

# SECTION **AV**

## AUDIO, VISUAL & NAVIGATION SYSTEM

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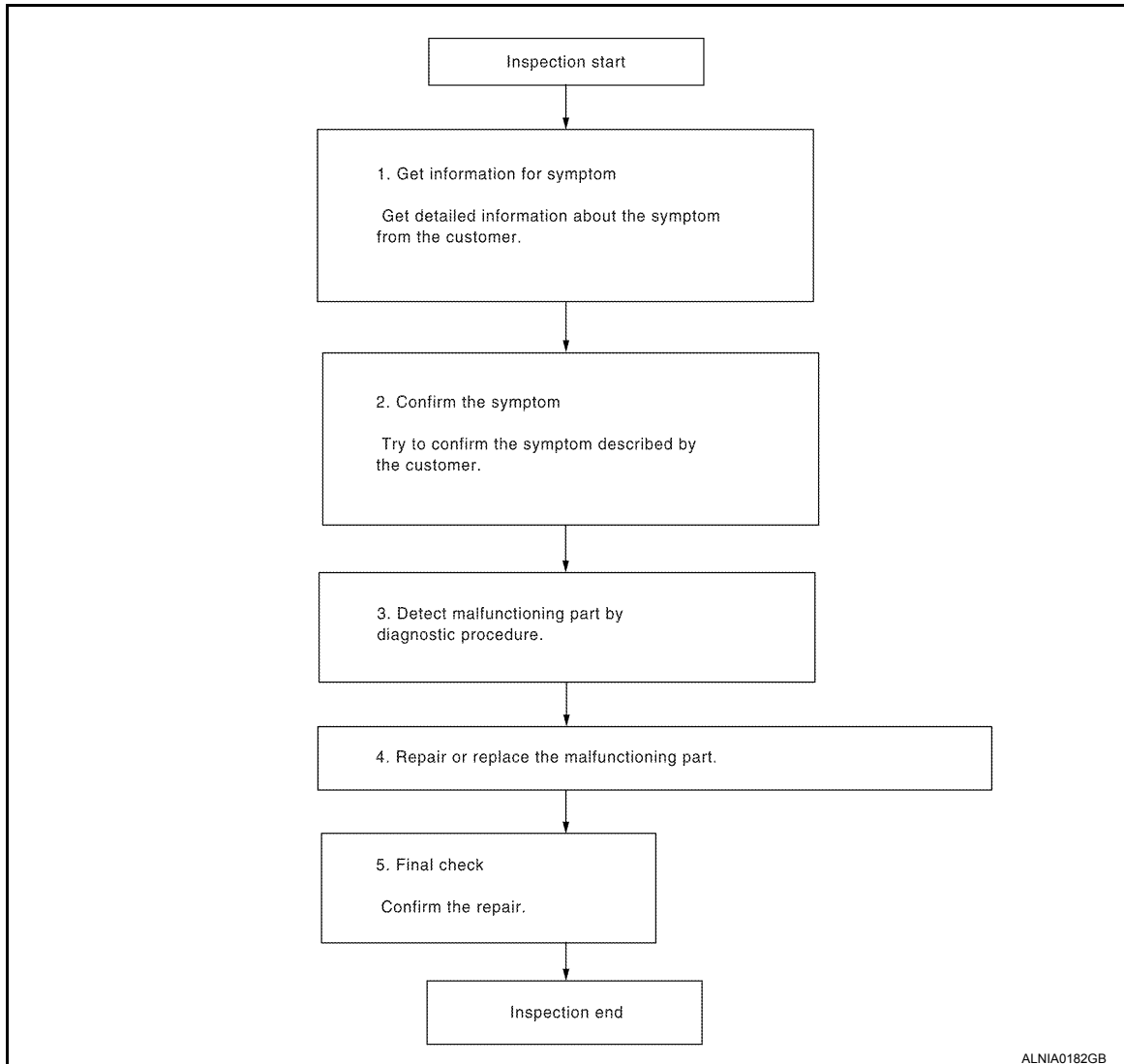
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:000000007328162

#### 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.

A

B

C

D

E

F

G

H

I

J

K

L

M

AV

O

P

## DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[BASE AUDIO]

---

Is malfunctioning part detected?

YES    >> GO TO 4  
NO     >> GO TO 2

### 4.REPAIR OR REPLACE THE MALFUNCTIONING PART

---

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

>> GO TO 5

### 5.FINAL CHECK

---

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

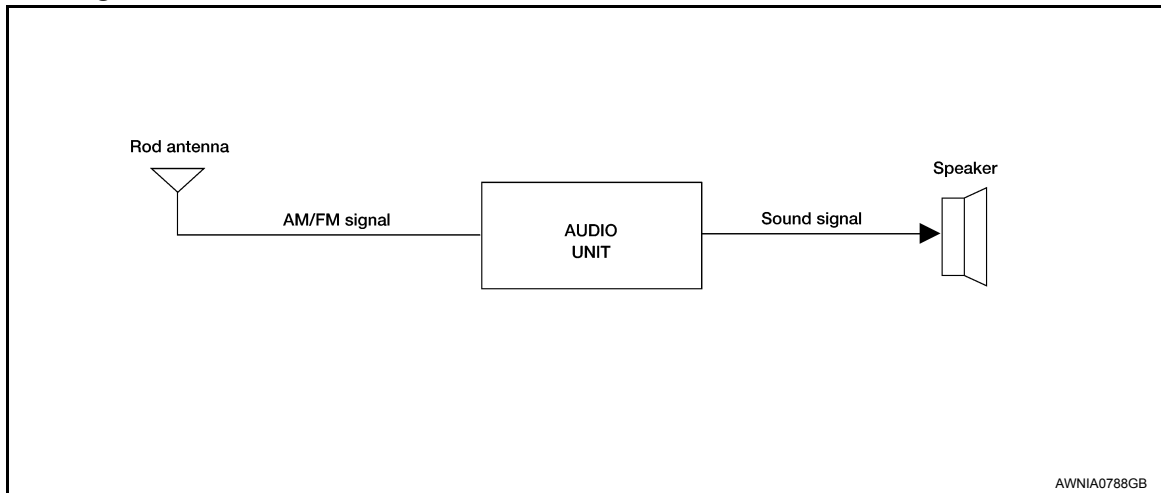
Has the symptom been repaired?

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

## SYSTEM DESCRIPTION

### AUDIO SYSTEM

#### System Diagram



#### System Description

INFOID:0000000007328164

##### 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.

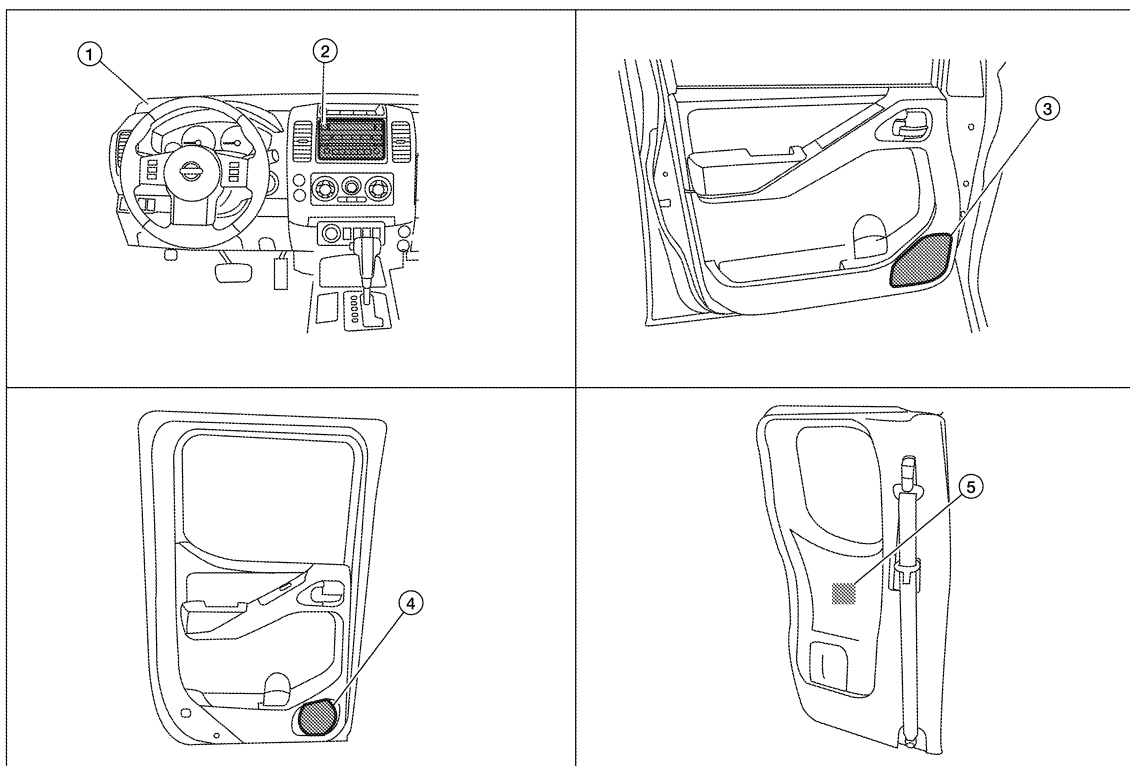
# AUDIO SYSTEM

< SYSTEM DESCRIPTION >

[BASE AUDIO]

## Component Parts Location

INFOID:000000007328165



AWNIA1797ZZ

- |   |  |  |
|---|--|--|
| 1. Front tweeter (crew cab)<br>LH M109<br>RH M111     | 2. Audio unit M43                                    | 3. Front door speaker<br>LH D12<br>RH D112 |
| 4. Rear door speaker (crew cab)<br>LH D207<br>RH D307 | 5. Rear door speaker (king cab)<br>LH B76<br>RH B160 |  |

## Component Description

INFOID:000000007328166

Part name	Description
Audio unit	Controls audio system functions
Front door speakers	<ul style="list-style-type: none"> <li>Outputs audio signal from audio unit</li> <li>Outputs high, mid and low range sounds</li> </ul>
Front tweeters	<ul style="list-style-type: none"> <li>Outputs audio signal from audio unit</li> <li>Outputs high range sounds</li> </ul>
Rear door speakers	<ul style="list-style-type: none"> <li>Outputs audio signal from audio unit</li> <li>Outputs high, mid and low range sounds</li> </ul>



**DTC/CIRCUIT DIAGNOSIS****POWER SUPPLY AND GROUND CIRCUIT  
AUDIO UNIT****AUDIO UNIT : Diagnosis Procedure**

INFOID:000000007328167

Regarding Wiring Diagram information, refer to [AV-18, "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 power	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				
M43	7	Ground	0V	Battery voltage	Battery voltage
	19	Ground	Battery voltage	Battery voltage	Battery voltage

Are the voltage results as specified?

YES >> GO TO 3

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

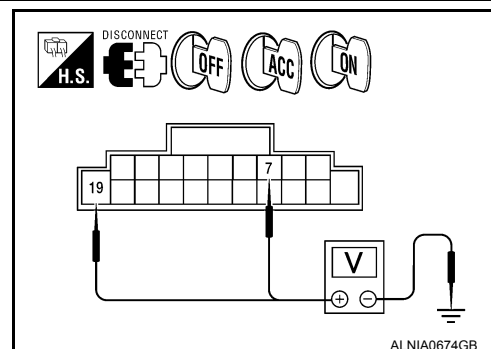
**3.GROUND CIRCUIT CHECK**

Inspect audio unit case ground.

Does case ground pass inspection?

YES >> Inspection end.

NO >> Repair audio unit case ground.



ALNIA0674GB

## FRONT DOOR SPEAKER

### Description

INFOID:000000007328168

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

### Diagnosis Procedure

INFOID:000000007328169

Regarding Wiring Diagram information, refer to [AV-18, "Wiring Diagram"](#).

### 1.CONNECTOR CHECK

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M43	2	D12	1	Yes
	3		2	
	11	D112	1	
	12		2	

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

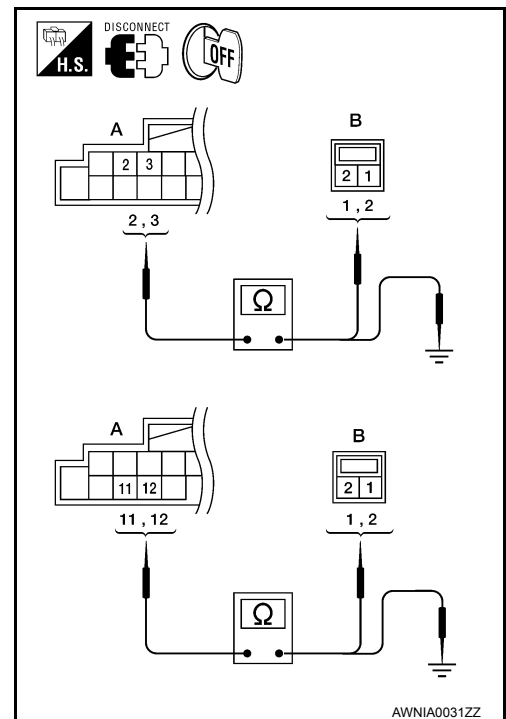
A		—	Continuity
Connector	Terminal		
M43	2	Ground	No
	3		
	11		
	12		

Are continuity results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

### 3.FRONT SPEAKER SIGNAL CHECK

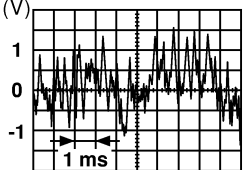


# FRONT DOOR SPEAKER

## < DTC/CIRCUIT DIAGNOSIS >

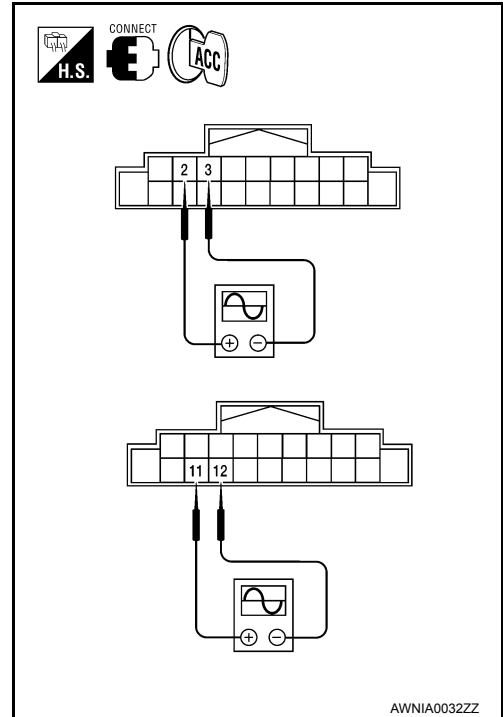
[BASE AUDIO]

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 or oscilloscope.

(+) Terminal		(-) Terminal	Condition	Reference signal
Con- nector	Terminal	Terminal		
M43	2	3	Receive audio signal	 <p>SKIA0177E</p>
	11	12		

Is the audio signal voltage as specified?

- YES >> Replace speaker. Refer to [AV-32. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-30. "Removal and Installation"](#).



A  
B  
C  
D  
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G  
H  
I  
J  
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L  
M  
AV  
O  
P

## FRONT TWEETER

## Description

INFOID:000000007328170

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

## Diagnosis Procedure

INFOID:000000007328171

Regarding Wiring Diagram information, refer to [AV-18, "Wiring Diagram"](#).

## 1.CONNECTOR CHECK

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M43	2	M109	1	Yes
	3		2	
	11	M111	1	
	12		2	

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

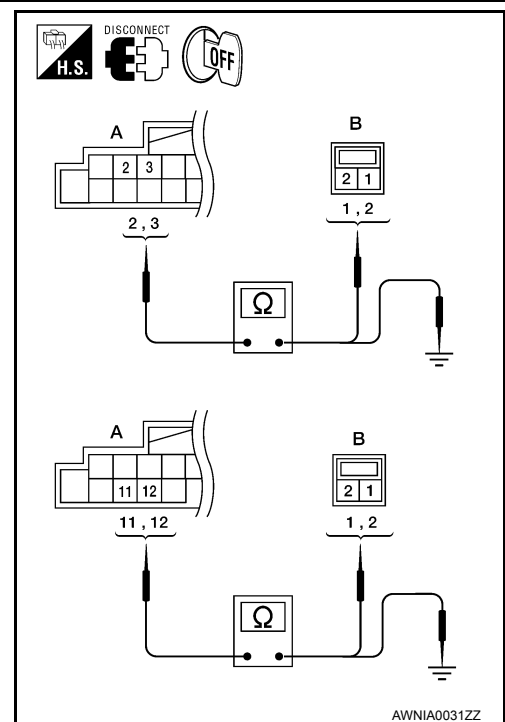
A		—	Continuity
Connector	Terminal		
M43	2	Ground	No
	3		
	11		
	12		

Are the continuity results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

## 3.FRONT TWEETER SIGNAL CHECK

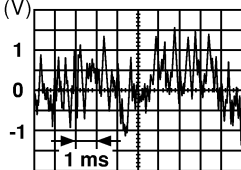


# FRONT TWEETER

## < DTC/CIRCUIT DIAGNOSIS >

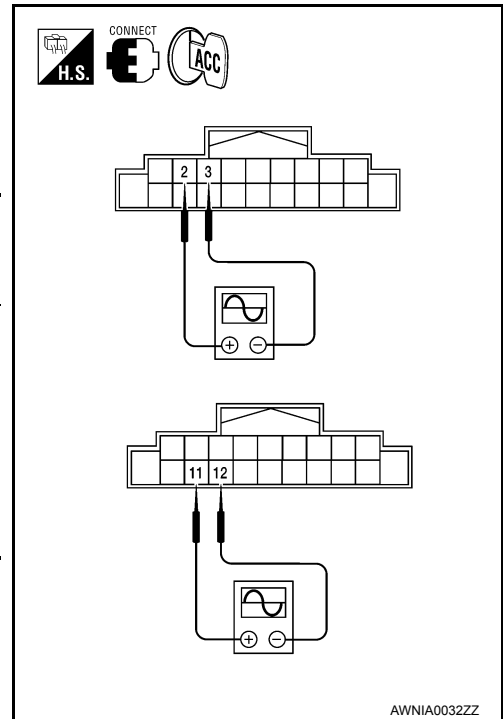
[BASE AUDIO]

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 or oscilloscope.

(+) Terminal		(-) Terminal	Condition	Reference signal
Con- nector	Terminal	Terminal		
M43	2	3	Receive audio signal	
	11	12		

Is the audio signal voltage as specified?

- YES >> Replace the suspect front tweeter. Refer to [AV-31. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-30. "Removal and Installation"](#).



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
AV  
O  
P

# REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

## REAR DOOR SPEAKER

### Description

INFOID:000000007328172

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

### Diagnosis Procedure

INFOID:000000007328173

Regarding Wiring Diagram information, refer to [AV-18, "Wiring Diagram"](#).

## 1.CONNECTOR CHECK

Check the audio unit 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 unit connector M43 and suspect rear door speaker connector.
2. Check continuity between audio unit harness connector M43 (A) and suspect rear door speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M43	4	D207 (crew cab) B76 (king cab)	1	Yes
	5		2	
	13	D307 (crew cab) B160 (king cab)	1	
	14		2	

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

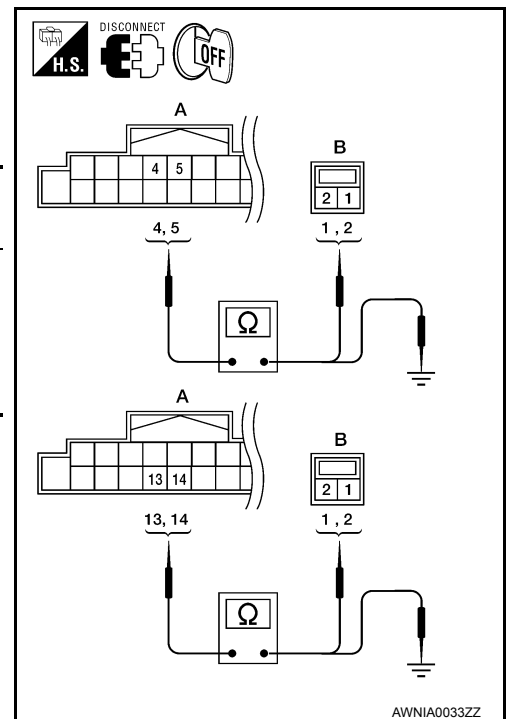
A		—	Continuity
Connector	Terminal		
M43	4	Ground	No
	5		
	13		
	14		

Are the continuity results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

## 3.REAR DOOR SPEAKER SIGNAL CHECK

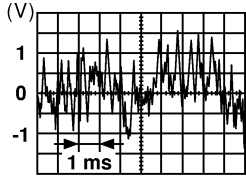


# REAR DOOR SPEAKER

## < DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

1. Connect audio unit connector and rear door 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 or oscilloscope.

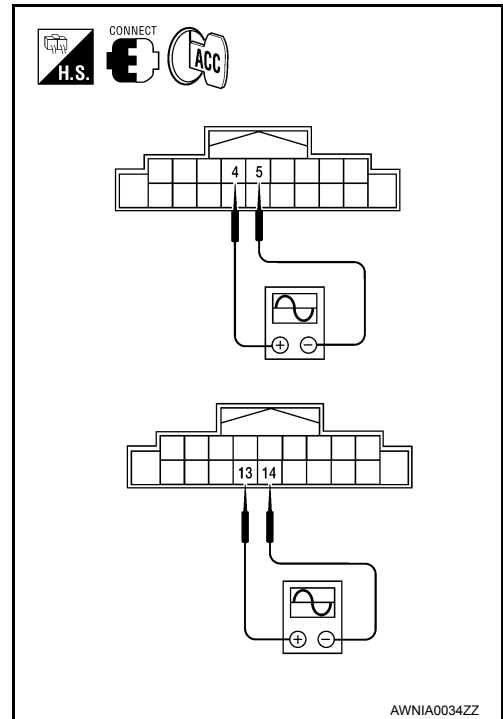
Connector	(+)	(-)	Condition	Reference signal
	Terminal	Terminal		
M43	4	5	Receive audio signal	
	13	14		

SKIA0177E

Is the audio signal voltage as specified?

YES >> Replace the suspect rear door speaker. Refer to [AV-33. "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-30. "Removal and Installation"](#).



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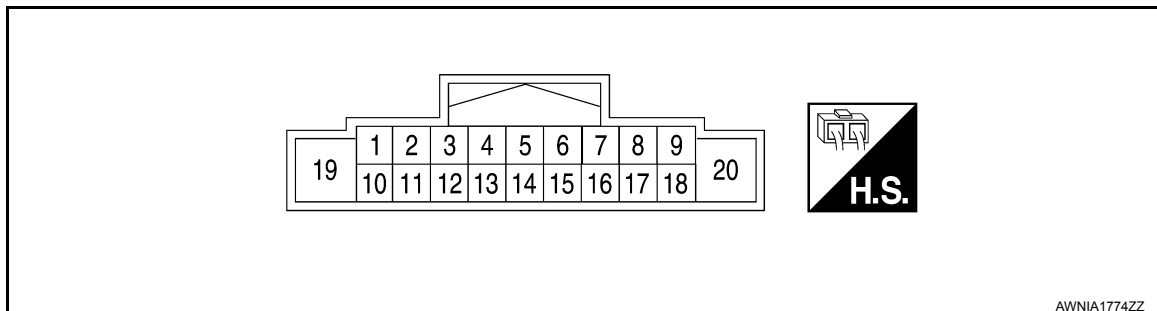
## ECU DIAGNOSIS INFORMATION

### AUDIO UNIT

#### Reference Value

INFOID:000000007328174

#### TERMINAL LAYOUT



#### PHYSICAL VALUES

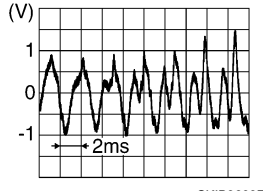
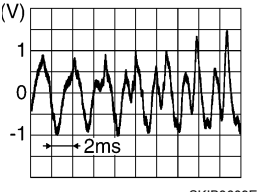
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
2 (BR)	3 (L)	Sound signal front door speaker and front tweeter LH	Output	Ignition switch ON	Audio output	 SKIB3609E
4 (G)	5 (B)	Sound signal rear door speaker LH	Output	Ignition switch ON	Audio output	 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	—	0V
9 (R)	Ground	Light switch	Input	Ignition switch ACC or ON	—	Battery voltage



# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[BASE AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
11 (LG)	12 (R)	Sound signal front door speaker and front tweeter RH	Output	Ignition switch ON	Voice output	
13 (GR)	14 (O)	Sound signal rear door speaker RH	Output	Ignition switch ON	Voice output	
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage

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AV

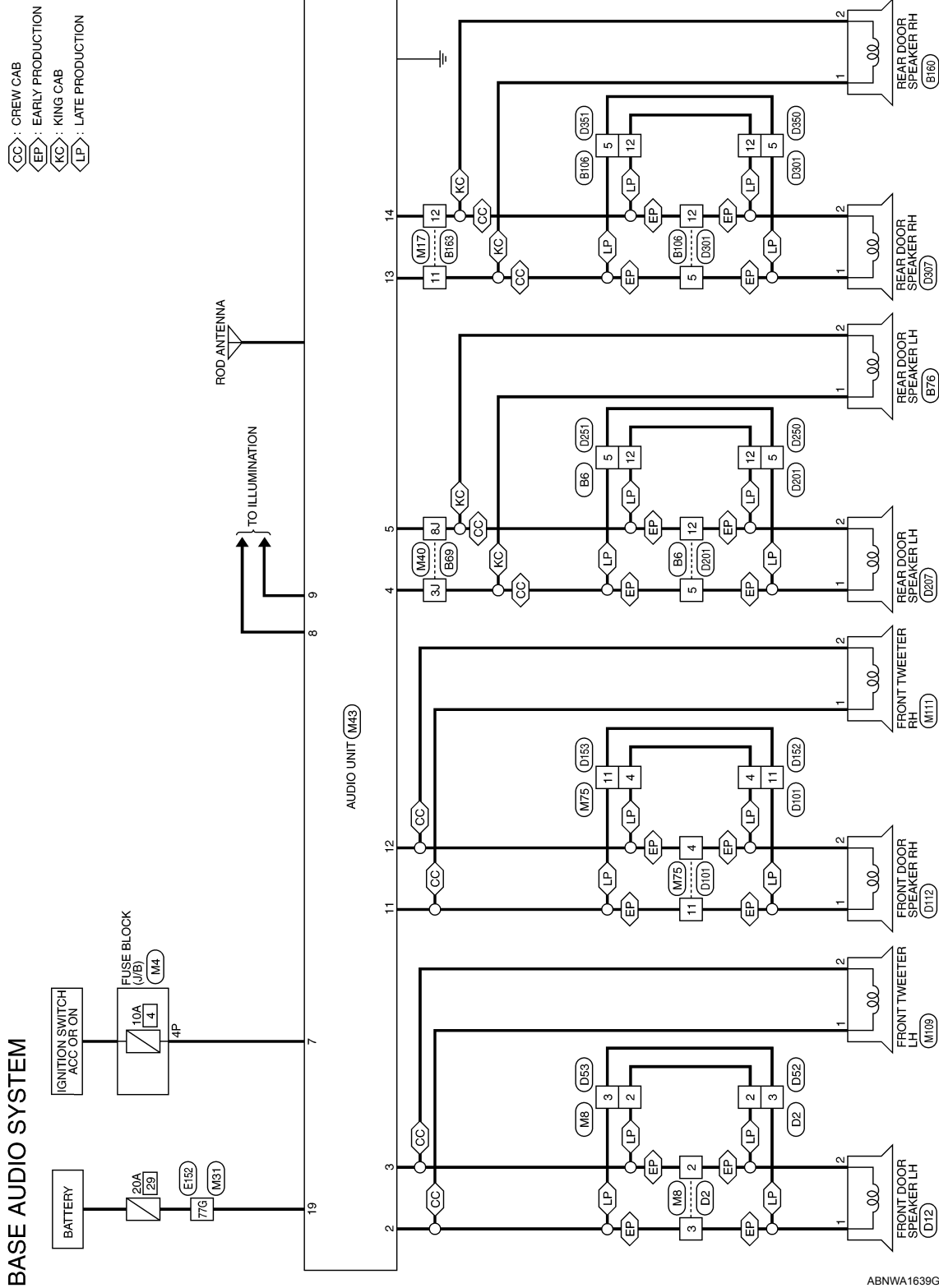
O  
P

## WIRING DIAGRAM

### BASE AUDIO SYSTEM

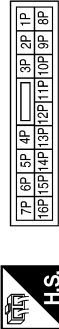
#### Wiring Diagram

INFOID:000000007328175



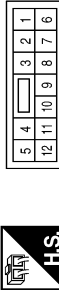
BASE AUDIO SYSTEM CONNECTORS

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



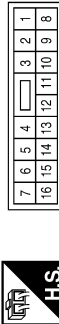
Terminal No.	Color of Wire	Signal Name
4P	G/B	—

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



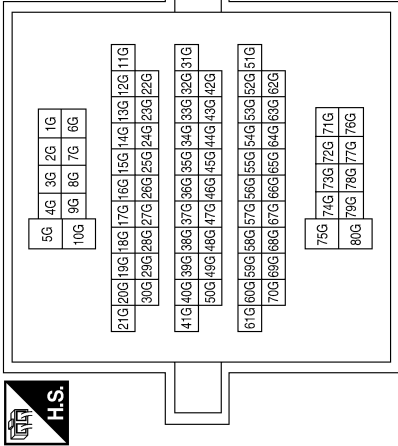
Terminal No.	Color of Wire	Signal Name
2	L	—
3	BR	—

Connector No.	M17
Connector Name	WIRE TO WIRE
Connector Color	WHITE



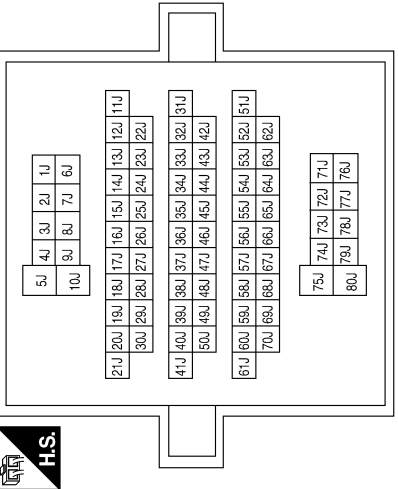
Terminal No.	Color of Wire	Signal Name
11	GR	—
12	O	—

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
77G	Y	—

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3J	G	—
8J	B	—

# BASE AUDIO SYSTEM

< WIRING DIAGRAM >

[BASE AUDIO]

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
4	R	—
11	LG	—

Terminal No.	Color of Wire	Signal Name
9	R	LIGHT SW
10	—	—
11	LG	FR SP RH (+)
12	R	FR SP RH (-)
13	GR	RR SP RH (+)
14	O	RR SP RH (-)
15	—	—
16	—	—
17	—	—
18	—	—
19	Y	BAT
20	—	—

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




Terminal No.	Color of Wire	Signal Name
1	—	—
2	BR	FR SP LH (+)
3	L	FR SP LH (-)
4	G	RR SP LH (+)
5	B	RR SP LH (-)
6	—	—
7	G/B	ACC
8	GR	ILL CONT

Connector No.	M111
Connector Name	FRONT TWEETER RH
Connector Color	BROWN



2	1
---	---

Terminal No.	Color of Wire	Signal Name
1	W	—
2	L	— (EXCEPT CREW CAB WITH PREMIUM AUDIO SYSTEM)

Connector No.	M109
Connector Name	FRONT TWEETER LH
Connector Color	BROWN



2	1
---	---

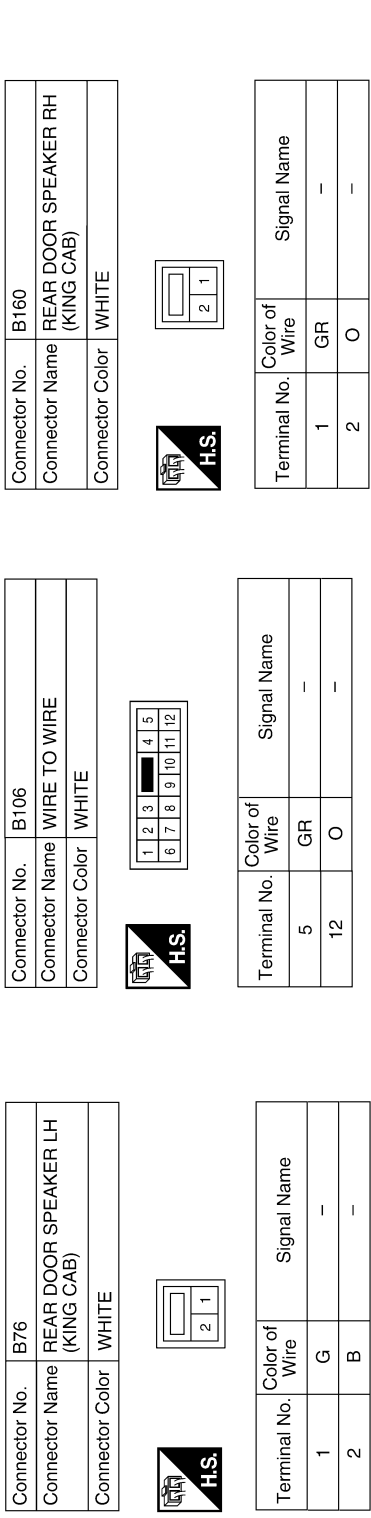
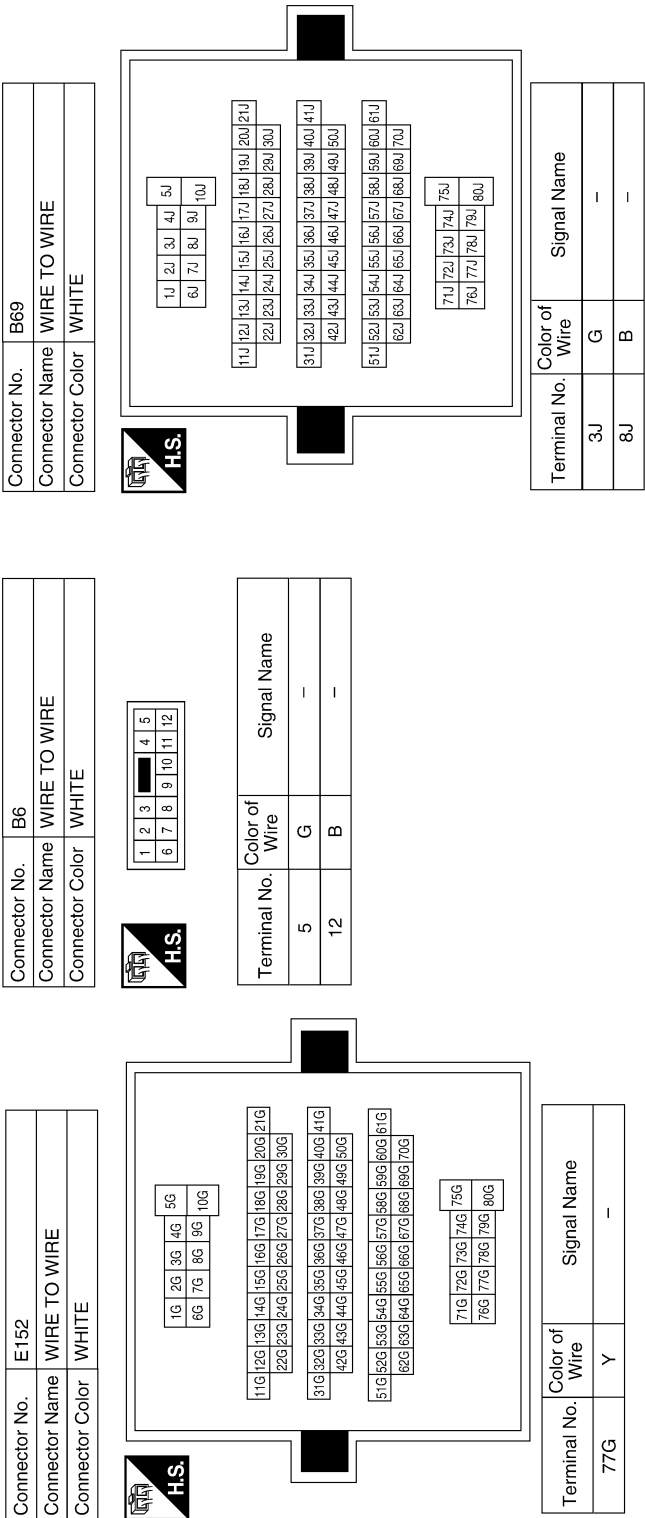
Terminal No.	Color of Wire	Signal Name
1	G	— (EXCEPT CREW CAB WITH PREMIUM AUDIO SYSTEM)
2	L	— (EXCEPT CREW CAB WITH PREMIUM AUDIO SYSTEM)

ABNIA2671GB

BASE AUDIO SYSTEM

< WIRING DIAGRAM >

[BASE AUDIO]



ABNIA2672GB

A  
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AV

# BASE AUDIO SYSTEM

< WIRING DIAGRAM >

[BASE AUDIO]

Connector No.	D12
Connector Name	FRONT DOOR SPEAKER LH
Connector Color	WHITE



1	2
---	---

Terminal No.	Color of Wire	Signal Name
1	L/W	—
2	L/R	—

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
2	L/R	—
3	L/W	—

Connector No.	B163
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
11	GR	—
12	O	—

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



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

Terminal No.	Color of Wire	Signal Name
4	L/B	—
11	W/B	—

Connector No.	D53
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
2	L	—
3	BR	—

Connector No.	D52
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
2	L	—
3	BR	—

AANIA1490GB

# BASE AUDIO SYSTEM

< WIRING DIAGRAM >

[BASE AUDIO]

Connector No.	D153
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	W	—
12	B	—

Connector No.	D152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	W	—
12	B	—

Connector No.	D112
Connector Name	FRONT DOOR SPEAKER RH
Connector Color	WHITE



2	1
---	---

Terminal No.	Color of Wire	Signal Name
1	W/B	—
2	L/B	—

Connector No.	D250
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	L	—
12	O	—

Connector No.	D207
Connector Name	REAR DOOR SPEAKER LH
Connector Color	WHITE



2	1
---	---

Terminal No.	Color of Wire	Signal Name
1	L	— (EXCEPT CREW CAB WITH MID AUDIO SYSTEM)
2	O	— (EXCEPT CREW CAB WITH MID AUDIO SYSTEM)

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



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

Terminal No.	Color of Wire	Signal Name
5	L	— (EXCEPT CREW CAB WITH MID AUDIO SYSTEM)
12	O	— (EXCEPT CREW CAB WITH MID AUDIO SYSTEM)

AANIA1491GB

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AV

# BASE AUDIO SYSTEM

< WIRING DIAGRAM >

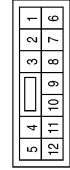
[BASE AUDIO]

Connector No.	D307
Connector Name	REAR DOOR SPEAKER RH
Connector Color	WHITE



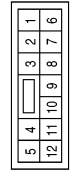
Terminal No.	Color of Wire	Signal Name
1	L	– (EXCEPT CREW CAB WITH MID AUDIO SYSTEM)
2	O	–

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



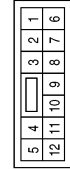
Terminal No.	Color of Wire	Signal Name
5	L	– (EXCEPT CREW CAB WITH MID AUDIO SYSTEM)
12	O	–

Connector No.	D251
Connector Name	WIRE TO WIRE
Connector Color	WHITE



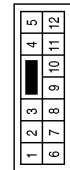
Terminal No.	Color of Wire	Signal Name
5	L	–
12	O	–

Connector No.	D351
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	–
12	O	–

Connector No.	D350
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	–
12	O	–

AANIA1492GB



## SYMPTOM DIAGNOSIS

## AUDIO SYSTEM

## Symptom Table

INFOID:000000007328176

## AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> <li>Audio unit power circuit</li> <li>Audio unit</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-9</a></li> <li><a href="#">AV-30</a></li> </ul>
All speakers do not sound	<ul style="list-style-type: none"> <li>Speaker circuit shorted to ground</li> <li>Audio unit</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-18</a></li> <li><a href="#">AV-9</a></li> </ul>
One or several speakers do not sound	<ul style="list-style-type: none"> <li>Front door speaker</li> <li>Front tweeter</li> <li>Rear door speaker</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-10</a></li> <li><a href="#">AV-12</a></li> <li><a href="#">AV-14</a></li> </ul>
Poor reception	<ul style="list-style-type: none"> <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 DIAGNOSIS" in the appropriate interior trim section.

## CD

Symptom	Possible cause	Reference page
CD cannot be inserted	Audio unit	<a href="#">AV-30</a>
CD cannot be ejected		
The CD cannot be played		
The sound skips, stops suddenly, or is distorted		

## NORMAL OPERATING CONDITION

### Description

INFOID:000000007328177

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

### NOISE

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

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

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

### NOTE:

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

### Type of Noise and Possible Cause

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

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000007328178

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

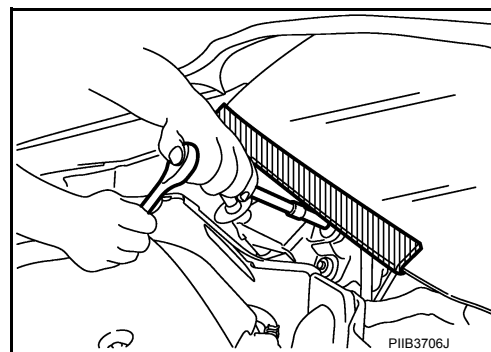
#### **WARNING:**

- 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:000000007831516

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



#### Precaution for Work

INFOID:000000007328179

- 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 a 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:
  - Water soluble dirt:

## PRECAUTIONS

< PRECAUTION >

[BASE AUDIO]

- 
- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
  - Then rub with a soft, 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, wring the water out of the cloth and wipe the detergent off.
  - Then rub with a soft, 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 >

[BASE AUDIO]

## PREPARATION

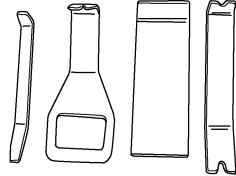
### PREPARATION

#### Special Service Tool

INFOID:000000007328180

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

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



AWJIA0483ZZ

#### Commercial Service Tools

INFOID:000000007831519

Tool name	Description
Power tool	Loosening nuts, screws and bolts



PIIB1407E

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AV

## REMOVAL AND INSTALLATION

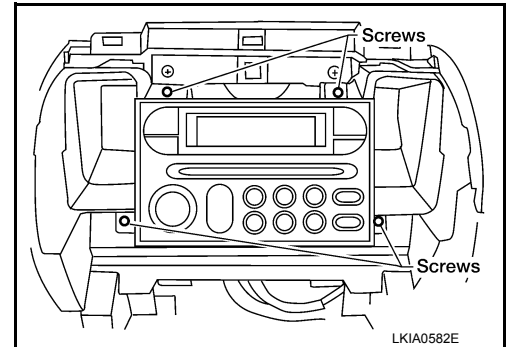
### AUDIO UNIT

#### Removal and Installation

INFOID:000000007328182

#### REMOVAL

1. Remove the cluster lid C. Refer to [JP-19. "Removal and Installation"](#).
2. Remove the audio control unit screws, using power tool.
3. Pull out the audio control unit from the instrument panel and disconnect the audio control unit connectors.



#### INSTALLATION

Installation is in the reverse order of removal.

## FRONT TWEETER

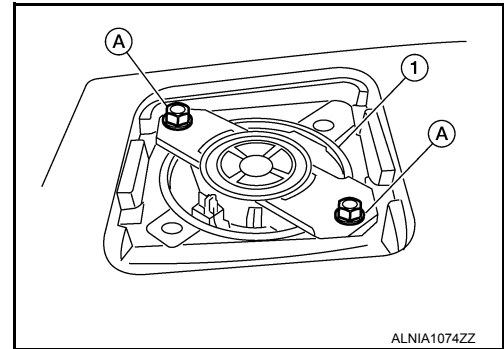
## Removal and Installation

INFOID:000000007328183

## 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.
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.

A  
B  
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AV

## FRONT DOOR SPEAKER

< REMOVAL AND INSTALLATION >

[BASE AUDIO]

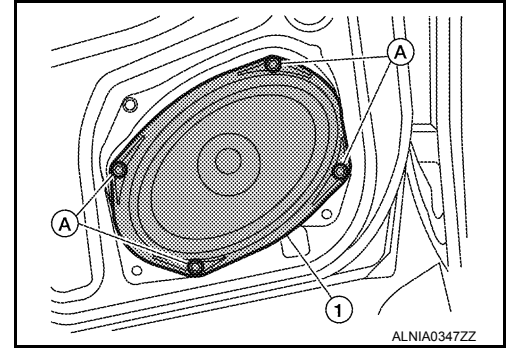
### FRONT DOOR SPEAKER

#### Removal and Installation

INFOID:000000007328184

#### REMOVAL

1. Remove the front door finisher. Refer to [INT-15, "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.



## REAR DOOR SPEAKER

### Removal and Installation

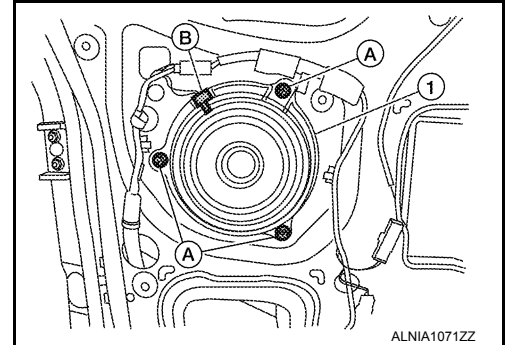
INFOID:000000007328185

#### REMOVAL

1. Remove the rear door finisher. Refer to [INT-15. "Removal and Installation"](#).
2. Remove the rear door speaker screws (A).
3. Remove rear door speaker (1), disconnect rear door speaker connector (B).

**NOTE:**

King cab shown, crew cab similar.



#### INSTALLATION

Installation is in the reverse order of removal.

A  
B  
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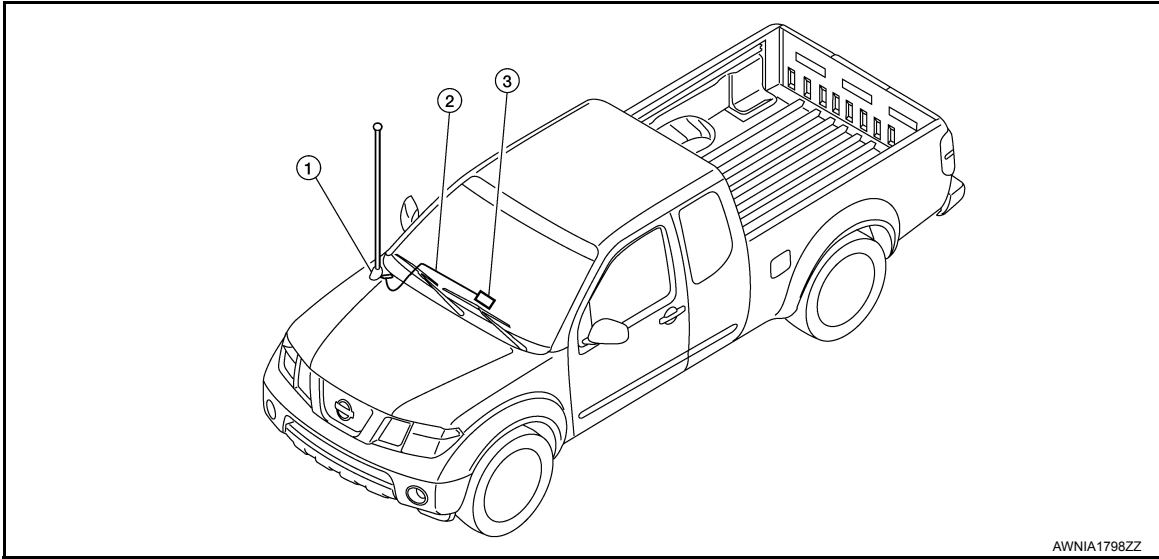
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## AUDIO ANTENNA

### Location of Audio Antenna System Component

INFOID:000000007328186



1. Audio antenna

2. Antenna feeder

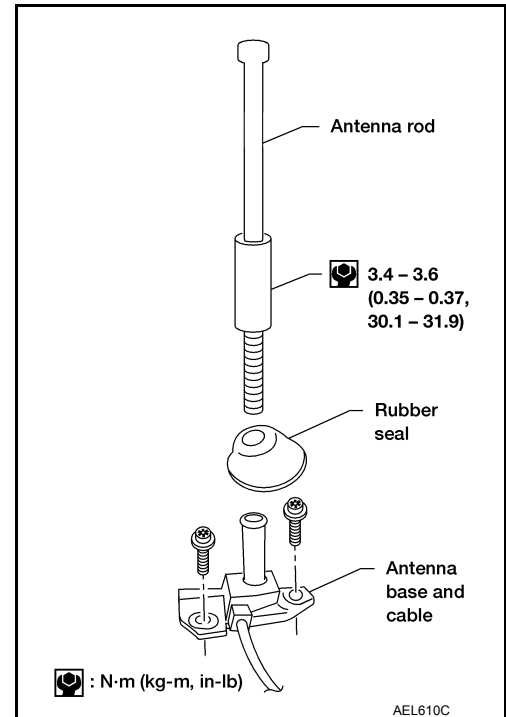
3. Audio unit M43

### Removal and Installation

INFOID:000000007328187

#### REMOVAL

1. Remove instrument lower panel RH and glove box. Refer to [IP-24, "Removal and Installation"](#).
2. Disconnect audio antenna cable from antenna feeder.
3. Remove antenna rod.
4. Remove rubber seal.
5. Remove cowl top. Refer to [EXT-24, "Removal and Installation"](#).
6. Remove fender protector. Refer to [EXT-27, "Removal and Installation of Front Fender Protector"](#).
7. Remove antenna base bolts.
8. Remove antenna base and cable.



