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AUDIO, VISUAL, NAVIGATION & TELEPHONE SYSTEM

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PRECAUTIONS

< SERVICE INFORMATION >

SERVICE INFORMATION

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 SRS 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 SRS 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.

PREPARATION

< SERVICE INFORMATION >

PREPARATION

Commercial Service Tool

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Tool name		Description
Power tool		Loosening bolts and nuts
	PBIC0191E	

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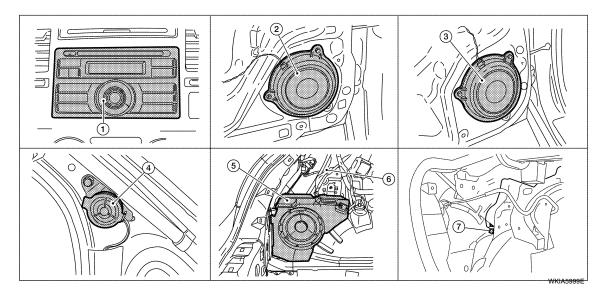
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Component Parts Location

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- 1. Audio unit M43, M44, M45
- 4. Tweeter LH M46, RH M47 (view with 5. front pillar garnish removed)
- Satellite radio tuner B30, B31 (sedan if equipped) (view with trunk side finisher LH removed)
- 2. Front door speaker LH D12, RH D112
 - Subwoofer B29 (premium system) [view with luggage side lower finisher (LH) removed]
- Rear door speaker LH D207, RH D307
- Satellite radio tuner B30, B31 (hatchback - if equipped) [view with luggage side lower finisher (LH) removed]

INFOID:0000000004306955

System Description

BASE SYSTEM

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

Power is supplied at all times

- through 20A fuse (No. 27, located in the fuse and fusible link box)
- · to audio unit terminal 19.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse (No. 20, located in the fuse and fusible link box)
- to audio unit terminal 7.

Ground is supplied through the case of the audio unit.

Then audio signals are supplied

- through audio unit terminals 2, 3, 4, 5, 11, 12, 13 and 14
- to terminals + and of front door speaker LH and RH and
- to terminals + and of rear door speaker LH and RH.

MID LEVEL AND PREMIUM SYSTEM

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

Power is supplied at all times

- through 20A fuse (No. 27, located in the fuse and fusible link box)
- · to audio unit terminal 19 and
- to subwoofer terminal 1 (with premium system).

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse (No. 20, located in the fuse and fusible link box)
- · to audio unit terminal 7.

Ground is supplied through the case of the audio unit.

Ground is also supplied

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< SERVICE INFORMATION >

- to audio unit terminal 21 (with premium system)
 through body grounds M57 and M61 and
 to subwoofer terminal 3 (with premium system)
 through body grounds B7 and B19.
 Then audio signals are supplied
 through audio unit terminals 2, 3, 4, 5, 11, 12, 13, and 14
 to terminals + and of front door speaker LH and RH and
 - to terminals 2 and 6 of subwoofer (with premium system).

• to terminals + and - of rear door speaker LH and RH and

· to terminals + and - of tweeter LH and RH and

Steering Wheel Audio Control Switches (with Bluetooth)
When one of steering wheel audio control switches is pushed, the resistance in steering switch circuit changes depending on which button is pushed.

Satellite Radio Tuner (Pre-wiring)

The satellite radio tuner pre-wiring allows connection of a satellite radio tuner.

Power is supplied at all times

- through 20A fuse (No. 27, located in the fuse and fusible link box)
- to satellite radio tuner pre-wiring terminal 32.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse (No. 20, located in the fuse and fusible link box)
- to satellite radio tuner pre-wiring terminal 36.

Then audio signals are supplied

- through satellite radio tuner pre-wiring terminals 21, 22, 23 and 24
- to audio unit terminals 41, 42, 43 and 44.

Satellite Radio Tuner (Factory Installed)

Power is supplied at all times

- through 20A fuse (No. 27, located in the fuse and fusible link box)
- to satellite radio tuner terminal 32.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse (No. 20, located in the fuse and fusible link box)
- · to satellite radio tuner terminal 36.

Ground is supplied through the case of the satellite radio tuner.

Then audio signals are supplied

- through satellite radio tuner terminals 21, 22, 23 and 24
- to audio unit terminals 41, 42, 43 and 44.

Ground is supplied through the case of the satellite radio tuner.

SPEED SENSITIVE VOLUME SYSTEM (MID LEVEL AND PREMIUM SYSTEM)

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

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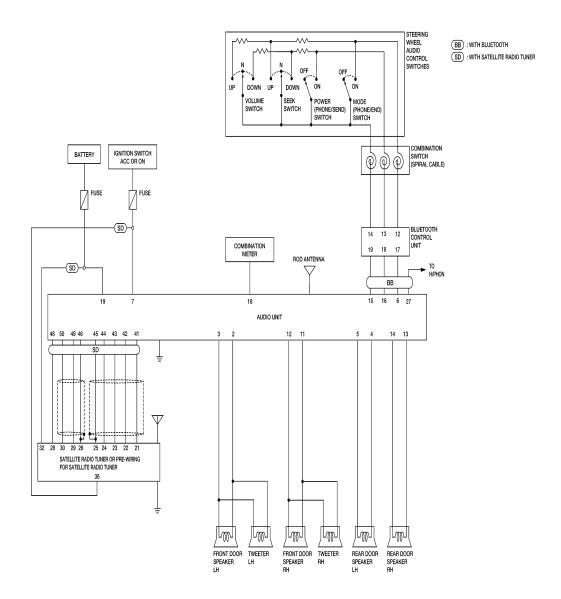
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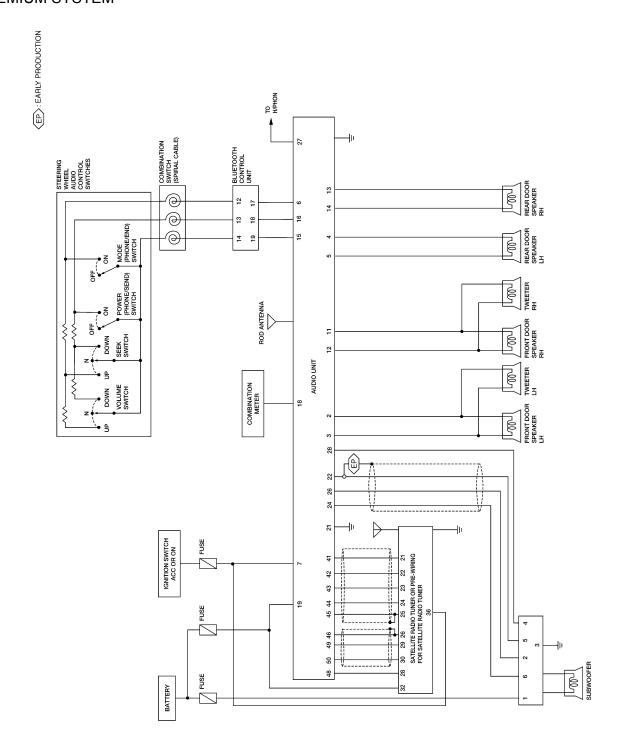
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MID LEVEL SYSTEM



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PREMIUM SYSTEM



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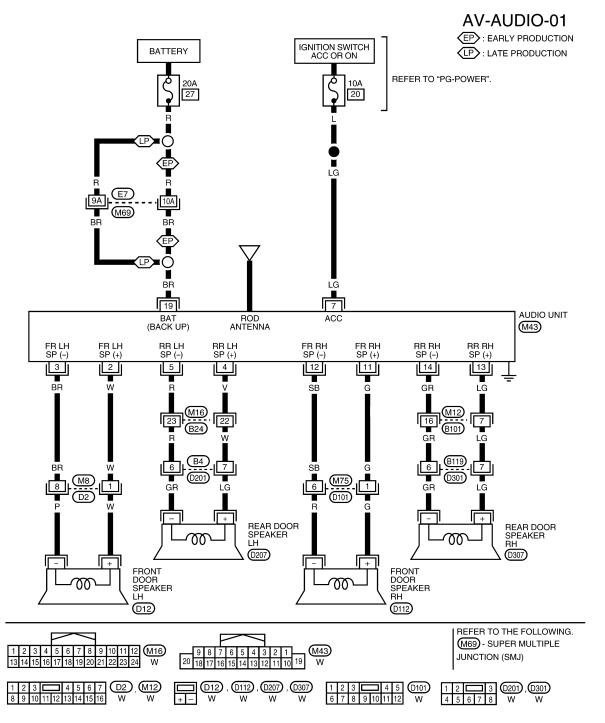
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Wiring Diagram - AUDIO -

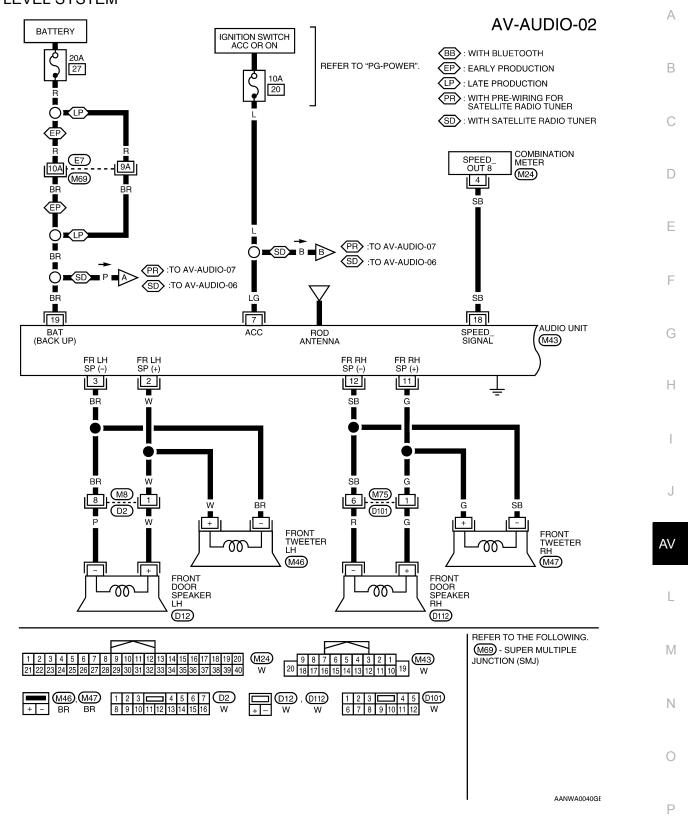
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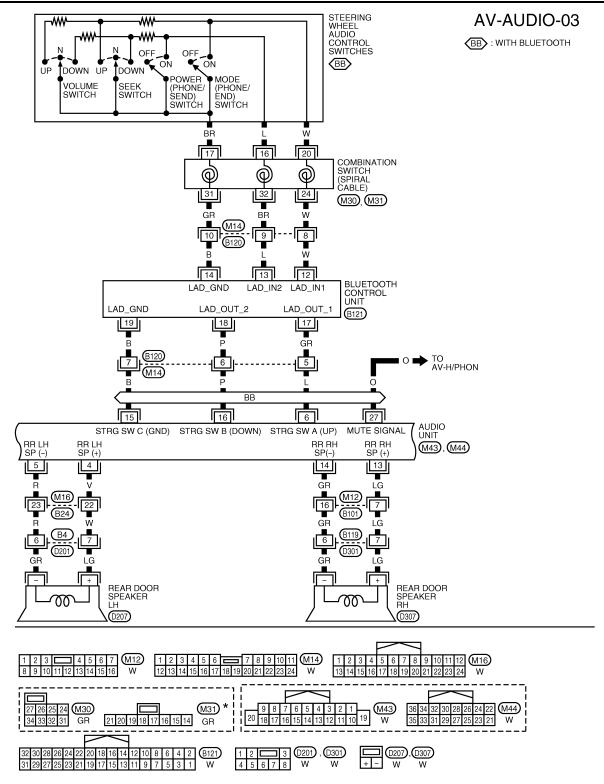
BASE SYSTEM



