

SECTION **AV**

AUDIO, VISUAL & NAVIGATION SYSTEM

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PRECAUTION

PRECAUTIONS

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

INFOID:000000011046221

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. 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 three minutes before performing any service.

Precaution for Trouble Diagnosis

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AV COMMUNICATION SYSTEM

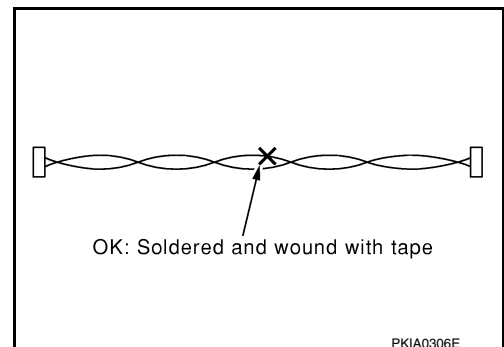
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

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AV COMMUNICATION SYSTEM

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



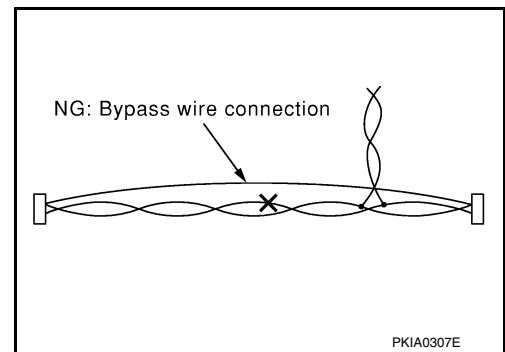
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PRECAUTIONS

< PRECAUTION >

[BASE AUDIO]

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



Precaution for Work

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- 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:
 - 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

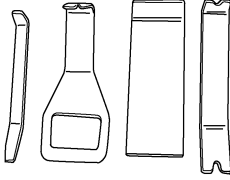
PREPARATION

Special Service Tools

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The actual shape of the tools may differ from those illustrated here.

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

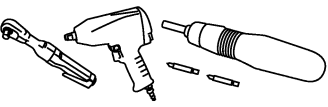


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Commercial Service Tools

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Tool name	Description
Power tool	Loosening nuts, screws and bolts



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COMPONENT PARTS

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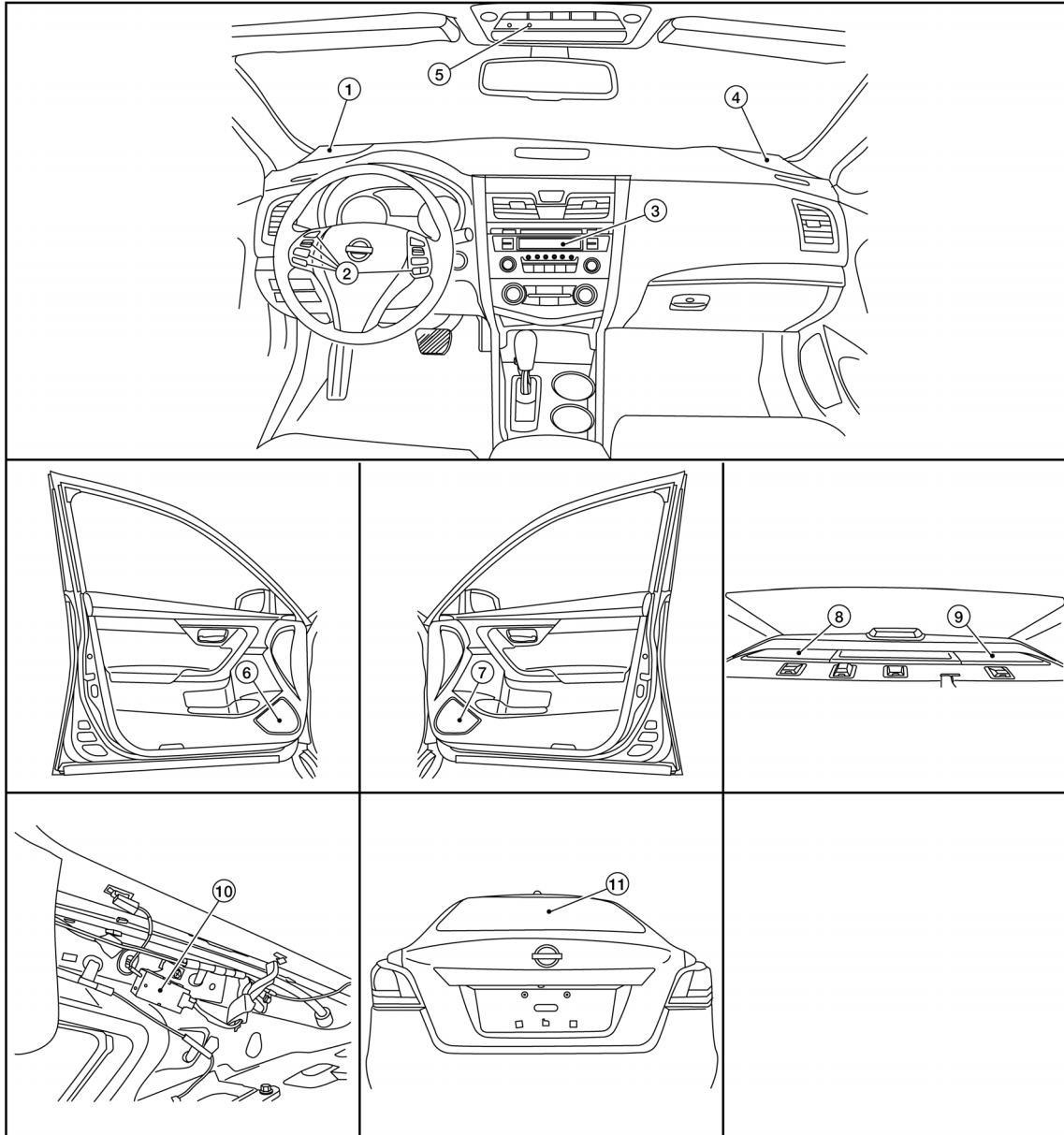
[BASE AUDIO]

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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|--------------------------|----------------------------------|----------------------------------|
| 1. Front speaker LH | 2. Steering switches | 3. Audio unit |
| 4. Front speaker RH | 5. Microphone | 6. Front door speaker LH |
| 7. Front door speaker RH | 8. Rear speaker RH (if equipped) | 9. Rear speaker LH (if equipped) |
| 10. Antenna amp. | 11. Window antenna | |

Component Description

INFOID:0000000010480088

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[BASE AUDIO]

Part name	Description
Audio unit	<ul style="list-style-type: none"> • Controls audio, hands-free phone and AUX IN connection functions. • Display unit is built in to audio unit.
Front door speakers	Outputs high, mid and low range audio signals from audio unit.
Front speakers	
Rear speakers (if equipped)	
Steering switches	<ul style="list-style-type: none"> • Operations for audio, hands-free phone and voice recognition are possible. • Steering switch signal is output to combination meter. • Combination meter outputs steering switch signal to audio unit.
Microphone	<ul style="list-style-type: none"> • Used for hands-free phone operations. • Microphone signal is transmitted to audio unit. • Power is supplied from audio unit.
Antenna amp.	<ul style="list-style-type: none"> • AM/FM signal received by window antenna is amplified and transmitted to audio unit. • Power is supplied from audio unit.
Window antenna	AM/FM signal is received and transmitted to antenna amp.

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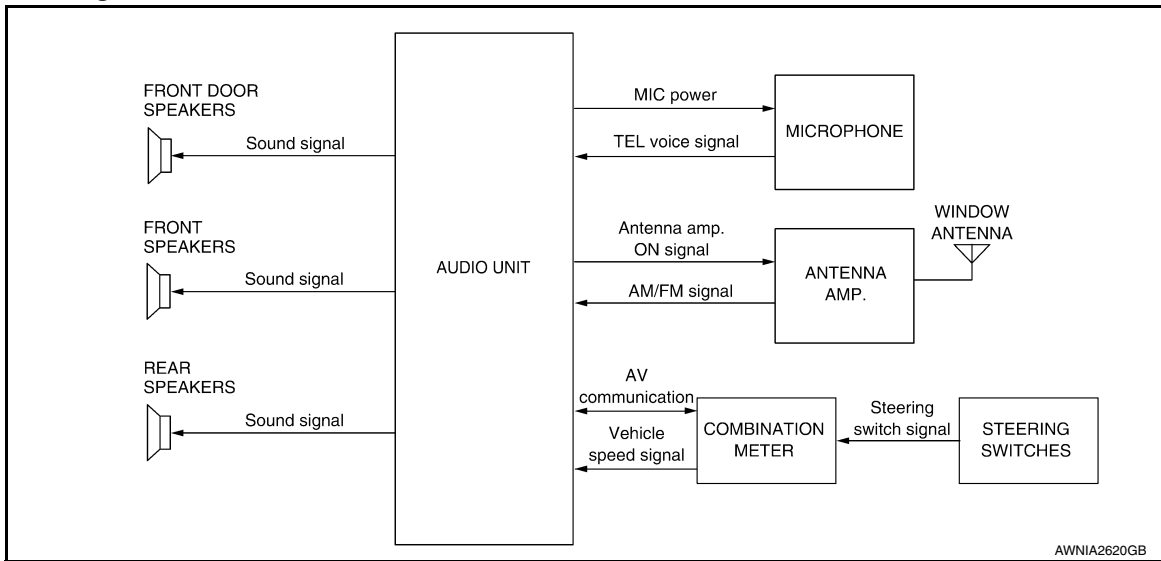
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SYSTEM

System Diagram

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System Description

INFOID:000000010480090

AUDIO SYSTEM

The audio system consists of the following components:

- Audio unit
- Front door speakers
- Front speakers
- Rear speakers (if equipped)
- Steering switches
- Microphone
- Antenna amp.
- Window antenna

When the audio system is on, AM/FM signals received by the window antenna are amplified by the antenna amp. and sent to the audio unit. The audio unit then sends audio signals to the front door speakers, front speakers and rear speakers.

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

HANDS-FREE PHONE SYSTEM

System Operation

NOTE:

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

The Bluetooth® telephone system allows users who have a Bluetooth® cellular telephone to make a wireless connection between their cellular telephone and the audio unit. Hands-free cellular telephone calls can be sent and received. Some Bluetooth® cellular telephones may not be recognized by the audio unit. When a cellular telephone or the audio unit is replaced, the telephone must be paired with the audio unit. Different cellular telephones may have different pairing procedures, refer to the cellular telephone operating manual.

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

Audio Unit

When the ignition switch is turned to ACC or ON, the audio unit will power up. During power up, the audio unit is initialized and performs various self-checks. Initialization may take up to 20 seconds.

Steering Switches

When buttons on the steering switches are pushed, the resistance in steering switches circuits change, depending on which button is pushed.

The following functions can be performed using the steering switches:

SYSTEM

< SYSTEM DESCRIPTION >

[BASE AUDIO]

- Initiate self-diagnosis of the Bluetooth[®] telephone system
- Start a voice recognition session
- Answer and end telephone calls
- Adjust the volume of calls
- Record memos

Microphone

The microphone is located in the roof console assembly. The microphone sends a signal to the audio unit.

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DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[BASE AUDIO]

DIAGNOSIS SYSTEM (AUDIO UNIT)

Diagnosis Description

INFOID:000000010480091

The audio unit on board diagnosis performs the functions listed in the table below:

Mode	Description
Hardware/Software Versions	Hardware and software versions are available for: <ul style="list-style-type: none"> • audio unit. • combination meter EEPROM version and EQ pin info are also available for the audio unit.
Speaker Channel Check	The connection of the speakers to the audio unit can be confirmed.
Communication Diagnosis	The AV communication (M-CAN) message history can be monitored.

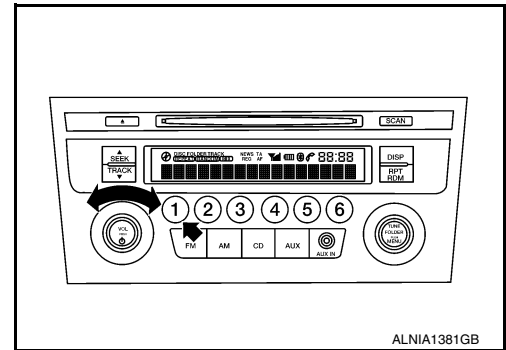
On Board Diagnosis Function

INFOID:000000010480092

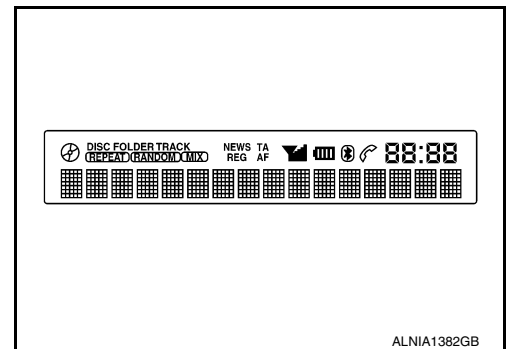
METHOD OF STARTING

Hardware/Software Versions and Speaker Channel Check

1. Turn the ignition ON.
2. Turn the audio system OFF.
3. While pressing the preset 1 button, turn the volume control dial clockwise or counterclockwise 30 clicks or more.



4. Initially, all display segments will be illuminated.



5. To exit hardware/software versions and speaker channel check, turn the ignition OFF.

Communication Diagnosis

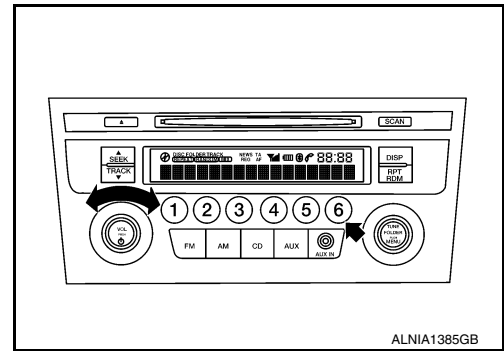
1. Turn the ignition ON.
2. Turn the audio system OFF.

DIAGNOSIS SYSTEM (AUDIO UNIT)

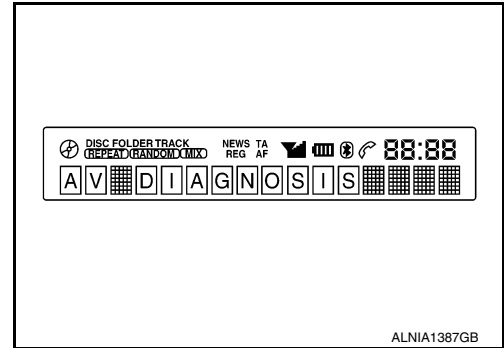
< SYSTEM DESCRIPTION >

[BASE AUDIO]

- While pressing the preset 6 button, turn the volume control dial clockwise or counterclockwise 30 clicks or more.



- Initially, the communication diagnosis mode is displayed.

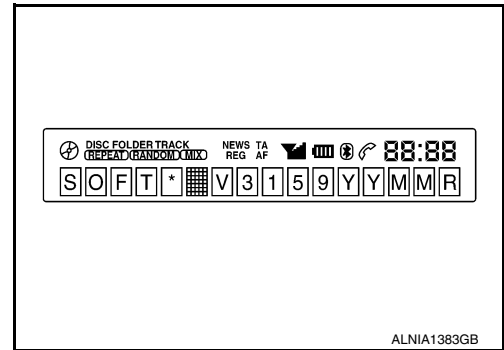


- To exit communication diagnosis, turn the ignition OFF.

SELF DIAGNOSIS MODE

Hardware/Software Versions

- Press the DISP button to enter versions display, and the audio head unit software version is displayed.



- With each additional press of the DISP button, the following information is available:

- HARD V##### (hardware version)
 - EEP V##### (EEPROM version)
 - MeterS V##### (combination meter software version)
 - MeterH V##### (combination meter hardware version)
 - @@@@ EQ1-4 # (EQ pin info)
- If an EQ error is present, INVALID EQ is displayed
- BTSOFT ##### (internal Bluetooth® module software version)
 - BTHARD ##### (internal Bluetooth® module hardware version)
 - BTCONF #####00 (internal Bluetooth® module configuration)

- Hold the DISP button down to return to all display segments screen.

Speaker Channel Check

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AV

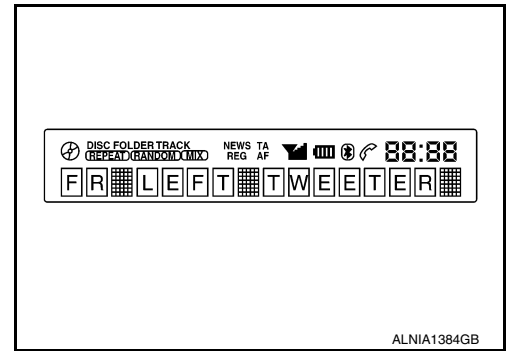
O
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DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[BASE AUDIO]

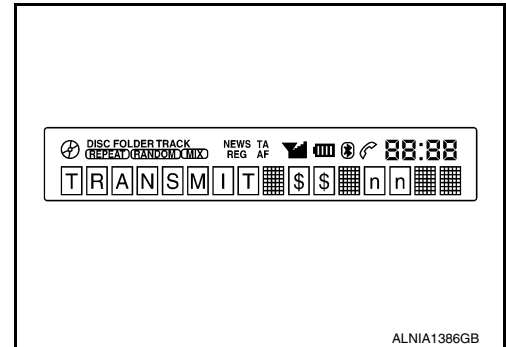
1. Press the RPT/DRM button to enter speaker channel check, and the front left tweeter (front speaker LH) is displayed.



2. With each additional press of the RPT/DRM button, the following information is available:
 - FR RIGHT TWEETER (front speaker RH)
 - FR RIGHT (front door speaker RH)
 - RR RIGHT (rear speaker RH)
 - RR LEFT (rear speaker LH)
 - FR LEFT (front door speaker LH)
3. Hold the RPT/DRM button down to return to all display segments screen.

Communication Diagnosis

1. Press the DISP button, and the M-CAN message transmission error history screen is displayed.



2. Press the DISP button again, and the METER \$ \$ n n (CMF message reception error history from M-CAN METER) screen is displayed.
3. Press the DISP button again, and the TROUBLE DEL. (deletion of M-CAN message communication history) screen is displayed. To retain the M-CAN message communication history and return to the communication diagnosis mode screen, press the DISP button.
4. To proceed to the M-CAN message communication history deletion screen, press the SEEK/TRACK Δ button. The REC DEL-NO? (selection of M-CAN message communication history deletion) screen is displayed. To cancel M-CAN message communication history deletion, wait 6 seconds and you will be returned to the TROUBLE DEL. (deletion of M-CAN message communication history) screen. To proceed with M-CAN message communication history deletion, press the SEEK/TRACK Δ button again.
5. The REC DEL-YES?@ (selection of M-CAN message communication history deletion) screen is displayed. To cancel M-CAN message communication history deletion, press the SEEK/TRACK ∇ button and you will be returned to the REC DEL-NO? (selection of M-CAN message communication history deletion) screen. To proceed with M-CAN message communication history deletion, wait 6 seconds and the communication history deletion will be executed. After the communication history deletion has been executed, you will be returned to the TROUBLE DEL. (deletion of M-CAN message communication history) screen. To return to the communication diagnosis mode screen, press the DISP button.

AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[BASE AUDIO]

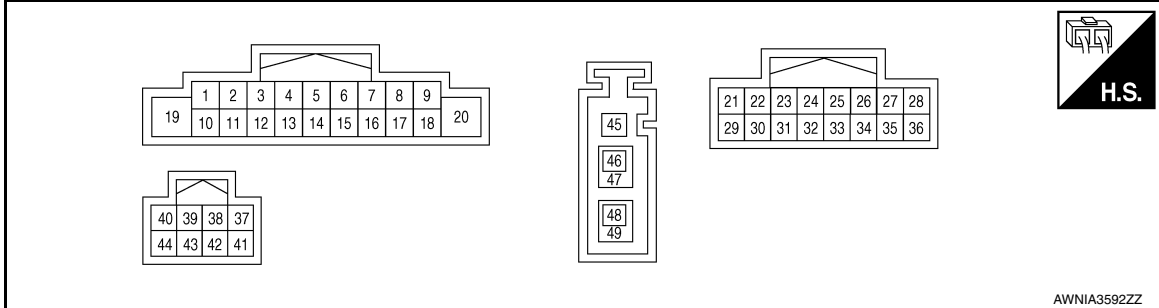
ECU DIAGNOSIS INFORMATION

AUDIO UNIT

Reference Value

INFOID:000000010480093

TERMINAL LAYOUT



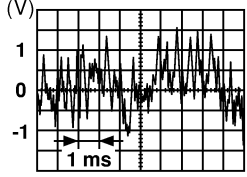
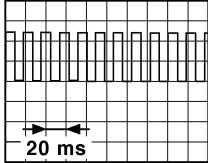
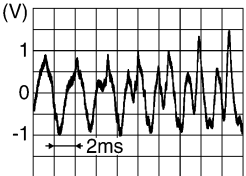
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
2 (V)	3 (SB)	Sound signal front speaker LH	Output	ON	Sound output	 SKIA0177E
4 (BR)	5 (Y)	Sound signal rear speaker LH	Output	ON	Sound output	 SKIA0177E
7 (P)	Ground	ACC power supply	Input	ACC	Ignition switch ACC or ON	Battery voltage
9 (R)	8 (GR)	Illumination control signal	Input	ON	Headlamps ON	Battery voltage
11 (Y)	12 (BR)	Sound signal front speaker RH	Output	ON	Sound output	 SKIA0177E

AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[BASE AUDIO]

Terminal (Wire color)		Description	Condition			Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
13 (LG)	14 (V)	Sound signal rear speaker RH	Output	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
18 (G)	Ground	Vehicle speed signal	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH).	 <p style="text-align: right; font-size: small;">JSNIA0012GB</p>
19 (G)	Ground	Battery power supply	Input	-	-	Battery voltage
27 (SB)	-	AV communication (H)	Input/ Output	-	-	-
28 (LG)	-	AV communication (L)	Input/ Output	-	-	-
35 (SB)	-	AV communication (H)	Input/ Output	-	-	-
36 (LG)	-	AV communication (L)	Input/ Output	-	-	-
38 (W)	Ground	Microphone power supply	Output	ON	-	5.0 V
40 (B)	39 (Shield)	Microphone signal	Input	ON	While speaking into microphone.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
45 (B)	Ground	Antenna amp. ON signal	Output	ON	-	Battery voltage
46 (B)	Ground	AM/FM antenna signal	Input	ON	-	5.0 V
47 (Shield)	-	AM/FM antenna signal shield	-	-	-	-

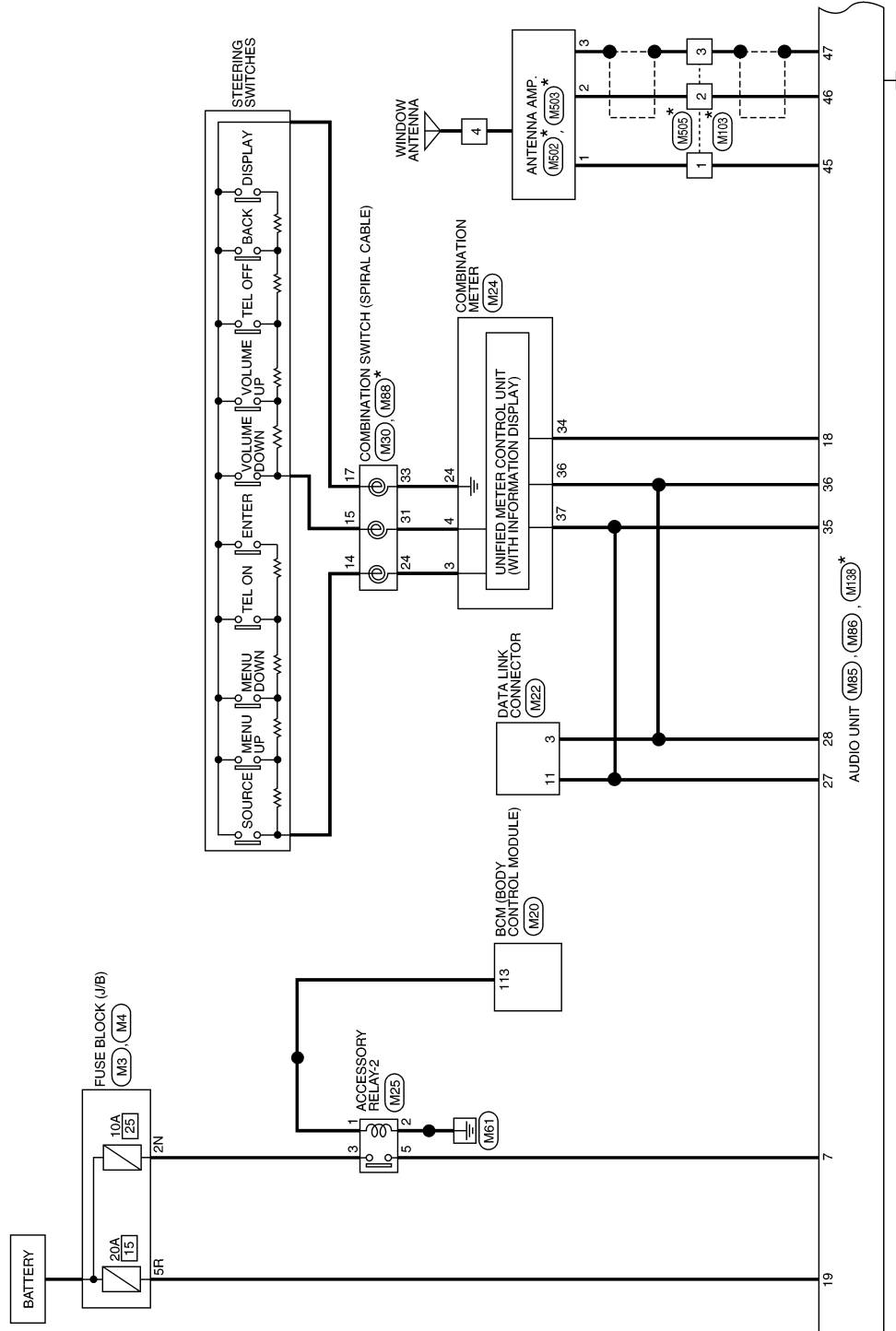
WIRING DIAGRAM

BASE AUDIO

Wiring Diagram

INFOID:000000010480094

BASE AUDIO SYSTEM



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

AANWA1154GB

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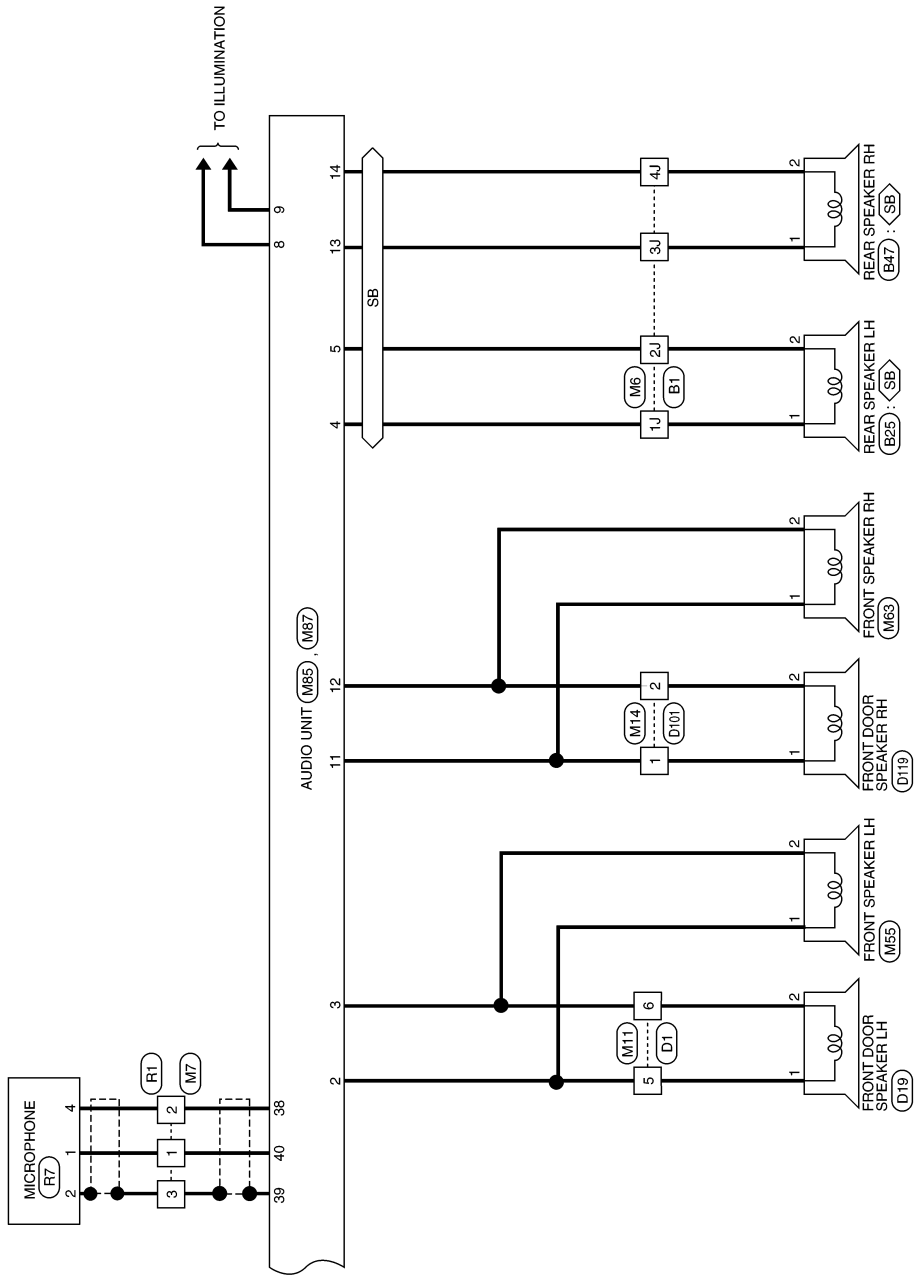
AV

BASE AUDIO

< WIRING DIAGRAM >

[BASE AUDIO]

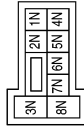
⊡ : WITH 6 SPEAKERS



AANWA1155GB

BASE AUDIO SYSTEM CONNECTORS

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



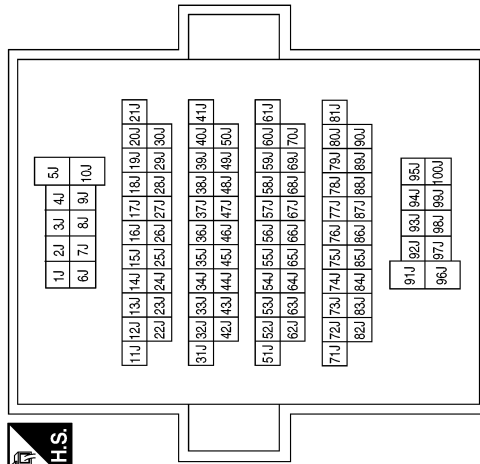
Terminal No.	Color of Wire	Signal Name
2N	LG	-

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



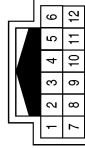
Terminal No.	Color of Wire	Signal Name
5R	G	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1J	BR	-
2J	Y	-
3J	LG	-
4J	V	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-
2	W	-
3	SHIELD	-

AANIA3054GB

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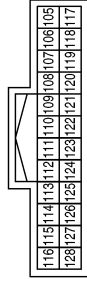
AV

BASE AUDIO

< WIRING DIAGRAM >

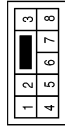
[BASE AUDIO]

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



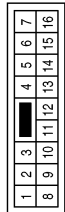
Terminal No.	Color of Wire	Signal Name
113	P	ACC RELAY OUT

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-(WITHOUT BOSE AUDIO SYSTEM)
2	BR	-(WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



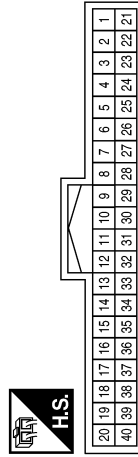
Terminal No.	Color of Wire	Signal Name
5	V	-(WITHOUT BOSE AUDIO SYSTEM)
6	SB	-(WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M25
Connector Name	ACCESSORY RELAY-2
Connector Color	BLUE



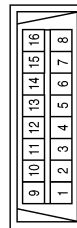
Terminal No.	Color of Wire	Signal Name
1	W	-
2	B	-
3	LG	-
5	P	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	P	STRG SW INPUT1
4	R	STRG SW INPUT2
24	W	STRG SW GND
34	G	SPEED 8P/R
36	LG	M-CAN-L
37	SB	M-CAN-H

Connector No.	M22
Connector Name	DATA LINK CONNECTOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	LG	-
11	SB	-

AANIA3055GB

BASE AUDIO

< WIRING DIAGRAM >

[BASE AUDIO]

Connector No.	M63
Connector Name	FRONT SPEAKER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	Y	-(WITHOUT BOSE AUDIO SYSTEM)
2	BR	-(WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M65
Connector Name	FRONT SPEAKER LH
Connector Color	BROWN



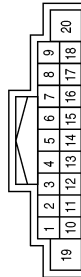
Terminal No.	Color of Wire	Signal Name
1	V	-(WITHOUT BOSE AUDIO SYSTEM)
2	SB	-(WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	P	-
31	R	-
33	W	-

Connector No.	M85
Connector Name	AUDIO UNIT (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	V	FR SP LH (+)
3	SB	FR SP LH (-)
4	BR	RR SP LH (+)
5	Y	RR SP LH (-)
6	-	-
7	P	ACC
8	GR	ILL (-)

Terminal No.	Color of Wire	Signal Name
9	R	ILL (+), LIGHT SW
10	-	-
11	Y	FR SP RH (+)
12	BR	FR SP RH (-)
13	LG	RR SP RH (+)
14	V	RR SP RH (-)
15	-	-
16	-	-
17	-	-
18	G	SPEED SIGNAL
19	G	BAT
20	-	-

AANIA3056GB

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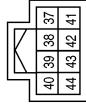
AV

BASE AUDIO

< WIRING DIAGRAM >

[BASE AUDIO]

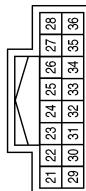
Connector No.	M87
Connector Name	AUDIO UNIT (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
37	-	-
38	W	MIC VCC
39	SHIELD	MIC GND
40	B	MIC SIGNAL
41	-	-
42	-	-
43	-	-
44	-	-

Terminal No.	Color of Wire	Signal Name
28	LG	M-CAN-L
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	SB	M-CAN-H
36	LG	M-CAN-L

Connector No.	M86
Connector Name	AUDIO UNIT (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE



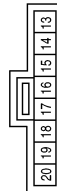
Terminal No.	Color of Wire	Signal Name
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	SB	M-CAN-H

Connector No.	M103
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-

Connector No.	M88
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14	P	-
15	L	-
17	G	-

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BASE AUDIO

< WIRING DIAGRAM >

[BASE AUDIO]

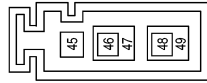
Connector No.	M502
Connector Name	ANTENNA AMP.
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-

Terminal No.	Color of Wire	Signal Name
45	B	ANT +B
46	B	ANTENNA SIGNAL
47	SHIELD	SHIELD
48	-	-
49	-	-

Connector No.	M138
Connector Name	AUDIO UNIT (WITH BASE AUDIO SYSTEM)
Connector Color	GRAY



Connector No.	M505
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-

Connector No.	M503
Connector Name	ANTENNA AMP.
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
4	B	-

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BASE AUDIO

< WIRING DIAGRAM >

[BASE AUDIO]

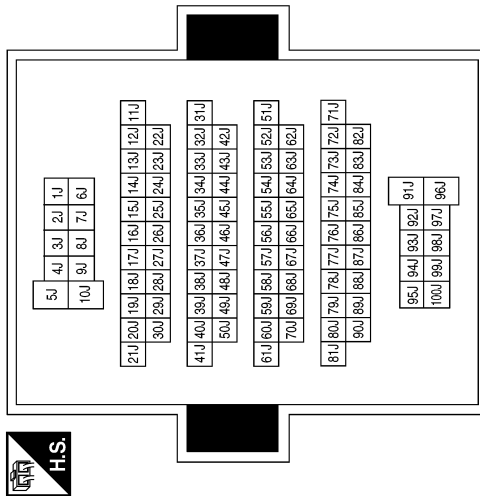
Connector No.	B25
Connector Name	REAR SPEAKER LH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	LG	-

Terminal No.	Color of Wire	Signal Name
1J	Y	-
2J	LG	-
3J	LG	-
4J	L	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	GRAY

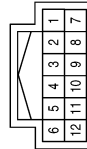


Connector No.	R7
Connector Name	MICROPHONE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	SHIELD	-
4	Y	-

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



Terminal No.	Color of Wire	Signal Name
1	L	-
2	Y	-
3	SHIELD	-

Connector No.	B47
Connector Name	REAR SPEAKER RH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	L	-



