LAMP RELAY 
 7
 6
 5
 4
 3
 2
 1

 16
 15
 14
 13
 12
 11
 10
 9
 8
 Connector Color BLUE E34 Connector No.

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Signal Name	I	I	I	ļ
Color of Wire	0	щ	×	ГG
Terminal No. Color of Wire	1	2	З	5

H.S.H

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Connector No.	E
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE
	654 321

H.S.

Signal Name	I
Color of Wire	9
Terminal No.	4

# [BOSE AUDIO WITH NAVIGATION]

< WIRING DIAGRAM >

#### **BOSE AUDIO WITH NAVIGATION SYSTEM** [BOSE AUDIO WITH NAVIGATION]

А Connector Name JOINT CONNECTOR-F03 Signal Name В Signal Name 
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 Т Т I WIRE TO WIRE 7 С ო œ 
 1
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 ---- -</td BLACK WHITE 0 B10 F49 Color of Wire Color of Wire œ l m > Connector Color Connector Color Connector Name D Connector No. Connector No. Terminal No. Terminal No. 15 ო 4 AHS. H.S. 佢 佢 Ε F 48 46 42 42 TCM (TRANSMISSION CONTROL MODULE) (WITH VQ35DE) 47 45 43 41 G REV LAMP RLY Signal Name 
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 43

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 15
 16
 17
 18
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 12
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 8
 9
 10
 41
 Signal Name T T I T Т Н BLACK F33 Color of Wire SHIELD Color of Wire P/B ш വ ≻ \_ I Connector Name Connector Color 1 21 31 Connector No. Terminal No. Ferminal No. 19 84J 85J 86J 88 91J H.S. J 佢 Κ 49.1 50.1 51.1 52.1 53.1 54.1 55.1 47.1 48.1 56.1 57.1 58.1 59.1 60.1 61.1 62.2 63.1 3/ 4/ 5/ 6/ 7/ 8/ 9/ 2/ 10/ 11/ 12/ 13/ 14/ 15/ 16/ 17/ 
 22J
 23J
 24J
 25J

 19J
 20J
 21J
 26J
 27J
 28J
 29J
 30J
 84J 85J 86J 87J 82J 83J 88J 89J 90J 91J 92J 31J 32J 33J 34J 35J 36J 37J 38J 39J 40J 41J 42J 43J 44J 45J 46J 64J 65J 66J 67J 68J 69J 70J 71J 72J 73J 74J 75J 76J 77J 78J 79J 66 Signal Name L OUTPUT 98J TRANSMISSION RANGE SWITCH ßN 67J WIRE TO WIRE 96J œ 6 5 Μ 95J 4 8 BLACK WHITE 94J F25 80J 81J 2 Color of Wire lœ Б 93J 0 œ ₽ 181 Connector Name Connector Name Connector Color Connector Color AV Connector No. Connector No. Terminal No. ო S H.S. H.S.

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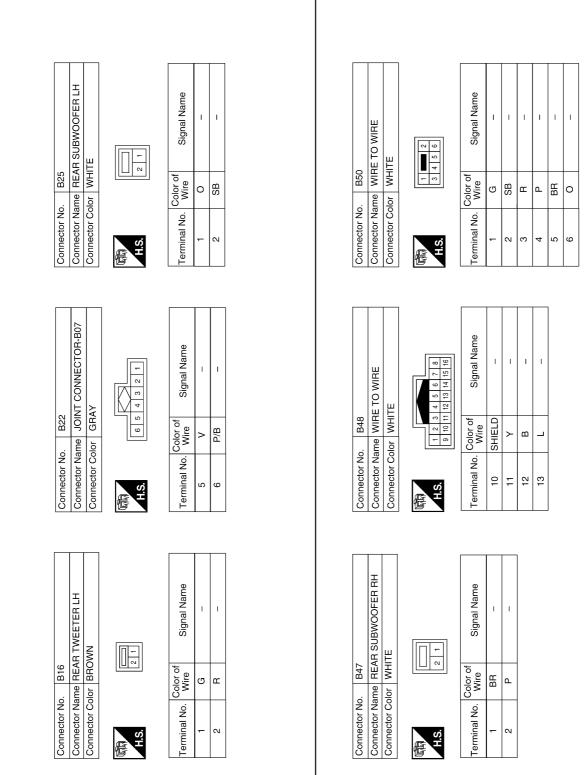
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# **BOSE AUDIO WITH NAVIGATION SYSTEM**

< WIRING DIAGRAM >

				/  >																										
Signal Name		1	I	1	-	– (EXCEPT SEDAN WITH NAVI)		1																						
Color of	ANILA	M/R	>	SHIELD	۲	_	SHIELD	B/R																						
Terminal No.		12	13	14	15	21	22	23																						
	WIRE TO WIRE	ш			1 2 3 4 5 6 7 8 9 10 11 12 10 11 12 10 12 10 10 10 10 11	18 19 20 21 22 23 24		Signal Name	I	I	1	1	– (EXCEPT SEDAN WITH NAVI)	1	Signal Name	1	1	I	– (WITH NAVI)											
B102	ne WIRE	or WHITE			2 3 4 5	5 14 15 16 1	Color of	Wire	LG	SHIELD	BR	σ	GR	SHIELD	Color of Wire	SB	BR	В	ГG											
Connector No.	Connector Name	Connector Color			v	_		Terminal No.	2		4	8	10	1	Terminal No.	13	14	15	16											
Con	Con	Con	]	Æ	S H			Teri							Teri															
			]								]						7													
	Connector Name REAR TWEETER RH	WN			-			Signal Name	I	I								4 5 6 7	11 12 13 14 15	Signal Name	1	1	I	I	I	I	I	I		
). B100	tme REA	olor BROWN		<u>IU</u>	2		Color of	Wire	^	٩					. B103			1 2 3	8 9 10	Color of Wire	SB	GR	0	^	M	ŋ	>	4		
Connector No.	Connector Na	Connector Color		E	SH			Terminal No.	1	2					Connector No.	Connector Name WIRE IO WIRE Connector Color BROWN		Æ	H.S.	Terminal No.	F	4	5	9	7	6	10	12		
											-										-							ABNI	A1993GB	

< WIRING DIAGRAM >

## [BOSE AUDIO WITH NAVIGATION]

Revision: September 2009

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#### **BOSE AUDIO WITH NAVIGATION SYSTEM** [BOSE AUDIO WITH NAVIGATION]

Signal Name	INST CTR TWDR + OUT	INST CTR TWDR - OUT	FR DOOR RH + OUT	FR DOOR RH - OUT	FR RH + IN (WITH NAVI)	FR RH - IN (WITH NAVI)	FR LH + IN	FR LH + IN	I
Color of Wire	٩	>	0	SB	GR	_	W/R	B/R	I
Terminal No. Color of Wire	69	70	71	72	73	74	75	76	77

< WIRING DIAGRAM >

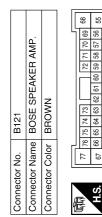
Signal Name	FR TWDR LH - OUT	AMP ON	I	I	RR LH - IN	RR LH + IN	RR RH - IN	RR RH + IN	I	TWTR RR PSHELF LH + OUT
Color of Wire	ш	σ	I	I	≻	BR	>	ГG	I	Ļ
Terminal No. Color of Wire	59	60	61	62	63	64	65	99	67	68

55

61 60 62

67

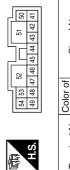
H.S.



Signal Name	TWTR RR PSHEL LH - OUT	
Color of Wire	œ	
Terminal No. Color of Wire	55	

Signal Name	TWTR RR PSHELF LH - OUT	I	I	RR TWDR LH + OUT	
Wire	ш	I	Ι	Μ	
erminal No. Wire	55	56	57	58	





Signal Name	FR TWDR LH + OUT (EXCEPT COUPE WITHOUT NAVI)	FR TWDR LH - OUT (EXCEPT COUPE WITHOUT NAVI)	FR TWDR RH - OUT
Color of Wire	LG	>	GR
Terminal No. Olor of	41	42	43

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Connector No.	). B138	8
Connector Name		WIRE TO WIRE
Connector Color	olor WHITE	ITE
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Terminal No.	Color of Wire	Signal Name
-	Г	I
2	Γ	- (WITH COUPE)

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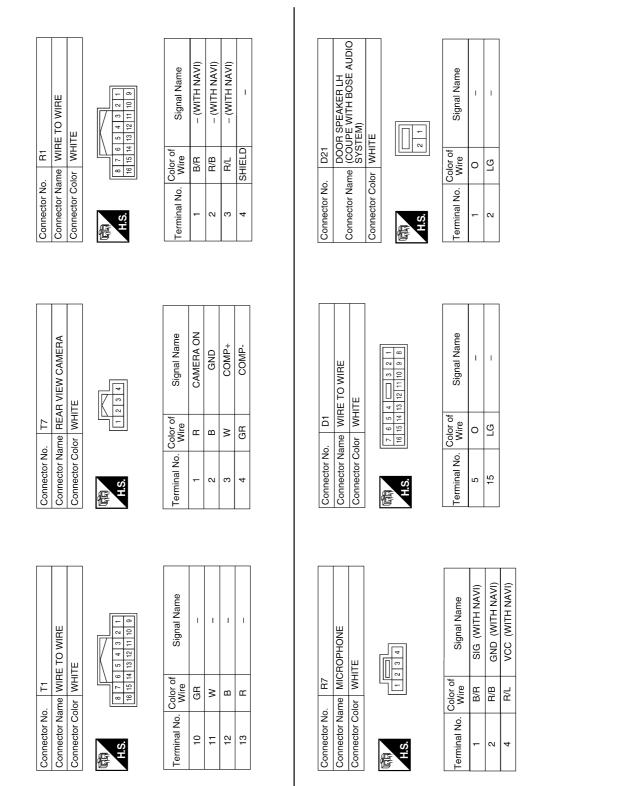
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Signal Name	FR TWDR RH + OUT	RH WOOFER + OUT	RH WOOFER - OUT	GND	LH WOOFER - OUT (EXCEPT COUPE WITHOUT NAVI)	TWTR RR PSHELF RH-OUT	BAT	BAT	GND	LH WOOFER +OUT	TWTR RR PSHELF RH +OUT
Color of Wire	ВВ	0	SB	В		٩	SB	σ	В	N	>
Terminal No.	44	45	46	47	48	49	50	51	25	53	54

< WIRING DIAGRAM >

[BOSE AUDIO WITH NAVIGATION]



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Connector Name WIRE TO WIRE

D101

Connector No.