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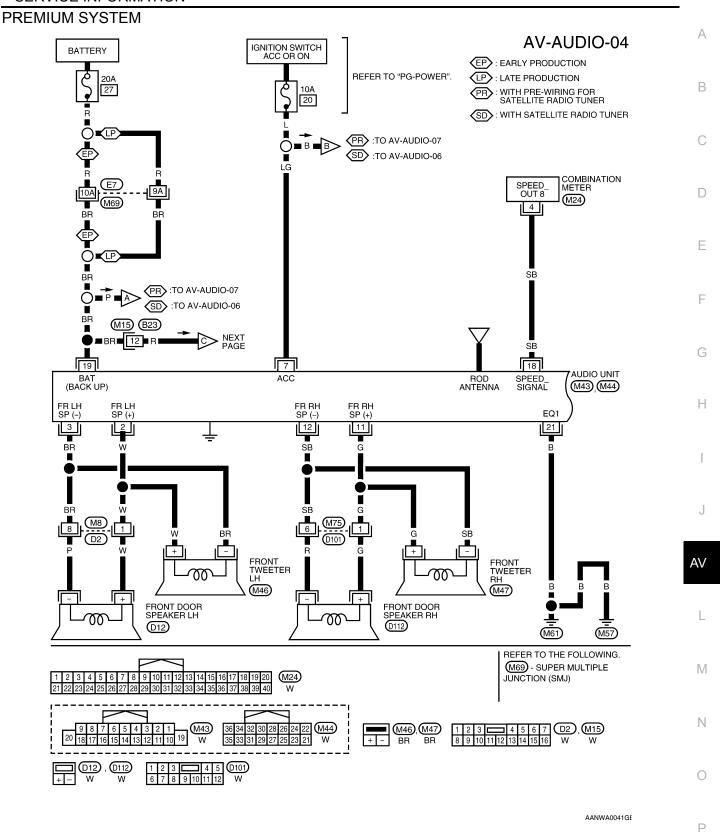
MID LEVEL SYSTEM



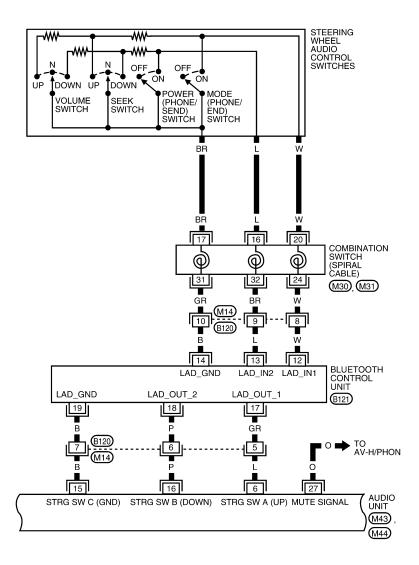


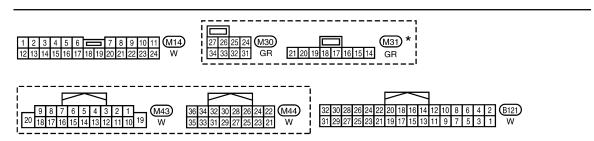
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

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

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AV-AUDIO-06

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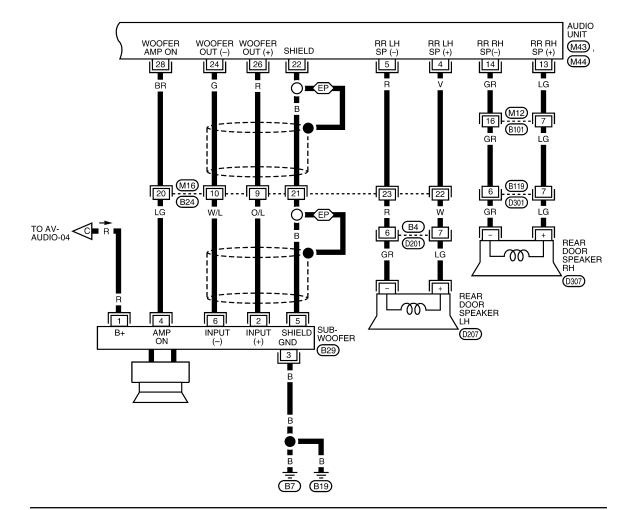
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1 2 3 4 5 6 7 M12 8 9 10 11 12 13 14 15 16 W 13 14 15 16 17 W 14 15 16 17 18 19 20 21 22 23 24 W	
9 8 7 6 5 4 3 2 1	2 1 1 B29 1 2 3 D201 D207 D207 D207 W +1- W W

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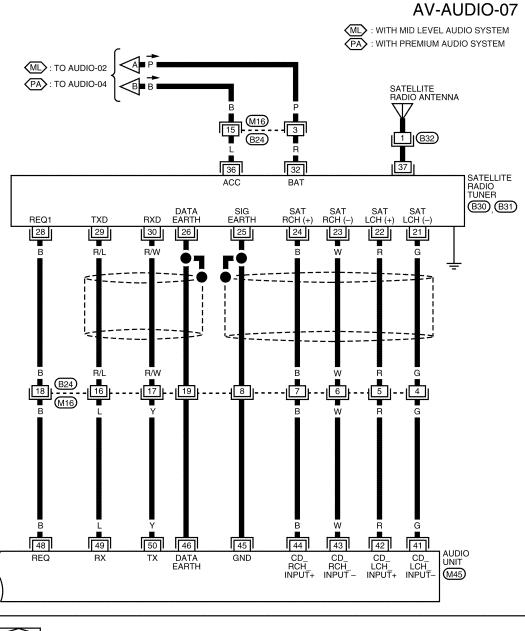
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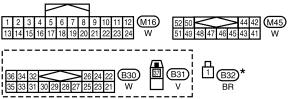
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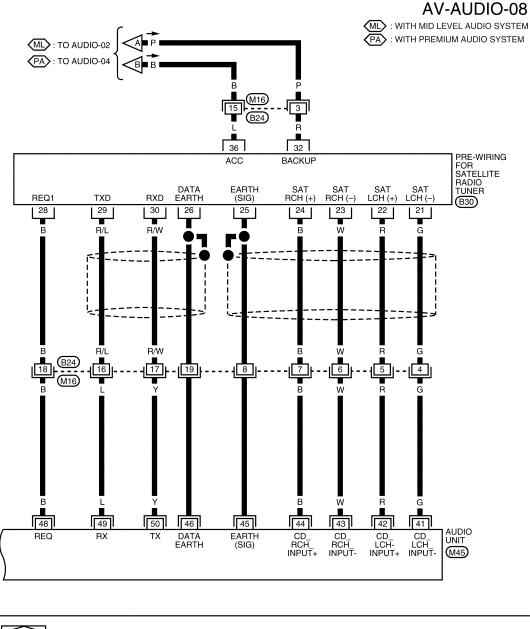
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Terminal and Reference Value for Audio Unit (Base System)

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WKIA5439E

	ninal color)		Signal		Condition	Reference value
+	_	Item	input/ output	Ignition switch	Operation	(Approx.)
2 (W)	3 (BR)	Audio signal front LH	Output	ON	Receive audio signal	(V) 1 0 -1 + 2ms SKIB3609E
4 (V)	5 (R)	Audio signal rear LH	Output	ON	Receive audio signal	(V) 1 0 -1 + 2ms SKIB3609E
7 (LG)	Ground	ACC power supply	Input	ACC	_	Battery voltage
11 (G)	12 (SB)	Audio signal front RH	Output	ON	Receive audio signal	(V) 1 0 -1 → 2ms SKIB3609E
13 (LG)	14 (GR)	Audio signal rear RH	Output	ON	Receive audio signal	(V) 1 0 -1 → 2ms SKIB3609E
19 (BR)	Ground	Battery power supply	Input	OFF	_	Battery voltage

Audio Unit (Mid Level and Premium System) Harness Connector Terminal Layout

19 10 11 12 13 14 15 16 17 18 20 22 24 26 28 30 32 34 36 21 23 25 27 29 31 33 35 42 44 45 46 47 48 49 51 H.S.

Terminal and Reference Value for Audio Unit (Mid Level and Premium System)

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	minal e color)	- Item	Signal input/		Condition	Reference value	Example of symp-
+	_	item	output	Ignition switch	Operation	(Approx.)	tom
2 (W)	3 (BR)	Audio sound signal front LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from front door speaker LH or tweeter LH.
4 (V)	5 (R)	Audio sound signal rear LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from rear door speaker LH or subwoofer LH.
					Press Phone/ End switch	0V	
C (L)*0	Crownd	Remote	lmaut	ON	Press SEEK UP switch	1.7V	Steering wheel au-
6 (L)*2	Ground	control A	Input	ON	Press VOL UP switch	3.3V	function
					Except for above	5.0V	
7 (LG)	Ground	ACC signal	Input	ON	Ignition switch ACC or ON	Battery voltage	System does not work properly.
11 (G)	12 (SB)	Audio sound signal front RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from front door speaker RH or tweeter RH.

	ninal color)	Itom	Signal		Condition	Reference value	Example of symp-
+	-	Item	input/ output	Ignition switch	Operation	(Approx.)	tom
13 (LG)	14 (GR)	Audio sound signal rear RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from rear door speaker RH or subwoofer RH.
15 (B)*2	-	Remote control ground	Input	_	_	_	Steering wheel au- dio controls do not function
					Press Phone/ Send switch	0V	
16 (P)*2	Ground	Remote	Input	ON	Press SEEK DOWN switch	1.7V	Steering wheel au-
.0 (1) 2	Cround	control B	mpat	0.11	Press VOL DOWN switch	3.3V	function
					Except for above	5.0V	
18 (SB)	Ground	Vehicle speed signal (8–pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 6 4 2 0 2 0 ms PKIC0643E	Speed sensitive volume is inoperative.
19 (BR)	Ground	Battery pow- er	Input	_	_	Battery voltage	Subwoofer will not work properly.
21 (B)*2	Ground	EQ selection	_	ON	-	0V (with mid level) 12V (with premium)	Wrong EQ will cause sub woofer to be inoperative
22*1	_	Shield	_	_	-	_	_
26 (R)*1	24 (G)	Audio sig- nal sub- woofer	Input	_	-	Audio signal	Subwoofer will not work properly.
28 (BR)*1	Ground	Subwoofer amp. ON signal	Output	ON	_	12V	Subwoofer will not work properly.
27 (O)*2	-	Bluetooth ON	Output	ON	Audio unit sends power signal to Bluetooth con- trol unit	-	Mute inoperative
31 (LG)*2	33 (V)*2	Audio out	Output	ACC/ ON	Audio unit re- ceives audio signal from Bluetooth con- trol unit	(V) 1 0 -1 + 2ms SKIB3609E	Bluetooth can not be heard.
35*2	_	Shield	_	_	_	_	_

< SERVICE INFORMATION >

	minal e color)	Item	Signal input/		Condition	Reference value	Example of symp-
+	_	itelli	output	Ignition switch	Operation	(Approx.)	tom
42 (R)	41 (G)	Audio left channel sound signal from satel- lite radio tuner	Input	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from sat- ellite radio tuner left channel.
44 (B)	43 (W)	Audio right channel sound signal from satel- lite radio tuner	Input	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from satellite radio tuner right channel.
45	_	Shield ground (au- dio signal)	-	_	-	0V	_
46	_	Shield ground (da- ta)	_	_	_	0V	-
48 (B)	Ground	Satellite ra- dio tuner re- quest to audio unit	Input	ON	Turn audio unit ON	5V	Satellite radio tun- er does not oper- ate properly.
49 (L)	Ground	Audio RX	Input	ON	Operate audio volume	(V) 6 4 2 0 • 5ms SKJA4403E	Satellite radio tun- er audio informa- tion does not display properly.
50 (Y)	Ground	Audio TX	Output	ON	Operate audio volume	(V) 6 4 2 0 → 2ms SKIA4402E	Satellite radio tun- er audio informa- tion does not display properly.