#### 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.**

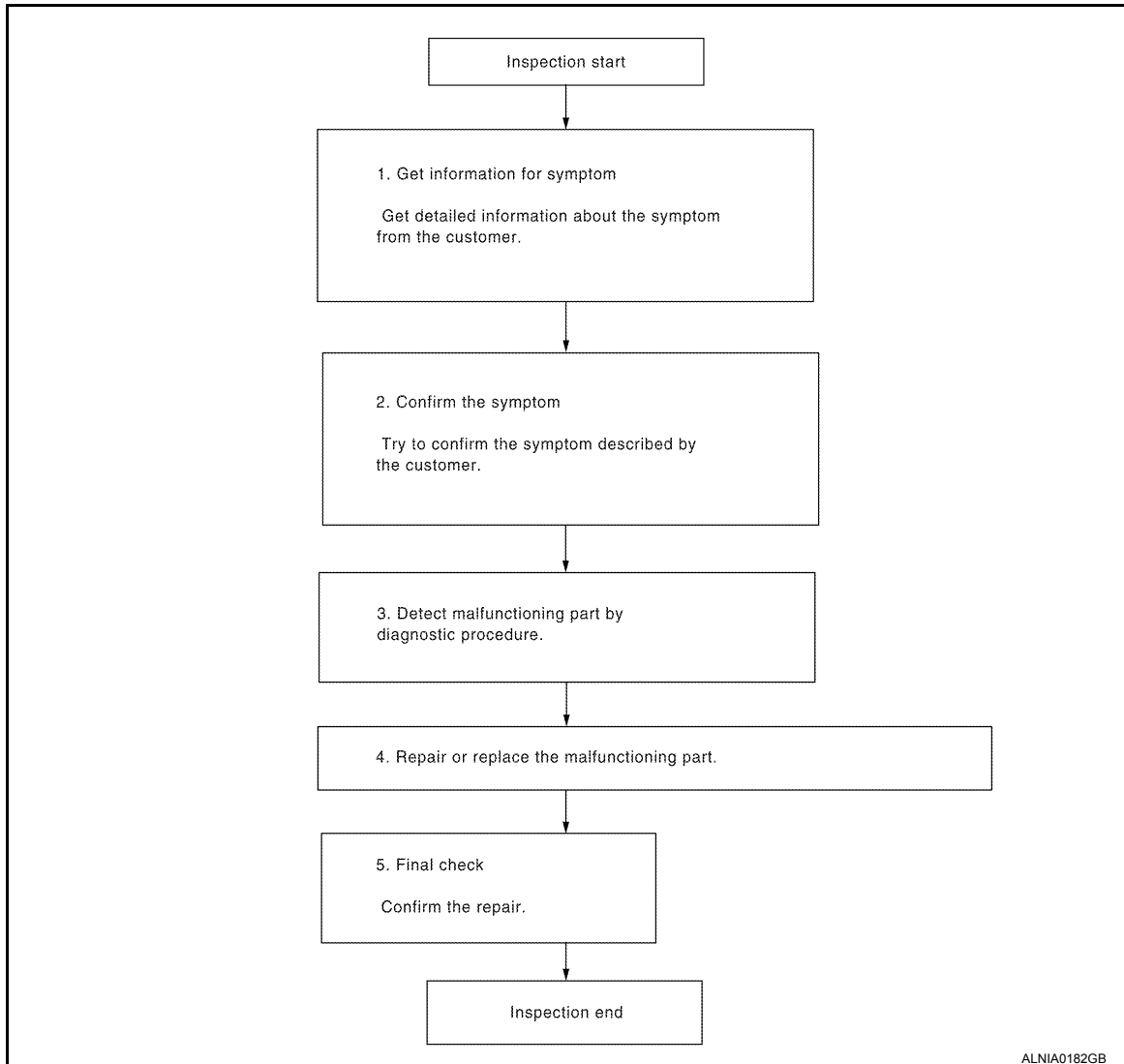
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:000000007328188

#### 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.

## DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[MID (CC), PREMIUM (KC) AUDIO]

---

Is malfunctioning part detected?

YES    >> GO TO 4  
NO     >> GO TO 2

### 4. REPAIR OR REPLACE THE MALFUNCTIONING PART

---

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

>> GO TO 5

### 5. FINAL CHECK

---

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

Was the repair confirmed?

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

# AUDIO SYSTEM

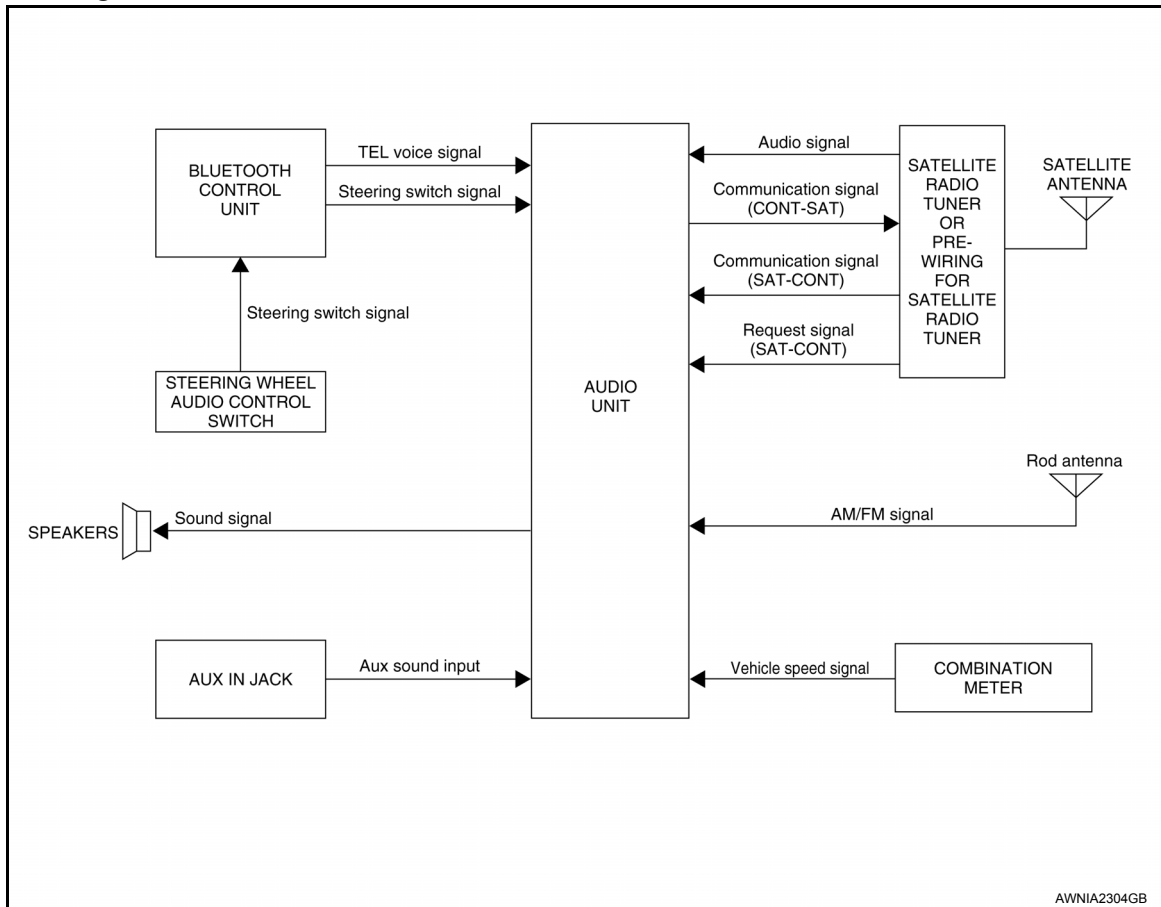
< SYSTEM DESCRIPTION >

[MID (CC), PREMIUM (KC) AUDIO]

## SYSTEM DESCRIPTION

### AUDIO SYSTEM

#### System Diagram



#### System Description

INFOID:000000007328190

##### AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Rod antenna
- Steering wheel audio control switch
- 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.

##### SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components

- Satellite antenna
- Satellite radio tuner

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

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

##### SPEED SENSITIVE VOLUME SYSTEM

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

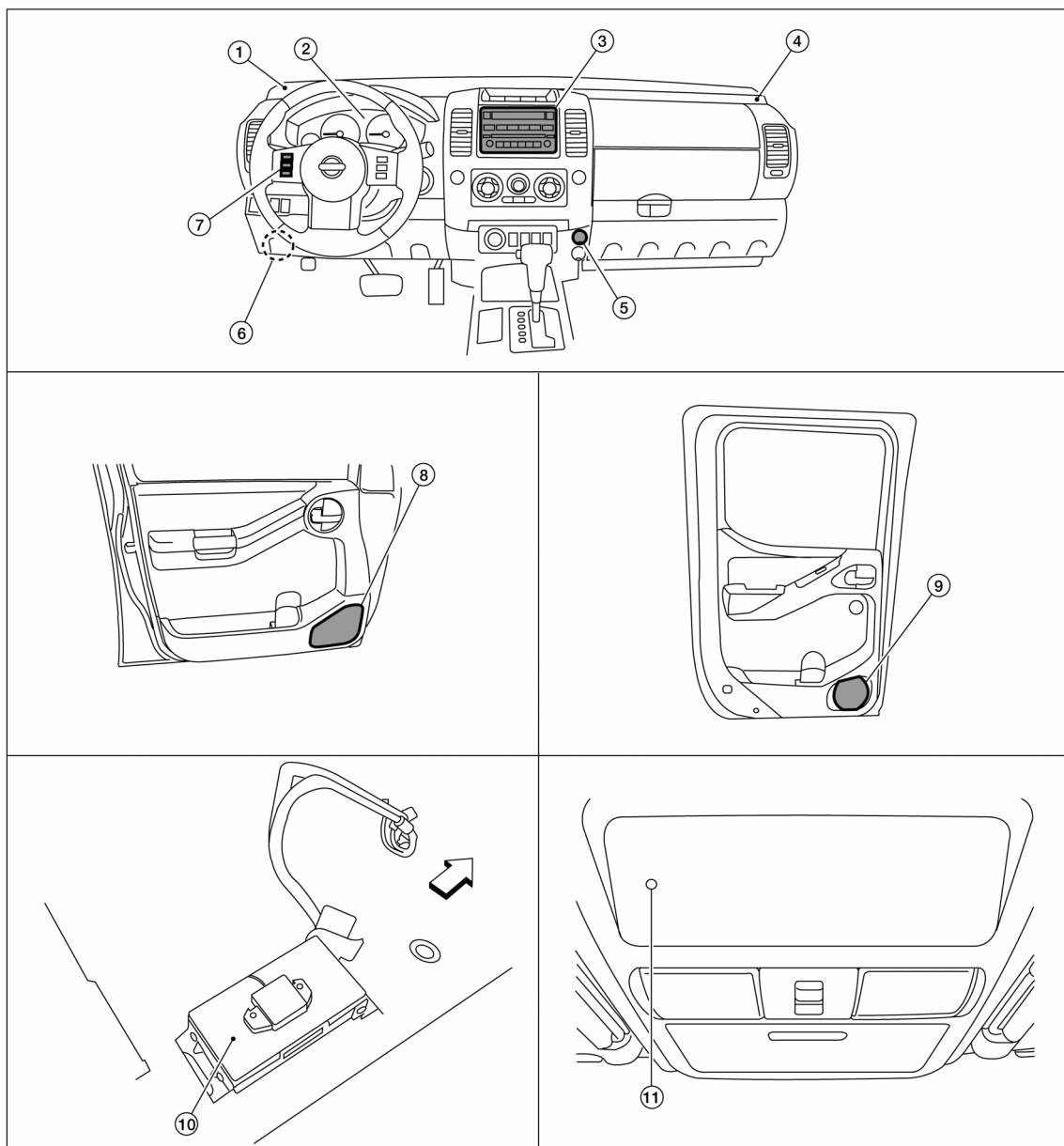
# AUDIO SYSTEM

< SYSTEM DESCRIPTION >

[MID (CC), PREMIUM (KC) AUDIO]

## Component Parts Location (Crew Cab)

INFOID:000000007328191



AWNIA2305ZZ

←:FRONT

- |   |  |  |
|---|--|--|
| 1. Front tweeter LH M109  | 2. Combination meter M24                   | 3. Audio unit M86, M87, M88, M89   |
| 4. Front tweeter RH M111  | 5. Aux in jack M85                         | 6. Satellite radio tuner or pre-wiring for satellite radio tuner M41, M129 |
| 7. Steering wheel audio control switches  | 8. Front door speaker<br>LH D12<br>RH D112 | 9. Rear door speaker<br>LH D207<br>RH D307                                 |
| 10. Bluetooth control unit B141, B142<br>(view with passenger front seat removed) | 11. Microphone R8                          |  |

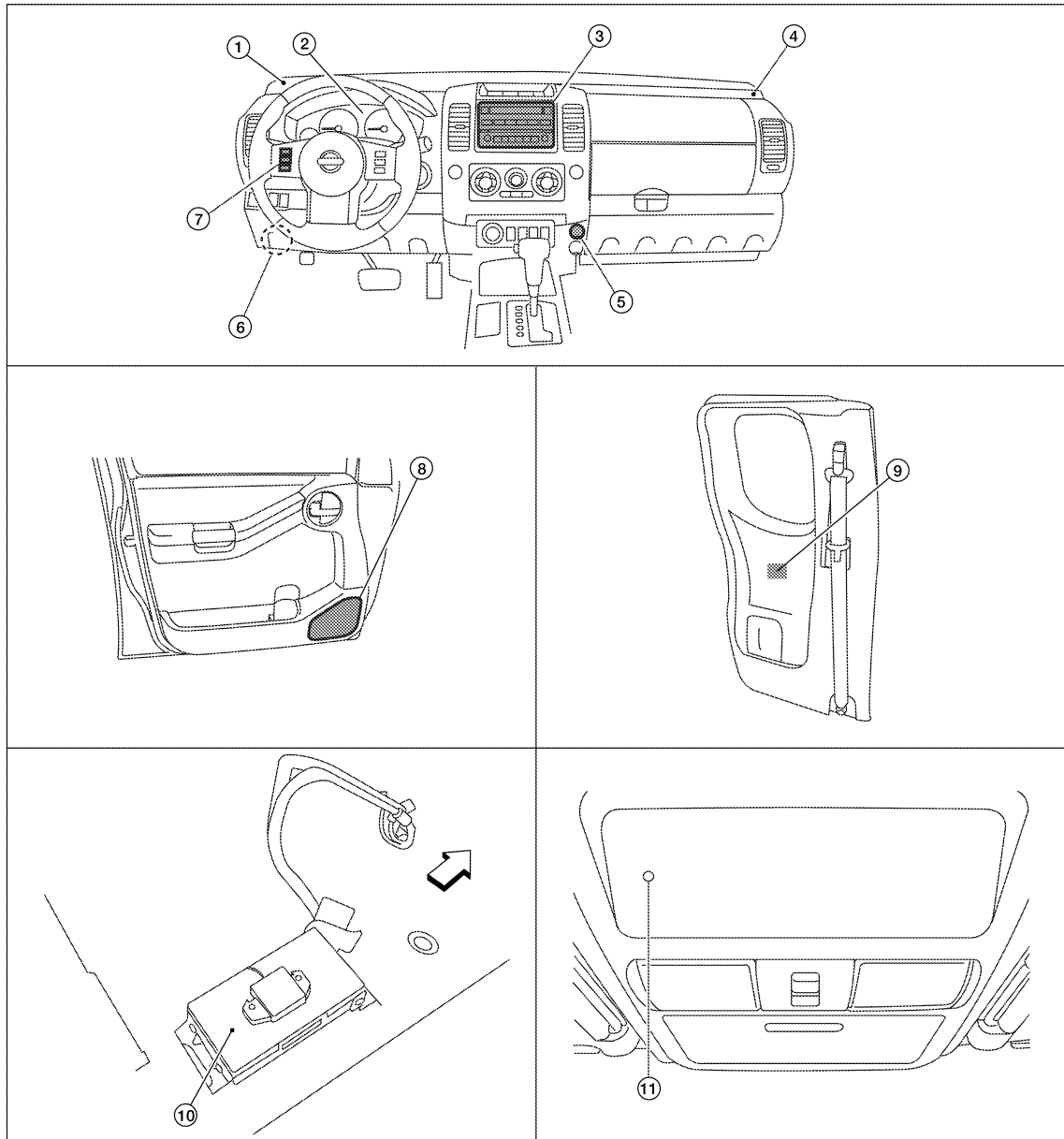
# AUDIO SYSTEM

< SYSTEM DESCRIPTION >

[MID (CC), PREMIUM (KC) AUDIO]

## Component Parts Location (King Cab)

INFOID:000000007328192



←:FRONT

- |  |   |  |
|--|---|--|
| 1. Front tweeter LH M109   | 2. Combination meter M24                | 3. Audio unit M42, M44, M45, M64   |
| 4. Front tweeter RH M111   | 5. Aux in jack M85                      | 6. Satellite radio tuner or pre-wiring for satellite radio tuner M41, M129 |
| 7. Steering wheel audio control switches                                       | 8. Front door speaker LH D12<br>RH D112 | 9. Rear door speaker LH B76<br>RH B160                                     |
| 10. Bluetooth control unit B141, B142 (view with passenger front seat removed) | 11. Microphone R8                       |  |

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## AUDIO SYSTEM

< SYSTEM DESCRIPTION >

[MID (CC), PREMIUM (KC) AUDIO]

### Component Description

INFOID:000000007328193

Part name	Description
Audio unit	Controls audio system and satellite radio system functions
Rod antenna	Audio signal (AM/FM) is received
Steering wheel audio control switch	<ul style="list-style-type: none"><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 style="list-style-type: none"><li>• Outputs audio signal from audio unit</li><li>• Outputs high, mid and low range sounds</li></ul>
Front tweeters	<ul style="list-style-type: none"><li>• Outputs audio signal from audio unit</li><li>• Outputs high range sounds</li></ul>
Rear door speakers	<ul style="list-style-type: none"><li>• Outputs audio signal from audio unit</li><li>• Outputs high, mid and low range sounds</li></ul>
Satellite radio tuner	<ul style="list-style-type: none"><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



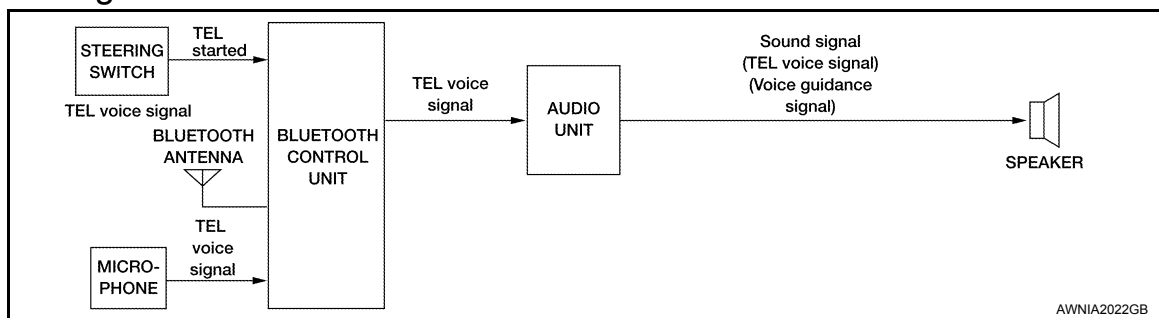
# HANDS-FREE PHONE SYSTEM

< SYSTEM DESCRIPTION >

[MID (CC), PREMIUM (KC) AUDIO]

## HANDS-FREE PHONE SYSTEM

### System Diagram



### System Description

INFOID:000000007328195

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

#### NOTE:

Cellular telephones must have their wireless connection set up (connected) 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 connected with the Bluetooth control unit. Different cellular telephones may have different connecting 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 connected with the Bluetooth control unit, Nissan Voice Recognition will then become active. Bluetooth telephone functions can be turned off using the Nissan Voice Recognition system.

#### STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

#### MICROPHONE

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

#### AUDIO UNIT

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

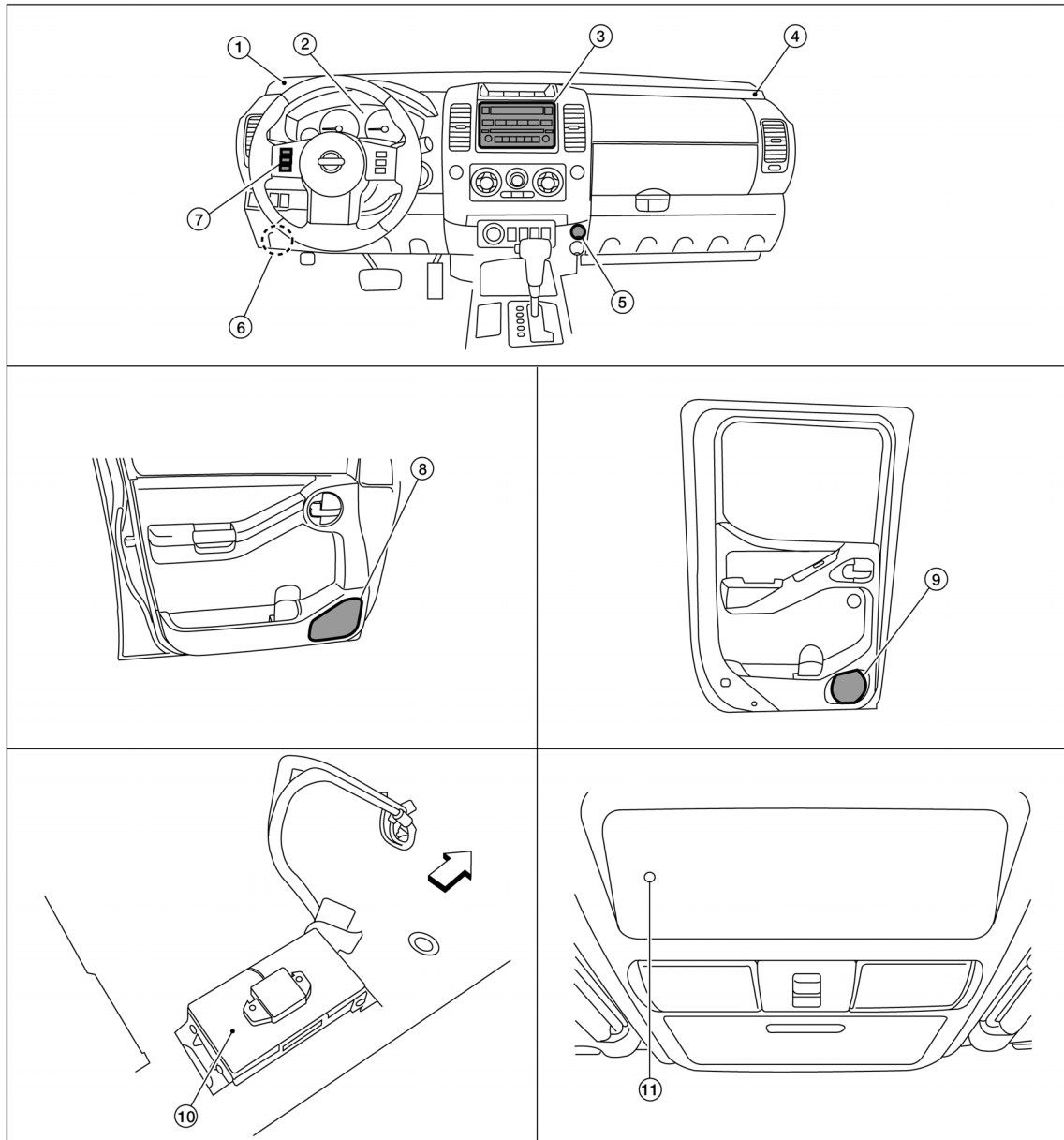
# HANDS-FREE PHONE SYSTEM

< SYSTEM DESCRIPTION >

[MID (CC), PREMIUM (KC) AUDIO]

## Component Parts Location (Crew Cab)

INFOID:000000007328196



AWNIA2305ZZ

←:FRONT

- |   |  |  |
|---|--|--|
| 1. Front tweeter LH M109  | 2. Combination meter M24                   | 3. Audio unit M86, M87, M88, M89   |
| 4. Front tweeter RH M111  | 5. Aux in jack M85                         | 6. Satellite radio tuner or pre-wiring for satellite radio tuner M41, M129 |
| 7. Steering wheel audio control switches  | 8. Front door speaker<br>LH D12<br>RH D112 | 9. Rear door speaker<br>LH D207<br>RH D307                                 |
| 10. Bluetooth control unit B141, B142<br>(view with passenger front seat removed) | 11. Microphone R8                          |  |

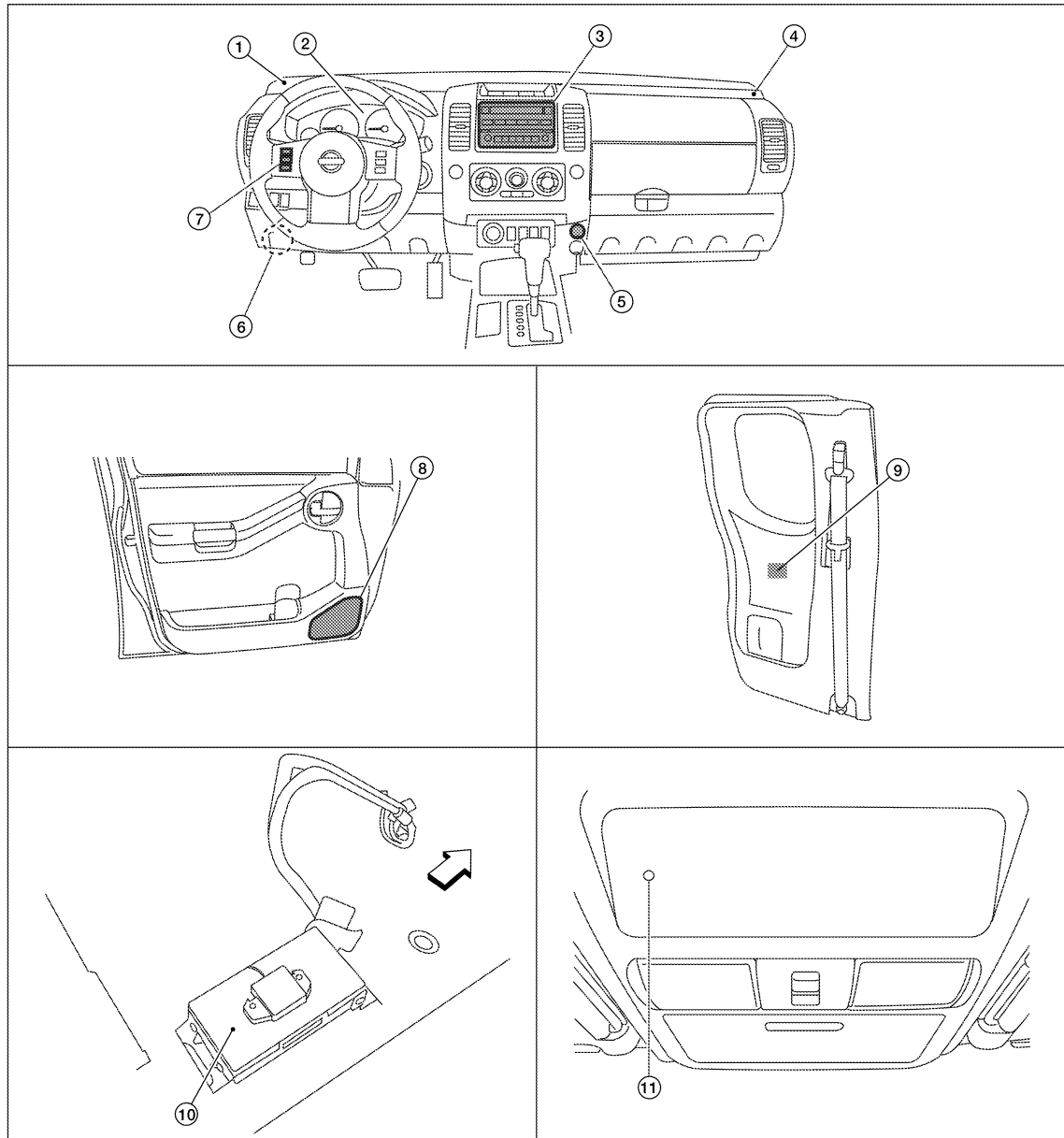
# HANDS-FREE PHONE SYSTEM

< SYSTEM DESCRIPTION >

[MID (CC), PREMIUM (KC) AUDIO]

## Component Parts Location (King Cab)

INFOID:000000007328197



←:FRONT

- |  |   |  |
|--|---|--|
| 1. Front tweeter LH M109   | 2. Combination meter M24                | 3. Audio unit M42, M44, M45, M64   |
| 4. Front tweeter RH M111   | 5. Aux in jack M85                      | 6. Satellite radio tuner or pre-wiring for satellite radio tuner M41, M129 |
| 7. Steering wheel audio control switches                                       | 8. Front door speaker LH D12<br>RH D112 | 9. Rear door speaker LH B76<br>RH B160                                     |
| 10. Bluetooth control unit B141, B142 (view with passenger front seat removed) | 11. Microphone R8                       |  |

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# HANDS-FREE PHONE SYSTEM

< SYSTEM DESCRIPTION >

[MID (CC), PREMIUM (KC) AUDIO]

## Component Description

INFOID:000000007328198

Part name	Description
Audio unit	<ul style="list-style-type: none"><li>• Receives telephone voice signal from Bluetooth control unit</li><li>• Sends telephone voice and voice guidance signals to the speakers</li></ul>
Front door speakers	Receives telephone voice and voice guidance signals from the audio amp.
Front tweeters	
Steering wheel audio control switch	<ul style="list-style-type: none"><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 >

[MID (CC), PREMIUM (KC) AUDIO]

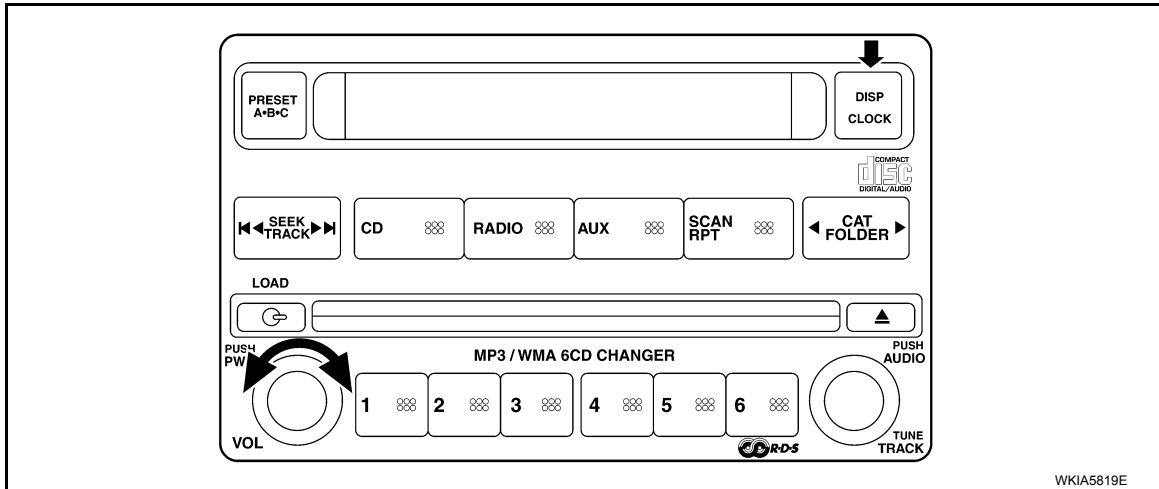
### DIAGNOSIS SYSTEM (AUDIO UNIT)

#### Component Function Check

INFOID:000000007328199

#### STARTING THE SELF-DIAGNOSIS MODE

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



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)

< SYSTEM DESCRIPTION >

[MID (CC), PREMIUM (KC) AUDIO]

## DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

### Diagnosis Description

INFOID:000000007328200

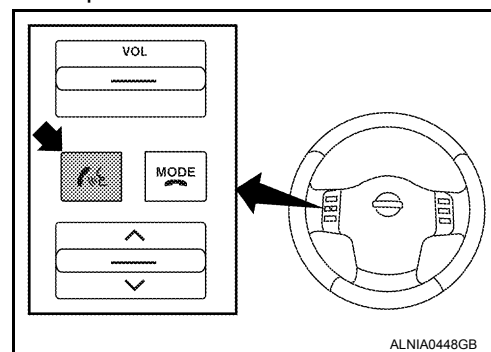
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switch prior to trouble diagnosis.

### BLUETOOTH CONTROL UNIT AUTOMATIC INITIALIZATION CHECKS

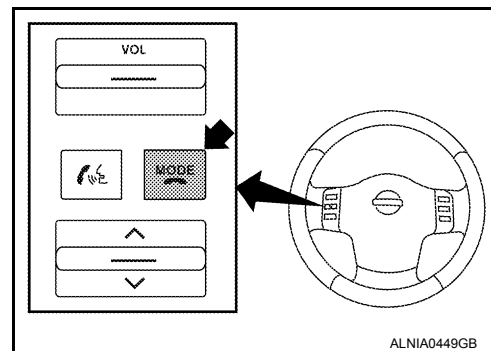
- Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switch [phone operation button (☎)/POWER on and MODE select button (MODE)] stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

### TECHNICIAN PERFORMED DIAGNOSTIC CHECK PROCEDURE

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



4. While the prompt is playing, press and hold the POWER on and MODE select button (MODE) located within the steering wheel audio control switch until you hear the “Diagnostics mode” prompt. The Bluetooth system will sound a 5 second beep.
5. While the beep is sounding, press and hold the POWER on and MODE select button (MODE) located within the steering wheel audio control switch again until you hear prompts.
6. The Bluetooth system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician. Refer to [AV-46, "Work Flow"](#).
7. After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails refer to [AV-46, "Work Flow"](#).
8. Self-diagnosis mode is complete when the voice prompt says “All diagnostic functions completed”.



### Work Flow

INFOID:000000007328201

Failure Message	Action
"Internal failure"	Replace Bluetooth control unit. Refer to <a href="#">AV-120, "Removal and Installation"</a> .
"Bluetooth antenna open"	1. Inspect harness connection. 2. Replace Bluetooth antenna. Refer to <a href="#">AV-120, "Removal and Installation"</a> .
"Bluetooth antenna shorted"	

## DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

< SYSTEM DESCRIPTION >

[MID (CC), PREMIUM (KC) AUDIO]

Failure Message	Action
"Phone operation button for Hands Free System is stuck"	Check steering wheel audio control switch. Refer to <a href="#">AV-62. "Description"</a> .
"POWER on and MODE select button for the Hands Free System is stuck"	
"Microphone test" (failed interactive test)	1. Inspect harness between Bluetooth control unit and microphone. 2. Replace microphone. Refer to <a href="#">AV-122. "Removal and Installation"</a> .

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## POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

### DTC/CIRCUIT DIAGNOSIS

#### POWER SUPPLY AND GROUND CIRCUIT AUDIO UNIT

##### AUDIO UNIT : Diagnosis Procedure (King Cab)

INFOID:000000007328202

Regarding Wiring Diagram information, refer to [AV-96, "Wiring Diagram - King Cab"](#).

### 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	6	Battery power	29
	10	Ignition switch ACC or ON	4

Are the fuses OK?

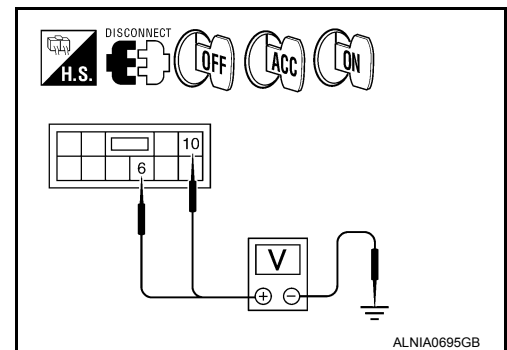
YES >> GO TO 2

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse [GI-49, "Circuit Inspection"](#).

### 2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect audio unit connector M64.
2. Check voltage between the audio unit connector M64 and ground.

(+) (+)		(-) (-)	OFF	ACC	ON
Connector	Terminal				
M64	6	Ground	Battery voltage	Battery voltage	Battery voltage
	10	Ground	0V	Battery voltage	Battery voltage



Are the voltage results as specified?

YES >> GO TO 3

NO >> • Check connector housing for disconnected or loose terminals.  
• Repair or replace 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.

##### AUDIO UNIT : Diagnosis Procedure (Crew Cab)

INFOID:000000007328203

Regarding Wiring Diagram information, refer to [AV-82, "Wiring Diagram - Crew Cab"](#).

### 1.CHECK FUSES

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



# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

Unit	Terminals	Signal name	Fuse No.
Audio unit	6	Battery power	29
	10	Ignition switch ACC or ON	4

Are the fuses OK?

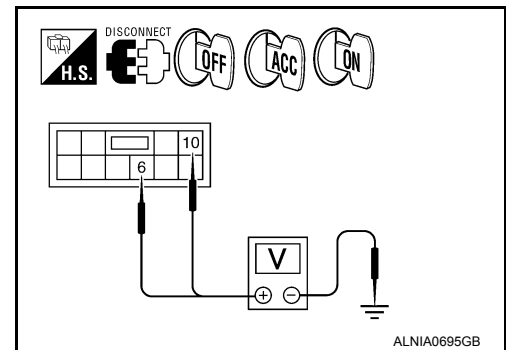
YES >> GO TO 2

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse [GI-49, "Circuit Inspection"](#).

## 2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect audio unit connector M88.
2. Check voltage between the audio unit connector M88 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M88	6	Ground	Battery voltage	Battery voltage	Battery voltage
	10	Ground	0V	Battery voltage	Battery voltage



Are the voltage results as specified?

YES >> GO TO 3

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

## 3. GROUND CIRCUIT CHECK

Inspect audio unit case ground.

Does case ground pass inspection?

YES >> Inspection End.

NO >> Repair audio unit case ground.

## SATELLITE RADIO TUNER

### SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000007328204

Regarding Wiring Diagram information, refer to [AV-82, "Wiring Diagram - Crew Cab"](#) or [AV-96, "Wiring Diagram - King Cab"](#).

## 1. CHECK FUSES

Check that the following fuses of the satellite radio tuner (factory installed) are not blown.

Unit	Terminals	Signal name	Fuse No.
Satellite radio tuner (factory installed)	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 [GI-49, "Circuit Inspection"](#).

## 2. POWER SUPPLY CIRCUIT CHECK

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

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M41	32	Ground	Battery voltage	Battery voltage	Battery voltage
	36		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 or replace harness or connector.

## 3. GROUND CIRCUIT CHECK

Inspect satellite radio tuner (factory installed) case ground.

Does case ground pass inspection?

YES >> Inspection End.

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

## BLUETOOTH CONTROL UNIT

### BLUETOOTH CONTROL UNIT : Diagnosis Procedure

INFOID:000000007328205

Regarding Wiring Diagram information, refer to [AV-82, "Wiring Diagram - Crew Cab"](#) or [AV-96, "Wiring Diagram - King Cab"](#).

## 1. CHECK FUSE

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

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

Is inspection result OK?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse [GI-49, "Circuit Inspection"](#).

## 2. CHECK POWER SUPPLY CIRCUIT

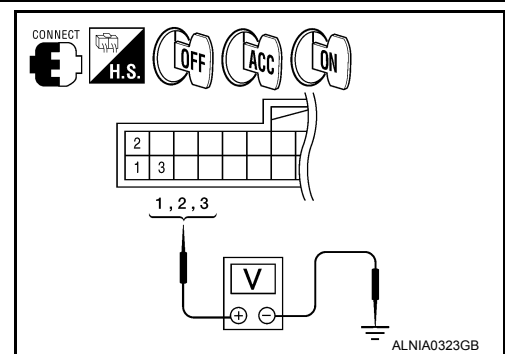
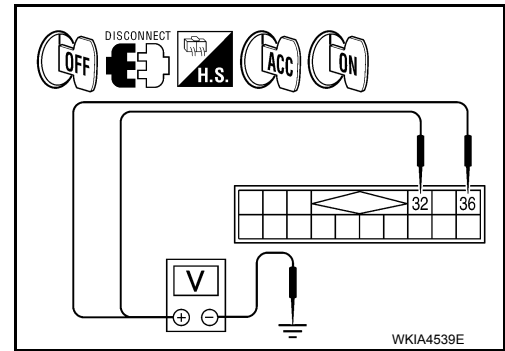
Check voltage between Bluetooth control unit harness connector B141 and ground.

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

Are the voltage readings as specified?

YES >> GO TO 3.

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



# POWER SUPPLY AND GROUND CIRCUIT

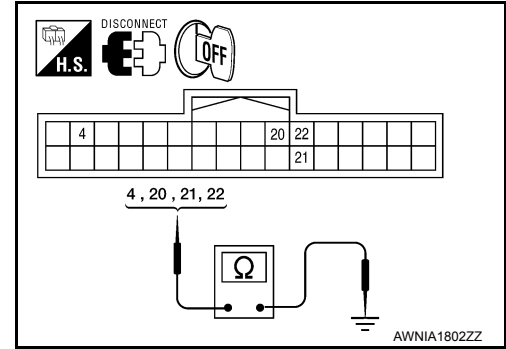
< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

## 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
B141	4	Ground	Yes
	20		
	21 (King Cab)		
	22		



Are continuity results as specified?

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

## MICROPHONE

### MICROPHONE : Diagnosis Procedure

INFOID:000000007328206

Regarding Wiring Diagram information, refer to [AV-82, "Wiring Diagram - Crew Cab"](#) or [AV-96, "Wiring Diagram - King Cab"](#).

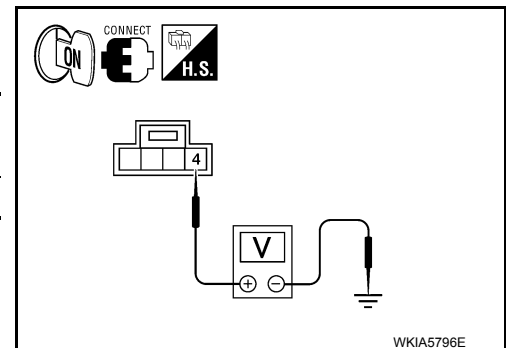
## 1.CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

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

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

Is approximately 5V present?

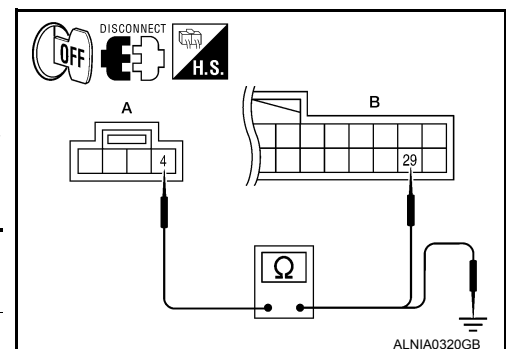
- YES >> GO TO 3  
NO >> GO TO 2



## 2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect microphone and Bluetooth control unit harness connectors.
3. Check continuity between microphone harness connector R8 (A) terminal 4 and Bluetooth control unit harness connector B141 (B) terminal 29.

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



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

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

A		—	Continuity
Connector	Terminal		
R8	4	Ground	No

Are the continuity test results as specified?

YES >> Replace the Bluetooth control unit. Refer to [AV-120, "Removal and Installation"](#).

NO >> Repair harness or connector.

## 3.CHECK GROUND CIRCUIT

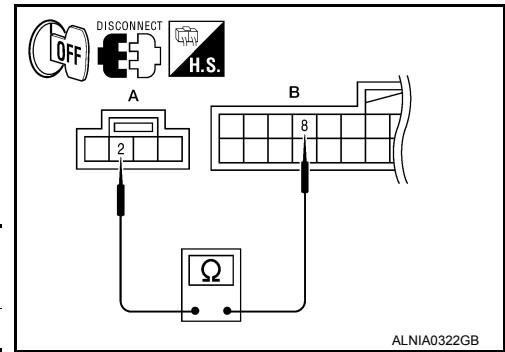
1. Turn ignition switch OFF.
2. Disconnect microphone harness connector R8 and Bluetooth control unit harness connector B141.
3. Check continuity between microphone harness connector R8 (A) terminal 2 and Bluetooth control unit harness connector B141 (B) terminal 8.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R8	2	B141	8	Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness or connector.



# FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

## FRONT DOOR SPEAKER

### Description

INFOID:000000007328207

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

### Diagnosis Procedure (Crew Cab)

INFOID:000000007328208

Regarding Wiring Diagram information, refer to [AV-82, "Wiring Diagram - Crew Cab"](#).

## 1.CONNECTOR CHECK

Check the audio unit 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 unit connector M88 and suspect speaker connector.
2. Check continuity between audio unit harness connector M88 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M88	1	D12	2	Yes
	2		1	
	3	D112	2	
	4		1	

3. Check continuity between audio unit harness connector M88 (A) and ground.

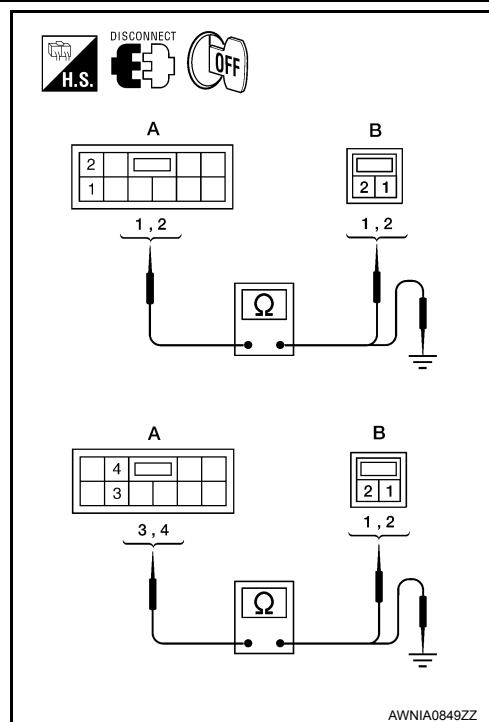
A		—	Continuity
Connector	Terminal		
M88	1	Ground	No
	2		
	3		
	4		

Are continuity test results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

## 3.SPEAKER SIGNAL CHECK

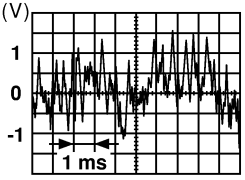


# FRONT DOOR SPEAKER

## < DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

1. Connect audio unit connector and suspect speaker connector.
2. Turn ignition switch ACC.
3. Push audio unit "POWER" switch.
4. Check the signal between audio unit harness connector M88 terminals with CONSULT or oscilloscope.

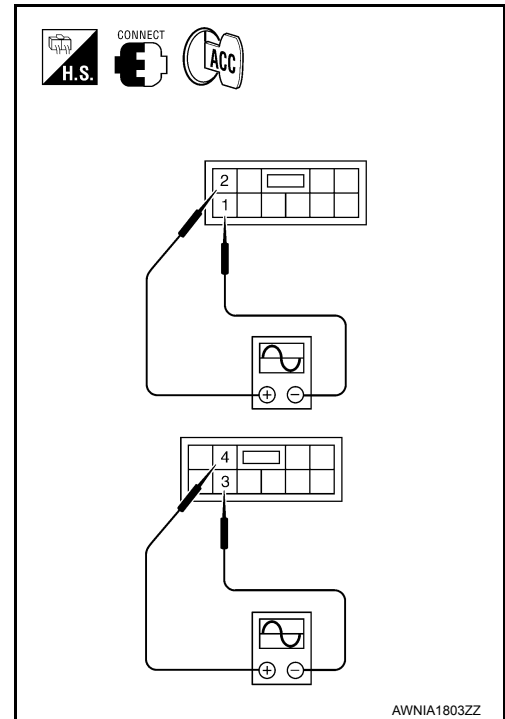
Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M88	2	1	Receive audio signal	
	4	3		

SKIA0177E

Are the audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to [AV-117, "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-115, "Removal and Installation"](#).



AWNIA1803ZZ

INFOID:000000007328209

## Diagnosis Procedure (King Cab)

Regarding Wiring Diagram information, refer to [AV-96, "Wiring Diagram - King Cab"](#).

### 1.CONNECTOR CHECK

Check the audio unit 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

# FRONT DOOR SPEAKER

## < DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

1. Disconnect audio unit connector M64 and suspect speaker connector.
2. Check continuity between audio unit harness connector M64 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M64	1	D12	2	Yes
	2		1	
	3	D112	2	
	4		1	

3. Check continuity between audio unit harness connector M64 (A) and ground.

A		—	Continuity
Connector	Terminal		
M64	1	Ground	No
	2		
	3		
	4		

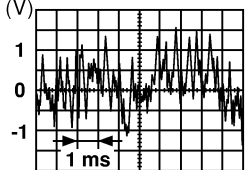
Are continuity test results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

## 3. SPEAKER SIGNAL CHECK

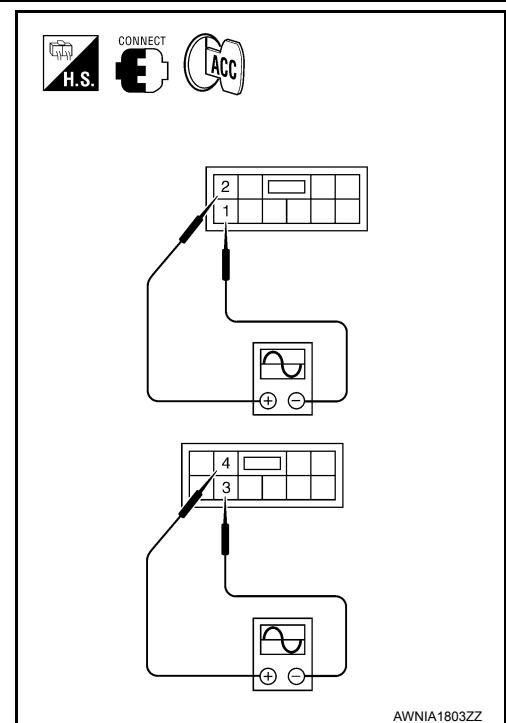
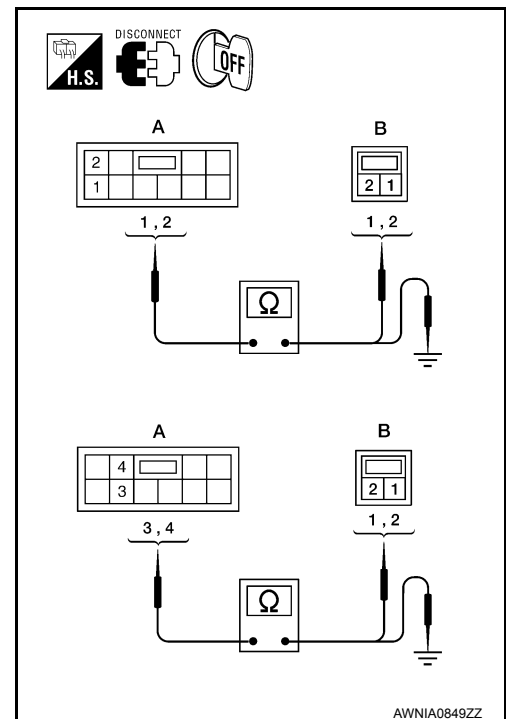
1. Connect audio unit connector and suspect speaker connector.
2. Turn ignition switch ACC.
3. Push audio unit "POWER" switch.
4. Check the signal between audio unit harness connector M64 terminals with CONSULT or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M64	2	1	Receive audio signal	
	4	3		

Are the audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to [AV-117. "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-115. "Removal and Installation"](#).