Connector Color WHITE

 DOOR SPEAKER RH
 COUPE WITH BOSE AUDIO
 SYSTEM)
 R BROWN Signal Name I. T -D121 Color of Wire g \_ Connector Name Connector Color Connector No. Terminal No. -2 H.S. E

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Signal Name
-

Color of Wire

> Terminal No. 7 9

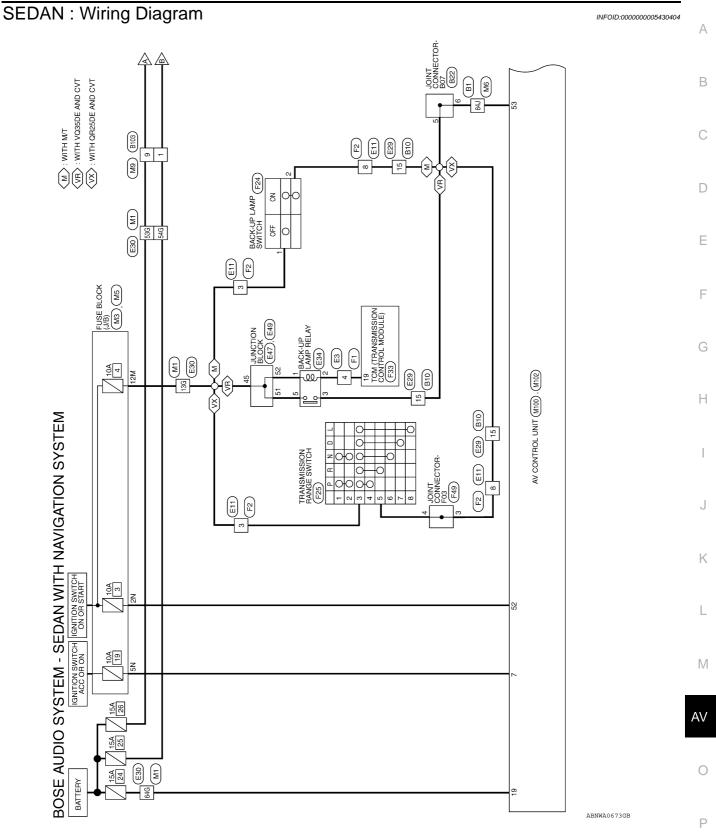
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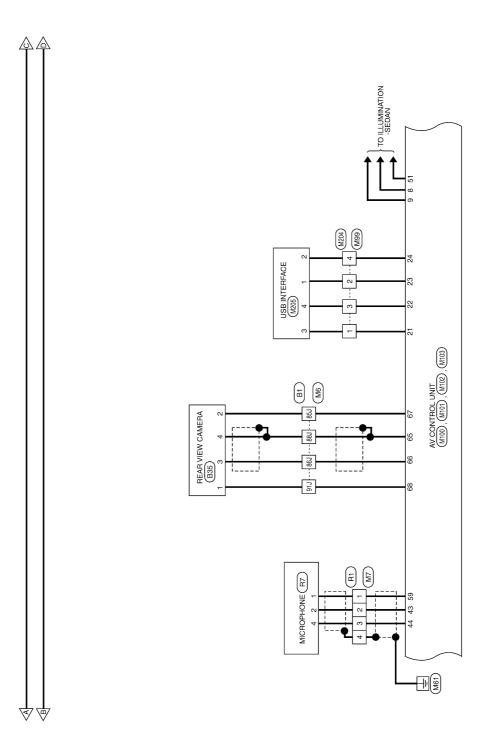
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## [BOSE AUDIO WITH NAVIGATION]

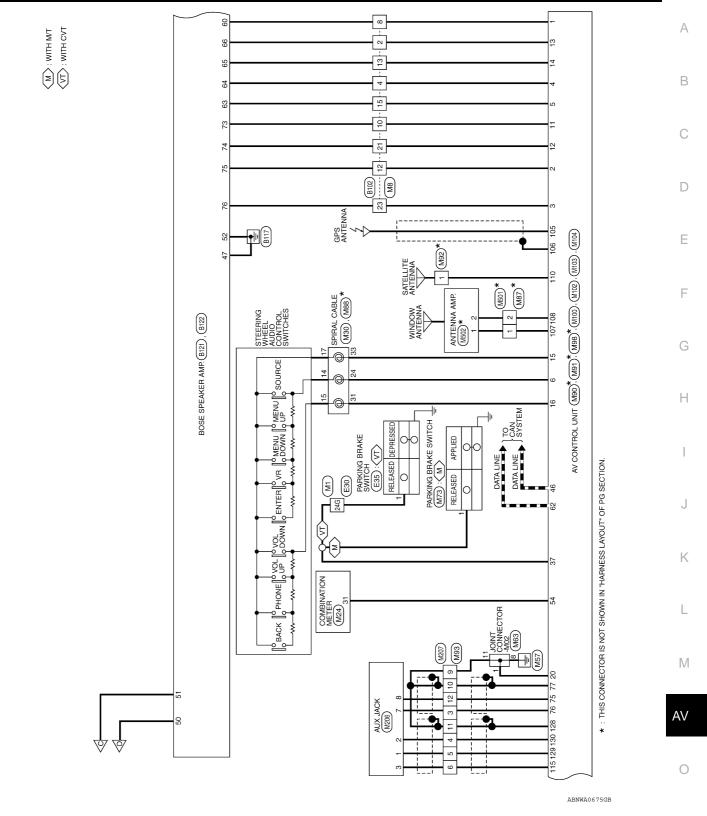




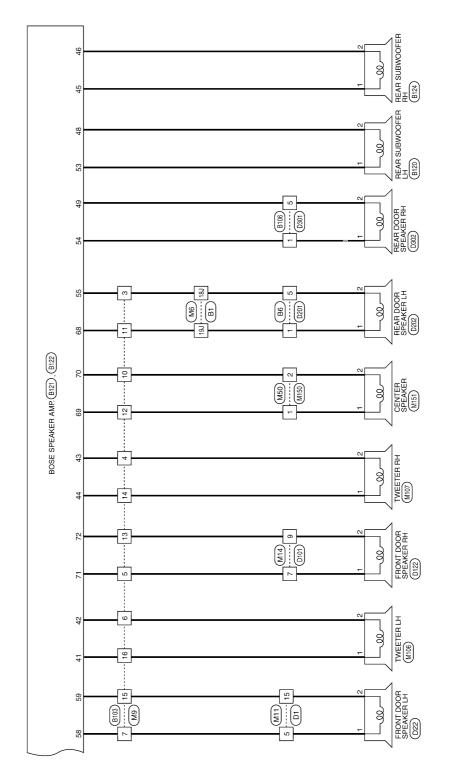
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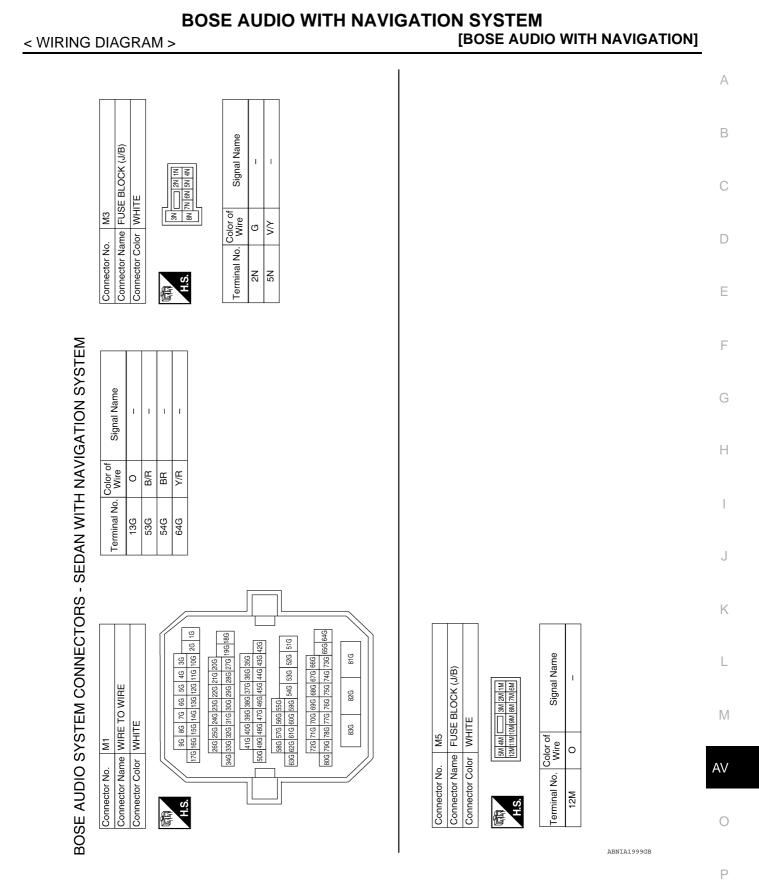
[BOSE AUDIO WITH NAVIGATION]



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**Revision: September 2009** 

# **BOSE AUDIO WITH NAVIGATION SYSTEM**

< WIRING DIAGRAM >

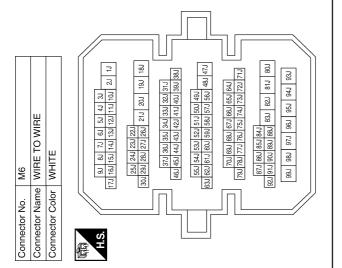
Connector Name WIRE TO WIRE Ę

Connector No.

