# AV SECTION AUDIO, VISUAL & NAVIGATION SYSTEM С

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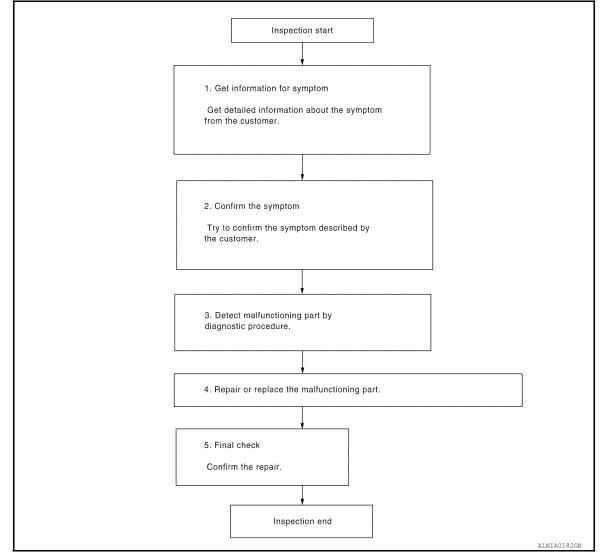
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# BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:000000006252973

**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.

#### DIAG

DIAGNOSIS AND REPAIR WORKFLOW	
< BASIC INSPECTION >	[BASE AUDIO]
Is malfunctioning part detected?	
YES >> GO TO 4 NO >> GO TO 2	
4. REPAIR OR REPLACE THE MALFUNCTIONING PART	
<ol> <li>Repair or replace the malfunctioning part.</li> <li>Reconnect parts or connectors disconnected during Diagnostic Procedure.</li> </ol>	
>> GO TO 5	
5.FINAL CHECK	
Refer to confirmed symptom in step 2, and make sure that the symptom is not detected.	
Has the symptom been repaired?	
YES >> Inspection End. NO >> GO TO 2	
NO GO TO 2	

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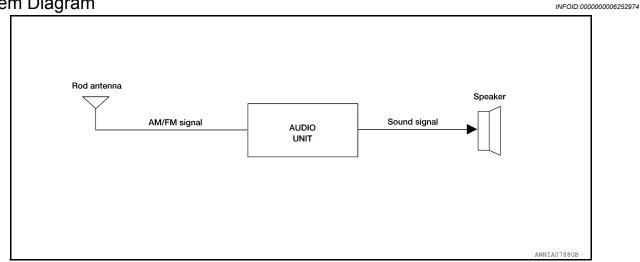
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# SYSTEM DESCRIPTION AUDIO SYSTEM

#### System Diagram



#### System Description

INFOID:000000006252975

#### AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Rod antenna
- Front door speakers
- · Front tweeters
- Rear door speakers

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

#### **AUDIO SYSTEM**

#### < SYSTEM DESCRIPTION >

#### **Component Parts Location**

INFOID:000000006252976

А

[BASE AUDIO]

2 3 В 1 С 0 C םםםח(כ D Ε (4) F G 5 Н J Front tweeter LH M109 Audio unit M43 3. Front tweeter RH M111 2. Front door speaker 5. Rear door speaker Κ LH D12 LH D207 RH D112 RH D307 **Component Description** INFOID:000000006252977 L

Part name	Description	5.4
Audio unit	Controls audio system functions	IVI
Front door speakers	<ul><li>Outputs audio signal from audio unit</li><li>Outputs high, mid and low range sounds</li></ul>	AV
Front tweeters	<ul><li>Outputs audio signal from audio unit</li><li>Outputs high range sounds</li></ul>	AV
Rear door speakers	<ul><li>Outputs audio signal from audio unit</li><li>Outputs high, mid and low range sounds</li></ul>	0

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1.

4.

< DTC/CIRCUIT DIAGNOSIS >

# DTC/CIRCUIT DIAGNOSIS POWER SUPPLY AND GROUND CIRCUIT AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-17, "Wiring Diagram".

#### 1.CHECK FUSES

Check that the following fuses of the audio unit are not are not blown.

Unit	Terminals	Signal name	Fuse No.
Audio unit	19 Battery		29
	7	Ignition switch ACC or ON	4

Are the fuses OK?

YES >> GO TO 2

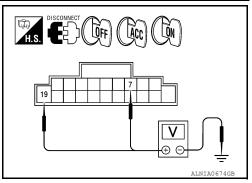
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect audio unit connector M43.

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

(	+)	(-)	(-) OFF	ACC	ON	
Connector	Terminal	(-)	011	700	ON	
M43	7 Ground		0V	Battery voltage	Battery voltage	
MH0	19	Ground	Battery voltage	Battery voltage	Battery voltage	



Are the voltage results as specified?

YES >> GO TO 3 NO >> • Check co

>> • 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.

[BASE AUDIO]

INFOID:000000006252978

#### FRONT DOOR SPEAKER

[BASE AUDIO] < DTC/CIRCUIT DIAGNOSIS > FRONT DOOR SPEAKER А Description INFOID:00000006252979 The audio unit sends audio signals to the front door speakers using the front door speaker circuits. В Diagnosis Procedure INFOID:000000006252980 Regarding Wiring Diagram information, refer to AV-17, "Wiring Diagram". D 1.CONNECTOR CHECK Check the audio unit and speaker connectors for the following: Е Proper connection Damage Disconnected or loose terminals Is the inspection result normal? F YES >> GO TO 2. NO >> Repair the terminal and connector. 2.HARNESS CHECK 1. Disconnect audio unit connector M43 and suspect speaker con-H.S. nector. OFF Н Check continuity between audio unit harness connector M43 (A) 2. terminal and suspect speaker harness connector (B) terminal. в 2 1 A В Continuity 1.2 2. Connector Terminal Connector Terminal 2 1 D12 Ω 2 3 M43 Yes 11 1 D112 2 Κ 12 3 Check continuity between audio unit harness connector M43 (A) terminal and ground. 2 1 11 12 L 11,12 1,2 А Continuity Connector Terminal Μ Ω 2 3 M43 Ground No AV 11 AWNIA0031z 12 Are continuity results as specified? YES >> GO TO 3. NO >> • Check connector housings for disconnected or loose terminals. · Repair harness or connector.

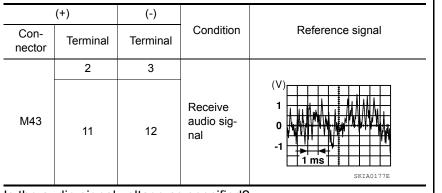
**3.**FRONT SPEAKER SIGNAL CHECK

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#### FRONT DOOR SPEAKER

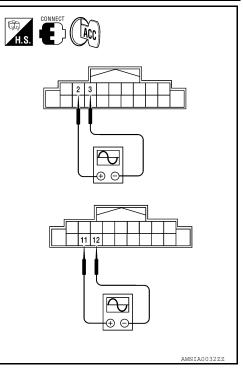
#### < DTC/CIRCUIT DIAGNOSIS >

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



Is the audio signal voltage as specified?

- YES >> Replace speaker. Refer to <u>AV-31</u>, "Removal and Installation".
- NO >> Replace audio unit. Refer to <u>AV-29</u>, "<u>Removal and</u> <u>Installation (Type 2)</u>".



[BASE AUDIO]

#### **FRONT TWEETER**

#### [BASE AUDIO]

			[BASE AUDIO]
R			
			INFOID:00000006252981
lio signals to	the front tv	veeters using the fr	ont tweeter circuits.
e			INFOID:00000006252982
m informatio	n, refer to <u>A</u>	V-17, "Wiring Diag	<u>ram"</u> .
,			
	anostora for	the following:	
speaker cor		the following.	
terminals			
ormal?			
rminal and c	onnector.		
it connector	M43 and s	uspect front tweete	
eter harnes	s connecto	r (B).	A B
В		Continuity	
Connector	Terminal	<b>,</b>	- 2,3
M109	2		
M111	1	Yes	
	2		
veen audio i	unit harness	s connector M43 (A	
			$ \begin{array}{c c} 11 12 \\ 11 12 \\ 11 12 \\ \end{array} \right) $
ninal	—	Continuity	
3	Ground	No	
			-
1			AWNIA0031ZZ
1	?		AWNIA003122
1 2 as specified			
1 2 as specified	ngs for disc	connected or loose	
	e m informatio ( speaker cor erminals ormal? rminal and c it connector ween audio of eter harnes B Connector M109 M111	e m information, refer to $A$ speaker connectors for cerminals ormal? rminal and connector. it connector M43 and s ween audio unit harness seter harness connector $\frac{B}{Connector} = \frac{B}{Connector} = \frac{B}{Conn$	m information, refer to <u>AV-17, "Wiring Diag</u> ( speaker connectors for the following: terminals ormal? rminal and connector. It connector M43 and suspect front tweeter ween audio unit harness connector M43 (A beter harness connector (B). B         Continuity           Connector         Terminal           M109         1           2         Yes           M111         2           ween audio unit harness connector M43 (A

Revision: March 2012

#### FRONT TWEETER

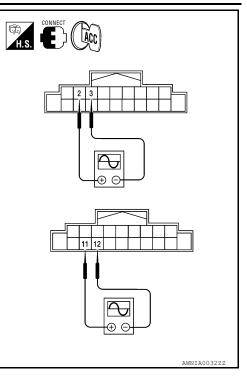
#### < DTC/CIRCUIT DIAGNOSIS >

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

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

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

- YES >> Replace the suspect front tweeter. Refer to <u>AV-30</u>, <u>"Removal and Installation"</u>.
- NO >> Replace audio unit. Refer to <u>AV-29</u>, "<u>Removal and</u> <u>Installation (Type 2)</u>".



[BASE AUDIO]

#### **REAR DOOR SPEAKER**

[BASE AUDIO]

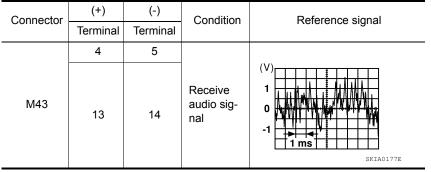
REAR [	DOOR S	PEAKER			
Descript	ion				INFOID:00000006252983
The audio	unit sends	audio signals to	the rear doo	r speakers using t	he rear door speaker circuits.
Diagnos	is Procec	lure			INFOID:00000006252984
Regarding	Wiring Dia	gram informatio	n, refer to <u>Av</u>	/-17, "Wiring Diagr	<u>am"</u> .
1.conne	ECTOR CHI	ECK			
<ul> <li>Proper c</li> </ul>		and speaker cor	nnectors for t	he following:	
Is the insp	ected or loo <u>ection resul</u> > GO TO 2.				
2.HARNE	SS CHECK				
speak 2. Check	er connecto continuity l	or.	unit harness	suspect rear door connector M43 (A) ector (B).	
Connector	Terminal	E Connector	Terminal	Continuity	
	4		1		
M43	5	D207	2	Yes	Ω
WHO	13	D307	1		
	14		2		
<ol> <li>Check and gr</li> </ol>		between audio i	unit harness (	connector M43 (A)	
	А			Continuity	13,14 $1,2$
Connector	· 1	Ferminal	_	Continuity	
		4			
M43		5	Ground	No	
		13 14			AWNIA003322
Are the co	ntinuity resu	ults as specified	?		
YES >	> GO TO 3			nnootod or loose t	orminalo
NO >		connector nousi		nnected or loose to	

< DTC/CIRCUIT DIAGNOSIS >

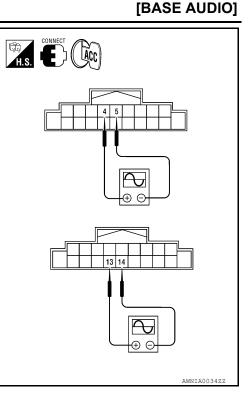
#### **REAR DOOR SPEAKER**

#### < DTC/CIRCUIT DIAGNOSIS >

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



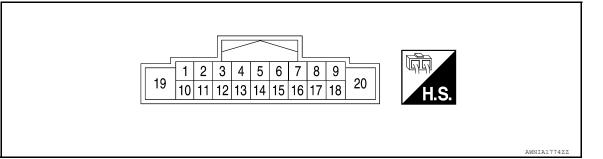
- Is the audio signal voltage as specified?
- YES >> Replace the suspect rear door speaker. Refer to AV-32, "Removal and Installation".
- >> Replace audio unit. Refer to AV-29, "Removal and NO Installation (Type 2)".



# ECU DIAGNOSIS INFORMATION AUDIO UNIT

#### Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	minal e color)	Description			Condition	Reference value	(
+	_	Signal name	Input/ Output		Condition	(Approx.)	-
2 (BR)	3 (L)	Sound signal front door speaker and front tweeter LH	Output	Ignition switch ON	Audio output	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	
4 (G)	5 (B)	Sound signal rear door speaker LH	Output	lgnition switch ON	Audio output	(V) 1 0 −1 + 2ms SKIB3609E	-
7 (G/B)	Ground	ACC power supply	Input	Ignition switch ACC or ON		Battery voltage	
8 (GR)	Ground	ILL control	Input	Ignition switch ACC or ON	_	٥V	A
9 (R)	Ground	Light switch	Input	Ignition switch ACC or ON		Battery voltage	_

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#### AUDIO UNIT

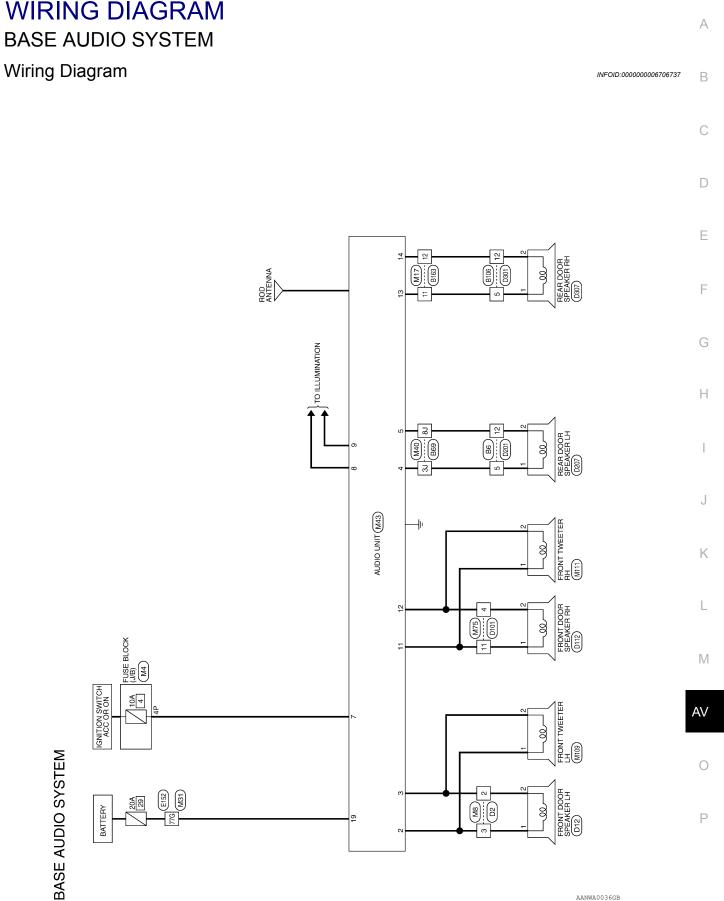
#### < ECU DIAGNOSIS INFORMATION >

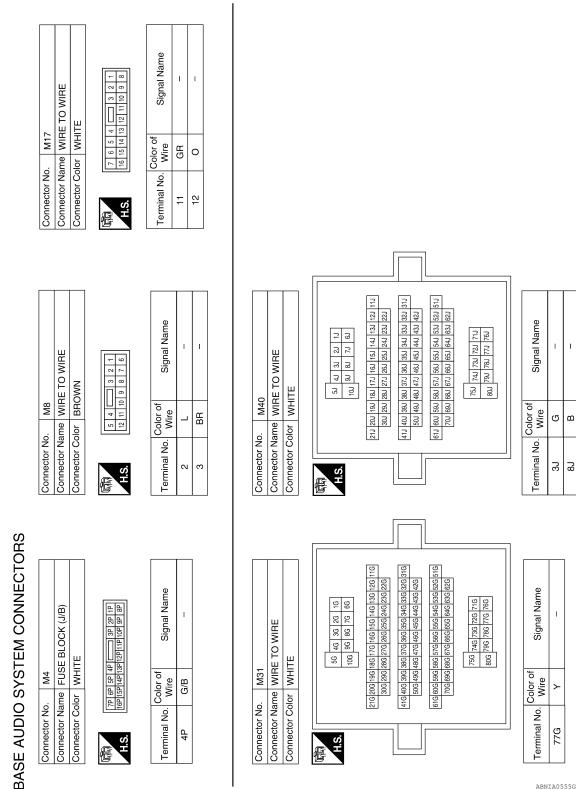
	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
11 (LG)	12 (R)	Sound signal front door speaker and front tweeter RH	Output	lgnition switch ON	Audio output	(V) 1 -1 -2 -1 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2
13 (GR)	14 (O)	Sound signal rear door speaker RH	Output	lgnition switch ON	Audio output	(V) 1 0 -1 • 2ms SKIB3609E
19 (Y)	Ground	Battery power supply	Input	lgnition switch OFF	_	Battery voltage