^{*1:} With premium system

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^{*2:} With Bluetooth

Terminal and Reference Value for Subwoofer (Premium Audio System)

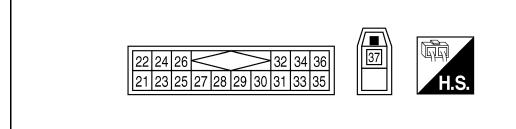
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	ninal color)	Item	Signal input/		Condition	Reference value	
+	_	item	output	Ignition switch	Operation	(Approx.)	
1 (R)	Ground	Battery power supply	Intput	OFF	-	Battery voltage	
2 (O/L)	6 (W/L)	Audio signal subwoof- er	Intput	ON	Receive audio signal	(V) 1 0 -1 + 2ms SKIB3609E	
3 (B)	Ground	Ground	_	ON	_	0 V	
4 (LG)	Ground	Subwoofer amp. ON signal	Input	ON	_	Battery voltage	
5	_	Shield	-	_	_	-	

Satellite Radio Tuner Harness Connector Terminal Layout

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LKIA0735E



Terminal and Reference Value for Satellite Radio Tuner

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	ninal color)	14	Signal		Condition	Voltage
+	_	Item	input/ output	Ignition switch	Operation	(Approx.)
22 (R)	21 (G)	Audio signal LH	Output	ON	Receive audio signal.	(V) 1 0 -1 + 2ms SKIB3609E
24 (B)	23 (W)	Audio signal RH	Output	ON	Receive audio signal.	(V) 1 0 -1 + 2ms SKIB3609E
25	_	Shield	_	_	-	-
26	_	Data ground		ON		0V
28 (B)	Ground	REQ1 (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	(V) 15 10 + + 20ms SKIB3825E
29 (R/L)	Ground	Communication signal (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	(V) 15 10 5 0 + 20ms SKIB3824E
30 (R/W)	Ground	Communication signal (AUDIO-SAT)	Input	ON	Set to the satellite radio mode	(V) 15 10 5 0 *****************************
32 (R)	Ground	Battery power supply		OFF	_	Battery voltage
36 (L)		ACC power supply	Input	ACC		
37	-	Antenna signal		-	_	-

Trouble Diagnosis

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NOTE:

The subwoofer (premium system) may be inoperative if the audio unit harness connectors have not been connected in the proper sequence (when the battery remains connected). The proper sequence is to connect M44

< SERVICE INFORMATION >

and M45 first followed by M43 last. If the subwoofer is inoperative, be sure to check this condition. Refer to AV-35, "Sound Is Not Heard from Subwoofer (Premium System)".

- The majority of the audio malfunctions are the result of outside causes (damaged CD, electromagnetic interference, etc.). Check the symptoms below to diagnose the malfunction.
- The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning.
 Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and then determine the cause.

Symptom	Check item
Audio system does not work properly.	 Audio unit power supply circuit. Refer to <u>AV-23, "Power Supply Circuit Inspection"</u>. Audio unit. Refer to "Trouble Diagnosis".
No sound can be heard from all speakers.	Audio unit. Refer to "Trouble Diagnosis" .
No sound can be heard from one or several speakers.	 Open or short in audio signal circuit between audio unit and front speaker. Refer to AV-30, "Sound Is Not Heard from Front Door Speaker (Base System)" or AV-32, "Sound Is Not Heard from Front Door Speaker or Tweeter (Mid Level and Premium System)" Front speaker. Refer to AV-30, "Sound Is Not Heard from Front Door Speaker (Base System)" or AV-32, "Sound Is Not Heard from Front Door Speaker or Tweeter (Mid Level and Premium System)" Open or short in audio signal circuit between audio unit and rear speaker. Refer to AV-31, "Sound Is Not Heard from Rear Door Speaker (Base System)" or AV-33, "Sound Is Not Heard from Rear Door Speaker (Mid Level and Premium System)" Rear speaker. Refer to AV-31, "Sound Is Not Heard from Rear Door Speaker (Base System)" or AV-33, "Sound Is Not Heard from Rear Door Speaker (Mid Level and Premium System)" Tweeter (mid level and premium system) AV-32, "Sound Is Not Heard from Front Door Speaker or Tweeter (Mid Level and Premium System)" Tweeter (Mid Level and Premium System) Speaker (Mid Level and Premium System)" or AV-33, "Sound Is Not Heard from Rear Door Speaker (Mid Level and Premium System)" Subwoofer (premium system). Refer to AV-35, "Sound Is Not Heard from Subwoofer (Premium System)" Audio unit. Refer to AV-23, "Power Supply Circuit Inspection"
No sound can be heard from radio or noise is heard.	 Antenna feeder. Refer to <u>AV-42</u>. Antenna. Refer to <u>AV-42</u>. Audio unit. Refer to <u>AV-23</u>, "<u>Power Supply Circuit Inspection</u>".

NOTE:

Noise resulting 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 that reflect off of mountains or buildings.

Noise Inspection

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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
	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	Ignition components
Occurs only when engine is ON.	A whistling noise occurs while the engine speed is high. A booming noise occurs while the engine is running and the lighting switch is ON.	Generator
Noise only occurs when various	A cracking or snapping sound occurs with the operation of various switches.	Relay malfunction, radio malfunction
electrical components are operating.	The noise occurs when various motors are operating.	Motor case ground Motor
The noise occurs constantly, not	Rear defogger coil malfunction Open circuit in printed heater	
A cracking or snapping sound occit is vibrating excessively.	urs while the vehicle is being driven, especially when	 Ground wire of body parts. Ground due to improper part installation Wiring connections or a short circuit

Power Supply Circuit Inspection

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1. CHECK FUSE

Check that the following fuses of the subwoofer (premium system) and audio unit are not blown.

Unit	Terminals	Signal name	Fuse No.
Audio unit	19	Battery power	27
	7	Ignition switch ACC or ON	20
Subwoofer (with premium audio)	1	Ignition switch ACC or ON	27

OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of blown fuse before installing new fuse. Refer to \underline{PG} $\underline{3}$.

$2. {\sf AUDIO}$ UNIT POWER SUPPLY CIRCUIT CHECK

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

	Terminal No.					
Unit	(+)		()	OFF	ACC	ON
	Connector	Terminal	(-)			İ
Audio unit M43	MA3	19	Ground	Battery voltage	Battery voltage	Battery voltage
	IVI43	7	Ground	0V	Battery voltage	Battery voltage

H.S. DISCONNECT OFF

OK or NG

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OK >> With premium system, GO TO 3.

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

· Repair harness or connector.

$3. \mathrm{SUBWOOFER}$ (PREMIUM SYSTEM) POWER SUPPLY CIRCUIT CHECK

1. Disconnect subwoofer connector.

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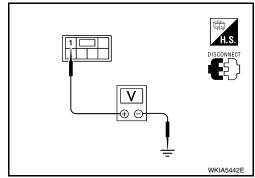
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Check voltage between subwoofer (premium system) and ground.

	Terminal No.					
Unit	Jnit (+)		()	OFF	ACC	ON
İ	Connector	Terminal	(-)			
Subwoof- er	B29	1	Ground	0V	Battery voltage	Battery voltage



OK or NG

OK >> GO TO 4.

NG

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

4. GROUND CIRCUIT CHECK

Check continuity between subwoofer (premium system) harness connector B29 terminal 3 and ground.

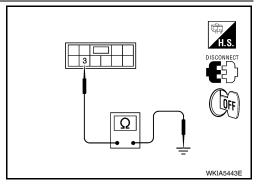
Continuity should exist.

OK or NG

OK >> Inspection End.

NG

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



Satellite Radio Tuner (Factory Installed) Power and Ground Supply Circuit Inspection

INFOID:0000000004306969

1. CHECK FUSES

Check that the following fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Satellite radio tuner (factory in-	32	Battery power	27
stalled)	36	Ignition switch ACC or ON	20

OK or NG

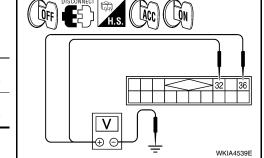
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of blown fuse before installing new fuse. Refer to \underline{PG} .

2. POWER SUPPLY CIRCUIT CHECK

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector B30.
- 3. Check voltage between the satellite radio tuner (factory installed) and ground.

	Terminal No.					
Unit	(+)		()	OFF	ACC	ON
	Connector	Terminal	(-)			
Satellite radio tuner (factory in- stalled)	B30	32	Ground	Battery voltage	Battery voltage	Battery voltage
	Б30	36	Ground	0V	Battery voltage	Battery voltage



OK or NG

OK >> GO TO 3.

< SERVICE INFORMATION >

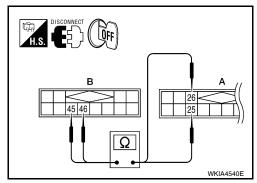
NG >> • Check connector housings for disconnected or loose terminals.

· Repair harness or connector.

3. GROUND CIRCUIT CHECK

- 1. Turn ignition switch OFF.
- 2. Inspect satellite radio tuner (factory installed) case ground.
- 3. Disconnect satellite radio tuner (factory installed) connector B30 (A) and audio unit connector M45 (B).
- Check continuity between satellite radio tuner (factory installed) and audio unit.

Satellite radio tuner		Audio	Continuity	
Connector	Terminal	Connector	Terminal	
A: B30	25	B: M45	45	Yes
A. B30	26	D. W43	46	165



OK or NG

OK >> Inspection End.

NG >> • Check conn

- >> Check connector housings for disconnected or loose terminals.
 - Repair harness, connector or satellite radio tuner (factory installed) case ground.

Satellite Radio Tuner (Factory Installed) Communication Circuit Inspection INFOID-00000004306970

1.CHECK HARNESS - 1

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector B30 and audio unit connector M45.
- Check continuity between satellite radio tuner (factory installed) harness connector B30 (A) terminal 28 and audio unit harness connector M45 (B) terminal 48

Continuity should exist.

4. Check continuity between satellite radio tuner (factory installed) harness connector B30 (A) terminal 28 and ground.

Continuity should not exist.

OK or NG

OK >> GO TO 2.

NG >> Repair harness or connector.

$\mathbf{2}.$ CHECK HARNESS - 2

 Check continuity between satellite radio tuner (factory installed) harness connector B30 (A) terminal 29 and audio unit harness connector M45 (B) terminal 49

Continuity should exist.

2. Check continuity between satellite radio tuner (factory installed) harness connector B30 (A) terminal 29 and ground.

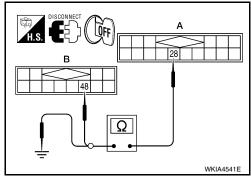
Continuity should not exist.

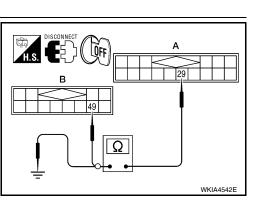
OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.

3.CHECK HARNESS - 3





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 Check continuity between satellite radio tuner (factory installed) harness connector B30 (A) terminal 30 and audio unit harness connector M45 (B) terminal 50

Continuity should exist.

2. Check continuity between satellite radio tuner (factory installed) harness connector B30 (A) terminal 30 and ground.

Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.