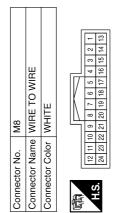
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[8	30	SE	E A	UDIO	WITH	NA\	/IGA	TIOI	٧]

Connector Color WHITE	lor WHI	TE
品 日 日 日 日 日	9 10 11	2 3 4 5 6 7 8 10 11 12 13 14 15 16
Terminal No. Color of Wire	Color of Wire	Signal Name
-	B/B	I
2	B/B	I
З	R/L	I
4	SHIELD	I

Signal Name	I	I	I	I	I	1	1
Color of Wire	BR/B	R/G	P/B	в	٢	SHIELD	GR
Terminal No.	18J	19J	84J	85J	86J	88J	91J



Signal Name	I	- (WITH SEDAN)	I	I	I	I	– (WITH SEDAN)	Ι	I
Color of Wire	٨	GR	B/P	В	σ	ГG	В	Μ	В
Terminal No.	2	4	8	10	12	13	15	21	23



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BOSE AUDIO WITH NAVIGAT	FION SYSTEM
< WIRING DIAGRAM >	[BOSE AUDIO WITH NAVIGATION]
Connector No.     M14       Connector Name     WIRE TO WIRE       Connector Name     WIRE TO WIRE       Connector Name     Wire       Total     N       Total     Signal Name       P     Connector Name	Connector No.     M50       Connector Name     WIRE TO WIRE       Connector Color     WHITE       Terminal No.     Color of Vire       2     O/B
Connector No.     M11       Connector Name     WIRE TO WIRE       Connector Name     WIRE TO WIRE       Connector Color     M11       Mile     a       Film     a       Terminal No.     Color of	Connector No.     M30       Connector Name     SPIRAL CABLE       Connector Color     GRAY       Connector Color     GRAY       Terminal No.     Color of
Nire       Signal Name       5     W       -	Wire     Signal Name       24     W/G     AUDIO_STRG_SW       33     L/B     AUDIO_STRG_SW

4         3         2         1           13         12         11         10         9         8	Signal Name	I	I	I	I	I	I	I	I	I	I	I	I
7 6 5 14 16 15 14	Color of Wire	BR	BR	GR/L	G/W	B/Υ	M	B/R	O/B	B/P	BR	Г/О	в
तित्र H.S.	Terminal No.	-	e	4	ъ	9	7	6	10	12	13	14	15

M24 M11 M11 M11 M11 M112 M112 M112 M112	V METER Connector No. M30 Connector Name SPIR. Connector Color GRAN	H.S.	10         11         12         13         14         15         16         17         18         19         20           30         31         32         33         34         35         38         39         40	24 W/G	Signal Name 31 GR/L
	Connector No. M24 Connector Name COMBINATIC Connector Color WHITE		5         6         7         8         9         10         11         12           25         26         27         28         29         30         31         32	-	

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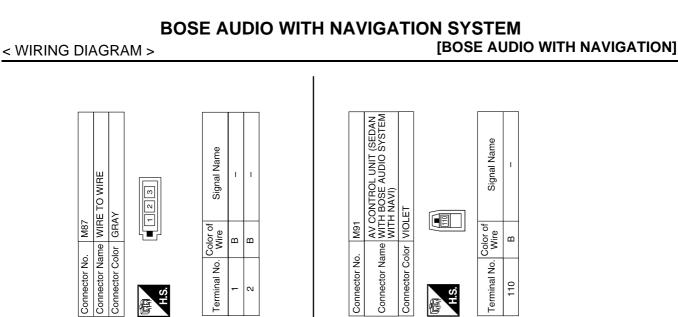
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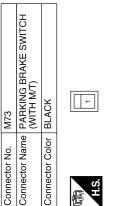
AV

Connector Name WIRE TO WIRE

Connector No. M9

Connector Color BROWN





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

Connector Name JOINT CONNECTOR-M02	BLUE	9 8 7 6 5 4 3 2 1
Connector Name	Connector Color	(12111098) H.S.

Signal Name	I	I	I
Color of Wire	в	В	В
Terminal No.	Ļ	8	11

Connector No.	M88
Connector Name SPIRAL CABLE	SPIRAL CABLE
Connector Color GRAY	GRAY
所 H.S.	20 19 18 17 16 15 14 13

Connector Name WITH BOSE AUDIO SYSTEM WITH NAVI)

M90

Connector No.

GRAY

Connector Color

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

Signal Name

Color of Wire B B

> Terminal No. 105 106

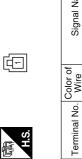
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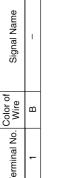
M63

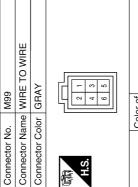
Connector No.

Signal Name ACC ACC ILL CONT ILL CONT ILL FR RH PRE+ FR RH PRE+ RR RH PRE- RR RH PRE- RR RH PRE- STRG SW GND STRG SW B	V/Y R/Y R/L B B B B B B C R/L B L/B C B L C B C C C C C C C C C C C C C C	0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 3 4 5 6 7 8 9 2 3 4 5 6 7 8 9 of Signal Name AMP ON FR LH PRE+	19 10 11 Color of Wire B/P G	Terminal No.
1 1	1 1	17	FR LH PRE-	н	3
	GH/L	<u>ı</u>	FR LH PRE+	σ	2
STRG SW B	l'ag	4		B/P	-
STRG SW GND	L/B	15		B/P	-
RR RH PRE-	ГG	14		Color of	Terminal No.
RR RH PRE+	>	13			
FR RH PRE-	8	12	11 12 13 14 15 16 17 18	19 10 11	2
FR RH PRE+	ш	11	2 3 4 5 6 7 8 9		
I	1	10		~ -  _	E
ILL	R/L	6			
ILL CONT	РY	5	J	- 11	
ACC	۲/۷	α	WHITE		Connector Color
Signal Name		۵	ITH BOSE AUDIO SYSTEM ITH NAVI) HITE		Connector N Connector C
	Color of Wire	al No.	M100 AV CONTROL UNIT (SEDAN WITH BOSE AUDIO SYSTEM WITH NAVI) WHITE		Connector No. Connector Name Connector Color
	Color of Wire		– (WITH SEDAN) M100 AV CONTROL UNIT (SEDAN WITH BOSE AUDIO SYSTEM WITH NAVI)		12 12 Connector No. Connector Nar Connector Nar
	Color of Wire		D – (WITH SEDAN) – (WITH SEDAN) 100 V CONTROL UNIT (SEDAN 11TH BOSE AUDIO SYSTEM 11TH NAVI)		11 12 Connector N Connector N Connector C
	Color of Wire		D – – D – (WITH SEDAN) – (WITH SEDAN) 100 V CONTROL UNIT (SEDAN TITH BOSE AUDIO SYSTEM TITH NAVI) HITE		10 11 12 Connector N Connector N Connector N
I	Color of Wire		D – – – – – – – – – – – – – – – – – – –		9 10 12 12 Connector N Connector N
	Color of Wire		D		6 9 10 11 12 12 Connector N Connector N
MAIN ANTENNA	Color of Wire		D D D - (WITH SEDAN) - (WITH SEDAN) - (WITH SEDAN) TITH BOSE AUDIO SYSTEM TITH NAVI) HITE		5 6 110 122 122 122 122 122 122 122 122 122
AMP SUPPLY MAIN ANTENNA	Color of Wire				4 5 6 9 9 10 11 12 12 12 12 0nnector N
Signal Name AMP SUPPLY MAIN ANTENNA	Color of Color of Mire		D C C C C C C C C C C C C C C C C C C C		3 5 6 6 11 11 11 11 11 20 N Connector N
Signal Name AMP SUPPLY MAIN ANTENNA	Color of Wire B B Color of Wire Color of Wire Wire Wire Wire Wire Wire Wire Wire		of Signal Name – – – – – – – – – – – – – – – – – – –		Terminal No. 3 5 6 6 9 10 11 11 12 12 12 12 Connector N
	Color of Color of Color of Color of Color of Wire of Wire Of Wire Of Color		01     1     5     6       01     11     12       01     Signal Name       0     -       0     -       0     -       0     -       0     -       0     -       0     -       0     -       0     -       100     -       11TH BOSE AUDIO SYSTEM       11TE		Terminal No. Terminal No. 3 4 5 6 9 11 11 12 12 12 12 Connector N
	lor GRA. Color of Wire Color of	nector Cc minal No. 108 109 109 109 109 109	b1     5     0     11     5       b1     2     0     11     2       b1     -     -     -       100     -     -     -       11TH BOSE AUDIO SYSTEM       HITE		Terminal No. Terminal No. 10 11 11 12 10 11 12 Connector N Connector N
(I NAVI) Signal Name AMP SUPPLY MAIN ANTENNA		nector Cc minal No. 108 109 ninal No.	bit     1     5     6       bit     2     1     1       bit     Signal Name     -       -     -     -       -     -     -       -     -     -       100     -     -       111H BOSE AUDIO SYSTEM       111F		Connector C Terminal No. 3 3 4 6 6 6 9 9 11 11 11 12 12 12 Connector N Connector N
		nector Na minal No. 107 109 109 109 109	WIRE TO WIRE       Connector Name     WIRE TO WIRE       Connector Color     WHITE       Time     Time       1     1       2     3       4     B       5     R       6     W       9     B       10     SHIELD       11     SHIELD       12     P       12     P       Connector Name     MITH SEDAN)		Connector Name WIRE T Connector Color WHITE Connector Color WHITE Terminal No. Color of 5 R B 6 W 10 SHIELD 11 SHIELD 11 SHIELD 12 P 12 P 12 Connector Name WITH B 6 W 13 Connector Name WITH Connector Color WHITE Connector Name WITH Connector Color WHITE