# FRONT TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

## FRONT TWEETER

### Description

INFOID:000000007328210

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

### Diagnosis Procedure (Crew Cab)

INFOID:000000007328211

Regarding Wiring Diagram information, refer to [AV-82, "Wiring Diagram - Crew Cab"](#).

## 1.CONNECTOR CHECK

Check the audio unit 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 unit connector M88 and suspect speaker connector.
2. Check continuity between audio unit harness connector M88 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M88	1	M109	2	Yes
	2		1	
	3	M111	2	
	4		1	

3. Check continuity between audio unit harness connector M88 (A) and ground.

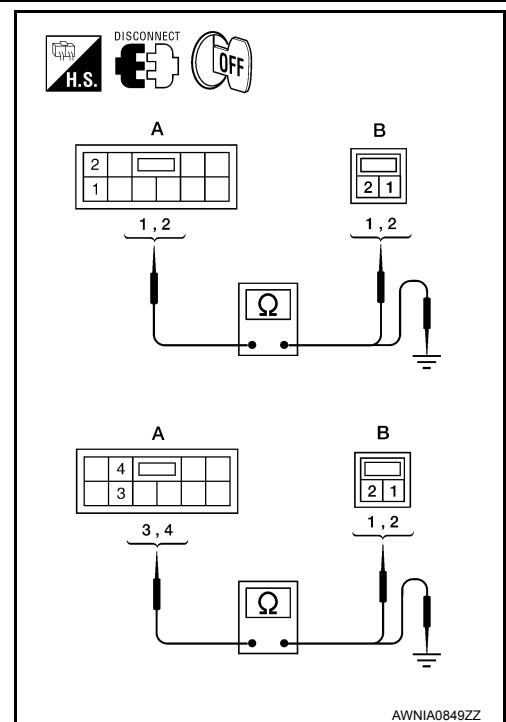
A		—	Continuity
Connector	Terminal		
M88	1	Ground	No
	2		
	3		
	4		

Are continuity test results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

## 3.SPEAKER SIGNAL CHECK



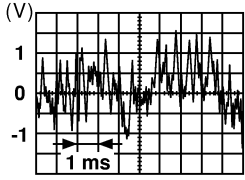


# FRONT TWEETER

## < DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

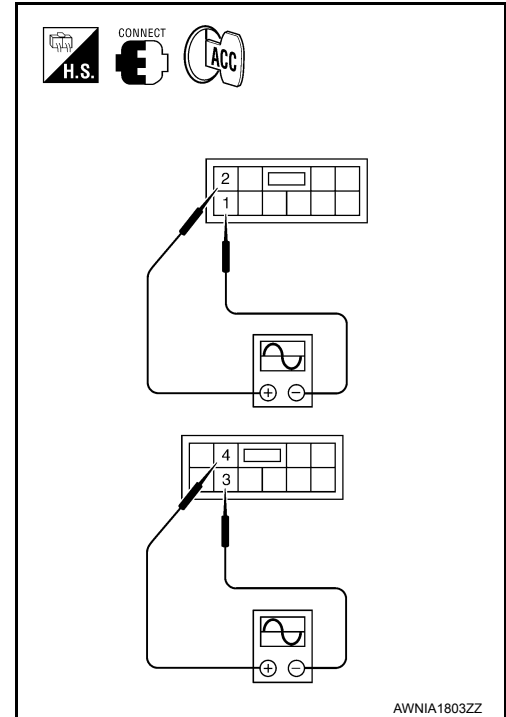
1. Connect audio unit connector and suspect speaker connector.
2. Turn ignition switch ACC.
3. Push audio unit "POWER" switch.
4. Check the signal between audio unit harness connector M88 terminals with CONSULT or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M88	2	1	Receive audio signal	 SKIA0177E
	4	3		

Are the audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to [AV-116, "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-115, "Removal and Installation"](#).



## Diagnosis Procedure (King Cab)

INFOID:000000007328212

Regarding Wiring Diagram information, refer to [AV-96, "Wiring Diagram - King Cab"](#).

## 1.CONNECTOR CHECK

Check the audio unit 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

## FRONT TWEETER

### < DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

1. Disconnect audio unit connector M64 and suspect speaker connector.
2. Check continuity between audio unit harness connector M64 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M64	1	M109	2	Yes
	2		1	
	3	M111	2	
	4		1	

3. Check continuity between audio unit harness connector M64 (A) and ground.

A		—	Continuity
Connector	Terminal		
M64	1	Ground	No
	2		
	3		
	4		

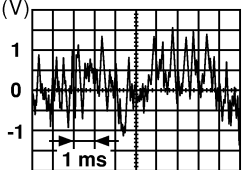
Are continuity test results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

### 3. SPEAKER SIGNAL CHECK

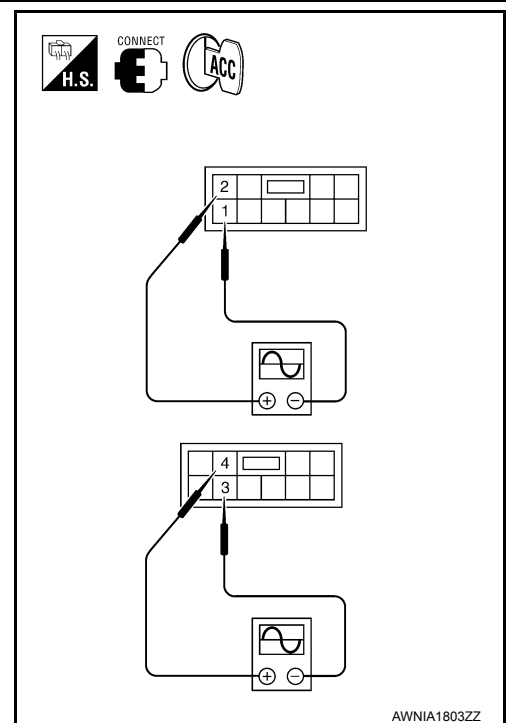
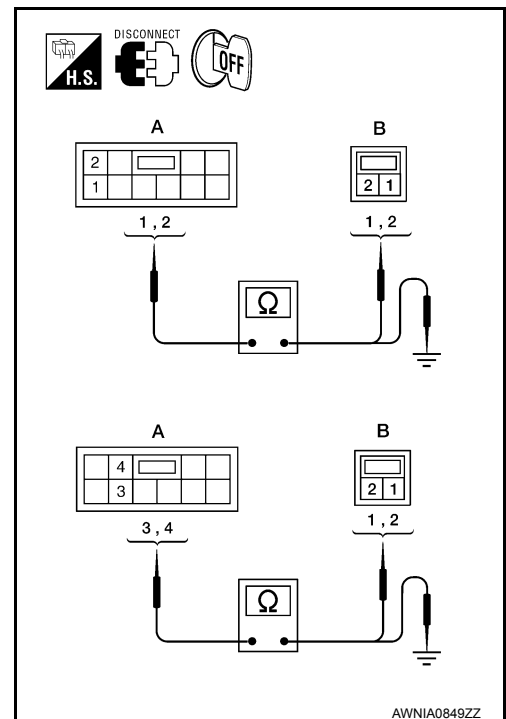
1. Connect audio unit connector and suspect speaker connector.
2. Turn ignition switch ACC.
3. Push audio unit "POWER" switch.
4. Check the signal between audio unit harness connector M64 terminals with CONSULT or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M64	2	1	Receive audio signal	 <p>(V)</p> <p>1</p> <p>0</p> <p>-1</p> <p>1 ms</p> <p>SKIA0177E</p>
	4	3		

Are the audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to [AV-116, "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-115, "Removal and Installation"](#).



# REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

## REAR DOOR SPEAKER

### Description

INFOID:000000007328213

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

### Diagnosis Procedure (Crew Cab)

INFOID:000000007328214

Regarding Wiring Diagram information, refer to [AV-82, "Wiring Diagram - Crew Cab"](#).

### 1.CONNECTOR CHECK

Check the audio unit 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 unit connector M87 and the suspect speaker connector.
2. Check continuity between audio unit harness connector M87 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M87	13	D207	2	Yes
	14		1	
	15	D307	2	
	16		1	

3. Check continuity between audio unit harness connector M87 (A) and ground.

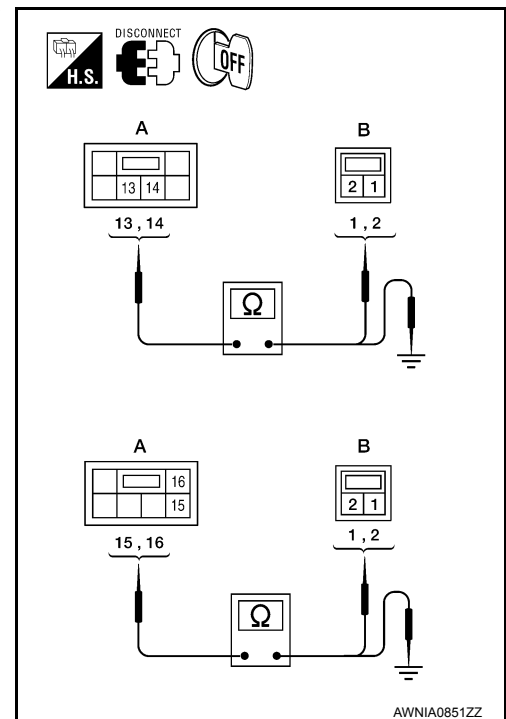
A		—	Continuity
Connector	Terminal		
M87	13	Ground	No
	14		
	15		
	16		

Are the continuity test results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

### 3.SPEAKER SIGNAL CHECK

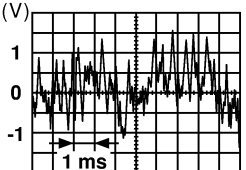


# REAR DOOR SPEAKER

## < DTC/CIRCUIT DIAGNOSIS >

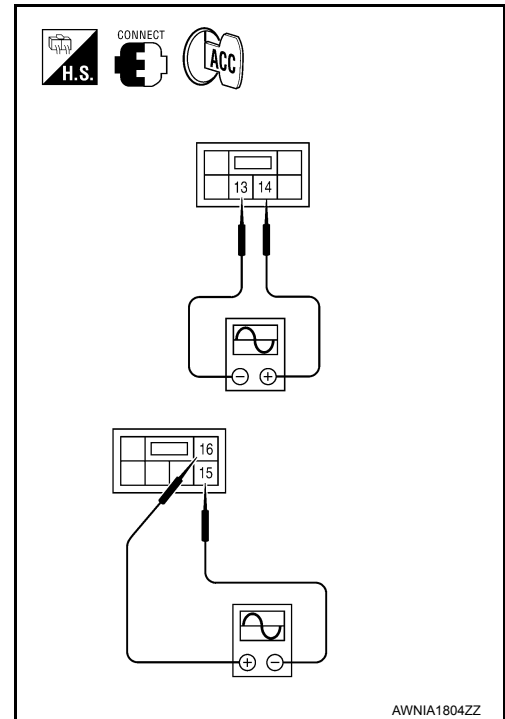
[MID (CC), PREMIUM (KC) AUDIO]

1. Connect audio unit connector M87 and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit "POWER" switch.
4. Check the signal between audio unit harness connector M87 terminals with CONSULT or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M44	14	13	Receive audio signal	
	16	15		

Is the audio signal voltage reading as specified?

- YES >> Replace suspect speaker. Refer to [AV-118, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-115, "Removal and Installation"](#).



## Diagnosis Procedure (King Cab)

INFOID:000000007328215

Regarding Wiring Diagram information, refer to [AV-96, "Wiring Diagram - King Cab"](#).

## 1.CONNECTOR CHECK

Check the audio unit 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

# REAR DOOR SPEAKER

## < DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

1. Disconnect audio unit connector M44 and the suspect speaker connector.
2. Check continuity between audio unit harness connector M44 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M44	13	B76	2	Yes
	14		1	
	15	B160	2	
	16		1	

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

A		—	Continuity
Connector	Terminal		
M44	13	Ground	No
	14		
	15		
	16		

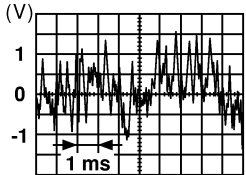
Are the continuity test results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

## 3. SPEAKER SIGNAL CHECK

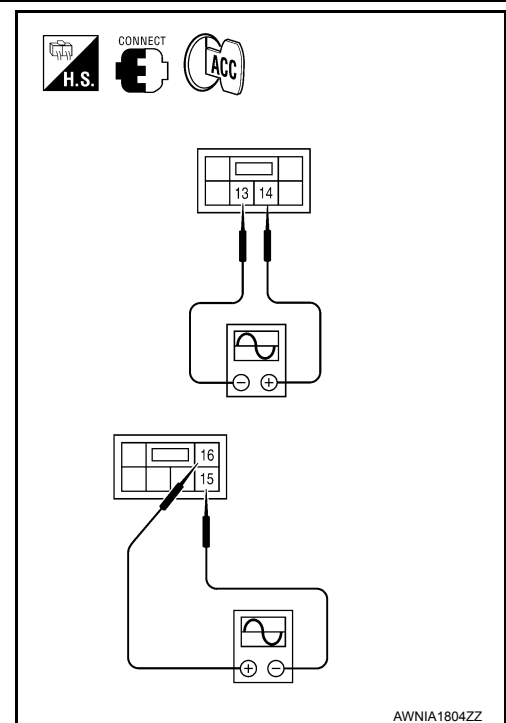
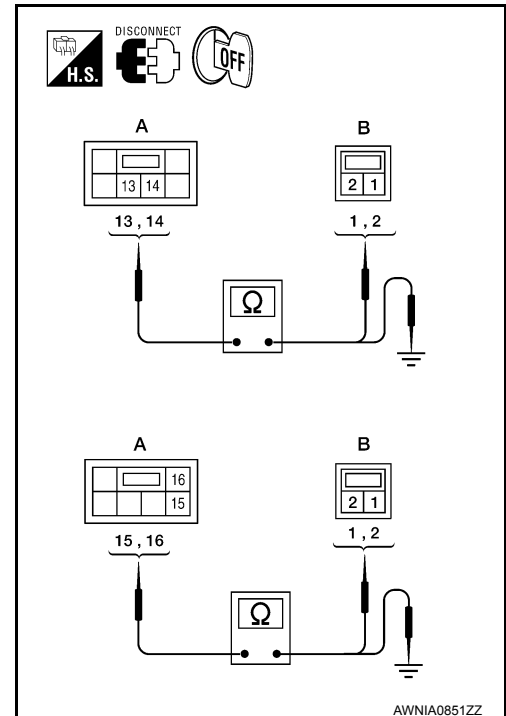
1. Connect audio unit connector M44 and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit "POWER" switch.
4. Check the signal between audio unit harness connector M44 terminals with CONSULT or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M44	14	13	Receive audio signal	 <p>SKIA0177E</p>
	16	15		

Is the audio signal voltage reading as specified?

YES >> Replace suspect speaker. Refer to [AV-118, "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-115, "Removal and Installation"](#).



# STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

## STEERING SWITCH

### Description

INFOID:000000007328216

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

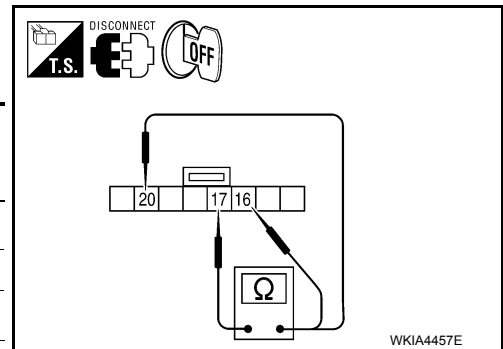
INFOID:000000007328217

Regarding Wiring Diagram information, refer to [AV-82, "Wiring Diagram - Crew Cab"](#) or [AV-96, "Wiring Diagram - King Cab"](#).

## 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.

Terminal	Signal name	Condition	Resistance (Ω) (Approx.)
16 17	Seek (down)	Depress ▽ button.	165
	Volume (down)	Depress VOL down button.	652
	Mode/end	Depress MODE button.	0
20 17	Seek (up)	Depress △ button.	165
	Volume (up)	Depress VOL up button.	652
	Phone/send	Depress button.	0



Do the steering wheel audio control switch buttons check OK?

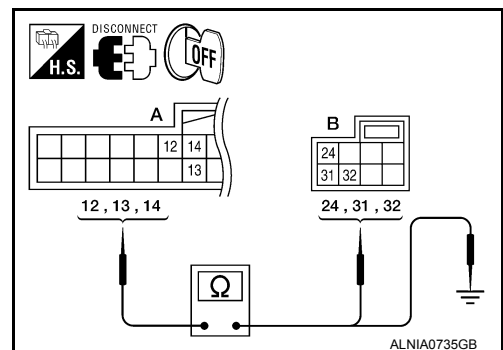
YES >> GO TO 2

NO >> Replace steering wheel audio control switch. Refer to [AV-119, "Removal and Installation"](#).

## 2.CHECK HARNESS

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B141	12	M30	24	Yes
	13		32	
	14		31	



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

A		—	Continuity
Connector	Terminal		
B141	12	Ground	No
	13		
	14		

## STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

Are the continuity results as specified?

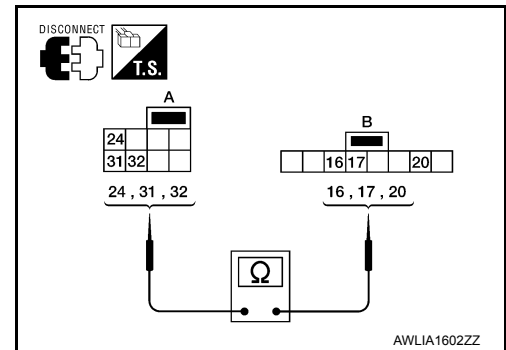
YES >> GO TO 3

NO >> Repair or replace harness or connector.

### 3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M102.
2. Check continuity between spiral cable harness connector M30 (A) and M102 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M102	20	Yes
	31		17	
	32		16	



Does the spiral cable check OK?

YES >> Inspection End.

NO >> Replace spiral cable. Refer to [SR-13, "Removal and Installation"](#).

# COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

## COMMUNICATION SIGNAL CIRCUIT

### SATELLITE RADIO TUNER

#### SATELLITE RADIO TUNER : Description

INFOID:000000007328218

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

#### SATELLITE RADIO TUNER : Diagnosis Procedure (Crew Cab)

INFOID:000000007328219

Regarding Wiring Diagram information, refer to [AV-82, "Wiring Diagram - Crew Cab"](#).

#### 1.CHECK HARNESS - REQ1

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector M41 and audio unit connector M86.
3. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 28 and audio unit harness connector M86 (B) terminal 48.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	28	M86	48	Yes

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

A		—	Continuity
Connector	Terminal		
M41	28	Ground	No

Are continuity results as specified?

YES >> GO TO 2

NO >> Repair or replace harness or connector.

#### 2.CHECK HARNESS - TXD

1. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 29 and audio unit harness connector M86 (B) terminal 49.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	29	M86	49	Yes

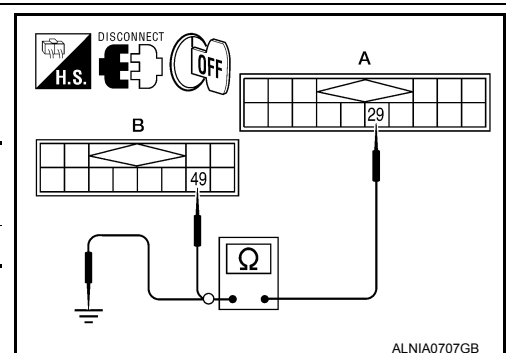
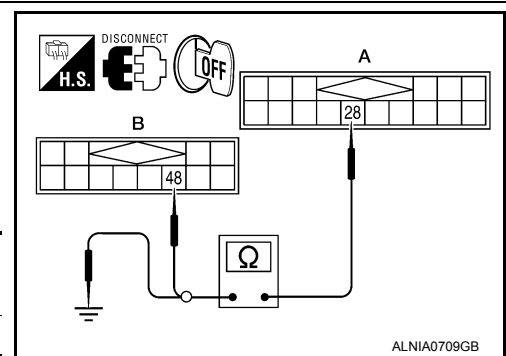
2. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 29 and ground.

A		—	Continuity
Connector	Terminal		
M41	29	Ground	No

Are continuity results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.





# COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

## 3.CHECK HARNESS - RXD

1. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 30 and audio unit harness connector M86 (B) terminal 50.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	30	M86	50	Yes

2. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 30 and ground.

A		—	Continuity
Connector	Terminal		
M41	30	Ground	No

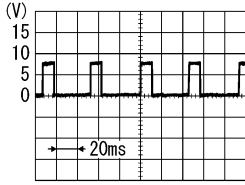
Are continuity results as specified?

YES >> GO TO 4

NO >> Repair or replace harness or connector.

## 4.CHECK REQ1 SIGNAL

1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
2. Turn ignition switch to ACC
3. Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 28 and ground with CONSULT or oscilloscope.

(+) Reference signal		(-)	Reference signal
Connector	Terminal		
M41	28	Ground	 <p>SKIB3825E</p>

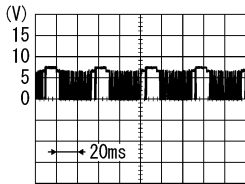
Are voltage readings as specified?

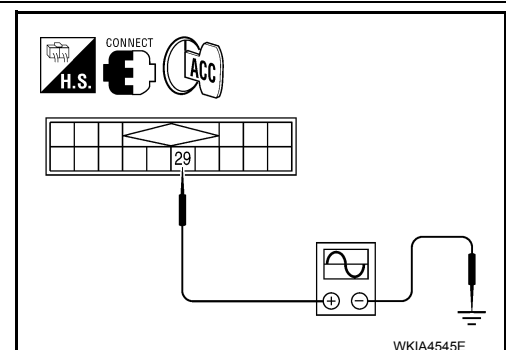
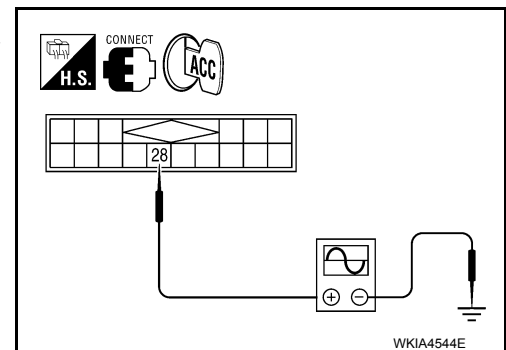
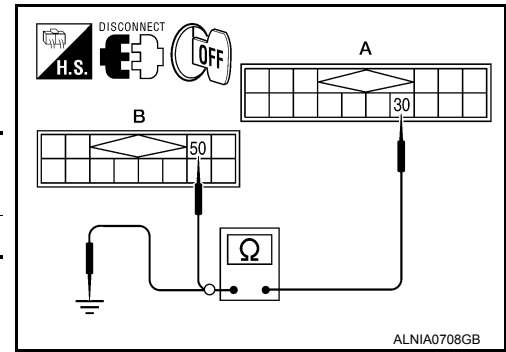
YES >> GO TO 5

NO >> Replace audio unit. Refer to [AV-115. "Removal and Installation"](#).

## 5.CHECK TXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 29 and ground with CONSULT or oscilloscope.

(+) Reference signal		(-)	Reference signal
Connector	Terminal		
M41	29	Ground	 <p>SKIB3824E</p>



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
O  
P

AV

# COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

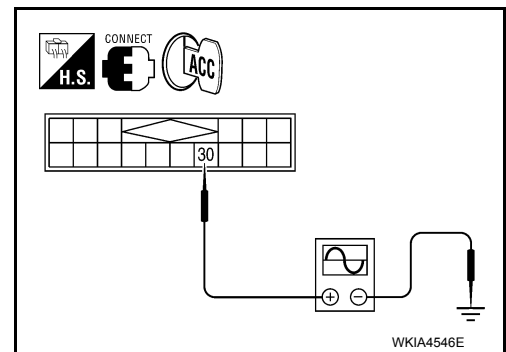
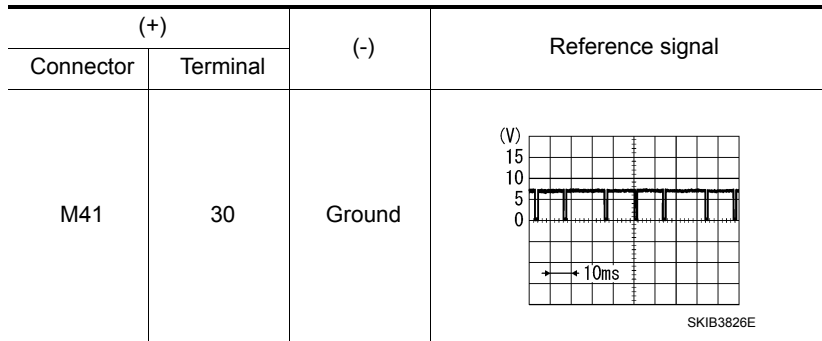
Are the voltage readings as specified?

YES >> GO TO 6

NO >> Replace satellite radio tuner. Refer to [AV-128, "Removal and Installation"](#)

## 6.CHECK RXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 30 and ground with CONSULT or oscilloscope.



Are the voltage readings as specified?

YES >> Replace satellite radio tuner. Refer to [AV-128, "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-115, "Removal and Installation"](#).

## SATELLITE RADIO TUNER : Diagnosis Procedure (King Cab)

INFOID:000000007328220

Regarding Wiring Diagram information, refer to [AV-96, "Wiring Diagram - King Cab"](#).

## 1.CHECK HARNESS - REQ1

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

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

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

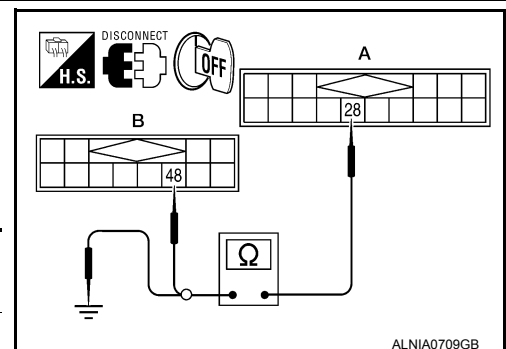
A		—	Continuity
Connector	Terminal		
M41	28	Ground	No

Are continuity results as specified?

YES >> GO TO 2

NO >> Repair or replace harness or connector.

## 2.CHECK HARNESS - TXD



# COMMUNICATION SIGNAL CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

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

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

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

A		—	Continuity
Connector	Terminal		
M41	29	Ground	No

Are continuity results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

### 3.CHECK HARNESS - RXD

1. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 30 and audio unit harness connector M42 (B) terminal 50.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	30	M42	50	Yes

2. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 30 and ground.

A		—	Continuity
Connector	Terminal		
M41	30	Ground	No

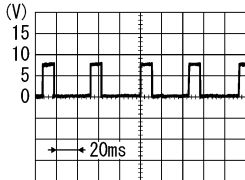
Are continuity results as specified?

YES >> GO TO 4

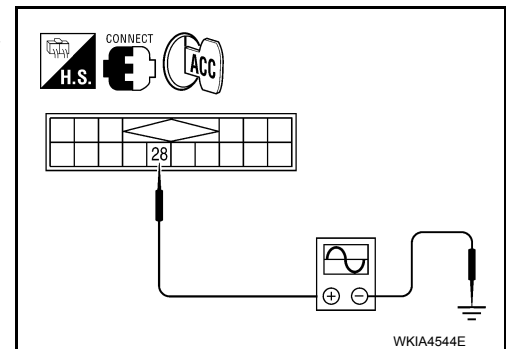
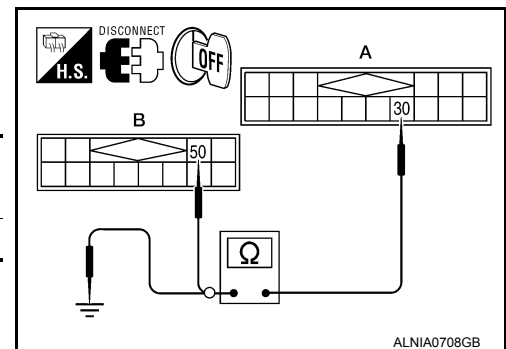
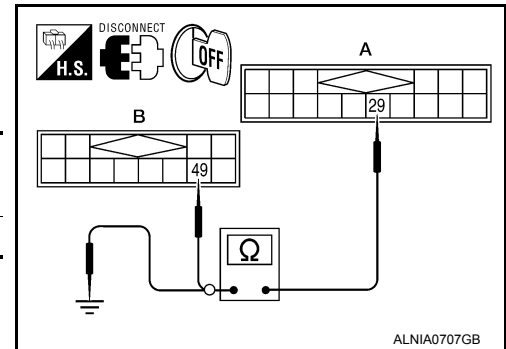
NO >> Repair or replace harness or connector.

### 4.CHECK REQ1 SIGNAL

1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
2. Turn ignition switch to ACC
3. Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 28 and ground with CONSULT or oscilloscope.

(+) Reference signal		(-)	Reference signal
Connector	Terminal		
M41	28	Ground	 <p>SKIB3825E</p>

Are voltage readings as specified?



# COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

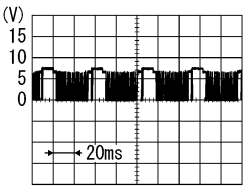
[MID (CC), PREMIUM (KC) AUDIO]

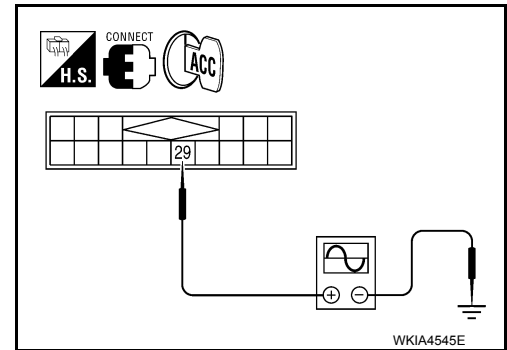
YES >> GO TO 5

NO >> Replace audio unit. Refer to [AV-115, "Removal and Installation"](#).

## 5.CHECK TXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 29 and ground with CONSULT or oscilloscope.

(+)		(-)	Reference signal
Connector	Terminal		
M41	29	Ground	 <p>SKIB3824E</p>



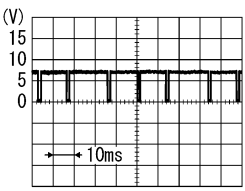
Are the voltage readings as specified?

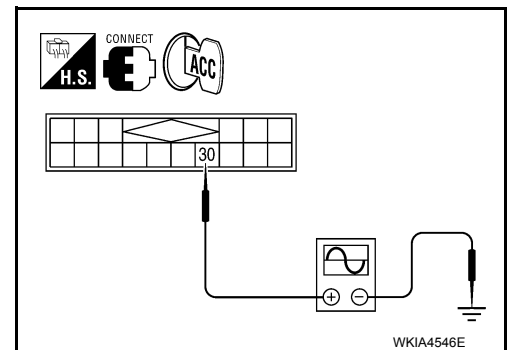
YES >> GO TO 6

NO >> Replace satellite radio tuner. Refer to [AV-128, "Removal and Installation"](#)

## 6.CHECK RXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 30 and ground with CONSULT or oscilloscope.

(+)		(-)	Reference signal
Connector	Terminal		
M41	30	Ground	 <p>SKIB3826E</p>



Are the voltage readings as specified?

YES >> Replace satellite radio tuner. Refer to [AV-128, "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-115, "Removal and Installation"](#).

# SOUND SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

## SOUND SIGNAL CIRCUIT SATELLITE RADIO TUNER

### SATELLITE RADIO TUNER : Description

INFOID:000000007328221

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 (Crew Cab)

INFOID:000000007328222

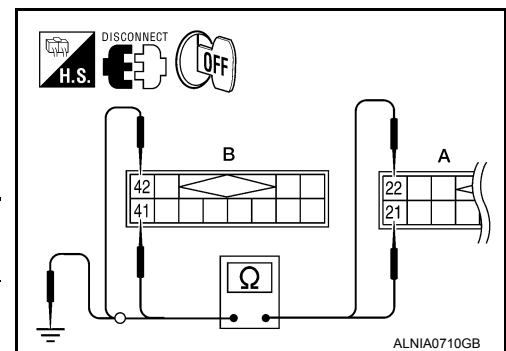
Regarding Wiring Diagram information, refer to [AV-82, "Wiring Diagram - Crew Cab"](#).

#### LEFT CHANNEL

##### 1.CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector M41 and audio unit connector M86.
3. Check continuity between satellite radio tuner (factory installed) connector M41 (A) and audio unit connector M86 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	21	M86	41	Yes
	22		42	



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

A		—	Continuity
Connector	Terminal		
M41	21	Ground	No
	22		

Are continuity results as specified?

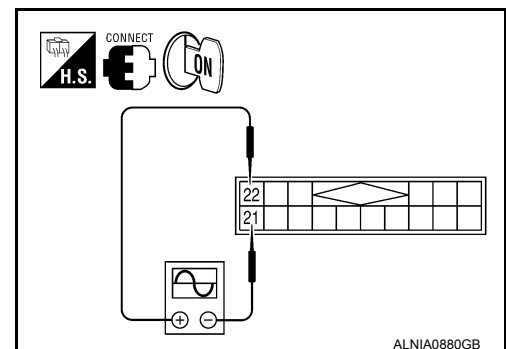
YES >> GO TO 2

NO >> Repair or replace harness or connector.

##### 2.CHECK LEFT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and audio unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector M41 terminals 21 and 22 with CONSULT or oscilloscope.

(+) Terminal		(-) Terminal	Reference signal
Connector	Terminal	Terminal	
M41	22	21	



Are voltage readings as specified?

# SOUND SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

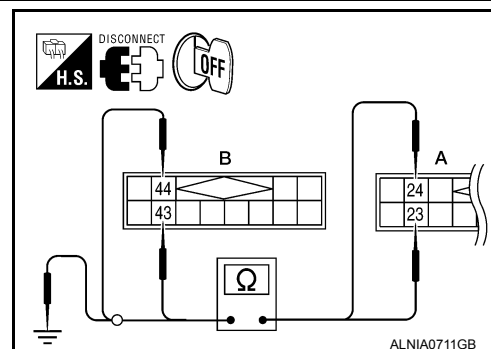
- YES >> Replace audio unit. Refer to [AV-115. "Removal and Installation"](#).  
 NO >> Replace satellite radio tuner. Refer to [AV-128. "Removal and Installation"](#).

## RIGHT CHANNEL

### 1.CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector M41 and audio unit connector M86.
3. Check continuity between satellite radio tuner (factory installed) M41 (A) and audio unit M86 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	23	M86	43	Yes
	24		44	



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

A		—	Continuity
Connector	Terminal		
M41	23	Ground	No
	24		

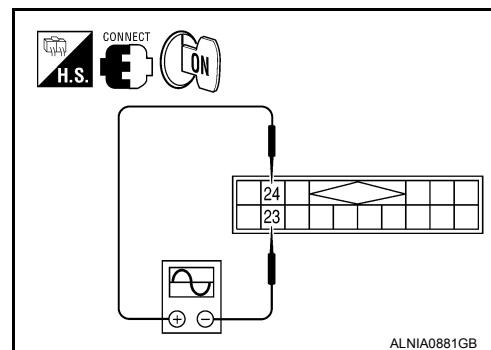
Are continuity results as specified?

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

### 2.CHECK RIGHT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and audio unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector M41 terminals 23 and 24 with CONSULT or oscilloscope.

(+) Terminal		(-) Terminal	Reference signal
Connector	Terminal	Terminal	
M41	24	23	



Are voltage readings as specified?

- YES >> Replace audio unit. Refer to [AV-115. "Removal and Installation"](#).  
 NO >> Replace satellite radio tuner. Refer to [AV-128. "Removal and Installation"](#).

## SATELLITE RADIO TUNER : Diagnosis Procedure (King Cab)

INFOID:000000007328223

Regarding Wiring Diagram information, refer to [AV-96. "Wiring Diagram - King Cab"](#).

## LEFT CHANNEL

### 1.CHECK HARNESS

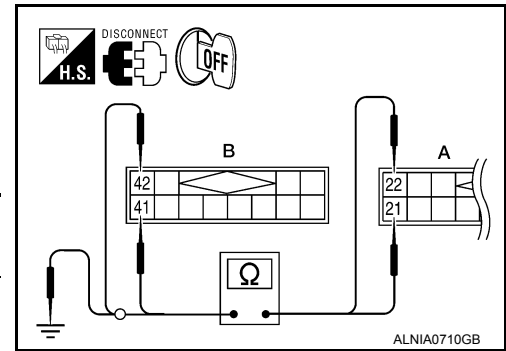
# SOUND SIGNAL CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	21	M42	41	Yes
	22		42	



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

A		—	Continuity
Connector	Terminal		
M41	21	Ground	No
	22		

Are continuity results as specified?

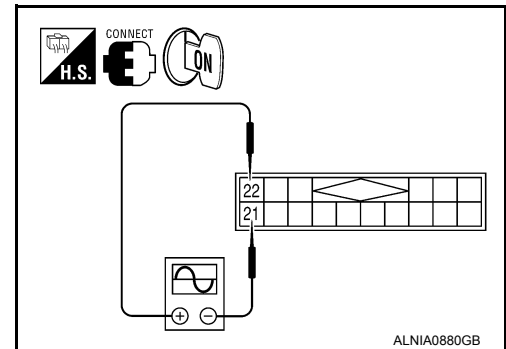
YES >> GO TO 2

NO >> Repair or replace harness or connector.

## 2.CHECK LEFT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and audio unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector M41 terminals 21 and 22 with CONSULT or oscilloscope.

(+) Terminal		(-) Terminal	Reference signal
Connector	Terminal	Terminal	
M41	22	21	<p>SKIB3609E</p>



Are voltage readings as specified?

YES >> Replace audio unit. Refer to [AV-115, "Removal and Installation"](#).

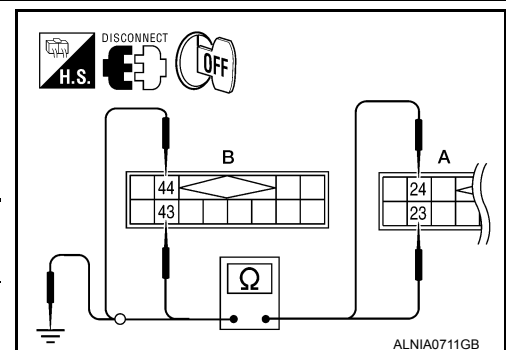
NO >> Replace satellite radio tuner. Refer to [AV-128, "Removal and Installation"](#).

## RIGHT CHANNEL

### 1.CHECK HARNESS

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	23	M42	43	Yes
	24		44	



## SOUND SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

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

A		—	Continuity
Connector	Terminal		
M41	23	Ground	No
	24		

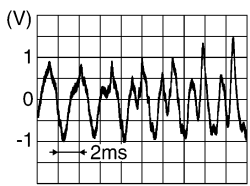
Are continuity results as specified?

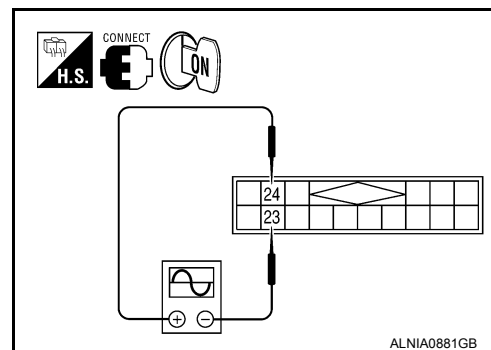
YES >> GO TO 2

NO >> Repair or replace harness or connector.

### 2. CHECK RIGHT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and audio unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector M41 terminals 23 and 24 with CONSULT or oscilloscope.

(+) Terminal		(-) Terminal	Reference signal
Connector	Terminal	Terminal	
M41	24	23	



Are voltage readings as specified?

YES >> Replace audio unit. Refer to [AV-115. "Removal and Installation"](#).

NO >> Replace satellite radio tuner. Refer to [AV-128. "Removal and Installation"](#).



# MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

## MICROPHONE SIGNAL CIRCUIT

### Description

INFOID:000000007328224

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

### Diagnosis Procedure

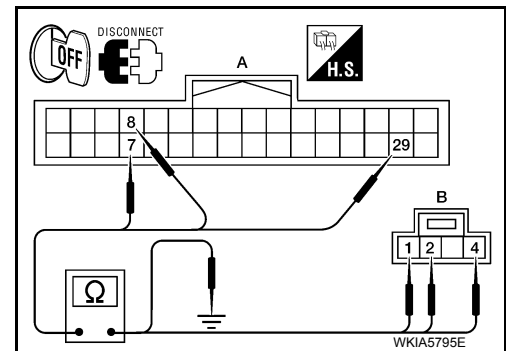
INFOID:000000007328225

Regarding Wiring Diagram information, refer to [AV-82, "Wiring Diagram - Crew Cab"](#) or [AV-96, "Wiring Diagram - King Cab"](#).

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

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

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



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

A		—	Continuity
Connector	Terminal		
B141	7	Ground	No
	8		
	29		

Are the continuity test results as specified?

YES >> GO TO 2

NO >> Repair or replace harness or connector.

### 2.CHECK MICROPHONE POWER SUPPLY

1. Connect Bluetooth control unit connector B141 and microphone connector R8.
2. Turn ignition switch ON.
3. Check voltage between microphone harness connector R8 terminal 4 and ground.

4 - Ground

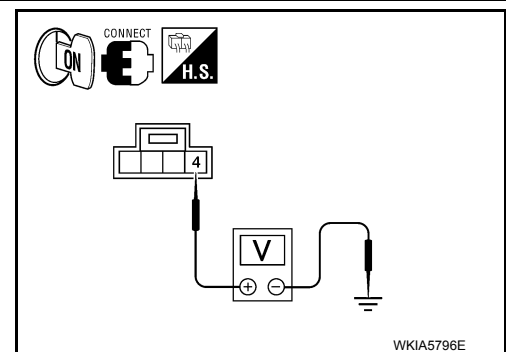
: Approx. 5V

Is voltage reading approx. 5 volts?

YES >> GO TO 3

NO >> Replace Bluetooth control unit. Refer to [AV-120, "Removal and Installation"](#).

### 3.CHECK MICROPHONE SIGNAL

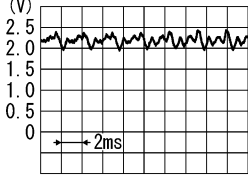


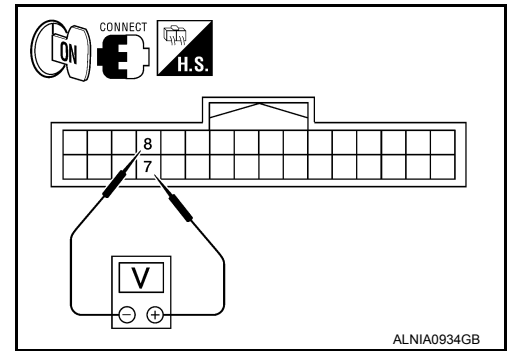
# MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

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

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
B141	7	8	<p>While speaking into MIC</p>  <p>PKIB5037J</p>



Are voltage readings as specified?

- YES >> Replace Bluetooth control unit. Refer to [AV-120. "Removal and Installation"](#).  
 NO >> Replace microphone. Refer to [AV-122. "Removal and Installation"](#).

# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[MID (CC), PREMIUM (KC) AUDIO]

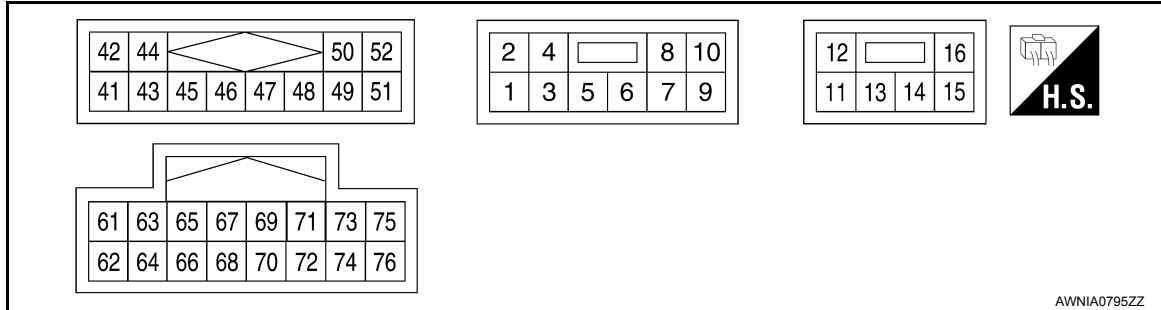
## ECU DIAGNOSIS INFORMATION

### AUDIO UNIT

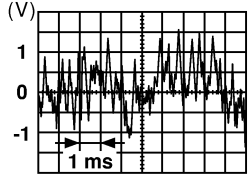
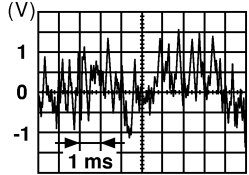
#### Reference Value

INFOID:000000007328226

#### TERMINAL LAYOUT



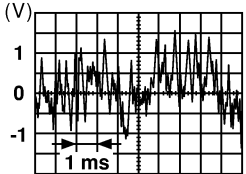
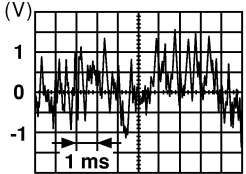
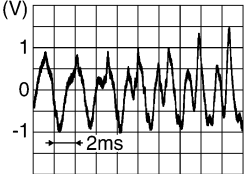
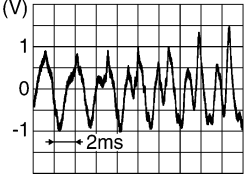
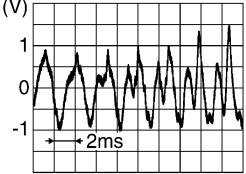
#### PHYSICAL VALUES

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-					
2 (BR)	1 (L)	Audio sound signal front LH	Output	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
4 (LG)	3 (R)	Audio sound signal front RH	Output	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
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

# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >





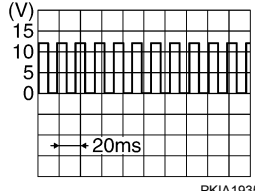
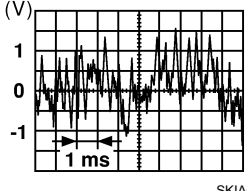
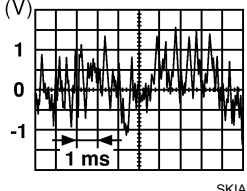
[MID (CC), PREMIUM (KC) AUDIO]

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-					
14 (G)	13 (B)	Audio sound signal rear LH	Output	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
16 (GR)	15 (O)	Audio sound signal rear RH	Output	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
42 (R)	41 (G)	Satellite radio au- dio signal LH	Input	Ignition switch ON	Satellite radio tuner operating	 SKIB3609E
44 (B)	43 (W)	Satellite radio au- dio signal RH	Input	Ignition switch ON	Satellite radio tuner operating	 SKIB3609E
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	 SKIB3609E
63 (R)	-	Mute control	-	-	-	-
67	-	Shield	-	Ignition switch ON	-	0V

# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[MID (CC), PREMIUM (KC) AUDIO]

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-					
69 (V)	71 (O)	Steering switch signal A	Input	Ignition switch ON	Pressing 	0V
					Pressing 	0.75
					Pressing VOL up button	2V
					Except for above	5V
70 (LG)	71 (O)	Steering switch signal B	Input	Ignition switch ON	Pressing 	0V
					Pressing 	0.75V
					Pressing VOL down button	2V
					Except for above	5 V
73 (SB)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	
74 (W)	Ground	Auxiliary audio input RH (+)	Input	Ignition switch ON	Receive audio signal (AUX input)	
75 (B)	Ground	Auxiliary audio input LH (+)	Input	Ignition switch ON	Receive audio signal (AUX input)	
76 (R)	-	Shield	-	-	-	0V

A

B

C

D

E

F

G

H

I

J

K

L

M

AV

O

P

# SATELLITE RADIO TUNER

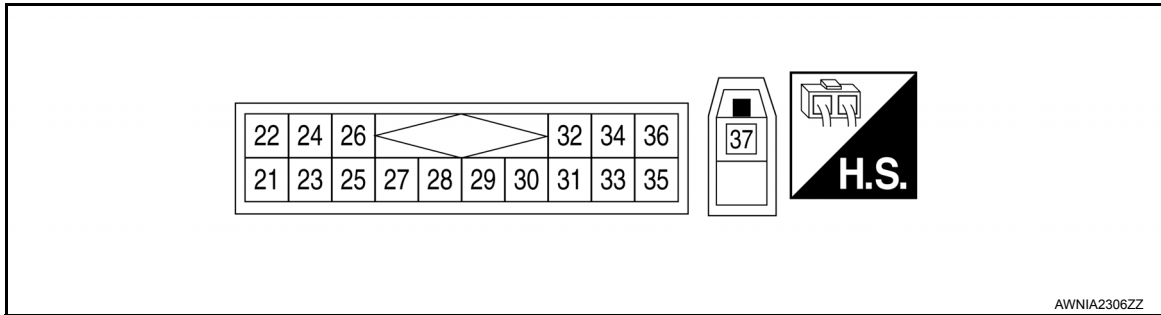
< ECU DIAGNOSIS INFORMATION >

[MID (CC), PREMIUM (KC) AUDIO]

## SATELLITE RADIO TUNER

### Reference Value

INFOID:000000007328227



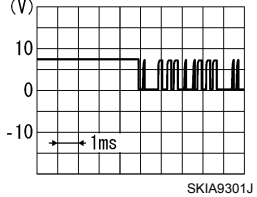
### PHYSICAL VALUES

Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/Output			
22 (R)	21 (G)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIB3609E</p>
24 (B)	23 (W)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIB3609E</p>
28 (O)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIA9299J</p>
29 (P)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	<p>SKIA9300J</p>

# SATELLITE RADIO TUNER

< ECU DIAGNOSIS INFORMATION >

[MID (CC), PREMIUM (KC) AUDIO]

Terminal		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
30 (L)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	
32 (R/B)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
36 (G/B)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
37	—	Satellite antenna	Input	—	—	—

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# BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

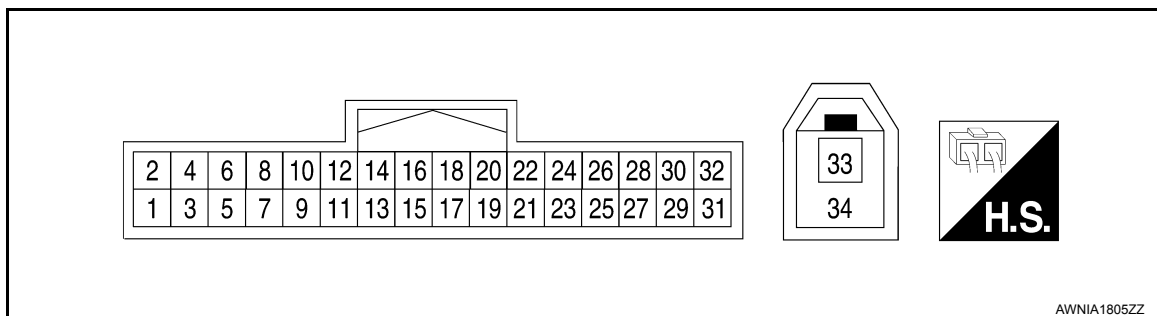
[MID (CC), PREMIUM (KC) AUDIO]

## BLUETOOTH CONTROL UNIT

### Reference Value

INFOID:000000007328228

### TERMINAL LAYOUT



### PHYSICAL VALUES







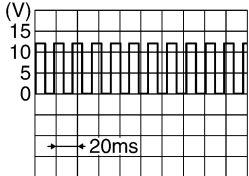
Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ output			
1 (R/B)	Ground	Battery power	Input	–	–	Battery voltage
2 (G/Y)	Ground	ACC power	Input	Ignition switch ACC/ON	–	Battery voltage
3 (W/G)	Ground	IGN power	Input	Ignition switch ON/ START	–	Battery voltage
4 (B)	Ground	Ground	–	–	–	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	<p>SKIB3609E</p>
11 (R)	–	Mute control	–	–	–	–
12 (BR)	14 (G)	Steering switch sig- nal A	Input	Ignition switch ON	Pressing  switch	0V
					Pressing  switch	0.75
					Pressing VOL up switch	2V
					Except for above	5V



# BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[MID (CC), PREMIUM (KC) AUDIO]

Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ output			
13 (L)	14 (G)	Steering switch signal B	Input	Ignition switch ON	Pressing  switch	0V
					Pressing  switch	0.75V
					Pressing VOL down switch	2V
					Except for above	5 V
17 (V)	19 (O)	Steering switch signal A	Output	Ignition switch ON	Pressing  switch	0V
					Pressing  switch	0.75
					Pressing VOL up switch	2V
					Except for above	5V
18 (LG)	19 (O)	Steering switch signal B	Output	Ignition switch ON	Pressing  switch	0V
					Pressing  switch	0.75V
					Pressing VOL down switch	2V
					Except for above	5V
20 (B)	Ground	Ground	–	–	–	0V
*21 (B)	Ground	Ground	–	–	–	0V
22 (B)	Ground	Ground	–	–	–	0V
28 (SB)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	 <small>PKIA1935E</small>
29 (Y)	Ground	Microphone power	Output	Ignition switch ON	–	5V
33 (B)	–	Bluetooth antenna	–	–	–	–
34	–	Shield	–	–	–	–

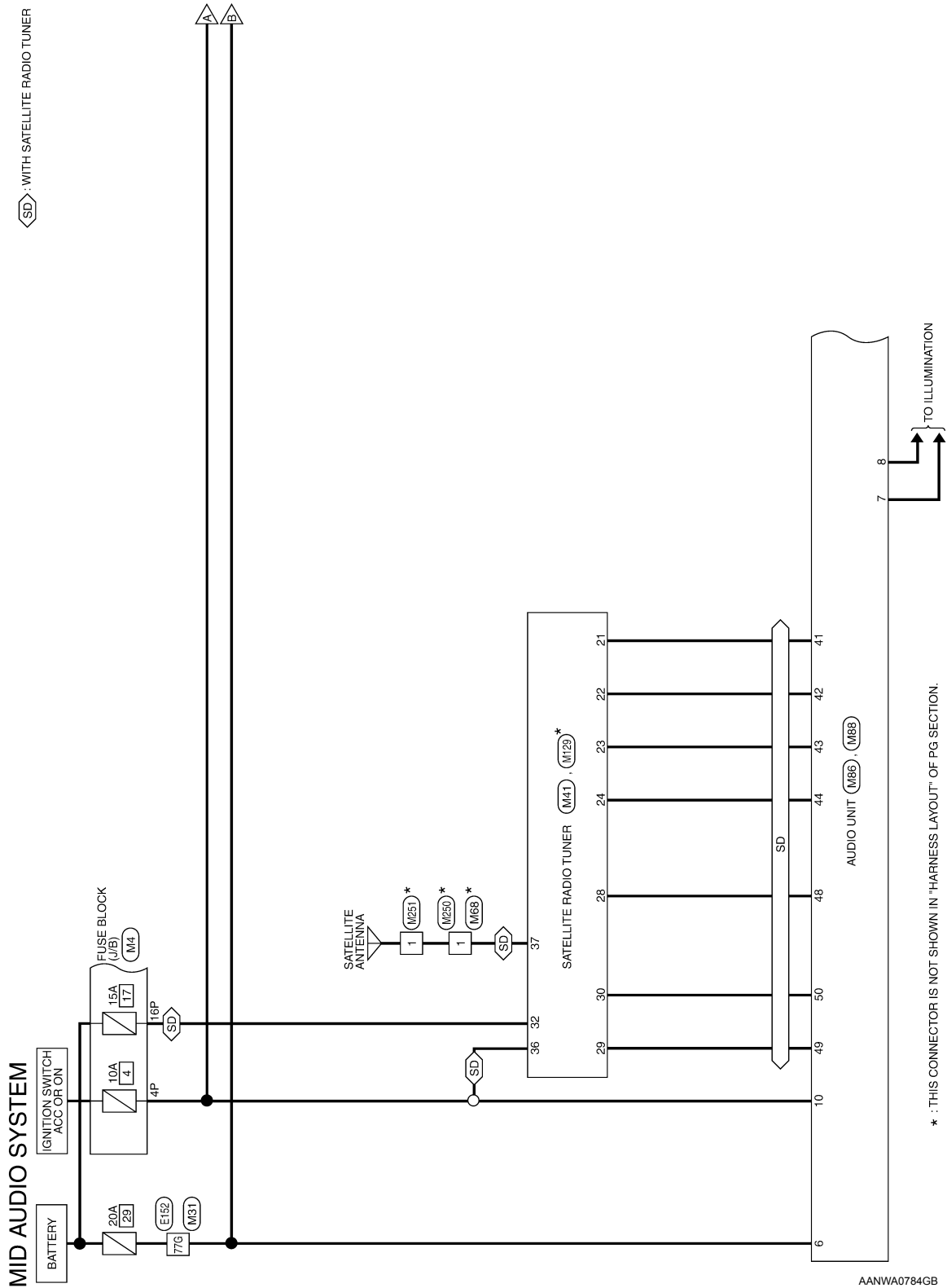
\*: King cab only

WIRING DIAGRAM

MID AUDIO SYSTEM

Wiring Diagram - Crew Cab

INFOID:000000007328229



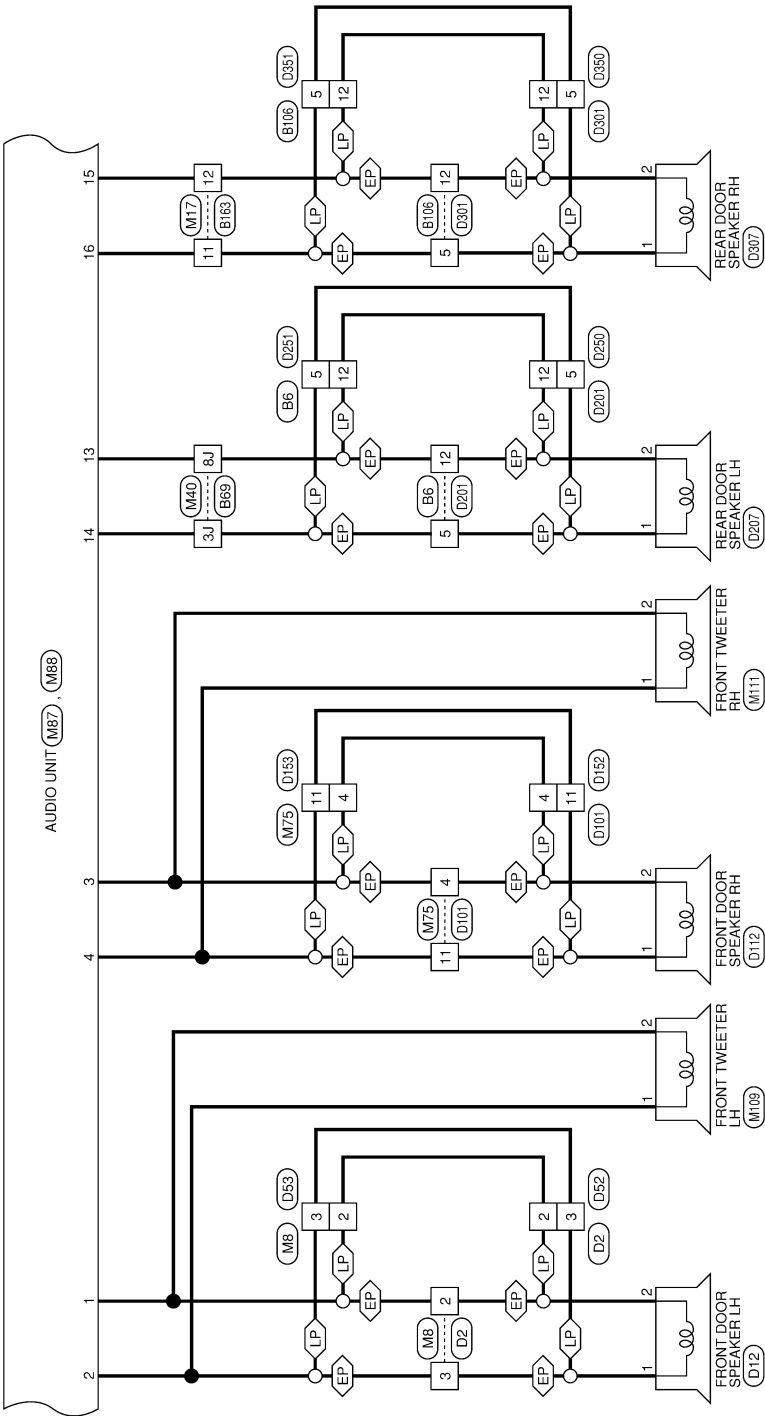
AANWA0784GB

MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

EP : EARLY PRODUCTION  
LP : LATE PRODUCTION



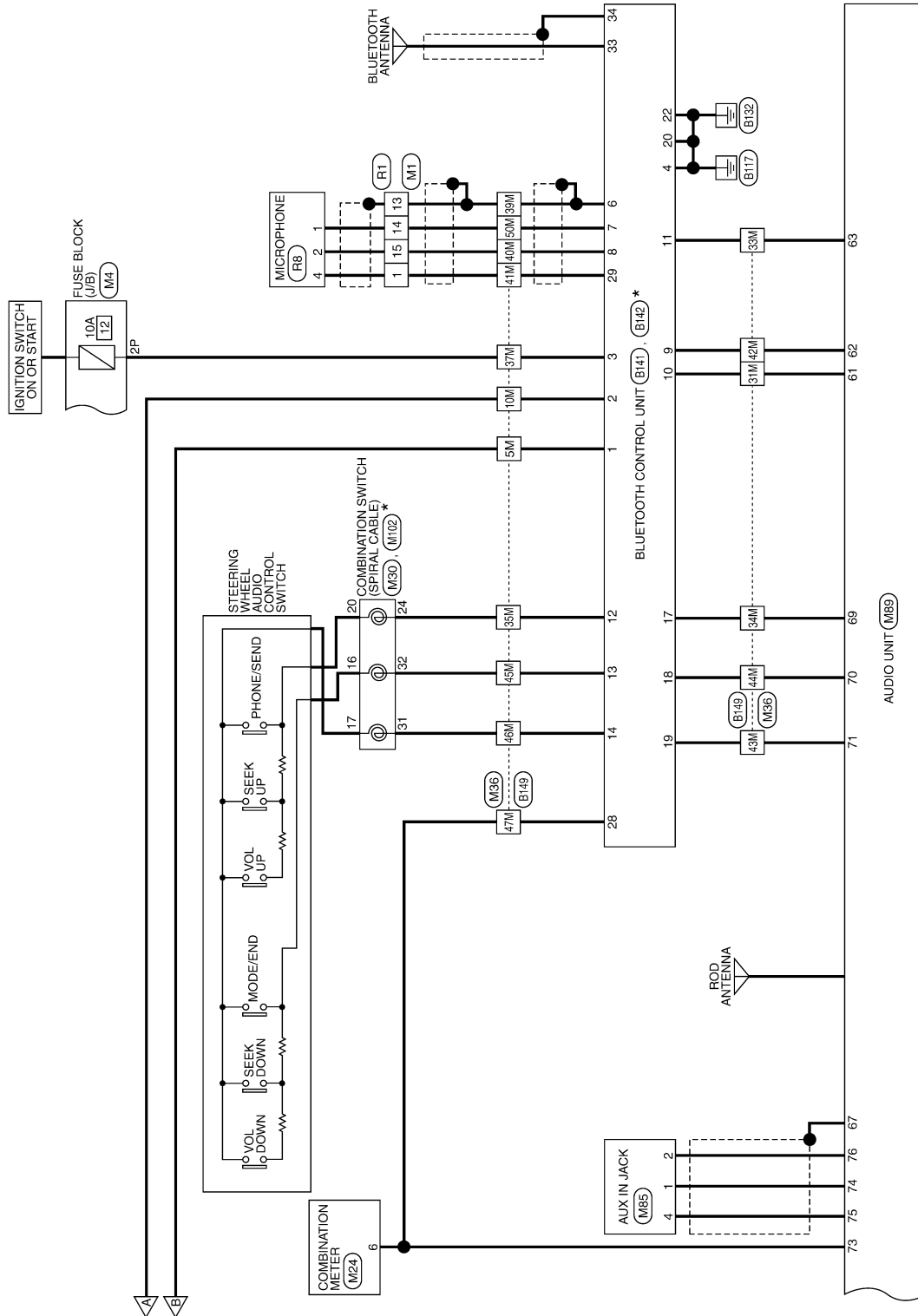
AANWA0785GB

AV

# MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]



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

ABNWA1317GB

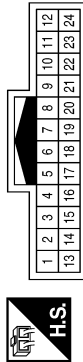
# MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

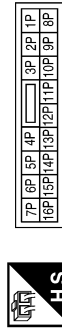
## MID AUDIO SYSTEM CONNECTORS

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



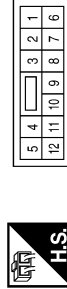
Terminal No.	Color of Wire	Signal Name
1	Y	-
13	SHIELD	-
14	G	-
15	L	-

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



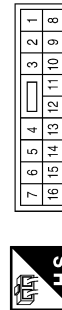
Terminal No.	Color of Wire	Signal Name
2P	W/G	-
4P	G/B	-
16P	R/B	-

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



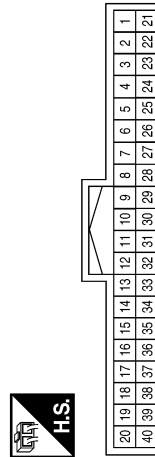
Terminal No.	Color of Wire	Signal Name
2	L	-
3	BR	-

Connector No.	M17
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	GR	-
12	O	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	SB	SPEED OUT 8

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	BR	STRG SW A (UP)
31	G	STRG SW GND
32	L	STRG SW B (DOWN)

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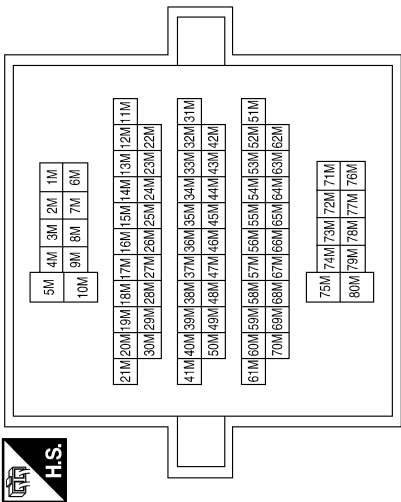
MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

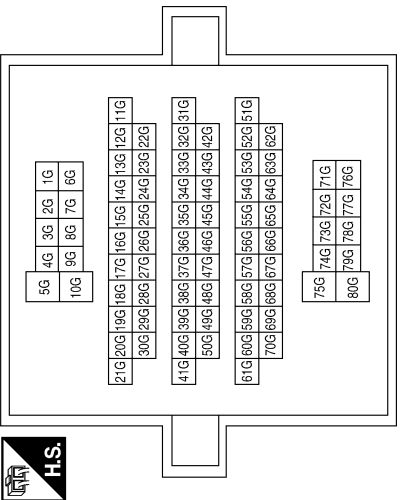
Terminal No.	Color of Wire	Signal Name
44M	LG	-
45M	L	-
46M	G	-
47M	SB	-
50M	G	-

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5M	R/B	-
10M	G/Y	-
31M	B	-
33M	R	-
34M	V	-
35M	BR	-
37M	W/G	-
39M	SHIELD	-
40M	L	-
41M	Y	-
42M	W	-
43M	O	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
77G	Y	-

ABNIA2676GB

MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

Connector No.	M68
Connector Name	WIRE TO WIRE
Connector Color	VIOLET



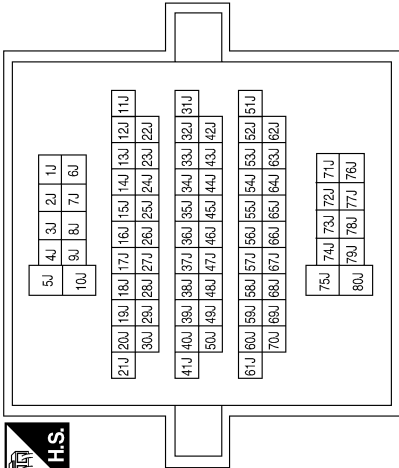
Terminal No.	Color of Wire	Signal Name
1	—	—

Connector No.	M41
Connector Name	SATELLITE RADIO TUNER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	G	SAT LCH (-)
22	R	SAT LCH (+)
23	W	SAT RCH (-)
24	B	SAT RCH (+)
25	—	—
26	—	—
27	—	—
28	O	REQ1
29	P	TXD
30	L	RXD
31	—	—
32	R/B	BACKUP
33	—	—
34	—	—
35	—	—
36	G/B	ACC

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3J	G	—
8J	B	—

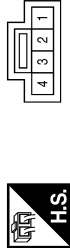
ABNIA3291GB

# MID AUDIO SYSTEM

< WIRING DIAGRAM >

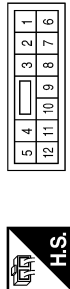
[MID (CC), PREMIUM (KC) AUDIO]

Connector No.	M85
Connector Name	AUX IN JACK
Connector Color	WHITE



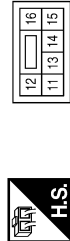
Terminal No.	Color of Wire	Signal Name
1	W	R+
2	R	COMMON
4	B	L+

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Color	WHITE



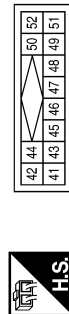
Terminal No.	Color of Wire	Signal Name
4	R	-
11	LG	-

Connector No.	M87
Connector Name	AUDIO UNIT (CREW CAB WITH MID AUDIO SYSTEM)
Connector Color	WHITE



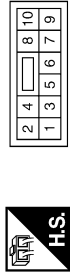
Terminal No.	Color of Wire	Signal Name
11	-	-
12	-	-
13	B	RRSP LH (-)
14	G	RRSP LH (+)
15	O	RRSP RH (-)
16	GR	RRSP RH (+)

Connector No.	M86
Connector Name	AUDIO UNIT (CREW CAB WITH MID AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
41	G	L (-)
42	R	L (+)
43	W	R (-)
44	B	R (+)
45	-	-
46	-	-
47	-	-
48	O	REQ
49	P	RX
50	L	TX
51	-	-
52	-	-

Connector No.	M88
Connector Name	AUDIO UNIT (CREW CAB WITH MID AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	FRSP LH (-)
2	BR	FRSP LH (+)
3	R	FRSP RH (-)
4	LG	FRSP RH (+)
5	-	-
6	Y	BAT (BACK UP)
7	GR	ILL CONT
8	R	LIGHT SW
9	-	-
10	G/B	ACC

ABNIA2678GB



# MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

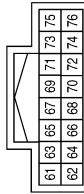
Connector No.	M102
Connector Name	COMBINATION SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
16	L	–
17	BR	–
20	W	–

Terminal No.	Color of Wire	Signal Name
67	SHIELD	SHIELD
68	–	–
69	V	REMOTE A SWC
70	LG	REMOTE B SWC
71	O	REMOTE GND SWC
72	–	–
73	SB	SPEED SIGNAL
74	W	AUX R+
75	B	AUX L+
76	R	AUX GND

Connector No.	M89
Connector Name	AUDIO UNIT (CREW CAB WITH MID AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
61	B	TEL SIG INPUT (-)
62	W	TEL SIG INPUT (+)
63	R	TEL SIG ON TRIG
64	–	–
65	–	–
66	–	–

Connector No.	M129
Connector Name	SATELLITE RADIO TUNER
Connector Color	VIOLET



Terminal No.	Color of Wire	Signal Name
37	–	–

Connector No.	M111
Connector Name	FRONT TWEETER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	W	–
2	L	– (EXCEPT CREW CAB WITH PREMIUM AUDIO SYSTEM)

Connector No.	M109
Connector Name	FRONT TWEETER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	– (EXCEPT CREW CAB WITH PREMIUM AUDIO SYSTEM)
2	L	– (EXCEPT CREW CAB WITH PREMIUM AUDIO SYSTEM)

ABNIA3292GB

# MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

Connector No.	M251
Connector Name	SATELLITE ANTENNA
Connector Color	BROWN



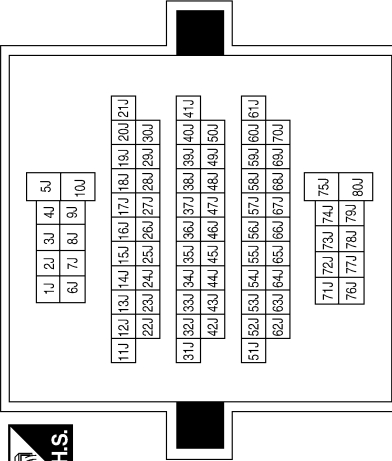
Terminal No.	Color of Wire	Signal Name
1	—	—

Connector No.	M250
Connector Name	WIRE TO WIRE
Connector Color	VIOLET



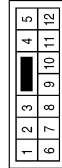
Terminal No.	Color of Wire	Signal Name
1	—	—

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



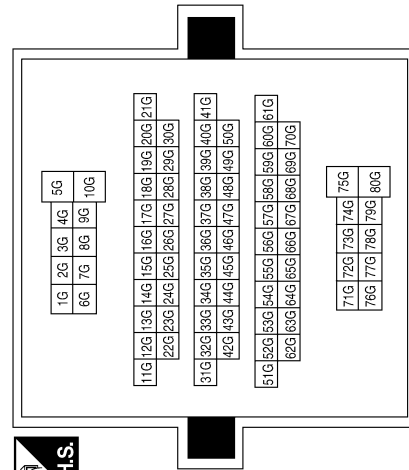
Terminal No.	Color of Wire	Signal Name
3J	G	—
8J	B	—

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



Terminal No.	Color of Wire	Signal Name
5	G	—
12	B	—

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
77G	Y	—

ABNIA2680GB

MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

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



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

Terminal No.	Color of Wire	Signal Name
5	GR	—
12	O	—

Connector No.	B141
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	R/B	BATT
2	G/Y	ACC
3	W/G	IGN
4	B	GND
5	—	—

Terminal No.	Color of Wire	Signal Name
6	SHIELD	MIC SHIELD
7	G	MIC IN+
8	L	MIC IN-
9	W	AUDIO OUT+
10	B	AUDIO OUT-
11	R	MUTE CONTROL
12	BR	LADDER IN 1
13	L	LADDER IN 2
14	G	LADDER IN GND
15	—	—
16	—	—
17	V	LADDER OUT 1
18	LG	LADDER OUT 2
19	O	LADDER OUT GND
20	B	CONT 1

Terminal No.	Color of Wire	Signal Name
21	—	—
22	B	CONT 3
23	—	—
24	—	—
25	—	—
26	—	—
27	—	—
28	SB	SPEED SIGNAL
29	Y	MIC POWER
30	—	—
31	—	—
32	—	—

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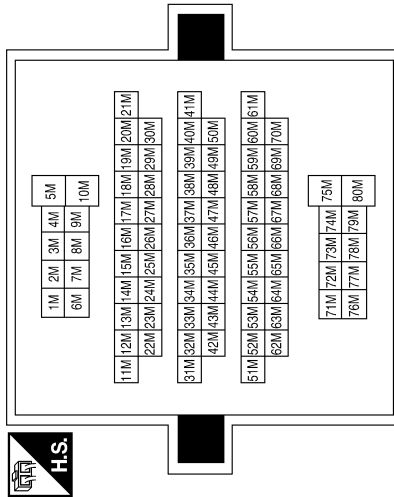
# MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

Terminal No.	Color of Wire	Signal Name
5M	R/B	-
10M	G/Y	-
31M	B	-
33M	R	-
34M	V	-
35M	BR	-
37M	W/G	-
39M	SHIELD	-
40M	L	-
41M	Y	-
42M	W	-
43M	O	-
44M	LG	-
45M	L	-
46M	G	-
47M	SB	-
50M	G	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



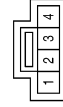
Connector No.	B142
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	BLACK



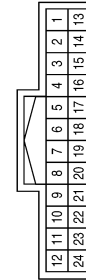
Terminal No.	Color of Wire	Signal Name
33	B	BT ANTENNA
34	SHIELD	BT ANTENNA SHIELD



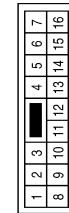
Connector No.	R8
Connector Name	MICROPHONE
Connector Color	WHITE



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



Connector No.	B163
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	Y	-
13	SHIELD	-
14	G	-
15	L	-

Terminal No.	Color of Wire	Signal Name
11	GR	-
12	O	-

ABNIA2682GB

# MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

Connector No.	D52
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
2	L	–
3	BR	–

Connector No.	D12
Connector Name	FRONT DOOR SPEAKER LH
Connector Color	WHITE



2	1
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Terminal No.	Color of Wire	Signal Name
1	L/W	–
2	L/R	–

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
2	L/R	–
3	L/W	–

Connector No.	D112
Connector Name	FRONT DOOR SPEAKER RH
Connector Color	WHITE



2	1
---	---

Terminal No.	Color of Wire	Signal Name
1	W/B	–
2	L/B	–

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



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

Terminal No.	Color of Wire	Signal Name
4	L/B	–
11	W/B	–

Connector No.	D53
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
2	L	–
3	BR	–

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# MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

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

5	4	<div></div>	3	2	1	
12	11	10	9	8	7	6



Terminal No.	Color of Wire	Signal Name
5	G	– (CREW CAB WITH MID AUDIO SYSTEM)
12	B	– (CREW CAB WITH MID AUDIO SYSTEM)

Connector No.	D153
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
5	W	–
12	B	–

Connector No.	D152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

5	4	<div></div>	3	2	1	
12	11	10	9	8	7	6



Terminal No.	Color of Wire	Signal Name
5	W	–
12	B	–

Connector No.	D251
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
5	L	–
12	O	–

Connector No.	D250
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
5	L	–
12	O	–

Connector No.	D207
Connector Name	REAR SPEAKER LH
Connector Color	WHITE

2	1
---	---



Terminal No.	Color of Wire	Signal Name
1	G	– (CREW CAB WITH MID AUDIO SYSTEM)
2	B	– (CREW CAB WITH MID AUDIO SYSTEM)

AANIA1494GB

MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

Connector No.	D350
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
5	L	—
12	O	—

Connector No.	D307
Connector Name	REAR DOOR SPEAKER RH
Connector Color	WHITE

2	1
---	---



Terminal No.	Color of Wire	Signal Name
1	GR	— (CREW CAB WITH MID AUDIO SYSTEM)
2	O	—

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

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



Terminal No.	Color of Wire	Signal Name
5	GR	— (CREW CAB WITH MID AUDIO SYSTEM)
12	O	—

Connector No.	D351
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
5	L	—
12	O	—

AANIA1495GB

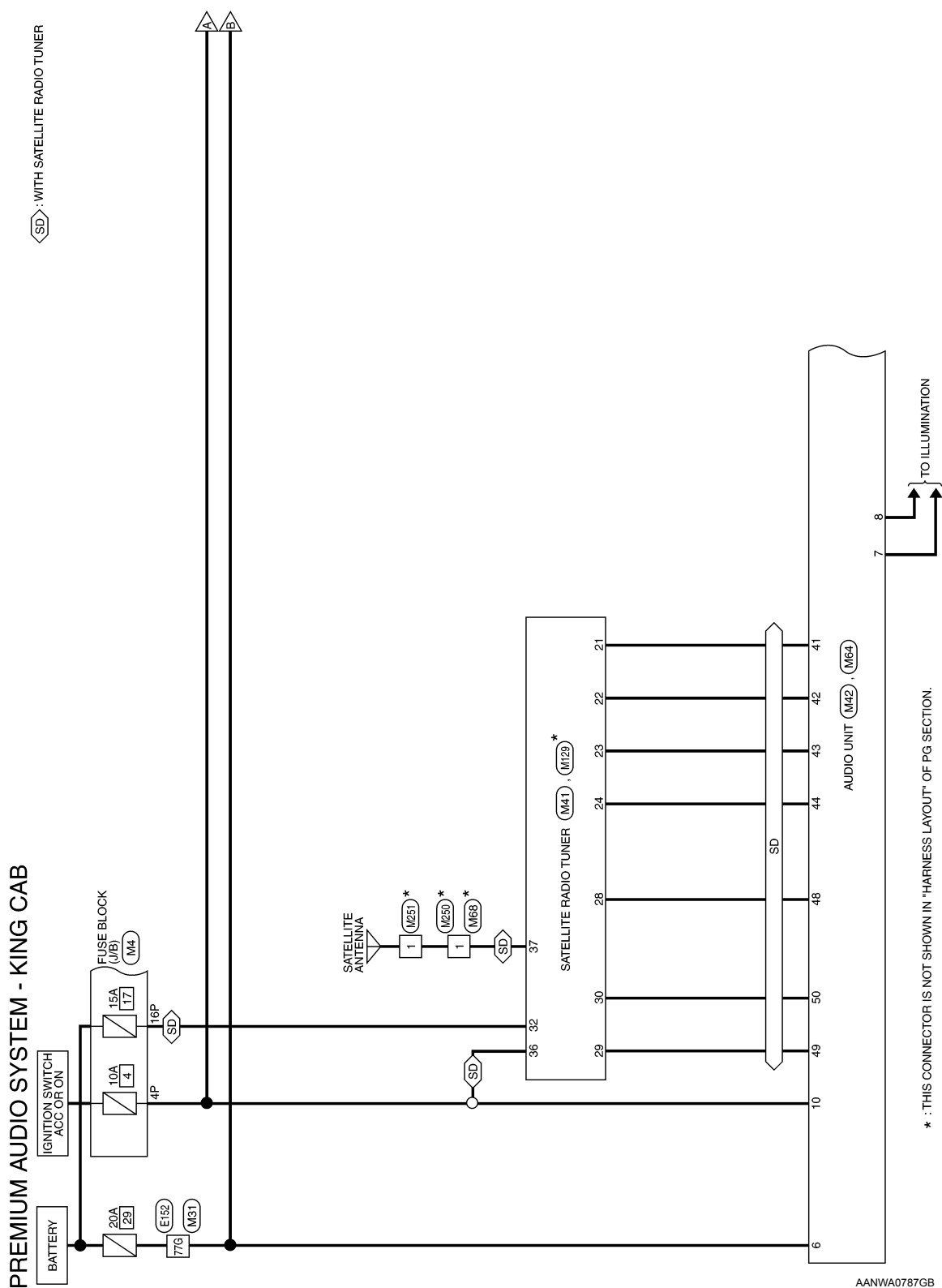
A  
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G  
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L  
M  
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P

AV

[MID (CC), PREMIUM (KC) AUDIO]

## PREMIUM AUDIO SYSTEM

INFOID:0000000007328230



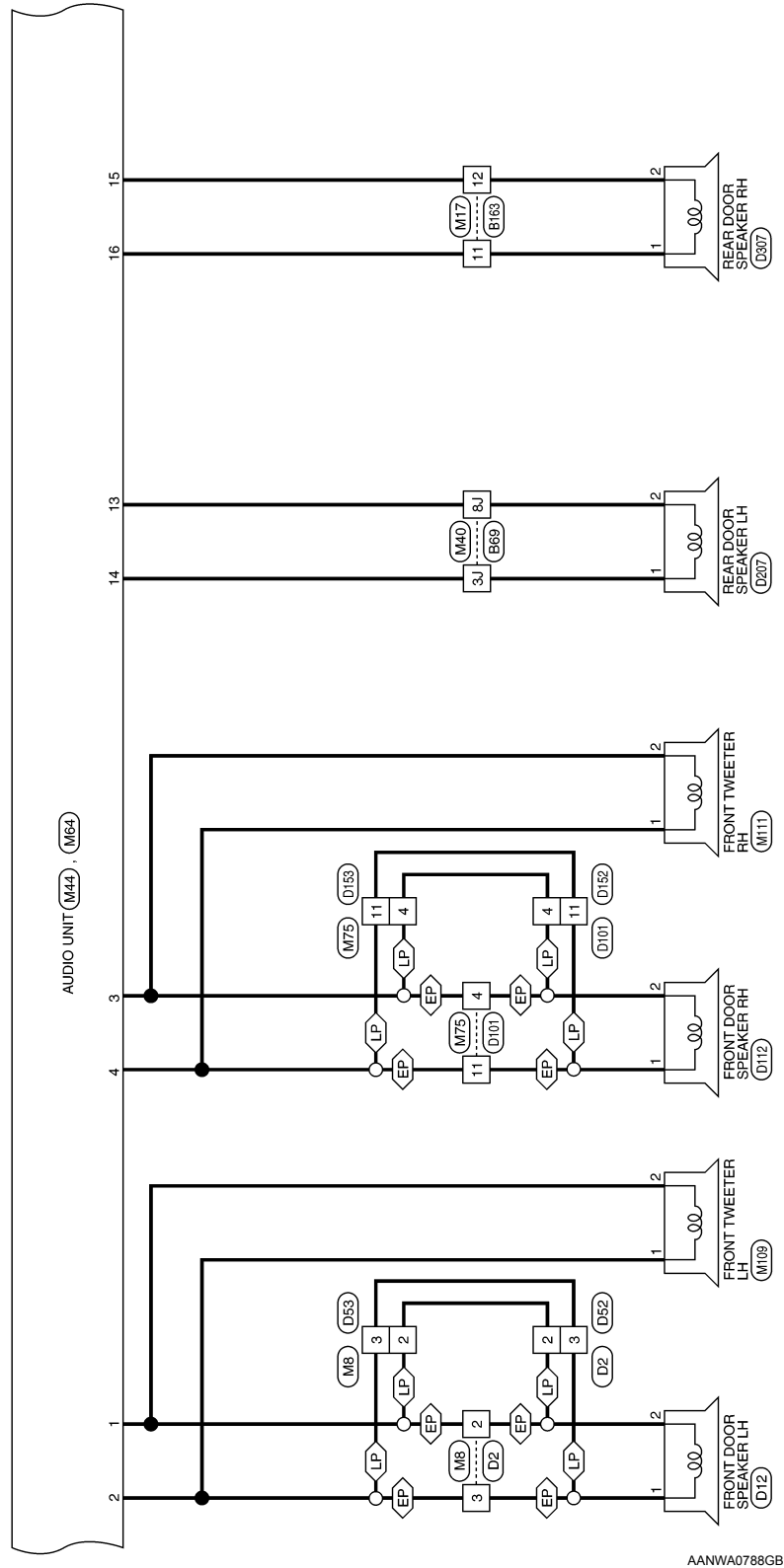


# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

EP : EARLY PRODUCTION  
LP : LATE PRODUCTION

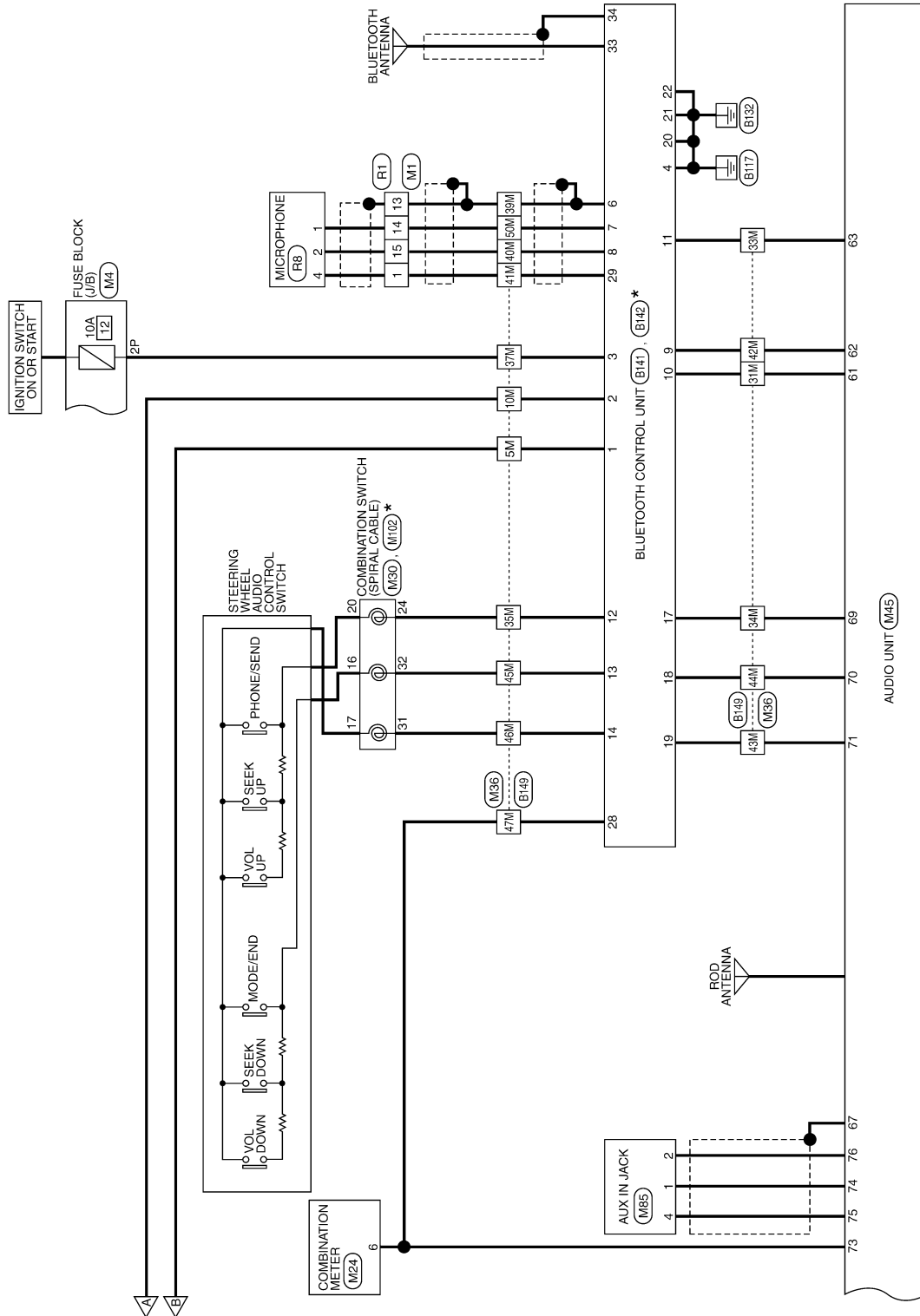


AANWA0788GB

# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]



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

ABNWA1063GB

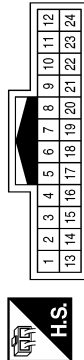
# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

## PREMIUM AUDIO SYSTEM CONNECTORS - KING CAB

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



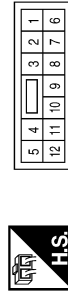
Terminal No.	Color of Wire	Signal Name
1	Y	-
13	SHIELD	-
14	G	-
15	L	-

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2P	W/G	-
4P	G/B	-
16P	R/B	-

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



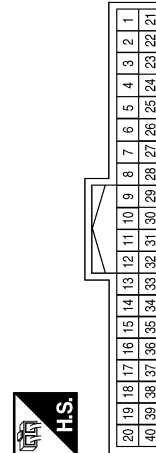
Terminal No.	Color of Wire	Signal Name
2	L	-
3	BR	-

Connector No.	M17
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	GR	-
12	O	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	SB	SPEED OUT 8

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	BR	STRG SW A (UP)
31	G	STRG SW GND
32	L	STRG SW B (DOWN)

ABNIA1698GB

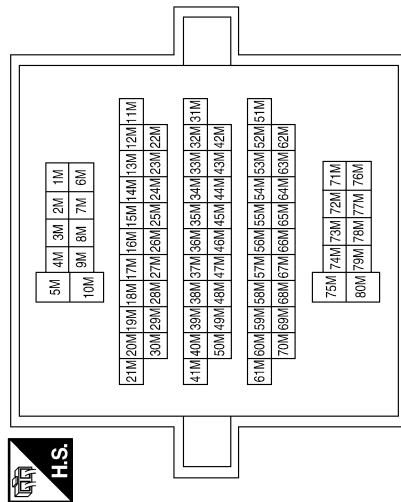
# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

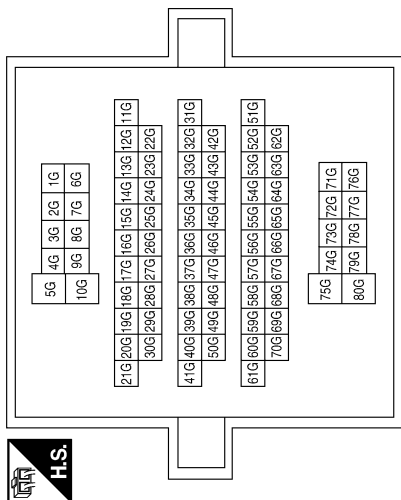
Terminal No.	Color of Wire	Signal Name
44M	LG	-
45M	L	-
46M	G	-
47M	SB	-
50M	G	-

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5M	R/B	-
10M	G/Y	-
31M	B	-
33M	R	-
34M	V	-
35M	BR	-
37M	W/G	-
39M	SHIELD	-
40M	L	-
41M	Y	-
42M	W	-
43M	O	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
77G	Y	-

ABNIA2732GB

[MID (CC), PREMIUM (KC) AUDIO]

Terminal No.	Color of Wire	Signal Name
41	G	L (-)
42	R	L (+)
43	W	R (-)
44	B	R(+)
45	-	-
46	-	-
47	-	-
48	O	REQ
49	P	RX
50	L	TX
51	-	-
52	-	-

Terminal No.	Color of Wire	Signal Name
21	G	SAT LCH (-)
22	R	SAT LCH (+)
23	W	SAT RCH (-)
24	B	SAT RCH (+)
25	-	-
26	-	-
27	-	-
28	O	REQ1
29	P	TXD
30	L	RXD
31	-	-
32	R/B	BACKUP
33	-	-
34	-	-
35	-	-
36	G/B	ACC

Terminal No.	Color of Wire	Signal Name
3J	G	-
8J	B	-

# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

Connector No.	M64
Connector Name	AUDIO UNIT (KING CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE

2	4	8	10
1	3	5	6
7	9		



Terminal No.	Color of Wire	Signal Name
1	L	FRSP LH (-)
2	BR	FRSP LH (+)
3	R	FRSP RH (-)
4	LG	FRSP RH (+)
5	-	-
6	Y	BAT (BACK UP)
7	GR	ILL CONT
8	R	LIGHT SW
9	-	-
10	G/B	ACC

Connector No.	M45
Connector Name	AUDIO UNIT (KING CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE

61	63	65	67	68	71	73	75
62	64	66	68	70	72	74	76



Terminal No.	Color of Wire	Signal Name
61	B	TEL SIG INPUT (-)
62	W	TEL SIG INPUT (+)
63	R	TEL SIG ON TRIG
64	-	-
65	-	-
66	-	-
67	SHIELD	SHIELD
68	-	-
69	V	REMOTE A SWC
70	LG	REMOTE B SWC
71	O	REMOTE GND SWC
72	-	-
73	SB	SPEED SIGNAL
74	W	AUX R+
75	B	AUX L+
76	R	AUX GND

Connector No.	M85
Connector Name	AUX IN JACK
Connector Color	WHITE

4	3	2	1
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Terminal No.	Color of Wire	Signal Name
1	W	R+
2	R	COMMON
4	B	L+

Connector No.	M44
Connector Name	AUDIO UNIT (KING CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE

12	16
11	13
14	15



Terminal No.	Color of Wire	Signal Name
11	-	-
12	-	-
13	B	RRSP LH (-)
14	G	RRSP LH (+)
15	O	RRSP RH (-)
16	GR	RRSP RH (+)

Connector No.	M68
Connector Name	WIRE TO WIRE
Connector Color	VIOLET

1
---



Terminal No.	Color of Wire	Signal Name
1	-	-

ABNIA2734GB

# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

Connector No.	M111
Connector Name	FRONT TWEETER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	W	–
2	L	– (EXCEPT CREW CAB WITH PREMIUM AUDIO SYSTEM)

Connector No.	M109
Connector Name	FRONT TWEETER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	– (EXCEPT CREW CAB WITH PREMIUM AUDIO SYSTEM)
2	L	– (EXCEPT CREW CAB WITH PREMIUM AUDIO SYSTEM)

Connector No.	M102
Connector Name	COMBINATION SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
16	L	–
17	BR	–
20	W	–

Connector No.	M251
Connector Name	SATELLITE ANTENNA
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	–	–

Connector No.	M250
Connector Name	WIRE TO WIRE
Connector Color	VIOLET



Terminal No.	Color of Wire	Signal Name
1	–	–

Connector No.	M129
Connector Name	SATELLITE RADIO TUNER
Connector Color	VIOLET



Terminal No.	Color of Wire	Signal Name
37	–	–

ABNIA3298GB

A  
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AV

# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

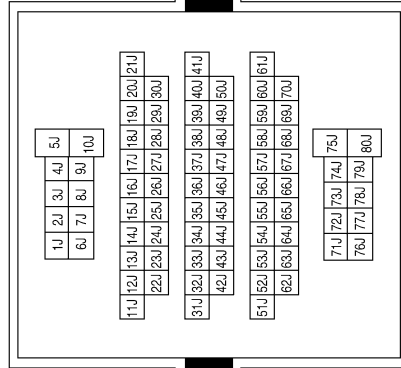
[MID (CC), PREMIUM (KC) AUDIO]

Connector No.	B76
Connector Name	REAR DOOR SPEAKER LH (KING CAB)
Connector Color	WHITE



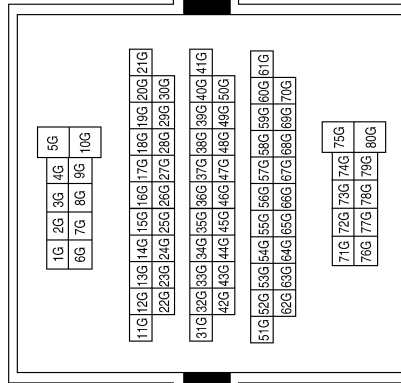
Terminal No.	Color of Wire	Signal Name
1	G	–
2	B	–

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3J	G	–
8J	B	–

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
77G	Y	–

ABNIA2736GB



# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

Terminal No.	Color of Wire	Signal Name
21	B	CONT 2
22	B	CONT 3
23	—	—
24	—	—
25	—	—
26	—	—
27	—	—
28	SB	SPEED SIGNAL
29	Y	MIC POWER
30	—	—
31	—	—
32	—	—

Terminal No.	Color of Wire	Signal Name
6	SHIELD	MIC SHIELD
7	G	MIC IN+
8	L	MIC IN-
9	W	AUDIO OUT+
10	B	AUDIO OUT-
11	R	MUTE CONTROL
12	BR	LADDER IN 1
13	L	LADDER IN 2
14	G	LADDER IN GND
15	—	—
16	—	—
17	V	LADDER OUT 1
18	LG	LADDER OUT 2
19	O	LADDER OUT GND
20	B	CONT 1

Connector No.	B141
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	R/B	BATT
2	G/Y	ACC
3	W/G	IGN
4	B	GND
5	—	—

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



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

ABNIA2737GB

A  
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P

AV

# PREMIUM AUDIO SYSTEM

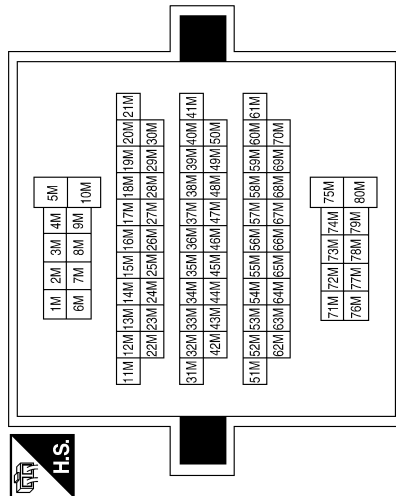
< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

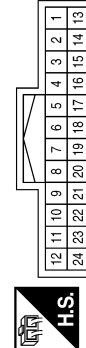
Terminal No.	Color of Wire	Signal Name
42M	W	-
43M	O	-
44M	LG	-
45M	L	-
46M	G	-
47M	SB	-
50M	G	-

Terminal No.	Color of Wire	Signal Name
5M	R/B	-
10M	G/Y	-
31M	B	-
33M	R	-
34M	V	-
35M	BR	-
37M	W/G	-
39M	SHIELD	-
40M	L	-
41M	Y	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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



Terminal No.	Color of Wire	Signal Name
1	Y	-
13	SHIELD	-
14	G	-
15	L	-

Connector No.	B163
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	GR	-
12	O	-

Connector No.	B160
Connector Name	REAR DOOR SPEAKER RH (KING CAB)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
2	O	-

ABNIA2738GB

# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

Connector No.	D12
Connector Name	FRONT DOOR SPEAKER LH
Connector Color	WHITE



1	2
---	---

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

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
2	L/R	-
3	L/W	-

Connector No.	R8
Connector Name	MICROPHONE
Connector Color	WHITE



1	2	3	4
---	---	---	---

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

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



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

Terminal No.	Color of Wire	Signal Name
4	L/B	-
11	W/B	-

Connector No.	D53
Connector Name	WIRE TO WIRE
Connector Color	BROWN



1	2	3	<div></div>	4	5
6	7	8	9	10	11
					12

Terminal No.	Color of Wire	Signal Name
2	L	-
3	BR	-

Connector No.	D52
Connector Name	WIRE TO WIRE
Connector Color	BROWN



5	4	<div></div>	3	2	1	
12	11	10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
2	L	-
3	BR	-

AANIA1499GB

A  
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AV

# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

Connector No.	D153
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	W	–
12	B	–

Connector No.	D152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	W	–
12	B	–

Connector No.	D112
Connector Name	FRONT DOOR SPEAKER RH
Connector Color	WHITE



2	1
---	---

Terminal No.	Color of Wire	Signal Name
1	W/B	–
2	L/B	–

Connector No.	D350
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	L	–
12	O	–

Connector No.	D251
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	L	–
12	O	–

Connector No.	D250
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	L	–
12	O	–

AANIA1500GB

PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[MID (CC), PREMIUM (KC) AUDIO]

A  
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D  
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K  
L  
M  
O  
P

Connector No.	D351
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
5	L	-
12	O	-

AANIA1501GB

AV

## SYMPTOM DIAGNOSIS

## AUDIO SYSTEM

## Symptom Table

INFOID:000000007328231

## AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> <li>Audio unit power circuit</li> <li>Audio unit</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-48</a> or <a href="#">AV-48</a></li> <li><a href="#">AV-45</a></li> </ul>
Steering wheel audio control switch does not operate	<ul style="list-style-type: none"> <li>Steering wheel audio control switch</li> <li>Audio unit</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-62</a></li> <li><a href="#">AV-45</a></li> </ul>
All speakers do not sound	<ul style="list-style-type: none"> <li>Speaker circuit shorted to ground</li> <li>Audio unit</li> <li>Audio unit power circuit</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-82</a> or <a href="#">AV-96</a></li> <li><a href="#">AV-45</a></li> <li><a href="#">AV-48</a> or <a href="#">AV-48</a></li> </ul>
One or several speakers do not sound	<ul style="list-style-type: none"> <li>Front door speaker</li> <li>Front tweeter</li> <li>Rear door speaker</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-53</a> or <a href="#">AV-54</a></li> <li><a href="#">AV-56</a> or <a href="#">AV-57</a></li> <li><a href="#">AV-59</a> or <a href="#">AV-60</a></li> </ul>
Poor reception	<ul style="list-style-type: none"> <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 DIAGNOSIS" in the appropriate interior trim section.