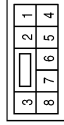
AANIA3059GB

BASE AUDIO

< WIRING DIAGRAM >

[BASE AUDIO]

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



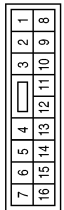
Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-(EXCEPT NAVI OR BOSE AUDIO SYSTEM)

Connector No.	D19
Connector Name	FRONT DOOR SPEAKER LH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-(WITHOUT NAVI)

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	G	-
6	R	-(EXCEPT NAVI OR BOSE AUDIO SYSTEM)

Connector No.	D119
Connector Name	FRONT DOOR SPEAKER RH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-(WITHOUT NAVI)

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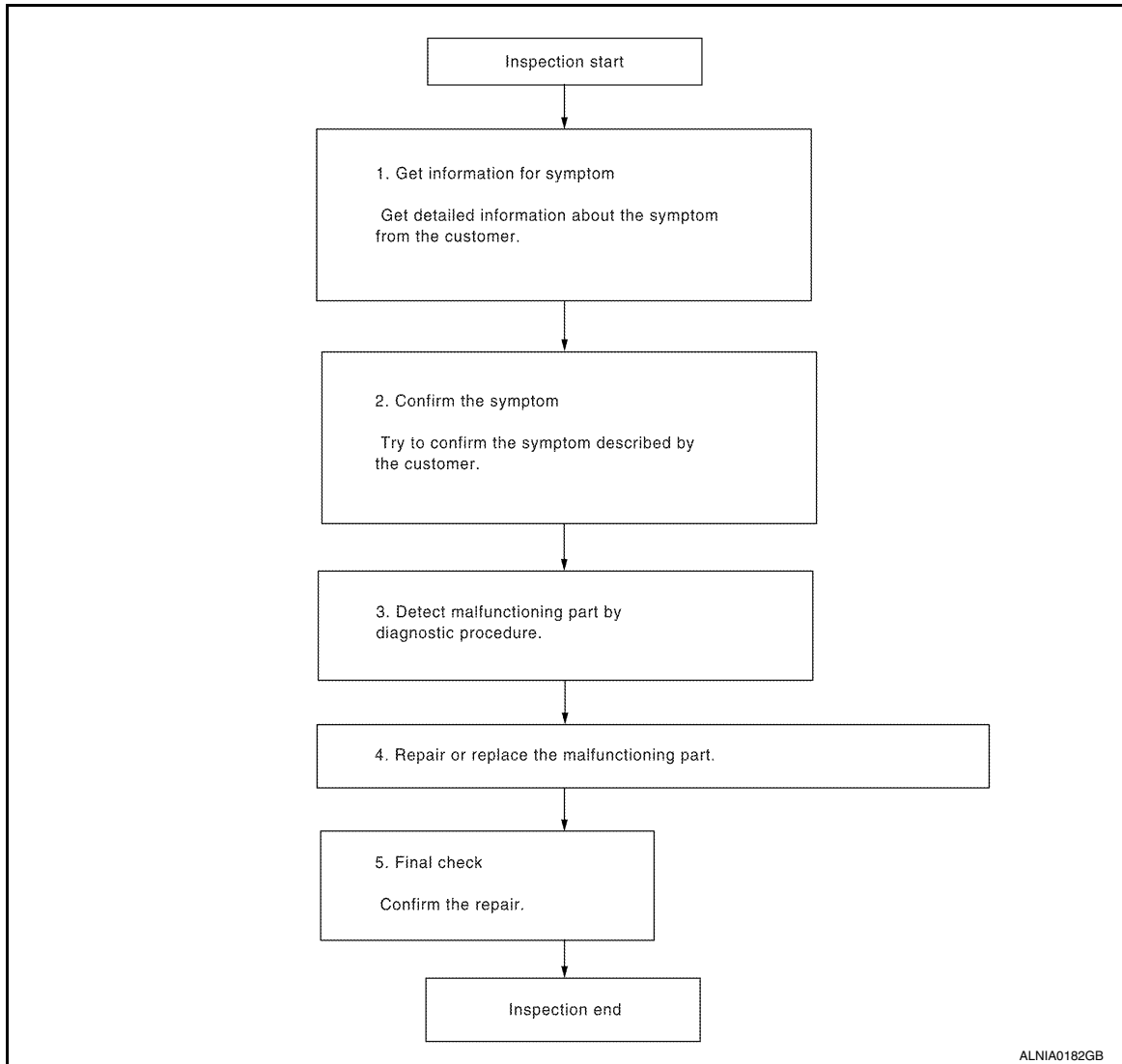
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000010480095

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 >

[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.

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:000000010480096

Regarding Wiring Diagram information, refer to [AV-21, "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
7	ACC power supply	25 (10A)
19	Battery power supply	15 (20A)

Are the fuses blown?

- YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M85.
3. Check voltage between audio unit connector M85 and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M85	7	—	Ignition switch: ON	Battery voltage
	19		Ignition switch: OFF	

Is the inspection result normal?

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

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

FRONT DOOR SPEAKER

Diagnosis Procedure

INFOID:000000010480097

Regarding Wiring Diagram information, refer to [AV-21. "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 terminals or connectors.

2. CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M85 and suspect front door speaker connector.
2. Check continuity between audio unit connector M85 and suspect front door speaker connector.

Audio unit		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M85	2	D19 (LH)	1	Yes
	3		2	
	11	D119 (RH)	1	
	12		2	

3. Check continuity between audio unit connector M85 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M85	2	—	No
	3		
	11		
	12		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT DOOR SPEAKER SIGNAL

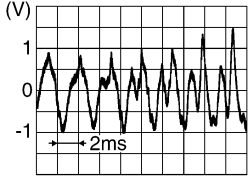
1. Connect audio unit connector M85 and suspect front door speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between audio unit connector M85 and ground.

Audio unit connector M85		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

2	3		
11	12	Audio signal output	

Is the inspection result normal?

- YES >> Replace front door speaker. Refer to [AV-50. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-48. "Removal and Installation"](#).

FRONT SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

FRONT SPEAKER

Diagnosis Procedure

INFOID:000000010480098

Regarding Wiring Diagram information, refer to [AV-21. "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 terminals or connectors.

2. CHECK FRONT SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M85 and suspect front speaker connector.
2. Check continuity between audio unit connector M85 and suspect front speaker connector.

Audio unit		Front speaker		Continuity
Connector	Terminal	Connector	Terminal	
M85	2	M55 (LH)	1	Yes
	3		2	
	11	M63 (RH)	1	
	12		2	

3. Check continuity between audio unit connector M85 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M85	2	—	No
	3		
	11		
	12		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT SPEAKER SIGNAL

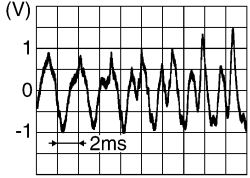
1. Connect audio unit connector M85 and suspect front speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between audio unit connector M85 and ground.

Audio unit connector M85		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

2	3	Audio signal output	
11	12		

SKIB3609E

Is the inspection result normal?

- YES >> Replace front speaker. Refer to [AV-49. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-48. "Removal and Installation"](#).

REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

REAR SPEAKER

Diagnosis Procedure

INFOID:000000010480099

Regarding Wiring Diagram information, refer to [AV-21. "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 terminals or connectors.

2. CHECK REAR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M85 and suspect rear speaker connector.
2. Check continuity between audio unit connector M85 and suspect rear speaker connector.

Audio unit		Rear speaker		Continuity
Connector	Terminal	Connector	Terminal	
M85	4	B25 (LH)	1	Yes
	5		2	
	13	B47 (RH)	1	
	14		2	

3. Check continuity between audio unit connector M85 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M85	4	—	No
	5		
	13		
	14		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK REAR SPEAKER SIGNAL

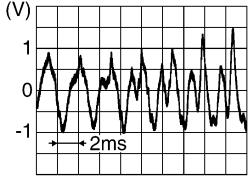
1. Connect audio unit connector M85 and suspect rear speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between audio unit connector M85 and ground.

Audio unit connector M85		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

4	5	Audio signal output	
13	14		

SKIB3609E

Is the inspection result normal?

- YES >> Replace rear speaker. Refer to [AV-51. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-48. "Removal and Installation"](#).

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

MICROPHONE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000010480100

Regarding Wiring Diagram information, refer to [AV-21. "Wiring Diagram"](#).

1. CHECK MICROPHONE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M87 and microphone connector R7.
3. Check continuity between audio unit connector M87 and microphone connector R7.

Audio unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M87	39	R7	2	Yes
	38		4	
	40		1	

4. Check continuity between audio unit connector M87 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M87	39	—	No
	38		
	40		

Is inspection result normal?

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

2. CHECK MICROPHONE VCC VOLTAGE

1. Connect audio unit connector M87.
2. Turn ignition switch ON.
3. Check voltage between terminals of audio unit connector M87.

Audio unit connector M87		Voltage (Approx.)
(+)	(-)	
Terminal	Terminal	
38	39	5.0 V

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Replace audio unit. Refer to [AV-48. "Removal and Installation"](#).

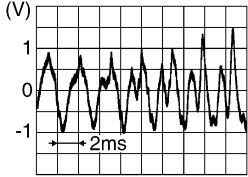
3. CHECK MICROPHONE SIGNAL

1. Connect microphone connector.
2. Check signal between terminals of audio unit connector M87.

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

Audio unit connector M87		Condition	Reference value
(+) Terminal	(-) Terminal		
40	39	Speak into microphone.	 <p>(V)</p> <p>1</p> <p>0</p> <p>-1</p> <p>2ms</p> <p>SKIB3609E</p>

Is the inspection result normal?

- YES >> Replace audio unit. Refer to [AV-48. "Removal and Installation"](#).
 NO >> Replace microphone. Refer to [AV-57. "Removal and Installation"](#).

STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

STEERING SWITCH






Diagnosis Procedure

INFOID:000000010480101

Regarding Wiring Diagram information, refer to [AV-21. "Wiring Diagram"](#).

1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect combination switch connector M88.
3. Check resistance between combination switch connector terminals.

Combination switch connector M88		Condition	Resistance Ω (Approx.)
Terminal	Terminal		
14	17	Depress SOURCE switch.	1
		Depress Δ switch.	121
		Depress ∇ switch.	321
		Depress  switch.	723
		Depress ENTER switch.	2023
15	17	Depress  switch.	1
		Depress  switch.	121
		Depress  switch.	321
		Depress  switch.	723
		Depress DISP switch.	2023

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering switches. Refer to [AV-52. "Removal and Installation"](#).

2. CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

1. Disconnect combination meter connector M24 and combination switch connector M30.
2. Check continuity between combination meter connector M24 and combination switch connector M30.

Combination meter		Combination switch		Continuity
Connector	Terminal	Connector	Terminal	
M24	3	M30	24	Yes
	24		33	
	4		31	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	3	—	No
	24		
	4		

Is the inspection result normal?

STEERING SWITCH

[BASE AUDIO]

< DTC/CIRCUIT DIAGNOSIS >

- YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3.CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M88.

Combination switch				Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M88	14	Yes
	31		15	
	33		17	

Is the inspection result normal?

- YES >> GO TO 4.
NO >> Replace spiral cable. Refer to [SR-15. "Removal and Installation"](#).

4.CHECK HARNESS BETWEEN COMBINATION METER AND AUDIO UNIT

1. Disconnect audio unit connector M86.
2. Check continuity between combination meter connector M24 and audio unit connector M86.

Combination meter		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
M24	37	M86	35	Yes
	36		36	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	37	—	No
	36		

Is the inspection result normal?

- YES >> Replace audio unit. Refer to [AV-48. "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:0000000010480102

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	Audio unit	Malfunction in audio unit. Refer to AV-16, "On Board Diagnosis Function" .
No sound comes out or the level of the sound is low.	No sound from all speakers.	<ul style="list-style-type: none"> • Speaker circuit shorted to ground. Refer to AV-21, "Wiring Diagram". • Audio unit power supply and ground circuits malfunction. Refer to AV-32, "AUDIO UNIT : Diagnosis Procedure".
	Only a certain speaker (front door speaker LH, front door speaker RH, front speaker LH, front speaker RH, rear speaker LH, rear speaker RH) does not output sound.	<ul style="list-style-type: none"> • Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and speaker. Refer to: <ul style="list-style-type: none"> - AV-33, "Diagnosis Procedure" (front door speaker). - AV-35, "Diagnosis Procedure" (front speaker). - AV-37, "Diagnosis Procedure" (rear speaker). • Malfunction in speaker. Refer to: <ul style="list-style-type: none"> - AV-50, "Removal and Installation" (front door speaker). - AV-49, "Removal and Installation" (front speaker). - AV-51, "Removal and Installation" (rear speaker). • Malfunction in audio unit. Refer to AV-16, "On Board Diagnosis Function".

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AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[BASE AUDIO]

Symptoms	Check items	Probable malfunction location
Noise is mixed with audio.	Noise comes out from all speakers.	Malfunction in audio unit. Refer to AV-16, "On Board Diagnosis Function" .
	Noise comes out only from a certain speaker (front door speaker LH, front door speaker RH, front speaker LH, front speaker RH, rear speaker LH, rear speaker RH).	<ul style="list-style-type: none"> • Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and speaker. Refer to: <ul style="list-style-type: none"> - AV-33, "Diagnosis Procedure" (front door speaker). - AV-35, "Diagnosis Procedure" (front speaker). - AV-37, "Diagnosis Procedure" (rear speaker). • Malfunction in speaker. • Poor Installation of speaker (e.g. backlash and looseness). Refer to: <ul style="list-style-type: none"> - AV-50, "Removal and Installation" (front door speaker). - AV-49, "Removal and Installation" (front speaker). - AV-51, "Removal and Installation" (rear speaker). • Malfunction in audio unit. Refer to AV-16, "On Board Diagnosis Function".
	Noise is mixed with radio only (when the vehicle hits a bump or while driving over bad roads)	Poor connector connection of antenna or antenna feeder. Refer to AV-54, "Location of Antenna" .
No radio reception or poor reception.	<ul style="list-style-type: none"> • Other audio sounds are normal. • Any radio station cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises). 	<ul style="list-style-type: none"> • Antenna amp. ON signal circuit malfunction. Refer to AV-19, "Reference Value". • Poor connector connection of antenna or antenna feeder. Refer to AV-54, "Location of Antenna".
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.

RELATED TO HANDS-FREE PHONE

- Before performing diagnosis, confirm that the cellular phone being used by the customer is compatible with the vehicle.
- It is possible that a malfunction is occurring due to a version change of the phone even though the phone is a compatible type. This can be confirmed by changing the cellular phone to another compatible type, and check that it operates normally. It is important to determine whether the cause of the malfunction is the vehicle or the cellular phone.

Check Compatibility

1. Make sure the customer's Bluetooth[®] related concern is understood.
2. Verify the customer's concern.
NOTE:
The customer's phone may be required, depending upon their concern.
3. Write down the customer's phone brand, model and service provider.
NOTE:
It is necessary to know the service provider. On occasion, a given phone may be on the approved list with one provider, but may not be on the approved list with other providers.
4. Go to "www.nissanusa.com/bluetooth/".
 - a. Using the website's search engine, find out if the customer's phone is on the approved list.
 - b. If the customer's phone is NOT on the approved list:









AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[BASE AUDIO]

Stop diagnosis here. The customer needs to obtain a Bluetooth® phone that is on the approved list before any further action.

- c. If the feature related to the customer's concern shows as "N" (not compatible):
Stop diagnosis here. If the customer still wants the feature to function, they will need to get an approved phone showing the feature as "Y" (compatible) in the "Basic Features".
- d. If the feature related to the customer's concern shows as "Y" (compatible):
Perform diagnosis as per the following table.

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection (no connection is displayed on the display at the guide).	Repeat the registration of cellular phone.	
Hands-free phone cannot be established.	<ul style="list-style-type: none"> • Hands-free phone operation can be made, but the communication cannot be established. • Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation. 	Malfunction in audio unit. Replace audio unit. Refer to AV-48, "Removal and Installation" .
The other party's voice cannot be heard by hands-free phone.	Check the "microphone speaker" in Inspection & Adjustment Mode if sound is heard.	
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-39, "Diagnosis Procedure" .
The system cannot be operated.	<ul style="list-style-type: none"> • The voice recognition can be controlled. • Steering switch's , , and  switch works, but  does not work. 	Steering switch malfunction. Replace steering switch. Refer to AV-52, "Removal and Installation" .
	Steering switch's  ,  ,  , and  switches do not work.	Steering switch signal circuit malfunction. Refer to AV-41, "Diagnosis Procedure" .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-41, "Diagnosis Procedure" .

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BASE AUDIO]

NORMAL OPERATING CONDITION

Description

INFOID:000000010480103

RELATED TO NOISE

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

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"> • Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		<ul style="list-style-type: none"> • Fuel pump condenser
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"> • Relay malfunction, audio unit malfunction
	The noise occurs when various motors are operating.	<ul style="list-style-type: none"> • Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		<ul style="list-style-type: none"> • 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.		<ul style="list-style-type: none"> • Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

RELATED TO HANDS-FREE PHONE

Symptom	Cause and Counter measure
Does not recognize cellular phone connection (No connection is displayed on the display at the guide).	<p>Some Bluetooth[®] enabled cellular phones may not be recognized by the in-vehicle phone module.</p> <p>Refer to "RELATED TO HANDS-FREE PHONE (Check Compatibility)" in AV-43, "Symptom Table".</p>
Cannot use hands-free phone.	<p>Customer will not be able to use a hands-free phone under the following conditions:</p> <ul style="list-style-type: none"> • The vehicle is outside of the telephone service area. • The vehicle is in an area where it is difficult to receive radio waves; such as in a tunnel, in an underground parking garage, near a tall building or in a mountainous area. • The cellular phone is locked to prevent it from being dialed. <p>NOTE:</p> <p>While a cellular phone is connected through the Bluetooth[®] wireless connection, the battery power of the cellular phone may discharge quicker than usual. The Bluetooth[®] Hands-Free Phone System cannot charge cellular phones.</p>

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[BASE AUDIO]

Symptom	Cause and Counter measure
The other party's voice cannot be heard by hands-free phone.	When the radio wave condition is not ideal or ambient sound is too loud, it may be difficult to hear the other person's voice during a call.
Poor sound quality.	Do not place the cellular phone in an area surrounded by metal or far away from the in-vehicle phone module to prevent tone quality degradation and wireless connection disruption.