Connector Name SATELLITE RADIO ANTENNA BROWN M92 Connector Color Connector No. 惛







Signal Name	I	I	I	I
Color of Wire	В	В	×	IJ
Terminal No. Color of Wire	Ļ	2	e	4

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# **BOSE AUDIO WITH NAVIGATION SYSTEM**

< WIRING DIAGRAM >

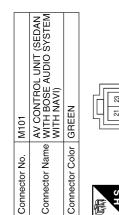
# **BOSE AUDIO WITH NAVIGATION SYSTEM**

## < WIRING DIAGRAM >

# [BOSE AUDIO WITH NAVIGATION]

f Signal Name	1	CAN-L	I	I	1	-	MR OUTPUT	IGN	REVERSE SIG	SPEED	I	I	I	Ι	MIC SIG	I	Ι	CAN-H	I	I	f Signal Name	1	I	I	I	I	I	I	I	I	I	
Color of Wire	1	Ч	I	ı	I	I	R/L	თ	P/B	W/N	I	I	I	I	B/R	I	I	_	I	I	Color of Wire	I	I	T	I	I	I	I	I	I	I	I
Terminal No.	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	Terminal No.	81	82	83	84	85	86	87	88	89	06	91

	1		46 47 48 62 63 64															1	1									
2	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITH NAVI)	TE	37 38 39 40 41 42 43 44 45 53 54 55 56 57 58 59 60 61	Signal Name	1	I	Ι	Н	PKB SIG	I	-	I	I	I	MIC GND	MIC +B	Signal Name	I	I	Ι	I	Η	AUX VIDEO-	AUX VIDEO+	VIDEO SHIELD	I	I	
. M102	-	lor WHITE	34 35 36 50 51 52	Color of Wire	I	I	I	I	G/R	I	I	I	I	I	R/B	R/L	Color of Wire	ı	ı	I	I	I	٩	_	SHIELD	I	ı	1
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	33	34	35	36	37	38	39	40	41	42	43	44	Terminal No.	70	71	72	73	74	75	76	22	78	79	08



22 24	Signal Nam	USB GRN	
]	Color of Wire	В	
ю́ц	erminal No.	21	

Signal Name	USB GRN	USB D-	V-BUS	USB D+	
Color of Wire	В	N	н	g	
Terminal No. Color of Wire	21	22	23	24	

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Connector No.	j.	è		Σ	M103	ო															
AV CONTROL UNIT (SEDAN Connector Name WITH BOSE AUDIO SYSTEM WITH NAVI)	tor ]	Var	ne	A N N	AV CONTROL UNIT (SEDAN WITH BOSE AUDIO SYSTEM WITH NAVI)	<u> </u>	₽₿₹	LE S S	ΑĽ	59	늘으	SS	ЩŃ	ΜΞ	72						
Connector Color WHITE	or Io	18	5	3	E	世									1						
															1						
[									$   \rangle$	IN .	11	117									
E	99	<u>66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100 102</u>	70	72	74	76	78	8	82	84	86	88	6	56	8	96	86	0	10	8	
SH	65	65 67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99 101 103	69	71	73	75	17	79	81	83	85	87	68	5	8	95	6	66	101	8	

	100	66				
	68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100	65 67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99				
	96	96				
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	88	87	Ĕ	፲	8	5
	86	85	Na	\ ▼	Ž	Ā
	84	83	Signal Name	R CAMERA SHIELD	R CAMERA COMP	CAMERA GND
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	74	73	_ of	Q		
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	70	69	25 ≤	SHIELD		
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þ	SH S	V	Terminal No. Color of Wire			

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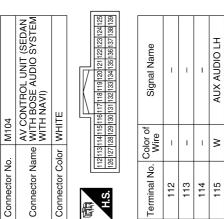
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BOSE AUDIO WITH NAVIGATIO	DN SYSTEM
>	[BOSE AUDIO WITH NAVIGATION]

Signal Name	I		I	I	1	I	I	I	I
Color of Wire	I	I	I	Ι	1	I	-	I	I
Terminal No. Color of Wire	131	132	133	134	135	136	137	138	139

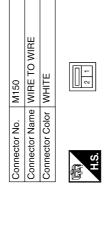
F Signal Name	I	-	1	-	1	I	-	1	-	-	I	AUX SHIELD	AUX AUDIO RH	AUX AUDIO-
Color of Wire	I	I	ı	I	ı	ı	I	I	I	I	I	SHIELD	œ	в
Terminal No. Color of Wire	117	118	119	120	121	122	123	124	125	126	127	128	129	130



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Signal Name	I	I	I	AUX AUDIO LH	I	
Color of Wire	I	Ι	I	۸	-	
Terminal No. Color of Wire	112	113	114	115	116	



Connector No. M107 Connector Name TWEETER RH (SEDAN) Connector Color BROWN

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

	Signal Name	– (WITH BOSE AUDIO SYSTEM)	– (WITH BOSE AUDIO SYSTEM)
	Color of Wire	Г/О	GR/L
配 H.S.	Terminal No. Color c	1	Ŋ

Connector No. M106	
Connector Name TWEETER LH (SEDAN)	LH (SEDAN)
Connector Color BROWN	
H.S.	

Signal Name	– (WITH BOSE AUDIO SYSTEM)	– (WITH BOSE AUDIO SYSTEM)	
Color of Wire	ГG	B/Y	
Terminal No. Wire	1	2	

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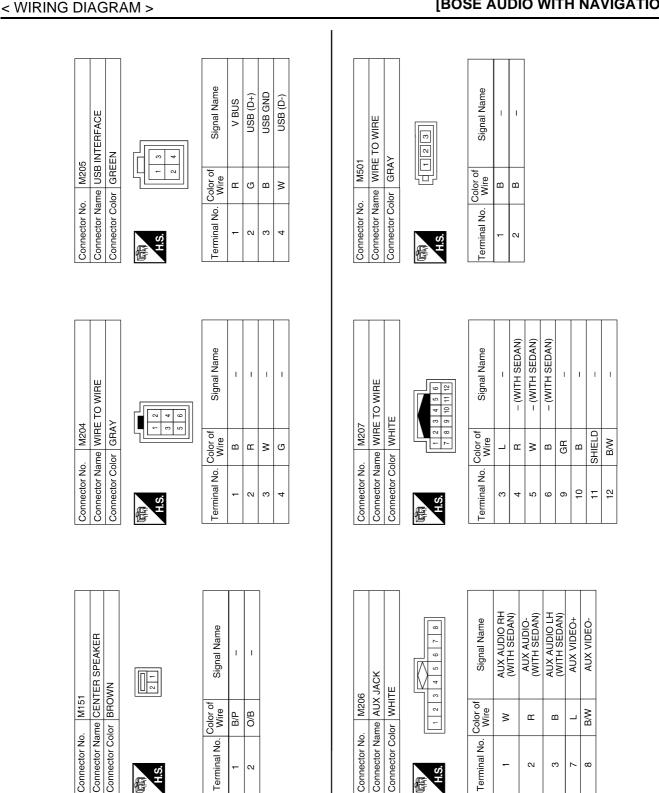
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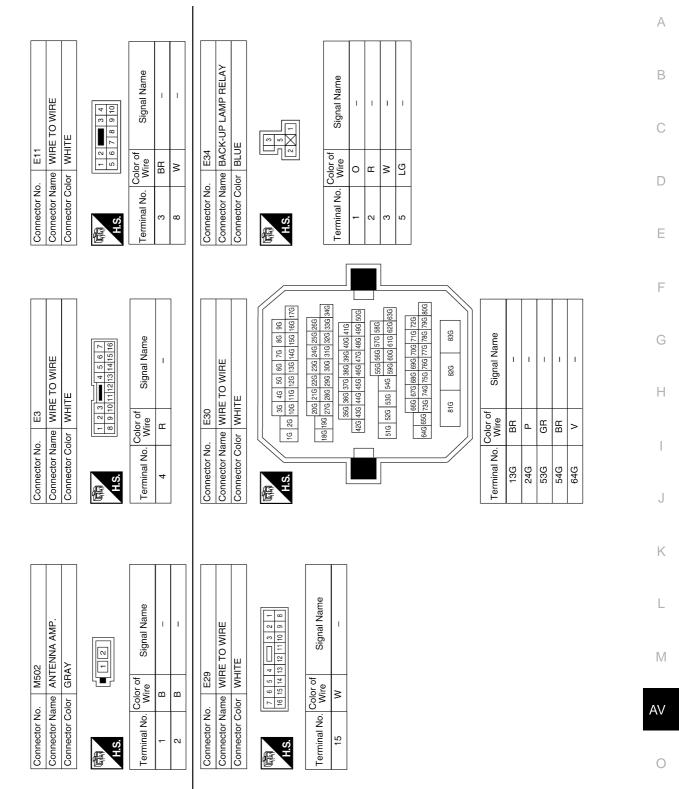
## BOSE AUDIO WITH NAVIGATION SYSTEM [BOSE AUDIO WITH NAVIGATION]

Revision: September 2009

## BOSE AUDIO WITH NAVIGATION SYSTEM

#### < WIRING DIAGRAM >





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## **BOSE AUDIO WITH NAVIGATION SYSTEM** [BOSE AUDIO WITH NAVIGATION]

Connector Name BACK-UP LAMP SWITCH Signal Name Signal Name Connector Name JUNCTION BLOCK I T T T 54 53 52 51 Connector Color BROWN Connector Color BLACK E49 F24 Color of Wire Color of Wire ŋ 0 <u>م</u> 0 Connector No. Connector No. Terminal No. Terminal No. 52 N 51 H.S. H.S.H. E E Signal Name Signal Name Connector Name JUNCTION BLOCK 1 I T Connector Name WIRE TO WIRE 
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 42 41 41 41 46 45 44 43 Connector Color WHITE Connector Color WHITE E47 Color of Wire Color of Wire F2 BB 0 1 Connector No. Connector No. Terminal No. Terminal No. 45 ო ω AHS. H.S. E E Connector Name PARKING BRAKE SWITCH (WITH CVT) Signal Name Signal Name 7 6 5 4 - 3 2 1 16 15 14 13 12 11 10 9 8 I. T Connector Name WIRE TO WIRE Connector Color WHITE BLACK -E35 Color of Wire Color of Wire Ē G ۰ Connector Color Connector No.