4. CHECK REQ1 SIGNAL

- 1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
- 2. Turn ignition switch to ACC
- Check signal between satellite radio tuner (factory installed) harness connector B30 terminal 28 and ground with CONSULT-III or oscilloscope.

28 - Ground : Refer to <u>AV-21, "Terminal</u> and <u>Reference Value for Satellite Radio Tuner"</u>.

OK or NG

OK >> GO TO 5.

NG >> Replace audio unit. Refer to <u>AV-37, "Removal and Installation"</u>.

5. CHECK TXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector B30 terminal 29 and ground with CONSULT-III or oscilloscope.

29 - Ground : Refer to <u>AV-21, "Terminal</u> and <u>Reference Value for Satellite Radio Tuner"</u>.

OK or NG

OK >> GO TO 6.

NG >> Replace audio unit. Refer to <u>AV-37, "Removal and</u> Installation".

6.CHECK RXD SIGNAL

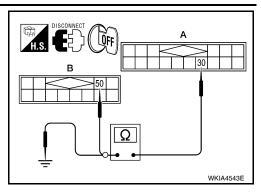
Check signal between satellite radio tuner (factory installed) harness connector B30 terminal 30 and ground with CONSULT-III or oscilloscope.

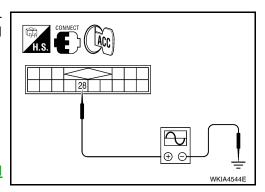
30 - Ground : Refer to <u>AV-21, "Terminal</u> and <u>Reference Value for Satellite Radio Tuner"</u>.

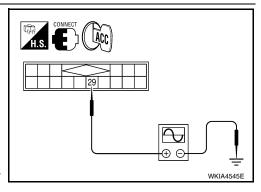
OK or NG

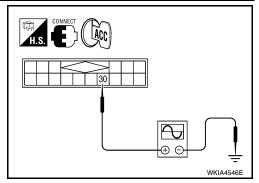
OK >> Replace satellite radio tuner. Refer to <u>AV-37, "Removal and Installation"</u>.

NG >> Replace audio unit. Refer to <u>AV-37, "Removal and</u> Installation".









Satellite Radio Tuner (Factory Installed) Left Channel Audio Signal Circuit Inspection

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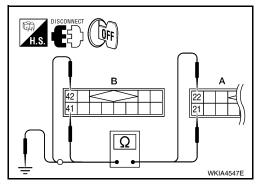
1. CHECK HARNESS

- Turn ignition switch OFF.
- Disconnect satellite radio tuner (factory installed) connector B30 (A) and audio unit connector M45 (B).
- Check continuity between satellite radio tuner (factory installed) and audio unit.

Satellite radio tuner		Audio	Continuity	
Connector	Terminal	Connector	Terminal	
A: B30	21	B: M45	41	Yes
A. B30	22	D. WH3	42	165

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

Sate	Continuity			
Connector	Terminal	_		
A: B30	21	Ground	No	
A. B30	22	Giodila	INO	



OK or NG

OK >> GO TO 2.

NG >> Repair harness or connector.

2.CHECK LEFT CHANNEL AUDIO SIGNAL

- Connect satellite radio tuner (factory installed) and audio unit.
- Turn ignition switch ON.
- Check signal between satellite radio tuner (factory installed) connector B30 terminals 21 and 22 with CONSULT-III or oscilloscope.

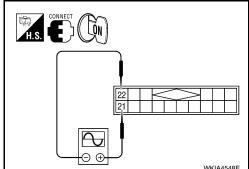
21 - 22

: Refer to AV-21, "Terminal and Reference Value for Satellite Radio Tuner".

OK or NG

OK >> Replace audio unit. Refer to AV-37, "Removal and Installation".

>> Replace satellite radio tuner. Refer to AV-37, "Removal NG and Installation".



Satellite Radio Tuner (Factory Installed) Right Channel Audio Signal Circuit Inspection INFOID:0000000004306972

1. CHECK HARNESS

- Turn ignition switch OFF.
- Disconnect satellite radio tuner (factory installed) connector B30 (A) and audio unit connector M45 (B). 2.
- Check continuity between satellite radio tuner (factory installed) and audio unit.

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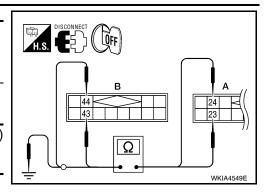
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Satellite radio tuner		Audio	Continuity	
Connector	Terminal	Connector	Terminal	
A: B30	23	B: M45	43	Yes
A. B30	24	B. W43	44	163

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

Sate	llite radio tuner		Continuity	
Connector	Terminal	_		
A: B30	23	Ground	No	
A. B30	24	Giouna		



OK or NG

OK >> GO TO 2.

NG >> Repair harness or connector.

2.CHECK RIGHT CHANNEL AUDIO SIGNAL

- 1. Connect satellite radio tuner (factory installed) and audio unit.
- 2. Turn ignition switch ON.
- Check signal between satellite radio tuner (factory installed) connector B30 terminals 23 and 24 with CONSULT-III or oscilloscope.

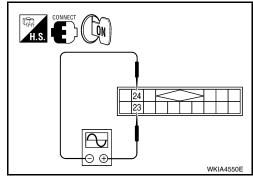
23 - 24

: Refer to AV-21, "Terminal and Reference Value for Satellite Radio Tuner".

OK or NG

OK >> Replace audio unit. Refer to <u>AV-37, "Removal and Installation"</u>.

NG >> Replace satellite radio tuner. Refer to AV-37, "Removal and Installation".



Steering Switch Check (With Bluetooth)

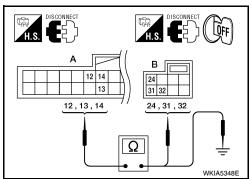
INFOID:0000000004306973

1. CHECK HARNESS

- 1. Turn ignition switch OFF.
- Disconnect Bluetooth control unit connector and spiral cable connector M30.
- 3. Check continuity between Bluetooth control unit (A) connector B121 terminals 12, 14, and 13 and spiral cable (B) connector M30 terminals 24, 31, and 32.

Terminals				
A			В	Continuity
Connector	Terminal	Connector	Terminal	
	12		24	
B121	13	M30	32	Yes
	14		31	

4. Check continuity between Bluetooth control unit and ground.



	Continuity			
Connector	Terminal	(–)		
2424	12			
B121	13	Ground	No	
	14			

OK or NG

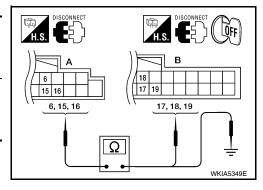
OK >> GO TO 3.

NG >> Repair harness.

2.CHECK HARNESS

- 1. Disconnect audio unit connector.
- 2. Check continuity between audio unit (A) connector M43 terminals 6, 15, and 16 and Bluetooth control unit (B) connector B121 terminals 17, 19, and 18.

(<i>A</i>	Continuity			
Connector	Terminal	Connector	Terminal	
	6		17	
M43	15	B121	19	Yes
	16		18	



OK or NG

OK >> GO TO 4.

NG >> Repair harness.

3. SPIRAL CABLE CHECK

- Disconnect spiral cable connector M102.
- 2. Check continuity between spiral cable terminals.

16 - 32 : Continuity should exist.
17 - 31 : Continuity should exist.
20 - 24 : Continuity should exist.

OK or NG

OK >> GO TO 4.

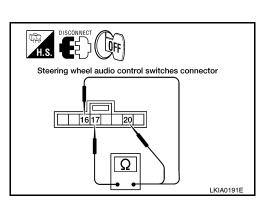
NG >> Replace spiral cable. Refer to <u>SRS-37</u>, "Removal and Installation".

Spiral cable connector Spiral cable connector 24 31 32 24 , 31 , 32 16 , 17 , 20 WKIA4424E

4. CHECK STEERING SWITCH RESISTANCE

Check resistance between spiral cable connector M102 terminals.

Terr	minal	Signal name	Condition	Resistance (Ω) (Approx.)
		Seek (down)	Depress Seek down switch.	165
16	16 17	Phone/Send	Depress Phone/Send switch.	0
		Volume (down)	Depress volume down switch.	487
		Seek (up)	Depress Seek up switch.	165
20	17	Phone/End	Depress Phone/End switch.	0
		Volume (up)	Depress volume up switch.	487



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OK >> Inspection End.

NG >> Replace steering switch. Refer to AV-37, "Removal and Installation".

Sound Is Not Heard from Front Door Speaker (Base System)

INFOID:0000000004306974

1. HARNESS CHECK

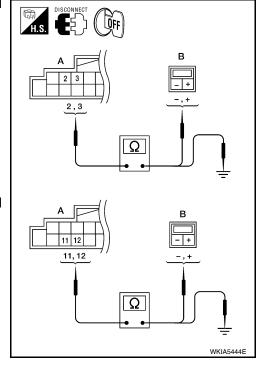
1. Disconnect audio unit connector and front door speaker connector (LH or RH).

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

	Tern			
	A	Continuity		
Connector	Terminal	Connector	Terminal	
	2	D12	+	
M43	3	DIZ	-	Yes
IVIAO	11	D112	+	165
	12	DIIZ	-	

3. Check continuity between audio unit connector M43 terminal and ground.

	Terminals				
	Continuity				
Connector	Terminal	_			
	2	Ground	No		
M43	3				
IVITO	11	Ground			
	12				



OK or NG

OK >> GO TO 2.

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

· Repair harness or connector.

2.FRONT SPEAKER SIGNAL CHECK

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

< SERVICE INFORMATION >

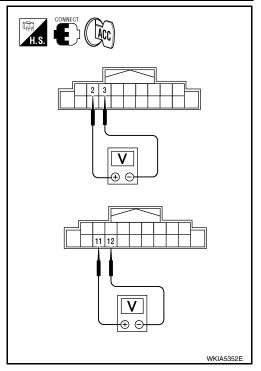
4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

	Term	ninals			
	(+)		(-)	Condi-	Reference
Con- nec- tor	Termi- nal	Con- nec- tor	Termi- nal	tion	signal
	2		3		
M43	11	M43	12	Receive audio signal	1 0 -1 1 ms SKIA0177E

OK or NG

OK >> Replace speaker. Refer to <u>AV-37</u>, "Removal and Installation" or <u>AV-37</u>, "Removal and Installation".

NG >> Replace audio unit. Refer to <u>AV-37, "Removal and Installation"</u>.



Sound Is Not Heard from Rear Door Speaker (Base System)

INFOID:0000000004306975

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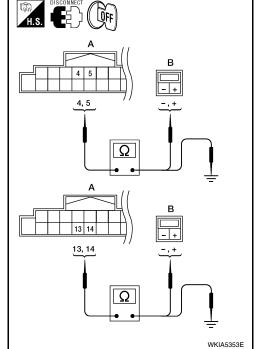
1. HARNESS CHECK

- 1. Disconnect audio unit connector and rear door speaker connector.
- 2. Check continuity between audio unit (A) connector terminal and rear door speaker (B) connector terminal.

	Tern			
	A		В	Continuity
Connector	Terminal	Connector	Terminal	
	5	D207	-	
M43	4	D201	+	Yes
IVIAO	14	D307	-	165
	13	D307	+	

3. Check continuity between audio unit harness connector terminal and ground.

	Tarminala				
	Terminals				
	Continuity				
Connector	Terminal				
	5	Ground	No		
M43	4				
WHO	14				
	13				



OK or NG

OK >> GO TO 2.

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

Repair harness or connector.