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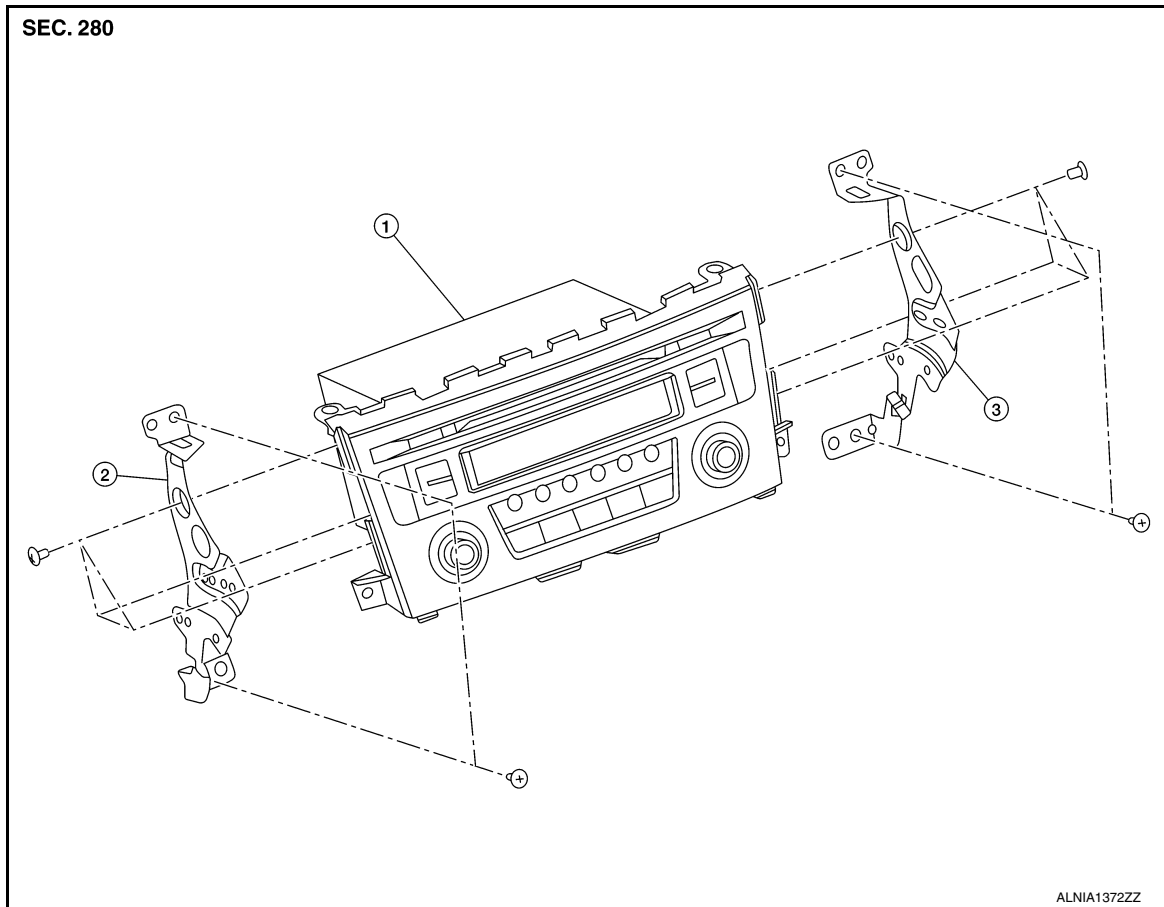
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REMOVAL AND INSTALLATION

AUDIO UNIT

Exploded View

INFOID:000000010480104



1. Audio unit

2. Audio unit bracket (LH)

3. Audio unit bracket (RH)

Removal and Installation

INFOID:000000010480105

REMOVAL

1. Disconnect the negative battery terminal. Refer to [PG-78, "Removal and Installation"](#).
2. Remove cluster lid C. Refer to [IP-20, "Cluster Lid C"](#).
3. Remove the front air control. Refer to [HAC-162, "Removal and Installation"](#).
4. Remove the audio unit bracket screws, then pull out the audio unit.
5. Disconnect the harness connectors from the audio unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

FRONT SPEAKER

< REMOVAL AND INSTALLATION >

[BASE AUDIO]

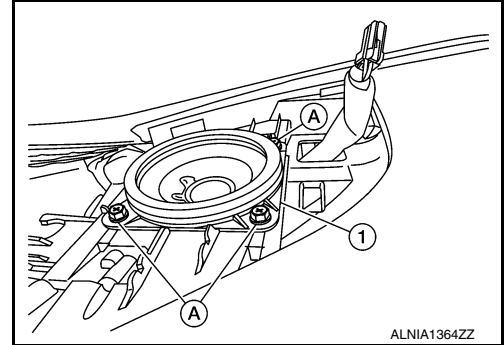
FRONT SPEAKER

Removal and Installation

INFOID:000000010480106

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-21. "FRONT PILLAR FINISHER : Removal and Installation"](#).
2. Remove the front speaker grille using a suitable tool.
3. Remove the front speaker screws (A).
4. Pull out the front speaker (1), disconnect the harness connector from front speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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FRONT DOOR SPEAKER

< REMOVAL AND INSTALLATION >

[BASE AUDIO]

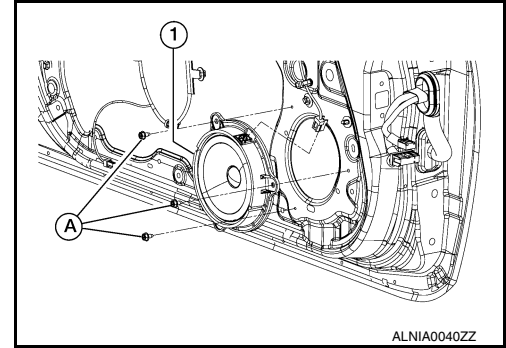
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000010480107

REMOVAL

1. Remove the front door finisher. Refer to [INT-15, "Removal and Installation"](#).
2. Remove the front door speaker screws (A).
3. Disconnect the harness connector from the front door speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

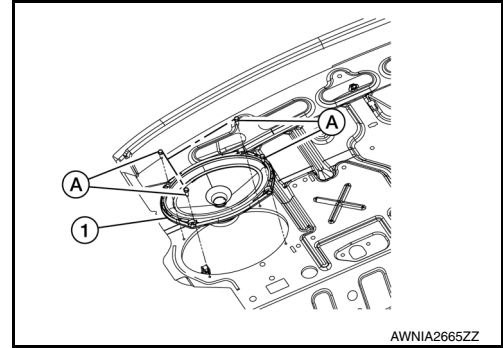
REAR SPEAKER

Removal and Installation

INFOID:000000010480108

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
2. Remove the rear speaker screws (A).
3. Disconnect the harness connector from the rear speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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STEERING SWITCH

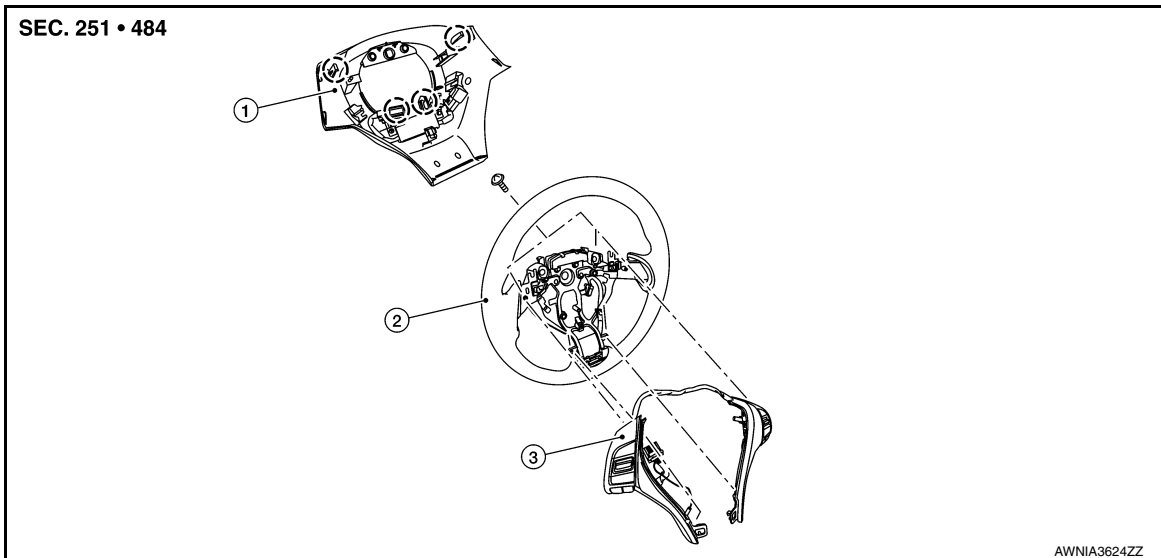
< REMOVAL AND INSTALLATION >

[BASE AUDIO]

STEERING SWITCH

Exploded View

INFOID:000000010480109



1. Steering wheel rear finisher

2. Steering wheel

3. Steering switches

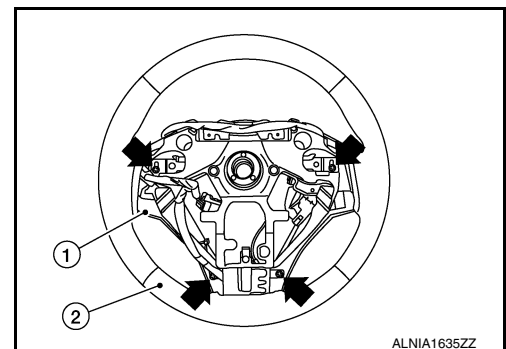
○ Pawl

Removal and Installation

INFOID:000000010480110

REMOVAL

1. Remove the steering wheel. Refer to [ST-31. "Removal and Installation"](#)
2. Release the pawls on the steering wheel rear finisher and remove.
3. Remove the steering switches screws (←).
4. Remove the steering switches (1) from steering wheel (2).



INSTALLATION

Installation is in the reverse order of removal.

ANTENNA AMP.

< REMOVAL AND INSTALLATION >

[BASE AUDIO]

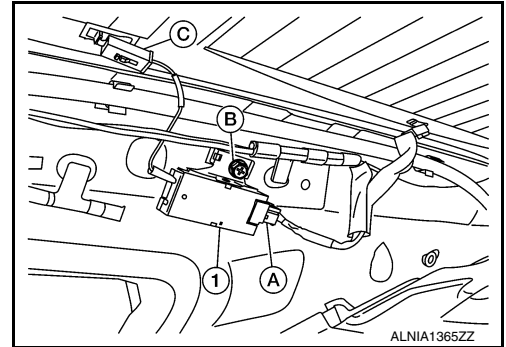
ANTENNA AMP.

Removal and Installation

INFOID:0000000010480111

REMOVAL

1. Remove the rear pillar finisher (RH). Refer to [INT-25. "REAR PILLAR FINISHER : Removal and Installation"](#).
2. Disconnect the harness connector (A) from the antenna amp. (1).
3. Disconnect the antenna amp. harness connector (C) from the rear window glass.
4. Remove the antenna amp. screw (B) and the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

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ANTENNA FEEDER

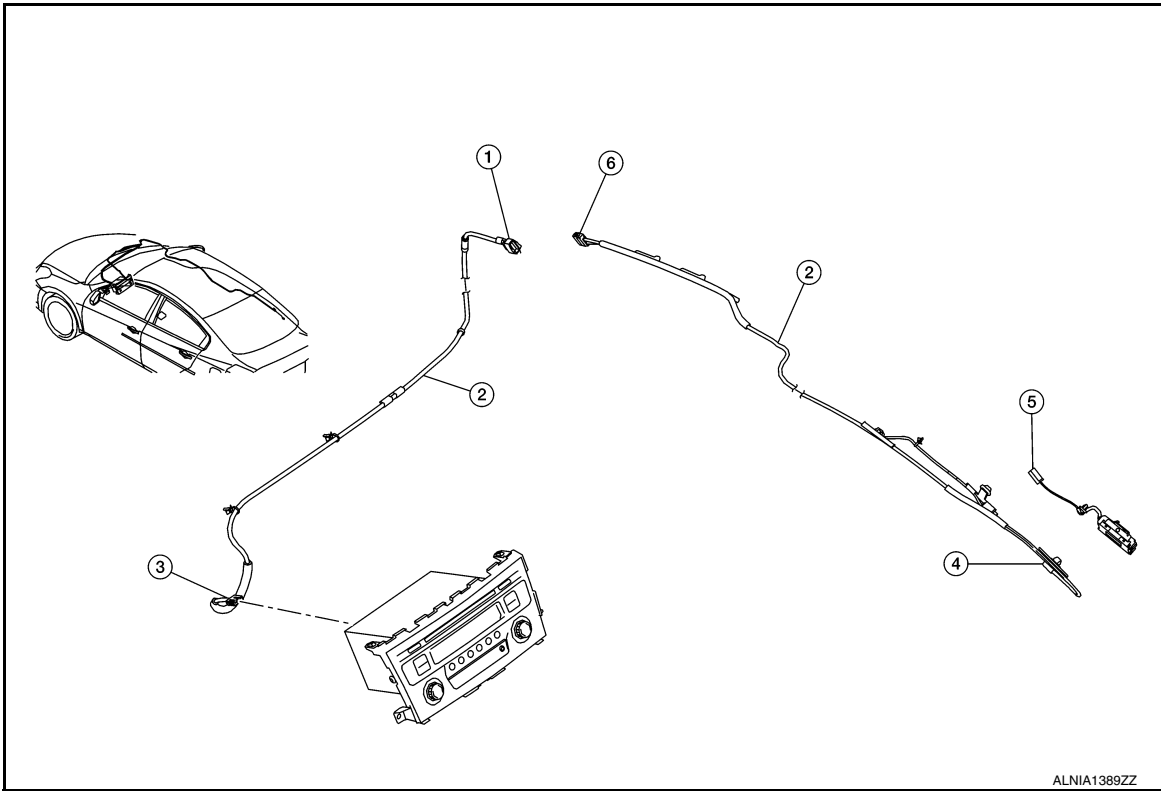
< REMOVAL AND INSTALLATION >

[BASE AUDIO]

ANTENNA FEEDER

Location of Antenna

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ALNIA1389ZZ

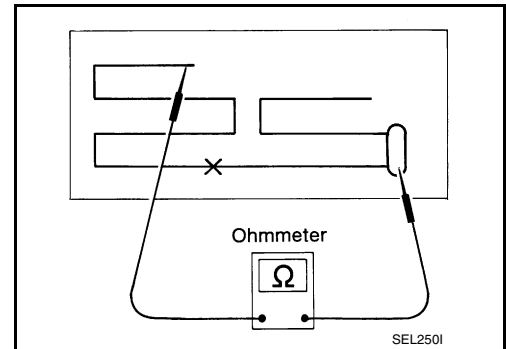
- | | | |
|---------|-------------------|---------|
| 1. M101 | 2. Antenna feeder | 3. M138 |
| 4. M502 | 5. M503 | 6. M501 |

Window Antenna Repair

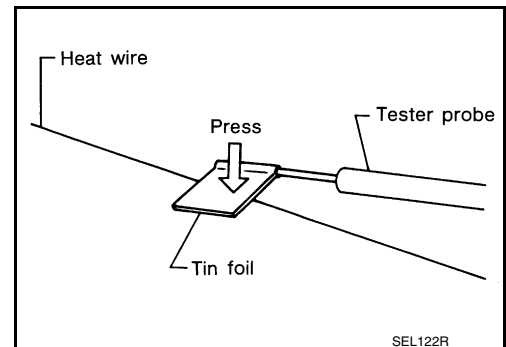
INFOID:000000010480113

ELEMENT CHECK

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



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

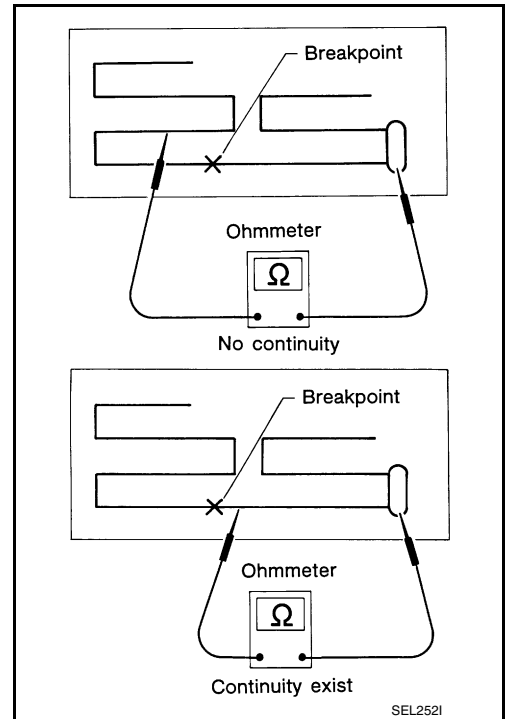


ANTENNA FEEDER

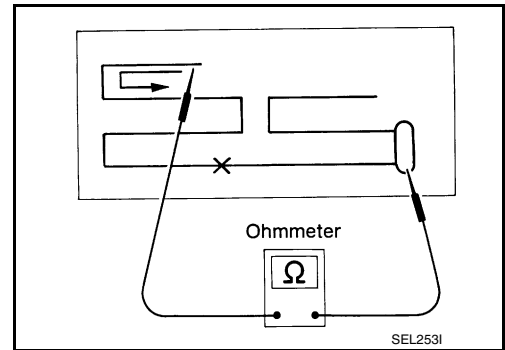
< REMOVAL AND INSTALLATION >

[BASE AUDIO]

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



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

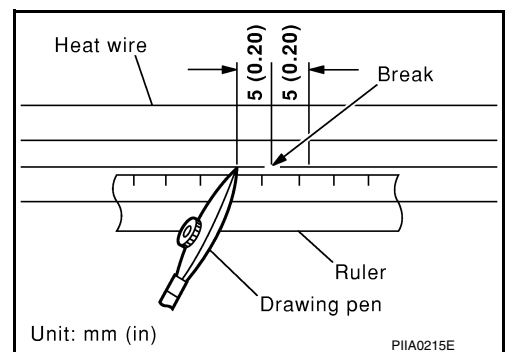


REPAIR EQUIPMENT

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

REPAIRING PROCEDURE

- Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
- Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
- Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.