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Terminal No.

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Connector No.

Terminal No.

H.S. E

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< WIRING DIAGRAM >

#### **BOSE AUDIO WITH NAVIGATION SYSTEM** [BOSE AUDIO WITH NAVIGATION]

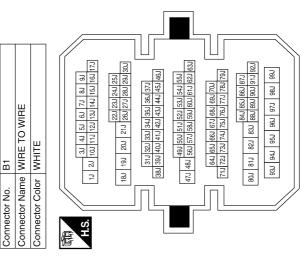
Connector Name JOINT CONNECTOR-F03 - (WITH NAVI) - (WITH NAVI) Signal Name Signal Name Т I Connector Name WIRE TO WIRE 7 ကထ ĉ 6 7 BLACK Connector Color WHITE 0 F49 1 2 4 5 Color of Wire Color of Wire B6 ŋ œ l m 0 Connector Color Connector No. Connector No. Terminal No. Terminal No. ß ო 4 H.S. H.S. 佢 佢 48 46 42 42 TCM (TRANSMISSION CONTROL MODULE) (WITH VQ35DE) 47 45 43 41 - (WITH NAVI) - (WITH NAVI) REV LAMP RLY Signal Name 
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 Signal Name T. Т I I I BLACK F33 Color of Wire Color of Wire SHIELD P/B ŋ 0 ш ≻ ശ Connector Name Connector Color 1 21 31 Connector No. Terminal No. Ferminal No. 19 19 84J 85J 86J 88J 91J 18 H.S. 佢 66 Signal Name R OUTPUT TRANSMISSION RANGE SWITCH ßN



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Color of Wire

Terminal No. ო S

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BLACK

Connector Color

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Connector No.

Connector Name

#### < WIRING DIAGRAM >

## **BOSE AUDIO WITH NAVIGATION SYSTEM** [BOSE AUDIO WITH NAVIGATION]

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Signal Name	CAMERA ON	GND	COMP +	COMP -
Color of Wire		В	≻	SHIELD
Terminal No. Color of Wire	F	2	3	4

Signal Name	I	I	1	– (WITH NAVI)
Color of Wire	SB	BR	В	ГG
Terminal No. Color of Wire	13	14	15	16

B22	Connector Name JOINT CONNECTOR-B07	GRAY	6 5 4 3 2 1	, of
Connector No.	Connector Name	Connector Color	际 H.S.	10,010,0

	Signal Name	I	1
0	Color of Wire	>	P/B
H.S.	Terminal No.	5	9





E

B10

Connector No.



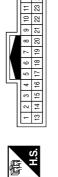
Connector No.	B102
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE

Connector Name WIRE TO WIRE

B103

Connector No.

Connector Color BROWN



H.S. 佢

12 24

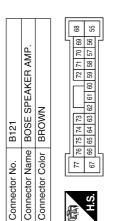
Signal Name	-	Ι	-	- (SEDAN WITH NAVI)	I	-	-	– (SEDAN WITH NAVI)	I
Color of Wire	ГG	BR	ŋ	GR	W/R	^	۲	_	B/R
Terminal No.	2	4	8	10	12	13	15	21	23

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#### Signal Name I I T I. I. T T T T I Color of Wire ВO В > ≥ G \_ \_م > Terminal No. 10 ÷ 12 ო 4 ß 9 $\sim$ 6

INST CTR TWDR + OUT FR RH + IN (WITH NAVI) FR RH - IN (WITH NAVI) INST CTR TWDR - OUT FR DOOR RH + OUT FR DOOR RH - OUT FR LH + IN FR LH + IN Signal Name I Color of Wire W/R SB GR B/B 0 ۵ > \_ I Terminal No. 69 7 72 73 74 75 77

Signal Name	FR TWDR LH - OUT	AMP ON	1	I	RR LH - IN	RR LH + IN	RR RH - IN	RR RH + IN	I	TWTR RR PSHELF LH + OUT
Color of Wire	ш	σ	I	I	≻	BR	>	ГG	I	L
Terminal No.	59	60	61	62	63	64	65	99	67	89



Signal Name	TWTR RR PSHELF LH - OUT	Ι	I	RR TWDR LH + OUT	
Color of Wire	В	I	I	N	
Terminal No. Color of Wire	55	56	57	58	

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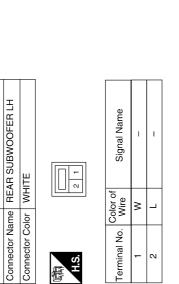
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< WIRING DIAGRAM >

B120

Connector No.

B106	WIRE TO WIRE	WHITE	1     2       4     5     6     7	Color of Signal Name
				Colo
Connector No.	Connector Name	Connector Color	त्रित H.S.	Terminal No.

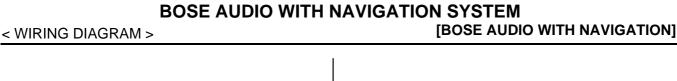
Signal Name	I	-
Color of Wire	^	Ч
Terminal No.	Ļ	5

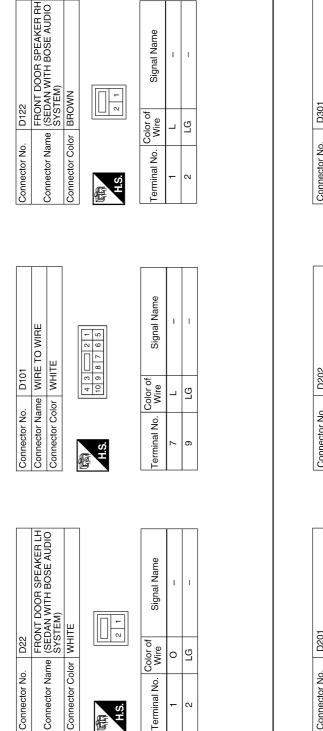
Connector No. B124 Connector Name REAR SUBWOOFER BH		_			7		Terminal No. Wire	- 0	2 SB				Connector No. D1 Connector Name WIRE TO WIRE		赋礼 16 15 14 13 12 11 10 H.S.		Terminal No. Color of Signal Name	5 0	15 LG		
Signal Name	FR TWDR RH + OUT	RH WOOFER + OUT	RH WOOFER - OUT	GND	LH WOOFER - OUT (EXCEPT COUPE	WITHOUT NAVI) TWTR BR PCHELF	IWIN HA PONELL RH-OUT	BAT	BAT	GND	LH WOOFER +OUT	TWTR RR PSHELF RH +OUT	R7 MICROPHONE	WHITE			Signal Name	SIG (WITH NAVI)	GND (WITH NAVI)	VCC (WITH NAVI)	
Color of Wire	BR	0	SB	В			۵.	SB	თ	ß	8	>	e e	-			Color of Wire	B/R	R/B	R/L	
Terminal No.	44	45	46	47	48	ç	49	50	51	52	53	54	Connector No. Connector Name	Connector Color	品. H.S.		Terminal No.	-	2	4	
B122 BOSF SPFAKFR AMP				54 53 <sup>32</sup> 7 31 50 49 48 47 46 45 44 43 42 41		Signal Name		(EXCEPT COUPE	WITHOUT NAVI)	FR TWDR LH - OUT (EXCEPT COUPE	WITHOUT NAVI)	FR TWDR RH - OUT	R1 WIRE TO WIRE		4 ç % ; 2 ç		Signal Name	– (WITH NAVI)	– (WITH NAVI)	– (WITH NAVI)	1
B122 me BOSF	or BROWN			54 53 <sup>Jz</sup> 49 48 47 46	24 F 24 A	Color of		- IJ		۳ >		GR	e la la	-	8 7 6 5	21 41 21 01	Color of Wire	B/R	R/B	R/L	SHIELD
Connector No.	Connector Color					Terminal No.							Connector No. Connector Name	Connector Color			Terminal No.				

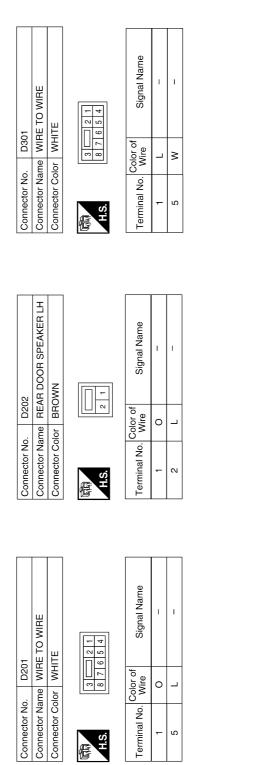
# **BOSE AUDIO WITH NAVIGATION SYSTEM**

Revision: September 2009

< WIRING DIAGRAM >







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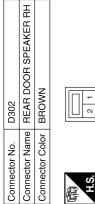
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Signal Na	Ι
Color of Wire	_
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MULTI AV SYSTEM (COUPE)

## [BOSE AUDIO WITH NAVIGATION]

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## INFOID:000000005430409

## Symptom Table

## NAVIGATION SYSTEM

Symptom	Possible cause	Reference page	С
Inoperative	AV control unit power and ground circuit     AV control unit	<u>AV-348</u> <u>AV-462</u>	D
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>AV control unit</li></ul>	• <u>AV-385</u> • <u>AV-462</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-390</u></li> <li><u>AV-385</u></li> <li><u>AV-462</u></li> </ul>	E

## 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-348</u> • <u>AV-462</u>	G
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>AV control unit</li></ul>	• <u>AV-385</u> • <u>AV-462</u>	Н
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-390</u> <u>AV-462</u> <u>AV-330</u>	1