2. REAR SPEAKER SIGNAL CHECK

< SERVICE INFORMATION >

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

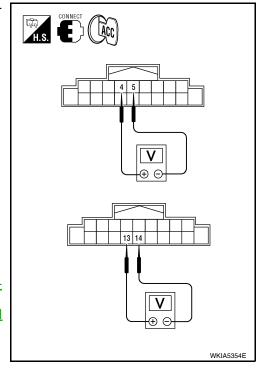
	Terminals					
(-	+)	(-)	Condi-		
Con- nector	Termi- nal	Con- nector	Termi- nal	tion	signal	
	4		5			
M43	13	M43	14	Receive audio signal	(V) 1 0 -1 1 ms	

OK or NG

NG

OK >> Replace speaker. Refer to AV-37, "Removal and Installation".

>> Replace audio unit. Refer to <u>AV-37</u>, "Removal and Installation".



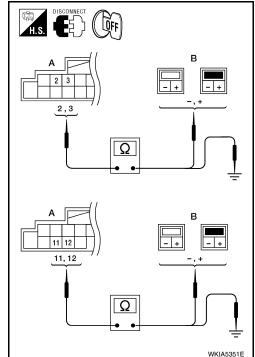
Sound Is Not Heard from Front Door Speaker or Tweeter (Mid Level and Premium System)

1. HARNESS CHECK

- 1. Disconnect audio unit connector and front door speaker and tweeter connector (LH or RH).
- 2. Check continuity between audio unit harness connector terminal and front door speaker and tweeter harness connector terminal.

	Terminals					
Audi	o unit.	Speaker	Continuity			
Connector	Terminal	Connector	Terminal			
	2	M46	+			
	3	10140	-			
	11	M47	+			
M43	12	101-7	-	Yes		
IVI43	2	D12	+	165		
	3	D12	-			
	11	D112	+			
	12	D112	-			

3. Check continuity between audio unit harness connector terminal and ground.



	Terminals					
	Continuity					
Connector	Terminal	_				
	2		No			
M43	3	Ground				
WHO	11					
	12					

OK or NG

OK >> GO TO 2.

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

· Repair harness or connector.

$2.\mathsf{FRONT}$ SPEAKER SIGNAL CHECK

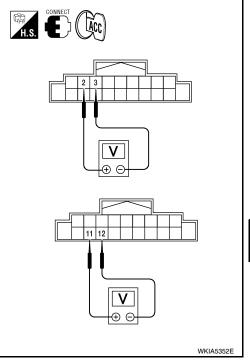
- 1. Connect audio unit connector, front door speaker connector and tweeter connector.
- Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio unit connector terminals with CONSULT-III or oscilloscope.

	Terminals				
(-	+)	(-)	Condi-	Reference
Con- nector	Termi- nal	Con- nector	Termi- nal	tion	signal
	2		3		
M51	11	M51	12	Receive audio signal	(V) 1 0 -1 1 ms

OK or NG

OK >> Replace front speaker. Refer to <u>AV-37, "Removal and Installation"</u>.

NG >> Replace audio unit. Refer to <u>AV-37, "Removal and Installation"</u>.



Sound Is Not Heard from Rear Door Speaker (Mid Level and Premium System)

INFOID:0000000004306977

1. HARNESS CHECK

1. Disconnect audio unit connector and rear door speaker connector.

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AV-33

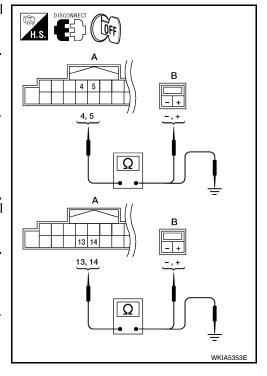
< SERVICE INFORMATION >

2. Check continuity between audio unit harness connector terminal and speaker harness connector terminal.

Audi	Continuity			
Connector	Terminal	Connector	Terminal	
	4	D207	+	
M43	5	DZUI	-	Yes
IVIAS	13	D307	+	les
	14	D307	-	

3. Check continuity between audio unit harness connector terminal and ground.

-	To continue to			
	Terminals			
	Audio unit		Continuity	
Connector	Terminal			
	4			
M43	5	Ground	No	
IVI40	13	Ground		
	14			



OK or NG

NG

OK >> GO TO 2.

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

Repair harness or connector.

$2.\mathsf{REAR}$ SPEAKER SIGNAL CHECK

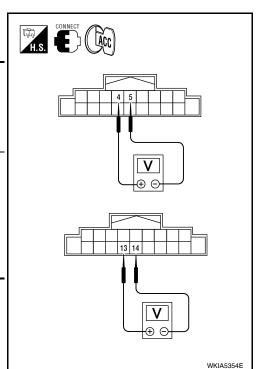
- 1. Connect audio unit connector and rear door speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio unit harness connector terminals with CONSULT-III or oscilloscope.

Terminals				Condi-	Reference	
(+)		(-)				
Con- nec- tor	Termi- nal	Con- nec- tor	Termi- nal	tion	signal	
	5		4			
M43	14	M43	13	Re- ceive audio signal	(V) 1 0 -1 1 ms	

OK or NG

OK >> Replace speaker. Refer to <u>AV-37, "Removal and Installation"</u>.

NG >> Replace audio unit. Refer to <u>AV-37, "Removal and Installation"</u>.



Sound Is Not Heard from Subwoofer (Premium System)

INFOID:0000000004306978

1.CHECK FUSE

Check that the following fuse is not blown.

Unit	Terminals	Signal name	Fuse No.
Subwoofer 1		Battery power	27

OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of blown fuse before installing new fuse. Refer to PG-

2.eq setting check

- Ensure that subwoofer amp. connector B29 and audio unit harness connectors M43, M44 and M45 are securely connected.
- Turn the ignition switch to the ACC position.
- 3. Press the "AUDIO", "AUX", and "TUNE DOWN" switches simultaneously, the current EQ Setting will be displayed.

Is "Woofer On" displayed?

>> GO TO 3. YES

NO >> Disconnect all audio unit harness connectors and wait for 2 minutes in order to reset the audio unit. Reconnect audio unit connectors M44 and M45 first followed by M43 last. Repeat Steps 1 through 3 to confirm that "Woofer On" is now displayed.

3. POWER SUPPLY CIRCUIT CHECK

- Turn ignition switch OFF. 1.
- 2. Disconnect subwoofer connector.
- Check voltage between the subwoofer and ground.

	٦	Terminal No.				
Unit	(+)		()	OFF	ACC	ON
	Connector	Terminal	(-)			
Subwoof- er	B29	1	Ground	Battery voltage	Battery voltage	Battery voltage

OK or NG

OK >> GO TO 4.

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

Repair harness or connector.

4. GROUND CIRCUIT CHECK

- Turn ignition switch OFF.
- Check continuity between subwoofer harness connector B29 terminal 3 and ground.

Continuity should exist.

OK or NG

NG

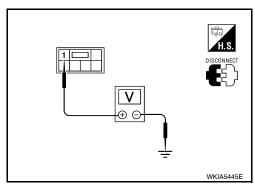
OK >> GO TO 5.

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

Repair harness or connector.

${f 5}$.CHECK SUBWOOFER ON SIGNAL

Turn ignition switch to ACC.



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< SERVICE INFORMATION >

2. Operate system and check voltage between subwoofer harness connector B29 terminal 4 and ground.

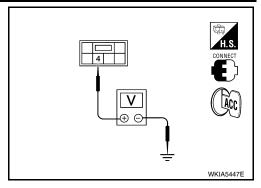
Voltage : Approx. 11.3V

OK or NG

OK >> GO TO 6.

NG >> • Check

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



6. HARNESS CHECK

- 1. Turn ignition switch OFF.
- 2. Disconnect audio unit connector and subwoofer connectors.
- 3. Check continuity between audio unit harness connector terminal and subwoofer harness connector terminal.

Audi	o unit	Subwoofer		Continuity	
Connector	Terminal	Connector	Terminal		
M44	24	B29	6	Yes	
17144	26	529	2	165	

4. Check continuity between audio unit harness connector terminal and ground.

H.S. CET OFF	
B 24 26 2 6 6 6	
24,26	
WKIA5	- 448E

	Audio unit		Continuity	
Connector	Terminal	_		
M44	24	Ground	No	
17144	26	Ground		

OK or NG

NG

OK >> GO TO 7.

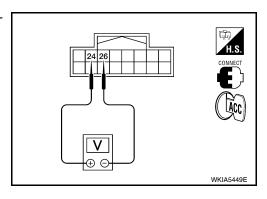
>> • Check connector housings for disconnected or loose terminals.

• Repair harness or connector.

7. SUBWOOFER SIGNAL CHECK

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

	Terminals						
(+)	(-)	Condi-	Reference		
Con- nec- tor	Ter- minal	Con- nec- tor	Ter- minal	tion	signal		
M44	26	M44	24	Receive audio signal	(V) 1 0 -1 1 ms		



AUDIO

< SERVICE INFORMATION >

OK or NG

OK >> Replace subwoofer. Refer to AV-37, "Removal and Installation".

NG >> Replace audio unit. Refer to AV-37, "Removal and Installation".

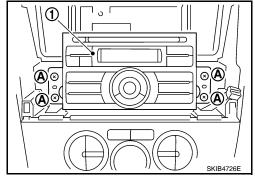
Removal and Installation

INFOID:0000000004306979

AUDIO UNIT

Removal

- 1. Remove cluster lid C. Refer to IP-11.
- 2. Remove the audio unit screws (A), disconnect the connectors and remove the audio unit (1).
- 3. Remove the audio unit bracket.



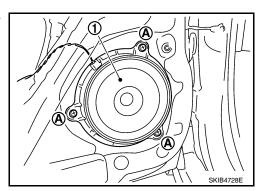
Installation

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

Removal

- 1. Remove the front door finisher. Refer to El-34.
- 2. Remove the front door speaker screws (A), disconnect the connector and remove the front door speaker (1).



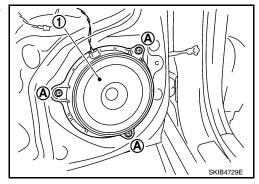
Installation

Installation is in the reverse order of removal.

REAR DOOR SPEAKER

Removal

- 1. Remove the rear door finisher. Refer to <u>EI-34</u>.
- 2. Remove the rear door finisher screws (A), disconnect the connector and remove the rear door speaker (1).



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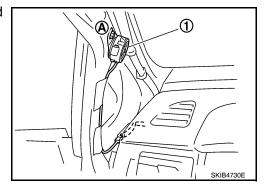
Installation

Installation is in the reverse order of removal.

TWEETER

Removal

- 1. Remove the front pillar garnish. Refer to El-39.
- Remove the tweeter screw (A), disconnect the connector and remove the tweeter (1).

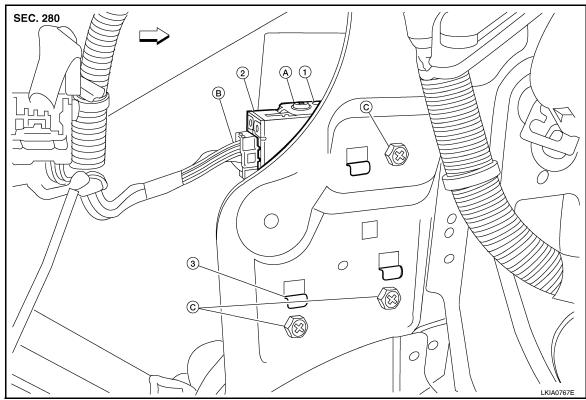


Installation

Installation is in the reverse order of removal.