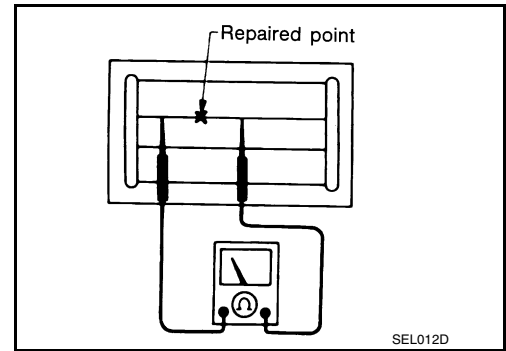


ANTENNA FEEDER

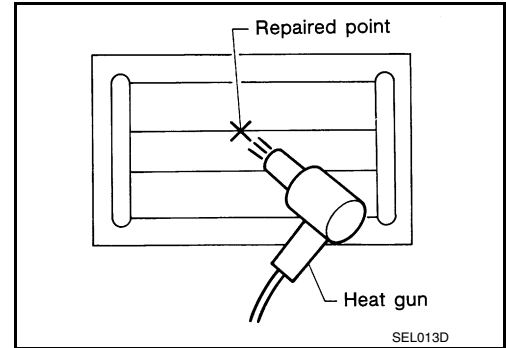
< REMOVAL AND INSTALLATION >

[BASE AUDIO]

4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.
Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet.
If a heat gun is not available, let the repaired area dry for 24 hours.



MICROPHONE

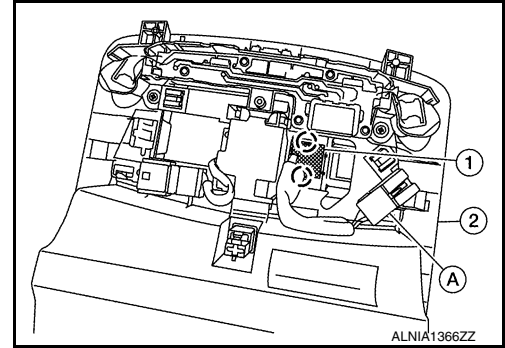
Removal and Installation

INFOID:000000010480114

REMOVAL

1. Remove the front room/map lamp assembly. Refer to [INL-62. "Removal and Installation"](#).
2. Disconnect the microphone connector (A) from the front room/map lamp assembly (2).
3. Release the microphone pawls, then remove the microphone (1).

○: Pawl



INSTALLATION

Installation is in the reverse order of removal.

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AV

PRECAUTION

PRECAUTIONS

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

INFOID:000000011046222

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. 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 three minutes before performing any service.

Precaution for Trouble Diagnosis

INFOID:000000010480116

AV COMMUNICATION SYSTEM

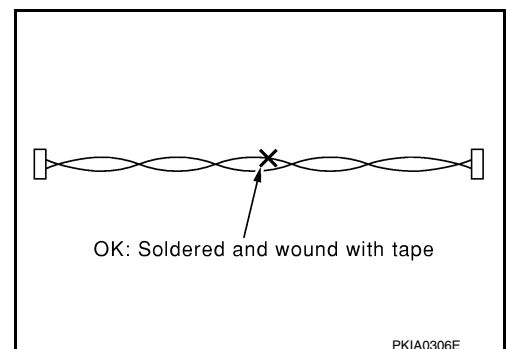
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

INFOID:000000010480117

AV COMMUNICATION SYSTEM

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

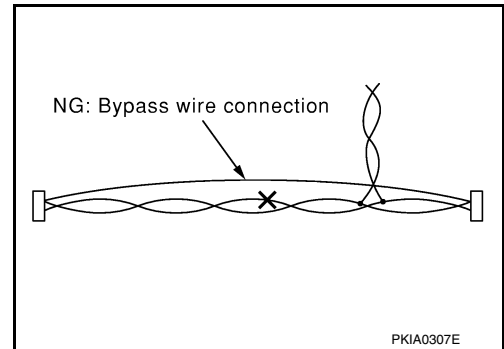


PRECAUTIONS

< PRECAUTION >

[DISPLAY AUDIO WITHOUT BOSE]

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



Precaution for Work

INFOID:000000010480118

- 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:
 - 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 >

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PREPARATION

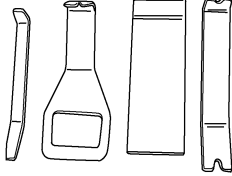
PREPARATION

Special Service Tools

INFOID:000000010480119

The actual shape of the tools may differ from those illustrated here.

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

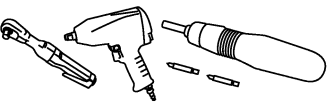


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Commercial Service Tools

INFOID:000000010480120

Tool name	Description
Power tool	Loosening nuts, screws and bolts



PIIB1407E

COMPONENT PARTS

< SYSTEM DESCRIPTION >

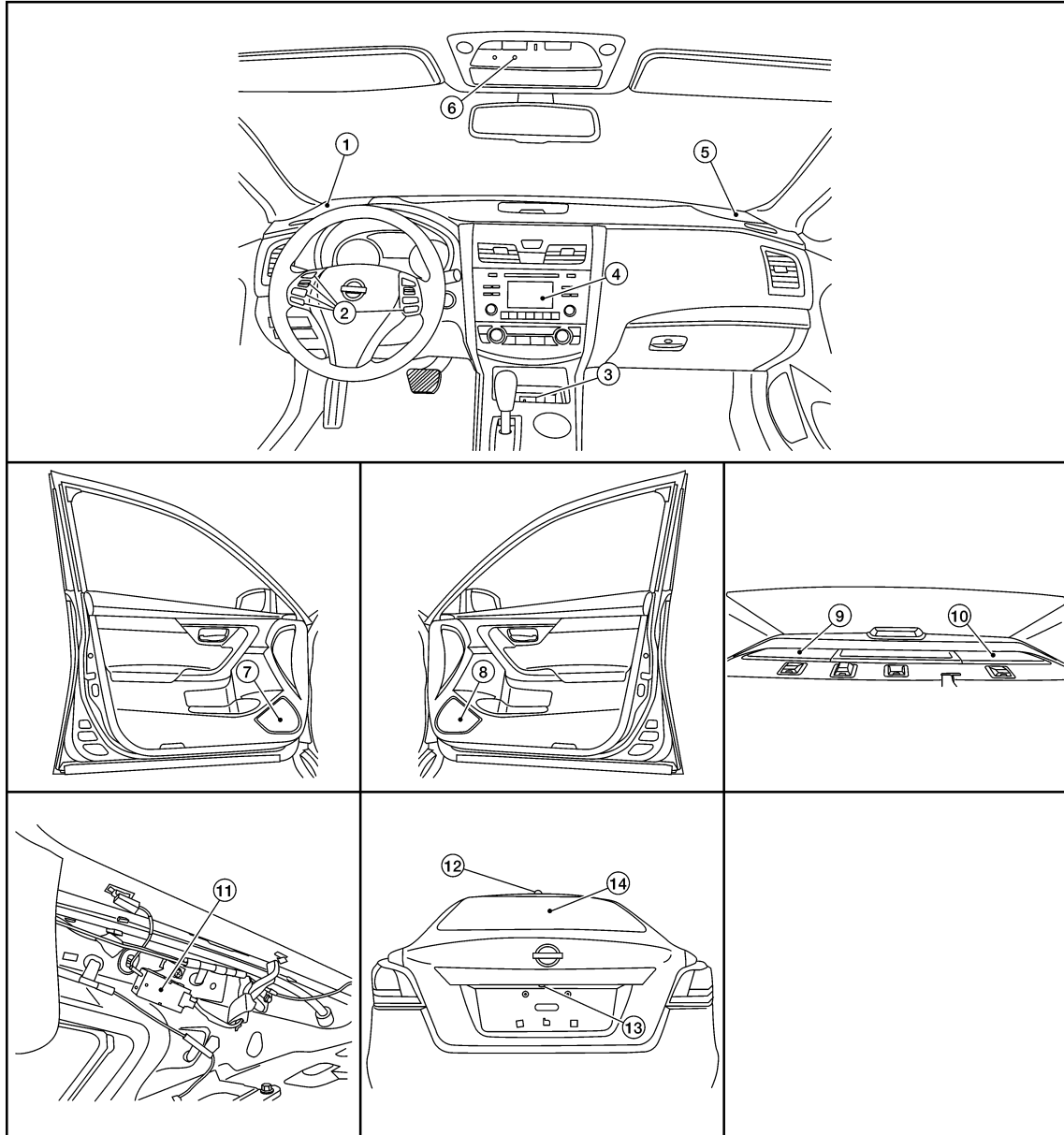
[DISPLAY AUDIO WITHOUT BOSE]

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:000000010480121



- | | | |
|--------------------------|--------------------------|----------------------------------|
| 1. Front speaker LH | 2. Steering switches | 3. USB interface and AUX in jack |
| 4. Audio unit | 5. Front speaker RH | 6. Microphone |
| 7. Front door speaker LH | 8. Front door speaker RH | 9. Rear speaker RH |
| 10. Rear speaker LH | 11. Antenna amp. | 12. Satellite antenna |
| 13. Rear view camera | 14. Window antenna | |

Component Description

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COMPONENT PARTS

< SYSTEM DESCRIPTION >

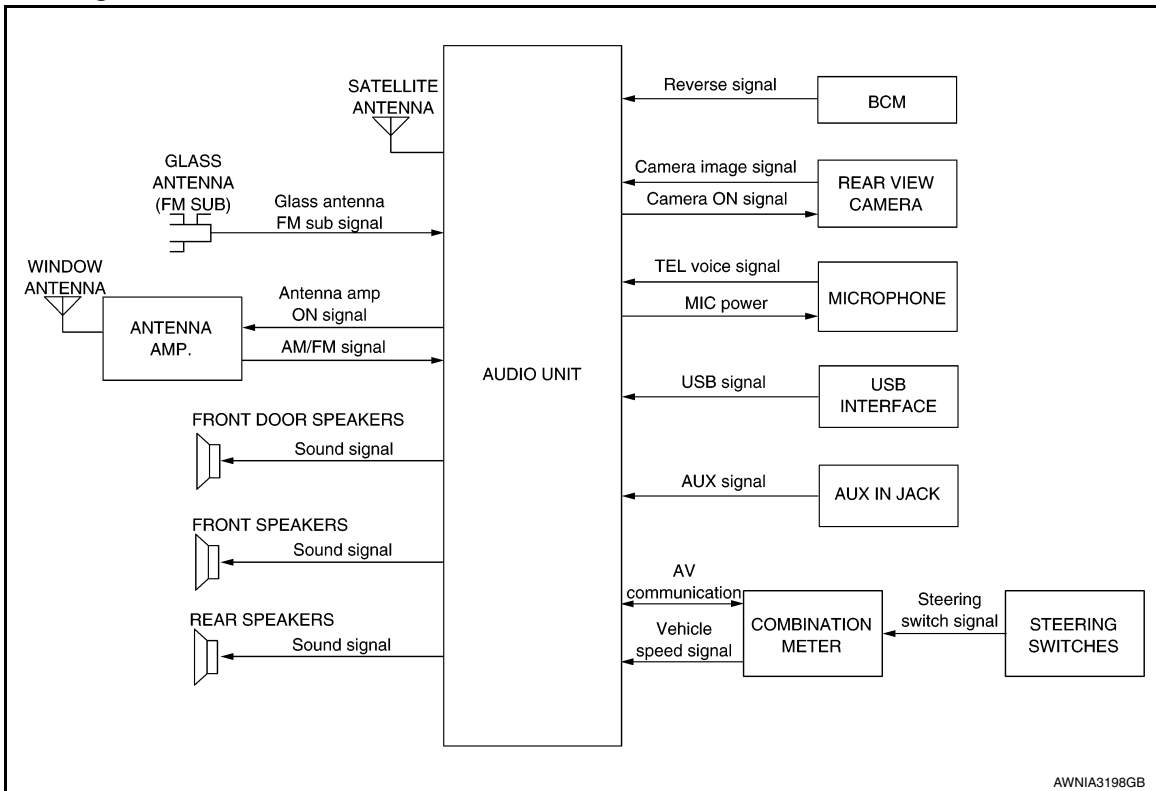
[DISPLAY AUDIO WITHOUT BOSE]

Part name	Description
Audio unit	<ul style="list-style-type: none">• Controls audio, hands-free phone, USB interface and AUX in jack connection, satellite radio and rear view camera functions.• Display unit is built in to audio unit.
Front door speakers	Outputs high, mid and low range audio signals from audio unit.
Front speakers	
Rear speakers	
Steering switches	<ul style="list-style-type: none">• Operations for audio, hands-free phone and voice recognition are possible.• Steering switch signal is output to combination meter.• Combination meter outputs steering switch signal to audio unit.
Microphone	<ul style="list-style-type: none">• Used for hands-free phone operations.• Microphone signal is transmitted to audio unit.• Power is supplied from audio unit.
USB interface and AUX in jack	<ul style="list-style-type: none">• USB sound and data input signals are transmitted to audio unit.• AUX sound input signals are transmitted to audio unit.
Rear view camera	<ul style="list-style-type: none">• Outputs image of vehicle rear to audio unit.• Power is supplied from audio unit.
Satellite antenna	Satellite radio signal is received and transmitted to audio unit.
Antenna amp.	<ul style="list-style-type: none">• AM/FM signal received by window antenna is amplified and transmitted to audio unit.• Power is supplied from audio unit.
Window antenna	AM/FM signal is received and transmitted to antenna amp.

SYSTEM

System Diagram

INFOID:000000010480123



System Description

INFOID:000000010480124

AUDIO SYSTEM

The audio system consists of the following components:

- Audio unit
- Front door speakers
- Front speakers
- Rear speakers
- Steering switches
- Microphone
- USB interface and AUX in jack
- Rear view camera
- Satellite antenna
- Antenna amp.
- Window antenna

When the audio system is on, AM/FM signals received by the window antenna are amplified by the antenna amp. and sent to the audio unit. The audio unit then sends audio signals to the front door speakers, front speakers and rear speakers.

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

HANDS-FREE PHONE SYSTEM

System Operation

NOTE:

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

The Bluetooth® telephone system allows users who have a Bluetooth® cellular telephone to make a wireless connection between their cellular telephone and the audio unit. Hands-free cellular telephone calls can be sent and received. Some Bluetooth® cellular telephones may not be recognized by the audio unit. When a cel-

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SYSTEM

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO WITHOUT BOSE]

ular telephone or the audio unit is replaced, the telephone must be paired with the audio unit. Different cellular telephones may have different pairing procedures, refer to the cellular telephone operating manual.

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

Audio Unit

When the ignition switch is turned to ACC or ON, the audio unit will power up. During power up, the audio unit is initialized and performs various self-checks. Initialization may take up to 20 seconds.

Steering Switches

When buttons on the steering switches are pushed, the resistance in steering switches circuits change, depending on which button is pushed.

The following functions can be performed using the steering switches:

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

Microphone

The microphone is located in the roof console assembly. The microphone sends a signal to the audio unit.

REAR VIEW CAMERA SYSTEM

- The audio unit supplies power to the rear view camera when the reverse signal is received from the BCM.
- The rear view camera transmits rear view camera images to the audio unit when power is supplied from the audio unit.
- The audio unit combines a warning message and fixed guide lines with an image received from the rear view camera to display a rear view camera image on the screen.

SATELLITE RADIO FUNCTION

- Satellite radio function is built into audio unit.
- Sound signal (satellite radio) is received by satellite antenna and transmitted to audio unit. Audio unit outputs sound signal to each speaker.

USB INTERFACE AND AUX IN JACK FUNCTION

- Sound and data signals are transmitted from USB interface to the audio unit and output to each speaker and tweeter.
- Sound signals are transmitted from AUX in jack to the audio unit and output to each speaker and tweeter.

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.

DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO WITHOUT BOSE]

DIAGNOSIS SYSTEM (AUDIO UNIT)

Description

INFOID:000000010480125

The audio unit on board diagnosis performs the functions listed in the table below:

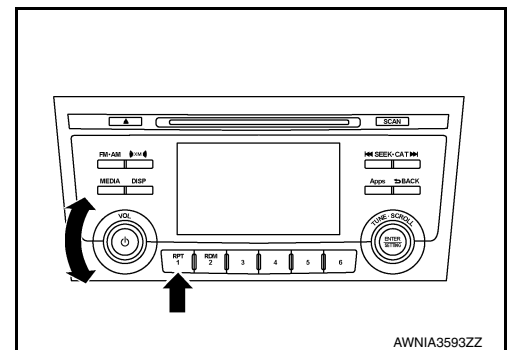
Mode	Description	
Self Diagnosis	<ul style="list-style-type: none"> Audio unit diagnosis. Diagnoses the connections across system components. 	
Confirmation/ Adjustment	Display Diagnosis	The following check functions are available: color tone check by color bar display and white display, light and shade check by gray scale display.
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, lights, reverse, EQ pin, destination and camera type.
	Speaker Test	The connection of a speaker can be confirmed by test tone.
	Error History	The system malfunction and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.
	Camera System	Guiding line position that overlaps rear view camera image can be adjusted.
	AV COMM Diagnosis	The communication condition of each unit of display audio system can be monitored.
	Delete Unit Connection Log	Erase the connection history of unit and error history.
	Initialize Setting	Initializes the audio unit memory.

On Board Diagnosis Function

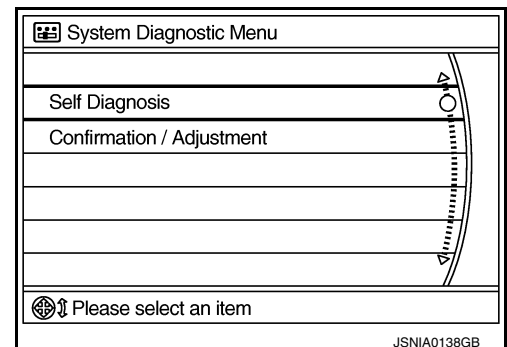
INFOID:000000010480126

METHOD OF STARTING

- Turn the ignition ON.
- Turn the audio system OFF.
- While pressing the preset 1 button, turn the volume control dial clockwise and counterclockwise quickly approximately 15 times or more. Shifting from current screen to previous screen is performed by pressing BACK button.



- The trouble diagnosis initial screen is displayed, and Self Diagnosis or Confirmation/Adjustment can be selected.



SELF DIAGNOSIS MODE

Audio Unit Self Diagnosis

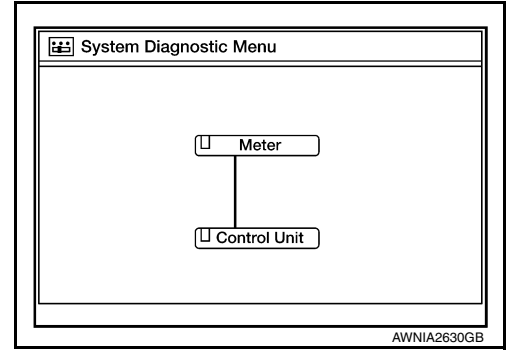
- Select Self Diagnosis.