## REAR VIEW MONITOR

Symptom	Possible cause	Reference page	J
Inoperative	<ul> <li>Rear view camera power and ground circuit</li> <li>Reverse signal circuit</li> <li>Camera image signal circuit</li> </ul>	<ul> <li><u>AV-350</u></li> <li><u>AV-393</u></li> <li><u>AV-392</u></li> </ul>	K

#### AUDIO 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-348</u> • <u>AV-462</u>	M
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>AV control unit</li></ul>	• <u>AV-385</u> • <u>AV-462</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-348</u></li> <li><u>AV-387</u></li> <li><u>AV-349</u></li> <li><u>AV-463</u></li> <li><u>AV-330</u></li> </ul>	AV
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-358</u></li> <li><u>AV-364</u></li> <li><u>AV-370</u></li> <li><u>AV-373</u></li> <li><u>AV-379</u></li> </ul>	P

## MULTI AV SYSTEM (SEDAN)

## Symptom Table

[BOSE AUDIO WITH NAVIGATION]

#### 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-353</u> • <u>AV-462</u>
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>AV control unit</li></ul>	• <u>AV-385</u> • <u>AV-462</u>
Voice activated control does not operate	<ul> <li>Microphone</li> <li>Steering wheel audio control switch</li> <li>AV control unit</li> </ul>	AV-390     AV-385     AV-462

**MULTI AV SYSTEM (SEDAN)** 

## 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>	<ul> <li><u>AV-353</u></li> <li><u>AV-462</u></li> </ul>
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>AV control unit</li></ul>	<ul> <li><u>AV-385</u></li> <li><u>AV-462</u></li> </ul>
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-390</u></li> <li><u>AV-385</u></li> <li><u>AV-462</u></li> </ul>

#### REAR VIEW MONITOR

Symptom	Possible cause	Reference page
Inoperative	<ul> <li>Rear view camera power and ground circuit</li> <li>Reverse signal circuit</li> <li>Camera image signal circuit</li> </ul>	<ul> <li><u>AV-355</u></li> <li><u>AV-393</u></li> <li><u>AV-392</u></li> </ul>

## AUDIO 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-353</u> • <u>AV-462</u>
Steering switch does not operate	<ul><li>Steering wheel audio control switch</li><li>AV control unit</li></ul>	• <u>AV-385</u> • <u>AV-462</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-353</u></li> <li><u>AV-387</u></li> <li><u>AV-349</u></li> <li><u>AV-387</u></li> <li><u>AV-462</u></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><u>AV-361</u></li> <li><u>AV-367</u></li> <li><u>AV-370</u></li> <li><u>AV-376</u></li> <li><u>AV-382</u></li> </ul>

## Description

#### 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 moun-
- Multi-path noise: This noise results from the waves sent directly from the broadcast station arriving at the antenna at a different time from the waves which reflect off mountains or buildings.

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

#### NOTE:

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

Type of Noise and Possible Cause

Occurrence condition		Possible cause
Occurs only when engine is ON. A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.		Ignition components
The occurrence of the noise is 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 occurs while the vehicle is being driven, especially when it is vibrating excessively.		<ul> <li>Ground wire of body parts</li> <li>Ground due to improper part installation</li> <li>Wiring connections or a short circuit</li> </ul>

#### NAVIGATION SYSTEM

#### **Basic Operation**

Symptom	Cause	Remedy	Μ
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.	AV
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.	0
Small black or bright spots appear on the screen.	Symptom peculiar to a liquid crystal display (display unit).	System is not malfunction.	Ρ

Vehicle Mark

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#### < SYMPTOM DIAGNOSIS >

## NORMAL OPERATING CONDITION

## [BOSE AUDIO WITH NAVIGATION]

Symptom	Cause	Remedy
Map screen and BIRDVIEW <sup>™</sup> 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 correctly.	Vehicle is transferred by ferry or by towing after its ignition switch is turned to OFF.	Drive the vehicle for a while in the GPS 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

Symptom	Cause	Remedy
Destination cannot be set.	Destination to be set is on an expressway.	Set the destination on an ordinary road.
Passing point is not searched when re-searching the route. The vehicle has already passed the passing point, or the system judged so.		To include the passing points that have been passed into the route again, set the route again.
Route information will not be displayed.	Route searching has not been done.	Set the destination and perform route searching.
	Vehicle mark is not on the recommended route.	Drive on the recommended route.
	Route guide is turned OFF.	Turn route guide ON.
	Route information is not available on the dark pink route.	System is not malfunctioning.
After the route searching, no guide sign will appear as the vehicle goes near the entrance/exit to the toll road.	Vehicle mark is not on the recommended route. (On the display, only guide signs related to the rec- ommended route will be shown.)	Drive on the recommended route.



#### < 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.	ļ
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]

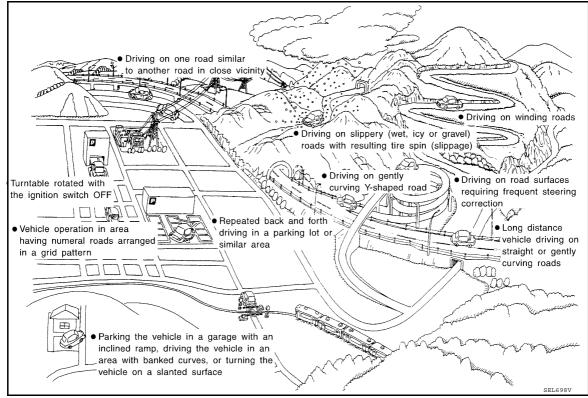
Symptom	Cause	Remedy
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, 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.



#### < SYMPTOM DIAGNOSIS >

## NORMAL OPERATING CONDITION

## [BOSE AUDIO WITH NAVIGATION]

Cause (cor	ndition) –: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
	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.	
	Spiral roads	When driving on a large, continuous spiral road (such as loop bridge), turning angle error is accumulated and the vehicle mark	
	ELK0193D Straight roads	may deviate from the correct location.         When driving on a long, straight road and slow curve without stopping, map-matching	
Road config-	ELK0194D	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.	

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#### < SYMPTOM DIAGNOSIS >

## [BOSE AUDIO WITH NAVIGATION]

Cause (co	ondition) –: 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	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 screen	When driving on new roads or other roads not displayed on the map screen, map matching does not function correctly and matches the location to a nearby road. When the vehicle returns to a road which is on the map, the vehicle mark may deviate from the correct road.		
Map data	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. 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.)	

#### < SYMPTOM DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

Cause (condition) -: While driving ooo: Display		Driving condition	Remarks (correction, etc.)	
Precautions for driving	Just after the engine is started	If the vehicle is driven just after the engine is started when the gyroscope (angular speed sensor) correction is not completed, the vehicle can lose its direction and may have deviated from the correct location.	Wait for a short while before driving after starting the engine.	E
	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 location correction and, if necessary, direction correction.	E
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.	F
	Direction when location is corrected Direction calibration adjustment	If the accuracy of location settings during correction is poor, accuracy may be re- duced afterwards.	Perform direction correction.	ŀ

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

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#### < SYMPTOM DIAGNOSIS >

#### [BOSE AUDIO WITH NAVIGATION]

- Because calculation of the current location cannot be done when traveling with the ignition off, for example when traveling by ferry or when being towed, the location before travel is displayed. If the precise location can be detected with GPS, the location will be corrected.

#### Vehicle Mark Jumps

In the following cases, the vehicle mark may appear to jump as a result of automatic correction of the current location.

- When map matching has been done
- If the current location and the vehicle mark are different when map matching is done, the vehicle mark may seem to jump. At this time, the location may be "corrected" to the wrong road or to a location which is not on a road.
- When GPS location correction has been done
- If the current location and the vehicle mark are different when the location is corrected using GPS measurements, the vehicle mark may seem to jump. At this time, the location may be "corrected" to a location which is not on a road.

#### Vehicle Mark is in a River or Sea

The navigation system moves the vehicle mark with no distinction between land and rivers or sea. If the vehicle mark is somehow out of place, it may appear that the vehicle is driving in a river or the sea.

#### Vehicle Mark Automatically Rotates

The system wrongly memorizes the rotating status as stopping when the ignition switch is turned ON with the turntable rotating. That causes the vehicle mark to rotate when the vehicle is stopped.

When Driving on Same Road, Sometimes Vehicle Mark is in Right Place and Sometimes it is in Wrong Place The conditions of the GPS antenna (GPS data) and gyroscope (angular speed sensor) change gradually. Depending on the road traveled and the operation of the steering wheel, the location detection results will be different. Therefore, even on a road on which the location has never been wrong, conditions may cause the vehicle mark to deviate.

## < PRECAUTION > PRECAUTION PRECAUTIONS

#### Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT **PRE-TENSIONER**" INFOID:000000005804867

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 G Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious iniury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the .1 battery, and wait at least 3 minutes before performing any service.

## Precaution for Trouble Diagnosis

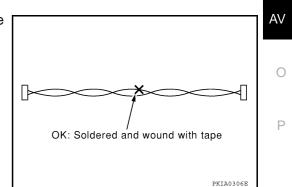
#### AV COMMUNICATION SYSTEM

- 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).]



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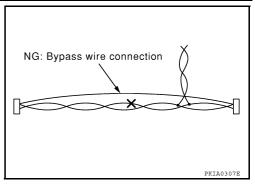
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## PRECAUTIONS

#### < PRECAUTION >

• 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.)