## CD

Symptom	Possible cause	Reference page
CD cannot be inserted	Audio unit	<a href="#">AV-45</a>
CD cannot be ejected		
The CD cannot be played		
The sound skips, stops suddenly, or is distorted		

## SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> <li>Satellite radio tuner power or ground circuit</li> <li>Satellite radio tuner communication circuit</li> <li>Satellite radio tuner</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-49</a></li> <li><a href="#">AV-64</a> or <a href="#">AV-66</a></li> <li><a href="#">AV-128</a></li> </ul>
Right or left channel does not sound	<ul style="list-style-type: none"> <li>Satellite radio tuner right or left channel audio signal circuit</li> <li>Satellite radio tuner</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-69</a> or <a href="#">AV-70</a></li> <li><a href="#">AV-128</a></li> </ul>

## HANDS-FREE PHONE

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> <li>Bluetooth control unit power circuit</li> <li>Bluetooth control unit</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-50</a></li> <li><a href="#">AV-46</a></li> </ul>
Steering wheel audio switch does not operate	<ul style="list-style-type: none"> <li>Steering wheel audio control switch</li> <li>Bluetooth control unit</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-62</a></li> <li><a href="#">AV-46</a></li> </ul>
Voice activated control does not activate	<ul style="list-style-type: none"> <li>Microphone</li> <li>Steering wheel audio control switch</li> <li>Bluetooth control unit</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-73</a></li> <li><a href="#">AV-62</a></li> <li><a href="#">AV-46</a></li> </ul>

## NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[MID (CC), PREMIUM (KC) AUDIO]

### NORMAL OPERATING CONDITION

#### Description

INFOID:000000007328232

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

#### NOISE

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

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

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

#### NOTE:

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

#### Type of Noise and Possible Cause

Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	• Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		• Fuel pump condenser
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	• Relay malfunction, audio unit malfunction
	The noise occurs when various motors are operating.	• Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		• Poor ground of antenna feeder line
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		• Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000007328233

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

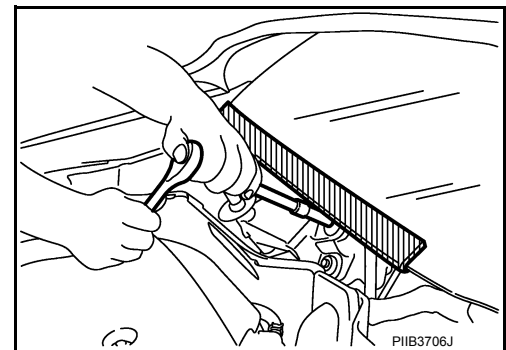
#### **WARNING:**

- 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:000000007831517

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



#### Precaution for Work

INFOID:000000007328234

- 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 a 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:
  - Water soluble dirt:



## PRECAUTIONS

< PRECAUTION >

[MID (CC), PREMIUM (KC) AUDIO]

- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, 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, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

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# PREPARATION

< PREPARATION >

[MID (CC), PREMIUM (KC) AUDIO]

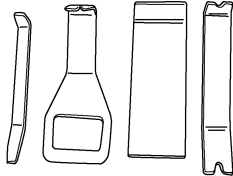
## PREPARATION

### PREPARATION

#### Special Service Tool

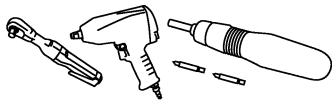
INFOID:000000007328235

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

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

#### Commercial Service Tools

INFOID:000000007831520

Tool name	Description
Power tool	Loosening nuts, screws and bolts
 PIIB1407E	

## REMOVAL AND INSTALLATION

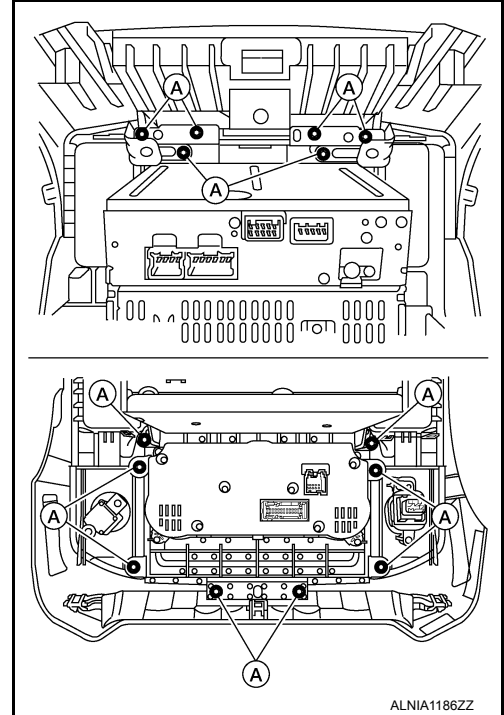
### AUDIO UNIT

#### Removal and Installation

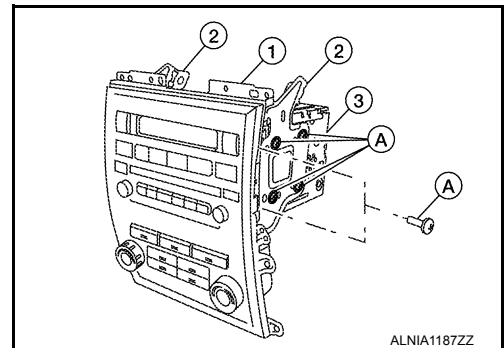
INFOID:000000007328237

#### REMOVAL

1. Remove the cluster lid C. Refer to [JP-19. "Removal and Installation"](#).
2. Remove the center ventilator grilles (RH/LH). Refer to [VTL-22. "Removal and Installation"](#).
3. Remove the audio control panel screws (A), then remove the audio unit assembly from cluster lid C.



4. Remove the audio unit screws (A), using power tool.
5. Remove the audio unit brackets (2), then pull out the audio unit (3) from the audio control panel (1).



#### INSTALLATION

Installation is in the reverse order of removal.

## FRONT TWEETER

< REMOVAL AND INSTALLATION >

[MID (CC), PREMIUM (KC) AUDIO]

### FRONT TWEETER

#### Removal and Installation

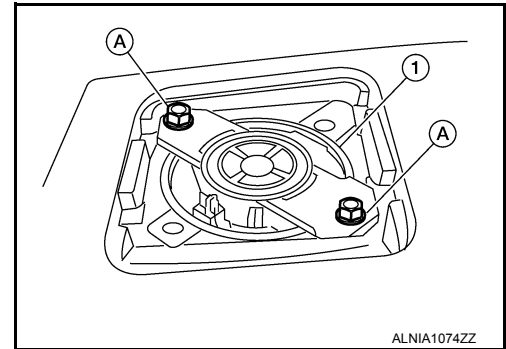
INFOID:000000007328238

#### 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.
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.

## FRONT DOOR SPEAKER

< REMOVAL AND INSTALLATION >

[MID (CC), PREMIUM (KC) AUDIO]

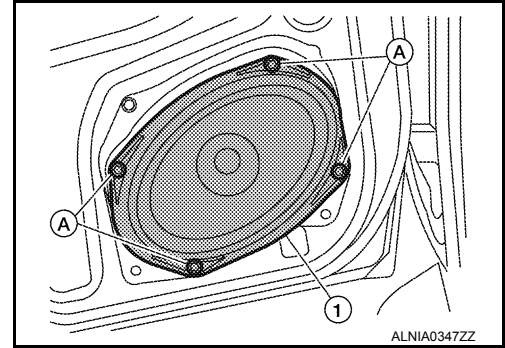
### FRONT DOOR SPEAKER

#### Removal and Installation

INFOID:000000007328239

#### REMOVAL

1. Remove the front door finisher. Refer to [INT-15. "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.

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## REAR DOOR SPEAKER

< REMOVAL AND INSTALLATION >

[MID (CC), PREMIUM (KC) AUDIO]

### REAR DOOR SPEAKER

#### Removal and Installation

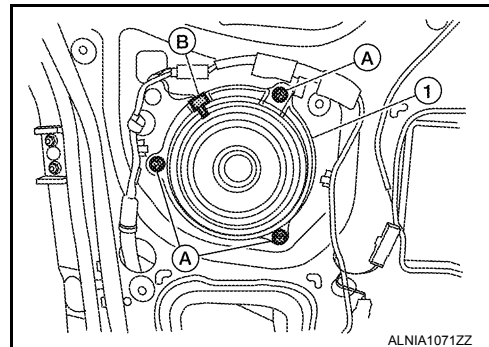
INFOID:000000007328240

#### REMOVAL

1. Remove the rear door finisher. Refer to [INT-15. "Removal and Installation"](#).
2. Remove the rear door speaker screws (A).
3. Remove the rear door speaker (1) and disconnect rear door speaker connector (B).

**NOTE:**

King cab shown, crew cab similar.



#### INSTALLATION

Installation is in the reverse order of removal.

# STEERING SWITCH

< REMOVAL AND INSTALLATION >

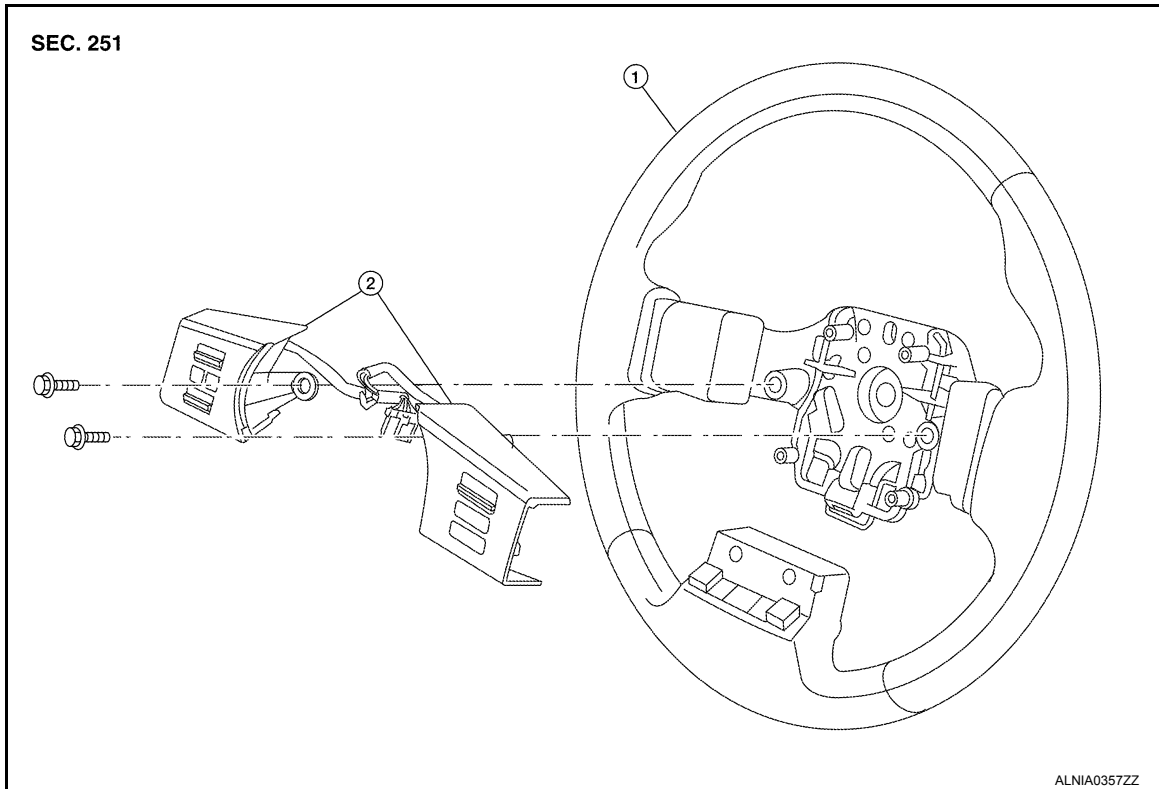
[MID (CC), PREMIUM (KC) AUDIO]

## STEERING SWITCH

### Removal and Installation

INFOID:000000007328241

### Removal and Installation



1. Steering wheel

2. Steering wheel audio control switches

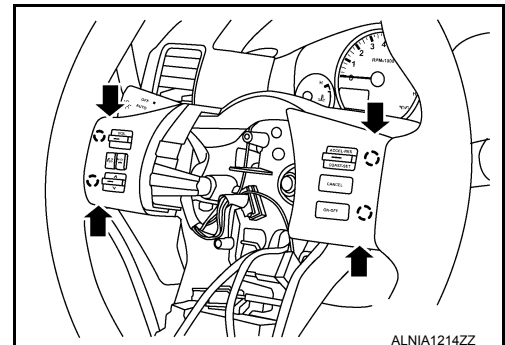
### REMOVAL

1. Remove the driver air bag module. Refer to [SR-11, "Removal and Installation"](#).
2. Remove the steering wheel audio control switch assembly screws.
3. Disconnect the steering wheel audio control switches connector.
4. Remove the steering wheel audio control switches by pulling on steering wheel audio control switches to release the pawls.

○: Pawl

#### CAUTION:

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



### INSTALLATION

Installation is in the reverse order of removal.

# BLUETOOTH CONTROL UNIT

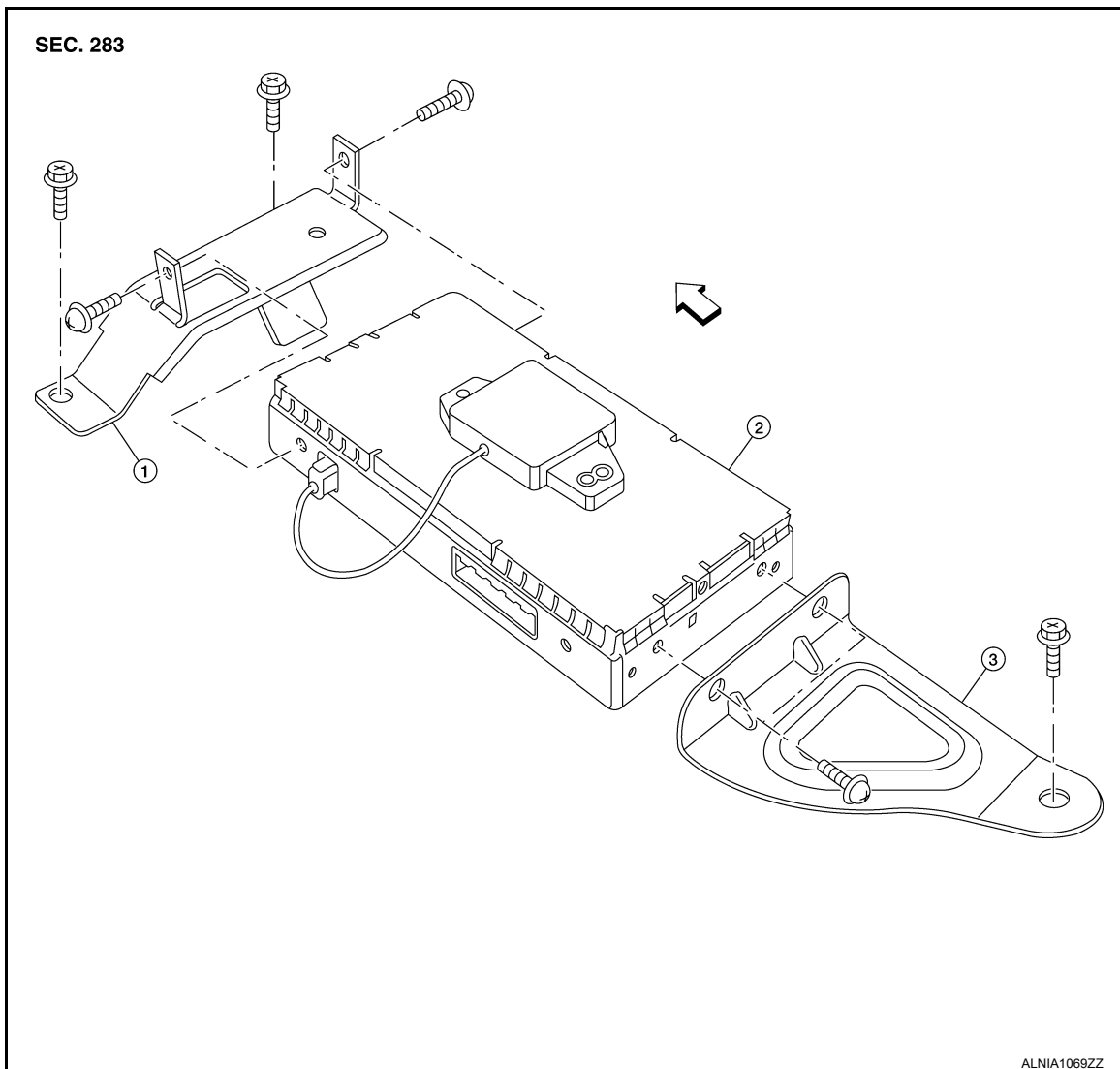
< REMOVAL AND INSTALLATION >

[MID (CC), PREMIUM (KC) AUDIO]

## BLUETOOTH CONTROL UNIT

### Removal and Installation

INFOID:000000007328242



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

⇐ Vehicle front

### REMOVAL

#### NOTE:

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 [SE-32. "Removal and Installation"](#).
2. Tilt the RH front seat back to access the bluetooth control unit.

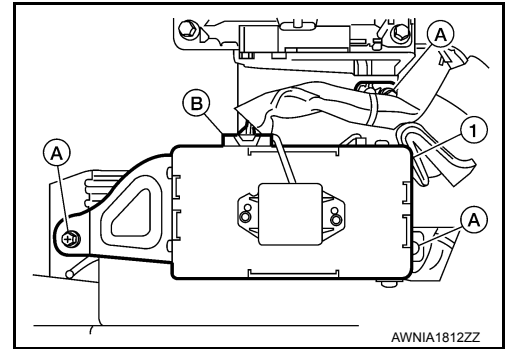


## BLUETOOTH CONTROL UNIT

### < REMOVAL AND INSTALLATION >

[MID (CC), PREMIUM (KC) AUDIO]

3. Disconnect the Bluetooth control unit harness connector (B).
4. Remove the Bluetooth control unit screws (A), then remove the Bluetooth control unit assembly (1).
5. Remove the Bluetooth control unit bracket screws and remove the Bluetooth control unit front and rear brackets.



### INSTALLATION

Installation is in the reverse order of removal.

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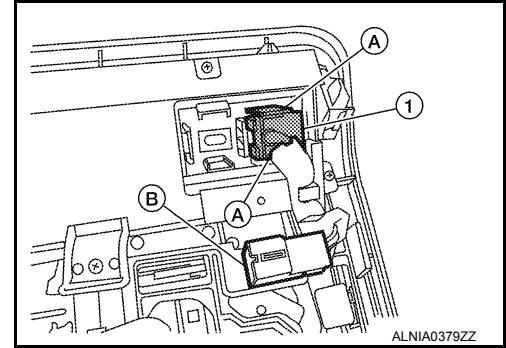
## MICROPHONE

### Removal and Installation

INFOID:000000007328243

#### REMOVAL

1. Remove the roof console. Refer to [INT-25. "Removal and Installation"](#).
2. Detach the Bluetooth microphone (1) from the front console finisher tabs (A).
3. Detach the Bluetooth microphone connector (B) and remove the Bluetooth microphone (1).



#### INSTALLATION

Installation is in the reverse order of removal.

# AUDIO ANTENNA

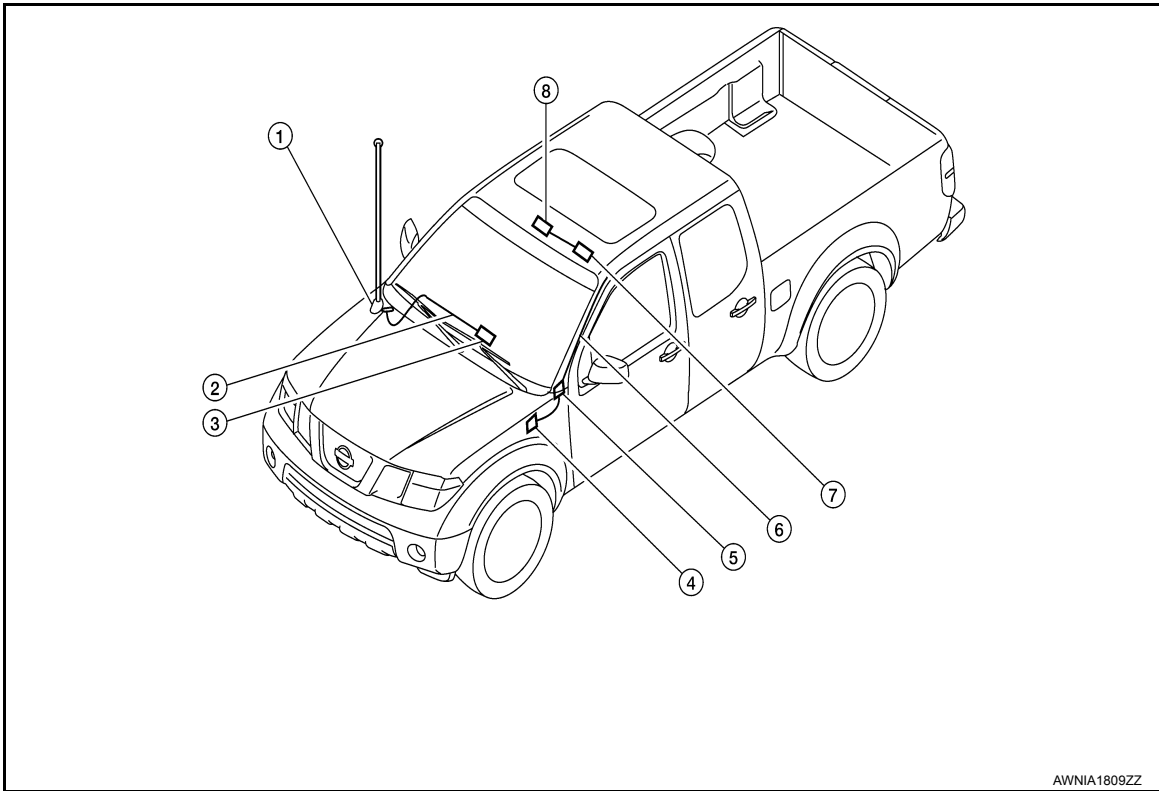
< REMOVAL AND INSTALLATION >

[MID (CC), PREMIUM (KC) AUDIO]

## AUDIO ANTENNA

### Location of Antenna (Crew Cab)

INFOID:000000007328244



- |  |  |                                  |
|--|--|----------------------------------|
| 1. Rod antenna   | 2. Antenna feeder  | 3. Audio unit M86, M87, M88, M89 |
| 4. Satellite radio tuner or pre-wiring for satellite radio tuner M41, M129 | 5. Satellite antenna in-line harness connector M250, M68 | 6. Satellite antenna feeder      |
| 7. Satellite antenna harness connector M251                                | 8. Satellite antenna                                     |                                  |

AV

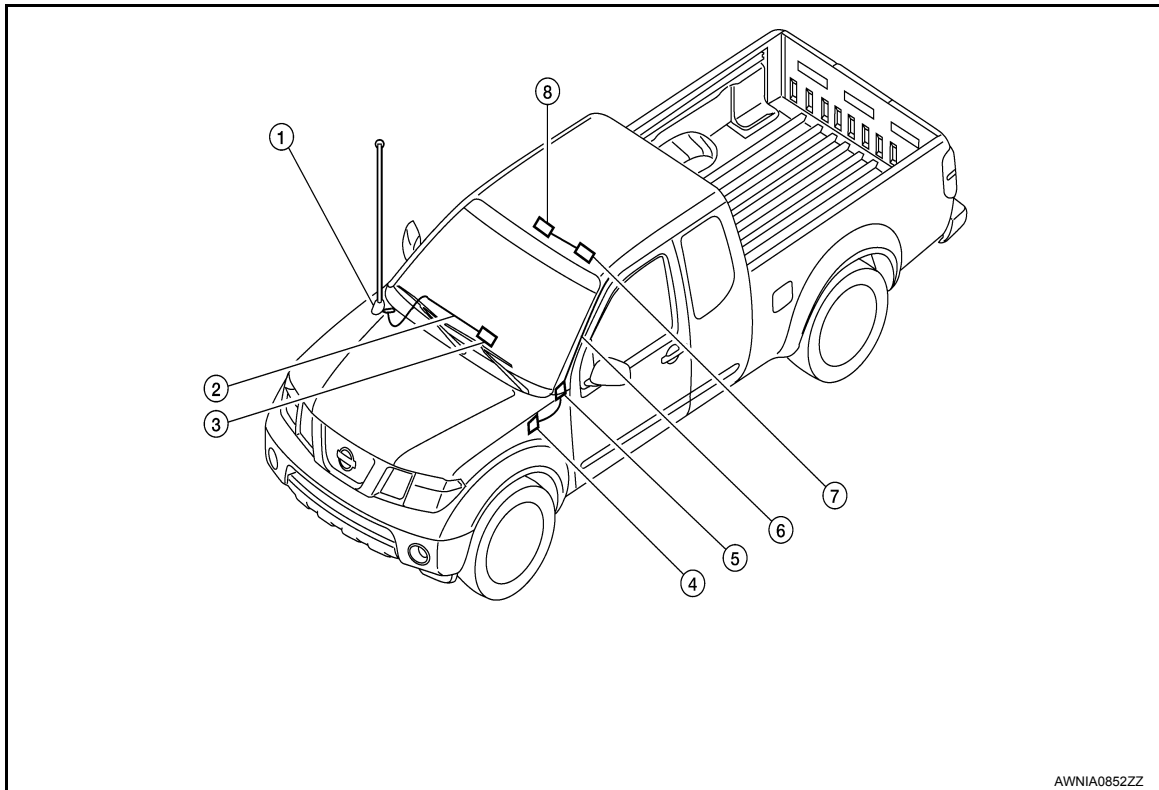
## AUDIO ANTENNA

< REMOVAL AND INSTALLATION >

[MID (CC), PREMIUM (KC) AUDIO]

### Location of Antenna (King Cab)

INFOID:000000007328245



- |  |  |                                  |
|--|--|----------------------------------|
| 1. Rod antenna   | 2. Antenna feeder  | 3. Audio unit M42, M44, M45, M64 |
| 4. Satellite radio tuner or pre-wiring for satellite radio tuner M41, M129 | 5. Satellite antenna in-line harness connector M250, M68 | 6. Satellite antenna feeder      |
| 7. Satellite antenna harness connector M251                                | 8. Satellite antenna                                     |                                  |

### Removal and Installation

INFOID:000000007328246

#### REMOVAL

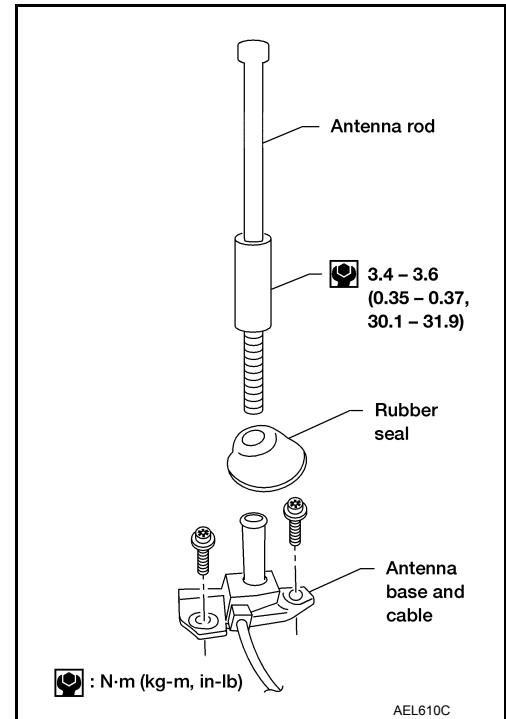
1. Remove instrument lower panel RH and glove box. Refer to [IP-24. "Removal and Installation"](#).
2. Disconnect audio antenna cable from antenna feeder.

## AUDIO ANTENNA

### < REMOVAL AND INSTALLATION >

[MID (CC), PREMIUM (KC) AUDIO]

3. Remove antenna rod.
4. Remove rubber seal.
5. Remove cowl top. Refer to [EXT-24. "Removal and Installation"](#).
6. Remove fender protector. Refer to [EXT-27. "Removal and Installation of Front Fender Protector"](#).
7. Remove antenna base bolts.
8. Remove antenna base and cable.



### 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

< REMOVAL AND INSTALLATION >

[MID (CC), PREMIUM (KC) AUDIO]

---

### AUXILIARY INPUT JACK

#### Removal and Installation

INFOID:000000007328247

##### Removal

1. Remove the instrument lower panel RH and glove box. Refer to [IP-24, "Removal and Installation"](#).
2. Remove the auxiliary input jack.

##### Installation

Installation is in the reverse order of removal.

# SATELLITE RADIO ANTENNA

< REMOVAL AND INSTALLATION >

[MID (CC), PREMIUM (KC) AUDIO]

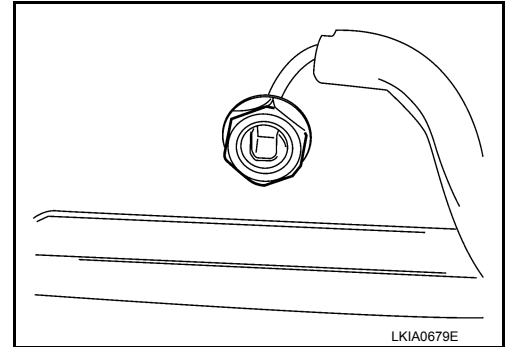
## SATELLITE RADIO ANTENNA

### Removal and Installation

INFOID:000000007328248

#### REMOVAL

1. Remove the roof console. Refer to [INT-25. "Removal and Installation"](#).
2. Disconnect the satellite radio antenna connector.
3. Remove the satellite radio antenna nut.
4. Remove the satellite radio antenna.



#### INSTALLATION

Installation is in the reverse order of removal.

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# SATELLITE RADIO TUNER

< REMOVAL AND INSTALLATION >

[MID (CC), PREMIUM (KC) AUDIO]

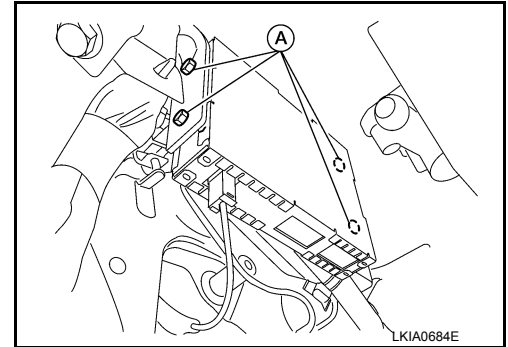
## SATELLITE RADIO TUNER

### Removal and Installation

INFOID:000000007328249

#### REMOVAL

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



#### INSTALLATION

Installation is in the reverse order of removal.



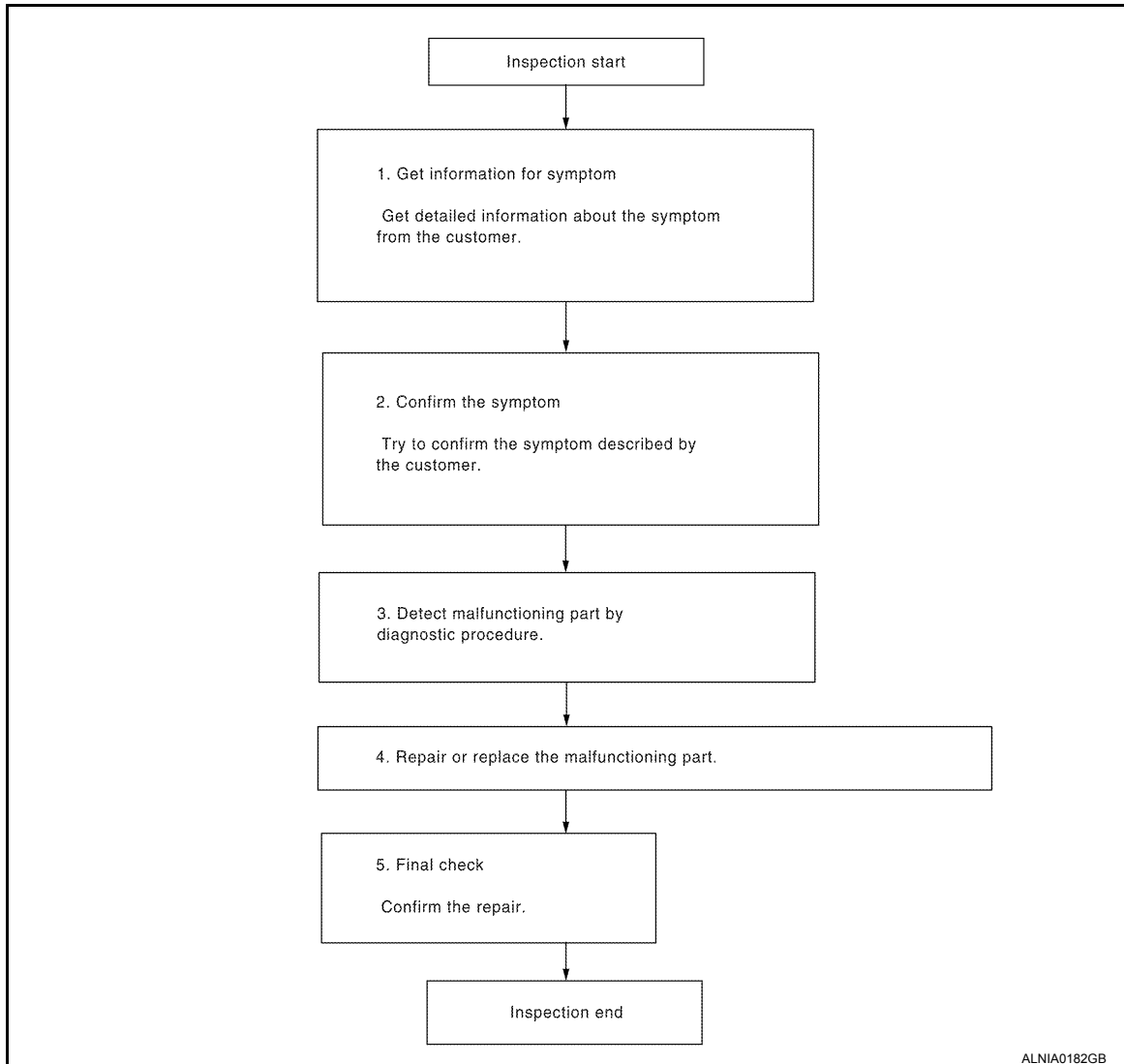
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:000000007328250

#### 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.

## DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[PREMIUM AUDIO (CREW CAB)]

---

Is malfunctioning part detected?

YES    >> GO TO 4  
NO     >> GO TO 2

### 4. REPAIR OR REPLACE THE MALFUNCTIONING PART

---

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

>> GO TO 5

### 5. FINAL CHECK

---

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

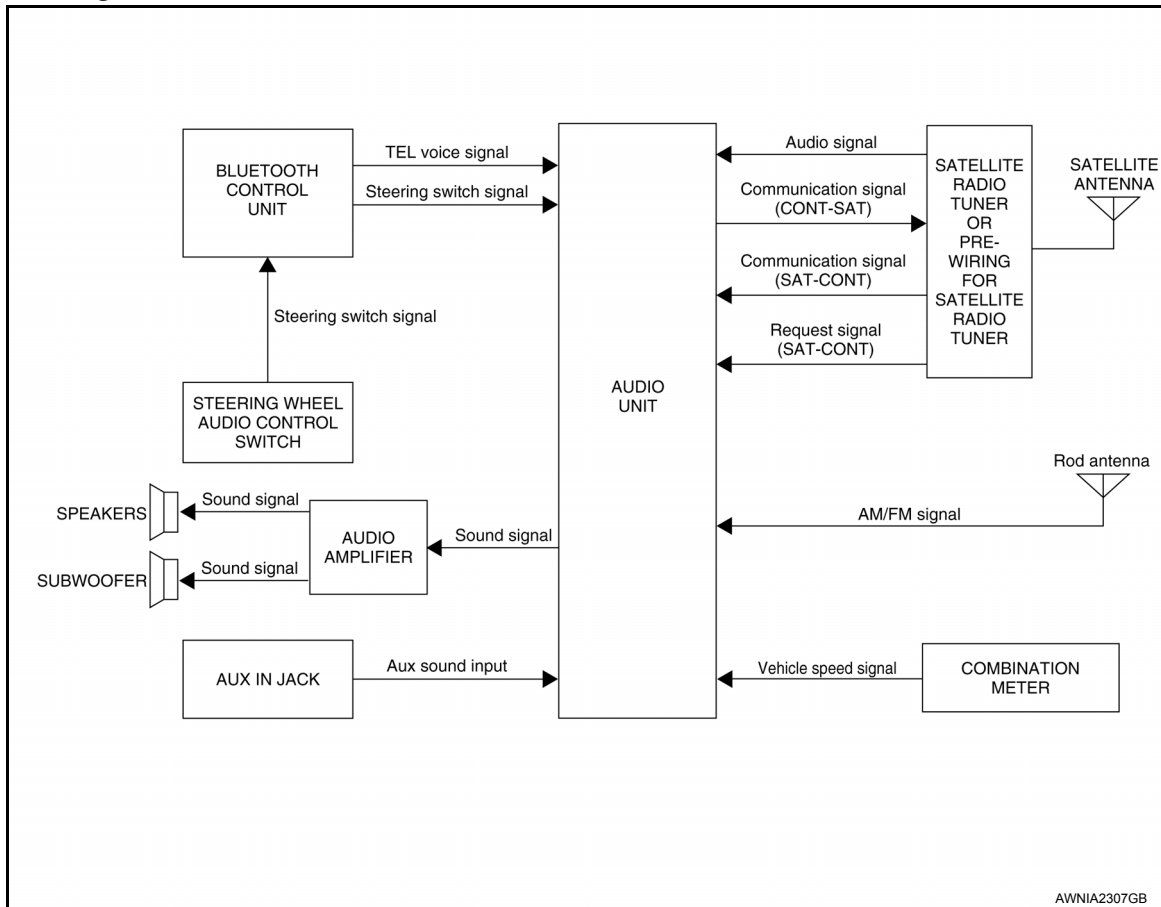
Was the repair confirmed?

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

## SYSTEM DESCRIPTION

### AUDIO SYSTEM

#### System Diagram



#### System Description

INFOID:000000007328252

#### 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.

# AUDIO SYSTEM

< SYSTEM DESCRIPTION >

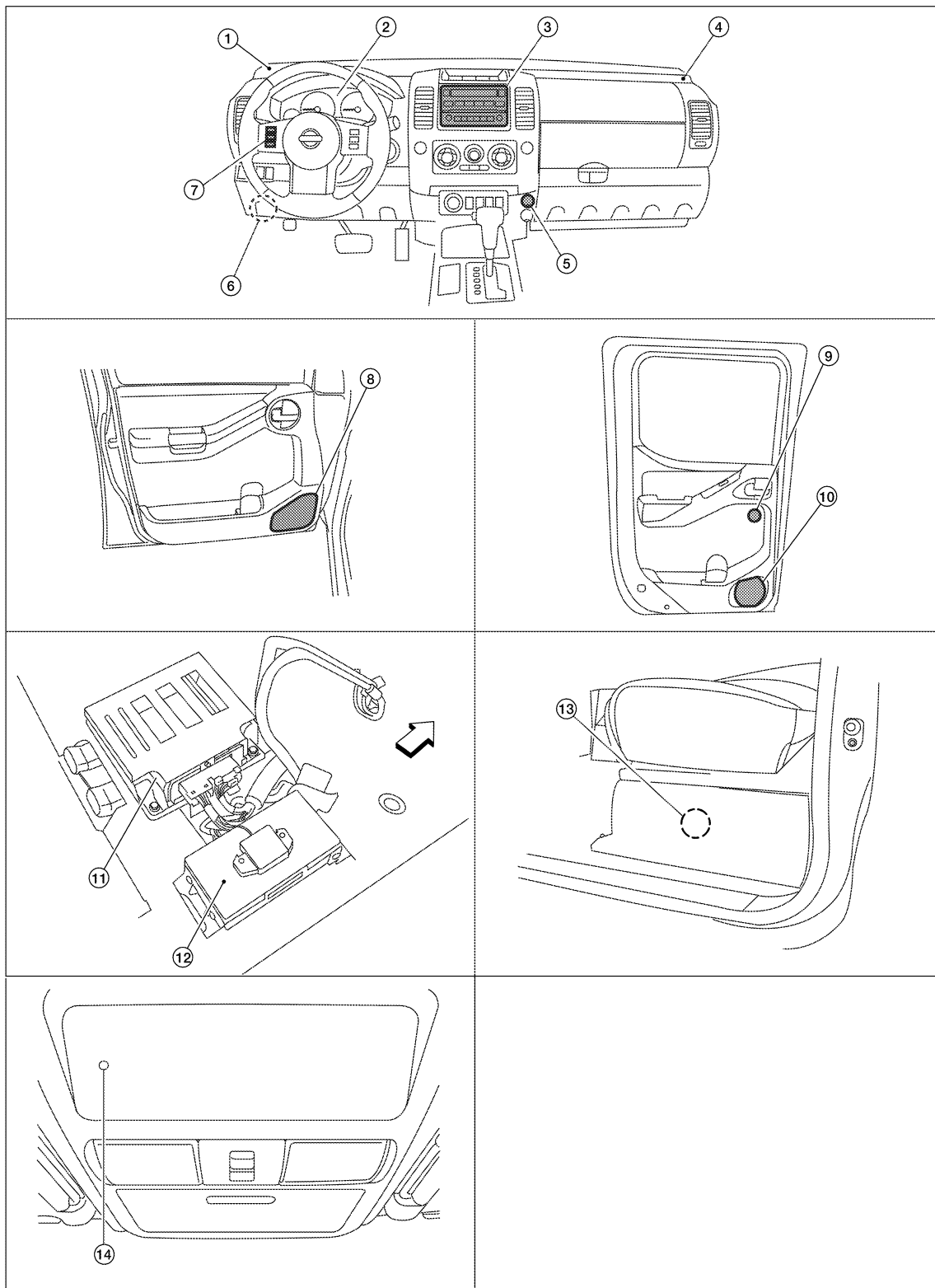
[PREMIUM AUDIO (CREW CAB)]

## 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

INFOID:000000007328253



AWNIA2025ZZ

# AUDIO SYSTEM

## < SYSTEM DESCRIPTION >

## [PREMIUM AUDIO (CREW CAB)]

↩:FRONT

- |   |  |  |
|---|--|--|
| 1. Front tweeter LH M109                    | 2. Combination meter M24   | 3. Audio unit M46, M48, M65, M66   |
| 4. Aux in jack M85                          | 5. Front tweeter RH M111   | 6. Satellite radio tuner or pre-wiring for satellite radio tuner M41, M129 |
| 7. Steering wheel audio control switch      | 8. Front door speaker<br>LH D12<br>RH D112                       | 9. Rear tweeter<br>LH D208<br>RH D308                                      |
| 10. Rear door speaker<br>LH D207<br>RH D307 | 11. Audio amplifier B158, B159 (view under passenger front seat) | 12. Bluetooth control unit B141, B142                                      |
| 13. Subwoofer B72 (under driver's seat)     | 14. Microphone R8  |  |

## Component Description

INFOID:000000007328254

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 style="list-style-type: none"> <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 style="list-style-type: none"> <li>Outputs audio signal from audio amplifier</li> <li>Outputs high, mid and low range sounds</li> </ul>
Front tweeters	<ul style="list-style-type: none"> <li>Outputs audio signal from audio amplifier</li> <li>Outputs high range sounds</li> </ul>
Rear door speakers	<ul style="list-style-type: none"> <li>Outputs audio signal from audio amplifier</li> <li>Outputs high, mid and low range sounds</li> </ul>
Rear door tweeters	<ul style="list-style-type: none"> <li>Outputs audio signal from audio amplifier</li> <li>Outputs high range sounds</li> </ul>
Subwoofer	<ul style="list-style-type: none"> <li>Outputs audio signal from audio amplifier</li> <li>Outputs low range sounds</li> </ul>
Satellite radio tuner	<ul style="list-style-type: none"> <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

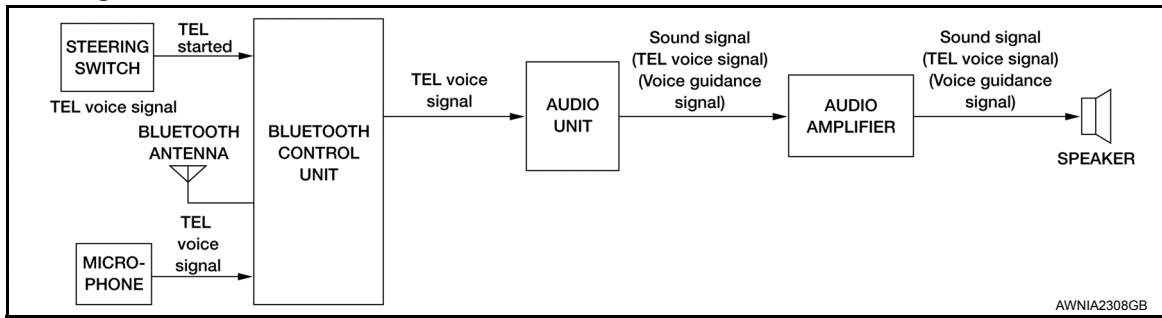
# HANDS-FREE PHONE SYSTEM

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO (CREW CAB)]

## HANDS-FREE PHONE SYSTEM

### System Diagram



### System Description

INFOID:000000007328256

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

#### NOTE:

Cellular telephones must have their wireless connection set up (connected) 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 connected with the Bluetooth control unit. Different cellular telephones may have different connecting 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 connected 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.