DIAGNOSIS SYSTEM (AUDIO UNIT)

[DISPLAY AUDIO WITHOUT BOSE]

< SYSTEM DESCRIPTION >

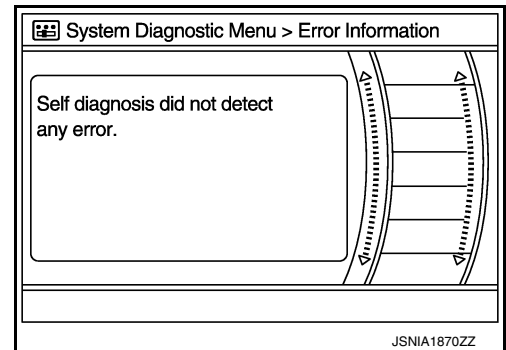
- Self diagnosis screen is displayed. The bar graph visible in center of screen indicates progress of self diagnosis.
- Diagnosis results are displayed after the self diagnosis is completed. The unit names and the connection lines are color coded according to the diagnostic results.



Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction ¹	Red	Green

1: Control unit (audio unit) is displayed in red.

- Replace audio unit if Self Diagnosis did not run because control unit malfunction is indicated. The symptom is audio unit internal error. Refer to [AV-109, "Removal and Installation"](#).
 - If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.
- Comments of self diagnosis results can be viewed in the diagnosis result screen.



Audio Unit Self Diagnosis Results

Only Unit Part Is Displayed In Red		
Screen switch	Description	Possible cause
Control unit	Malfunction is detected in audio unit power supply and ground circuits.	<ul style="list-style-type: none"> Audio unit power supply or ground circuits. Refer to AV-89, "AUDIO UNIT : Diagnosis Procedure". If no malfunction is detected in audio unit power supply and ground circuits, replace audio unit. Refer to AV-109, "Removal and Installation".

A Connecting Cable Between Units Is Displayed In Yellow		
Area with yellow connection lines	Description	Possible cause
Control unit ↔ Meter	When one of the following is detected: <ul style="list-style-type: none"> malfunction is detected in combination meter power supply and ground circuits. malfunction is detected in AV communication circuits between audio unit and combination meter. 	<ul style="list-style-type: none"> Combination meter power supply or ground circuits. Refer to MWI-57, "COMBINATION METER : Diagnosis Procedure". AV communication circuits between audio unit and combination meter.

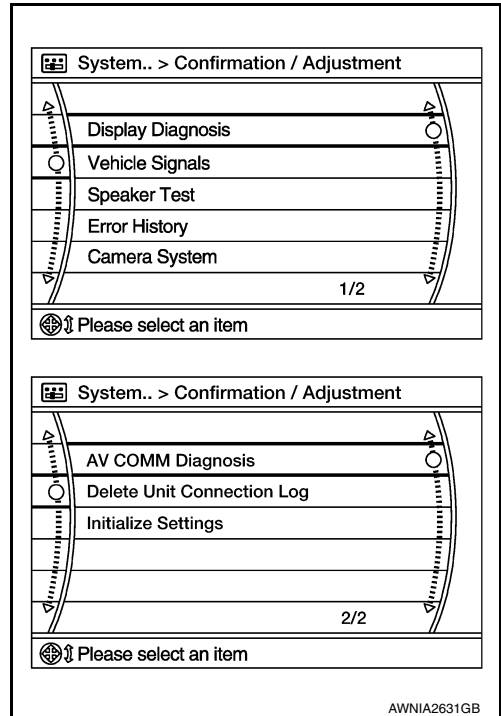
DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

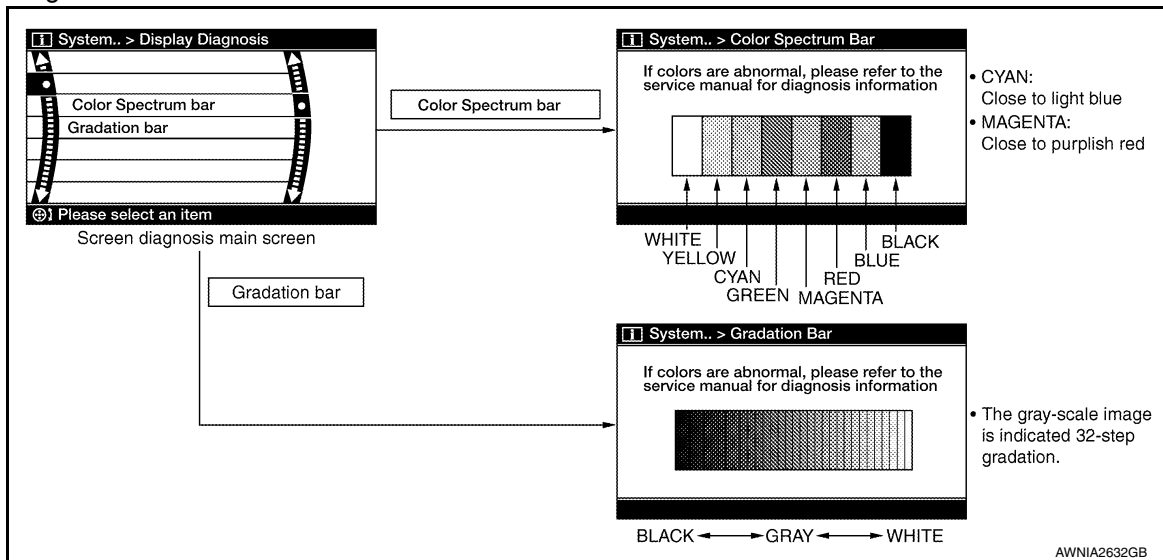
[DISPLAY AUDIO WITHOUT BOSE]

Audio Unit Confirmation/Adjustment

1. Select Confirmation/Adjustment.
2. Select each switch on the Confirmation/Adjustment screen to display the relevant trouble diagnosis screen. Press the BACK switch to return to the initial Confirmation/Adjustment screen.

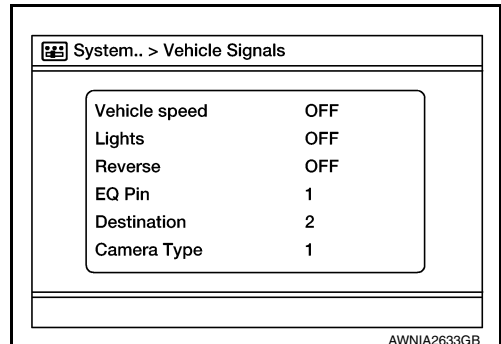


Display Diagnosis



Vehicle Signals

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



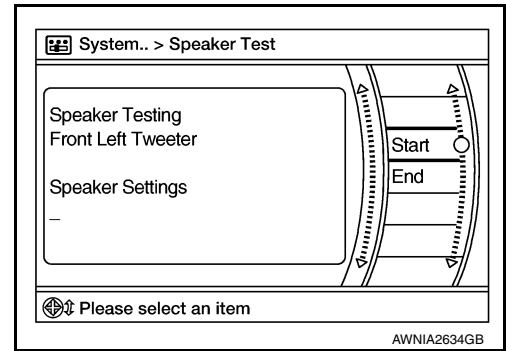
Speaker Test

DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO WITHOUT BOSE]

Select Speaker Test to display the Speaker Diagnosis screen. Press Start to generate a test tone in a speaker. Press Start again to generate a test tone in the next speaker. Press End to stop the test tones.



Error History

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

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

The frequency of occurrence is displayed in a count up manner. The actual count up method differs depending on the error item.

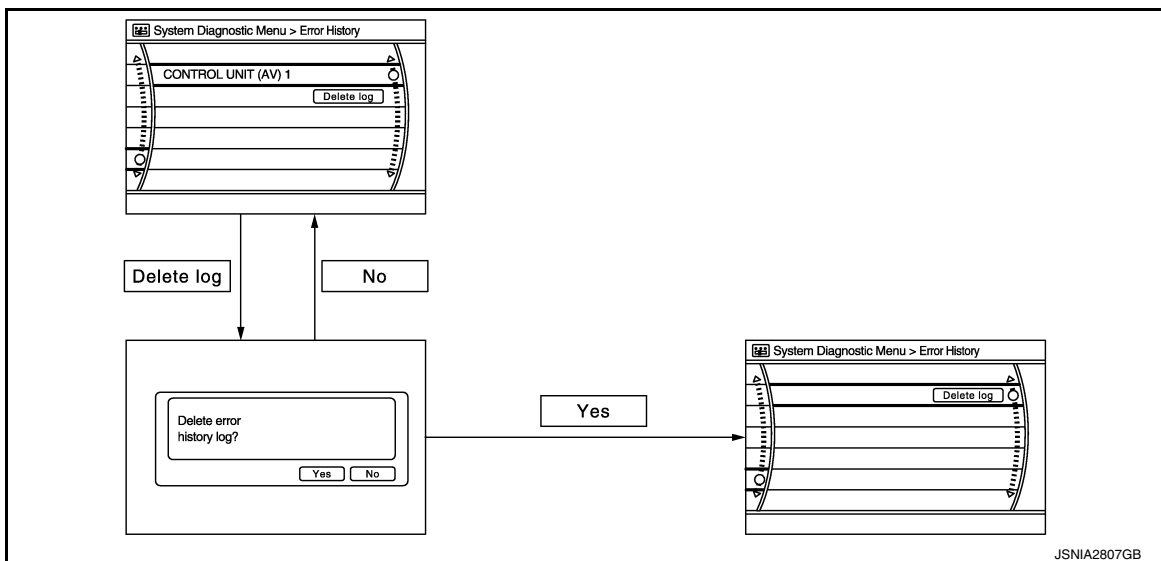
Count up method A

- The counter is set to 40 if an error occurs. 1 is subtracted from the counter if the condition is normal at a next ignition ON cycle.
- The counter lower limit is 1. The counter can be reset (no error record display) with the Delete log switch.

Count up method B

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

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



Error item

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

DIAGNOSIS SYSTEM (AUDIO UNIT)

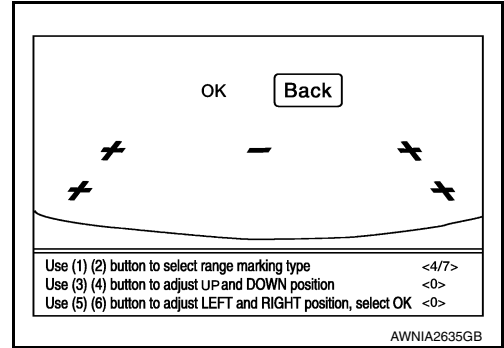
< SYSTEM DESCRIPTION >

[DISPLAY AUDIO WITHOUT BOSE]

Error item	Description	Possible cause
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	Replace the audio unit if the malfunction occurs constantly. Refer to AV-109, "Removal and Installation"
AV COMM CIRCUIT	When one of the following is detected: <ul style="list-style-type: none"> malfunction is detected in combination meter power supply and ground circuits. malfunction is detected in AV communication circuits between audio unit and combination meter. 	<ul style="list-style-type: none"> Combination meter power supply or ground circuits. Refer to MWI-57, "COMBINATION METER : Diagnosis Procedure". AV communication circuits between audio unit and combination meter.

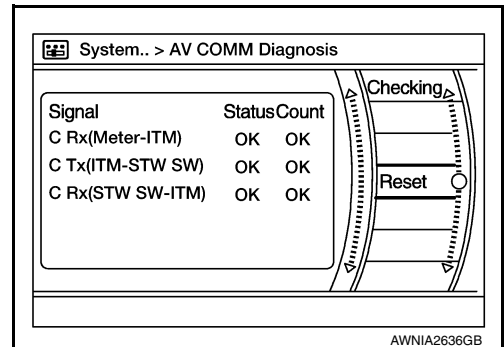
Camera System

This mode is used to adjust the guide line display position of the rear view camera.



AV COMM Diagnosis

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



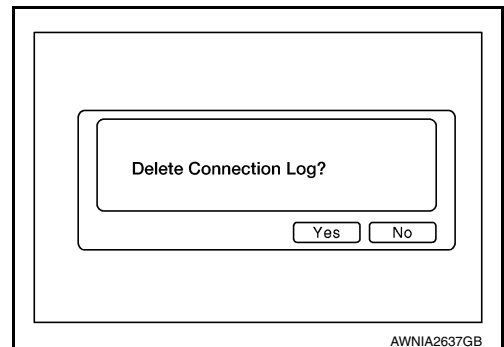
Items	Status (Current)	Counter (Past)
C Rx(Meter-ITM)	OK / ???	OK / 0 – 39
C Tx(ITM-TW SW)	OK / ???	OK / 0 – 39
C Rx(STW SW-ITM)	OK / ???	OK / 0 – 39

NOTE:

“???” indicates UNKWN.

Delete Unit Connection Log

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



Initialize Settings

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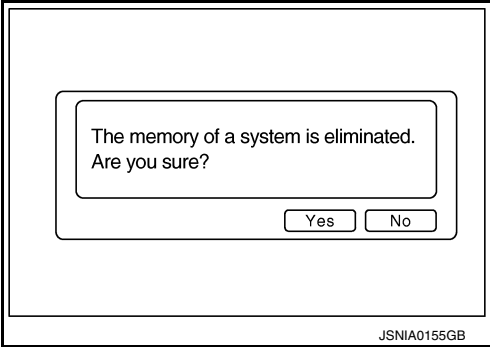
AV

DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO WITHOUT BOSE]

Deletes data stored from the audio unit.



AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO WITHOUT BOSE]

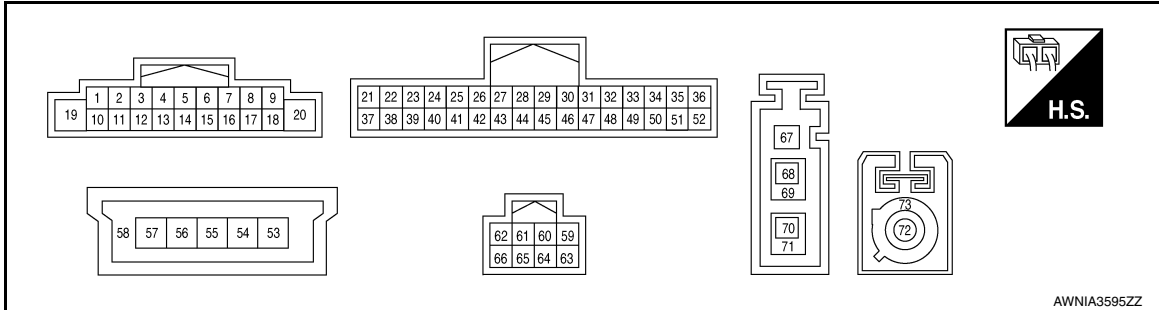
ECU DIAGNOSIS INFORMATION

AUDIO UNIT

Reference Value

INFOID:0000000010480127

TERMINAL LAYOUT



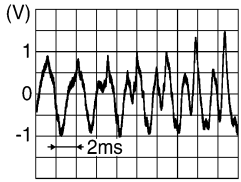
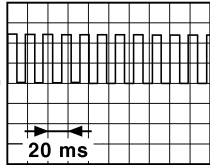
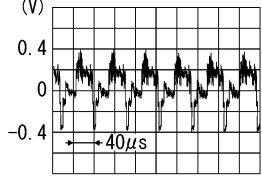
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
2 (V)	3 (SB)	Sound signal front speaker LH	Output	ON	Sound output	 SKIB3609E
4 (BR)	5 (Y)	Sound signal rear speaker LH	Output	ON	Sound output	 SKIB3609E
7 (P)	Ground	ACC power supply	Input	ACC	—	Battery voltage
9 (R)	8 (GR)	Illumination control signal	Input	ON	Headlamps ON	Battery voltage
11 (Y)	12 (BR)	Sound signal front speaker RH	Output	ON	Sound output	 SKIB3609E

AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

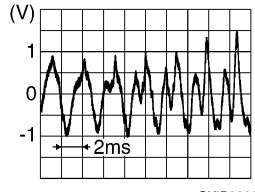
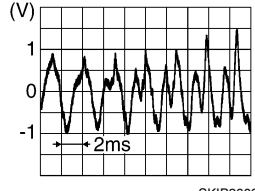
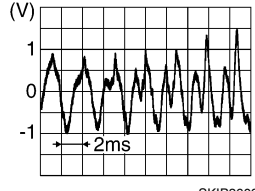
[DISPLAY AUDIO WITHOUT BOSE]

Terminal (Wire color)		Description	Input/ Output	Condition		Reference value (Approx.)
+	-			Signal name	Ignition switch	
13 (LG)	14 (V)	Sound signal rear speaker RH	Output	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
18 (G)	Ground	Vehicle speed signal	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	 <p style="text-align: right; font-size: small;">JSNIA0012GB</p>
19 (G)	Ground	Battery power supply	Input	OFF	—	Battery voltage
20 (GR)	Ground	Ground	—	ON	—	0 V
21 (Shield)	—	Camera shield	—	—	—	—
22 (B)	Ground	Camera image signal	Input	ON	When camera image is displayed	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
23 (W)	Ground	Camera power supply	Output	ON	When camera image is displayed	6.0 V
					Except for above	0 V
24 (R)	Ground	Camera ground	—	ON	—	0 V
25 (LG)	—	AV communication (L)	Input/ Output	—	—	—
26 (SB)	—	AV communication (H)	Input/ Output	—	—	—
28 (LG)	—	AV communication (L)	Input/ Output	—	—	—
29 (SB)	—	AV communication (H)	Input/ Output	—	—	—
39 (G)	Ground	Reverse signal	Input	ON	Selector lever in R (reverse)	Battery voltage
					Selector lever in any position other than R (reverse)	0 V
45 (B)	Ground	Camera ground	—	ON	—	0 V
51 (W)	Ground	Microphone power supply	Output	ON	—	5.0 V

AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO WITHOUT BOSE]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
52 (B)	50 (Shield)	Microphone signal	Input	ON	While speaking into microphone.	 <small>SKIB3609E</small>
53 (B)	—	USB ground	—	—	—	—
55 (G)	—	USB D+ signal	—	—	—	—
56 (W)	—	USB D- signal	—	—	—	—
57 (R)	—	V BUS signal	—	—	—	—
58 (Shield)	—	USB Shield	—	—	—	—
59 (Shield)	—	AUX Shield	—	—	—	—
60 (B)	—	AUX ground	—	ON	—	0V
61 (W)	Ground	AUX audio signal RH	Input	ON	AUX audio signal received	 <small>SKIB3609E</small>
62 (R)	Ground	AUX audio signal LH	Input	ON	AUX audio signal received	 <small>SKIB3609E</small>
67 (B)	Ground	Antenna amp. ON signal	Output	ON	—	Battery voltage
68 (B)	Ground	AM/FM antenna signal	Input	ON	—	5.0 V
69 (Shield)	—	AM/FM antenna signal Shield	—	—	—	—
70 (B)	Ground	Glass antenna (FM sub) signal	Input	ON	—	5.0 V
71 (Shield)	—	Glass antenna (FM sub) signal Shield	—	—	—	—
72 (B)	Ground	Satellite antenna signal	Input	ON	—	5.0 V
73 (Shield)	—	Satellite antenna signal shield	—	—	—	—