SATELLITE RADIO TUNER

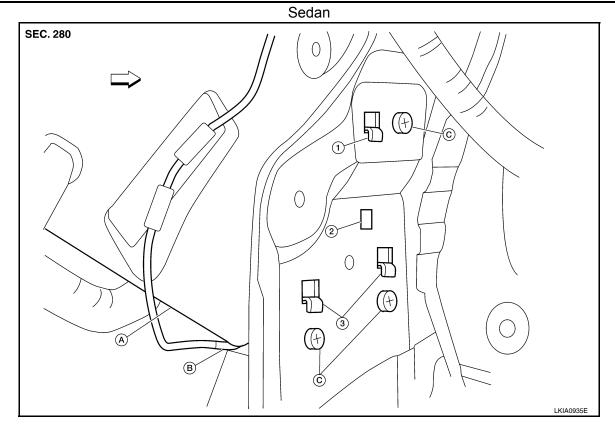
Hatchback



- Bracket (upper)
- Screws
- Front

- Satellite radio tuner
- Connector

- Bracket (lower)
- C. Satellite radio tuner bolts

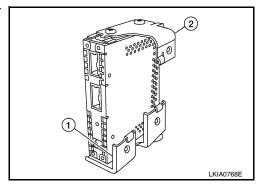


- 1. Bracket (upper)
- A. Satellite radio tuner connector
- 2. Satellite radio tuner
- B. Satellite radio tuner feeder harness C. connector
- 3. Bracket (lower)
 - C. Satellite radio tuner bolts

 \Rightarrow Front

Removal

- For hatchback, remove the luggage side lower finisher (LH) (hatchback only). Refer to <u>EI-53</u>.
- 2. For sedan, remove the trunk side finisher (LH). Refer to EI-55. "Removal and Installation".
- 3. For hatchback remove the subwoofer. Refer to AV-37, "Removal and Installation".
- 4. Remove the satellite radio tuner bolts.
- 5. Disconnect the connectors and remove the satellite radio tuner.
- 6. If necessary, remove the upper bracket (2) and the lower bracket (1).



Installation

Installation is in the reverse order of removal.

SATELLITE RADIO ANTENNA

Removal

1. Lower the headlining. Refer to <u>EI-47</u>.

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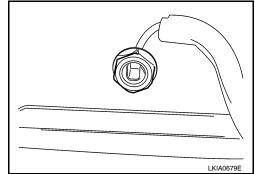
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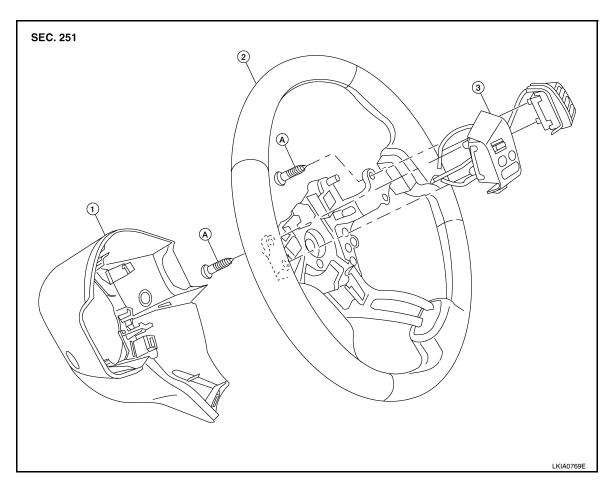
- 2. Disconnect the satellite radio antenna connectors.
- 3. Detach the satellite radio antenna feeder harness clips.
- 4. Remove the satellite radio antenna nut and remove the satellite radio antenna from the roof.



Installation

Installation is in the reverse order of removal.

STEERING WHEEL AUDIO CONTROL SWITCHES



- 1. Steering wheel finisher cover
- 2. Steering wheel

3. Steering wheel audio control switches

A. Screws

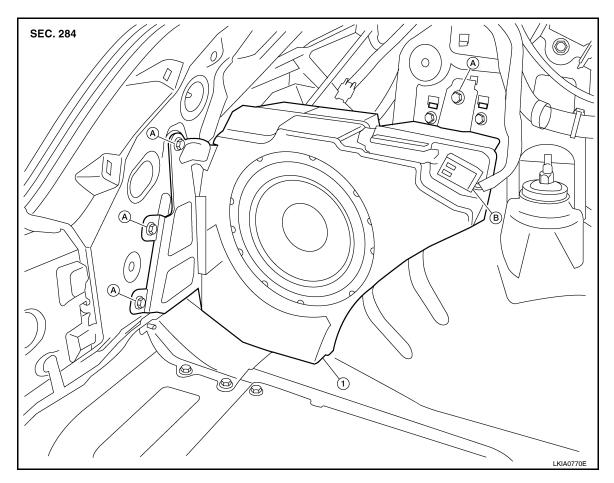
Removal

- Remove the steering wheel. Refer to <u>PS-7</u>, "Removal and Installation".
- 2. Remove the steering wheel finisher cover.
- 3. Remove the screws and the steering wheel audio control switches.

Installation

Installation is in the reverse order of removal.

SUBWOOFER



1. Subwoofer A. Subwoofer bolts B. Connector

Removal

- 1. Remove the luggage side lower finisher (LH). Refer to <u>EI-53</u>.
- Remove the subwoofer bolts.
- 3. Disconnect the connector and remove the subwoofer.

Installation

Installation is in the reverse order of removal.

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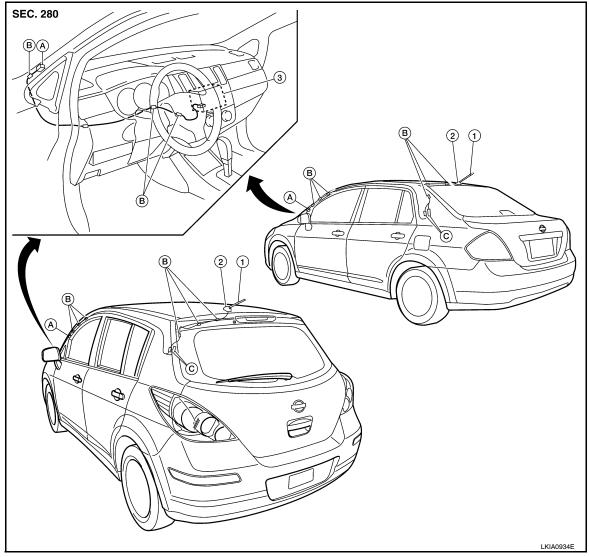
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AUDIO ANTENNA

Location of Antenna

INFOID:0000000004306980



1. Roof antenna

- 2. Roof antenna base
- A. Audio antenna harness connector
- B. Harness clips

- 3. Audio unit
- C. Roof antenna harness connectors

Removal and Installation of Roof Antenna

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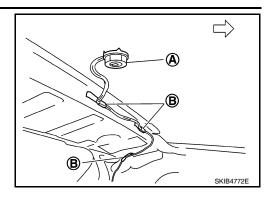
REMOVAL

- 1. For hatchback, remove the luggage side upper finisher (LH). Refer to <u>EI-53</u>.
- For sedan, remove the rear pillar finisher. Refer to EI-51, "Removal and Installation Sedan".
- 3. Remove rear assist grip (LH). Refer to <u>EI-47</u>.
- 4. Remove three clips of headlining (rear side). Pull down headlining (rear side) and obtain space for work between vehicle and headlining.
- 5. Disconnect the roof antenna harness connectors.
- 6. Remove nut (A) and clips (B).

AUDIO ANTENNA

< SERVICE INFORMATION >

• : Vehicle front



7. Remove the roof antenna.

INSTALLATION

Installation is in the reverse order of removal.

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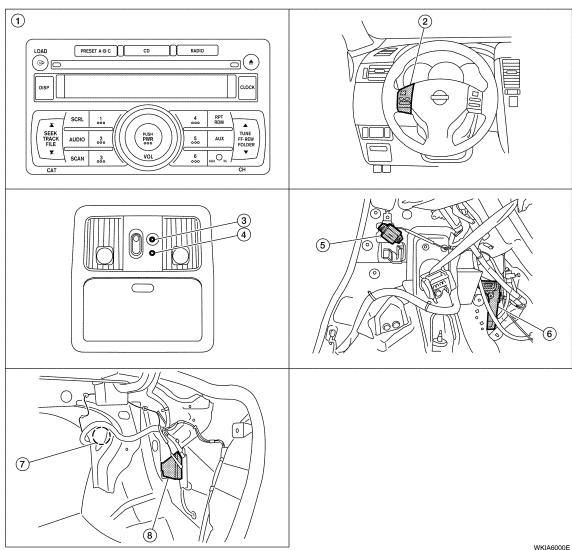
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Component Parts and Harness Connector Location

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- 1. Audio unit M43, M44, M45
- 4. Bluetooth ON indicator R15
- 7. Bluetooth antenna (sedan)
- 2. Steering wheel audio control switches
- 5. Bluetooth antenna (hatchback)
- 8. Bluetooth control unit B121, B122 (sedan) (view with trunk side finisher RH removed)
- B. Bluetooth microphone R15
- Bluetooth control unit B121, B122 (hatchback) [view with luggage side lower finisher (RH) removed]

System Description

INFOID:0000000004306983

BLUETOOTH® HANDS-FREE PHONE SYSTEM

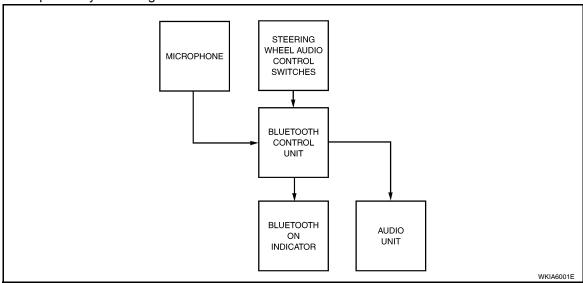
Refer to the Owner's Manual for Bluetooth telephone system operating instructions. **NOTE:**

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

Bluetooth telephone system allows users who have a Bluetooth cellular telephone to make a wireless connection between their cellular telephone and the Bluetooth control unit. Hands-free cellular telephone calls can be sent and received. Personal memos can be created using the NISSAN Voice Recognition system. Some Blue-

tooth 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 Telephone System Diagram



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. During this time the Bluetooth ON indicator will flash until initialization is complete. If a phone is present in the vehicle and paired with the Bluetooth control unit, NISSAN Voice Recognition will then become active and the Bluetooth ON indicator will remain on. Bluetooth telephone functions can be turned off using the NISSAN Voice Recognition system. For Bluetooth control unit location, refer to AV-44, "Component Parts and Harness Connector Location".

Steering Wheel Audio Control Switches

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

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

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

Volume Switch

Call volume can be adjusted using the audio unit volume switch.

Bluetooth Microphone

The Bluetooth microphone is located in the roof console assembly. The Bluetooth microphone sends a signal to the Bluetooth control unit. The Bluetooth microphone can be actively tested during self-diagnosis. For Bluetooth microphone location, refer to AV-44, "Component Parts and Harness Connector Location".

Bluetooth ON Indicator

The Bluetooth ON indicator is located in the overhead console. The indicator will flash during power up while the Bluetooth control unit is initializing. This process may take up to 10 seconds. If a phone is present in the vehicle and paired with the Bluetooth control unit, the indicator will remain on to indicate that the system is ready for voice commands. The indicator flashes during self-diagnosis. For Bluetooth ON indicator location, refer to AV-44, "Component Parts and Harness Connector Location".