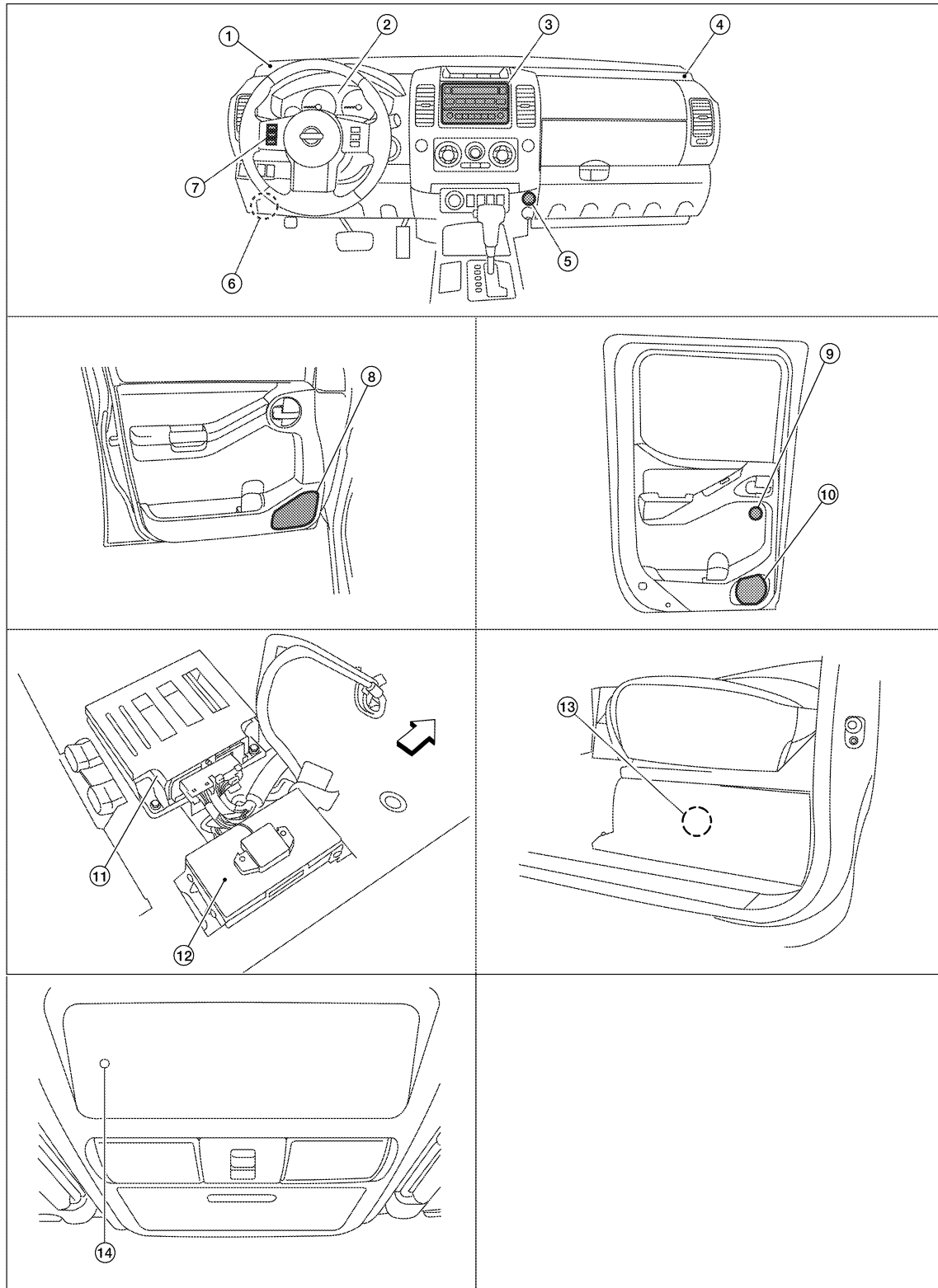
# HANDS-FREE PHONE SYSTEM

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO (CREW CAB)]

## Component Parts Location

INFOID:000000007328257



←:FRONT

- |                          |                          |  |
|--------------------------|--------------------------|--|
| 1. Front tweeter LH M109 | 2. Combination meter M24 | 3. Audio unit M46, M48, M65, M66   |
| 4. Aux in jack M85       | 5. Front tweeter RH M111 | 6. Satellite radio tuner or pre-wiring for satellite radio tuner M41, M129 |

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# HANDS-FREE PHONE SYSTEM

## < SYSTEM DESCRIPTION >

## [PREMIUM AUDIO (CREW CAB)]

- |   |  |                                       |
|---|--|---------------------------------------|
| 7. Steering wheel audio control switch      | 8. Front door speaker<br>LH D12<br>RH D112                       | 9. Rear tweeter<br>LH D208<br>RH D308 |
| 10. Rear door speaker<br>LH D207<br>RH D307 | 11. Audio amplifier B158, B159 (view under passenger front seat) | 12. Bluetooth control unit B141, B142 |
| 13. Subwoofer B72 (under driver's seat)     | 14. Microphone R8  |                                       |

## Component Description

INFOID:000000007328258

Part name	Description
Audio unit	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Receives audio signals from the audio unit</li> <li>Outputs amplified audio signals to the speakers</li> </ul>
Front door speakers	Receives telephone voice and voice guidance signals from the audio amplifier
Front tweeters	
Steering wheel audio control switch	<ul style="list-style-type: none"> <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 >

[PREMIUM AUDIO (CREW CAB)]

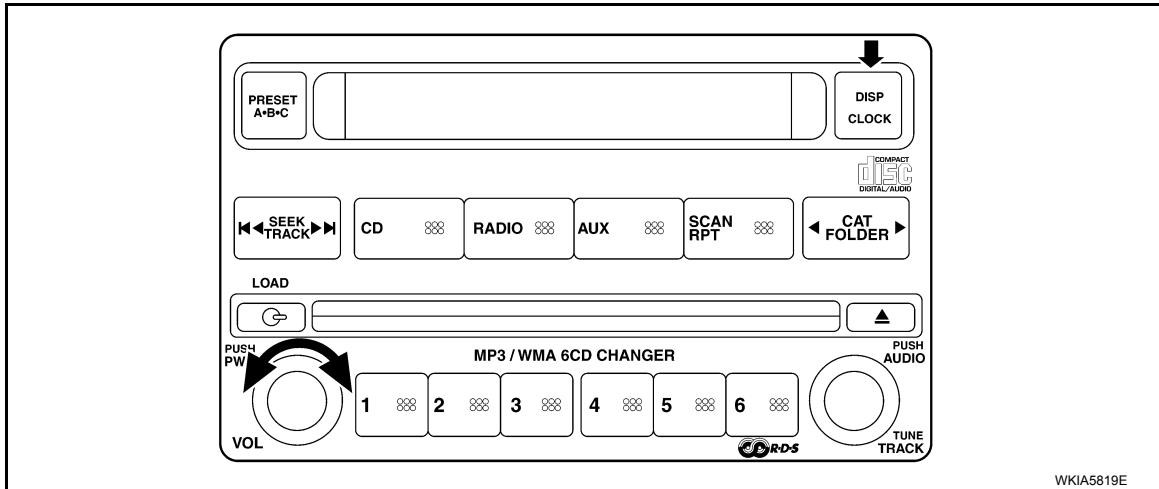
## DIAGNOSIS SYSTEM (AUDIO UNIT)

### Component Function Check

INFOID:000000007328259

#### STARTING THE SELF-DIAGNOSIS MODE

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



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)

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO (CREW CAB)]

## DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

### Diagnosis Description

INFOID:000000007328260

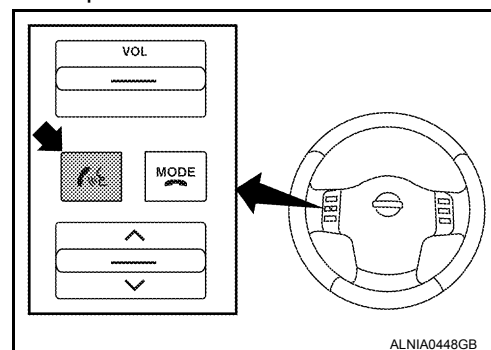
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switch prior to trouble diagnosis.

### BLUETOOTH CONTROL UNIT AUTOMATIC INITIALIZATION CHECKS

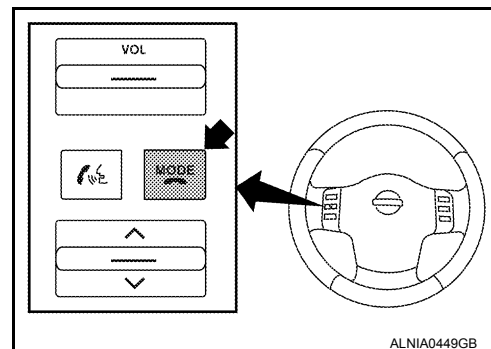
- Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switch [phone operation button (☎)/POWER on and MODE select button (MODE)] stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

### TECHNICIAN PERFORMED DIAGNOSTIC CHECK PROCEDURE

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



4. While the prompt is playing, press and hold the POWER on and MODE select button (MODE) located within the steering wheel audio control switch until you hear the "Diagnostics mode" prompt. The Bluetooth system will sound a 5 second beep.
5. While the beep is sounding, press and hold the POWER on and MODE select button (MODE) located within the steering wheel audio control switch again until you hear prompts.
6. The Bluetooth system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician. Refer to [AV-138, "Work Flow"](#).
7. After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails refer to [AV-138, "Work Flow"](#).
8. Self-diagnosis mode is complete when the voice prompt says "All diagnostic functions completed".



### Work Flow

INFOID:000000007328261

Failure Message	Action
"Internal failure"	Replace Bluetooth control unit. Refer to <a href="#">AV-209, "Removal and Installation"</a> .
"Bluetooth antenna open"	<ol style="list-style-type: none"> <li>1. Inspect harness connection.</li> <li>2. Replace Bluetooth antenna. Refer to <a href="#">AV-215, "Removal and Installation"</a>.</li> </ol>
"Bluetooth antenna shorted"	

## DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO (CREW CAB)]

Failure Message	Action
"Phone operation button for Hands Free System is stuck"	Check steering wheel audio control switch. Refer to <a href="#">AV-161, "Diagnosis Procedure"</a> .
"POWER on and MODE select button for the Hands Free System is stuck"	
"Microphone test" (failed interactive test)	1. Inspect harness between Bluetooth control unit and microphone. 2. Replace microphone. Refer to <a href="#">AV-211, "Removal and Installation"</a> .

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## POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

### DTC/CIRCUIT DIAGNOSIS

#### POWER SUPPLY AND GROUND CIRCUIT AUDIO UNIT

##### AUDIO UNIT : Diagnosis Procedure

INFOID:000000007328262

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

### 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	6	Battery power	29
	10	Ignition switch ACC or ON	4

Are the fuses OK?

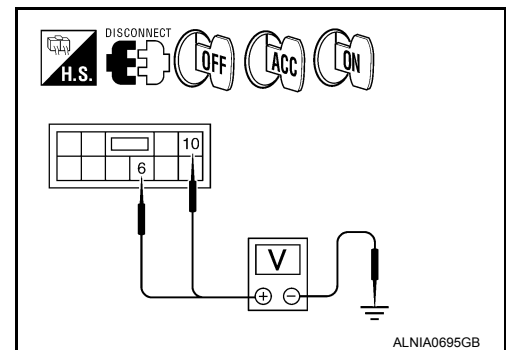
YES >> GO TO 2

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to [GL-49, "Circuit Inspection"](#).

### 2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect audio unit connector M65.
2. Check voltage between the audio unit connector M65 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M65	6	Ground	Battery voltage	Battery voltage	Battery voltage
	10	Ground	0V	Battery voltage	Battery voltage



Are the voltage results as specified?

YES >> GO TO 3

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

### 3.GROUND CIRCUIT CHECK

Inspect audio unit case ground.

Does case ground pass inspection?

YES >> Inspection End.

NO >> Repair audio unit case ground.

#### SATELLITE RADIO TUNER

##### SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000007328263

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

### 1.CHECK FUSES

Check that the following fuses of the satellite radio tuner (factory installed) are not blown.

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

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

Are the fuses OK?

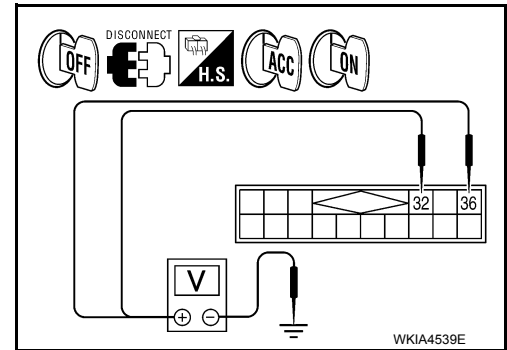
YES >> GO TO 2

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to [GL-49, "Circuit Inspection"](#).

## 2. POWER SUPPLY CIRCUIT CHECK

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

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M41	32	Ground	Battery voltage	Battery voltage	Battery voltage
	36		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 or replace harness or connector.

## 3. GROUND CIRCUIT CHECK

Inspect satellite radio tuner (factory installed) case ground.

Does case ground pass inspection?

YES >> Inspection End.

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

## AUDIO AMP

### AUDIO AMP : Diagnosis Procedure

INFOID:000000007328264

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

## 1. CHECK FUSE

Check that the audio amplifier fuses are not blown.

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

Are the fuses OK?

YES >> GO TO 2

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

## 2. CHECK POWER SUPPLY CIRCUIT

# POWER SUPPLY AND GROUND CIRCUIT

[PREMIUM AUDIO (CREW CAB)]

## < DTC/CIRCUIT DIAGNOSIS >

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

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

Is battery voltage present?

YES >> GO TO 3

NO >> Repair or replace 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		
B158	4	Ground	Yes
	20		

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness or connector.

## BLUETOOTH CONTROL UNIT

### BLUETOOTH CONTROL UNIT : Diagnosis Procedure

INFOID:000000007328265

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

## 1.CHECK FUSE

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

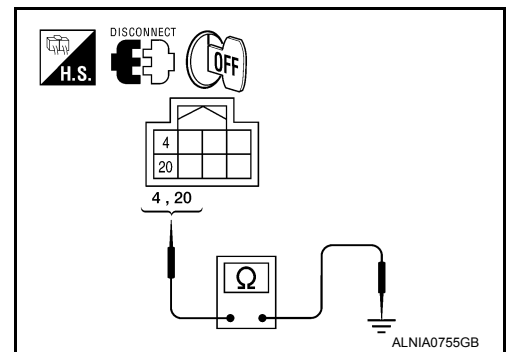
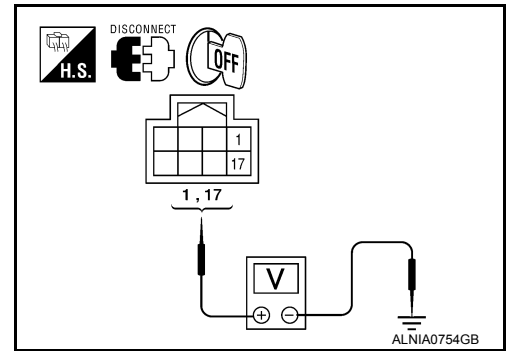
Unit	Terminal	Signal name	Fuse No.
Bluetooth control unit	1	Battery power	29
	2	Ignition switch ACC or ON	4
	3	Ignition switch ON or START	12

Is inspection result OK?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse. Refer to [GI-49, "Circuit Inspection"](#)

## 2.CHECK POWER SUPPLY CIRCUIT



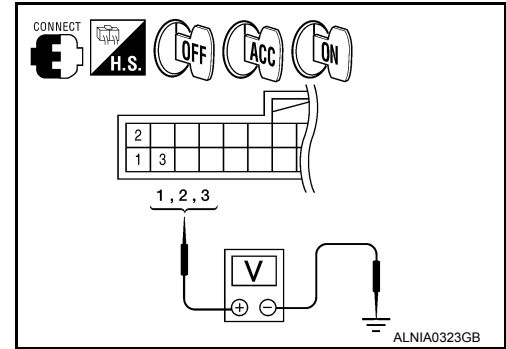
# POWER SUPPLY AND GROUND CIRCUIT

[PREMIUM AUDIO (CREW CAB)]

## < DTC/CIRCUIT DIAGNOSIS >

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

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



Is battery voltage present as specified?

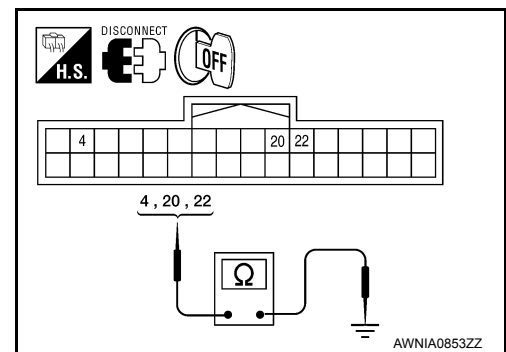
YES >> GO TO 3.

NO >> Repair or replace 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
B141	4	Ground	Yes
	20		
	22		



Are continuity results as specified?

YES >> Inspection End.

NO >> Repair or replace harness or connector.

## MICROPHONE

## MICROPHONE : Diagnosis Procedure

INFOID:000000007328266

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

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

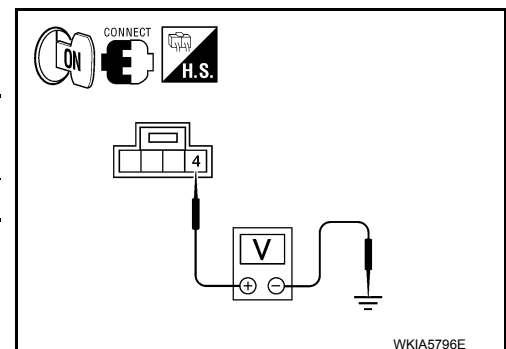
1. Turn ignition switch ON.
2. Check voltage between microphone harness connector R8 terminal 4 and ground.

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

Is approximately 5V present?

YES >> GO TO 3

NO >> GO TO 2



## 2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

# POWER SUPPLY AND GROUND CIRCUIT

[PREMIUM AUDIO (CREW CAB)]

## < DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect microphone and Bluetooth control unit harness connectors.
3. Check continuity between microphone harness connector R8 (A) terminal 4 and Bluetooth control unit harness connector B141 (B) terminal 29.

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

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

A		—	Continuity
Connector	Terminal		
R8	4	Ground	No

Are the continuity test results as specified?

- YES >> Replace the Bluetooth control unit. Refer to [AV-209, "Removal and Installation"](#).  
 NO >> Repair or replace harness or connector.

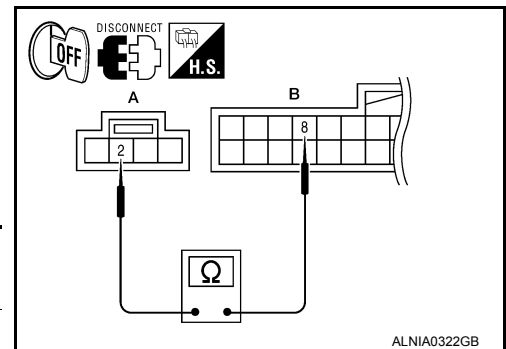
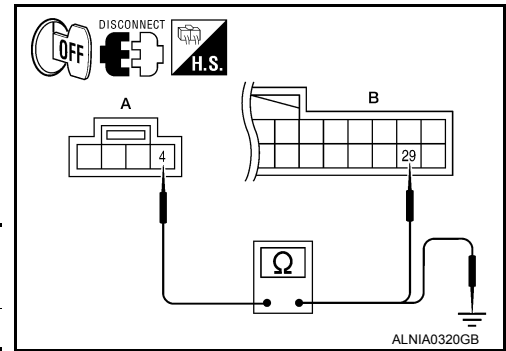
## 3.CHECK GROUND CIRCUIT

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R8	2	B141	8	Yes

Does continuity exist?

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





# FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

## FRONT DOOR SPEAKER

### Description

INFOID:000000007328267

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:000000007328268

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

### 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 connector B159 and suspect speaker connector.
2. Check continuity between audio amplifier harness connector B159 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B159	15	D12	1	Yes
	31		2	
	16	D112	1	
	32		2	

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

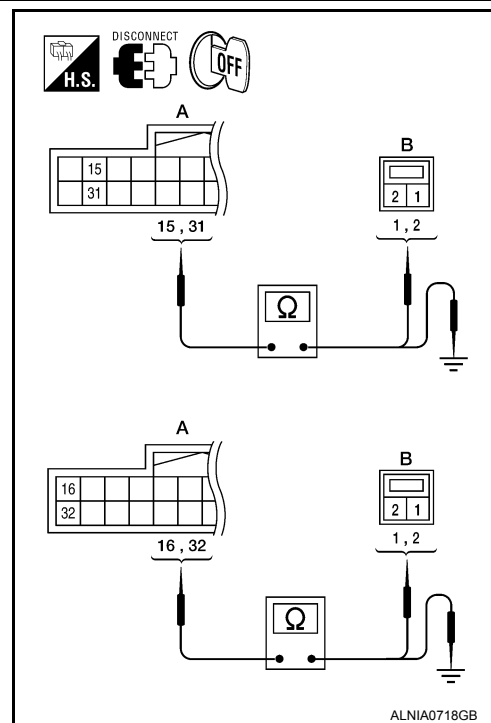
A		—	Continuity
Connector	Terminal		
B159	15	Ground	No
	31		
	16		
	32		

Are continuity test results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

### 3.FRONT DOOR SPEAKER SIGNAL CHECK

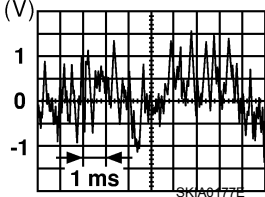


# FRONT DOOR SPEAKER

[PREMIUM AUDIO (CREW CAB)]

## < DTC/CIRCUIT DIAGNOSIS >

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

Connector	Terminal		Condition	Reference signal
	(+)	(-)		
B159	15	31	Receive audio signal	
	16	32		

Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to [AV-204. "Removal and Installation"](#).

NO >> GO TO 4

## 4. PRE-AUDIO AMPLIFIER HARNESS CHECK

1. Disconnect audio unit connector M65 and audio amplifier connector B159.
2. Check continuity between audio unit harness connector M65 (A) and audio amplifier harness connector B159 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M65	1	B159	6	Yes
	2		22	
	3		5	
	4		21	

3. Check continuity between audio unit harness connector M65 (A) and ground.

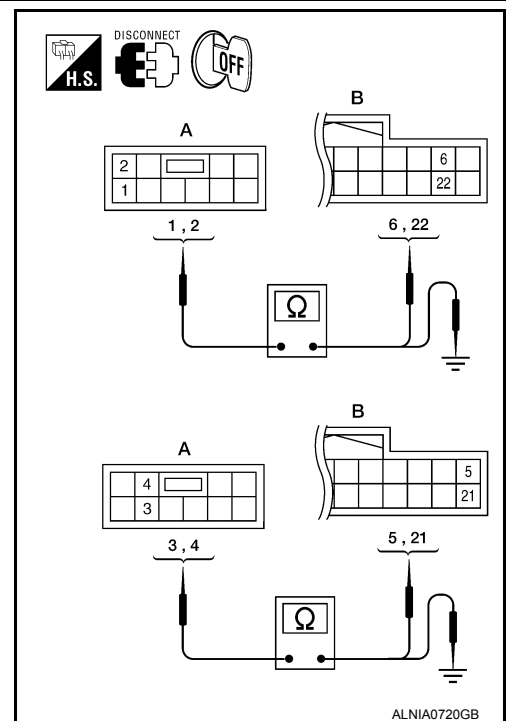
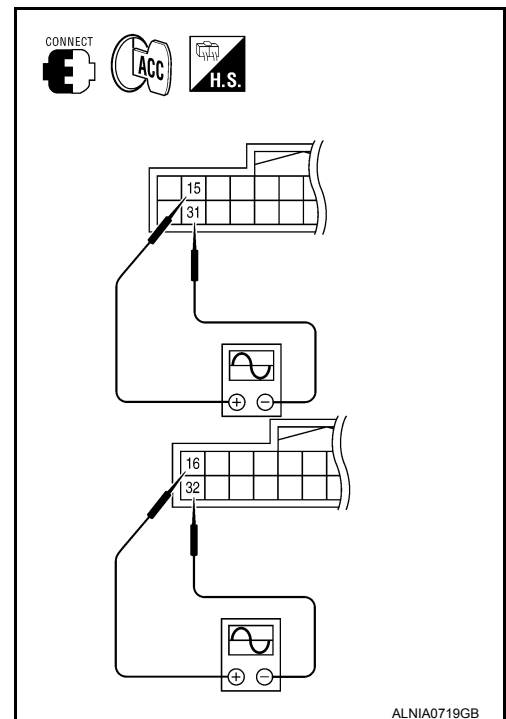
A		—	Continuity
Connector	Terminal		
M65	1	Ground	No
	2		
	3		
	4		

Are continuity test results as specified?

YES >> GO TO 5

NO >> Repair or replace harness or connector.

## 5. PRE-AMP SIGNAL CHECK

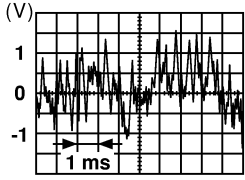


# FRONT DOOR SPEAKER

## < DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

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 M65 terminals with CONSULT or oscilloscope.

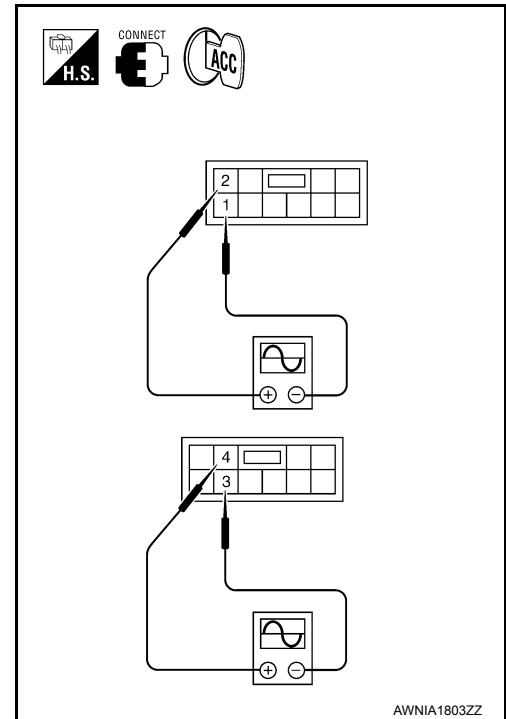
Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M65	2	1	Receive audio signal	
	4	3		

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Are the audio signal voltage readings as specified?

YES >> Replace audio amplifier Refer to [AV-202, "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-201, "Removal and Installation"](#).



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## FRONT TWEETER

### Description

INFOID:000000007328269

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

INFOID:000000007328270

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

### 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.
2. Check continuity between audio amplifier harness connector B159 (A) and suspect tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B159	14	M109	1	Yes
	30		2	
	13	M111	1	
	29		2	

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

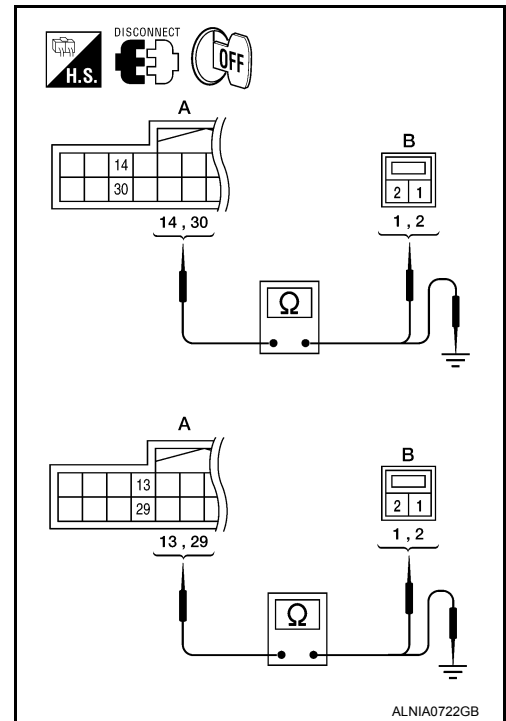
A		—	Continuity
Connector	Terminal		
B159	14	Ground	No
	30		
	13		
	29		

Are continuity test results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

### 3.FRONT TWEETER SIGNAL CHECK



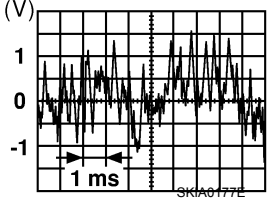
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# FRONT TWEETER

## < DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

1. Connect audio amplifier connector B159 and suspect tweeter 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 or oscilloscope.

Connector	Terminal		Condition	Reference signal
	(+)	(-)		
B159	14	30	Receive audio signal	
	13	29		

Is audio signal voltage as specified?

YES >> Replace suspect tweeter. Refer to [AV-203. "Removal and Installation"](#).

NO >> GO TO 4

## 4. PRE-AUDIO AMPLIFIER HARNESS CHECK

1. Disconnect audio unit connector M65 and audio amplifier connector B159.
2. Check continuity between audio unit harness connector M65 (A) and audio amplifier harness connector B159 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M65	1	B159	6	Yes
	2		22	
	3		5	
	4		21	

3. Check continuity between audio unit harness connector M65 (A) and ground.

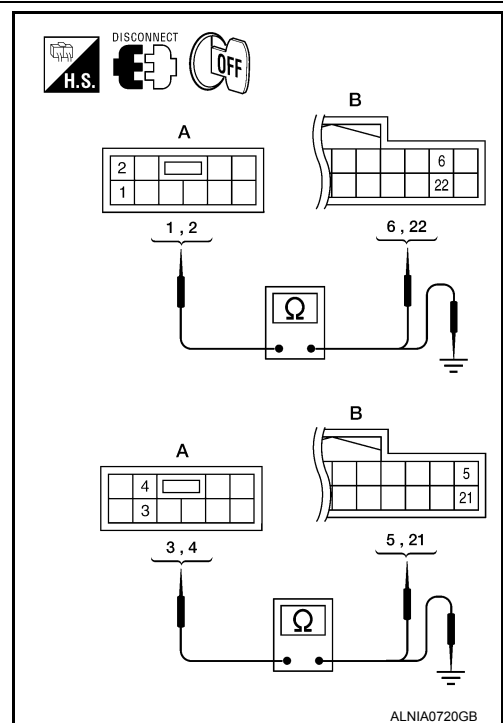
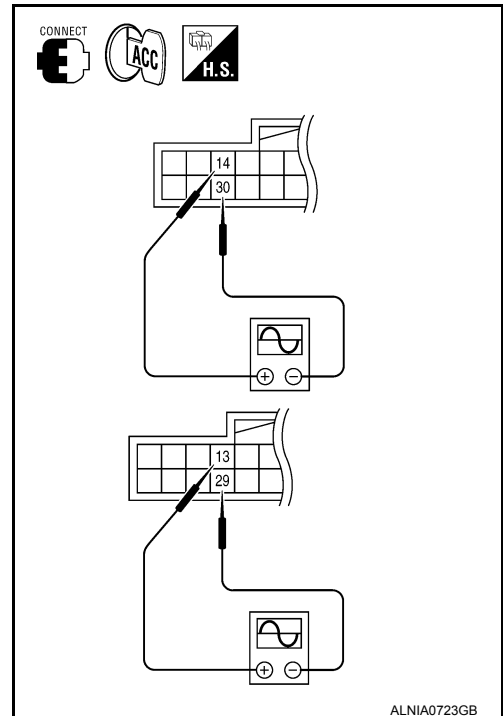
A		—	Continuity
Connector	Terminal		
M65	1	Ground	No
	2		
	3		
	4		

Are continuity test results as specified?

YES >> GO TO 5

NO >> Repair or replace harness or connector.

## 5. PRE-AUDIO AMPLIFIER SIGNAL CHECK

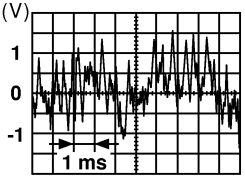


# FRONT TWEETER

## < DTC/CIRCUIT DIAGNOSIS >

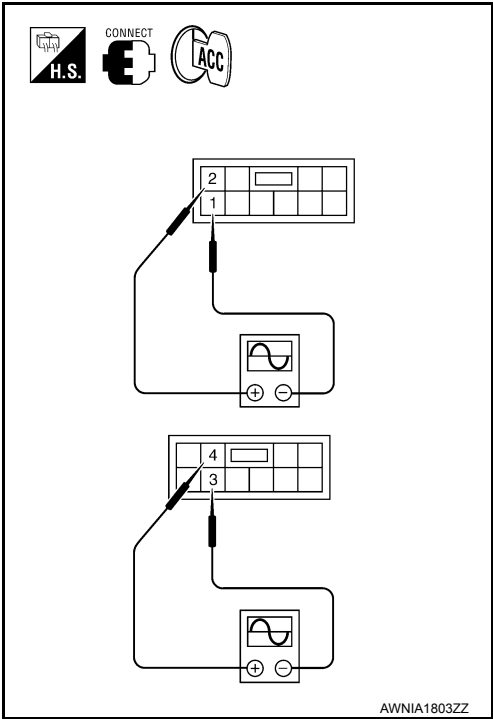
[PREMIUM AUDIO (CREW CAB)]

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 M65 terminals with CONSULT or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M65	2	1	Receive audio signal	
	4	3		

Are the audio signal voltage readings as specified?

- YES >> Replace audio amplifier Refer to [AV-202, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-201, "Removal and Installation"](#).



# REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

## REAR DOOR SPEAKER

### Description

INFOID:000000007328271

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

INFOID:000000007328272

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

### 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		B		Continuity
Connector	Terminal	Connector	Terminal	
B159	11	D207	1	Yes
	27		2	
	12	D307	1	
	28		2	

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

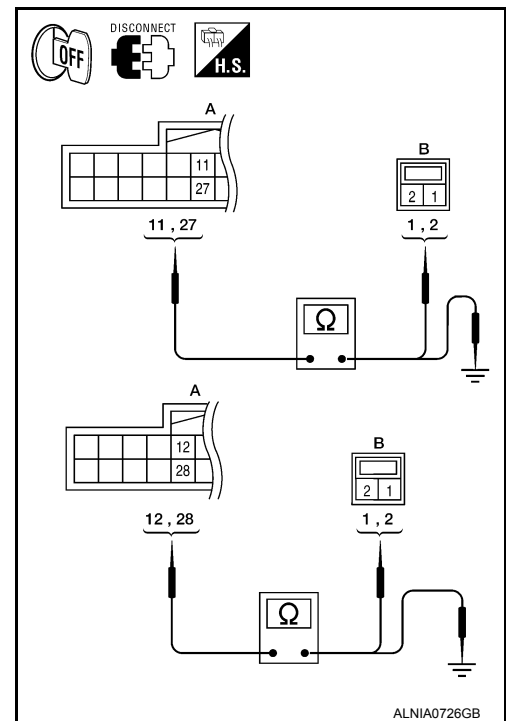
Connector	Terminal	-	Continuity
B159	11	Ground	No
	27		
	12		
	28		

Are the continuity test results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

### 3.SPEAKER SIGNAL CHECK

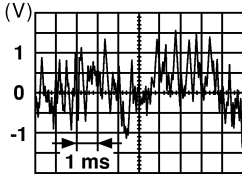


# REAR DOOR SPEAKER

[PREMIUM AUDIO (CREW CAB)]

## < 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 or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B159	11	27	Receive audio signal	 SKIA0177E
	12	28		

Are audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to [AV-205. "Removal and Installation"](#).

NO >> GO TO 4

## 4. PRE-AUDIO AMPLIFIER HARNESS CHECK

1. Disconnect audio unit connector M66 and audio amplifier connector B159.
2. Check continuity between audio unit harness connector M66 (A) and audio amplifier harness connector B159 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M66	13	B159	8	Yes
	14		24	
	15		7	
	16		23	

3. Check continuity between audio unit harness connector M66 (A) and ground.

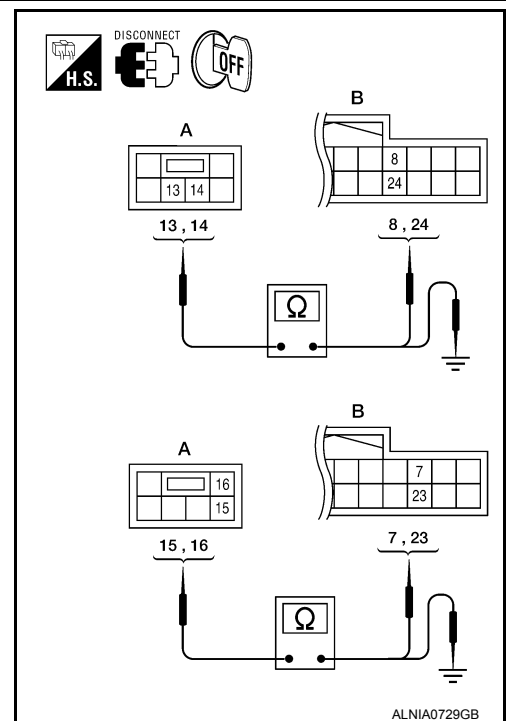
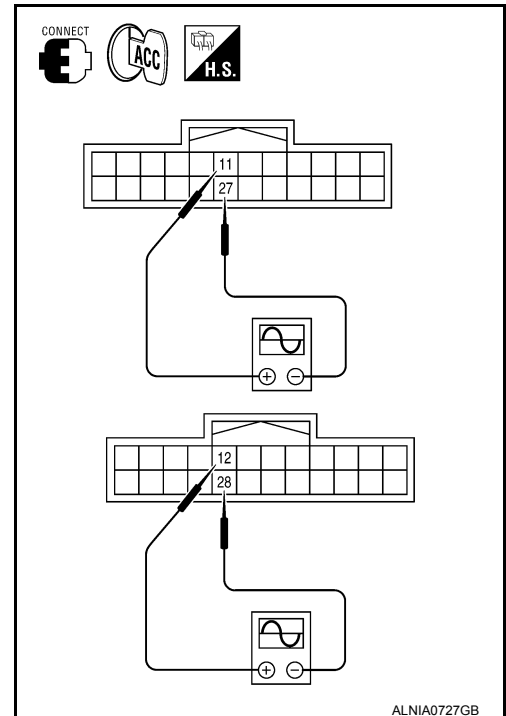
A		—	Continuity
Connector	Terminal		
M66	13	Ground	No
	14		
	15		
	16		

Are the continuity test results as specified?

YES >> GO TO 5

NO >> Repair or replace harness or connector.

## 5. PRE-AUDIO AMPLIFIER SIGNAL CHECK



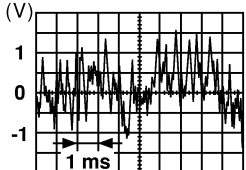


# REAR DOOR SPEAKER

## < DTC/CIRCUIT DIAGNOSIS >

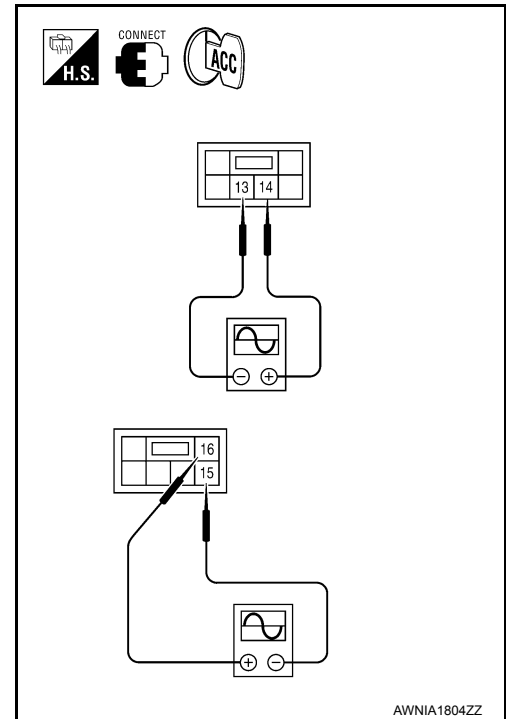
## [PREMIUM AUDIO (CREW CAB)]

1. Connect audio unit connector M66 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 M66 terminals with CONSULT or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M66	14	13	Receive audio signal	 <p>SKIA0177E</p>
	16	15		

Is the audio signal voltage reading as specified?

- YES >> Replace audio amplifier Refer to [AV-202, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-201, "Removal and Installation"](#).



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# REAR DOOR TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

## REAR DOOR TWEETER

### Description

INFOID:000000007328273

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

### Diagnosis Procedure

INFOID:000000007328274

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

### 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		B		Continuity
Connector	Terminal	Connector	Terminal	
B159	11	D208	1	Yes
	27		2	
	12	D308	1	
	28		2	

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

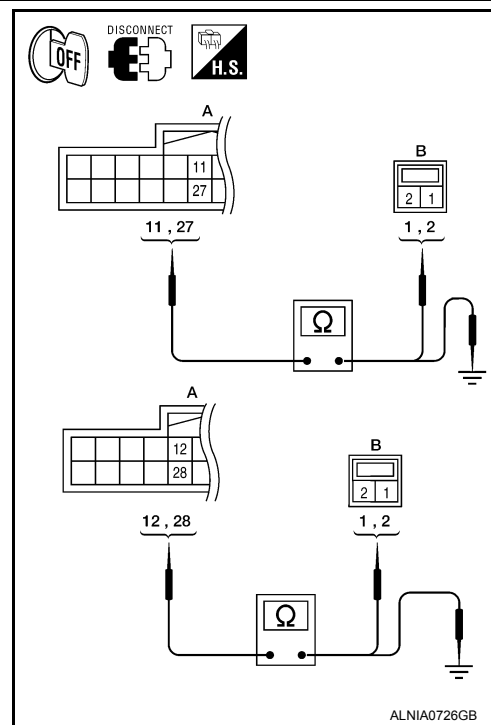
Connector	Terminal	-	Continuity
B159	11	Ground	No
	27		
	12		
	28		

Are the continuity test results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

### 3.SPEAKER SIGNAL CHECK

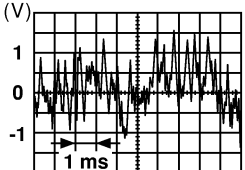


# REAR DOOR TWEETER

[PREMIUM AUDIO (CREW CAB)]

## < 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 or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B159	11	27	Receive audio signal	 SKIA0177E
	12	28		

Are audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to [AV-206. "Removal and Installation"](#).

NO >> GO TO 4

## 4. PRE-AUDIO AMPLIFIER HARNESS CHECK

1. Disconnect audio unit connector M66 and audio amplifier connector B159.
2. Check continuity between audio unit harness connector M66 (A) and audio amplifier harness connector B159 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M66	13	B159	8	Yes
	14		24	
	15		7	
	16		23	

3. Check continuity between audio unit harness connector M66 (A) and ground.

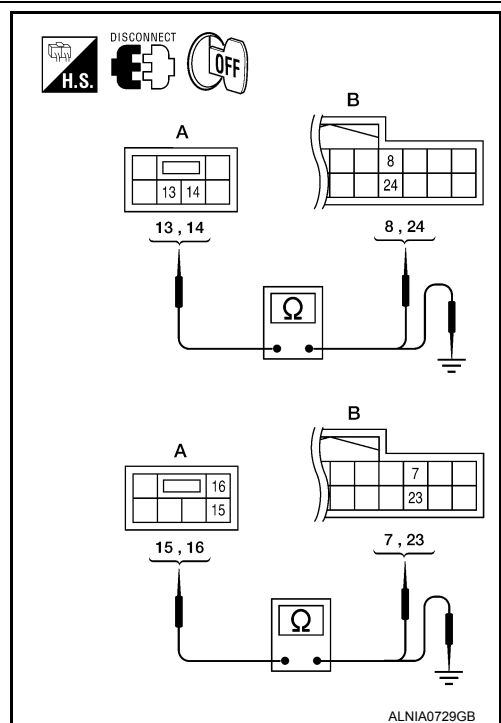
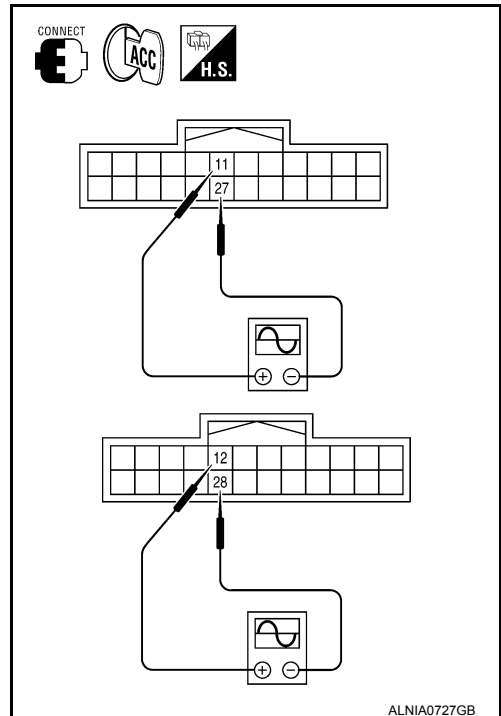
A		—	Continuity
Connector	Terminal		
M66	13	Ground	No
	14		
	15		
	16		

Are the continuity test results as specified?

YES >> GO TO 5

NO >> Repair or replace harness or connector.

## 5. PRE-AUDIO AMPLIFIER SIGNAL CHECK

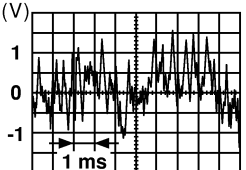


# REAR DOOR TWEETER

## < DTC/CIRCUIT DIAGNOSIS >

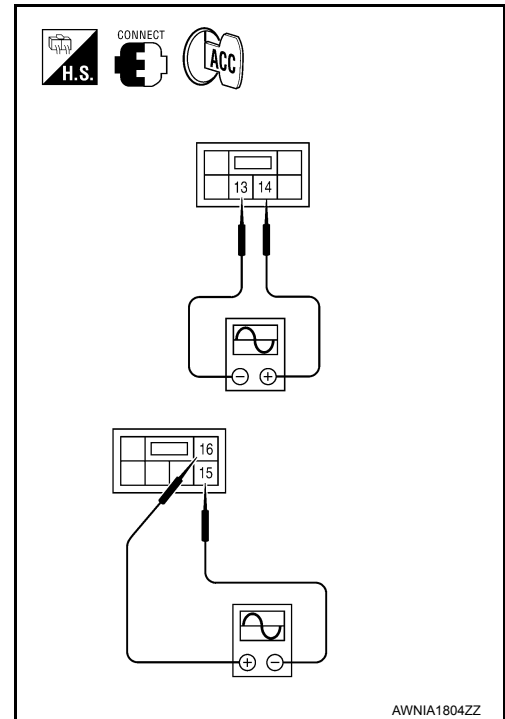
[PREMIUM AUDIO (CREW CAB)]

1. Connect audio unit connector M66 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 M66 terminals with CONSULT or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M66	14	13	Receive audio signal	 <p>SKIA0177E</p>
	16	15		

Is the audio signal voltage reading as specified?

- YES >> Replace audio amplifier Refer to [AV-202, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-201, "Removal and Installation"](#).



# SUBWOOFER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

## SUBWOOFER

### Description

INFOID:000000007328275

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

INFOID:000000007328276

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

### 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?

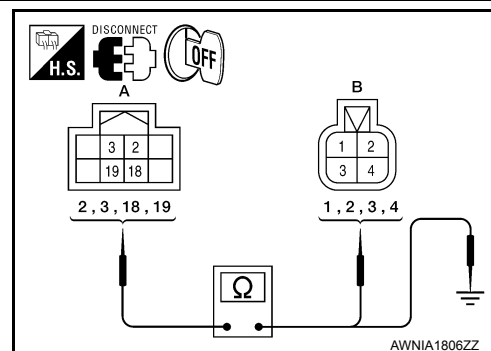
YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.SPEAKER HARNESS CHECK

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B158	2	B72	1	Yes
	18		2	
	3		3	
	19		4	



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

A		—	Continuity
Connector	Terminal		
B158	2	Ground	No
	18		
	3		
	19		

Are the continuity test results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.

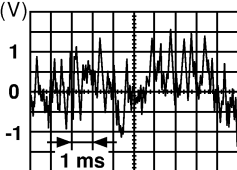
### 3.SPEAKER SIGNAL CHECK

# SUBWOOFER

## < DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

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 or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B158	2	18	Receive audio signal	 SKIA0177E
	3	19		

Is the audio signal voltage as specified?

YES >> Replace subwoofer. Refer to [AV-208. "Removal and Installation"](#).