#### [BOSE AUDIO WITH NAVIGATION]



## PREPARATION

# PREPARATION

## PREPARATION

## Special Service Tools

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

Tool number (Kent-Moore No.) Tool name		Description		С
 (J-46534)		Removing trim components		D
Trim Tool Set				E
	AWJIA0483ZZ			F
Commercial Service Tools			INFOID:000000005430416	
				G
Tool name		Description		
		Loosening bolts and nuts		Н

PBIC0191E

Power tool	

[BOSE AUDIO WITH NAVIGATION]

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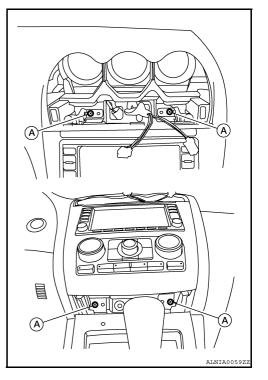
# < ON-VEHICLE REPAIR > ON-VEHICLE REPAIR AV CONTROL UNIT

Removal and Installation

INFOID:000000005430417

#### REMOVAL

- 1. Disconnect the negative battery terminal.
- 2. Remove the center ventilator grilles. Refer to <u>VTL-24, "CENTER VENTILATOR GRILLES : Removal and Installation"</u>.
- 3. Remove the storage bin. Refer to IP-14, "Removal and Installation".
- 4. Remove cluster lid D. Refer to IP-11, "Removal and Installation".
- 5. Remove the AV control unit upper and lower screws (A).



- 6. Pull out the AV control unit assembly, disconnect the AV control unit assembly connectors.
- 7. Disconnect the front air control unit connector.
- 8. Remove the AV control unit bracket screws, then remove the AV control unit brackets.

#### INSTALLATION

Installation is in the reverse order of removal.

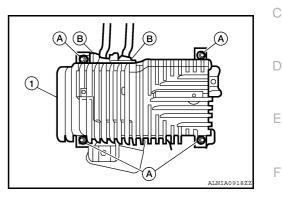
## < ON-VEHICLE REPAIR >

# BOSE SPEAKER AMP

## Removal and Installation - Coupe

#### REMOVAL

- 1. Remove the trunk floor carpet and spare tire cover. Refer to INT-21, "Removal and Installation".
- 2. Remove the RH trunk floor spacer.
- 3. 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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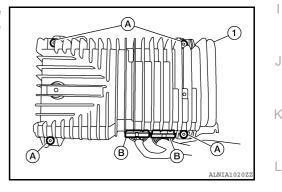
## INSTALLATION

Installation is in the reverse order of removal.

## Removal and Installation - Sedan

#### REMOVAL

- 1. Open the trunk lid.
- 2. 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.

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## < ON-VEHICLE REPAIR >

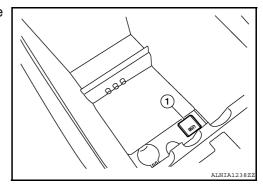
# USB CONNECTOR

## Removal and Installation

INFOID:000000005806081

Removal

- 1. Disconnect the negative battery terminal.
- 2. Remove the center console assembly. Refer to IP-14, "Removal and Installation".
- 3. Push the pawl from the back of the center console to remove the USB connector (1).



Installation Installation is in the reverse order of removal.

# AUXILIARY INPUT JACKS

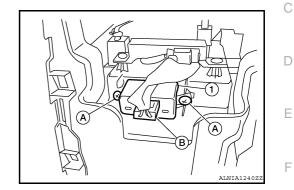
## Removal and Installation

## REMOVAL

1. Remove the center console. Refer to IP-14, "Removal and Installation".

**AUXILIARY INPUT JACKS** 

- 2. Remove the center console bin box.
- 3. Disconnect the auxiliary input jacks connector (B).
- 4. Remove the auxiliary input jacks screws (A).
- 5. Remove the auxiliary input jacks (1).



INSTALLATION Installation is in the reverse order of removal.

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< ON-VEHICLE REPAIR >

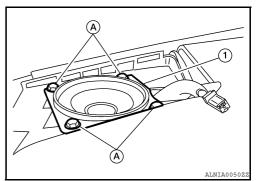
## FRONT TWEETER

## Removal and Installation

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#### REMOVAL

- 1. Remove the front pillar finisher. Refer to <u>INT-14, "Removal and Installation"</u> (coupe) and <u>INT-37, "Removal and Installation"</u> (sedan).
- 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.

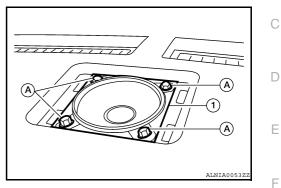
## < ON-VEHICLE REPAIR > CENTER SPEAKER

## CENTER OF EARER

## Removal and Installation

#### 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.

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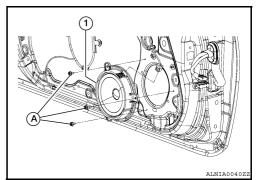
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## FRONT DOOR SPEAKER

## Removal and Installation

#### REMOVAL

- 1. Remove the front door finisher. Refer to <u>INT-11, "Removal and Installation"</u> (coupe) and <u>INT-31, "Removal and Installation"</u> (sedan).
- 2. Remove the front door speaker screws (A), then disconnect the front door speaker connector and remove the front door speaker (1).



INSTALLATION Installation is in the reverse order of removal.

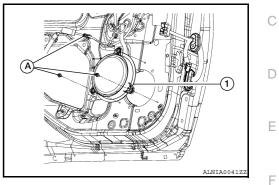
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## REAR DOOR SPEAKER

Removal and Installation - Sedan

#### REMOVAL

- 1. Remove the rear door finisher. Refer to INT-31, "Removal and Installation".
- 2. Remove the rear door speaker screws (A), then disconnect the rear door speaker connector and remove the rear door speaker (1).



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

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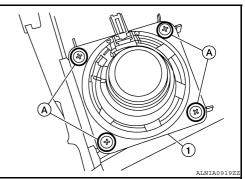
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## REAR TWEETER

## Removal and Installation - Coupe

REMOVAL

- 1. Remove the rear parcel shelf finisher. Refer to INT-15, "Removal and Installation".
- 2. Remove the rear tweeter speaker screws (A) and remove the rear tweeter speaker (1).



[BOSE AUDIO WITH NAVIGATION]

INSTALLATION Installation is in the reverse order of removal.

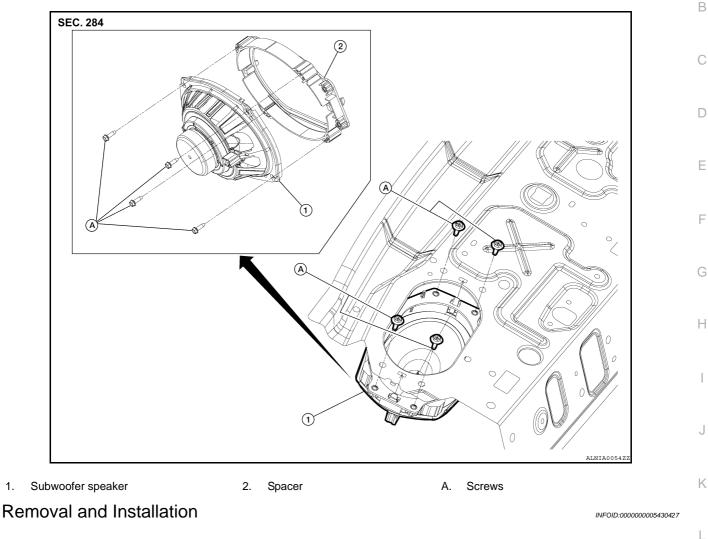
## < ON-VEHICLE REPAIR > **SUBWOOFER**

## Components

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[BOSE AUDIO WITH NAVIGATION]



#### REMOVAL

1.

- 1. Remove the rear parcel shelf finisher. Refer to INT-15, "Removal and Installation" (coupe) and INT-39, "Removal and Installation" (sedan).
- 2. Remove the upper trunk finisher. Refer to INT-21, "Removal and Installation" (coupe) and INT-47, "Removal and Installation" (sedan).
- 3. Remove the subwoofer speaker screws from the top, disconnect the subwoofer speaker harness connec-AV tor and remove the subwoofer speaker and spacer assembly.
- 4. Remove the spacer screws and remove the subwoofer speaker from the spacer.

#### INSTALLATION

Installation is in the reverse order of removal.

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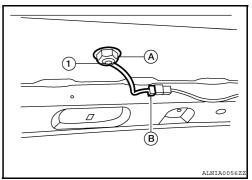
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# SATELLITE RADIO ANTENNA

## Removal and Installation

REMOVAL

- 1. Lower the headliner at the rear. Refer to <u>INT-18, "Removal and Installation"</u> (coupe) and <u>INT-43,</u> <u>"Removal and Installation"</u> (sedan).
- 2. Remove the satellite radio antenna nut (A), then disconnect the satellite radio antenna connector (B) and remove the satellite radio antenna (1).



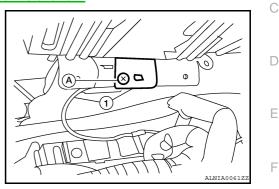
INSTALLATION Installation is in the reverse order of removal.

## **GPS ANTENNA**

## Removal and Installation

#### REMOVAL

- 1. Remove the combination meter. Refer to <u>MWI-153, "Removal and Installation"</u>.
- 2. Remove the navigation audio unit. Refer to AV-462, "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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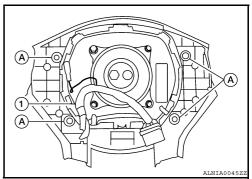
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# STEERING SWITCH

## 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).



INSTALLATION

Installation is in the reverse order of removal.