#### < WIRING DIAGRAM >

# WIRING DIAGRAM

Wiring Diagram

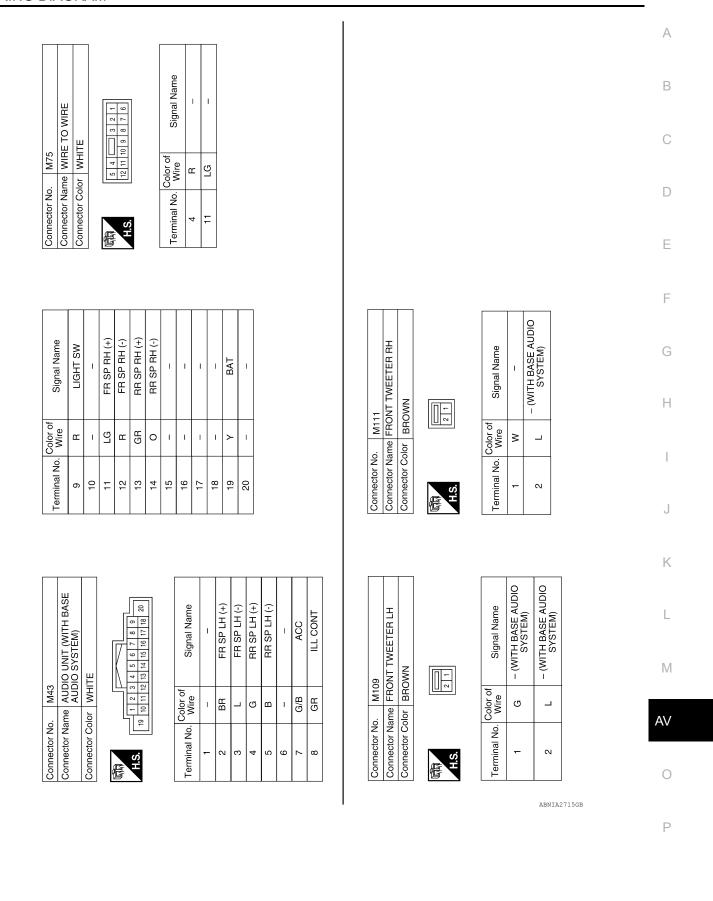




< WIRING DIAGRAM >



ABNIA0555GB



#### < WIRING DIAGRAM >

Connector No. Connector Name Connector Color	Connector No. E152 Connector Name WIRE TO WIRE Connector Color WHITE	E E	Connector No. Connector Nan Connector Cold	Connector No. Connector Name Connector Color		B6 WIRE TO WIRE WHITE	Connector No. Connector Name Connector Color	B69 me WIRE TO WIRE lor WHITE	) WIRE	
.S.H		16 26 36 46 56 66 76 86 96 106	品 H.S.	- w	2 3 <b>4</b> 4 7 8 9 10 11	0 11 12	मित्र H.S	1.1 2.1 6.1 7.1	21 31 41 51 71 81 91 101	
	111G 12G 13G 1 22G 23G 2 310 32G 33G 3 42G 43G 4 511G 52G 55G 55 52G 55G 55 71	116         176         196         206         216           226         236         246         256         276         286         299         306           216         236         246         256         286         276         286         306           316         326         386         376         386         396         406         416           426         436         446         456         466         470         490         500         416           426         436         456         570         586         500         616         616           516         526         556         570         586         500         616         616           620         650         650         650         670         550         500         616	Terminal No.		Color of Wire B	Signal Name		11.1         12.1         13.1         14.1         15.           22.1         22.1         23.1         24.1         25.           31.1         32.1         33.1         34.1         45.           61.1         52.1         53.1         54.1         45.           61.1         52.1         53.1         54.1         45.           61.1         52.1         53.1         54.1         55.           61.1         52.1         53.1         54.1         55.           62.1         52.1         53.1         54.1         55.	11.1         [12.1         [13.1         [14.1         [15.1         [15.1]         [15.1]         [15.2]         [15.2]         [15.2]         [15.2]         [15.2]         [15.2]         [15.2]         [15.2]         [15.2]         [15.2]         [15.2]         [15.2]         [15.2]         [15.1]         [15.2]	
Terminal No. 77G	Color of Wire ∀	766  776   786   786   806   Signal Name	]				Terminal No.	Mire Golor of B	Signal Name	
Connector No. Connector Name Connector Color	Connector No. B106 Connector Name WIRE TO WIRE Connector Color WHITE	E TO WIRE	Connector No. Connector Nan Connector Col	Connector No. B163 Connector Name WIRE TO WIRE Connector Color WHITE	B163 WIRE T WHITE	0 WIRE	Connector No. Connector Name Connector Color	D2 me WIRE TO WIRE or BROWN	WIRE	
雨 H.S.	1     2     3       6     7     8     9	9 10 11 12	ET H.S.	- 00	9 10 11 12	3 <b>—</b> 4 5 6 7 10 11 12 13 14 15 16	。 S:H	1         2         3	9 10 11 12	
Terminal No.	o. Color of Wire GR	Signal Name	Terminal No.		Color of Wire GR	Signal Name	Terminal No. 2	Color of Wire L/R	Signal Name	
12	0	1	12		0	1	e	ΓM	1	

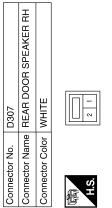
[BASE AUDIO]

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NG DIAGRAM >	BASE AUDIO STSTEM	[BASE AUDIO]
		_
Connector No. D112 Connector Name FRONT DOOR SPEAKER RH Connector Color WHITE	Signal Name Signal Name Signal Name Signal Name	
Connector No. D112 Connector Name FRONT I Connector Color WHITE	Terminal No.     Color of Vire     Signal I       1     W/B     -       2     U/B     -       2     D301       Connector Name     WIRE TO WIRE       Connector Color     WHITE       1     1       1     1       1     1       1     1       1     1       1     1       1     1       1     1       1     1       1     1	_
Conne Conne Conne H.S.		
D101 WIRE TO WIRE WHITE	rof Signal Name B	
	lo. Color of Wire Number Name REAR D Color WHITE Color WHITE	
Connector No. Connector Name Connector Color	Terminal No. Volt 11 W Connector No. Connector No. Connect	
Connector No. D12 Connector Name FRONT DOOR SPEAKER LH Connector Color WHITE	Signal Name 3 2 1 1 3 2 1 1 8 7 1 6 Signal Name	
Vo. D12 Vame FRONT Color WHITE	Terminal No.     Color of Wire     Signa       2     LW     Signa       2     LM     Signa       1     LM     Signa       1     Signa     Signa       1     L     Signa	)
Connector No. Connector Name Connector Color	Terminal No.     Woldstring       2     1       2     L       2     L       2     L       2     L       2     L       2     L       2     L       2     L       2     L       2     L       2     L       1     L	4
		ABNIA2716GB

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#### < WI



]	Signal Name	I	I
	Color of Wire	L	0
	Terminal No.	1	0

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# SYMPTOM DIAGNOSIS AUDIO SYSTEM

# Symptom Table

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#### AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul><li>Audio unit power circuit</li><li>Audio unit</li></ul>	<ul> <li><u>AV-8</u></li> <li><u>AV-29</u></li> </ul>
All speakers do not sound	<ul> <li>Speaker circuit shorted to ground</li> <li>Audio unit power circuit</li> <li>Audio unit</li> </ul>	<ul> <li><u>AV-17</u></li> <li><u>AV-8</u></li> <li><u>AV-29</u></li> </ul>
One or several speakers do not sound	<ul><li>Front door speaker</li><li>Front tweeter</li><li>Rear door speaker</li></ul>	• <u>AV-9</u> • <u>AV-11</u> • <u>AV-13</u>
Poor reception	<ul> <li>Rod antenna is not fully connected to antenna base</li> <li>Base antenna/rod connection (thread zone) has foreign material or corrosion inside.</li> </ul>	_
Buzz/rattle sound from speaker	The majority of buzz/rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the buzz/rattle.	Refer to "SQUEAK AND RATTLE TROUBLE DIAG- NOSIS" in the ap- propriate interior trim section.

CD

Symptom	Possible cause	Reference page	•
CD cannot be inserted			
CD cannot be ejected		AV 20	
The CD cannot be played	- Audio unit	<u>AV-29</u>	
The sound skips, stops suddenly, or is distorted	1		k

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#### NORMAL OPERATING CONDITION

#### < SYMPTOM DIAGNOSIS >

#### NORMAL OPERATING CONDITION

#### Description

INFOID:000000006252988

[BASE AUDIO]

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

NOISE

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

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

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

NOTE:

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

Type of Noise and Possible Cause

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

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# < PRECAUTION > 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:

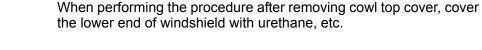
- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation 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 Procedure without Cowl Top Cover



#### Precaution for Work

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components.

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#### PRECAUTIONS

< PRECAUTION >

- Water soluble dirt: Dip a soft cloth into lukewarm water, and wring the water out of the cloth to wipe the dirty area.

Then rub with a soft and dry cloth.

- Oily dirt: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%), and wipe the dirty area.

Then dip a cloth into fresh water, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol, or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

#### PREPARATION

< PREPARATION >

# PREPARATION

# PREPARATION

# Special Service Tool

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
 (J-46534) Trim tool set	ANJIAO48322	For removing trim	E
Commercial Service Tools		INFOID:000000000	6252990 G
Tool name		Description	
		Loosening bolts and nuts	Н
Power tool			I
	PBIC0191E		1

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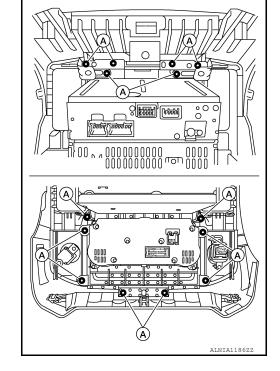
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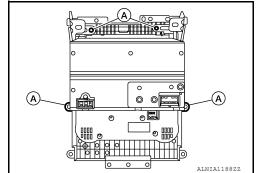
# REMOVAL AND INSTALLATION AUDIO UNIT

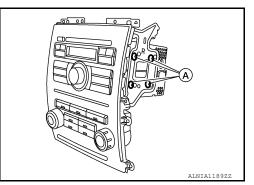
Removal and Installation (Type 1)

#### REMOVAL

- 1. Remove the cluster lid C. Refer to IP-14, "Removal and Installation".
- 2. Remove the RH and LH ventilator grilles. Refer to VTL-21, "Removal and Installation".
- 3. Remove the audio unit assembly screws (A).







 Remove the audio unit RH/LH bracket screws (A), using power tool and remove the audio unit brackets.

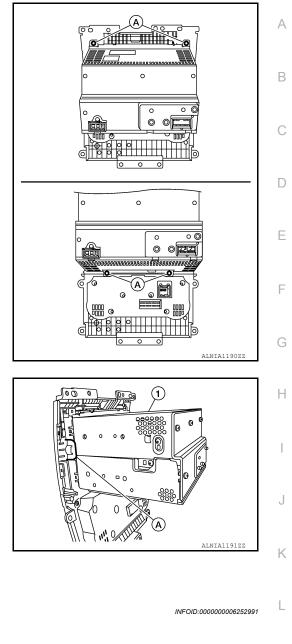
4. Remove the audio unit bracket screws (A).

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#### **AUDIO UNIT**

#### < REMOVAL AND INSTALLATION >

6. Remove the audio unit screws (A), using power tool.

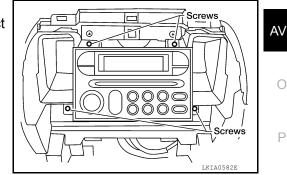


7. Release the audio unit tab (A) and remove the audio unit (1).

INSTALLATION Installation is in the reverse order of removal. Removal and Installation (Type 2)

#### REMOVAL

- 1. Remove the cluster lid C. Refer to IP-14, "Removal and Installation".
- 2. Remove the audio unit screws, using power tool.
- 3. Pull out the audio unit from the instrument panel and disconnect the audio unit connectors.



INSTALLATION Installation is in the reverse order of removal. Μ

#### FRONT TWEETER

#### < REMOVAL AND INSTALLATION >

## FRONT TWEETER

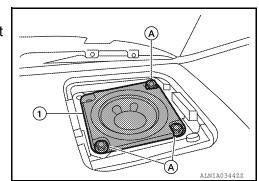
#### Removal and Installation

#### REMOVAL

#### CAUTION:

#### Use a suitable tool to prevent damage to the front tweeter speaker grille trim and the instrument panel.

- 1. Remove the front tweeter grille, using a suitable tool.
- 2. Remove the front tweeter screws (A).
- 3. Pull out the front tweeter speaker (1) and disconnect front tweeter connector, then remove the front tweeter speaker (1).



INSTALLATION Installation is in the reverse order of removal. INFOID:000000006252993

[BASE AUDIO]

#### < REMOVAL AND INSTALLATION >

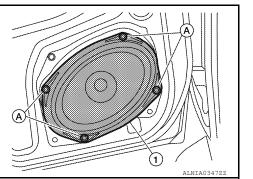
## FRONT DOOR SPEAKER

#### **Removal and Installation**

#### REMOVAL

- 1. Remove the front door finisher. Refer to INT-14, "Removal and Installation".
- 2. Remove the front door speaker screws (A).
- 3. Pull out the front door speaker (1), and disconnect the front door speaker connector and remove the front door speaker (1).

**INSTALLATION** Installation is in the reverse order of removal. [BASE AUDIO] А INFOID:000000006252994 В С D Ε (1) ALNIA0347ZZ F Н J Κ L Μ AV Ο Ρ



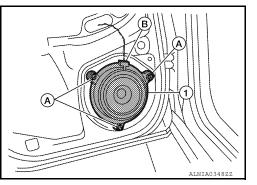
#### < REMOVAL AND INSTALLATION >

## REAR DOOR SPEAKER

#### Removal and Installation

#### REMOVAL

- 1. Remove the rear door finisher. Refer to INT-14, "Removal and Installation".
- 2. Remove the rear door speaker screws (A).
- 3. Disconnect the rear door speaker connector (B) and remove rear door speaker (1).



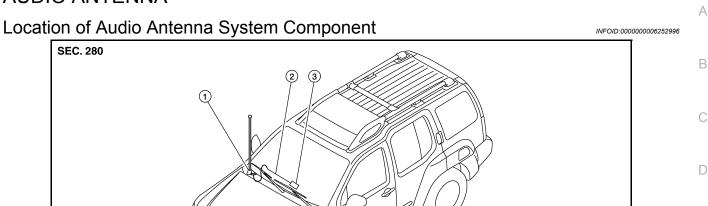
INSTALLATION Installation is in the reverse order of removal. [BASE AUDIO]

#### **AUDIO ANTENNA**

< REMOVAL AND INSTALLATION >

# AUDIO ANTENNA

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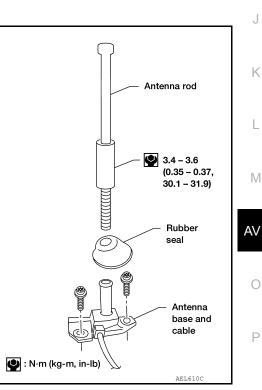


#### Removal and Installation

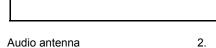
#### REMOVAL

1.

- Remove instrument lower panel RH and lower glove box. Refer to IP-19, "Removal and Installation". 1.
- Remove audio unit. Refer to AV-28, "Removal and Installation (Type 1)" or AV-29, "Removal and Installa-2. tion (Type 2)".
- 3. Disconnect audio antenna cable from antenna feeder.
- Remove antenna rod.
- 5. Remove rubber seal.
- Remove cowl top. Refer to EXT-20, "Removal and Installation". 6.
- Remove front fender protector. Refer to EXT-22, "Removal and 7. Installation".
- Remove antenna base bolts. 8.
- 9. Remove antenna base and cable.



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



Antenna feeder

3. Audio unit Е

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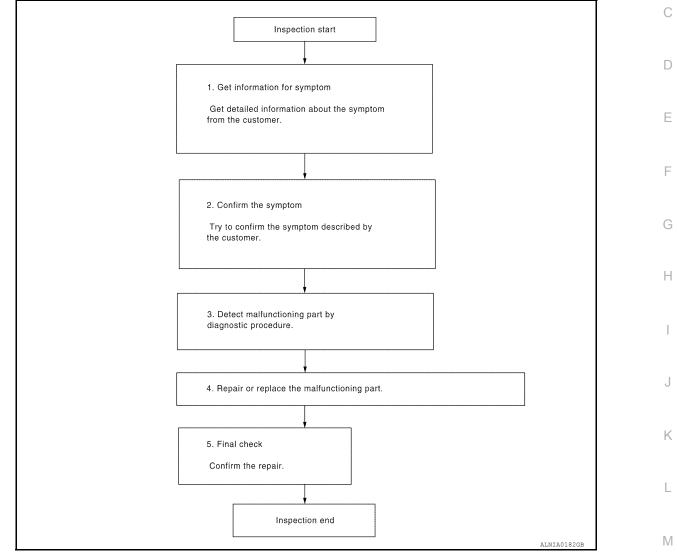
< REMOVAL AND INSTALLATION >

Always properly tighten the antenna rod during installation or the antenna rod may bend or break during vehicle operation.

# 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.

[PREMIUM AUDIO]

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#### 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

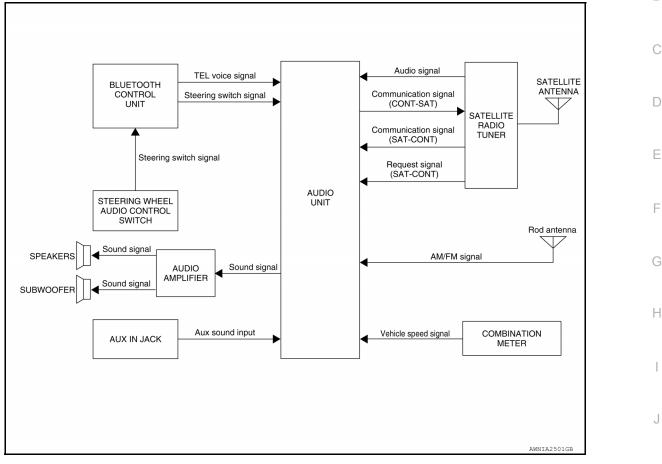
Refer to confirmed symptom in step 2, and make sure that the symptom is not detected. <u>Was the repair confirmed?</u>

YES >> Inspection End.

NO >> GO TO 2

# SYSTEM DESCRIPTION > SYSTEM DESCRIPTION AUDIO SYSTEM

### System Diagram



# System Description

#### AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Audio amplifier
- Rod antenna
- Steering wheel audio control switch
- Front door speakers
- Front tweeters
- Rear door speakers
- Rear tweeters
- Subwoofer

When the audio system is on, radio signals are received by the rod antenna. The audio unit then sends audio signals to the audio amplifier The audio amplifier amplifies the audio signals before sending them to the front door speakers, front tweeters, rear door speakers, rear tweeters and the subwoofer. 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.