Audio Unit

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

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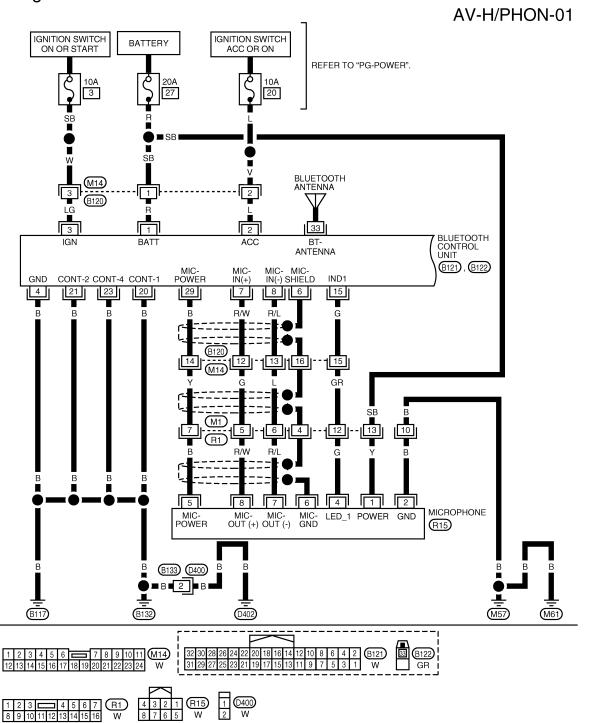
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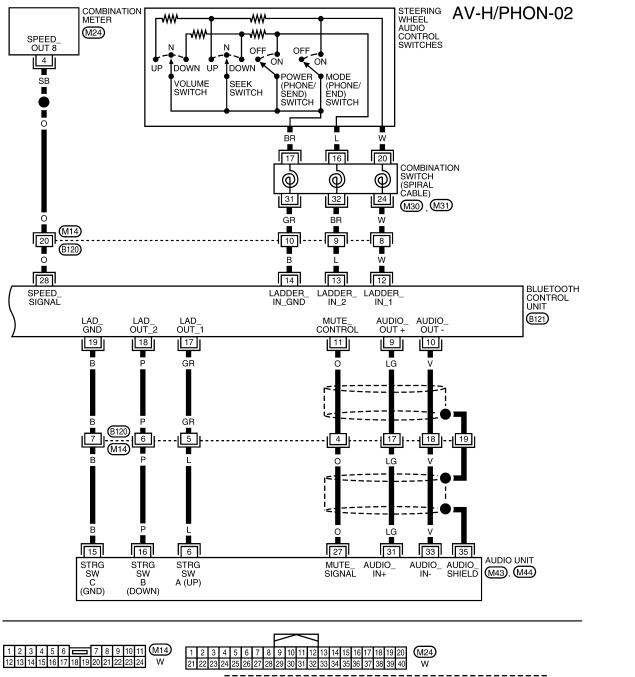
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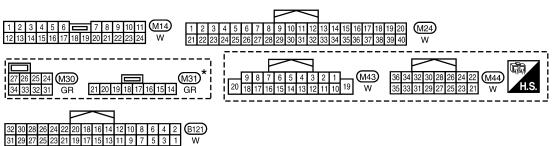
Wiring Diagram - H/PHON -

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WKWA4987E





 $\hbox{$\star$: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION. }$

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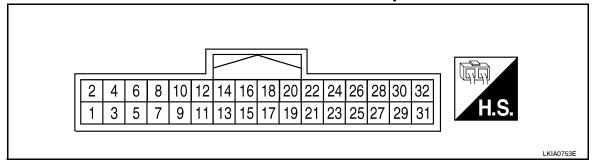
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Bluetooth Control Unit Harness Connector Terminal Layout

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Terminal and Reference Value for Bluetooth Control Unit

INFOID:0000000004306986

Terminal (Wire color)		Item	Signal		Condition	Reference value	Evample of symptom
+	-	item	input/ output	Ignition switch	Operation	(Approx.)	Example of symptom
1 (R)	Ground	Battery pow- er	Input	_	-	Battery voltage	System does not work properly.
2 (L)	Ground	ACC power	Input	ACC/ ON	_	Battery voltage	System does not work properly.
3 (LG)	Ground	IGN power	Input	ON/ START	_	Battery voltage	System does not work properly.
4 (B)	-	Ground	_	_	_	_	_
6	_	Shield	_	_	_	-	_
7 (R/W)	8 (R/L)	Mic-in signal	Input	-	-	-	Bluetooth Micro- phone inoperative.
9 (LG)	10 (V)	Audio out	Output	ACC/ ON	Bluetooth control unit sends audio signal	(V) 1 0 -1 + 2ms SKIB3609E	Audio can not be heard.
11(O)	_	Mute	Output	-	_	5V	Mute inoperative.
					Press MODE switch	0V	
12 (W)	Ground	round Remote control switch 1	Input ACC/ ON		Press SEEK UP switch	0.75V	Steering wheel audio control switches do
				ON	Press VOL UP switch	2V	not function.
					Except for above	5V	
					Press POWER switch	0V	
13 (L)	Ground	Ground Remote control switch 2	control Input	out ACC/ ON	Press SEEK DOWN switch	0.75V	Steering wheel audio control switches do
					Press VOL DOWN switch	2V	not function.
					Except for above	5V	
14 (B)	-	Remote control ground	Input	-	-	-	Steering wheel audio control switches do not function.

< SERVICE INFORMATION >

	minal e color)	Item	Signal input/		Condition	Reference value	Example of symptom	
+	_	ileiii	output	Ignition switch	Operation	(Approx.)	, , , , , , , , , , , , , , , , , , , ,	
15 (G)	Ground	Bluetooth ON indicator LED	Output	_	Bluetooth control unit initialized and paired with phone	Battery voltage	Bluetooth ON indicator inoperative.	
					Press Phone/End switch	0V		
17 (GR)	Ground	Audio unit switch 1	Output	ACC/ ON	Press SEEK UP switch	0.75V	Steering wheel audio controls do not func-	
		SWILCIT		ON	Press VOL UP switch	2V	tion.	
					Except for above	5V	-	
					Press Phone/ Send switch	0V		
18 (P)	Ground	und Audio unit switch 2 Output ACC/ON Press DOW	Control DOWN SWILCH			0.75V	Steering wheel audio controls do not function.	
						2V		
				5V				
19 (B)	Ground	Audio unit switch ground	Output	_	-	-	Steering wheel audio controls do not function.	
20 (B)	_	Cont-1	_	_	_	-	_	
21 (B)	=	Cont-2	-	_	_	_	_	
23 (B)	I	Cont-4	_	_	_	-	_	
28 (O)	Ground	Vehicle speed signal (8-pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	(V) 6 4 2 0 20 ms PKICO643E	Speed sensitive volume is inoperative.	
29 (B)	Ground	Bluetooth Microphone power	Output	_	-	5V	Bluetooth Micro- phone inoperative.	
33	_	Bluetooth antenna sig- nal	Input	_	_	-	-	

Bluetooth Control Unit Self-Diagnosis Function

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

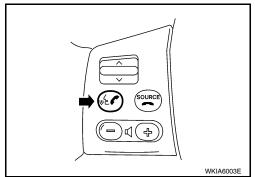
BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

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

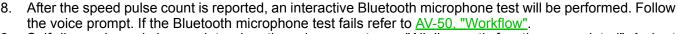
SELF-DIAGNOSIS MODE

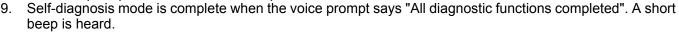
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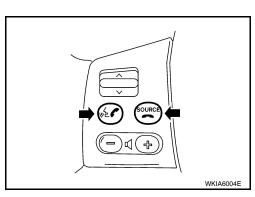
- 1. Turn ignition switch to ACC or ON.
- Wait for the Bluetooth system to complete initialization and the Bluetooth ON indicator to stop flashing. This may take up to 10 seconds.
- Press and hold the steering wheel audio control switch SEND button for at least 5 seconds. The Bluetooth system will begin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



- 4. While the prompt is playing, momentarily press both the steering wheel audio control switches SEND and END buttons simultaneously. The Bluetooth system will sound a 5 second beep.
- While the beep is sounding, momentarily press both the steering wheel audio control switches SEND and END buttons simultaneously again.
- The Bluetooth system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician and the Bluetooth ON indicator will flash. Refer to <u>AV-50</u>. "Workflow".
- 7. If there are no failure records to report, the speed pulse count will be reported next.







Workflow (INFOID:000000004306988

Flashing Pattern (Bluetooth ON indicator)	Failure Message	Action
1	"Internal failure"	Replace Bluetooth control unit. Refer to AV-55. "Removal and Installation".
2	"Bluetooth antenna open"	Inspect harness connection.
3	"Bluetooth antenna shorted"	Replace Bluetooth antenna. Refer to AV-55, "Removal and Installation".
4	"Phone/Send for the Hands Free Phone System is stuck"	Check steering wheel audio control switches. Refer to AV-28, "Steering Switch Check
5	"Phone/End for the Hands Free Phone System is stuck"	(With Bluetooth)".
-	"Bluetooth Microphone test" (failed interactive test)	Inspect harness between Bluetooth control unit and Bluetooth microphone. Replace Bluetooth microphone. Refer to AV-55, "Removal and Installation".

Power Supply and Ground Circuit Inspection for Bluetooth Control Unit

INFOID:0000000004306989

1. CHECK FUSES

Make sure the following fuses for the Bluetooth control unit are not blown.

< SERVICE INFORMATION >

	Terminals	Ignition Switch	Fuse No.
Connector	Terminal	ignition Switch	
	1	All positions	27
B121	2	ACC/ON	20
	3	ON/START	3

OK or NG

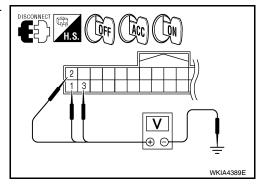
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to \underline{PG} - $\underline{3}$.

2. CHECK POWER SUPPLY CIRCUIT

- 1. Disconnect Bluetooth control unit connector B121.
- Check voltage between connector terminals and ground as follows.

	Terminals		Ignition switch position		
	(+)	(-)	OFF	ACC	ON
Connector	Connector Terminal		OFF	ACC	ON
	1		Battery voltage	Battery voltage	Battery voltage
B121	2	Ground	0V	Battery voltage	Battery voltage
	3		0V	0V	Battery voltage



OK or NG

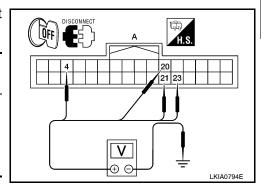
OK >> GO TO 3.

NG >> Check harness for open between Bluetooth control unit and fuse.

3. CHECK GROUND CIRCUITS

- Turn ignition switch OFF.
- Check continuity between the following Bluetooth control unit terminals and ground.

	Continuity					
Connector	Connector Terminal —					
	4		Yes			
B121	20	Ground				
DIZI	21	Giouna				
	23					



OK or NG

OK >> Inspection End.

NG >> Repair or replace harness.

Basic Inspection of Hands-Free Phone

1. CHECK INDICATOR OPERATION

- 1. Turn ignition switch ACC.
- Check that the indicator is blinking.

OK or NG

OK >> GO TO 2 NG >> GO TO 3

2. CHECK STEERING WHEEL AUDIO CONTROL SWITCH OPERATION

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< SERVICE INFORMATION >

- 1. Press the SEND switch.
- Check the indicator is blinking.

OK or NG

OK >> INSPECTION END

NG >> Check steering wheel audio control switch circuit.

3.CHECK BLUETOOTH INDICATOR OUTPUT VOLTAGE

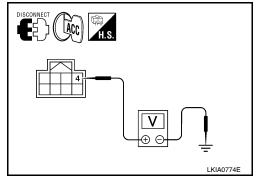
- 1. Disconnect Bluetooth microphone connector.
- 2. Check voltage between Bluetooth microphone connector R15 terminal 4 and ground.

4 - Ground : Approx. 12 V

OK or NO

OK >> Replace Bluetooth indicator. Refer to <u>AV-55</u>, "Removal and Installation".

NG >> GO TO 4.