NO >> GO TO 4

## 4. PRE-AUDIO AMPLIFIER HARNESS CHECK

1. Disconnect audio unit connector M66 and audio amplifier connector B159.
2. Check continuity between audio unit harness connector M66 (A) and audio amplifier harness connector B159 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M66	13	B159	8	Yes
	14		24	
	15		7	
	16		23	

3. Check continuity between audio unit harness connector M66 (A) and ground.

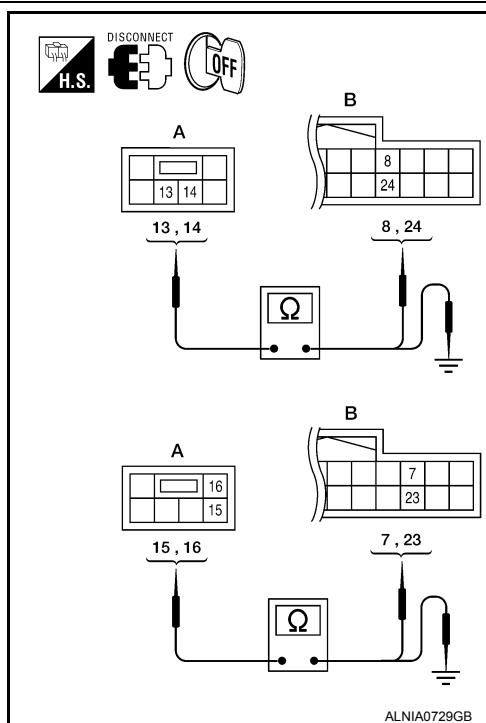
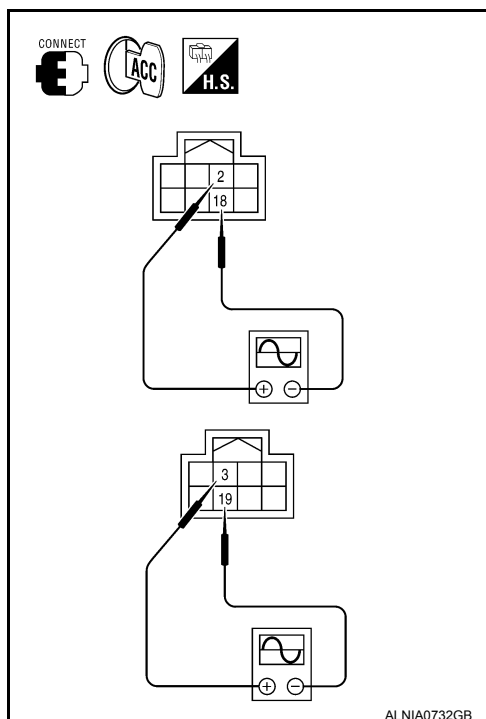
A		—	Continuity
Connector	Terminal		
M66	13	Ground	No
	14		
	15		
	16		

Are the continuity test results as specified?

YES >> GO TO 5

NO >> Repair or replace harness or connector.

## 5. PRE-AUDIO AMPLIFIER SIGNAL CHECK

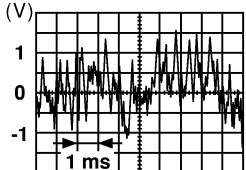


# SUBWOOFER

## < DTC/CIRCUIT DIAGNOSIS >

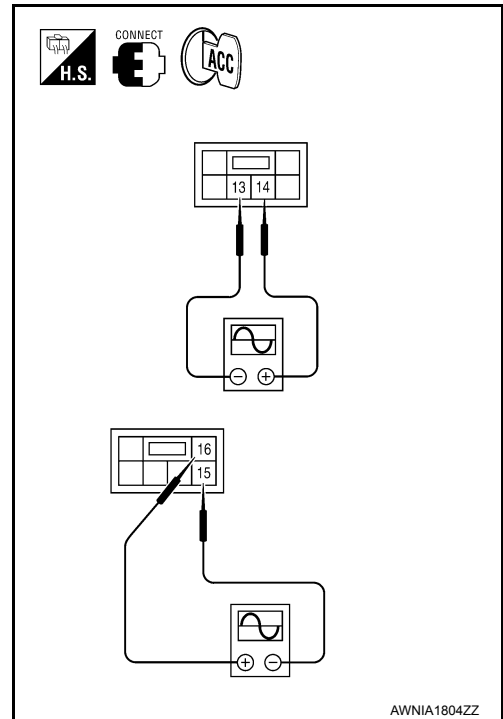
## [PREMIUM AUDIO (CREW CAB)]

1. Connect audio unit connector M66 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 M66 terminals with CONSULT or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M66	14	13	Receive audio signal	 <p>SKIA0177E</p>
	16	15		

Is the audio signal voltage reading as specified?

- YES >> Replace audio amplifier Refer to [AV-202, "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-201, "Removal and Installation"](#).



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## AMP ON SIGNAL CIRCUIT

### Description

INFOID:000000007328277

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

### Diagnosis Procedure

INFOID:000000007328278

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

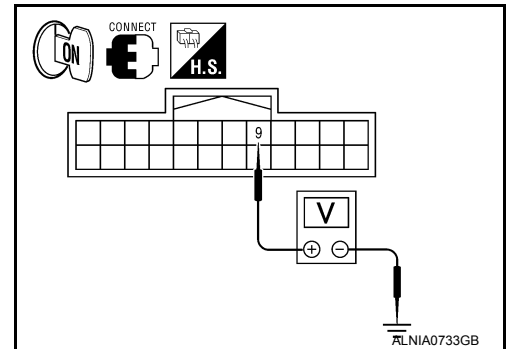
### 1.CHECK AMPLIFIER ON SIGNAL

1. Turn audio system ON.
2. Check voltage between audio amplifier harness connector B159 terminal 9 and ground.

**9 - Ground : More than 6.5V**

Is battery voltage present?

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



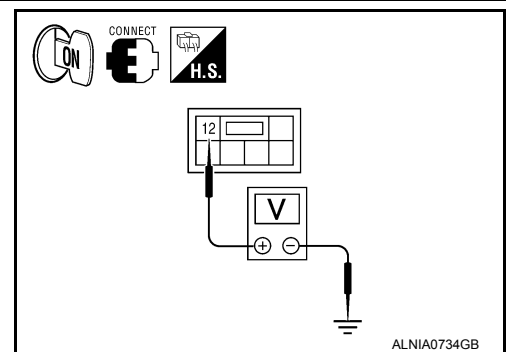
### 2.CHECK AMPLIFIER ON SIGNAL (AUDIO UNIT)

Check voltage between audio unit harness connector M66 terminal 12 and ground.

**12 - Ground : More than 6.5V**

Is battery voltage present?

- YES >> Repair or replace harness or connector.  
NO >> Replace audio unit. Refer to [AV-201, "Removal and Installation"](#).





# STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

## STEERING SWITCH

### Description

INFOID:000000007328279

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

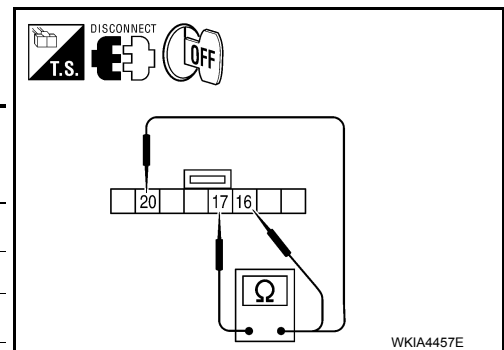
INFOID:000000007328280

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

### 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.

Terminal		Signal name	Condition	Resistance (Ω) (Approx.)
16	17	Seek (down)	Depress ▽ button.	165
		Volume (down)	Depress VOL down button.	652
		Mode/end	Depress  button.	0
20	17	Seek (up)	Depress △ button.	165
		Volume (up)	Depress VOL up button.	652
		Phone/send	Depress  button.	0



Do the steering wheel audio control switch buttons check OK?

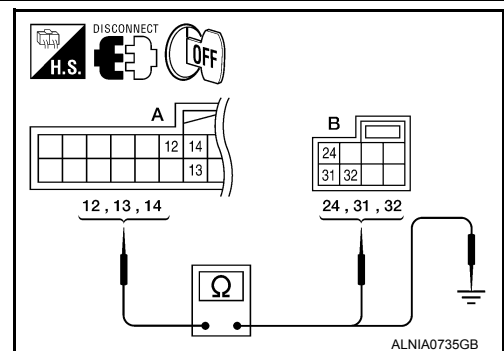
YES >> GO TO 2

NO >> Replace steering wheel audio control switch. Refer to [AV-207, "Removal and Installation"](#).

### 2.CHECK HARNESS

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B141	12	M30	24	Yes
	13		32	
	14		31	



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

A		—	Continuity
Connector	Terminal		
B141	12	Ground	No
	13		
	14		

Are the continuity results as specified?

## STEERING SWITCH

[PREMIUM AUDIO (CREW CAB)]

### < DTC/CIRCUIT DIAGNOSIS >

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

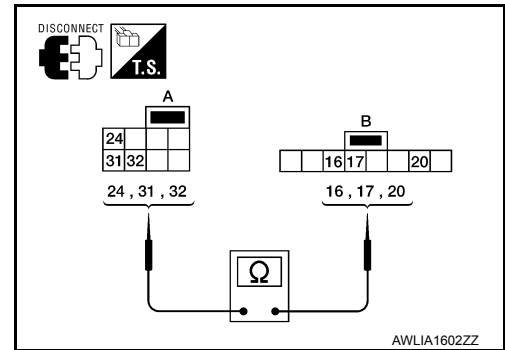
### 3. SPIRAL CABLE CHECK

1. Disconnect spiral cable connector M102.
2. Check continuity between spiral cable harness connector M30 (A) and M102 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M102	20	Yes
	31		17	
	32		16	

Does the spiral cable check OK?

- YES >> Inspection End.  
NO >> Replace spiral cable. Refer to [SR-13. "Removal and Installation"](#).



# COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

## COMMUNICATION SIGNAL CIRCUIT

### SATELLITE RADIO TUNER

#### SATELLITE RADIO TUNER : Description

INFOID:000000007328281

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

#### SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:000000007328282

Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

#### 1.CHECK HARNESS - REQ1

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector M41 and audio unit connector M48.
3. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 28 and audio unit harness connector M48 (B) terminal 48.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	28	M48	48	Yes

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

A		—	Continuity
Connector	Terminal		
M41	28	Ground	No

Are continuity results as specified?

YES >> GO TO 2

NO >> Repair or replace harness or connector.

#### 2.CHECK HARNESS - TXD

1. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 29 and audio unit harness connector M48 (B) terminal 49.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	29	M48	49	Yes

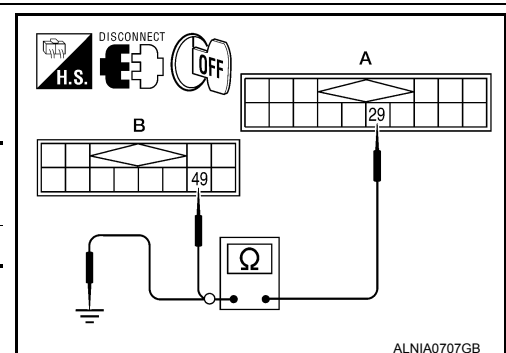
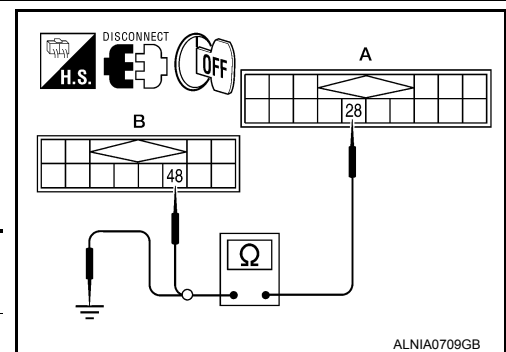
2. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 29 and ground.

A		—	Continuity
Connector	Terminal		
M41	29	Ground	No

Are continuity results as specified?

YES >> GO TO 3

NO >> Repair or replace harness or connector.



# COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

## 3.CHECK HARNESS - RXD

1. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 30 and audio unit harness connector M48 (B) terminal 50.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	30	M48	50	Yes

2. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 30 and ground.

A		—	Continuity
Connector	Terminal		
M41	30	Ground	No

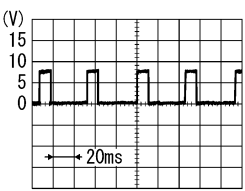
Are continuity results as specified?

YES >> GO TO 4

NO >> Repair or replace harness or connector.

## 4.CHECK REQ1 SIGNAL

1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
2. Turn ignition switch to ACC
3. Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 28 and ground with CONSULT or oscilloscope.

(+) Reference signal		(-)	Reference signal
Connector	Terminal		
M41	28	Ground	 <p>SKIB3825E</p>

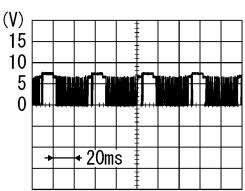
Are voltage readings as specified?

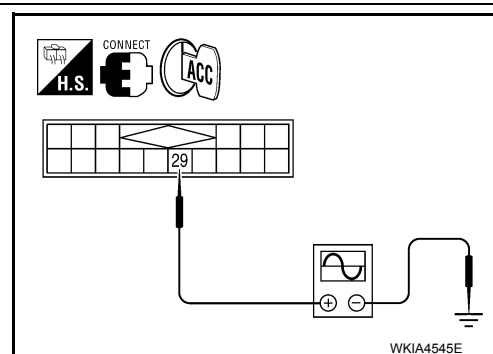
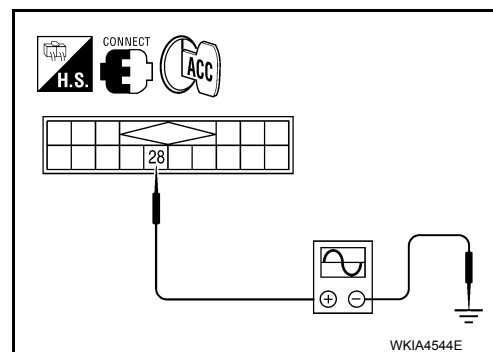
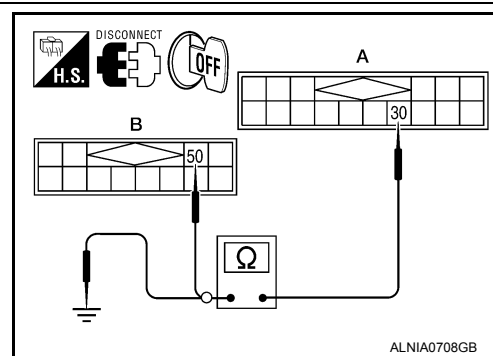
YES >> GO TO 5

NO >> Replace audio unit. Refer to [AV-201. "Removal and Installation"](#).

## 5.CHECK TXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 29 and ground with CONSULT or oscilloscope.

(+) Reference signal		(-)	Reference signal
Connector	Terminal		
M41	29	Ground	 <p>SKIB3824E</p>



# COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

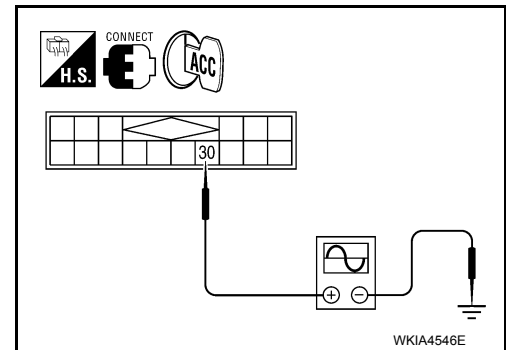
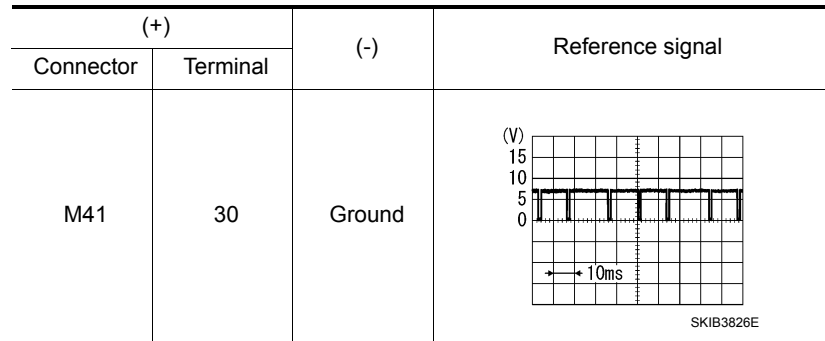
Are the voltage readings as specified?

YES >> GO TO 6

NO >> Replace satellite radio tuner. Refer to [AV-216. "Removal and Installation"](#)

## 6.CHECK RXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 30 and ground with CONSULT or oscilloscope.



Are the voltage readings as specified?

YES >> Replace satellite radio tuner. Refer to [AV-216. "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-201. "Removal and Installation"](#).

## SOUND SIGNAL CIRCUIT SATELLITE RADIO TUNER

### SATELLITE RADIO TUNER : Description

INFOID:000000007328283

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:000000007328284

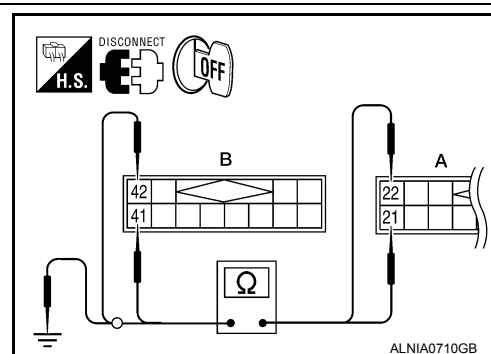
Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

#### LEFT CHANNEL

##### 1.CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector M41 and audio unit connector M48.
3. Check continuity between satellite radio tuner (factory installed) connector M41 (A) and audio unit connector M48 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	21	M48	41	Yes
	22		42	



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

A		—	Continuity
Connector	Terminal		
M41	21	Ground	No
	22		

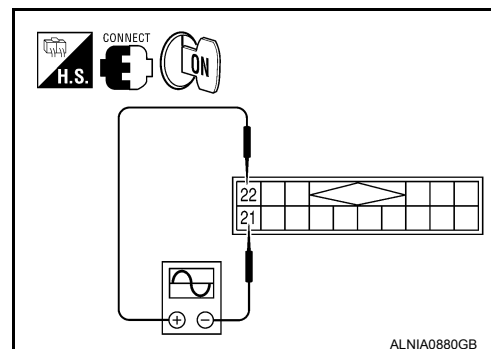
Are continuity results as specified?

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

##### 2.CHECK LEFT CHANNEL AUDIO SIGNAL

1. Connect satellite radio tuner (factory installed) and audio unit.
2. Turn ignition switch ON.
3. Check signal between satellite radio tuner (factory installed) connector M41 terminals 21 and 22 with CONSULT or oscilloscope.

(+) Terminal		(-) Terminal	Reference signal
Connector	Terminal	Terminal	
M41	22	21	



Are voltage readings as specified?

# SOUND SIGNAL CIRCUIT

[PREMIUM AUDIO (CREW CAB)]

## < DTC/CIRCUIT DIAGNOSIS >

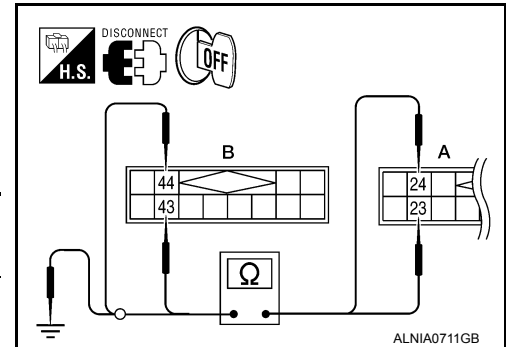
- YES >> Replace audio unit. Refer to [AV-201. "Removal and Installation"](#).  
 NO >> Replace satellite radio tuner. Refer to [AV-216. "Removal and Installation"](#).

### RIGHT CHANNEL

#### 1.CHECK HARNESS

- Turn ignition switch OFF.
- Disconnect satellite radio tuner (factory installed) connector M41 and audio unit connector M48.
- Check continuity between satellite radio tuner (factory installed) M41 (A) and audio unit M48 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	23	M48	43	Yes
	24		44	



- Check continuity between satellite radio tuner (factory installed) connector M41 (A) and ground.

A		—	Continuity
Connector	Terminal		
M41	23	Ground	No
	24		

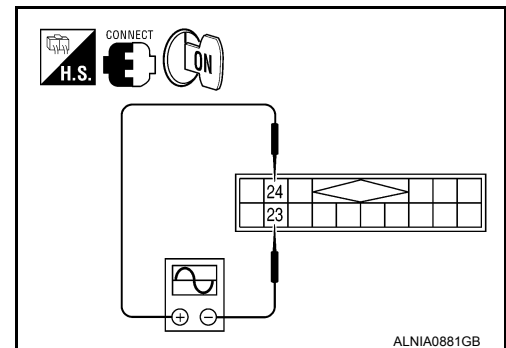
#### Are continuity results as specified?

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

#### 2.CHECK RIGHT 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 M41 terminals 23 and 24 with CONSULT or oscilloscope.

(+) Terminal		(-) Terminal	Reference signal
Connector	Terminal	Terminal	
M41	24	23	



#### Are voltage readings as specified?

- YES >> Replace audio unit. Refer to [AV-201. "Removal and Installation"](#).  
 NO >> Replace satellite radio tuner. Refer to [AV-216. "Removal and Installation"](#).

# MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

## MICROPHONE SIGNAL CIRCUIT

### Description

INFOID:000000007328285

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

### Diagnosis Procedure

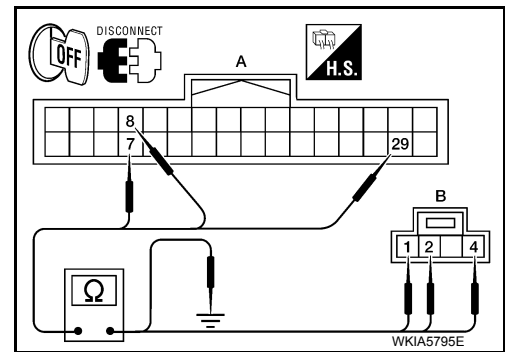
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Regarding Wiring Diagram information, refer to [AV-180, "Wiring Diagram - Crew Cab"](#).

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

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

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



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

A		—	Continuity
Connector	Terminal		
B141	7	Ground	No
	8		
	29		

Are the continuity test results as specified?

YES >> GO TO 2

NO >> Repair or replace harness or connector.

### 2.CHECK MICROPHONE POWER SUPPLY

1. Connect Bluetooth control unit connector B141 and microphone connector R8.
2. Turn ignition switch ON.
3. Check voltage between microphone harness connector R8 terminal 4 and ground.

**4 - Ground**

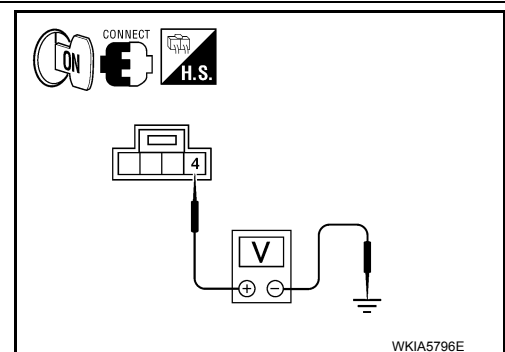
**: Approx. 5V**

Is voltage reading approx. 5 volts?

YES >> GO TO 3

NO >> Replace Bluetooth control unit. Refer to [AV-209, "Removal and Installation"](#).

### 3.CHECK MICROPHONE SIGNAL



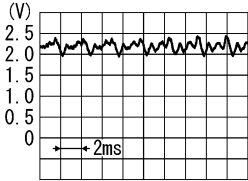


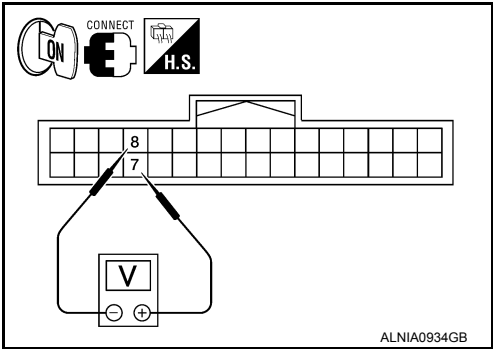
MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

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

Connector	(+)	(-)	Reference signal
	Terminal	Terminal	
B141	7	8	<div>While speaking into MIC</div> <div></div> <div>PKIB5037J</div>



Are voltage readings as specified?

- YES >> Replace Bluetooth control unit. Refer to [AV-209, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-211, "Removal and Installation"](#).

AV

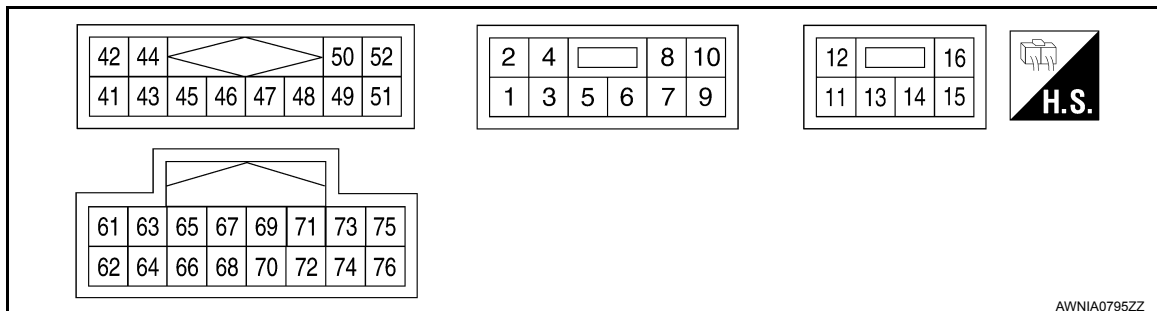
## ECU DIAGNOSIS INFORMATION

### AUDIO UNIT

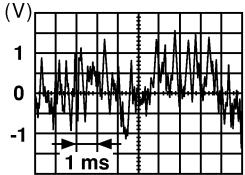
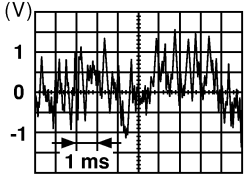
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INFOID:000000007328287

#### TERMINAL LAYOUT



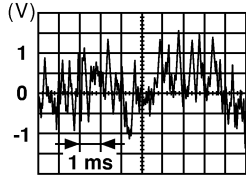
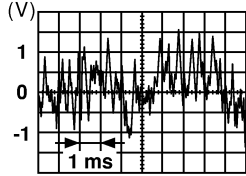
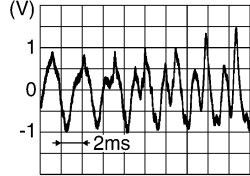
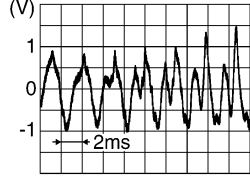
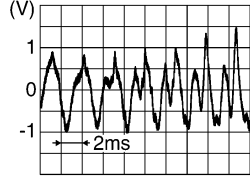
#### PHYSICAL VALUES

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-					
2 (W)	1 (B)	Audio sound signal front LH	Output	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
4 (Y)	3 (BR)	Audio sound signal front RH	Output	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
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

# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >





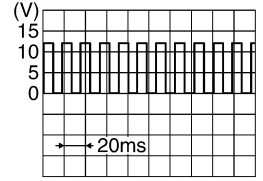
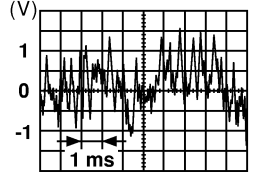
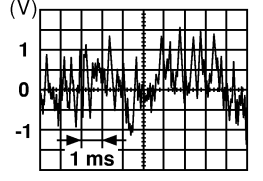
[PREMIUM AUDIO (CREW CAB)]

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-					
14 (BR)	13 (B/R)	Audio sound signal rear LH	Output	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
16 (L)	15 (B/W)	Audio sound signal rear RH	Output	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
42 (R)	41 (G)	Satellite radio au- dio signal LH	Input	Ignition switch ON	Satellite radio tuner operating	 SKIB3609E
44 (B)	43 (W)	Satellite radio au- dio signal RH	Input	Ignition switch ON	Satellite radio tuner operating	 SKIB3609E
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	 SKIB3609E
63 (R)	-	Mute control	-	-	-	-
67	-	Shield	-	Ignition switch ON	-	0V

# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO (CREW CAB)]

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-					
69 (V)	71 (O)	Steering switch signal A	Input	Ignition switch ON	Pressing  button	0V
					Pressing  button	0.75
					Pressing VOL up button	2V
					Except for above	5V
70 (LG)	71 (O)	Steering switch signal B	Input	Ignition switch ON	Pressing  button	0V
					Pressing  button	0.75V
					Pressing VOL down button	2V
					Except for above	5 V
73 (SB)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	 PKIA1935E
74 (W)	Ground	Auxiliary audio input RH (+)	Input	Ignition switch ON	Receive audio signal (AUX input)	 SKIA0177E
75 (B)	Ground	Auxiliary audio input LH (+)	Input	Ignition switch ON	Receive audio signal (AUX input)	 SKIA0177E
76 (R)	-	Shield	-	-	-	0V

# AUDIO AMP

< ECU DIAGNOSIS INFORMATION >

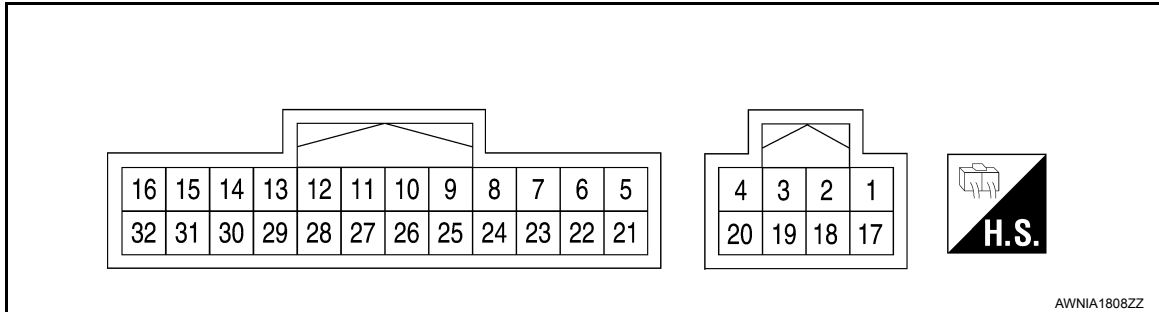
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## AUDIO AMP

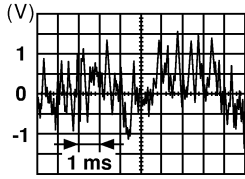
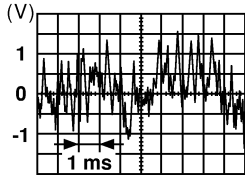
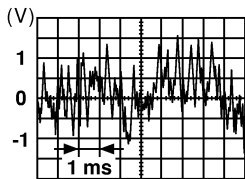
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### TERMINAL LAYOUT



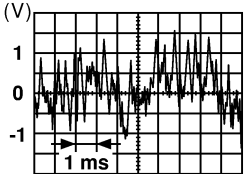
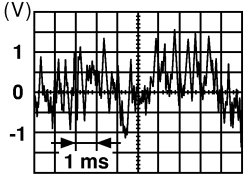
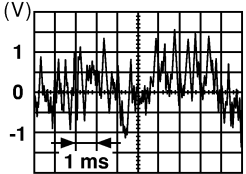
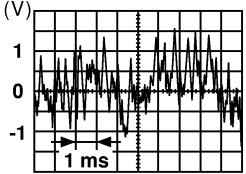
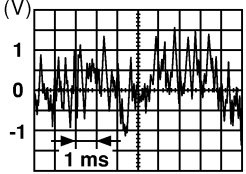
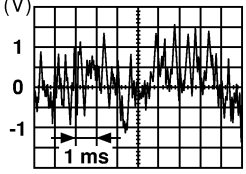
### PHYSICAL VALUES

Terminal (wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-					
1 (Y)	Ground	Battery	Input	-	-	Battery voltage
2 (W)	18 (G)	Subwoofer	Output	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
3 (O)	19 (BR)	Subwoofer	Output	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
4 (B)	Ground	Ground	-	Ignition switch ON	-	-
9 (G/W)	Ground	Amp. ON signal	Input	Ignition switch ON	-	More than 6.5V
11 (G)	27 (B)	Rear door speak- er LH and rear door tweeter LH	Output	Ignition switch ON	Receive audio sig- nal	 SKIA0177E

# AUDIO AMP

< ECU DIAGNOSIS INFORMATION >

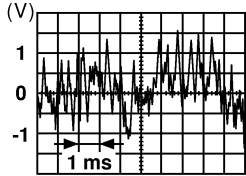
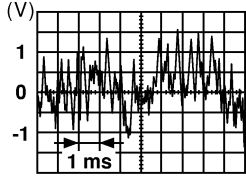
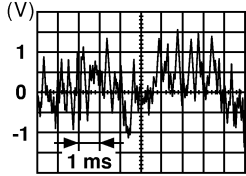
[PREMIUM AUDIO (CREW CAB)]

Terminal (wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-					
12 (GR)	28 (O)	Rear door speaker RH and rear door tweeter RH	Output	Ignition switch ON	Receive audio signal	 SKIA0177E
13 (W)	29 (P)	Front door tweeter RH	Output	Ignition switch ON	Receive audio signal	 SKIA0177E
14 (Y)	30 (GR)	Front tweeter LH	Output	Ignition switch ON	Receive audio signal	 SKIA0177E
15 (BR)	31 (L)	Front door speaker LH	Output	Ignition switch ON	Receive audio signal	 SKIA0177E
16 (LG)	32 (R)	Front door speaker RH	Output	Ignition switch ON	Receive audio signal	 SKIA0177E
17 (R/B)	Ground	Battery	Input	-	-	Battery voltage
20 (B)	Ground	Ground	-	Ignition switch ON	-	-
21 (Y)	5 (BR)	Audio sound signal front RH	Input	Ignition switch ON	Receive audio signal	 SKIA0177E

# AUDIO AMP

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO (CREW CAB)]

Terminal (wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	-					
22 (W)	6 (B)	Audio sound sig- nal front LH	Input	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
23 (L)	7 (B/W)	Audio sound sig- nal rear RH	Input	Ignition switch ON	Receive audio sig- nal	 SKIA0177E
24 (BR)	8 (B/R)	Audio sound sig- nal rear LH	Input	Ignition switch ON	Receive audio sig- nal	 SKIA0177E

A  
B  
C  
D  
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J  
K  
L  
M  
O  
P

AV

# SATELLITE RADIO TUNER

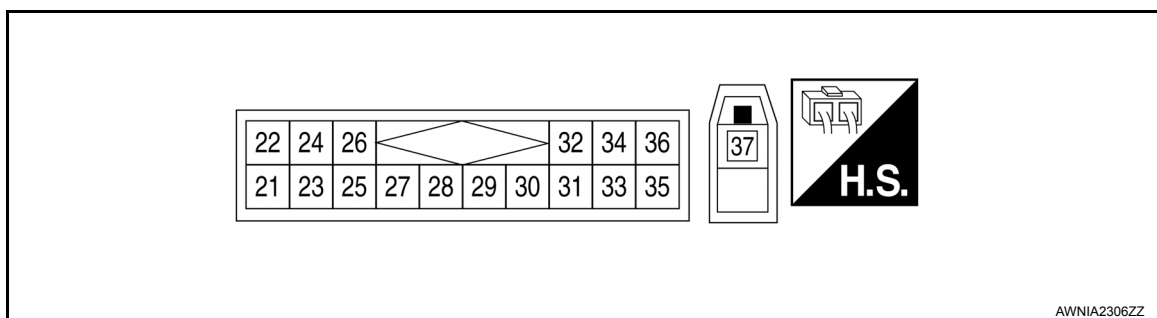
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[PREMIUM AUDIO (CREW CAB)]

## SATELLITE RADIO TUNER

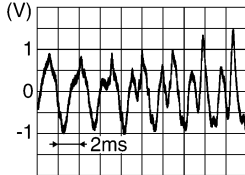
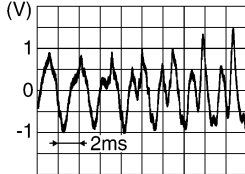
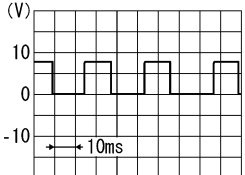
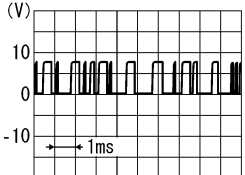
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AWNIA2306ZZ

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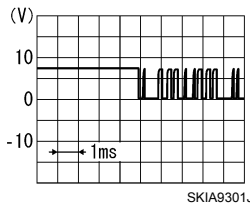
Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/Output			
22 (R)	21 (G)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	 <p>SKIB3609E</p>
24 (B)	23 (W)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	 <p>SKIB3609E</p>
28 (O)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	 <p>SKIA9299J</p>
29 (P)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	 <p>SKIA9300J</p>



# SATELLITE RADIO TUNER

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO (CREW CAB)]

Terminal		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
30 (L)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	
32 (R/B)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
36 (G/B)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
37	—	Satellite antenna	Input	—	—	—

A  
B  
C  
D  
E  
F  
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J  
K  
L  
M

AV

O  
P

# BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

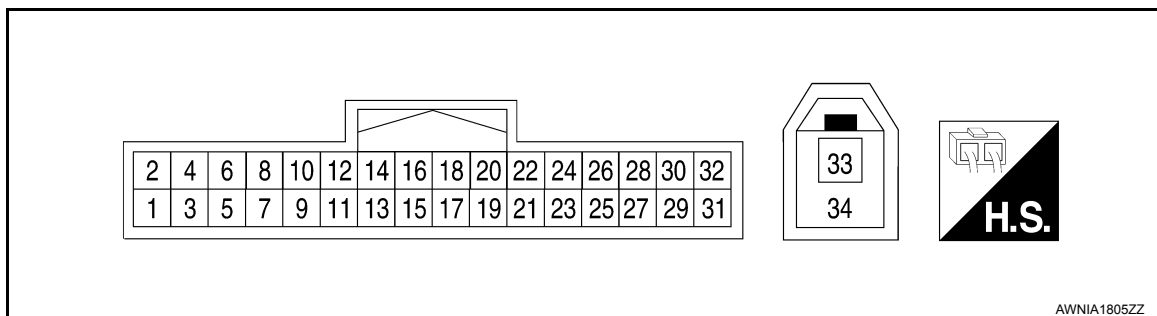
[PREMIUM AUDIO (CREW CAB)]

## BLUETOOTH CONTROL UNIT

### Reference Value

INFOID:000000007328290

### TERMINAL LAYOUT









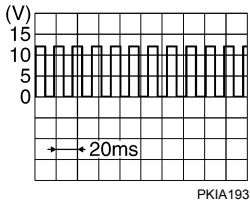
### PHYSICAL VALUES

Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ output			
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	-	-	-	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	<p>SKIB3609E</p>
11 (R)	-	Mute control	-	-	-	-
12 (BR)	14 (G)	Steering switch sig- nal A	Input	Ignition switch ON	Pressing  switch	0V
					Pressing  switch	0.75
					Pressing VOL up switch	2V
					Except for above	5V

# BLUETOOTH CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO (CREW CAB)]

Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ output			
13 (L)	14 (G)	Steering switch signal B	Input	Ignition switch ON	Pressing  switch	0V
					Pressing  switch	0.75V
					Pressing VOL down switch	2V
					Except for above	5 V
17 (V)	19 (O)	Steering switch signal A	Output	Ignition switch ON	Pressing  switch	0V
					Pressing  switch	0.75
					Pressing VOL up switch	2V
					Except for above	5V
18 (LG)	19 (O)	Steering switch signal B	Output	Ignition switch ON	Pressing  switch	0V
					Pressing  switch	0.75V
					Pressing VOL down switch	2V
					Except for above	5V
20 (B)	Ground	Ground	–	–	–	0V
22 (B)	Ground	Ground	–	–	–	0V
28 (SB)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	
29 (Y)	Ground	Microphone power	Output	Ignition switch ON	–	5V
33 (B)	–	Bluetooth antenna	–	–	–	–
34	–	Shield	–	–	–	–

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# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

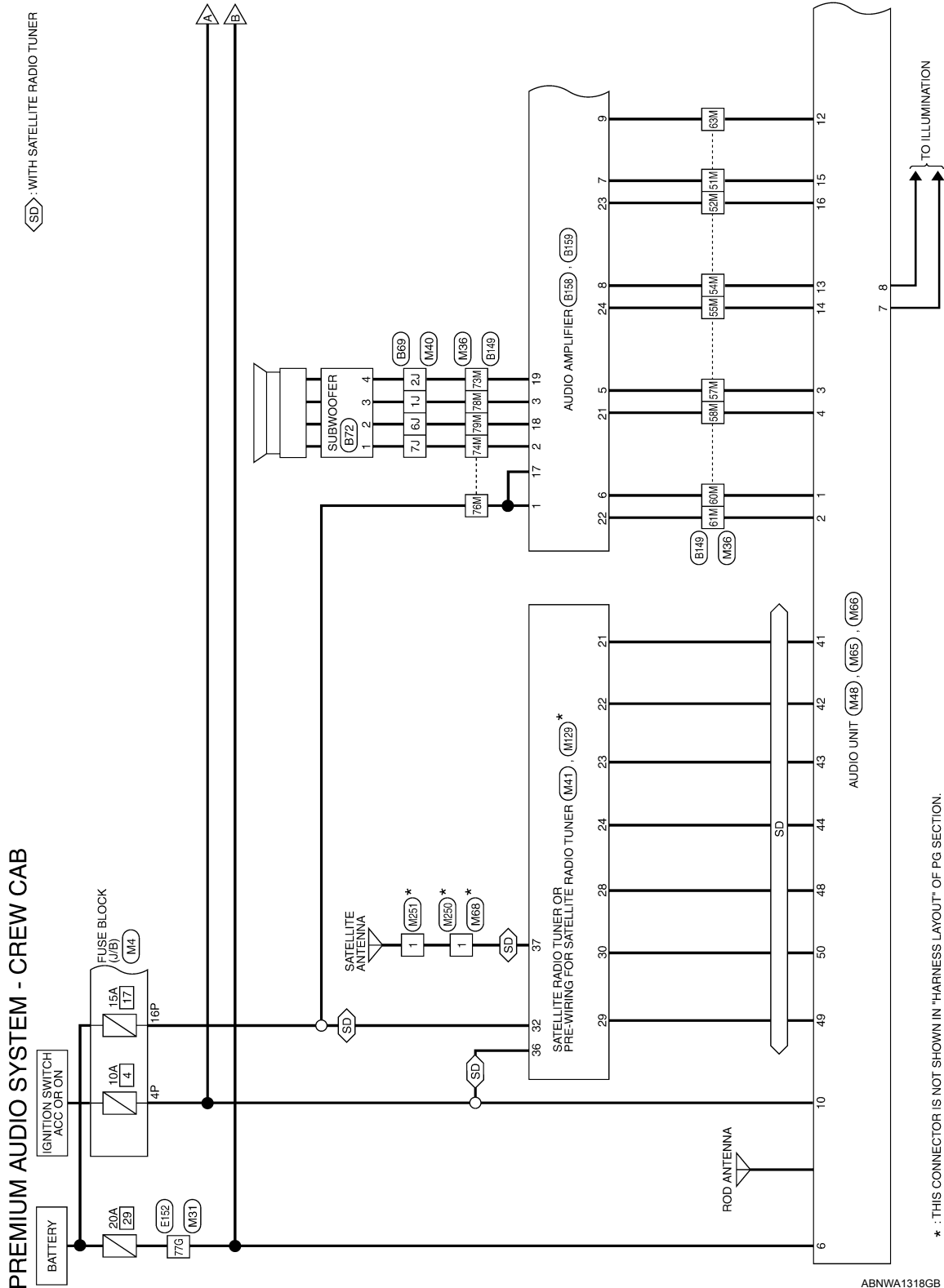
[PREMIUM AUDIO (CREW CAB)]

## WIRING DIAGRAM

### PREMIUM AUDIO SYSTEM

#### Wiring Diagram - Crew Cab

INFOID:000000007328291



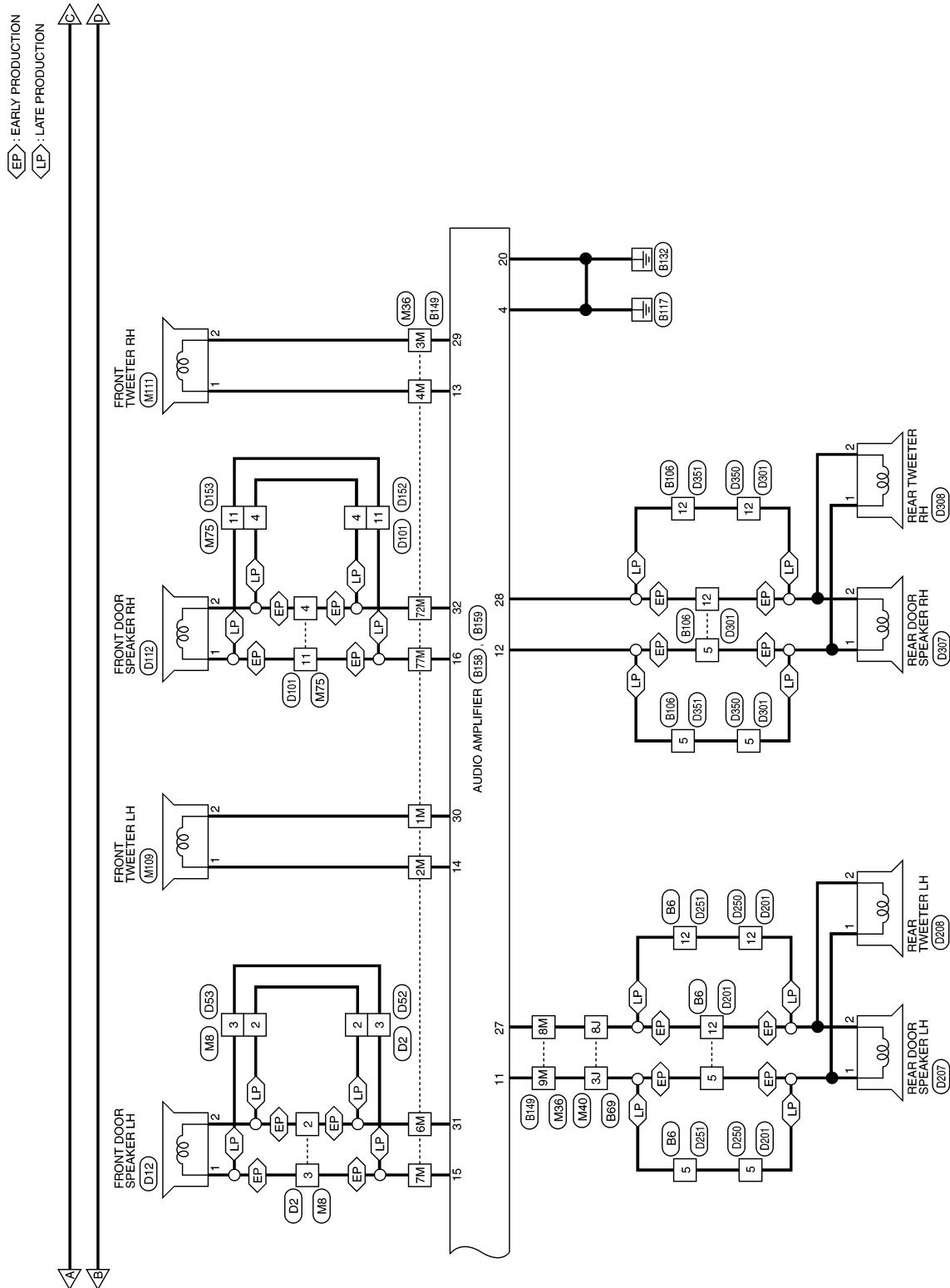
\* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

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# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO (CREW CAB)]

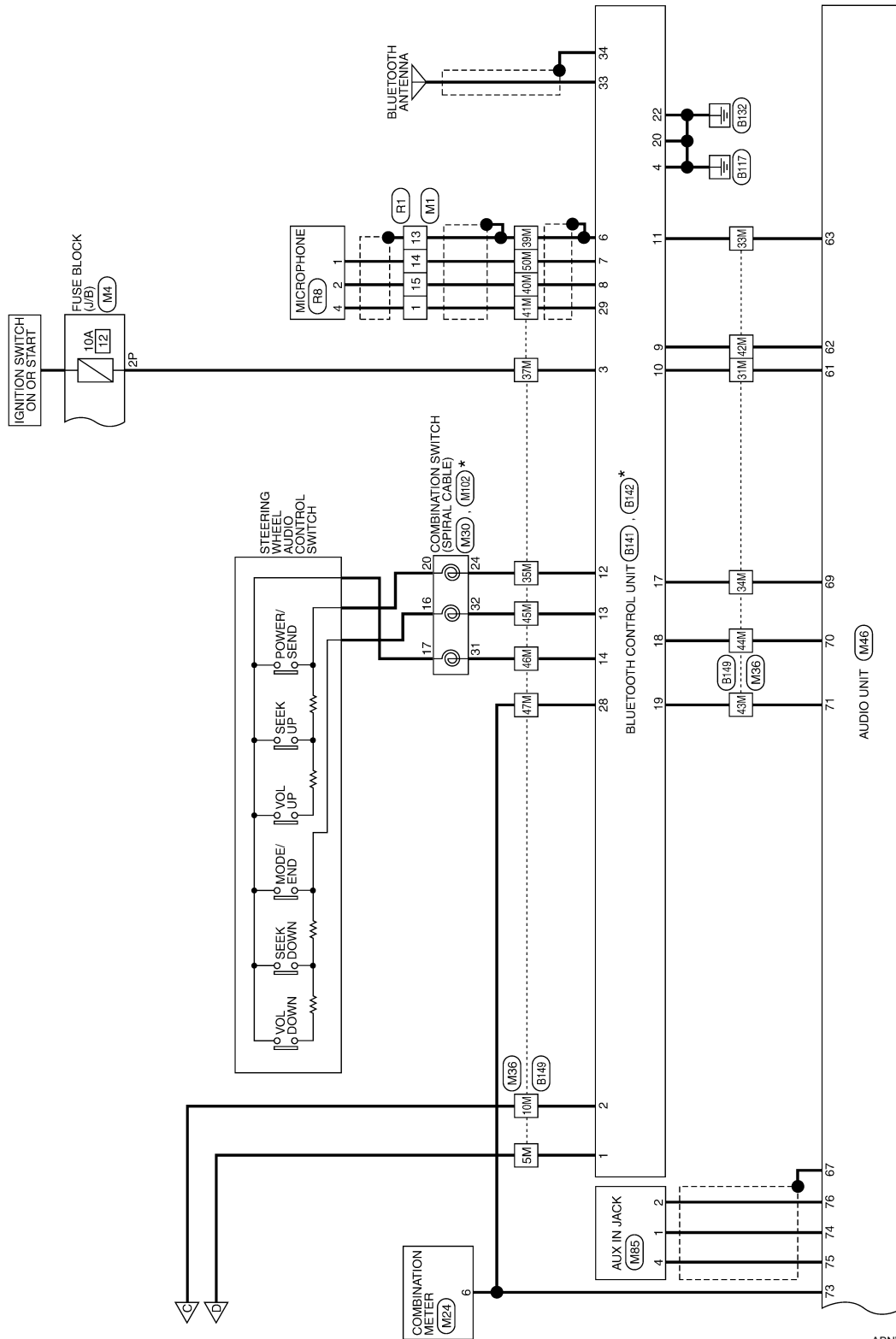


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# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO (CREW CAB)]