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DISPLAY AUDIO WITHOUT BOSE

[DISPLAY AUDIO WITHOUT BOSE]

< WIRING DIAGRAM >

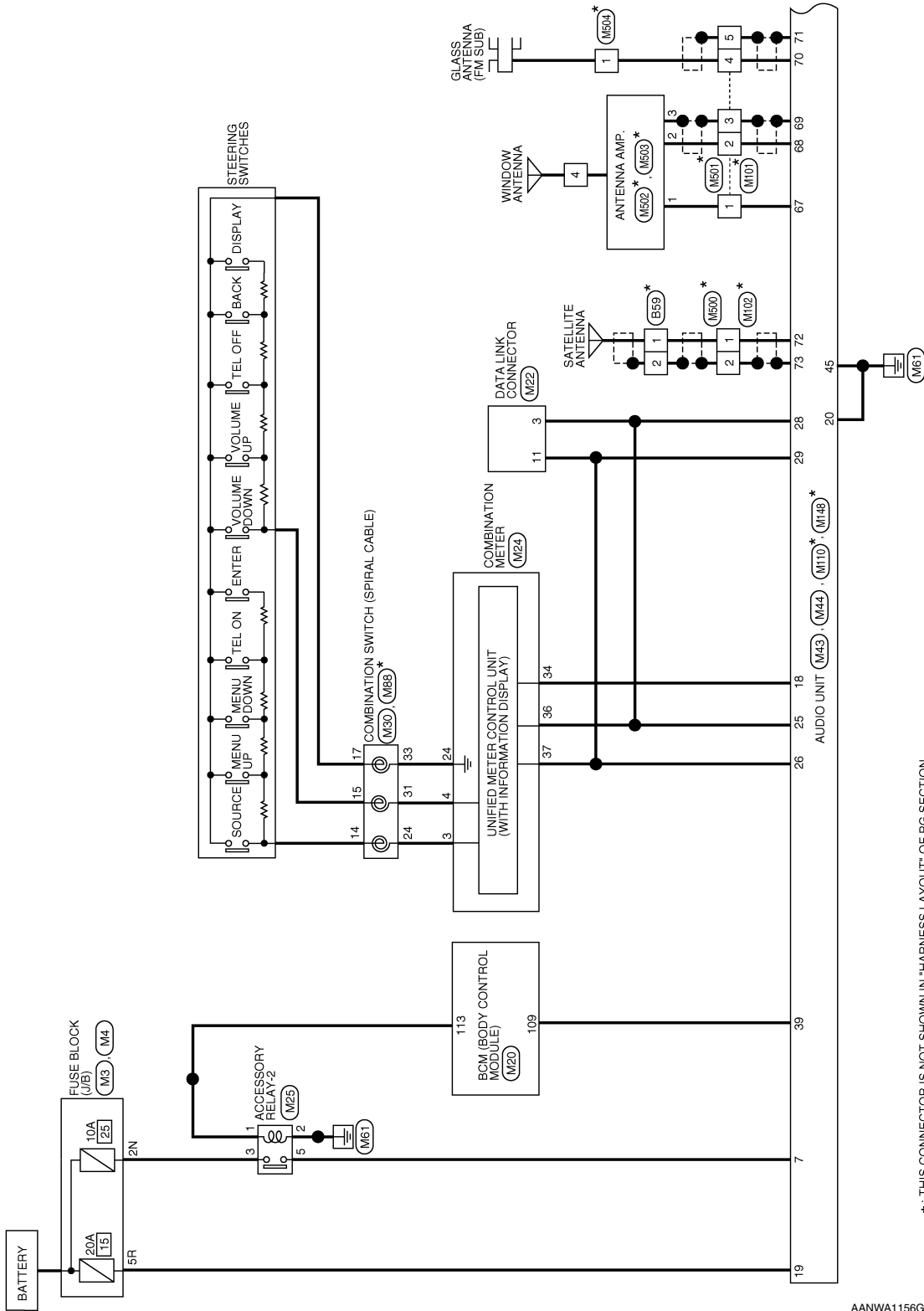
WIRING DIAGRAM

DISPLAY AUDIO WITHOUT BOSE

Wiring Diagram

INFOID:000000010480128

DISPLAY AUDIO SYSTEM - WITHOUT BOSE AUDIO SYSTEM



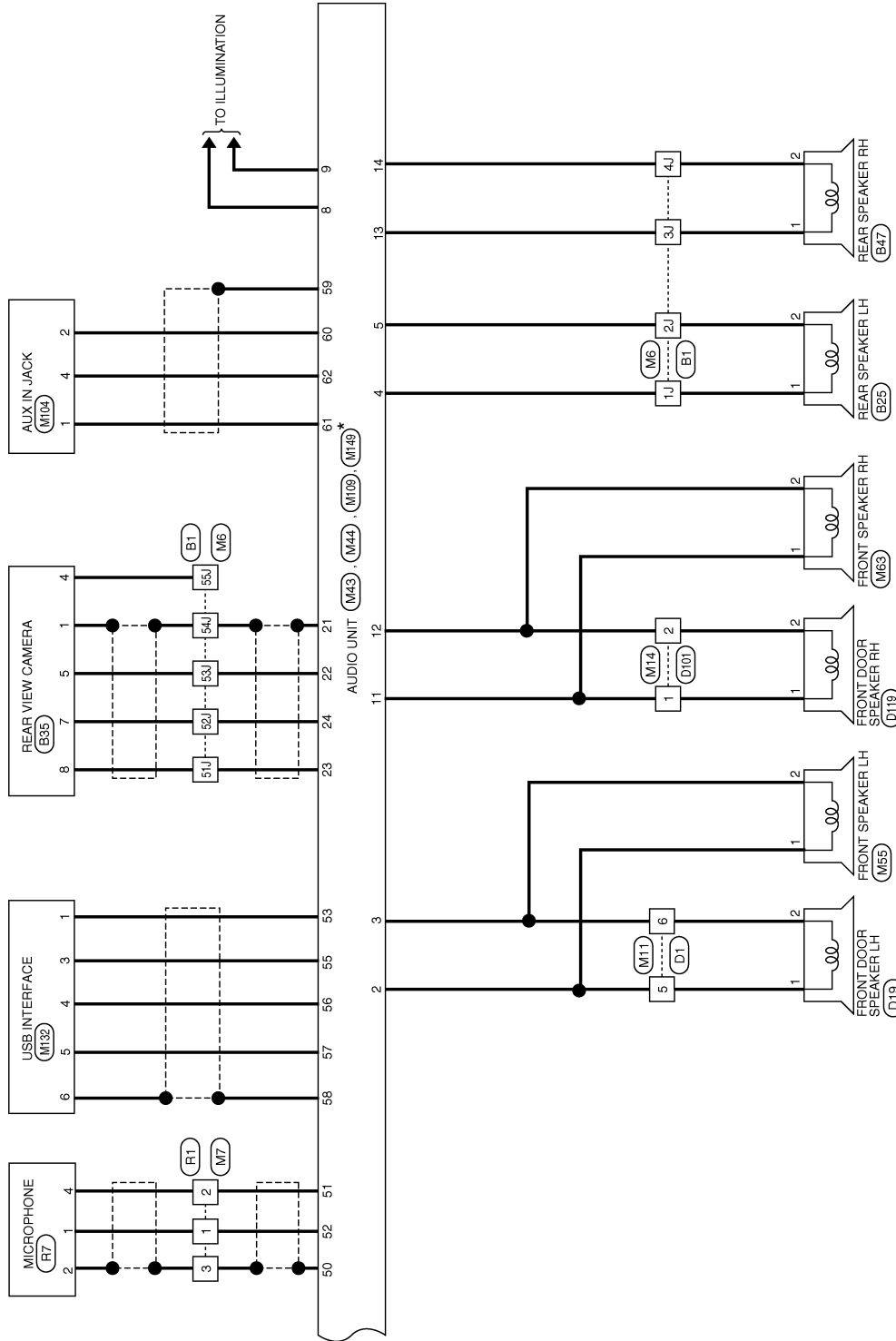
*: THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT" OF PG SECTION.

AANWA1156GB

DISPLAY AUDIO WITHOUT BOSE

< WIRING DIAGRAM >

[DISPLAY AUDIO WITHOUT BOSE]



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

AANWA1157GB

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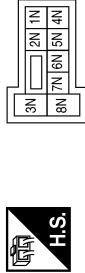
DISPLAY AUDIO WITHOUT BOSE

[DISPLAY AUDIO WITHOUT BOSE]

< WIRING DIAGRAM >

DISPLAY AUDIO SYSTEM CONNECTORS - WITHOUT BOSE AUDIO SYSTEM

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



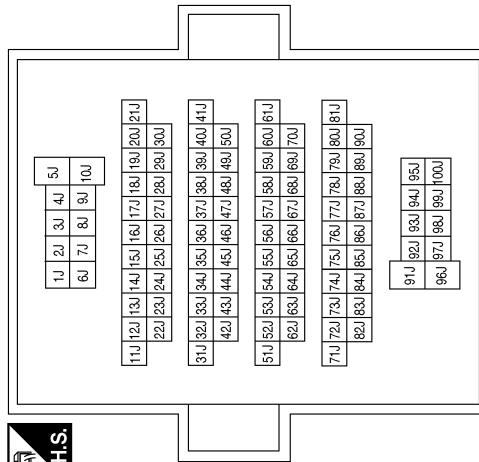
Terminal No.	Color of Wire	Signal Name
2N	LG	-

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



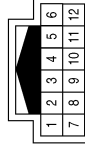
Terminal No.	Color of Wire	Signal Name
5R	G	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1J	BR	-
2J	Y	-
3J	LG	-
4J	V	-
51J	W	-
52J	R	-
53J	B	-
54J	SHIELD	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-
2	W	-
3	SHIELD	-

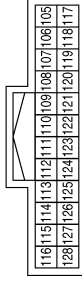
AANIA3061GB

DISPLAY AUDIO WITHOUT BOSE

[DISPLAY AUDIO WITHOUT BOSE]

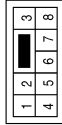
< WIRING DIAGRAM >

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



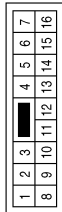
Terminal No.	Color of Wire	Signal Name
109	G	REVERSE SIGNAL
113	P	ACC RELAY OUT

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-(WITHOUT BOSE AUDIO SYSTEM)
2	BR	-(WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



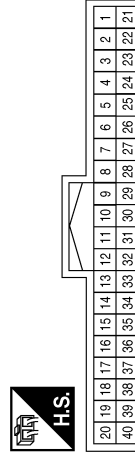
Terminal No.	Color of Wire	Signal Name
5	V	-(WITHOUT BOSE AUDIO SYSTEM)
6	SB	-(WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M25
Connector Name	ACCESSORY RELAY-2
Connector Color	BLUE



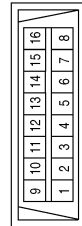
Terminal No.	Color of Wire	Signal Name
1	W	-
2	B	-
3	LG	-
5	P	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	P	STRG SW INPUT1
4	R	STRG SW INPUT2
24	W	STRG SW GND
34	G	SPEED 8P/R
36	LG	M-CAN-L
37	SB	M-CAN-H

Connector No.	M22
Connector Name	DATA LINK CONNECTOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	LG	-
11	SB	-

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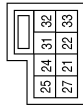
AV

DISPLAY AUDIO WITHOUT BOSE

< WIRING DIAGRAM >

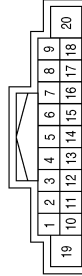
[DISPLAY AUDIO WITHOUT BOSE]

Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	P	-
31	R	-
33	W	-

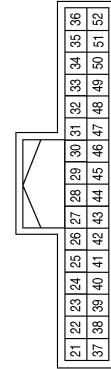
Connector No.	M43
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	V	FR SP LH (+)
3	SB	FR SP LH (-)
4	BR	RR SP LH (+)
5	Y	RR SP LH (-)
6	-	-

Terminal No.	Color of Wire	Signal Name
7	P	ACC
8	GR	ILL (-)
9	R	ILL (+), LIGHT SW
10	-	-
11	Y	FR SP RH (+)
12	BR	FR SP RH (-)
13	LG	RR SP RH (+)
14	V	RR SP RH (-)
15	-	-
16	-	-
17	-	-
18	G	SPEED SIGNAL
19	G	+B
20	GR	GND

Connector No.	M44
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	SHIELD	COMPOSITE -
22	B	COMPOSITE +
23	W	CAMERA 6.2V

Terminal No.	Color of Wire	Signal Name
24	R	CAMERA GND
25	LG	M-CAN1-L
26	SB	M-CAN1-H
27	-	-
28	LG	M-CAN2-L
29	SB	M-CAN2-H
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-

Terminal No.	Color of Wire	Signal Name
39	G	REV
40	-	-
41	-	-
42	-	-
43	-	-
44	-	-
45	B	CAM DET
46	-	-
47	-	-
48	-	-
49	-	-
50	SHIELD	MIC GND
51	W	MIC V+
52	B	MIC +

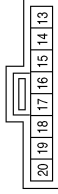
AANIA3063GB

DISPLAY AUDIO WITHOUT BOSE

[DISPLAY AUDIO WITHOUT BOSE]

< WIRING DIAGRAM >

Connector No.	M88
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14	P	-
15	L	-
17	G	-

Connector No.	M63
Connector Name	FRONT SPEAKER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	Y	-(WITHOUT BOSE AUDIO SYSTEM)
2	BR	-(WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M55
Connector Name	FRONT SPEAKER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	V	-(WITHOUT BOSE AUDIO SYSTEM)
2	SB	-(WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M104
Connector Name	AUX IN JACK
Connector Color	WHITE



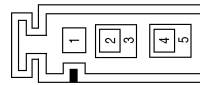
Terminal No.	Color of Wire	Signal Name
1	W	-
2	B	-
4	R	-

Connector No.	M102
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

Connector No.	M101
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-
4	B	-
5	SHIELD	-

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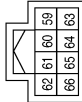
AV

DISPLAY AUDIO WITHOUT BOSE

[DISPLAY AUDIO WITHOUT BOSE]

< WIRING DIAGRAM >

Connector No.	M109
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



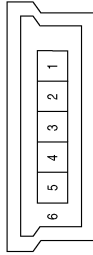
Terminal No.	Color of Wire	Signal Name
59	SHIELD	AUX SHIELD
60	B	AUX GND
61	W	AUX R
62	R	AUX L
63	-	-
64	-	-
65	-	-
66	-	-

Connector No.	M110
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM)
Connector Color	PINK



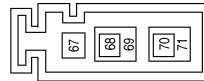
Terminal No.	Color of Wire	Signal Name
72	B	SAT ANT
73	SHIELD	SAT SHIELD

Connector No.	M132
Connector Name	USB INTERFACE
Connector Color	BLACK



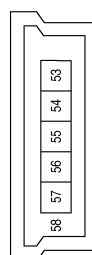
Terminal No.	Color of Wire	Signal Name
1	B	-
2	-	-
3	G	-
4	W	-
5	R	-
6	SHIELD	-

Connector No.	M148
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
67	B	ANT +B
68	B	MAIN ANT
69	SHIELD	MAIN GND
70	B	ANT SUB
71	SHIELD	SUB GND

Connector No.	M149
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
53	B	USB GND
54	-	-
55	G	USB D+
56	W	USB D-
57	R	VBUS
58	SHIELD	SHIELD

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DISPLAY AUDIO WITHOUT BOSE

< WIRING DIAGRAM >

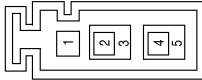
[DISPLAY AUDIO WITHOUT BOSE]

Connector No.	M502
Connector Name	ANTENNA AMP.
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-

Connector No.	M501
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-
4	B	-
5	SHIELD	-

Connector No.	M500
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

Connector No.	M504
Connector Name	GLASS ANTENNA
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M503
Connector Name	ANTENNA AMP.
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
4	B	-

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DISPLAY AUDIO WITHOUT BOSE

< WIRING DIAGRAM >

[DISPLAY AUDIO WITHOUT BOSE]

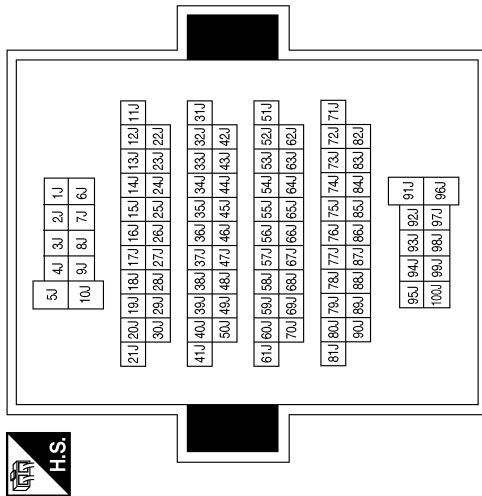
Connector No.	B25
Connector Name	REAR SPEAKER LH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	LG	-

Terminal No.	Color of Wire	Signal Name
1J	Y	-
2J	LG	-
3J	LG	-
4J	L	-
51J	W	-
52J	B	-
53J	R	-
54J	SHIELD	-
55J	G	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	GRAY



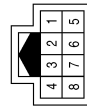
Connector No.	B47
Connector Name	REAR SPEAKER RH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	L	-

Terminal No.	Color of Wire	Signal Name
5	R	-
7	B	-
8	W	-

Connector No.	B35
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	SHIELD	-
4	G	-

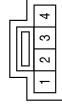
AANIA3067GB

DISPLAY AUDIO WITHOUT BOSE

< WIRING DIAGRAM >

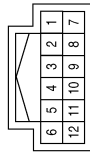
[DISPLAY AUDIO WITHOUT BOSE]

Connector No.	R7
Connector Name	MICROPHONE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	SHIELD	-
4	Y	-

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



Terminal No.	Color of Wire	Signal Name
1	L	-
2	Y	-
3	SHIELD	-

Connector No.	B59
Connector Name	SATELLITE RADIO ANTENNA
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

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



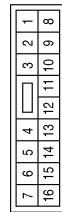
Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-(EXCEPT NAVI OR BOSE AUDIO SYSTEM)

Connector No.	D19
Connector Name	FRONT DOOR SPEAKER LH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-(WITHOUT NAVI)

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	G	-
6	R	-(EXCEPT NAVI OR BOSE AUDIO SYSTEM)

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DISPLAY AUDIO WITHOUT BOSE

< WIRING DIAGRAM >

[DISPLAY AUDIO WITHOUT BOSE]