4. CHECK BLUETOOTH INDICATOR CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect Bluetooth control unit connector B121 and Bluetooth microphone connector R15.
- Check continuity between Bluetooth control unit connector B121

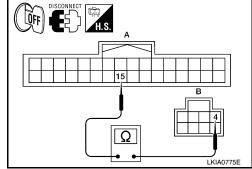
 (A) terminal 15 and Bluetooth microphone connector R15 (B) terminal 4.

15 - 4 : Continuity should exist

OK or NO

OK >> Replace Bluetooth control unit. Refer to <u>AV-55</u>, <u>"Removal and Installation"</u>.

NG >> Repair or replace harness.



Steering Wheel Audio Control Switch Does Not Operate

INFOID:0000000004306991

1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

- Turn ignition switch OFF.
- 2. Disconnect steering wheel audio control switch connector.
- 3. Check steering wheel audio control switch. Refer to AV-28, "Steering Switch Check (With Bluetooth)".

OK or NG

OK >> GO TO 2

NG >> Replace steering wheel audio control switch. AV-37, "Removal and Installation".

2. CHECK AUDIO UNIT

Turn ignition switch ON.

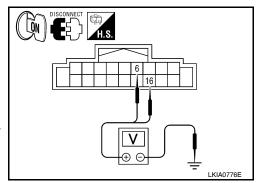
2. Check voltage between audio unit harness connector M43 terminals 6, 16 and ground.

6 - Ground : Approx. 5 V 16 - Ground : Approx. 5 V

OK or NG

OK >> Replace audio unit. Refer to <u>AV-37, "Removal and Installation"</u>.

NG >> GO TO 5.



< SERVICE INFORMATION >

$\overline{3}$.check bluetooth control unit

Turn ignition switch ON.

Check voltage between Bluetooth control unit harness connector B121 terminals 17, 18 and ground.

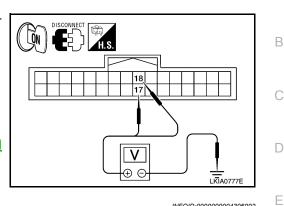
> 17 - Ground : Approx. 5 V 18 - Ground : Approx. 5 V

OK or NG

OK >> Repair or replace harness.

NG >> Replace Bluetooth control unit. AV-55, "Removal and

Installation".



INFOID:0000000004306992

Voice Activated Control Function Does Not Operate

NOTE:

Even under the normal condition, Bluetooth voice guidance may not occur when pressing steering wheel audio control switch.

BLUETOOTH VOICE GUIDANCE IS HEARD WHEN PRESSING STEERING WHEEL AUDIO CON-TROL SWITCH

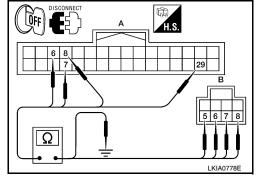
1.check harness between bluetooth control unit and bluetooth microphone

Turn ignition switch OFF.

2. Disconnect Bluetooth control unit connector and Bluetooth microphone connector.

3. Check continuity between Bluetooth control unit connector B121 (A) and Bluetooth microphone connector R15 (B).

	Continuity					
Connector	Connector Terminal Connector Terminal					
	6		6	- Yes		
A: B121	7	B: R15	8			
A. D121	8		7			
	29		5			



Check continuity between Bluetooth control unit harness connector B121 and ground.

	Continuity			
Connector	Continuity			
	7			
A: B121	8	Ground	No	
	29			

OK or NG

OK >> GO TO 2.

NG >> Repair harness or connector.

2. CHECK BLUETOOTH MICROPHONE POWER SUPPLY

Connect Bluetooth control unit connector and Bluetooth microphone connector.

Turn ignition switch ON.

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< SERVICE INFORMATION >

3. Check voltage between Bluetooth microphone connector R15 terminal 5 and ground.

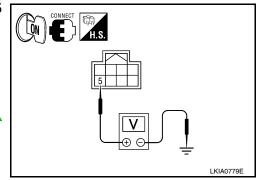
5 - Ground

: Approx. 5 V

YES or NO

YES >> GO TO 3.

NO >> Replace Bluetooth control unit. Refer to <u>AV-55</u>. "Removal and Installation".

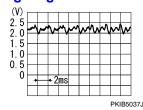


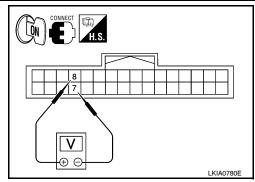
3. CHECK MIC. SIGNAL

1. Check signal between Bluetooth control unit harness connector B121 terminals 7 and 8.

When giving a voice

7 - 8:





OK or NG

OK >> Replace Bluetooth control unit. Refer to AV-55, "Removal and Installation".

NG >> Replace Bluetooth microphone. Refer to AV-55, "Removal and Installation".

BLUETOOTH VOICE GUIDANCE IS NOT HEARD WHEN PRESSING STEERING WHEEL AUDIO CONTROL SWITCH

1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH CIRCUIT

Refer to AV-28, "Steering Switch Check (With Bluetooth)".

OK or NG

OK >> GO TO 2.

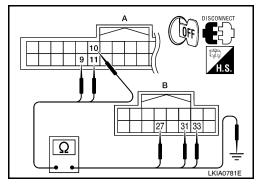
NG >> Replace applicable parts.

$2.\mathsf{CHECK}$ BLUETOOTH VOICE SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect Bluetooth control unit connector and audio unit connector.
- 3. Check continuity between Bluetooth control unit harness connector B121 (A) and audio unit harness connector M44 (B).

	Continuity			
Connector	Continuity			
	9		31	Yes
A: B121	10	B: M44	33	
	11	•	27	

4. Check continuity between Bluetooth control unit harness connector B121 (A) and ground.



< SERVICE INFORMATION >

	Continuity					
Connector	Connector Terminal —					
	9					
A: B121	10	Ground	No			
	11					

OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.

3. CHECK MUTE SIGNAL

- 1. Connect Bluetooth control unit connector and audio unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between Bluetooth control unit connector B121 terminal 11 and ground.

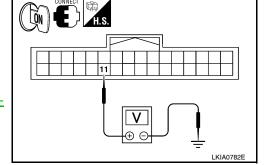
11 - Ground

: Approx. 5 V

OK or NG

OK >> GO TO 4.

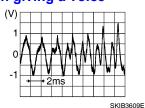
NG >> Replace audio unit. Refer to AV-37, "Removal and Installation".

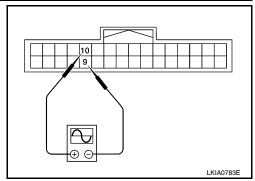


4. CHECK BLUETOOTH VOICE SIGNAL

1. Check signal between Bluetooth control unit harness connector B121 terminals 9 and 10.







9 - 10:

OK or NG

OK >> Replace audio unit. Refer to AV-37, "Removal and Installation".

NG >> Replace Bluetooth control unit. Refer to AV-55, "Removal and Installation".

Removal and Installation

BLUETOOTH CONTROL UNIT

INFOID:0000000004306993

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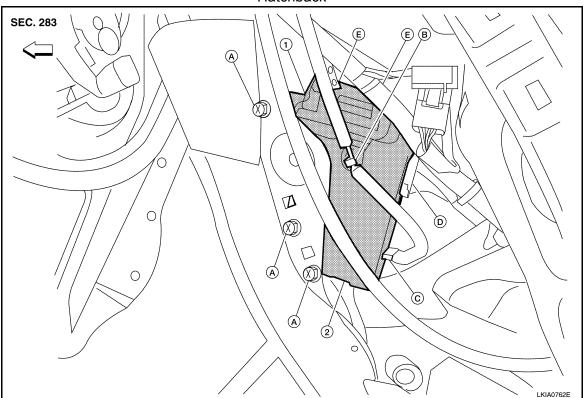
ΑV

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Ν

0

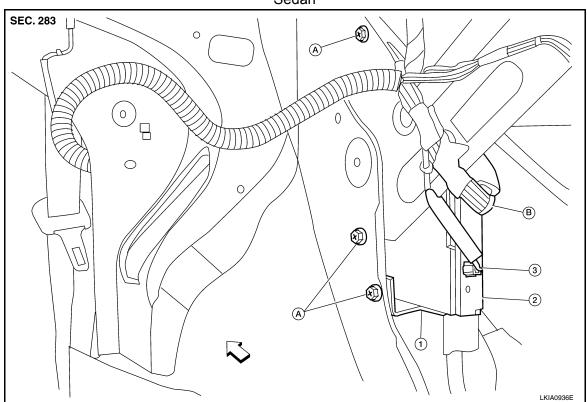
Hatchback



- 1. Bluetooth control unit bracket
- B. BLuetooth antenna feeder harness C. clip (hatchback only)
- E. Bluetooth control unit bracket screws
- 2. Bluetooth control unit
 - Bluetooth antenna feeder harness connector
- ← Front

- A. Blue tooth control unit bolts
- D. Bluetooth control unit connector

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< SERVICE INFORMATION >

- 1. Bluetooth control unit bracket
- 2. Bluetooth control unit
- 3. Bluetooth antenna feeder connector

- A. Bluetooth control unit bolts
- B. Bluetooth control unit connector
- ← Front

Removal

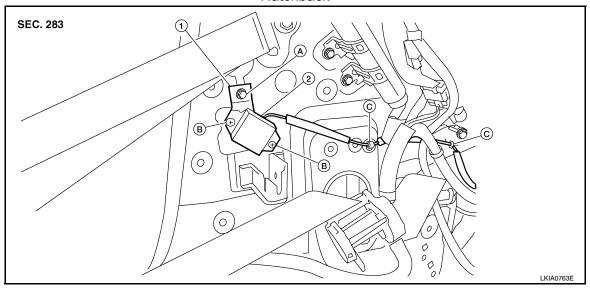
- 1. For hatchback, remove luggage side lower finish (RH). Refer to El-53, "Removal and Installation".
 - · Disconnect Bluetooth antenna harness clip.
- For sedan, remove the trunk room side finisher (RH). Refer to EI-55, "Removal and Installation".
 - · Disconnect the Bluetooth antenna harness connector.
- 3. Disconnect the Bluetooth control unit harness connector.
- 4. Remove the Bluetooth control unit upper and lower bracket bolts.
- 5. Unhook the Bluetooth control unit upper and lower brackets and remove Bluetooth control unit.
- 6. Remove Bluetooth control unit bracket screws and remove the upper and lower brackets from unit.

Installation

Installation is in the reverse order of removal.

BLUETOOTH ANTENNA

Hatchback



- 1. Bluetooth antenna bracket
- B. Bluetooth antenna screws
- 2. Bluetooth antenna
- Bluetooth antenna feeder harness clips
- A. Bluetooth antenna bracket bolts

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- 1. Bluetooth antenna bracket
- B. Bluetooth antenna screws
- Bluetooth antenna
- C. Bluetooth antenna feeder harness clip
- A. Bluetooth antenna bracket bolts
- \Rightarrow Front

Removal

- For hatchback, remove luggage side lower finisher (RH). Refer to EI-53, "Removal and Installation".
- For sedan, fold the rear seat back down, remove the seat back finisher (RH). Refer to EI-55, "Removal and Installation".
- 3. Disconnect the Bluetooth antenna feeder harness clips.
- 4. Disconnect the Bluetooth antenna feeder harness connector.
- 5. Remove the Bluetooth antenna bracket bolt(s) and remove antenna.
- 6. Remove the Bluetooth antenna screws and remove bracket.

Installation

Installation is in the reverse order of removal.

BLUETOOTH MICROPHONE

Removal

- 1. Remove over-head console assembly, roof finisher. Refer to <u>El-47</u>.
- 2. Remove the Bluetooth microphone.

Installation

Installation is in the reverse order of removal.