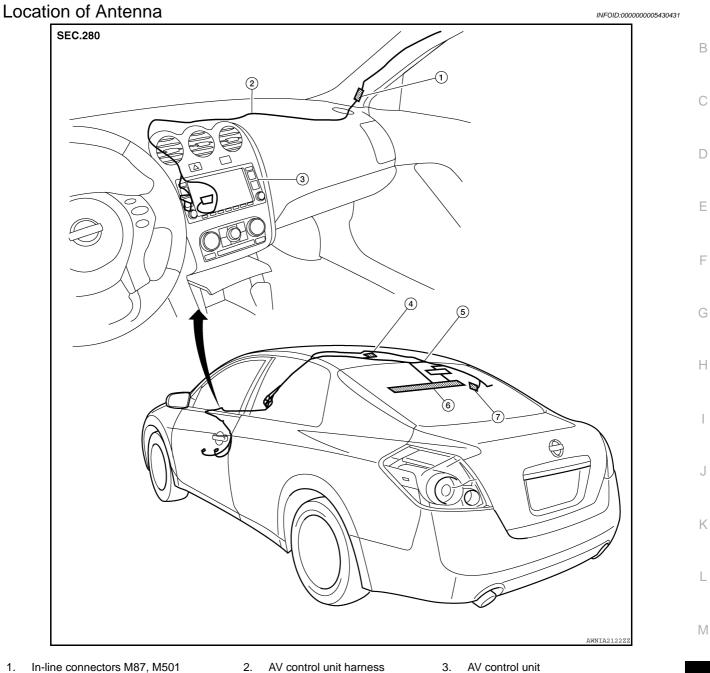
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## **AUDIO ANTENNA (COUPE)**

## < ON-VEHICLE REPAIR >

# [BOSE AUDIO WITH NAVIGATION]

# AUDIO ANTENNA (COUPE)



- 1.
- Satellite antenna 4.
- 7. Antenna amp.

## Window Antenna Repair

## **ELEMENT CHECK**

AV control unit harness

5.

- AV control unit antenna feeder
- AV control unit

6.

Window Antenna

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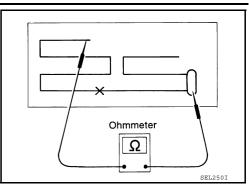
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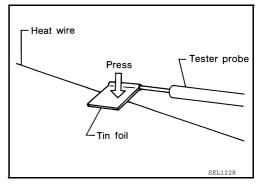
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## [BOSE AUDIO WITH NAVIGATION]

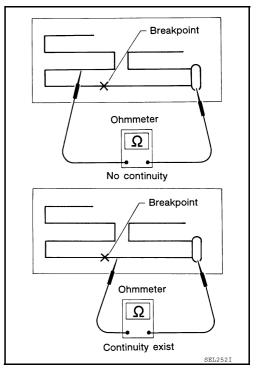
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



• 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.



- 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**

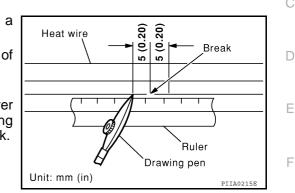
composition is deposited.

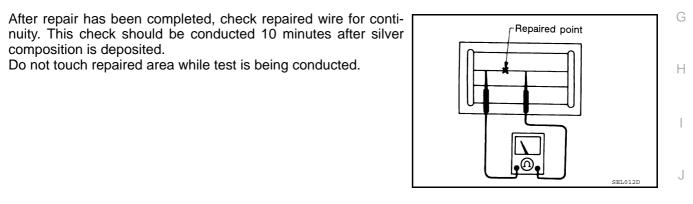
- 1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
- 2. Apply a small amount of conductive silver composition to tip of drawing pen.

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.

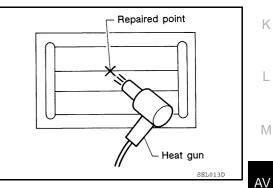
Do not touch repaired area while test is being conducted.





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

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



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## AUDIO ANTENNA (SEDAN)

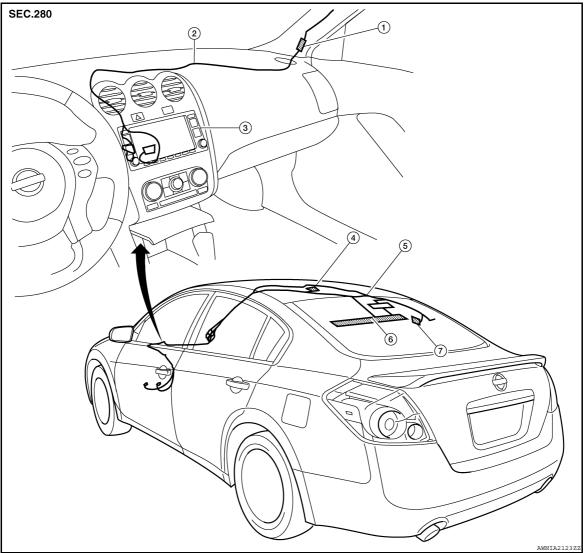
### < ON-VEHICLE REPAIR >

## [BOSE AUDIO WITH NAVIGATION]

# AUDIO ANTENNA (SEDAN)

## Location of Antenna

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- 1. In-line connectors M87, M501
- 2. AV control unit harness

4. Satellite antenna

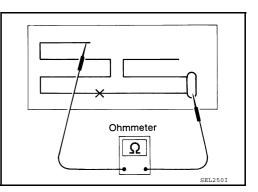
- 5. AV control unit antenna feeder
- 3. AV control unit
- 6. Window Antenna

7. Antenna amp.

## Window Antenna Repair

### ELEMENT CHECK

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



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## **AUDIO ANTENNA (SEDAN)**

## [BOSE AUDIO WITH NAVIGATION]

Press

Tin foil

- Heat wire

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Tester probe

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Breakpoint

- 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.

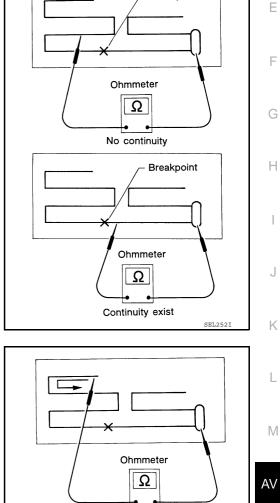
< ON-VEHICLE REPAIR >

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

## **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**



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## AUDIO ANTENNA (SEDAN)

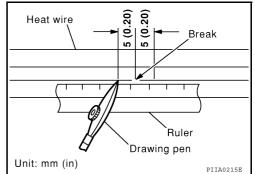
#### < ON-VEHICLE REPAIR >

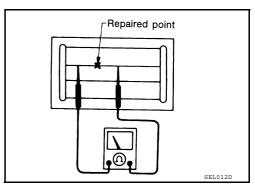
## [BOSE AUDIO WITH NAVIGATION]

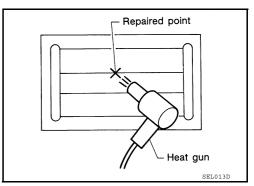
- 1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
- 2. Apply a small amount of conductive silver composition to tip of drawing pen.

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.

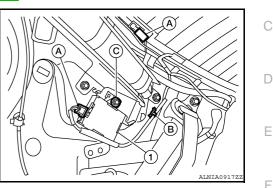
If a heat gun is not available, let the repaired area dry for 24 hours.

## ANTENNA AMP.

## Removal and Installation - Coupe

#### REMOVAL

- 1. Remove the rear pillar finisher RH. Refer to INT-18, "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).



#### INSTALLATION

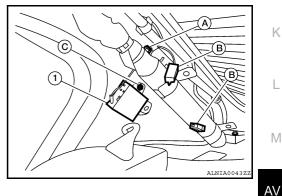
Installation is in the reverse order of removal.

Removal and Installation - Sedan

## REMOVAL

#### CAUTION:

- Before servicing, turn ignition switch OFF, disconnect both battery terminals and wait at least three minutes.
- 1. Disconnect the negative and positive battery terminals, then wait at least three minutes.
- 2. Remove the rear pillar finisher RH. Refer to INT-43, "Exploded View".
- 3. Partially remove the side curtain air bag module RH to gain access to the antenna amp. Refer to <u>SR-11.</u> <u>"Removal and Installation"</u>.
- 4. Detach the antenna amp harness clip (A), disconnect the antenna amp connectors (B), remove the antenna amp screw (C) and remove the antenna amp (1).



INSTALLATION Installation is in the reverse order of removal.

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## **MICROPHONE**

## < ON-VEHICLE REPAIR >

# **MICROPHONE**

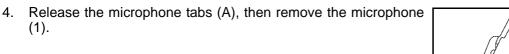
## **Removal and Installation**

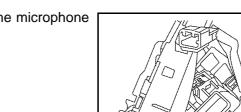
## REMOVAL

(1).

- 1. Remove the room/map lamp assembly. Refer to INL-108, "Removal and Installation".
- 2. Detach the microphone connector (A).

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



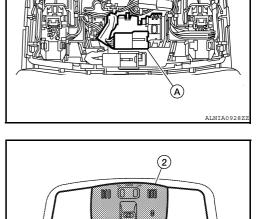


**INSTALLATION** Installation is in the reverse order of removal. INFOID:000000005430437

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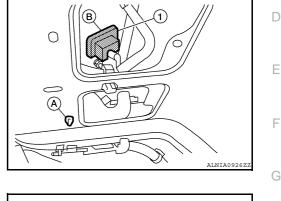
# **REAR VIEW CAMERA**

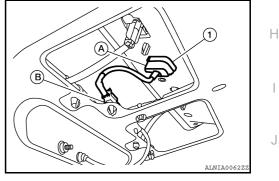
## **Removal and Installation**

#### REMOVAL

- 1. Remove the license plate finisher. Refer to EXT-24, "Removal and Installation" (coupe) and EXT-48, "Removal and Installation" (sedan).
- 2. Remove trunk lid finisher. Refer to INT-20, "Exploded View".
- 3. Remove the rear view camera by performing the following:
  - For coupe models, release the clip (A), then pull out the rear view camera connector, disconnect the rear view camera connector, press the rear view camera tab (B) and remove the rear view camera (1).

 For sedan models, disconnect the rear view camera connector (B), press the rear view camera tab (A) and remove the rear view camera (1).





#### **INSTALLATION**

Installation is in the reverse order of removal.

#### Adjustment

### REAR VIEW MONITOR

For adjustment on the rear view camera, refer to AV-91, "Work Flow".

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