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# **AUDIO SYSTEM**

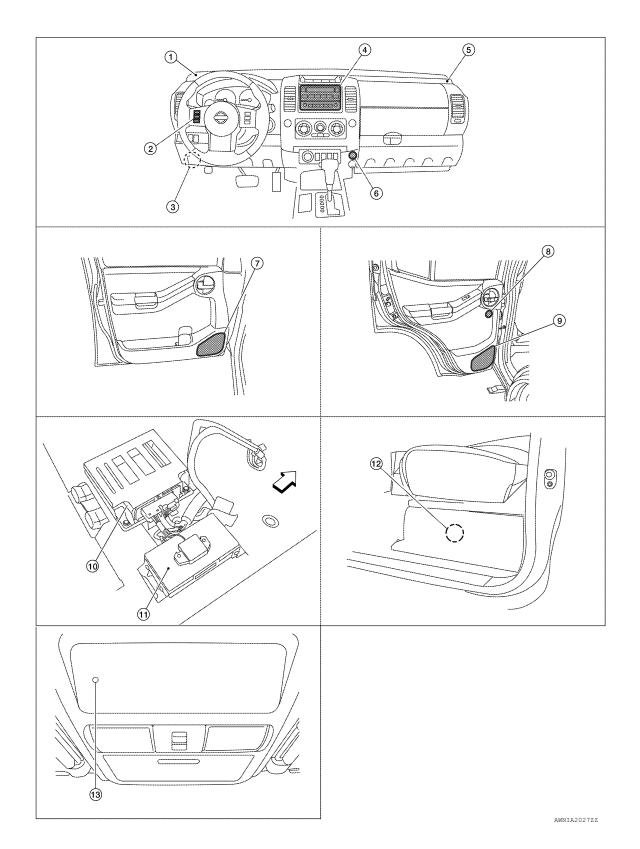
#### < SYSTEM DESCRIPTION >

#### SPEED SENSITIVE VOLUME SYSTEM

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

# **Component Parts Location**

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# **AUDIO SYSTEM**

#### < SYSTEM DESCRIPTION >

#### C:FRONT

- 1. Front tweeter LH M109
- 4. Audio unit M42, M44, M45, M46

der passenger front seat)

**Component Description** 

7. Front door speaker LH D12 RH D112

13. Microphone R8

- 2. Steering wheel audio control switch
- 5. Front tweeter RH M111
- 8. Rear door tweeter LH D208 RH D308
- 10. Audio amplifier B158, B159 (view un- 11. Bluetooth control unit B141, B142
- Satellite radio tuner M41, M129
- 6. Aux in jack M85

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- 9. Rear door speaker LH D207 RH D307
- 12. Subwoofer B72 (under driver's seat)
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Part name	Description			
Audio unit	Controls audio system and satellite radio system functions			
Rod antenna	Audio signal (AM/FM) is received and output to Audio unit			
Audio amplifier	Receives power (amp ON) and audio signals from Audio unit and outputs audio signals to each speaker			
Steering wheel audio control switch	<ul> <li>Start a voice recognition session</li> <li>Answer and end telephone calls</li> <li>Adjust the volume level</li> </ul>			
Front door speakers	<ul><li>Outputs audio signal from audio amplifier</li><li>Outputs high, mid and low range sounds</li></ul>			
Front tweeters	<ul><li>Outputs audio signal from audio amplifier</li><li>Outputs high range sounds</li></ul>			
Rear door speakers	<ul><li>Outputs audio signal from audio amplifier</li><li>Outputs high, mid and low range sounds</li></ul>			
Rear door tweeters	<ul><li>Outputs audio signal from audio amplifier</li><li>Outputs high range sounds</li></ul>			
Subwoofer	<ul><li>Outputs audio signal from audio amplifier</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			

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Revision: March 2012

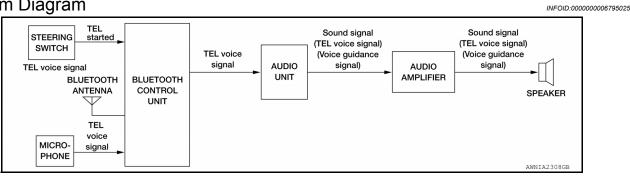
[PREMIUM AUDIO]

# HANDS-FREE PHONE SYSTEM

#### < SYSTEM DESCRIPTION >

# HANDS-FREE PHONE SYSTEM

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 equipped cellular telephone to make a wireless connection between their cellular telephone and the Bluetooth control unit. Hands-free cellular telephone calls can be sent and received. Some Bluetooth cellular telephones may not be recognized by the Bluetooth control unit. When a cellular telephone or the Bluetooth control unit is replaced, the telephone must be paired with the Bluetooth control unit. Different cellular telephones may have different pairing procedures. Refer to the cellular telephone operating manual.

#### **BLUETOOTH CONTROL UNIT**

When the ignition switch is turned to ACC or ON, the Bluetooth control unit will power up. During power up, the Bluetooth control unit is initialized and performs various self checks. Initialization may take up to 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 SWITCH

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

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

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

#### MICROPHONE

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

#### AUDIO UNIT

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

# HANDS-FREE PHONE SYSTEM

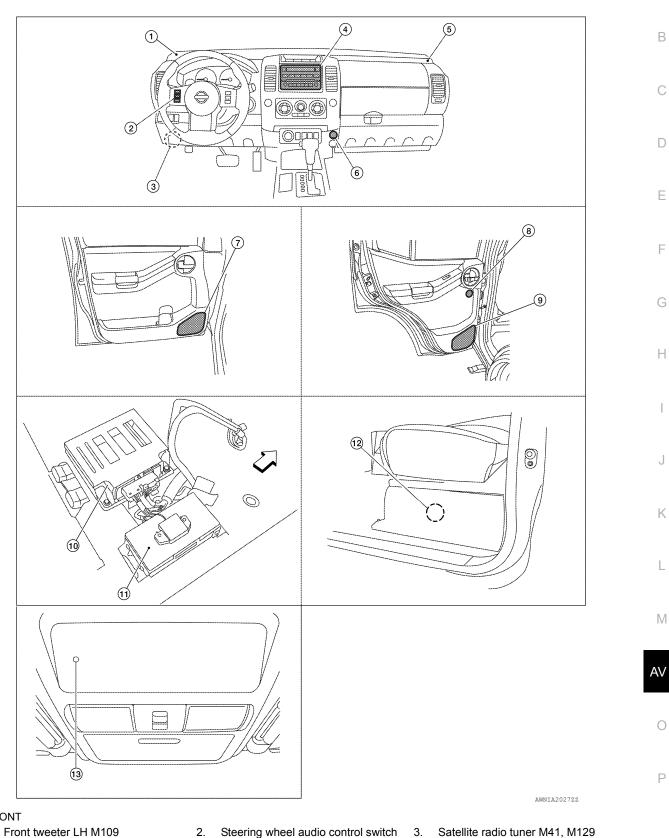
#### < SYSTEM DESCRIPTION >

# Component Parts Location

#### [PREMIUM AUDIO]

#### INFOID:000000006795028





#### <□ :FRONT

- 1. Front tweeter LH M109
- Audio unit M42, M44, M45, M46 4.
- 7. Front door speaker LH D12 RH D112
- 2. Steering wheel audio control switch
- 5. Front tweeter RH M111
- 8. Rear door tweeter LH D208 RH D308

- Satellite radio tuner M41, M129
- 6. Aux in jack M85
- 9. Rear door speaker LH D207 RH D307

Revision: March 2012

**AV-41** 

# HANDS-FREE PHONE SYSTEM

#### < SYSTEM DESCRIPTION >

10. Audio amplifier B158, B159 (view un- 11. Bluetooth control unit B141, B142 12. Subwoofer B72 (under driver's seat) der passenger front seat)

#### 13. Microphone R8

# **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 the speakers</li> </ul>	
Audio amplifier	<ul> <li>Receives audio signals from the audio unit</li> <li>Outputs amplified audio signals to the speakers</li> </ul>	
Front door speakers		
Front tweeters	<ul> <li>Receives telephone voice and voice guidance signals from the audio amplifie</li> </ul>	
Steering wheel audio control switch	<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	

# DIAGNOSIS SYSTEM (AUDIO UNIT)

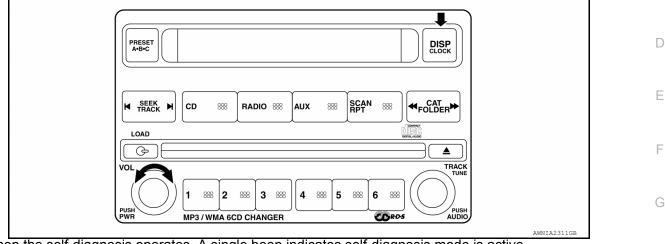
#### < SYSTEM DESCRIPTION >

# DIAGNOSIS SYSTEM (AUDIO UNIT)

# **Component Function Check**

# STARTING THE SELF-DIAGNOSIS MODE

- 1. Turn ignition switch from OFF to ACC.
- Press and hold the "DISP/CLOCK" switch and turn the volume control dial clockwise or counterclockwise for <u>30 clicks or more.</u>



Then the self-diagnosis operates. A single beep indicates self-diagnosis mode is active.

- 3. Initially, all display segments will be illuminated.
- 4. Press each switch. When each switch is pressed, its name and communication code will be displayed **NOTE:**

CD player LOAD and EJECT buttons are not included in this test and will not change the display when pressed.

# DIAGNOSIS FUNCTION

- It can check for continuity of the switches by sounding the beep when each audio unit switch and steering wheel audio control switch is pressed.
- It can check for continuity of harness between audio unit switch and steering wheel audio control switch.

# EXITING THE SELF-DIAGNOSIS MODE

Turn ignition switch OFF. Then the self-diagnosis ends.

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

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# DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

### **Diagnosis Description**

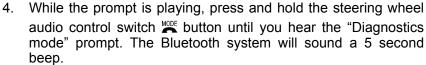
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switch prior to trouble diagnosis.

#### BLUETOOTH CONTROL UNIT (AUTOMATIC INITIALIZATION) CHECK

- Internal control unit failure
- · Bluetooth antenna connection open or shorted
- Steering wheel audio control switch[SEND( € 1/2)/END( 1/2)] stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

#### BLUETOOTH CONTROL UNIT (STEERING WHEEL AUDIO CONTROL SWITCH) CHECK

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



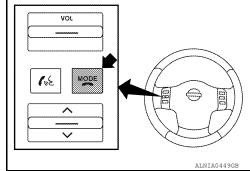
- 5. While the beep is sounding, press and hold the steering wheel audio control switch button again until you hear prompts.
- 6. The Bluetooth system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician. Refer to <u>AV-44</u>, "Work Flow".
- After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails refer to <u>AV-44</u>, "<u>Work Flow</u>".
- 8. Self-diagnosis mode is complete when the voice prompt says "All diagnostic functions completed".

#### Work Flow

Revision: March 2012

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Failure Message	Action		
"Internal failure"	Replace Bluetooth control unit. Refer to AV-112, "Removal and Installation".		
"Bluetooth antenna open"	1. Inspect harness connection.		
"Bluetooth antenna shorted"	2. Replace Bluetooth antenna. Refer to <u>AV-112, "Removal and Installation"</u> .		
"Phone/Send for Hands Free System is stuck"	Check steering wheel audie central switch Pafer to AV/66 "Description"		
"Phone/End for the Hands Free System is stuck"	Check steering wheel audio control switch. Refer to <u>AV-66, "Description"</u> .		
"Microphone test" (failed interactive test)	<ol> <li>Inspect harness between Bluetooth control unit and microphone.</li> <li>Replace microphone. Refer to <u>AV-114</u>, "<u>Removal and Installation</u>".</li> </ol>		



INFOID:000000006253008

**IPREMIUM AUDIO1** 

#### POWER SUPPLY AND GROUND CIRCUIT [PREMIUM AUDIO] < DTC/CIRCUIT DIAGNOSIS > DTC/CIRCUIT DIAGNOSIS А POWER SUPPLY AND GROUND CIRCUIT AUDIO UNIT В AUDIO UNIT : Diagnosis Procedure INFOID:000000006253010 Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram". D 1.CHECK FUSES Check that the following fuses of the audio unit are not are not blown. Ε Unit Terminals Signal name Fuse No. 6 29 Battery power Audio unit 10 4 Ignition switch ACC or ON Are the fuses OK? YES >> GO TO 2 >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to GI-NO 40. "Circuit Inspection". 2.POWER SUPPLY CIRCUIT CHECK Н 1. Disconnect audio unit connector M46. 2. Check voltage between the audio unit connector M46 and E)(( LOFF) ACC ground. (+)OFF ACC ON (-) Connector Terminal Battery Battery Battery 6 Ground voltage voltage voltage M46 Κ Battery Battery 10 Ground 0V voltage voltage ALNTA0695GF Are the voltage results as specified? L YES >> GO TO 3 NO >> • Check connector housing for disconnected or loose terminals. Repair harness or connector. 3.GROUND CIRCUIT CHECK Μ Inspect audio unit case ground. Does case ground pass inspection? AV YES >> Inspection End. >> Repair audio unit case ground. NO SATELLITE RADIO TUNER SATELLITE RADIO TUNER : Diagnosis Procedure INFOID:000000006253011 Ρ Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram". 1.CHECK FUSES

Check that the following fuses of the satellite radio turner are not blown.

#### < DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

Unit	Terminals	Signal name	Fuse No.
Satellite radio tuner	32	Battery power	17
	36	Ignition switch ACC or ON	4

Are the fuses OK?

YES >> GO TO 2

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to <u>GI-</u> 40, "Circuit Inspection".

# 2. POWER SUPPLY CIRCUIT CHECK

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner connector M41.
- 3. Check voltage between the satellite radio tuner and ground.

(+)			055	100	011
Connector	Terminal	(-)	OFF	ACC	ON
M41	32	Ground	Battery voltage	Battery voltage	Battery voltage
10141	36	Ground	0V	Battery voltage	Battery voltage

Are the voltage readings as specified?

#### YES >> GO TO 3

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

# **3.**GROUND CIRCUIT CHECK

Inspect satellite radio tuner case ground.

Does case ground pass inspection?

YES >> Inspection End.

NO >> Repair satellite radio tuner case ground.

AUDIO AMP

# AUDIO AMP : Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram".

# 1.CHECK FUSE

Check that the audio amplifier fuses are not blown.

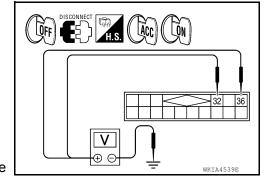
Unit	Terminal	Signal name	Fuse No.
Audio amplifier	1	Patton power	17
	17	Battery power	17

#### Are the fuses OK?

YES >> GO TO 2

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to <u>GI-40, "Circuit Inspection"</u>.

2. CHECK POWER SUPPLY CIRCUIT



INFOID:000000006253012

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect audio amplifier connector.
- 3. Check voltage between audio amplifier harness connector B158 and around.

(+)		(-)	Voltage (approx.)
Connector	Terminal	(-)	voltage (approx.)
B158	1 17	Ground	Battery voltage

Is battery voltage present?

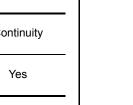
YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect audio amplifier connector.
- 3. Check continuity between audio amplifier harness connector B158 and ground.

(+)		(-)	Continuity	
Connector	Terminal	(-)	Continuity	
B158	4	Ground	Yes	
	20	Ground	165	



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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 AV-85, "Wiring Diagram".

# 1.CHECK FUSE

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

Unit	Terminal	Signal name	Fuse No.	M
Bluetooth control unit	1	Battery power	29	-
	2	Ignition switch ACC or ON	4	
	3	Ignition switch ON or START	12	AV

Is inspection result OK?

YES >> GO TO 2.

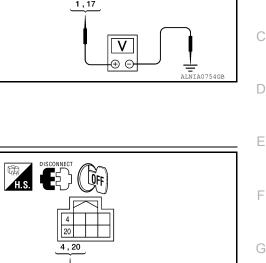
>> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to GL NO 40, "Circuit Inspection" .

# 2.CHECK POWER SUPPLY CIRCUIT

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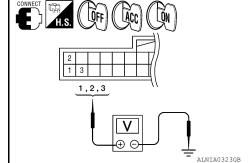
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#### < DTC/CIRCUIT DIAGNOSIS >

Check voltage between Bluetooth control unit harness connector B141 and ground.

(+)		()	OFF	ON	ACC
Connector	Terminal	(-)	OIT	ON	ACC
	1		Battery voltage	Battery voltage	Battery voltage
B141	2	Ground	0V	Battery voltage	Battery voltage
	3		0V	Battery voltage	0V

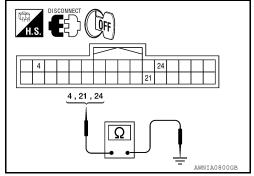


[PREMIUM AUDIO]

#### Is battery voltage present as specified?

- YES >> GO TO 3.
- NO >> Repair harness or connector.
- **3.**CHECK GROUND CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit connector.
- 3. Check continuity between Bluetooth control unit harness connector B141 and ground.

Connector	Terminal	—	Continuity
	4		
B141	21	Ground	Yes
	24		



Are continuity results as specified?

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

#### MICROPHONE

# **MICROPHONE : Diagnosis Procedure**

INFOID:000000006253014

Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram".

# 1.CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

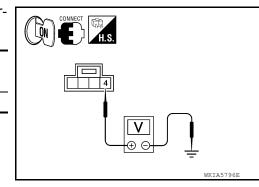
- 1. Turn ignition switch ON.
- Check voltage between microphone harness connector R8 terminal 4 and ground.

(	+)	(-)	Value (Approx.)
Connector	Connector Terminal		Value (Approx.)
R8	4	Ground	5V

#### Is approximately 5V present?

YES >> GO TO 3 NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)



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#### < DTC/CIRCUIT DIAGNOSIS >

#### 1. Turn ignition switch OFF.

- Disconnect microphone and Bluetooth control unit harness connectors.
- Check continuity between microphone harness connector R8 (A) terminal 4 and Bluetooth control unit harness connector B141 (B) terminal 29.

A		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
R8	4	B141	29	Yes

 Check continuity between microphone harness connector R8 (A) terminal 4 and ground.

	4		Continuity
Connector Terminal			Continuity
R8	4	Ground	No

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

- YES >> Replace the Bluetooth control unit. Refer to AV-112, "Removal and Installation".
- NO >> Repair harness or connector.

# 3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect microphone harness connector R8 and Bluetooth control unit harness connector B141.
- Check continuity between microphone harness connector R8 (A) terminal 2 and Bluetooth control unit harness connector B141 (B) terminal 8.