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

ABNWA1319GB

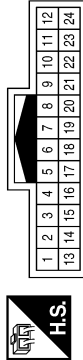
# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO (CREW CAB)]

## PREMIUM AUDIO SYSTEM CONNECTORS - CREW CAB

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



Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

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

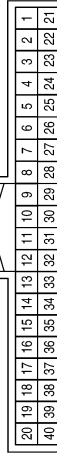


Terminal No.	Color of Wire	Signal Name
1	Y	-
13	SHIELD	-
14	G	-
15	L	-

Terminal No.	Color of Wire	Signal Name
2P	W/G	-
4P	G/B	-
16P	R/B	-

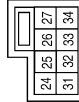
Terminal No.	Color of Wire	Signal Name
2	L	-
3	BR	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



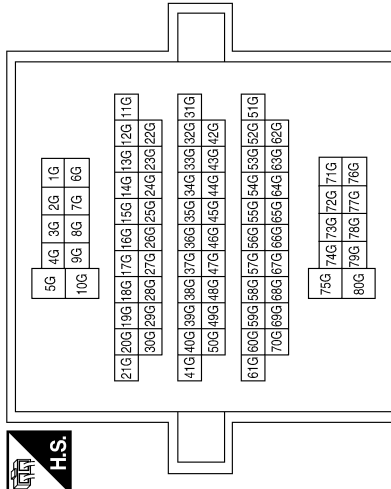
Terminal No.	Color of Wire	Signal Name
6	SB	SPEED OUT 8

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	BR	STRG SW A (UP)
31	G	STRG SW GND
32	L	STRG SW B (DOWN)

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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A B C D E F G H I J K L M O P

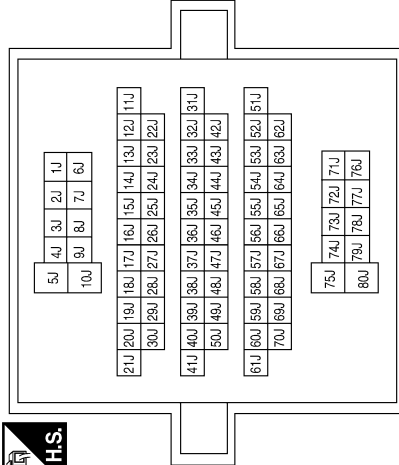
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# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO (CREW CAB)]

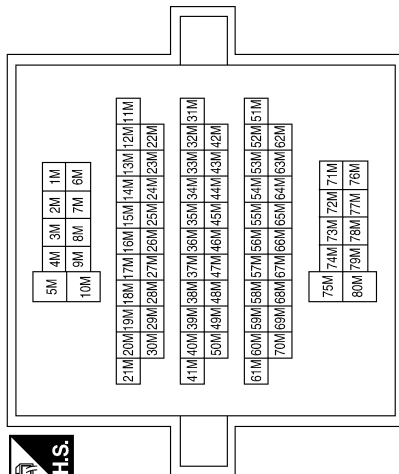
Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1J	O	-
2J	BR	-
3J	G	-
6J	G	-
7J	W	-
8J	B	-

Terminal No.	Color of Wire	Signal Name
35M	BR	-
37M	W/G	-
39M	SHIELD	-
40M	L	-
41M	Y	-
42M	W	-
43M	O	-
44M	LG	-
45M	L	-
46M	G	-
47M	SB	-
50M	G	-
51M	B/W	-
52M	L	-
54M	B/R	-
55M	BR	-
57M	BR	-
58M	Y	-
60M	B	-
61M	W	-
63M	G/W	-
72M	R	-
73M	BR	-
74M	W	-
76M	R/B	-
77M	LG	-
78M	O	-
79M	G	-

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1M	GR	-
2M	Y	-
3M	P	-
4M	W	-
5M	R/B	-
6M	L	-
7M	BR	-
8M	B	-
9M	G	-
10M	G/Y	-
31M	B	-
33M	R	-
34M	V	-

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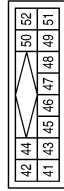


# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

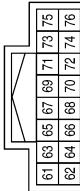
[PREMIUM AUDIO (CREW CAB)]

Connector No.	M48
Connector Name	AUDIO UNIT (CREW CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
41	G	L (-)
42	R	L (+)
43	W	R (-)
44	B	R (+)
45	-	-
46	-	-
47	-	-
48	O	REQ
49	P	RX
50	L	TX
51	-	-
52	-	-

Connector No.	M46
Connector Name	AUDIO UNIT (CREW CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
61	B	TEL SIG INPUT (-)
62	W	TEL SIG INPUT (+)
63	R	TEL SIG ON TRIG
64	-	-
65	-	-
66	-	-
67	SHIELD	SHIELD
68	-	-
69	V	REMOTE A SWC
70	LG	REMOTE B SWC
71	O	REMOTE GND SWC
72	-	-
73	SB	SPEED SIGNAL
74	W	AUX R+
75	B	AUX L+
76	R	AUX GND

Connector No.	M41
Connector Name	SATELLITE RADIO TUNER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	G	SAT LCH (-)
22	R	SAT LCH (+)
23	W	SAT RCH (-)
24	B	SAT RCH (+)
25	-	-
26	-	-
27	-	-
28	O	REQ1
29	P	TXD
30	L	RXD
31	-	-
32	R/B	BACKUP
33	-	-
34	-	-
35	-	-
36	G/B	ACC

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# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

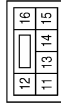
[PREMIUM AUDIO (CREW CAB)]

Connector No.	M68
Connector Name	WIRE TO WIRE
Connector Color	VIOLET



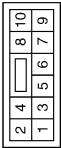
Terminal No.	Color of Wire	Signal Name
1	—	—

Connector No.	M66
Connector Name	AUDIO UNIT (CREW CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	—	—
12	G/W	AMP ON/OFF SIG
13	B/R	RRSP LH (-)
14	BR	RRSP LH (+)
15	B/W	RRSP RH (-)
16	L	RRSP RH (+)

Connector No.	M65
Connector Name	AUDIO UNIT (CREW CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE



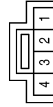
Terminal No.	Color of Wire	Signal Name
1	B	FRSP LH (-)
2	W	FRSP LH (+)
3	BR	FRSP RH (-)
4	Y	FRSP RH (+)
5	—	—
6	Y	BAT (BACK UP)
7	GR	ILL CONT
8	R	LIGHT SW
9	—	—
10	G/B	ACC

Connector No.	M102
Connector Name	COMBINATION SWITCH
Connector Color	GRAY



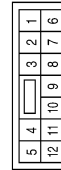
Terminal No.	Color of Wire	Signal Name
16	L	—
17	BR	—
20	W	—

Connector No.	M85
Connector Name	AUX IN JACK
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	R+
2	R	COMMON
4	B	L+

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	R	—
11	LG	—

ABNIA2688GB

# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO (CREW CAB)]

Connector No.	M129
Connector Name	SATELLITE RADIO TUNER
Connector Color	VIOLET



Terminal No.	Color of Wire	Signal Name
37	—	—

Connector No.	M111
Connector Name	FRONT TWEETER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	W	—
2	P	— (CREW CAB WITH PREMIUM AUDIO SYSTEM)

Connector No.	M109
Connector Name	FRONT TWEETER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	Y	— (CREW CAB WITH PREMIUM AUDIO SYSTEM)
2	GR	— (CREW CAB WITH PREMIUM AUDIO SYSTEM)

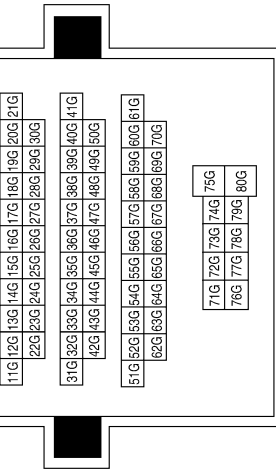
Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	M251
Connector Name	SATELLITE ANTENNA
Connector Color	BROWN



Connector No.	M250
Connector Name	WIRE TO WIRE
Connector Color	VIOLET



Terminal No.	Color of Wire	Signal Name
77G	Y	—

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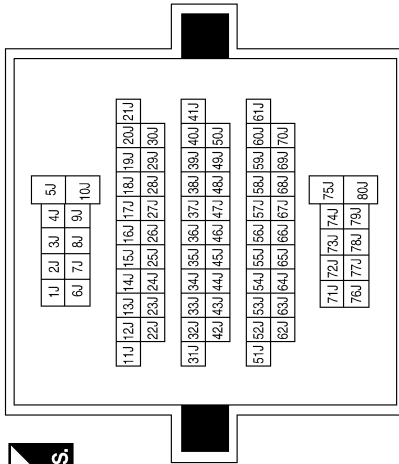
# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

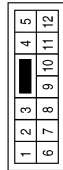
[PREMIUM AUDIO (CREW CAB)]

Terminal No.	Color of Wire	Signal Name
1J	O	-
2J	BR	-
3J	G	-
6J	G	-
7J	W	-
8J	B	-

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

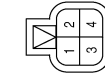


Terminal No.	Color of Wire	Signal Name
5	G	-
12	B	-

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



Connector No.	B72
Connector Name	SUBWOOFER
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
5	GR	-
12	O	-

Terminal No.	Color of Wire	Signal Name
1	W	REAR LEFT (+)
2	G	REAR LEFT (-)
3	O	REAR RIGHT (+)
4	BR	REAR RIGHT (-)

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO (CREW CAB)]

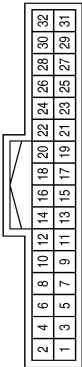
Connector No.	B142
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	BLACK



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

Terminal No.	Color of Wire	Signal Name
11	R	MUTE CONTROL
12	BR	LADDER IN 1
13	L	LADDER IN 2
14	G	LADDER IN GND
15	-	-
16	-	-
17	V	LADDER OUT 1
18	LG	LADDER OUT 2
19	O	LADDER OUT GND
20	B	CONT 1
21	-	-
22	B	CONT 3
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	SB	SPEED SIGNAL
29	Y	MIC POWER
30	-	-
31	-	-
32	-	-

Connector No.	B141
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R/B	BATT
2	G/Y	ACC
3	W/G	IGN
4	B	GND
5	-	-
6	SHIELD	MIC SHIELD
7	G	MIC IN+
8	L	MIC IN-
9	W	AUDIO OUT +
10	B	AUDIO OUT -

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# PREMIUM AUDIO SYSTEM

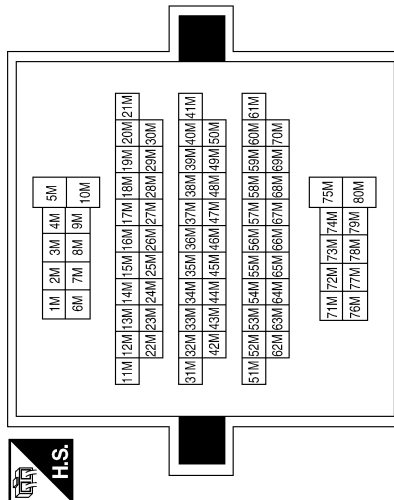
< WIRING DIAGRAM >

[PREMIUM AUDIO (CREW CAB)]

Terminal No.	Color of Wire	Signal Name
52M	L	-
54M	B/R	-
55M	BR	-
57M	BR	-
58M	Y	-
60M	B	-
61M	W	-
63M	G/W	-
72M	R	-
73M	BR	-
74M	W	-
76M	R/B	-
77M	LG	-
78M	O	-
79M	G	-

Terminal No.	Color of Wire	Signal Name
8M	B	-
9M	G	-
10M	G/Y	-
31M	B	-
33M	R	-
34M	V	-
35M	BR	-
37M	W/G	-
39M	SHIELD	-
40M	L	-
41M	Y	-
42M	W	-
43M	O	-
44M	LG	-
45M	L	-
46M	G	-
47M	SB	-
50M	G	-
51M	B/W	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1M	GR	-
2M	Y	-
3M	P	-
4M	W	-
5M	R/B	-
6M	L	-
7M	BR	-

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# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO (CREW CAB)]

Terminal No.	Color of Wire	Signal Name
13	W	FR RH TW (+)
14	Y	FR LH TW (+)
15	BR	FRSP LH OUT (+)
16	LG	FRSP RH OUT (+)
21	Y	FRSP RH (+) IN
22	W	FRSP LH (+) IN
23	L	RRSP RH (+) IN
24	BR	RRSP LH (+) IN
25	-	-
26	-	-
27	B	RRSP LH OUT (-)
28	O	RRSP RH OUT (-)
29	P	FR RH TW (-)
30	GR	FR LH TW (-)
31	L	FRSP LH OUT (-)
32	R	FRSP RH OUT (-)

Connector No.	B159
Connector Name	AUDIO AMPLIFIER
Connector Color	WHITE

16	15	14	13	12	11	10	9	8	7	6	5
32	31	30	29	28	27	26	25	24	23	22	21



Terminal No.	Color of Wire	Signal Name
5	BR	FRSP RH (-) IN
6	B	FRSP LH (-) IN
7	B/W	RRSP RH (-) IN
8	B/R	RRSP LH (-) IN
9	G/W	AMP ON/OFF SIGNAL
10	-	-
11	G	RRSP LH OUT (+)
12	GR	RRSP RH OUT (+)

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

4	3	2	1
20	19	18	17



Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	BROWN

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



Connector No.	R8
Connector Name	MICROPHONE
Connector Color	WHITE

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

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

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

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13



Terminal No.	Color of Wire	Signal Name
1	Y	-
13	SHIELD	-
14	G	-
15	L	-

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# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO (CREW CAB)]

Connector No.	D53
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
2	L	—
3	BR	—

Connector No.	D52
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
2	L	—
3	BR	—

Connector No.	D12
Connector Name	FRONT DOOR SPEAKER LH
Connector Color	WHITE



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Terminal No.	Color of Wire	Signal Name
1	L/W	—
2	L/R	—

Connector No.	D152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	W	—
12	B	—

Connector No.	D112
Connector Name	FRONT DOOR SPEAKER RH
Connector Color	WHITE



2	1
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Terminal No.	Color of Wire	Signal Name
1	W/B	—
2	L/B	—

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



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

Terminal No.	Color of Wire	Signal Name
4	L/B	—
11	W/B	—

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# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO (CREW CAB)]

Connector No.	D207
Connector Name	REAR DOOR SPEAKER LH
Connector Color	WHITE



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Terminal No.	Color of Wire	Signal Name
1	L	-(EXCEPT CREW CAB WITH MID AUDIO SYSTEM)
2	O	-(EXCEPT CREW CAB WITH MID AUDIO SYSTEM)

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



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

Terminal No.	Color of Wire	Signal Name
5	L	-(EXCEPT CREW CAB WITH MID AUDIO SYSTEM)
12	O	-(EXCEPT CREW CAB WITH MID AUDIO SYSTEM)

Connector No.	D153
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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

Connector No.	D251
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	D250
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	D208
Connector Name	REAR TWEETER LH
Connector Color	BROWN



2	1
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Terminal No.	Color of Wire	Signal Name
5	L	-
12	O	-

Terminal No.	Color of Wire	Signal Name
5	L	-
12	O	-

Terminal No.	Color of Wire	Signal Name
1	L	-
2	O	-

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# PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO (CREW CAB)]

Connector No.	D308
Connector Name	REAR TWEETER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L	–
2	O	–

Connector No.	D307
Connector Name	REAR DOOR SPEAKER RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	– (EXCEPT CREW CAB WITH MID AUDIO SYSTEM)
2	O	–

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



Terminal No.	Color of Wire	Signal Name
5	L	– (EXCEPT CREW CAB WITH MID AUDIO SYSTEM)
12	O	–

Connector No.	D351
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	–
12	O	–

Connector No.	D350
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	–
12	O	–

AANIA1498GB

# AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

## SYMPTOM DIAGNOSIS

### AUDIO SYSTEM

#### Symptom Table

INFOID:000000007328292

#### AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> <li>Audio unit power circuit</li> <li>Audio unit</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-140</a></li> <li><a href="#">AV-137</a></li> </ul>
Steering wheel audio control switch does not operate	<ul style="list-style-type: none"> <li>Steering wheel audio control switch</li> <li>Audio unit</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-161</a></li> <li><a href="#">AV-137</a></li> </ul>
All speakers do not sound	<ul style="list-style-type: none"> <li>Speaker circuit shorted to ground</li> <li>Audio unit</li> <li>Audio unit power circuit</li> <li>Audio amplifier ON signal</li> <li>Audio amplifier power/ground circuit</li> <li>Audio amplifier</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-180</a></li> <li><a href="#">AV-137</a></li> <li><a href="#">AV-140</a></li> <li><a href="#">AV-160</a></li> <li><a href="#">AV-141</a></li> <li><a href="#">AV-202</a></li> </ul>
One or several speakers do not sound	<ul style="list-style-type: none"> <li>Front door speaker</li> <li>Front tweeter</li> <li>Rear door speaker</li> <li>Rear door tweeter</li> <li>Subwoofer</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-145</a></li> <li><a href="#">AV-148</a></li> <li><a href="#">AV-151</a></li> <li><a href="#">AV-154</a></li> <li><a href="#">AV-157</a></li> </ul>
Poor reception	<ul style="list-style-type: none"> <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 DIAGNOSIS" in the appropriate interior trim section.

#### CD

Symptom	Possible cause	Reference page
CD cannot be inserted	Audio unit	<a href="#">AV-137</a>
CD cannot be ejected		
The CD cannot be played		
The sound skips, stops suddenly, or is distorted		

#### SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"> <li>Satellite radio tuner power or ground circuit</li> <li>Satellite radio tuner communication circuit</li> <li>Satellite radio tuner</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-140</a></li> <li><a href="#">AV-163</a></li> <li><a href="#">AV-216</a></li> </ul>
Right or left channel does not sound	<ul style="list-style-type: none"> <li>Satellite radio tuner right or left channel audio signal circuit</li> <li>Satellite radio tuner</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AV-166</a></li> <li><a href="#">AV-216</a></li> </ul>

#### HANDS-FREE PHONE

## AUDIO SYSTEM

### < SYMPTOM DIAGNOSIS >

### [PREMIUM AUDIO (CREW CAB)]

Symptom	Possible cause	Reference page
Inoperative	<ul style="list-style-type: none"><li>• Bluetooth control unit power circuit</li><li>• Bluetooth control unit</li></ul>	<ul style="list-style-type: none"><li>• <a href="#">AV-142</a></li><li>• <a href="#">AV-138</a></li></ul>
Steering wheel audio switch does not operate	<ul style="list-style-type: none"><li>• Steering wheel audio control switch</li><li>• Bluetooth control unit</li></ul>	<ul style="list-style-type: none"><li>• <a href="#">AV-161</a></li><li>• <a href="#">AV-138</a></li></ul>
Voice activated control does not activate	<ul style="list-style-type: none"><li>• Microphone</li><li>• Steering wheel audio control switch</li><li>• Bluetooth control unit</li></ul>	<ul style="list-style-type: none"><li>• <a href="#">AV-143</a></li><li>• <a href="#">AV-161</a></li><li>• <a href="#">AV-138</a></li></ul>

## NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[PREMIUM AUDIO (CREW CAB)]

### NORMAL OPERATING CONDITION

#### Description

INFOID:000000007328293

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

#### NOISE

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

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

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

#### NOTE:

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

#### Type of Noise and Possible Cause

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

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000007328294

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

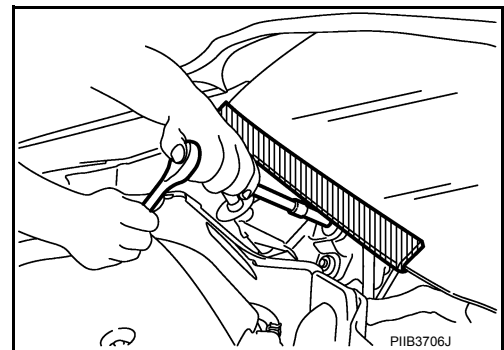
#### **WARNING:**

- 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:000000007831518

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



#### Precaution for Work

INFOID:000000007328295

- 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 a 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:
  - Water soluble dirt:

## PRECAUTIONS

< PRECAUTION >

[PREMIUM AUDIO (CREW CAB)]

- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, 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, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

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# PREPARATION

< PREPARATION >

[PREMIUM AUDIO (CREW CAB)]

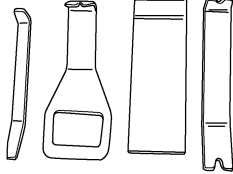
## PREPARATION

### PREPARATION

#### Special Service Tool


INFOID:000000007328296

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

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

#### Commercial Service Tools

INFOID:0000000007831521

Tool name	Description
Power tool	Loosening nuts, screws and bolts
 PIIB1407E	



## REMOVAL AND INSTALLATION

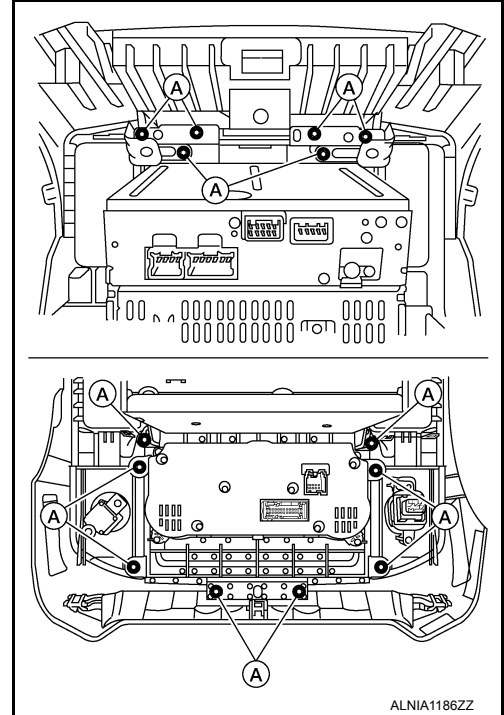
### AUDIO UNIT

#### Removal and Installation

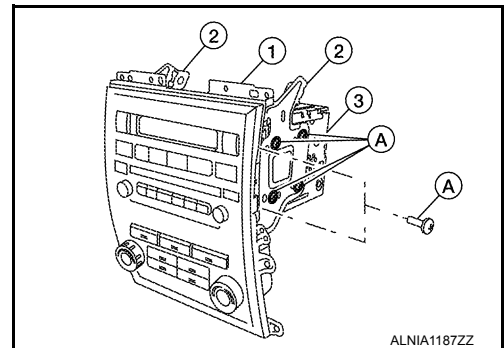
INFOID:000000007328298

#### REMOVAL

1. Remove the cluster lid C. Refer to [JP-19. "Removal and Installation"](#).
2. Remove the center ventilator grilles (RH/LH). Refer to [VTL-22. "Removal and Installation"](#).
3. Remove the audio control panel screws (A), then remove the audio unit assembly from cluster lid C.



4. Remove the audio unit screws (A), using power tool.
5. Remove the audio unit brackets (2), then pull out the audio unit (3) from the audio control panel (1).



#### INSTALLATION

Installation is in the reverse order of removal.

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## AUDIO AMP

### Removal and Installation

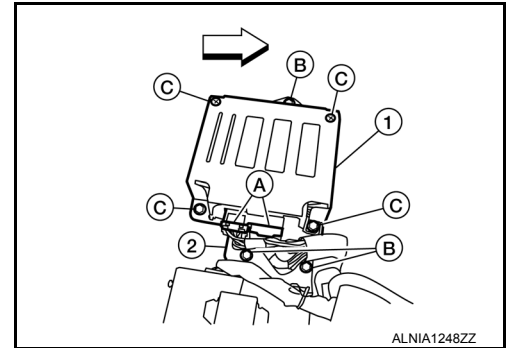
INFOID:000000007328299

#### REMOVAL

##### NOTE:

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 [SE-32. "Removal and Installation"](#).
2. Tilt the RH front seat back to access the audio amp. (1) and 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 bracket (2).



#### INSTALLATION

Installation is in the reverse order of removal.

## FRONT TWEETER

< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO (CREW CAB)]

### FRONT TWEETER

#### Removal and Installation

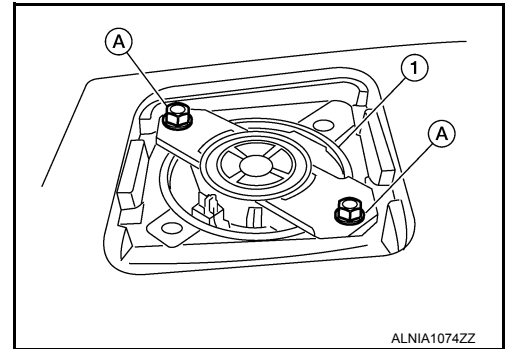
INFOID:000000007328300

#### 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.
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 >

[PREMIUM AUDIO (CREW CAB)]

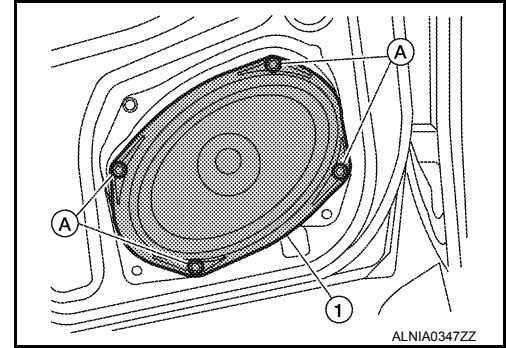
### FRONT DOOR SPEAKER

#### Removal and Installation

INFOID:000000007328301

#### REMOVAL

1. Remove the front door finisher. Refer to [INT-15, "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.

## REAR DOOR SPEAKER

< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO (CREW CAB)]

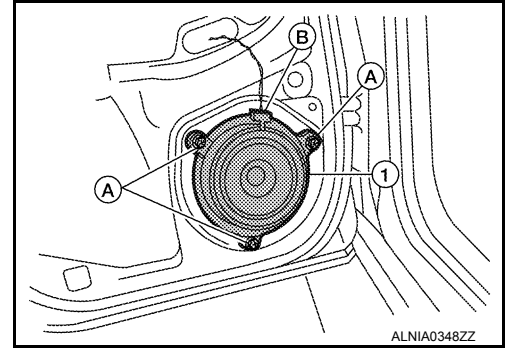
### REAR DOOR SPEAKER

#### Removal and Installation

INFOID:000000007328302

#### REMOVAL

1. Remove the rear door finisher. Refer to [INT-15. "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.

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## REAR DOOR TWEETER

< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO (CREW CAB)]

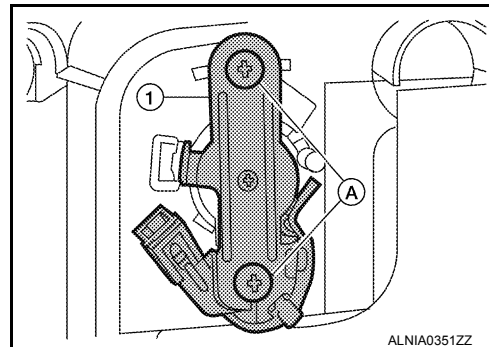
### REAR DOOR TWEETER

#### Removal and Installation

INFOID:000000007328303

#### REMOVAL

1. Remove the rear door finisher. Refer to [INT-15. "Removal and Installation"](#).
2. Remove the rear door tweeter screws (A) and remove the rear door tweeter (1).



#### INSTALLATION

Installation is in the reverse order of removal.

# STEERING SWITCH

< REMOVAL AND INSTALLATION >

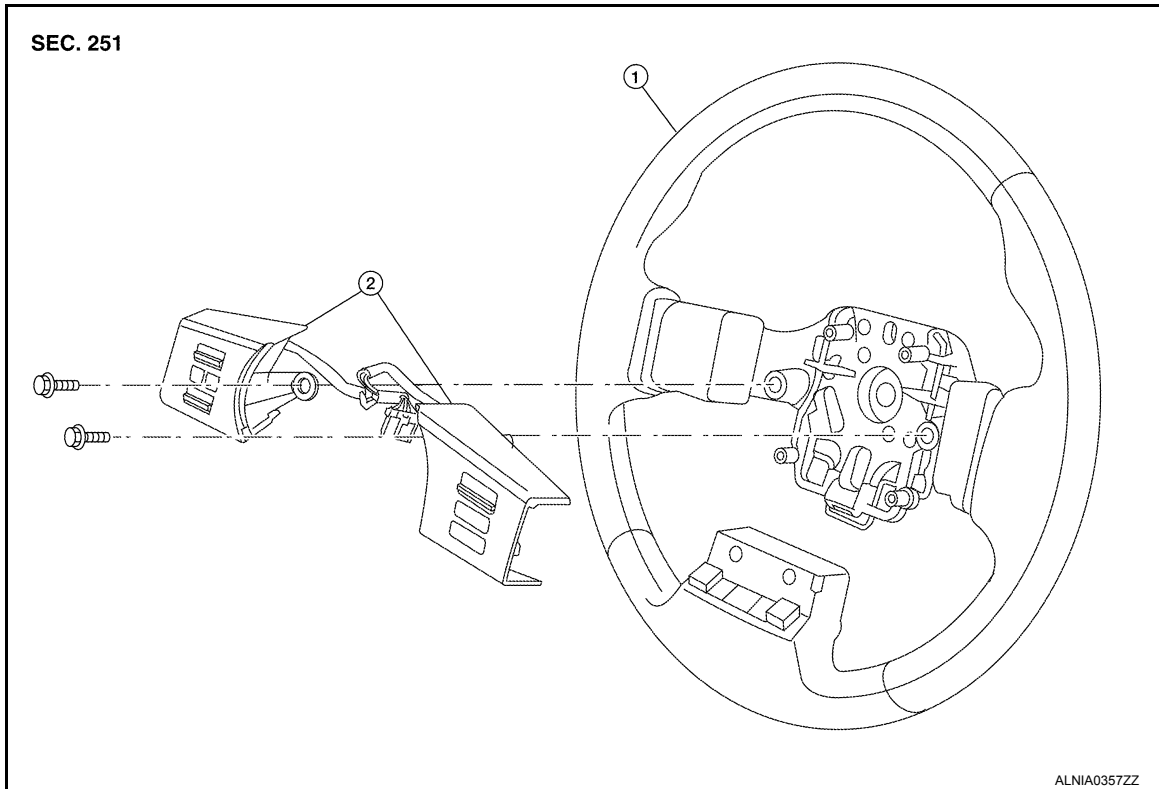
[PREMIUM AUDIO (CREW CAB)]

## STEERING SWITCH

### Removal and Installation

INFOID:000000007328304

### Removal and Installation



1. Steering wheel

2. Steering wheel audio control switches

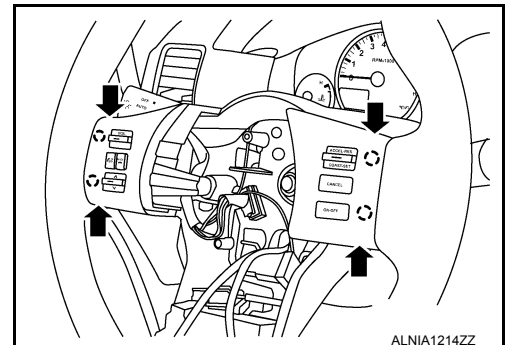
### REMOVAL

1. Remove the driver air bag module. Refer to [SR-11, "Removal and Installation"](#).
2. Remove the steering wheel audio control switch assembly screws.
3. Disconnect the steering wheel audio control switches connector.
4. Remove the steering wheel audio control switches by pulling on steering wheel audio control switches to release the pawls.

○: Pawl

#### CAUTION:

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



### INSTALLATION

Installation is in the reverse order of removal.

# SUBWOOFER

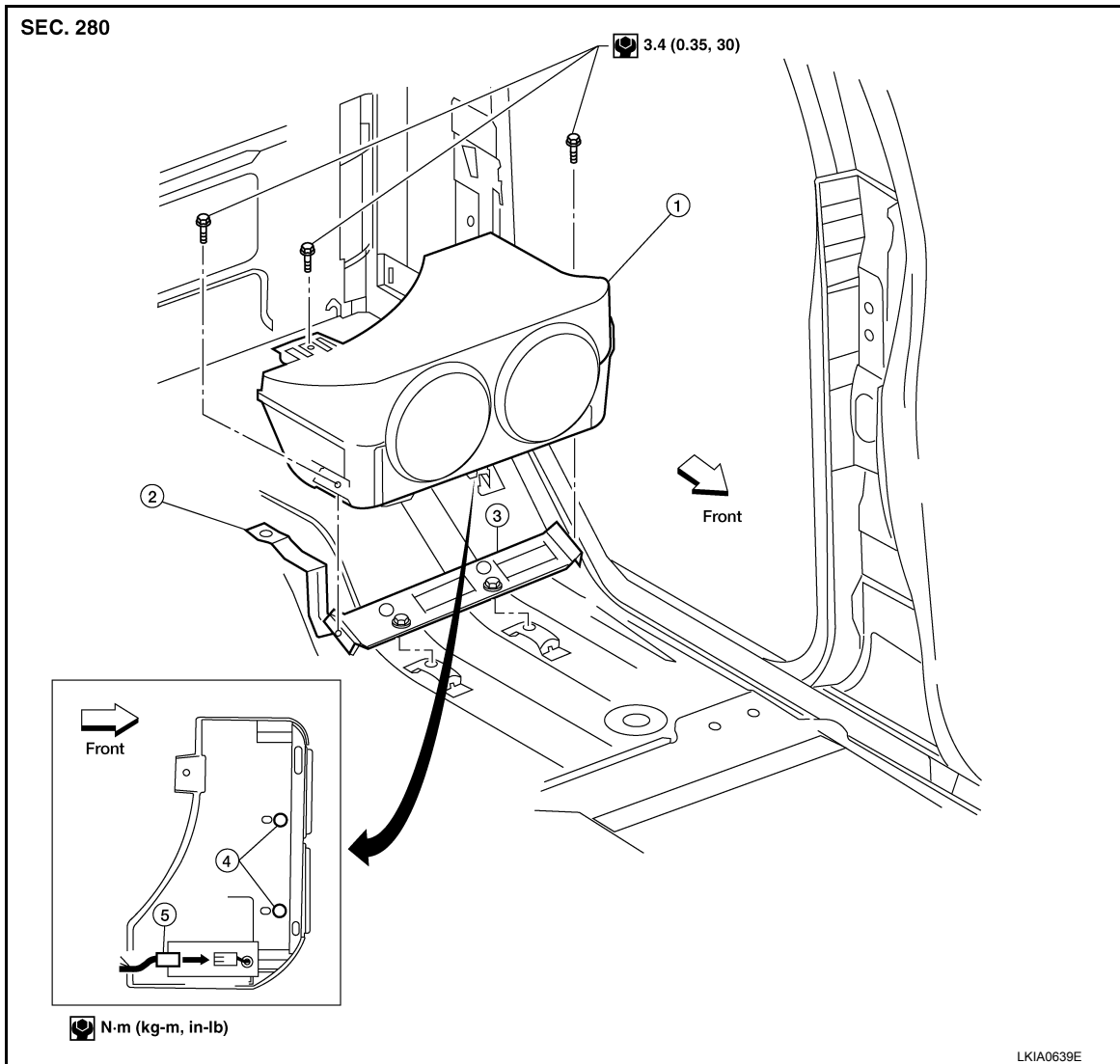
< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO (CREW CAB)]

## SUBWOOFER

### Removal and Installation

INFOID:000000007328305



- |                 |              |                       |
|-----------------|--------------|-----------------------|
| 1. Subwoofer    | 2. Bracket   | 3. Locating pin plate |
| 4. Locating pin | 5. Connector |                       |

### REMOVAL

1. Position the LH rear seat cushion in the folded up position.
2. Remove storage box RH (crew cab). Refer to [INT-23, "Removal and Installation"](#).
3. Remove the subwoofer screws.
4. Disconnect the connector and remove the subwoofer.

### INSTALLATION

Installation is in the reverse order of removal.



# BLUETOOTH CONTROL UNIT

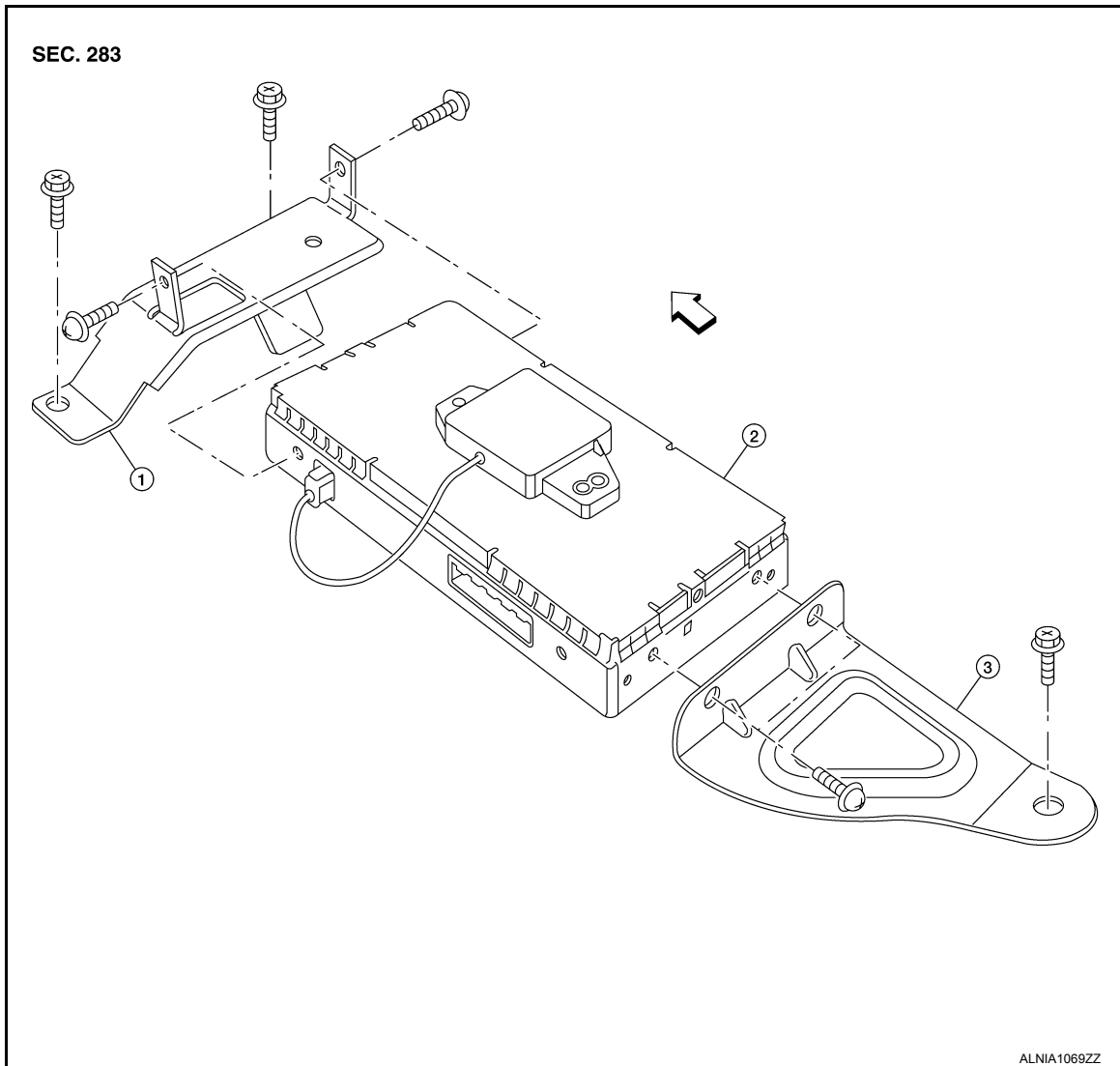
< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO (CREW CAB)]

## BLUETOOTH CONTROL UNIT

### Removal and Installation

INFOID:000000007328306



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

Vehicle front

### REMOVAL

#### NOTE:

Do not remove the RH front seat from the vehicle.

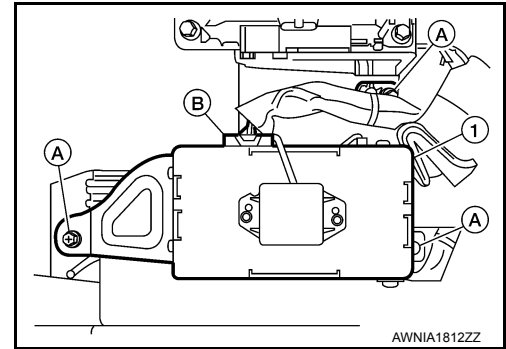
1. Remove the RH front seat bolts, disconnect the RH front seat electrical connectors. Refer to [SE-32](#), "Removal and Installation".
2. Tilt the RH front seat back to access the bluetooth control unit.

## BLUETOOTH CONTROL UNIT

### < REMOVAL AND INSTALLATION >

[PREMIUM AUDIO (CREW CAB)]

3. Disconnect the Bluetooth control unit harness connector (B).
4. Remove the Bluetooth control unit screws (A), then remove the Bluetooth control unit assembly (1).
5. Remove the Bluetooth control unit bracket screws and remove the Bluetooth control unit front and rear brackets.



### INSTALLATION

Installation is in the reverse order of removal.

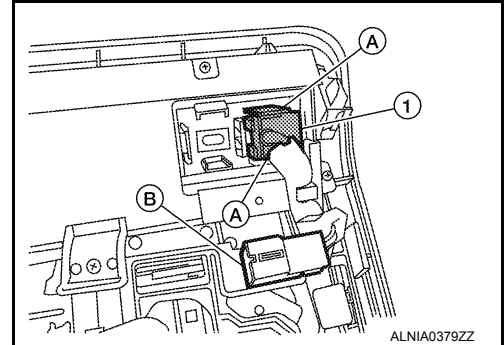
## MICROPHONE

## Removal and Installation

INFOID:000000007328307

## REMOVAL

1. Remove the roof console. Refer to [INT-25. "Removal and Installation"](#).
2. Detach the Bluetooth microphone (1) from the front console finisher tabs (A).
3. Detach the Bluetooth microphone connector (B) and remove the Bluetooth microphone (1).



## INSTALLATION

Installation is in the reverse order of removal.

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# AUDIO ANTENNA

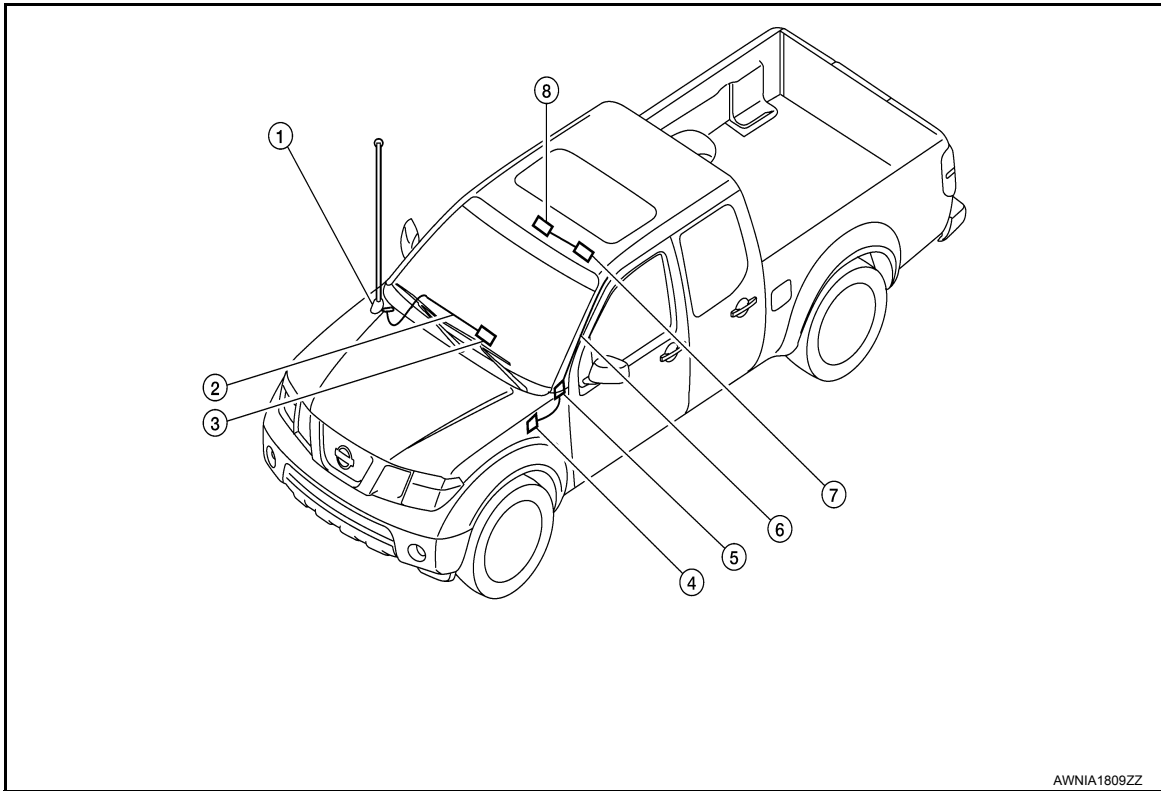
< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO (CREW CAB)]

## AUDIO ANTENNA

### Location of Antenna

INFOID:000000007328308



- |  |  |                                  |
|--|--|----------------------------------|
| 1. Rod antenna   | 2. Antenna feeder  | 3. Audio unit M46, M48, M65, M66 |
| 4. Satellite radio tuner or pre-wiring for satellite radio tuner M41, M129 | 5. Satellite antenna in-line harness connector M250, M68 | 6. Satellite antenna feeder      |
| 7. Satellite antenna harness connector M251                                | 8. Satellite antenna                                     |                                  |

### Removal and Installation

INFOID:000000007328309

#### REMOVAL

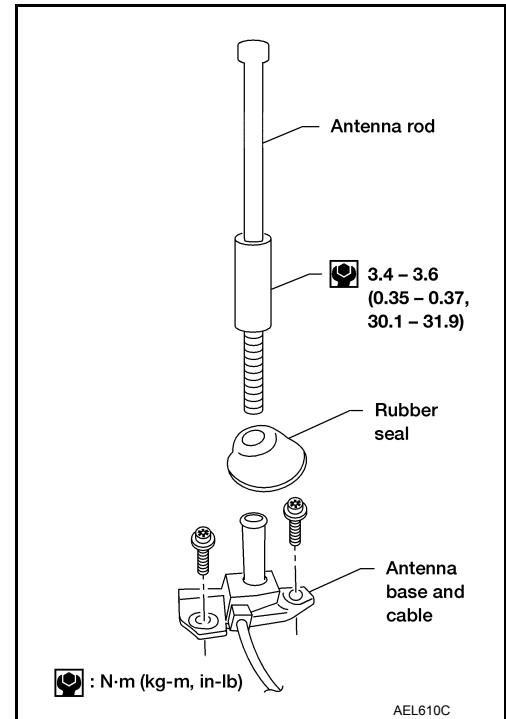
1. Remove instrument lower panel RH and glove box. Refer to [IP-24. "Removal and Installation"](#).
2. Disconnect audio antenna cable from antenna feeder.

## AUDIO ANTENNA

### < REMOVAL AND INSTALLATION >

[PREMIUM AUDIO (CREW CAB)]

3. Remove antenna rod.
4. Remove rubber seal.
5. Remove cowl top. Refer to [EXT-24. "Removal and Installation"](#).
6. Remove fender protector. Refer to [EXT-27. "Removal and Installation of Front Fender Protector"](#).
7. Remove antenna base bolts.
8. Remove antenna base and cable.



### 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

< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO (CREW CAB)]

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### AUXILIARY INPUT JACK

#### Removal and Installation

INFOID:000000007328310

##### Removal

1. Remove the instrument lower panel RH and glove box. Refer to [IP-24, "Removal and Installation"](#).
2. Remove the auxiliary input jack.

##### Installation

Installation is in the reverse order of removal.

# SATELLITE RADIO ANTENNA

< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO (CREW CAB)]

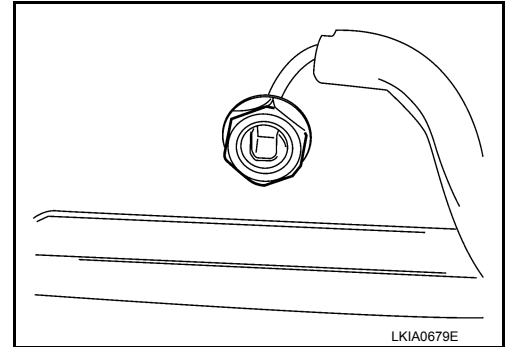
## SATELLITE RADIO ANTENNA

### Removal and Installation

INFOID:000000007328311

#### REMOVAL

1. Remove the roof console. Refer to [INT-25. "Removal and Installation"](#).
2. Disconnect the satellite radio antenna connector.
3. Remove the satellite radio antenna nut.
4. Remove the satellite radio antenna.



#### INSTALLATION

Installation is in the reverse order of removal.

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# SATELLITE RADIO TUNER

< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO (CREW CAB)]

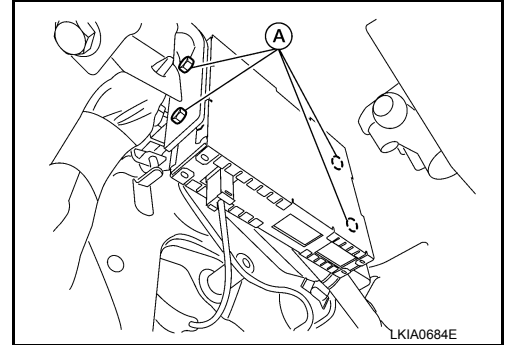
## SATELLITE RADIO TUNER

### Removal and Installation

INFOID:000000007328312

#### REMOVAL

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



#### INSTALLATION

Installation is in the reverse order of removal.