Connector

B141

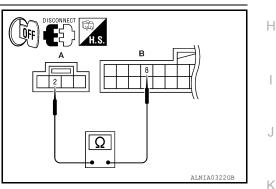
В

Terminal

8

Continuity

Yes



#### Does continuity exist?

Connector

R8

YES >> Inspection End.

А

NO >> Repair harness or connector.

Terminal

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[PREMIUM AUDIO]

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# FRONT DOOR SPEAKER

#### < DTC/CIRCUIT DIAGNOSIS >

# FRONT DOOR SPEAKER

# Description

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

### **Diagnosis** Procedure

INFOID:000000006253016

INFOID:000000006253015

Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the audio unit, audio amplifier and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

NO >> Repair the terminal and connector.

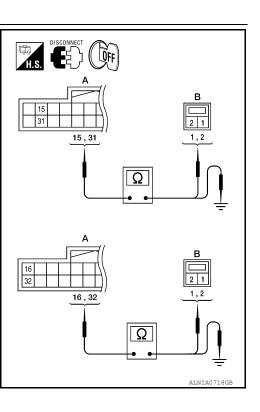
# 2.SPEAKER HARNESS CHECK

- 1. Disconnect audio amplifier connector B159 and suspect speaker connector.
- Check continuity between audio amplifier harness connector B159 (A) and suspect speaker harness connector (B).

	A		В	Continuity	
Connector	Terminal	Connector Terminal		Continuity	
	15	D12	1		
B159	31	DIZ	2	Yes	
	16	D112	1	Tes	
	32		2		

 Check continuity between audio amplifier harness connector B159 (A) and ground.

	А		Continuity
Connector	Terminal		
	15		No
B159	31	Ground	
6159	16		
	32		



#### Are continuity test results as specified?

YES >> GO TO 3. NO >> • Check co

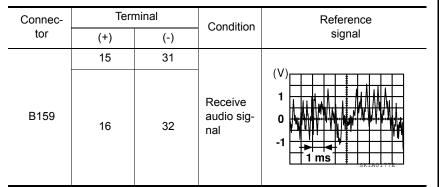
- >> Check connector housings for disconnected or loose terminals.
- Repair harness or connector.

**3.**FRONT DOOR SPEAKER SIGNAL CHECK

# FRONT DOOR SPEAKER

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Connect audio amplifier connector B159 and suspect speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push audio unit "POWER" switch.
- 4. Check the signal between audio amplifier harness connector B159 terminals with CONSULT-III or oscilloscope.



#### Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to <u>AV-108</u>, "<u>Removal</u> <u>and Installation</u>".

NO >> GO TO 4.

#### **4.** AUDIO UNIT TO AUDIO AMPLIFIER HARNESS CHECK

- 1. Disconnect audio unit connector M46 and audio amplifier connector B159.
- Check continuity between audio unit harness connector M46 (A) and audio amplifier harness connector B159 (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	1		6	
M46	2	B159	22	Yes
	3		5	Tes
	4	†	21	

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

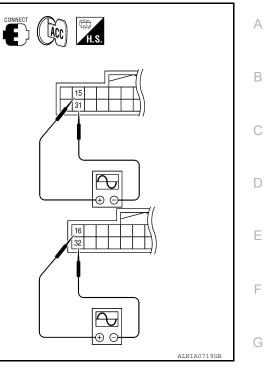
	A			Continuity
-	Connector	Terminal		Continuity
-		1		No
	M46	2	Ground	
		3		
		4		

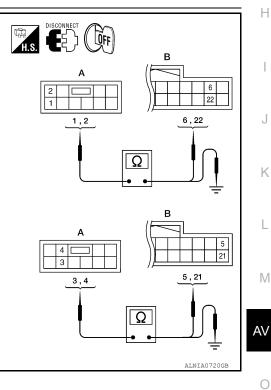
#### Are continuity test results as specified?

- YES >> GO TO 5.
- NO >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

5. AUDIO AMPLIFIER SIGNAL CHECK





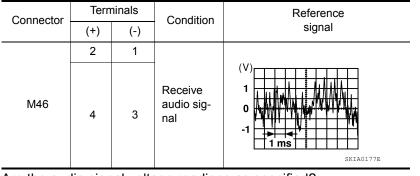


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# FRONT DOOR SPEAKER

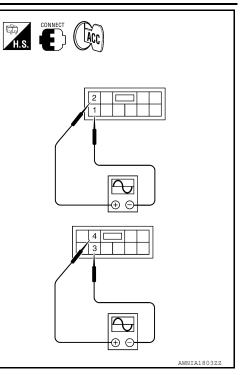
#### < DTC/CIRCUIT DIAGNOSIS >

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



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

- YES >> Replace audio amplifier. Refer to <u>AV-106, "Removal and</u> <u>Installation"</u>.
- NO >> Replace audio unit. Refer to <u>AV-105, "Removal and</u> <u>Installation"</u>.



### [PREMIUM AUDIO]

# FRONT TWEETER

#### < DTC/CIRCUIT DIAGNOSIS >

# FRONT TWEETER

### Description

The audio unit sends audio signals to the audio amplifier. The audio amplifier amplifies the audio signals before sending them to the tweeters using the audio signal circuits.

### **Diagnosis** Procedure

Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the audio unit, audio amplifier and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

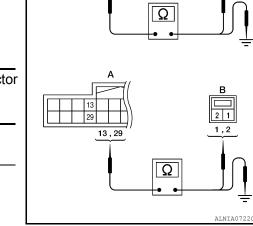
# 2.HARNESS CHECK

- 1. Disconnect audio amplifier connector B159 and suspect tweeter connector.
- Check continuity between audio amplifier harness connector B159 (A) and suspect tweeter harness connector (B).

	1	٩	В		Continuity	
	Connector	Terminal	Connector	Terminal	Continuity	
	D450	14	M109	M100	1	
		30		2	Yes	
B159	13		1	165		
		29	M111	2		

 Check continuity between audio amplifier harness connector B159 (A) and ground.

A		_	Continuity
Connector	Terminal		Continuity
	14		No
B159	30	Ground	
B159	13		
	29	-	



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#### Are continuity test results as specified?

YES >> GO TO 3. NO >> • Check c

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

**3.**FRONT TWEETER SIGNAL CHECK

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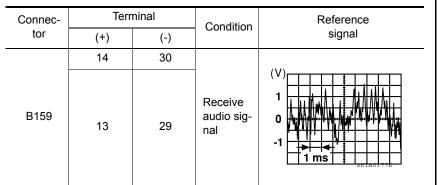
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# **FRONT TWEETER**

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Connect audio amplifier connector B159 and suspect tweeter connector.
- 2. Turn ignition switch to ACC.
- 3. Push audio unit "POWER" switch.
- Check the signal between audio amplifier harness connector 4. B159 terminals with CONSULT-III or oscilloscope.



#### Is audio signal voltage as specified?

>> Replace suspect tweeter. Refer to AV-107, "Removal YES and Installation".

NO >> GO TO 4.

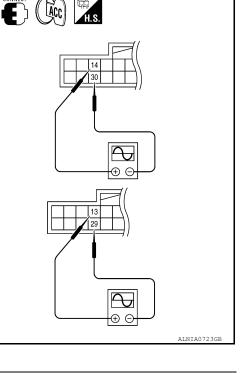
#### 4. AUDIO UNIT AND AUDIO AMPLIFIER HARNESS CHECK

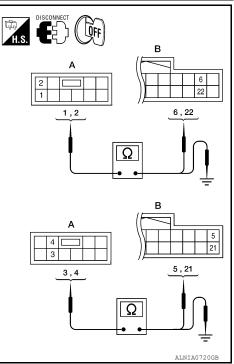
- 1. Disconnect audio unit connector M46 and audio amplifier connector B159.
- 2. Check continuity between audio unit harness connector M46 (A) and audio amplifier harness connector B159 (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	1		6	
M46	2	B159	22	Yes
	3		5	Tes
	4		21	

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

		А		Continuity
_	Connector	Terminal	_	
_	M46	1		No
		2	Ground	
		3		
		4		



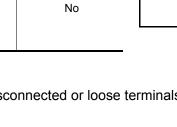


Are continuity test results as specified?

- YES >> GO TO 5.
- NO >> • Check connector housings for disconnected or loose terminals.
  - · Repair harness or connector.

5. AUDIO AMPLIFIER SIGNAL CHECK



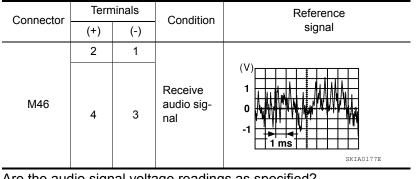


#### [PREMIUM AUDIO]

# FRONT TWEETER

#### < DTC/CIRCUIT DIAGNOSIS >

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



Are the audio signal voltage readings as specified?

- YES >> Replace audio amplifier. Refer to <u>AV-106, "Removal and</u> <u>Installation"</u>.
- NO >> Replace audio unit. Refer to <u>AV-105</u>, "<u>Removal and</u> <u>Installation</u>".

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# **REAR DOOR SPEAKER**

#### < DTC/CIRCUIT DIAGNOSIS >

# REAR DOOR SPEAKER

### Description

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

# **Diagnosis** Procedure

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Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the audio unit, audio amplifier and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

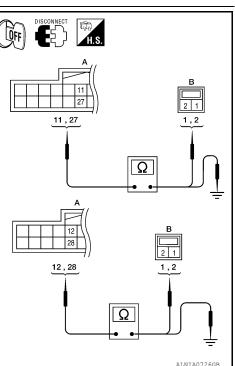
2.SPEAKER HARNESS CHECK

- Disconnect audio amplifier connectors B159 and suspect 1. speaker connector.
- 2. Check continuity between audio amplifier harness connectors B159 (A) and suspect speaker harness connector (B).

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	11	D207	1	
B159	27	D207	2	Yes
	12	D007	1	165
	28	D307	2	

3. Check continuity between audio amplifier harness connectors B159 (A) and ground.

Connector	Terminal	-	Continuity
	11		
B159	27	Ground	No
	12	Ground	NO
	28		



Are the continuity test results as specified?

YES >> GO TO 3. NO

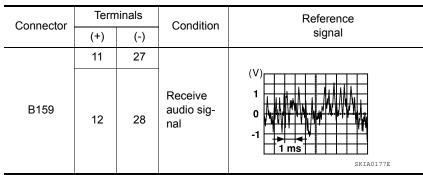
- >> Check connector housings for disconnected or loose terminals.
  - · Repair harness or connector.
- **3.**SPEAKER SIGNAL CHECK

[PREMIUM AUDIO]

# **REAR DOOR SPEAKER**

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Connect audio amplifier connectors and suspect speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push audio unit "POWER" switch.
- 4. Check the signal between audio amplifier harness connectors B159 terminals with CONSULT-III or oscilloscope.



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

YES >> Replace suspect speaker. Refer to <u>AV-109</u>, "<u>Removal</u> and Installation - Rear Door Speaker".

#### **4.**AUDIO UNIT AND AUDIO AMPLIFIER HARNESS CHECK

- 1. Disconnect audio unit connector M44 and audio amplifier connector B159.
- Check continuity between audio unit harness connector M44 (A) and audio amplifier harness connector B159 (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	13		8	
M44	14	B159	24	Vaa
	15		7	Yes
	16		23	

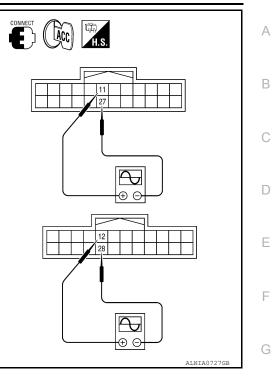
 Check continuity between audio unit harness connector M44 (A) and ground.

		А		Continuity
-	Connector	Terminal		Continuity
-		13		
	M44	14	Ground	No
		15	Ground	
		16		

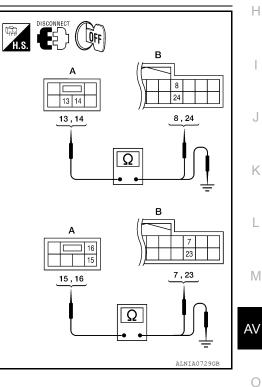
#### Are the continuity test results as specified?

- YES >> GO TO 5.
- NO >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

5. AUDIO AMPLIFIER SIGNAL CHECK



[PREMIUM AUDIO]

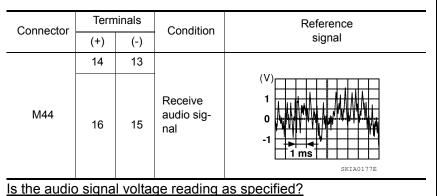


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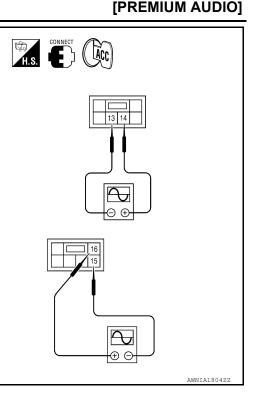
# **REAR DOOR SPEAKER**

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Connect audio unit connector M44 and audio amplifier connector B159.
- 2. Turn ignition switch to ACC.
- 3. Push audio unit "POWER" switch.
- 4. Check the signal between audio unit harness connector M44 terminals with CONSULT-III or oscilloscope.



- YES >> Replace audio amplifier. Refer to <u>AV-106. "Removal and</u> <u>Installation"</u>.
- NO >> Replace audio unit. Refer to <u>AV-105</u>, "<u>Removal and</u> <u>Installation</u>".



# REAR DOOR TWEETER

# < DTC/CIRCUIT DIAGNOSIS >

# REAR DOOR TWEETER

Description

The audio unit sends audio signals to the audio amplifier. The audio amplifier amplifies the audio signals В before sending them to the rear door tweeters using the audio signal circuits.

### Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the audio unit, audio amplifier and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

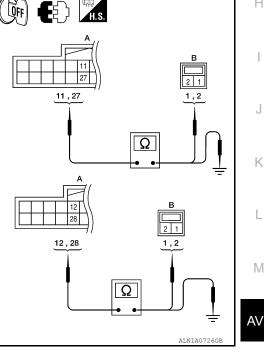
2.SPEAKER HARNESS CHECK

- 1. Disconnect audio amplifier connectors B159 and suspect speaker connector.
- 2. Check continuity between audio amplifier harness connectors B159 (A) and suspect speaker harness connector (B).

	A	В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	11	D208	1	
B159	27		2	Yes
	12	D208	1	Tes
	28	D308	2	

3. Check continuity between audio amplifier harness connectors B159 (A) and ground.

Connector	Terminal	-	Continuity
	11		
B159	27	Ground	No
B139	12	Ground	NO
	28	-	



Are the continuity test results as specified?

YES >> GO TO 3. NO

- >> Check connector housings for disconnected or loose terminals. Repair harness or connector.
- 3.SPEAKER SIGNAL CHECK

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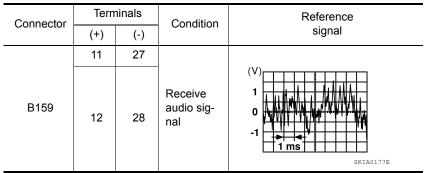
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# **REAR DOOR TWEETER**

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Connect audio amplifier connectors and suspect speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push audio unit "POWER" switch.
- 4. Check the signal between audio amplifier harness connectors B159 terminals with CONSULT-III or oscilloscope.



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

YES >> Replace suspect speaker. Refer to <u>AV-109</u>, "Removal and Installation - Rear Tweeter".

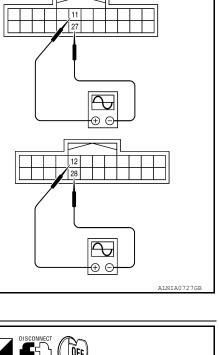
### **4.** AUDIO UNIT AND AUDIO AMPLIFIER HARNESS CHECK

- 1. Disconnect audio unit connector M44 and audio amplifier connector B159.
- 2. Check continuity between audio unit harness connector M44 (A) and audio amplifier harness connector B159 (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	13		8	
M44	14	B159	24	Yes
	15		7	Tes
	16		23	

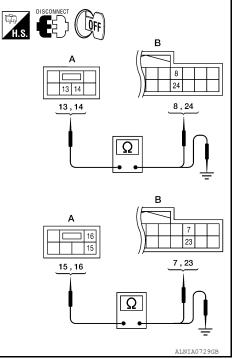
 Check continuity between audio unit harness connector M44 (A) and ground.

	A			Continuity
_	Connector	Terminal		Continuity
_		13		No
	M44	14	Ground	
		15	Ground	NO
		16		



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Are the continuity test results as specified?

- YES >> GO TO 5.
- NO >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

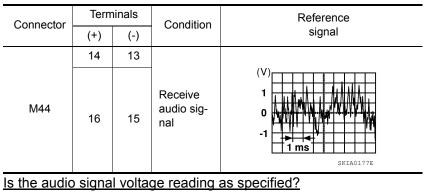
5. AUDIO AMPLIFIER SIGNAL CHECK

#### [PREMIUM AUDIO]

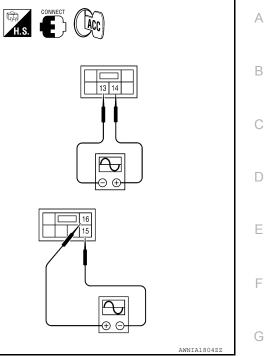
# **REAR DOOR TWEETER**

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Connect audio unit connector M44 and audio amplifier connector B159.
- 2. Turn ignition switch to ACC.
- 3. Push audio unit "POWER" switch.
- 4. Check the signal between audio unit harness connector M44 terminals with CONSULT-III or oscilloscope.



- YES >> Replace audio amplifier. Refer to <u>AV-106. "Removal and Installation"</u>.
- NO >> Replace audio unit. Refer to <u>AV-105</u>, "<u>Removal and</u> <u>Installation</u>".



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# < DTC/CIRCUIT DIAGNOSIS >

# SUBWOOFER

### Description

The audio unit sends audio signals to the audio amplifier. The audio amplifier amplifies the audio signals before sending them to the subwoofer using the audio signal circuits.

### **Diagnosis** Procedure

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Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram".

# 1.CONNECTOR CHECK

Check the audio unit, audio amplifier and subwoofer connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

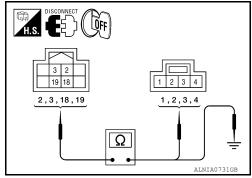
YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.SPEAKER HARNESS CHECK

- 1. Disconnect audio amplifier connector B158 and subwoofer connector B72.
- Check continuity between audio amplifier harness connector B158 (A) and subwoofer harness connector B72 (B).

	A		3	
Connector	Terminal	Connector	Terminal	Continuity
	2		1	
B158	3	B72	3	)/a a
	18		2	Yes
	19		4	



3. Check continuity between audio amplifier harness connector B158 (A) and ground.

	А		Continuity
Connector	Terminal		
	2		
B158	3	Ground	No
6130	18	Ground	No
	19		

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

YES >> GO TO 3.

NO

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

**3.**SPEAKER SIGNAL CHECK

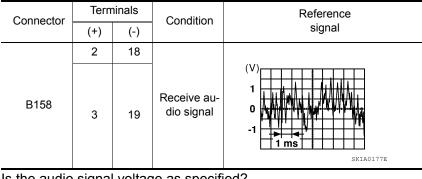
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[PREMIUM AUDIO]

# SUBWOOFER

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Connect audio amplifier connector B158 and subwoofer connector B72.
- 2. Turn ignition switch to ACC.
- 3. Push audio unit "POWER" switch.
- 4. Check the signal between audio amplifier harness connector B158 terminals with CONSULT-III or oscilloscope.



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

YES >> Replace subwoofer. Refer to <u>AV-111, "Removal and</u> <u>Installation"</u>.

### **4.** AUDIO UNIT AND AUDIO AMPLIFIER HARNESS CHECK

- 1. Disconnect audio unit connector M44 and audio amplifier connector B159.
- Check continuity between audio unit harness connector M44 (A) and audio amplifier harness connector B159 (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	13		8	
M44	14	B159	24	Yes
	15		7	fes
	16		23	

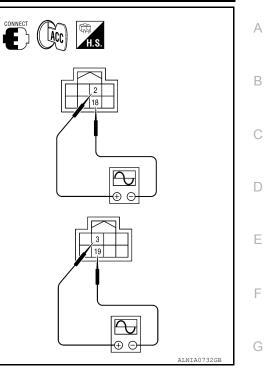
 Check continuity between audio unit harness connector M44 (A) and ground.

		А		Continuity
-	Connector	Terminal		Continuity
-		13		
	M44	14	Ground	No
		15	Ground	
		16		

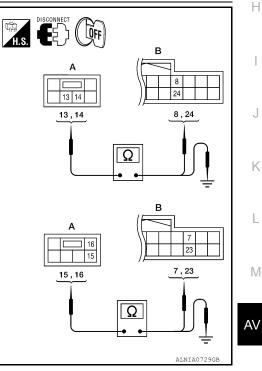
#### Are the continuity test results as specified?

- YES >> GO TO 5.
- NO >> Check connector housings for disconnected or loose terminals.
  - Repair harness or connector.

5. AUDIO AMPLIFIER SIGNAL CHECK



[PREMIUM AUDIO]



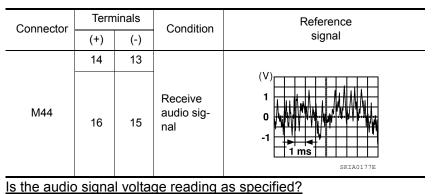
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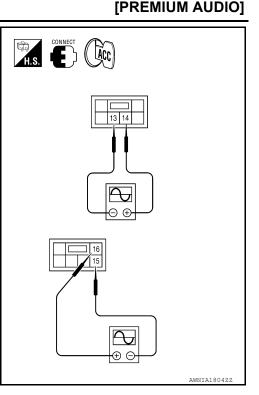
# **SUBWOOFER**

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Connect audio unit connector M44 and audio amplifier connector B159.
- 2. Turn ignition switch to ACC.
- 3. Push audio unit "POWER" switch.
- 4. Check the signal between audio unit harness connector M44 terminals with CONSULT-III or oscilloscope.

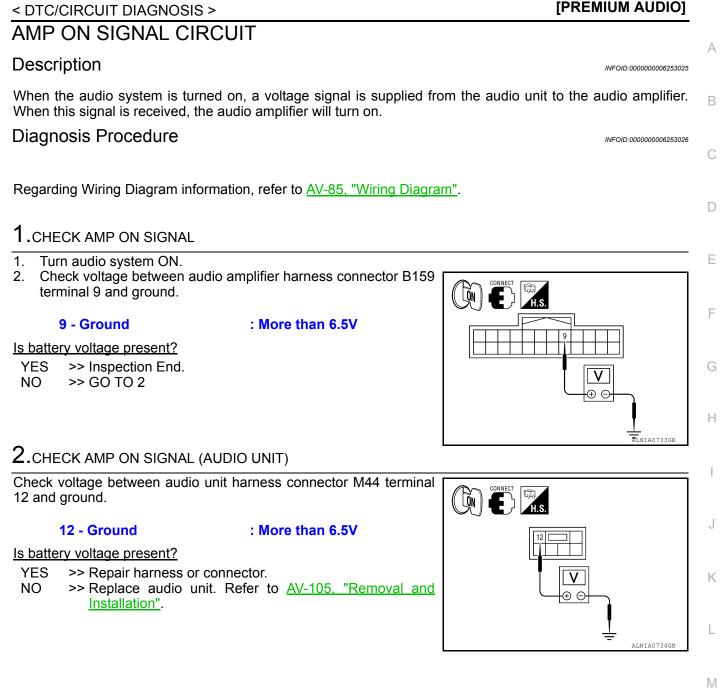


- YES >> Replace audio amplifier. Refer to <u>AV-106. "Removal and</u> <u>Installation"</u>.
- NO >> Replace audio unit. Refer to <u>AV-105</u>, "<u>Removal and</u> <u>Installation</u>".



#### Revision: March 2012

# AMP ON SIGNAL CIRCUIT



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Ρ

### < DTC/CIRCUIT DIAGNOSIS >

# STEERING SWITCH

### Description

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

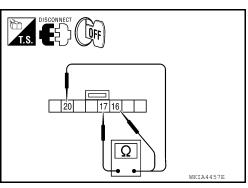
### Diagnosis Procedure

Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram".

# 1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

- 1. Turn ignition switch OFF.
- 2. Disconnect steering wheel audio control switch connector M102.
- 3. Check resistance between steering switch connector terminals.

Terr	minal	Signal name	Condition	Resistance (Ω) (Approx.)
		Seek (down)	Depress $ abla$ button	165
16	17	Volume (down)	Depress VOL down button	652
		Mode/end	Depress MODE button	0
		Seek (up)	Depress $\Delta$ button	165
20	17	Volume (up)	Depress VOL up button	652
		Phone/send	Depress 🌈 🏑 button	0



Do the steering wheel audio control switch buttons check OK?

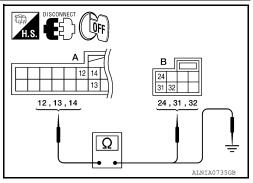
YES >> GO TO 2

NO	>> Replace steering wheel audio control switch. Refer to AV-110.	"Removal and Installation".
----	--	-----------------------------

2.check harness between spiral cable and bluetooth control unit

- 1. Disconnect Bluetooth control unit harness connector B141 and spiral cable harness connector M30.
- Check continuity between Bluetooth control unit harness connector B141 (A) and spiral cable harness connector M30 (B).

Α	А		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	12		24	
B141	13	M30	32	Yes
	14		31	



3. Check continuity between Bluetooth control unit connector B141 (A) and ground.

	А		Continuity
Connector	Terminal		Continuity
	12		No
B141	13	Ground	
	14		

Are the continuity results as specified?

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< DTC/CIRCUIT DIAGNOSIS >

. Check co					s connector N		A	в
А			В		Continuity	24 31 32	$\square$	
Connector	Terminal	Connector	Teri	minal	Continuity	24,31	, 32	16,17,20
	24		2	20				<b></b> _
M30	31	M102		17	Yes		Ω	_
oes the spir	32			16			•	AWLIA1602ZZ
CHECK H	ARNESS	BETWEE	N BLU	ІЕТООТН С 45.		T AND AUDIO U		nit harness conne
	Termi	inal Cor	nector	Terminal	Continuit	h		
Connector	leini			69		ly		
Connector	17			69		LY		
Connector B141		,	И45	69 70	Yes	<u>iy</u>		
	17	, 3 I	И45		Yes	<u>y</u>		
B141	17 18 19	, 3   )	-	70 71		141 and ground.		
B141	17 18 19 ontinuity b	, 3   )	uetoot	70 71		<u> </u>		
B141 . Check co	17 18 19 ontinuity b	, 3 I 9 petween B	uetoot	70 71	it connector B	<u> </u>		
B141 Check co	17 18 19 ontinuity b	petween B	uetoot	70 71	it connector B	<u> </u>		
B141 Check co Connector	17 18 19 ontinuity b	petween B Termina 17	uetoot	70 71 h control un	it connector B	<u> </u>		
B141 Check co Connector B141 <u>re the contin</u> YES >> C NO >> F CHECK A Connect Turn igni	nuity resu GO TO 5. Repair han UDIO UN audio uni	Termina 17 18 19 11ts as spe rness. IIT VOLTA it harness h ON.	cified? GE connect	70 71 h control un Ground	it connector B	141 and ground.	s connec	tor B141.
B141 Check co Connector B141 YES >> ( NO >> F CHECK A Connect Turn igni Check vo	nuity resu GO TO 5. Repair han UDIO UN audio uni tion switc oltage bet	Termina 17 18 19 11ts as spe rness. IIT VOLTA it harness h ON.	cified? GE connection	70 71 h control un Ground ctor M45 an harness cor	it connector B Continuity No d Bluetooth co nnector M45 te	ntrol unit harness	s connec	tor B141.
B141 Check co Connector B141 YES >> ( NO >> F CHECK A Connect Turn igni Check vo	nuity resu GO TO 5. Repair han UDIO UN audio uni tion switc	rness. IIT VOLTA it harness h ON. ween aud	GE connection o unit	70 71 h control un Ground ctor M45 an harness cor (-) udio unit	it connector B Continuity No d Bluetooth co nector M45 te Voltage (Approx.	ntrol unit harness	s connec	tor B141.
B141 Check co Connector B141 YES >> ( NO >> F CHECK A Connect Turn igni Check vo	nuity resu GO TO 5. Repair han UDIO UN audio uni tion switc oltage bet	Detween B Termina 17 18 19 Its as spe rness. IT VOLTA it harness h ON. ween aud	cified? GE connection	70 71 h control un Ground ctor M45 an harness cor	it connector B Continuity No d Bluetooth co nector M45 te Voltage (Approx.	ntrol unit harness	s connec	tor B141.

#### Revision: March 2012

# < DTC/CIRCUIT DIAGNOSIS >

# COMMUNICATION SIGNAL CIRCUIT 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-85, "Wiring Diagram".

# **1.**CHECK HARNESS - REQ1

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner connector M41 and audio unit connector M42.
- Check continuity between satellite radio tuner harness connector M41 (A) terminal 28 and audio unit harness connector M42 (B) terminal 48.

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M41	28	M42	48	Yes

4. Check continuity between satellite radio tuner harness connector M41 (A) terminal 28 and ground.

	A		Continuity
Connector	Terminal		Continuity
M41	28	Ground	No

Are continuity results as specified?

YES >> GO TO 2

NO >> Repair harness or connector.

2.CHECK HARNESS - TXD

Check continuity between satellite radio tuner harness connector M41 (A) terminal 29 and audio unit harness connector M42 (B) terminal 49.

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M41	29	M42	49	Yes

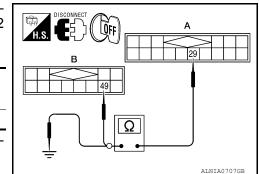
2. Check continuity between satellite radio tuner harness connector M41 (A) terminal 29 and ground.

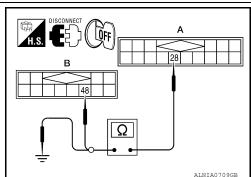
	A		Continuity	
Connector	Terminal		Continuity	
M41	29	Ground	No	

Are continuity results as specified?

YES >> GO TO 3

NO >> Repair harness or connector.





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INFOID 000000006253029

# **COMMUNICATION SIGNAL CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

### [PREMIUM AUDIO]

#### 3. CHECK HARNESS - RXD А 1. Check continuity between satellite radio tuner harness connec-tor M41 (A) terminal 30 and audio unit harness connector M42 (B) terminal 50. 30 А В Continuity Connector Terminal Connector Terminal C M41 30 M42 50 Yes 2. Check continuity between satellite radio tuner harness connector M41 (A) terminal 30 and ground. D ALNIA0708GE A Continuity Ε Terminal Connector M41 30 Ground No Are continuity results as specified? YES >> GO TO 4 NO >> Repair harness or connector. **4.**CHECK REQ1 SIGNAL 1. Connect satellite radio tuner connector and audio unit connector. 2. Turn ignition switch to ACC Н 3. Check signal between satellite radio tuner harness connector M41 terminal 28 and ground with CONSULT-III or oscilloscope. (+)(-) Reference signal Connector Terminal (V) 15 Æ E 28 M41 Ground K SKIB3825E Are voltage readings as specified? YES >> GO TO 5 NO >> Replace audio unit. Refer to AV-105, "Removal and Installation". Μ CHECK TXD SIGNAL Check signal between satellite radio tuner harness connector M41 AV terminal 29 and ground with CONSULT-III or oscilloscope. (+) (-) Reference signal Connector Terminal (V Ρ F M41 29 Ground WKIA4545E SKIB3824E Are the voltage readings as specified?

# **COMMUNICATION SIGNAL CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

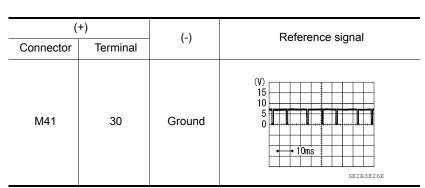
[PREMIUM AUDIO]

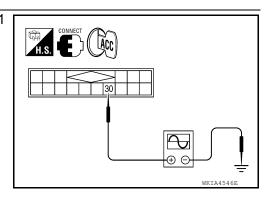
YES >> GO TO 6

NO >> Replace satellite radio tuner. Refer to <u>AV-119</u>, "Removal and Installation".

6.CHECK RXD SIGNAL

Check signal between satellite radio tuner harness connector M41 terminal 30 and ground with CONSULT-III or oscilloscope.





Are the voltage readings as specified?

YES >> Replace satellite radio tuner. Refer to <u>AV-119</u>, "<u>Removal and Installation</u>".

NO >> Replace audio unit. Refer to <u>AV-105, "Removal and Installation"</u>.

#### SOUND SIGNAL CIRCUIT [PREMIUM AUDIO] < DTC/CIRCUIT DIAGNOSIS > SOUND SIGNAL CIRCUIT А SATELLITE RADIO TUNER SATELLITE RADIO TUNER : Description INFOID:000000006253031 В Left and right channel audio signals are supplied from the satellite radio tuner to the audio unit through the sound signal circuits. SATELLITE RADIO TUNER : Diagnosis Procedure INFOID:000000006253032 D Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram". LEFT CHANNEL Е **1.**CHECK HARNESS Turn ignition switch OFF. 1. Disconnect satellite radio tuner connector M41 and audio unit 2. F connector M42. Check continuity between satellite radio tuner connector M41 3. (A) and audio unit connector M42 (B). Е 42 41 А В Continuity Connector Terminal Connector Terminal Н Ω 21 41 M41 M42 Yes 22 42 ALNIA0710GB Check continuity between satellite radio tuner connector M41 (A) and ground. А Continuity Connector Terminal 21 M41 Ground No 22 Are continuity results as specified? YES >> GO TO 2 L NO >> Repair harness or connector. 2.CHECK LEFT CHANNEL AUDIO SIGNAL 1. Connect satellite radio tuner and audio unit. Μ Turn ignition switch ON. 2. Check signal between satellite radio tuner connector M41 termi-3. H.S. CONNECT nals 21 and 22 with CONSULT-III or oscilloscope. AV (+) (-) Reference signal Connector Terminal Terminal 22 Ρ 22 21 M41 F ALNIA0880GI SKIB3609E

Are voltage readings as specified?

YES >> Replace audio unit. Refer to AV-105, "Removal and Installation".

# SOUND SIGNAL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

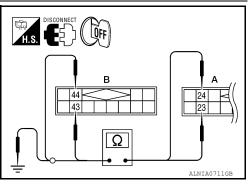
NO >> Replace satellite radio tuner. Refer to <u>AV-119, "Removal and Installation"</u>.

#### **RIGHT CHANNEL**

1.CHECK HARNESS

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner connector M41 and audio unit connector M42.
- 3. Check continuity between satellite radio tuner M41 (A) and audio unit M42 (B).

A	٨	E	3	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M41	23	M42	43	Yes
10141	24	IVI <del>1</del> 2	44	165



4. Check continuity between satellite radio tuner connector M41 (A) and ground.

	A		Continuity
Connector	Terminal		Continuity
	23	Ground	No
10141	24	Gibunu	NO

Are continuity results as specified?

YES >> GO TO 2

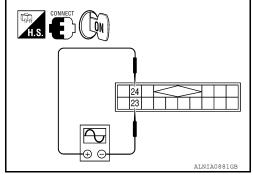
NO >> Repair harness or connector.

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner and audio unit.

- 2. Turn ignition switch ON.
- 3. Check signal between satellite radio tuner connector M41 terminals 23 and 24 with CONSULT-III or oscilloscope.

(+)		(-)	Reference signal
Connector	Terminal	Terminal	
M41	24	23	(V) 1 0 1 2 2 ms skib3609E



Are voltage readings as specified?

YES >> Replace audio unit. Refer to <u>AV-105, "Removal and Installation"</u>.

NO >> Replace satellite radio tuner. Refer to AV-119, "Removal and Installation".

#### **MICROPHONE SIGNAL CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

# MICROPHONE SIGNAL CIRCUIT

#### Description

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

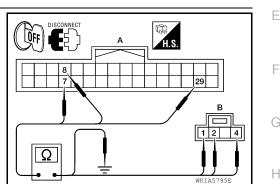
#### **Diagnosis** Procedure

Regarding Wiring Diagram information, refer to AV-85, "Wiring Diagram".

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

- 1. Turn ignition switch OFF.
- Disconnect Bluetooth control unit connector B141 and microphone connector R8.
- Check continuity between Bluetooth control unit harness connector B141 (A) and microphone harness connector R8 (B).

	A	I	3	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	7		1	
B141	8	R8	2	Yes
	29		4	



4. Check continuity between Bluetooth control unit harness connector B141 (A) and ground.

	•		
	A		Continuity
Connector	Terminal		Continuity
	7		
B141	8	Ground	No
	29		

Are the continuity test results as specified?

YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK MICROPHONE POWER SUPPLY

- Μ 1 Connect Bluetooth control unit connector B141 and microphone connector R8. ( [Qn ] i 2. Turn ignition switch ON. Check voltage between microphone harness connector R8 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-112, Ρ
  - "Removal and Installation".

3.CHECK MICROPHONE SIGNAL

[PREMIUM AUDIO]

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WKTA5796F

# **MICROPHONE SIGNAL CIRCUIT**

Reference signal

While speaking into MIC

2ms

mmmmm

PKIB5037J

#### < DTC/CIRCUIT DIAGNOSIS >

(+)

Terminal

7

Connector

B141

Check signal between Bluetooth control unit harness connector B141 terminals 7 and 8 with CONSULT-III or and oscilloscope.

(-)

8

Terminal

r	CONNECT H.S.
	ALNIA0934GB

Are voltage readings as specified?

YES >> Replace Bluetooth control unit. Refer to <u>AV-112, "Removal and Installation"</u>.

NO >> Replace microphone. Refer to <u>AV-114</u>, "<u>Removal and Installation</u>".

(V) 2.5 2.0

1.5

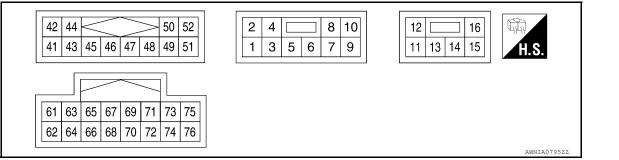
1.0 0.5

#### [PREMIUM AUDIO]

# ECU DIAGNOSIS INFORMATION AUDIO UNIT

## **Reference Value**

#### **TERMINAL LAYOUT**



## PHYSICAL VALUES

(Wire	minal e color)	Item	Signal input/		Condition	Reference value (Approx.)
+	-		output			
2 (W)	1 (B)	Audio sound signal front LH	Output	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E
4 (Y)	3 (BR)	Audio sound signal front RH	Output	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
6 (Y)	Ground	Battery power	Input	-	_	Battery voltage
7 (GR)	Ground	Illumination control signal	Input	Ignition switch ON	Illumination control switch is operated by lighting switch in 1st position.	Changes between 0 and 12V
8 (R)	Ground	Illumination signal	Input	OFF	Lighting switch is in 1st position.	Battery voltage
					Lighting switch is OFF.	0V
10 (G/B)	Ground	ACC signal	Input	Ignition switch ON	-	Battery voltage
12 (G/W)	Ground	Amp ON signal	Output	Ignition switch ON	_	Battery voltage

[PREMIUM AUDIO]

INFOID:000000006253035

А

В

С

D

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F

# **AUDIO UNIT**

#### < ECU DIAGNOSIS INFORMATION >

# [PREMIUM AUDIO]

	ninal color)	ltem	Signal input/		Condition	Reference value (Approx.)
+	_		output			(V)
14 (BR)	13 (B/R)	Audio sound signal rear LH	Output	lgnition switch ON	Receive audio sig- nal	1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
16 (L)	15 (B/W)	Audio sound signal rear RH	Output	lgnition switch ON	Receive audio sig- nal	(V) 1 -1 -1 -1 -1 -1 -1 -1 -1 -1
42 (R)	41 (G)	Satellite radio au- dio signal LH	Input	lgnition switch ON	Satellite radio tuner operating	(V) 1 0 -1 • 2ms SKIB3609E
44 (B)	43 (W)	Satellite radio au- dio signal RH	Input	lgnition switch ON	Satellite radio tuner operating	(V) 1 0 -1 • 2ms SKIE3609E
48 (O)	_	REQ (SAT→ audio unit)	Input	Ignition switch ON	-	_
49 (P)	_	RX (SAT→ audio unit)	Input	Ignition switch ON	_	_
50 (L)	_	TX (audio unit→- SAT)	Input	Ignition switch ON	_	_
62 (W)	61 (B)	Telephone signal input	Input	Ignition switch ACC/ON	Bluetooth control unit sends audio signal	(V) 1 0 -1 • 2ms SKIB3609E
63 (R)	_	Mute control	_	_	_	
67	_	Shield	_	Ignition switch ON	-	OV

# **AUDIO UNIT**

#### < ECU DIAGNOSIS INFORMATION >

#### [PREMIUM AUDIO]

	minal e color)	Item	Signal input/	Condition		Reference value (Approx.)
+	-		output			(())
					Pressing 🌈 🔬 button	0V
69	71	Steering switch sig-	Input	Ignition switch	Pressing $\triangle$ button	0.75
(V)	(O)	nal A		ON	Pressing VOL up button	2V
					Except for above	5V
					Pressing KODE switch	0V
70	71	Steering switch sig-		Ignition	Pressing $ abla$ button	0.75V
(LG)	(O)	nal B	Input	switch ON	Pressing VOL down button	2V
					Except for above	5 V
73 (SB)	Ground	Vehicle speed sig- nal (8-pulse)	Input	lgnition switch ON	When vehicle speed is approx. 25 MPH (40 km/h)	(V) 15 10 5 0 + 20ms PKIA1935E
74 (W)	Ground	Auxiliary audio in- put RH (+)	Input	lgnition switch ON	Receive audio sig- nal (AUX input)	(V) 1 0 -1 1 1 1 1 1 1 1 1 1 1 1 1 1
75 (B)	Ground	Auxiliary audio in- put LH (+)	Input	Ignition switch ON	Receive audio sig- nal (AUX input)	(V) 1 0 -1 1 ms SKIA0177E
76 (B)	_	Shield	_	_	-	0V

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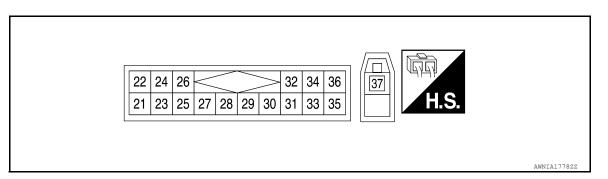
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# < ECU DIAGNOSIS INFORMATION >

# SATELLITE RADIO TUNER

# **Reference Value**

INFOID:000000006253037



#### PHYSICAL VALUES

Teri	minal	Description				Reference value
+	-	Signal name	Input/ Output		Condition	(Approx.)
22 (R)	21 (G)	Satellite radio sound signal LH	Output	lgnition switch ON	When satellite radio mode is selected	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
24 (B)	23 (W)	Satellite radio sound signal RH	Output	lgnition switch ON	When satellite radio mode is selected	(V) 1 0 -1 • 2ms SKIEJ609E
28 (O)	Ground	Request signal (SAT→CONT)	Output	lgnition switch ON	When satellite radio mode is selected	(V) 10 0 -10 -10 -10 -10 -10 -10 -
29 (P)	Ground	Communication signal (SAT→CONT)	Output	lgnition switch ON	When satellite radio mode is selected	(V) 10 0 -10 -10 -10 -10 -10 -10 -

# SATELLITE RADIO TUNER

#### < ECU DIAGNOSIS INFORMATION >

#### [PREMIUM AUDIO]

Terr	minal	Description				Reference value	Δ
+	-	Signal name	Input/ Output		Condition	(Approx.)	A
30 (L)	Ground	Communication signal (CONT→SAT)	Input	lgnition switch ON	When satellite radio mode is selected	(V) 10 0 -10 -10 -10 -10 -10 -10 -	B C
32 (R/B)	Ground	Battery power supply	Input	lgnition switch OFF	_	Battery voltage	D
36 (G/B)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	E
37	—	Satellite antenna	Input	_	—		F

G

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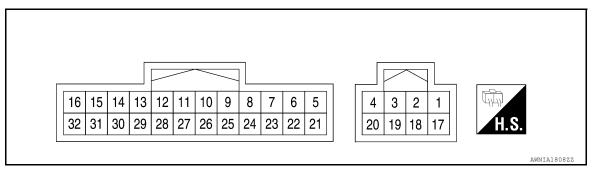
Р

# AUDIO AMP

**Reference Value** 

INFOID:000000006253038

TERMINAL LAYOUT



## PHYSICAL VALUES

(wire	ninal color)	ltem	Signal input/ output		Condition	Reference value (Approx.)
+ 1 (Y)	– Ground	Battery	Input	_	_	Battery voltage
2 (W)	18 (G)	Subwoofer	Output	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
3 (O)	19 (BR)	Subwoofer	Output	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
4 (B)	Ground	Ground	_	lgnition switch ON	-	_
9 (G/W)	Ground	Amp. ON signal	Input	lgnition switch ON	-	More than 6.5V
11 (G)	27 (B)	Rear door speak- er LH and rear door tweeter LH	Output	lgnition switch ON	Receive audio sig- nal	(V) 1 -1 -1 -1 -1 -1 -1 -1 -1 -1

# **AUDIO AMP**

#### < ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

	minal color)	Item	Signal input/		Condition	Reference value (Approx.)	A
+	-		output				
12 (GR)	28 (O)	Rear door speak- er RH and rear door tweeter RH	Output	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	B C D
13 (W)	29 (P)	Front door tweet- er RH	Output	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	E
14 (Y)	30 (GR)	Front tweeter LH	Output	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E	G
15 (BR)	31 (L)	Front door speak- er LH	Output	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E	I J K
16 (LG)	32 (R)	Front door speak- er RH	Output	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E	L
17 (R/B)	Ground	Battery	Input	-	_	Battery voltage	AV
20 (B)	Ground	Ground	_	Ignition switch ON	-	-	0
21 (Y)	5 (BR)	Audio sound sig- nal front RH	Input	Ignition switch ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	Ρ

# AUDIO AMP

#### < ECU DIAGNOSIS INFORMATION >

	ninal color) —	Item	Signal input/ output		Condition	Reference value (Approx.)
22 (W)	6 (B)	Audio sound sig- nal front LH	Input	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
23 (L)	7 (B/W)	Audio sound sig- nal rear RH	Input	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E
24 (BR)	8 (B/R)	Audio sound sig- nal rear LH	Input	lgnition switch ON	Receive audio sig- nal	(V) 1 0 -1 SKIA0177E

# < ECU DIAGNOSIS INFORMATION >

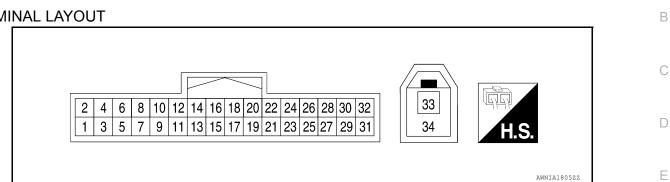
**BLUETOOTH CONTROL UNIT** 

# **Reference Value**

[PREMIUM AUDIO]

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## PHYSICAL VALUES

Tern (wire	ninal color)	Descriptior	1		Condition	Reference value	
+	_	Signal name	Input/ output		Condition	(Approx.)	
1 (R/B)	Ground	Battery power	Input	_	_	Battery voltage	
2 (G/Y)	Ground	ACC power	Input	Ignition switch ACC/ON	-	Battery voltage	
3 (W/G)	Ground	IGN power	Input	Ignition switch ON/ START	-	Battery voltage	
4 (B)	Ground	Ground	-	Ignition switch ON	_	0V	
6	_	Shield	_	-	_	_	
7 (G)	8 (L)	MIC in signal	Input	-	_	_	
9 (W)	10 (B)	Audio out	Output	Ignition switch ACC/ON	Bluetooth control unit sends audio signal	(V) 1 0 -1 2ms SKIB3609E	
11 (R)	_	Mute control	_	-	_	_	
					Pressing 🌈 💉 button	0V	
12	14	Steering switch sig-	Input	Ignition switch	Pressing $\Delta$ button	0.75	
(BR)	(G)	nal A	mpar	ON	Pressing VOL up button	2V	
					Except for above	5V	

Revision: March 2012

# **BLUETOOTH CONTROL UNIT**

# < ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

	ninal color)	Description	n		Condition	Reference value
+	_	Signal name	Input/ output		Condition	(Approx.)
					Pressing	0V
13	14	Steering switch sig-		Ignition	Pressing $ abla$ button	0.75V
(L)	(G)	nal B	Input	switch ON	Pressing VOL down button	2V
					Except for above	5 V
					Pressing 🌈 🏑 button	0V
17	19	Steering switch sig-	Output	Ignition switch	Pressing $\Delta$ button	0.75
(V)	(O)	nal A		ON	Pressing VOL up button	2V
					Except for above	5V
					Pressing MODE button	0V
18	19	Steering switch sig-	<u> </u>	Ignition	Pressing $ abla$ button	0.75V
(LG)	(O)	nal B	Output	switch ON	Pressing VOL down button	2V
					Except for above	5V
21 (B)	Ground	Ground	_	-	_	0V
24 (B)	Ground	Ground	_	_	-	0V
28 (SB)	Ground	Vehicle speed sig- nal (8-pulse)	Input	lgnition switch ON	When vehicle speed is approx. 25 MPH (40 km/h)	(V) 15 10 5 0 • • • 20ms • • • 20ms
29 (Y)	Ground	Microphone power	Output	Ignition switch ON	-	5V

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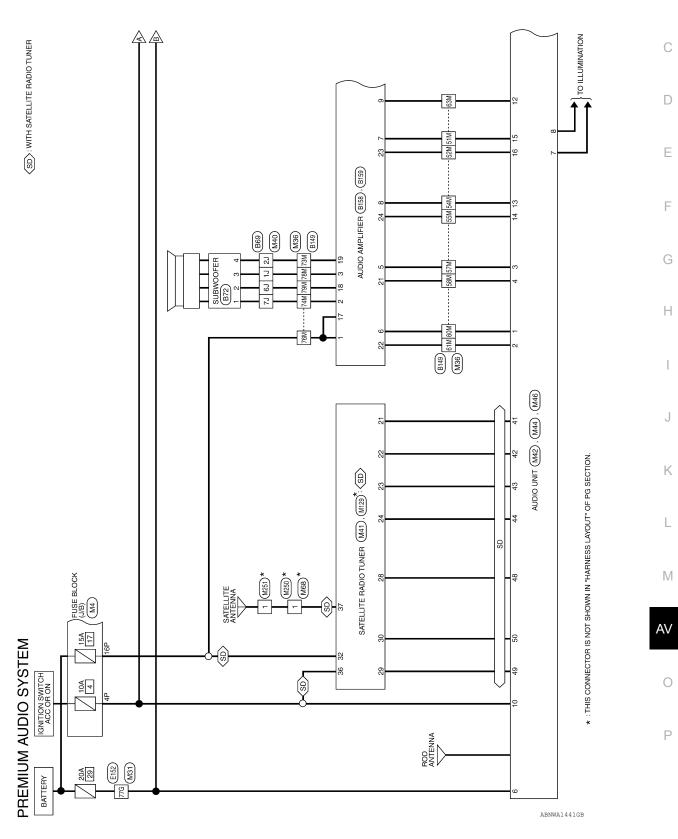
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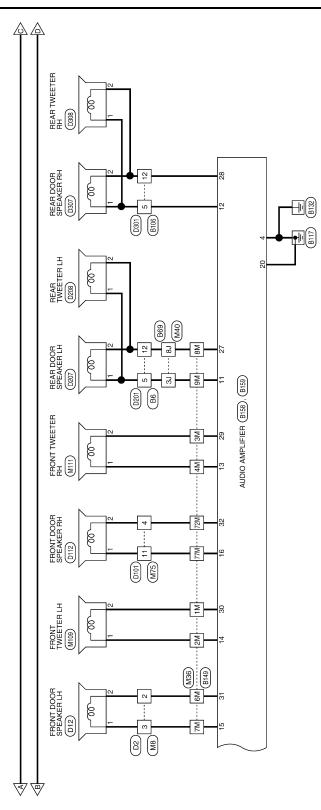
# WIRING DIAGRAM

PREMIUM AUDIO SYSTEM

Wiring Diagram

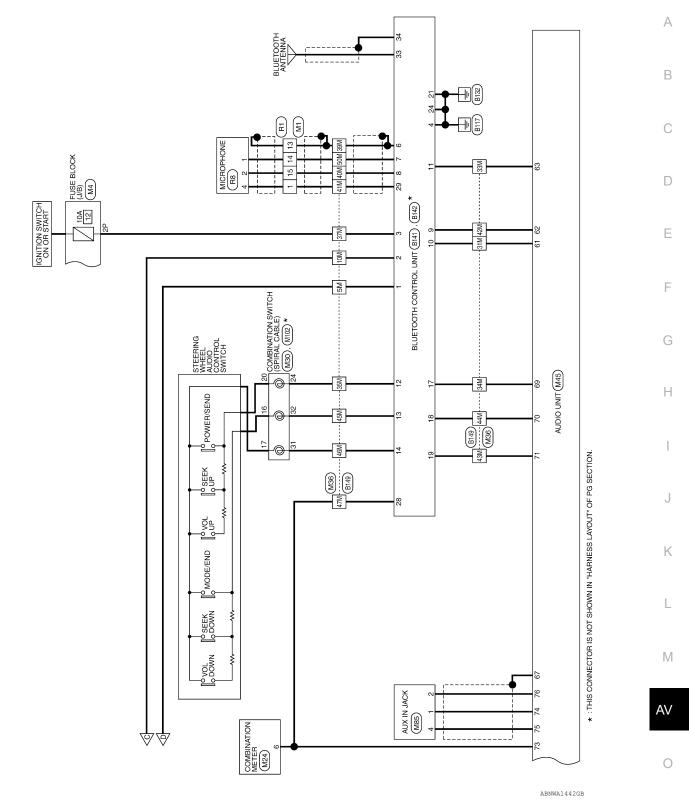


< WIRING DIAGRAM >



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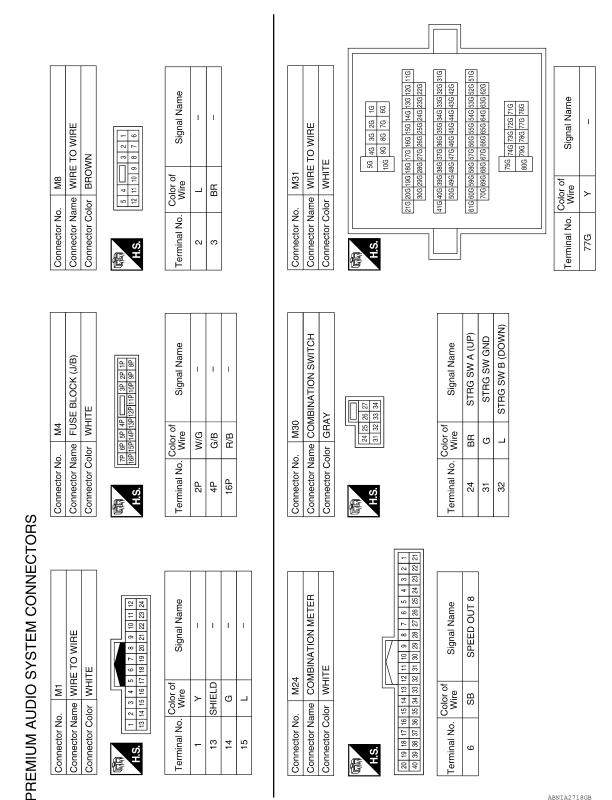
#### < WIRING DIAGRAM >



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#### < WIRING DIAGRAM >

#### [PREMIUM AUDIO]



ABNIA2718GB

Connector No. M40		Connector Color WHITE		54 41 31 21 11	10, 9, 8, 7,		21J 20J 19J 18J 17J 16J 15J 14J 13J 12J	[ ncz   n+z   ncz   nzz   nzz   nzz   nnc	411 401 391 381 371 361 351 341 331 321	000 490 480 470 460 450 440 430 420	611 601 591 581 571 561 551 541 533 521 511	[ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [	75J 74J 73J 72J 71J	80, 79, 78, 77, 76,	]		Terminal No. Wire Signal Name		2J BR -	3J G -		-	8J B I											
Conne	Conne	Conne	Æ			1	1				1	]	1	1			Termir				9		®			-								
Signal Name		1	1	I	I	I	1	I	1	I	I	I	I	I	I	I	I	I	I	I	I	I	I	. 1										
Color of			· >	×	0	ГG		σ	SB	σ	B/W		B/B	BR	BR	≻	B	×	G/W	ш	BB	N !	я/н - Ч	2 C		ס								
Terminal No.	MOC		41M	42M	43M	44M	45M	46M	47M	50M	51M	52M	54M	55M	57M	58M	60M	61M	63M	72M	73M	74M	M0/	78M	NO Y									
			Γ																															
	Connector Name WIRE TO WIRE			MI MC MC M	M9 W2 W2 W4 W4		21M 20M 19M 18M 17M 16M 15M 14M 13M 12M 11M	/ 27M 26M 25M 24M 23M 22M	41M 40M 39M 38M 37M 36M 35M 34M 33M 32M 31M	/ 47M 46M 45M 44M 43M 42M	61M 60M 59M 58M 57M 56M 55M 54M 53M 52M 51M	A 67M 66M 65M 64M 63M 62M	MFT MOT MOT MAT M	80M 79M 78M 77M 76M			Signal Name		1		1	1	1	I	Ī	1	I	I	I	I	1	1		
M36	RE 1	WHITE		19		0	19M 18M	29M 28M	39M 38M	49M 48M	59M 58M	69M 68M	75	80			Color of	Alle		- 0	. >	R/B		BR	В	ڻ ن	G∖Y	в	œ	>	BR	W/G	-	

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**PREMIUM AUDIO SYSTEM** 

#### < WIRING DIAGRAM >

# Revision: March 2012

[PREMIUM AUDIO]

#### < WIRING DIAGRAM >

14 [19	Signal Name	I	AMP ON/OFF SIG	RRSP LH (-)	RRSP LH (+)	RRSP RH (-)	RRSP RH (+)	
11 13	Color of Wire	Ι	G/W	B/R	ВВ	B/W	L	
H.S.	Terminal No.	11	12	13	14	15	16	
1								
	12 11 13 14	S. 12 11 13 14 15 11 13 14 15 Minal No. Color of Wire	S. 12 11 12 12 11 13 14 13 14 15 14 14 15 14 14 15 14 14 15 14 14 14 14 14 14 14 14 14 14	S. 12 11 11 12 12 12 12 12 12	S. iiiial No. Color of Wire 11 12 13 B/R	S. ninal No. Color of 11	Image: Non-Section of Minal No.         Image: No-Section of Minal No.         Image: No-Secti	Image: Non-Section of Minal No.         Image: Non-Sec

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Connector Color WHITE

M42

Connector No.

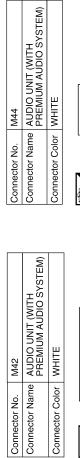
Connector Name SATELLITE RADIO TUNER

M41

Connector No.

Connector Color WHITE

		1												1
41 43 45 46 47 48 49 51	Signal Name	(-) T	(+) T	R (-)	R (+)	I	I	I	REQ	RX	TX	I	I	
41 43 45 4	Color of Wire	σ	æ	×	В	I	I	I	0	٩	_	-	-	
H.S.	Terminal No.	41	42	43	44	45	46	47	48	49	50	13	52	

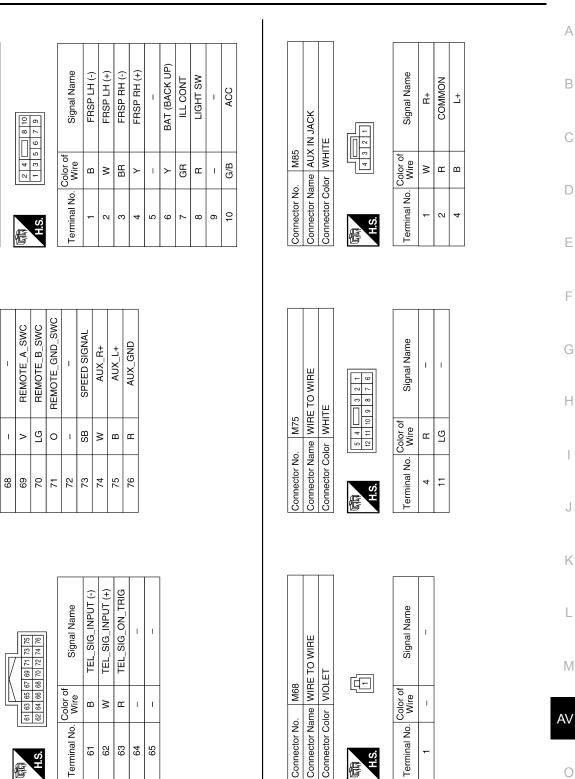


Sić		AMP	ЯF	RF	R	RR	
Color of Wire	I	G/W	B/R	BR	B/W	L	
Terminal No.	11	12	13	14	15	16	

21 23 27 28 29 30 31 33 35	Signal Name	SAT LCH (-)	SAT LCH (+)	SAT RCH (-)	SAT RCH (+)	I	I	I	REQ1	TXD	RXD	I	BACKUP	I	I	I	ACC
23 25 27	Color of Wire	σ	œ	×	В	I	I	I	0	Ч	Γ	Ι	R/B	I	-	I	G/B
H.S.	Terminal No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

ABNIA3607GB

**AV-90** 



#### < WIRING DIAGRAM >

Connector Name AUDIO UNIT (WITH PREMIUM AUDIO SYSTEM)

M46

Connector No.

Signal Name

Color of Wire

Terminal No.

SHIELD

SHIELD

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AUDIO UNIT (WITH PREMIUM AUDIO SYSTEM)

M45

Connector No.

Connector Name Connector Color

WHITE

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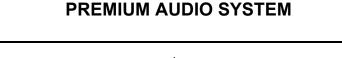
Connector Color WHITE

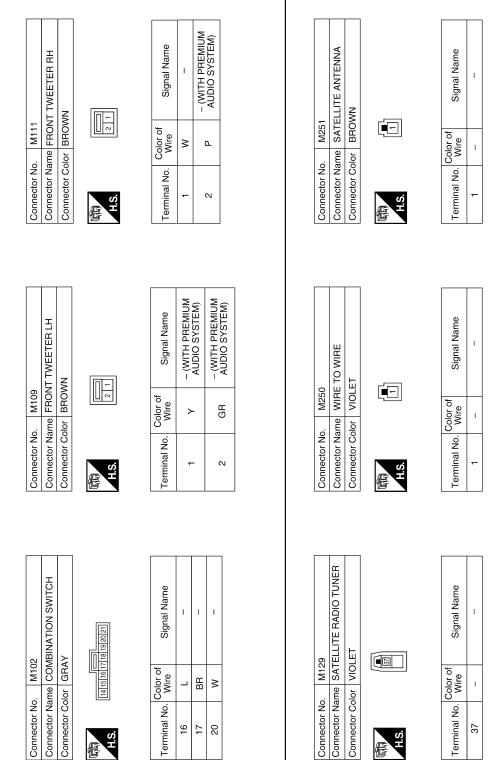
[PREMIUM AUDIO]

Revision: March 2012

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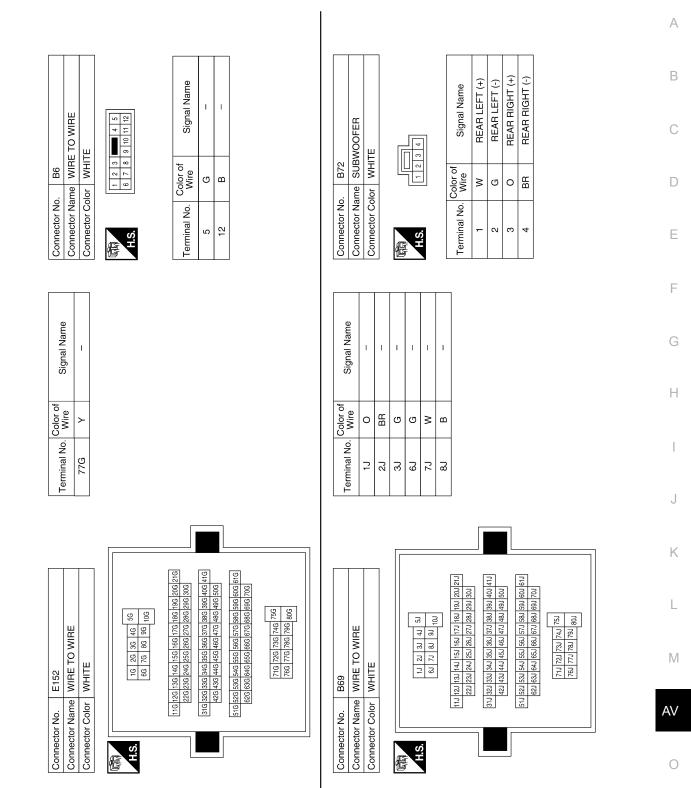




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#### < WIRING DIAGRAM >

#### [PREMIUM AUDIO]



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Signal Name	LAD IN1	LAD IN2	LAD IN GND	I	I	LAD OUT1	LAD OUT2	LAD OUT GND	ļ	CONT 2	I	I	CONT 5	I	I	I	SPEED SIGNAL	MIC PWR	I	I	I
Color of Wire	BR	_	ŋ	I	I	>	Ľ	0	I	В	I	I	ш	I	I	I	SB	≻	I	I	I
Terminal No.	12	13	14	15	16	11	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

18 20 22 24 28 28 30 32 17 19 21 23 25 27 29 31	Signal Name	BATT	ACC	IGN	GND	I	MIC_SHIELD	MIC_IN+	MIC_IN-	AUDIO_OUT+	AUDIO_OUT	MUTE_CONTROL	
11 13 15	Color of Wire	R/B	G∖Y	W/G	в	I	SHIELD	ŋ	L	Ν	В	В	
開開 H.S. 13579	Terminal No.	-	2	ო	4	ъ	9	7	8	6	10	11	

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Connector No.	o. B106	
Connector Name WIRE TO WIRE	ame WIRE	E TO WIRE
Connector Color	olor WHITE	щ
国 H.S.	1         2         3           6         7         8	9 10 11 12
Terminal No.	Color of Wire	Signal Name
5	GR	-

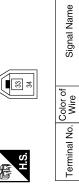
Connector Name BLUETOOTH CONTROL UNIT

B141

Connector No.

Connector Color WHITE

Connector No.	B142
Connector Name	Connector Name BLUETOOTH CONTROL UNIT
Connector Color BLACK	BLACK
中国	



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SHIELD BT ANTENNA SHIELD **BT ANTENNA** 



#### [PREMIUM AUDIO]

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В

С

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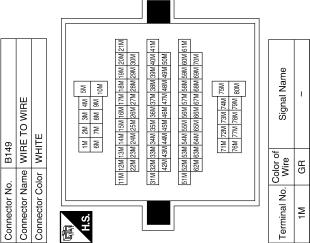
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Signal Name	I	I	I	I	I	1	I	I	I	I	I	I	I	-	I
Color of Wire	_	B/R	BR	BR	Y	В	Μ	G/W	н	BR	Μ	R/B	ГG	0	ŋ
Terminal No.	52M	54M	55M	57M	58M	60M	61M	63M	72M	ME7	74M	76M	WLL	78M	79M

< WIRING DIAGRAM >

Terminal No.	Color of Wire	Signal Name
8M	в	I
9M	g	I
10M	G/Y	I
31M	в	I
33M	щ	1
34M	>	I
35M	ВВ	I
37M	W/G	I
39M	SHIELD	1
40M	L	I
41M	۲	I
42M	Ν	I
43M	0	I
44M	ГG	I
45M	L	I
46M	g	I
47M	SB	I
50M	σ	I
51M	B/W	I



Signal Name	I	I	I	I	I	I	I	
Color of Wire	GR	≻	Ч	Μ	R/B	L	BR	
Terminal No. Wire	1M	2M	ЗМ	4M	5M	6M	ΜŹ	

ABNIA2725GB

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Signal Name	FR TW (+)	FR TW (+)	FRSP LH OUT (+)	FRSP RH OUT (+)	FRSP RH (+) IN	FRSP LH (+) IN	RRSP RH (+) IN	RRSP LH (+) IN	Τ	I	RRSP LH OUT (-)	RRSP RH OUT (-)	FR TW (-)	FR TW (-)	FRSP LH OUT (-)	FRSP RH OUT (-)
Color of Wire	×	≻	BR	ГG	≻	3	_	ВВ	I	I	в	0	٩	GR	_	æ
Terminal No.	13	14	15	16	21	22	23	24	25	26	27	28	29	30	31	32

< WIRING DIAGRAM >

Connector Name AUDIO AMPLIFIER

Connector Name AUDIO AMPLIFIER

B158

Connector No.

Connector Color WHITE

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B159

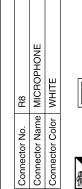
Connector No.

Connector Color WHITE

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	11 10 9 8 7 6 5	27 26 25 24 23 22 21	Signal Name	FRSP RH (-) IN	FRSP LH (-) IN	RRSP RH (-) IN	RRSP LH (-) IN	AMP ON/OFF SIGNAL	I	RRSP LH OUT (+)	RRSP RH OUT (+)
1	15 14 13 12	1 30 29 28	Color of Wire	BR	в	B/W	B/R	G/W	I	ŋ	GR
	16	H.S. 32 31	Terminal No.	ъ	Q	7	ω	6	10	11	12

20 19 18 17	Signal Name	BAT	WOOFER(+)1	WOOFER(+)2	GND	BAT	WOOFER(-)1	WOOFER(-)2	GND	
20 1 3	Color of Wire	≻	W	0	В	R/B	G	BR	В	
H.S.	Terminal No.	-	2	3	4	17	18	19	20	



WIRE TO WIRE

Connector Name Connector Color

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Connector No.

WHITE

Connector Name WIRE TO WIRE

D2

Connector No.

BROWN

Connector Color

H.S. 佢



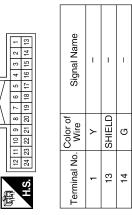
Signal Name	MIC OUT +	MIC OUT -	MIC POWER	
Color of Wire	g	L	٢	
Terminal No.	1	2	4	

Signal Name I. T

Color of Wire

Terminal No. N С

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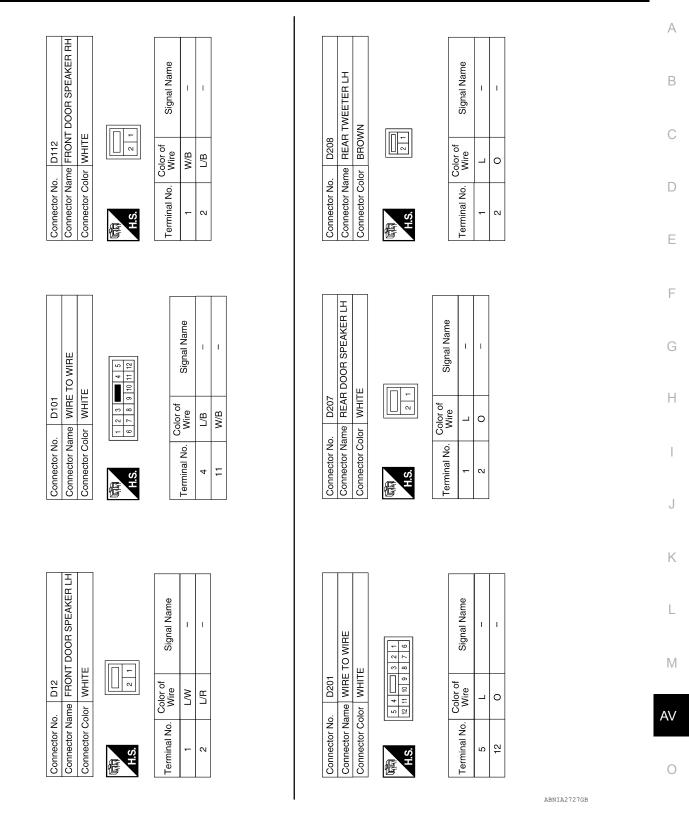
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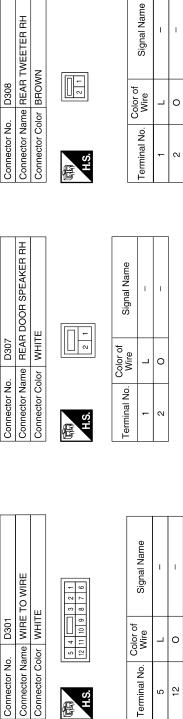
#### < WIRING DIAGRAM >

[PREMIUM AUDIO]



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Connector No.



Terminal No.

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ABNIA2728GB

# SYMPTOM DIAGNOSIS AUDIO SYSTEM

# Symptom Table

# AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	Audio unit power circuit     Audio unit	<ul> <li><u>AV-45</u></li> <li><u>AV-105</u></li> </ul>
Steering wheel audio control switch does not operate	<ul><li>Steering wheel audio control switch</li><li>Audio unit</li></ul>	<ul> <li><u>AV-110</u></li> <li><u>AV-105</u></li> </ul>
All speakers do not sound	<ul> <li>Speaker circuit shorted to ground</li> <li>Audio unit power circuit</li> <li>Audio amplifier ON signal</li> <li>Audio amplifier power/ground circuit</li> <li>Audio amplifier</li> <li>Audio unit</li> </ul>	<ul> <li><u>AV-85</u></li> <li><u>AV-45</u></li> <li><u>AV-65</u></li> <li><u>AV-46</u></li> <li><u>AV-106</u></li> <li><u>AV-105</u></li> </ul>
One or several speakers do not sound	<ul> <li>Front door speaker</li> <li>Front tweeter</li> <li>Rear door speaker</li> <li>Rear door tweeter</li> <li>Subwoofer</li> </ul>	<ul> <li><u>AV-50</u></li> <li><u>AV-53</u></li> <li><u>AV-56</u></li> <li><u>AV-59</u></li> <li><u>AV-62</u></li> </ul>
Poor reception	<ul> <li>Rod antenna is not fully connected to antenna base</li> <li>Base antenna/rod connection (thread zone) has for- eign material or corrosion inside.</li> </ul>	_
Buzz/rattle sound from speaker	The majority of buzz/rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the buzz/rattle.	Refer to "SQUEAK AND RATTLE TROUBLE DIAG- NOSIS" in the ap- propriate interior trim section.

#### CD

Symptom	Possible cause	Reference page	•
CD cannot be inserted			
CD cannot be ejected	Audio unit	AV-105	
The CD cannot be played		<u>Av-105</u>	
The sound skips, stops suddenly, or is distorted	_		$\mathbb{N}$

#### SATELLITE RADIO

			A \ /
Symptom	Possible cause	Reference page	AV
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-45</u></li> <li><u>AV-68</u></li> <li><u>AV-119</u></li> </ul>	0
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-71</u>	Р

#### HANDS-FREE PHONE

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# **AUDIO SYSTEM**

#### < SYMPTOM DIAGNOSIS >

#### [PREMIUM AUDIO]

Symptom	Possible cause	Reference page
Inoperative	<ul><li>Bluetooth control unit power circuit</li><li>Bluetooth control unit</li></ul>	• <u>AV-47</u> • <u>AV-44</u>
Steering wheel audio switch does not operate	<ul><li>Steering wheel audio control switch</li><li>Bluetooth control unit</li></ul>	• <u>AV-66</u> • <u>AV-44</u>
Voice activated control does not activate	<ul><li>Microphone</li><li>Steering wheel audio control switch</li><li>Bluetooth control unit</li></ul>	• <u>AV-48</u> • <u>AV-66</u> • <u>AV-44</u>

## 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,  $_{\rm B}$  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	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.	Motor case ground     Motor
The noise occurs constantly, not	just under certain conditions.	Poor ground of antenna feeder line
A cracking or snapping sound occ it is vibrating excessively.	urs while the vehicle is being driven, especially when	<ul> <li>Ground wire of body parts</li> <li>Ground due to improper part installation</li> <li>Wiring connections or a short circuit</li> </ul>

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#### 2011 Xterra

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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

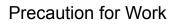
#### WARNING:

- 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 Procedure without Cowl Top Cover

INFOID:00000008202950

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc.



PIIB3706J

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- · Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- · Follow the steps below to clean components.



INFOID:000000006837974

# PRECAUTIONS

#### **IPREMIUM AUDIO1**

< PRECAUTION > [PREMIUM AUDIO]	
<ul> <li>Water soluble dirt: Dip a soft cloth into lukewarm water, and wring the water out of the cloth to wipe the dirty area.</li> <li>Then rub with a soft and dry cloth.</li> <li>Oily dirt: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%), and wipe</li> </ul>	А
the dirty area. Then dip a cloth into fresh water, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.	В
<ul> <li>Do not use organic solvent such as thinner, benzene, alcohol, or gasoline.</li> <li>For genuine leather seats, use a genuine leather seat cleaner.</li> </ul>	С
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# PREPARATION

# < PREPARATION > PREPARATION

# PREPARATION

# **Special Service Tool**

INFOID:000000006837975

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	AWJIA0463ZZ	For removing trim

# **Commercial Service Tools**

INFOID:000000006253043

Tool name	Description
Power tool	Loosening bolts and nuts

# REMOVAL AND INSTALLATION AUDIO UNIT

Removal and Installation

#### REMOVAL

- 1. Remove the cluster lid C. Refer to IP-14, "Removal and Installation".
- 2. Remove the RH and LH ventilator grilles. Refer to VTL-21, "Removal and Installation".
- 3. Remove the audio unit assembly screws (A), then remove the audio unit assembly, from cluster lid C.

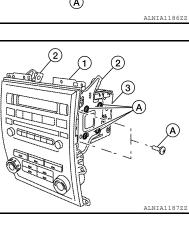
Revision: March 2012

INSTALLATION Installation is in the reverse order of removal.

4. Remove the audio unit screws (A), using power tool.

(3) from the audio control panel (1).

5. Remove the audio unit brackets (2), then pull out the audio unit



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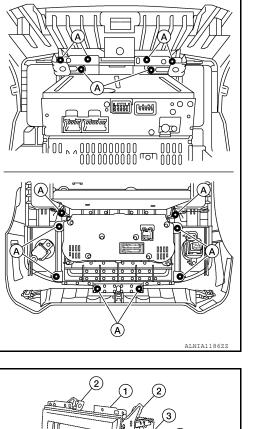
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# < REMOVAL AND INSTALLATION > AUDIO AMP

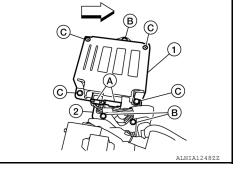
#### Removal and Installation

#### REMOVAL

#### CAUTION:

#### Do not remove the RH front seat from the vehicle.

- 1. Remove the RH front seat bolts, disconnect the RH front seat electrical connectors. Refer to <u>SE-17</u>. <u>"Removal and Installation"</u>.
- 2. Tilt the RH front seat back to access the audio amp (1), remove the audio amp kick shield screws (C).
  - <>:Vehicle front
- 3. Disconnect the audio amp connectors (A) and remove the audio amp (1) from the bracket (2).
- 4. Remove the audio amp bracket screws (B) and remove audio amp bracket (2).



INSTALLATION Installation is in the reverse order of removal. INFOID:000000006253045

[PREMIUM AUDIO]

# **FRONT TWEETER**

#### < REMOVAL AND INSTALLATION >

# FRONT TWEETER

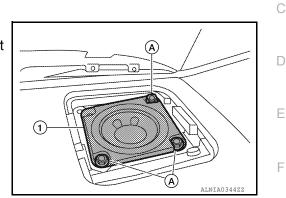
#### **Removal and Installation**

#### REMOVAL

#### **CAUTION:**

#### Use a suitable tool to prevent damage to the front tweeter speaker grille trim and the instrument panel.

- 1. Remove the front tweeter grille, using a suitable tool.
- 2. Remove the front tweeter screws (A).
- 3. Pull out the front tweeter speaker (1) and disconnect front tweeter connector, then remove the front tweeter speaker (1).



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

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# FRONT DOOR SPEAKER

# Removal and Installation

#### REMOVAL

- 1. Remove the front door finisher. Refer to INT-14, "Removal and Installation".
- 2. Remove the front door speaker screws (A).
- 3. Pull out the front door speaker (1), and disconnect the front door speaker connector and remove the front door speaker (1).

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INSTALLATION Installation is in the reverse order of removal. INFOID:000000006253047

# REAR DOOR SPEAKER

# Removal and Installation - Rear Door Speaker

## REMOVAL

- 1. Remove the rear door finisher. Refer to INT-14, "Removal and Installation".
- 2. Remove the rear door speaker screws (A).
- 3. Disconnect the rear door speaker connector (B) and remove rear door speaker (1).

INSTALLATION

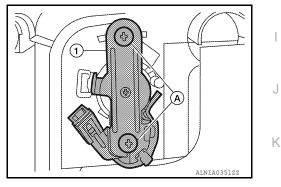
Installation is in the reverse order of removal.

Removal and Installation - Rear Tweeter

#### REMOVAL

- 1. Remove rear door finisher. Refer to INT-14, "Removal and Installation".
- 2. Remove the rear tweeter screws (A) and remove the rear tweeter (1).





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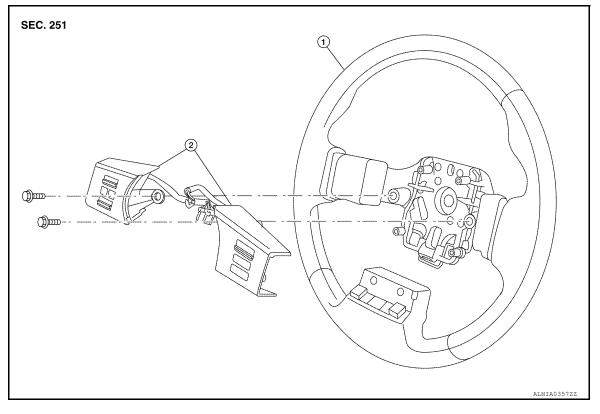
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# STEERING SWITCH

# Removal and Installation

INFOID:000000006253050



1. Steering wheel 2. Steering wheel audio control switches

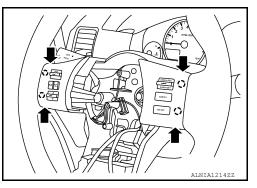
#### REMOVAL

- 1. Remove the driver air bag module. Refer to <u>SR-4, "Removal and Installation"</u>.
- 2. Remove the steering wheel audio control switch assembly screws.
- 3. Disconnect the steering wheel audio control switches connector.
- Remove the steering wheel audio control switches by pulling on steering wheel audio control switches to release the pawls. CAUTION:

Do not tilt steering wheel audio control switches during removal or damage may occur to the pawls.

• (\_):Pawl

INSTALLATION Installation is in the reverse order of removal.



# **SUBWOOFER**

# **Removal and Installation**

Revision: March 2012

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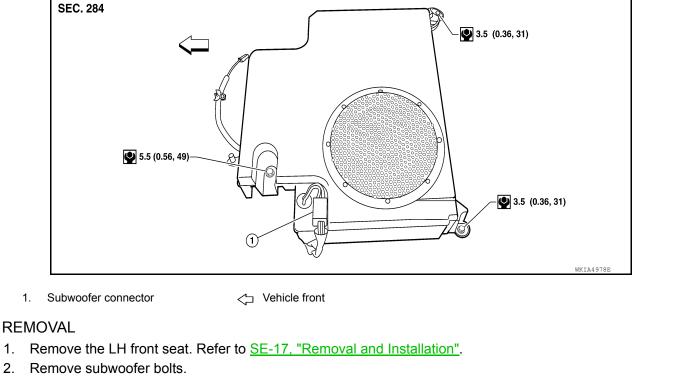
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[PREMIUM AUDIO]



Disconnect the subwoofer connector and remove the subwoofer. **INSTALLATION** 

Installation is in the reverse order of removal.

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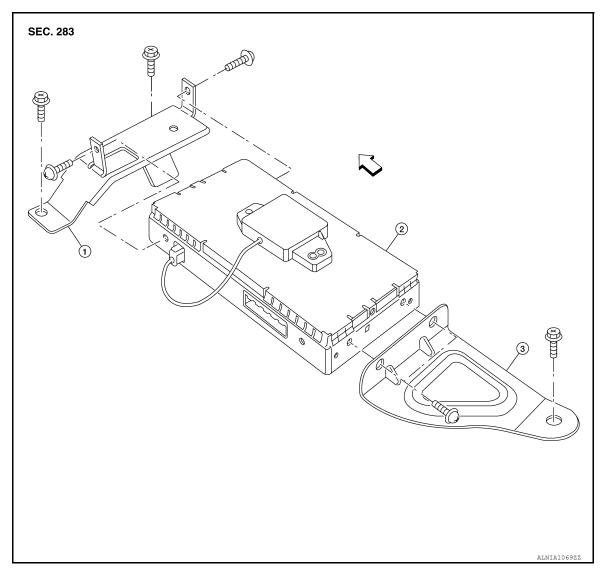
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# **BLUETOOTH CONTROL UNIT**

# Removal and Installation

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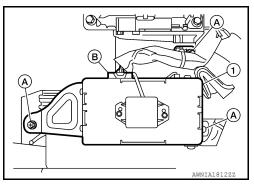
[PREMIUM AUDIO]



1. Bluetooth control unit front bracket 2. Bluetooth control unit/antenna 3. Bluetooth control unit rear bracket

#### REMOVAL

- 1. Remove the RH front seat bolts, disconnect the RH front seat electrical connectors. Refer to <u>SE-17.</u> <u>"Removal and Installation"</u>.
- 2. Disconnect the Bluetooth control unit harness connector (B).
- 3. Remove the Bluetooth control unit screws (A), then remove the Bluetooth control unit assembly (1).
- 4. Remove the Bluetooth control unit bracket screws and remove the Bluetooth control unit front and rear brackets.



# **BLUETOOTH CONTROL UNIT**

< REMOVAL AND INSTALLATION >	
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# MICROPHONE

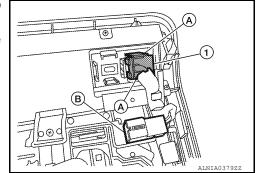
#### Removal and Installation

INFOID:000000006253054

[PREMIUM AUDIO]

#### REMOVAL

- 1. Remove the front room/map lamp. Refer to <u>INT-21, "Removal and Installation"</u>.
- 2. Detach the Bluetooth microphone (1) from the front room/map
- lamp tabs (A).Detach the Bluetooth microphone connector (B) and remove the Bluetooth microphone (1).



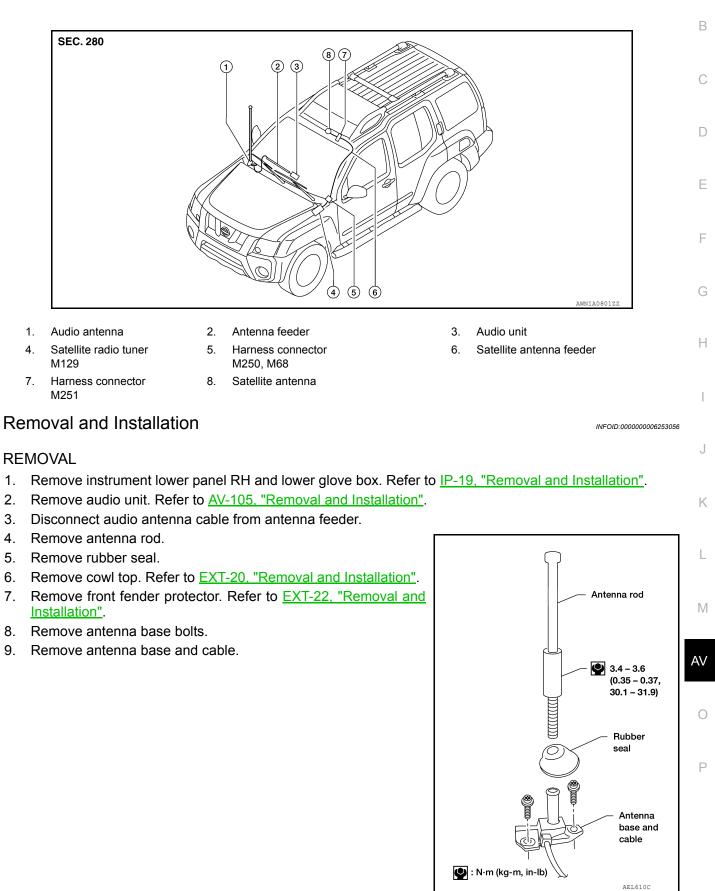
INSTALLATION Installation is in the reverse order of removal.

# AUDIO ANTENNA

# Location of Antenna

INFOID:000000006253055

[PREMIUM AUDIO]



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INSTALLATION

Installation is in the reverse order of removal.

**CAUTION:** 

Always properly tighten the antenna rod during installation or the antenna rod may bend or break during vehicle operation.

# **AUXILIARY INPUT JACK**

# [PREMIUM AUDIO]

< REMOVAL AND INSTALLATION > [PREMIUM AUD	00]
AUXILIARY INPUT JACK	٨
Removal and Installation	A 06253057
Removal	В
<ol> <li>Remove the lower instrument panel RH and lower glove box. Refer to <u>IP-19. "Removal and Installation</u></li> <li>Remove the auxiliary input jack.</li> </ol>	
Installation Installation is in the reverse order of removal.	С
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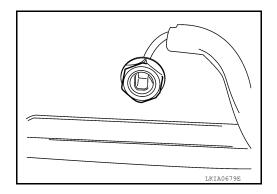
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# SATELLITE RADIO ANTENNA

Removal and Installation

#### REMOVAL

- 1. Remove the front cover. Refer to EXT-26. "Removal and Installation".
- 2. Remove the front room/map lamp assembly. Refer to INL-58, "Removal and Installation".
- 3. Disconnect the satellite radio antenna connector.
- 4. Remove the satellite radio antenna nut.
- 5. Remove the satellite radio antenna.



INSTALLATION Installation is in the reverse order of removal. INFOID:000000006253058

# Removal and Installation

#### REMOVAL

- 1. Disconnect the battery negative terminal.
- 2. Disconnect the satellite radio tuner connectors.
- 3. Remove the satellite radio tuner screws (A), and remove satellite radio tuner.
- 4. Remove satellite radio tuner bracket screws and remove the satellite radio tuner brackets.

INSTALLATION Installation is in the reverse order of removal.



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