Connector No.	D119
Connector Name	FRONT DOOR SPEAKER RH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-(WITHOUT NAVI)

AANIA3069GB

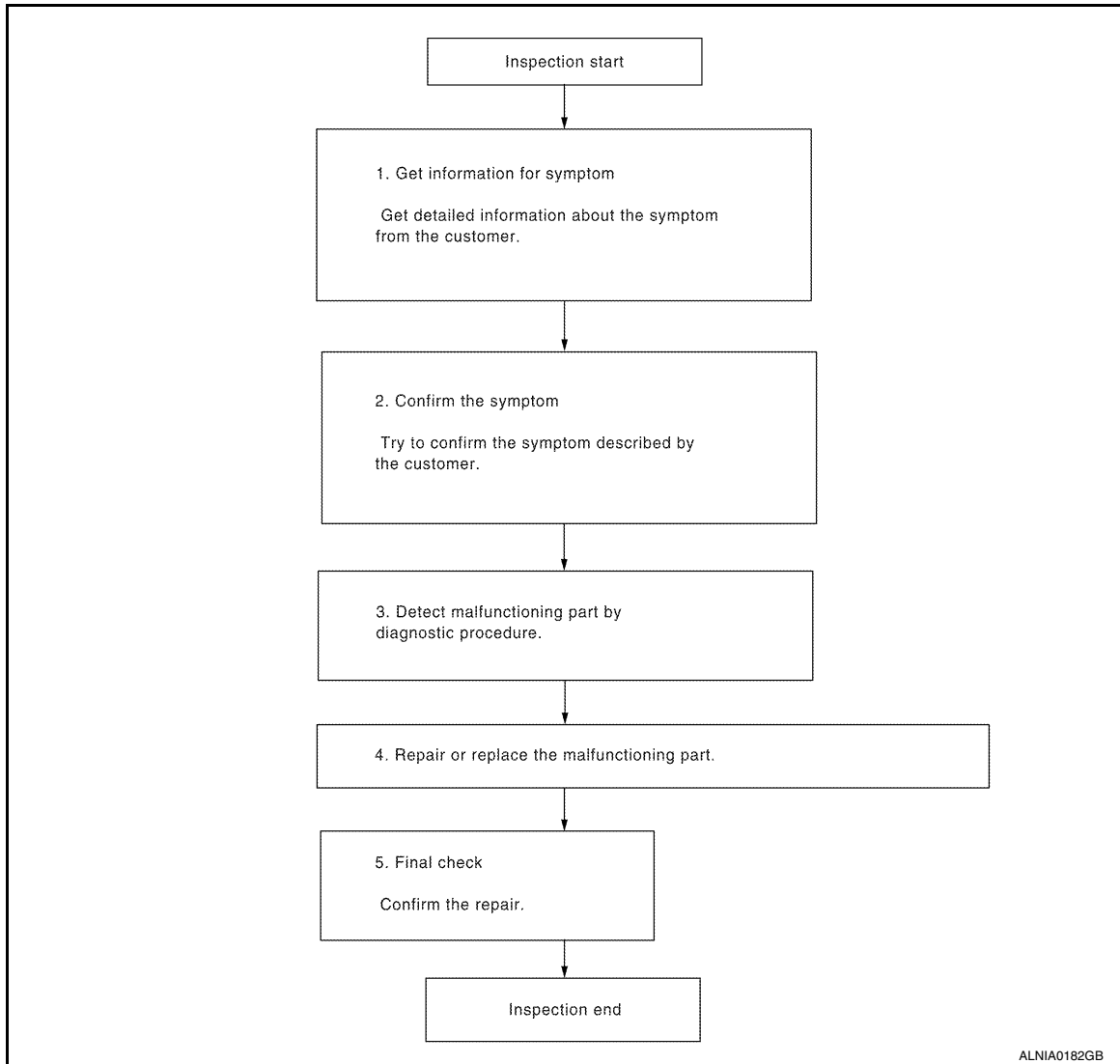
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000010480129

OVERALL SEQUENCE



DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CONFIRM THE SYMPTOM

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

>> GO TO 3.

3.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[DISPLAY AUDIO WITHOUT BOSE]

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.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[DISPLAY AUDIO WITHOUT BOSE]

INSPECTION AND ADJUSTMENT REGISTRATION (AUDIO UNIT)

REGISTRATION (AUDIO UNIT) : Description

INFOID:000000011108747

AFTER REPLACEMENT

If the audio unit is replaced with a new audio unit, the new audio unit must be registered using the Bluetooth D/C(serial #).

CAUTION:

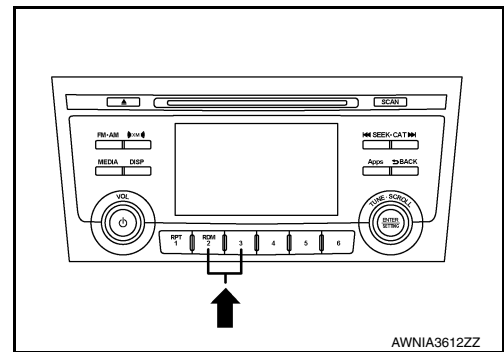
If the new audio unit Bluetooth D/C(serial #) is not registered, the “APPS” mode will not function.

REGISTRATION (AUDIO UNIT) : Work Procedure

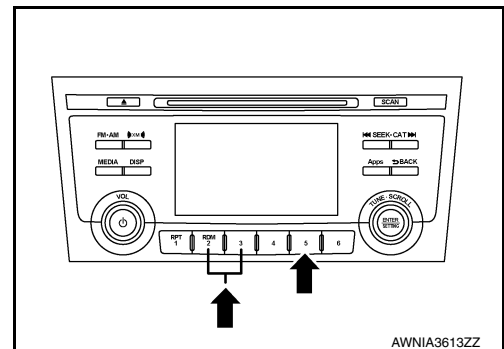
INFOID:000000011108748

1. RECORD BLUETOOTH D/C(SERIAL #) FOR REPLACEMENT AUDIO UNIT

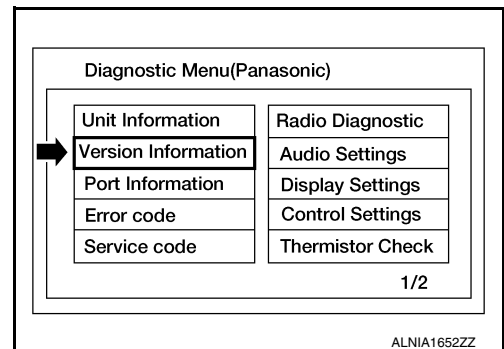
1. Turn ignition switch ON.
2. Turn audio unit OFF.
3. Access the diagnostic menu as follows:
 - Press and hold preset buttons 2 and 3.



- While holding preset buttons 2 and 3, press preset button 5 three times.



4. Select Version Information from the Diagnostic Menu.

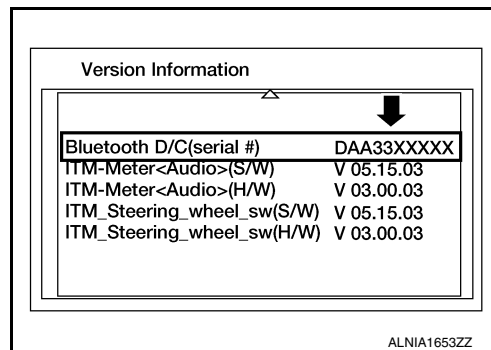


INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[DISPLAY AUDIO WITHOUT BOSE]

5. Scroll through the menu pages to Bluetooth D/C(serial #) and record the number displayed.



>> GO TO 2.

2. REGISTER REPLACEMENT AUDIO UNIT

Register the replacement audio unit by contacting NISSAN Owner Services. Refer to TSB.

>> GO TO 3.

3. OPERATION CHECK

Verify that the audio unit "APPS" function operates normally.

>> Work End.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:000000010480130

Regarding Wiring Diagram information, refer to [AV-74, "Wiring Diagram"](#).

1. CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
7	ACC power supply	25 (10A)
19	Battery power supply	15 (20A)

Are the fuses blown?

- YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M43.
3. Check voltage between audio unit connector M43 and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M43	7	—	Ignition switch: ON	Battery voltage
	19		Ignition switch: OFF	

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M44.
3. Check continuity between audio unit connectors and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M43	20	—	Yes
M44	45		

Is the inspection result normal?

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

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FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

FRONT DOOR SPEAKER

Diagnosis Procedure

INFOID:000000010480131

Regarding Wiring Diagram information, refer to [AV-74. "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 terminals or connectors.

2. CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M43 and suspect front door speaker connector.
2. Check continuity between audio unit connector M43 and suspect front door speaker connector.

Audio unit		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M43	2	D19 (LH)	1	Yes
	3		2	
	11	D119 (RH)	1	
	12		2	

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

Audio unit		Ground	Continuity
Connector	Terminal		
M43	2	—	No
	3		
	11		
	12		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT DOOR SPEAKER SIGNAL

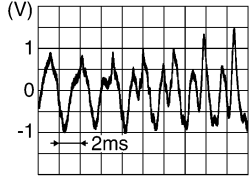
1. Connect audio unit connector M43 and suspect front door speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between audio unit connector M43 and ground.

Audio unit connector M43		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

2	3	Audio signal output	
11	12		

Is the inspection result normal?

- YES >> Replace front door speaker. Refer to [AV-113. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-109. "Removal and Installation"](#).

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FRONT SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

FRONT SPEAKER

Diagnosis Procedure

INFOID:000000010480132

Regarding Wiring Diagram information, refer to [AV-74. "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 terminals or connectors.

2. CHECK FRONT SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M43 and suspect front speaker connector.
2. Check continuity between audio unit connector M43 and suspect front speaker connector.

Audio unit		Front speaker		Continuity
Connector	Terminal	Connector	Terminal	
M43	2	M55 (LH)	1	Yes
	3		2	
	11	M63 (RH)	1	
	12		2	

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

Audio unit		Ground	Continuity
Connector	Terminal		
M43	2	—	No
	3		
	11		
	12		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT SPEAKER SIGNAL

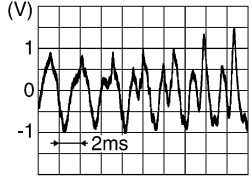
1. Connect audio unit connector M43 and suspect front speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between audio unit connector M43 and ground.

Audio unit connector M43		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

2	3	Audio signal output	
11	12		

Is the inspection result normal?

- YES >> Replace front speaker. Refer to [AV-112. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-109. "Removal and Installation"](#).

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REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

REAR SPEAKER

Diagnosis Procedure

INFOID:000000010480133

Regarding Wiring Diagram information, refer to [AV-74. "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 terminals or connectors.

2. CHECK REAR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M43 and suspect rear speaker connector.
2. Check continuity between audio unit connector M43 and suspect rear speaker connector.

Audio unit		Rear speaker		Continuity
Connector	Terminal	Connector	Terminal	
M43	4	B25 (LH)	1	Yes
	5		2	
	13	B47 (RH)	1	
	14		2	

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

Audio unit		Ground	Continuity
Connector	Terminal		
M43	4	—	No
	5		
	13		
	14		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK REAR SPEAKER SIGNAL

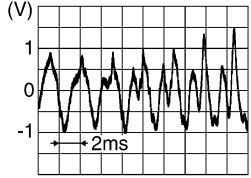
1. Connect audio unit connector M43 and suspect rear speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between audio unit connector M43 and ground.

Audio unit connector M43		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

4	5	Audio signal output	
13	14		

Is the inspection result normal?

- YES >> Replace rear speaker. Refer to [AV-114. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-109. "Removal and Installation"](#).

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REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000010480134

Regarding Wiring Diagram information, refer to [AV-74. "Wiring Diagram"](#).

1. CHECK REVERSE INPUT SIGNAL

1. Turn ignition switch ON.
2. Shift the selector lever to R (reverse).
3. Check voltage between audio unit connector M44 and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M44	39	—	Selector lever in R (reverse)	Battery Voltage

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK CAMERA POWER SUPPLY CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M44 and rear view camera connector.
3. Check continuity between audio unit connector M44 and rear view camera connector B35.

Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M44	23	B35	8	Yes

4. Check continuity between audio unit connector M44 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M44	23		No

Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK CAMERA POWER SUPPLY VOLTAGE

1. Connect audio unit connector M44 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to R (reverse).
4. Check voltage between audio unit connector M44 and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M44	23	—	Selector lever is in "R".	6.0 V

Is inspection result normal?

YES >> GO TO 4.

NO >> Replace audio unit. Refer to [AV-109. "Removal and Installation"](#).

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

4. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M44 and rear view camera connector.
3. Check continuity between audio unit connector M44 and rear view camera connector B35.

Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M44	22	B35	5	Yes

4. Check continuity between audio unit connector M44 terminal 82 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M44	22		No

Is inspection result normal?

- YES >> GO TO 5.
 NO >> Repair or replace harness or connectors.

5. CHECK CAMERA GROUND CIRCUIT CONTINUITY

Check continuity between audio unit connector M44 and rear view camera connector B35.

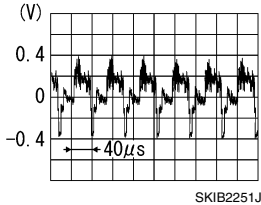
Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M44	24	B35	7	Yes

Is inspection result normal?

- YES >> GO TO 6.
 NO >> Repair or replace harness or connectors.

6. CHECK CAMERA IMAGE SIGNAL

1. Connect audio unit connector M44 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to R (reverse).
4. Check signal between audio unit connector M44 and ground.

Audio unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M44	22	—	Camera image displayed.	

Is inspection result normal?

- YES >> Replace audio unit. Refer to [AV-109, "Removal and Installation"](#).
 NO >> Replace rear view camera. Refer to [AV-122, "Removal and Installation"](#).

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MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

MICROPHONE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000010480135

Regarding Wiring Diagram information, refer to [AV-74. "Wiring Diagram"](#).

1. CHECK MICROPHONE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M44 and microphone connector R7.
3. Check continuity between audio unit connector M44 and microphone connector R7.

Audio unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M44	50	R7	2	Yes
	51		4	
	52		1	

4. Check continuity between audio unit connector M44 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M44	50	—	No
	51		
	52		

Is inspection result normal?

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

2. CHECK MICROPHONE VCC VOLTAGE

1. Connect audio unit connector M44.
2. Turn ignition switch ON.
3. Check voltage between terminals of audio unit connector M44.

Audio unit connector M44		Voltage (Approx.)
(+)	(-)	
Terminal	Terminal	
51	50	5.0 V

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Replace audio unit. Refer to [AV-109. "Removal and Installation"](#).

3. CHECK MICROPHONE SIGNAL

1. Connect microphone connector.
2. Check signal between terminals of audio unit connector M44.

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

Audio unit connector M44		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
52	50	Speak into microphone.	

Is the inspection result normal?

- YES >> Replace audio unit. Refer to [AV-109. "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-121. "Removal and Installation"](#).

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STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

STEERING SWITCH






Diagnosis Procedure

INFOID:000000010480136

Regarding Wiring Diagram information, refer to [AV-74. "Wiring Diagram"](#).

1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect combination switch connector M88.
3. Check resistance between combination switch connector terminals.

Combination switch connector M88		Condition	Resistance Ω (Approx.)
Terminal	Terminal		
14	17	Depress SOURCE switch.	1
		Depress Δ switch.	121
		Depress ∇ switch.	321
		Depress  switch.	723
		Depress ENTER switch.	2023
15	17	Depress -  switch.	1
		Depress  + switch.	121
		Depress  switch.	321
		Depress  switch.	723
		Depress DISP switch.	2023

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering switches. Refer to [AV-116. "Removal and Installation"](#).

2. CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

1. Disconnect combination meter connector M24 and combination switch connector M30.
2. Check continuity between combination meter connector M24 and combination switch connector M30.

Combination meter		Combination switch		Continuity
Connector	Terminal	Connector	Terminal	
M24	3	M30	24	Yes
	24		33	
	4		31	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	3	—	No
	24		
	4		

Is the inspection result normal?

STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

- YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3. CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M88.

Combination switch				Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M88	14	Yes
	31		15	
	33		17	

Is the inspection result normal?

- YES >> GO TO 4.
NO >> Replace spiral cable. Refer to [SR-15. "Removal and Installation"](#).

4. CHECK HARNESS BETWEEN COMBINATION METER AND AUDIO UNIT

1. Disconnect audio unit connector M44.
2. Check continuity between combination meter connector M24 and audio unit connector M44.

Combination meter		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
M24	37	M44	26	Yes
	36		25	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	37	—	No
	36		

Is the inspection result normal?

- YES >> Replace audio unit. Refer to [AV-109. "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

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USB CONNECTOR

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

USB CONNECTOR

Diagnosis Procedure

INFOID:000000010480137

Regarding Wiring Diagram information, refer to [AV-74. "Wiring Diagram"](#).

1. CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M149 and USB interface connector M132.
3. Check continuity between audio unit connector M149 and USB interface connector M132.

Audio unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M149	53	M132	1	Yes
	55		3	
	56		4	
	57		5	
	58		6	

4. Check continuity between audio unit connector M149 and ground.

Audio unit		—	Continuity
Connector	Terminal		
M149	55	Ground	No
	57		

Is the inspection result normal?

- YES >> Replace the USB interface. Refer to [AV-110. "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

AUXILIARY INPUT JACK

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

AUXILIARY INPUT JACK

Diagnosis Procedure

INFOID:000000010480138

Regarding Wiring Diagram information, refer to [AV-74. "Wiring Diagram"](#).

1. CHECK AUX IN JACK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M109 and AUX in jack connector M104.
3. Check continuity between audio unit connector M109 and AUX in jack connector M104.

Audio unit		AUX in jack		Continuity
Connector	Terminal	Connector	Terminal	
M109	60	M104	2	Yes
	61		1	
	62		4	

4. Check continuity between audio unit connector M109 and ground.

Audio unit		—	Continuity
Connector	Terminal		
M109	61	Ground	No
	62		

Is the inspection result normal?

- YES >> Replace the AUX in jack. Refer to [AV-111. "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

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SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:0000000010480139

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	Audio unit	Malfunction in audio unit. Refer to AV-65, "On Board Diagnosis Function" .
No sound comes out or the level of the sound is low.	No sound from all speakers.	<ul style="list-style-type: none"> • Speaker circuit shorted to ground. Refer to AV-74, "Wiring Diagram". • Audio unit power supply and ground circuits malfunction. Refer to AV-89, "AUDIO UNIT : Diagnosis Procedure".
	Only a certain speaker (front door speaker LH, front door speaker RH, front speaker LH, front speaker RH, rear speaker LH, rear speaker RH) does not output sound.	<ul style="list-style-type: none"> • Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and speaker. Refer to: <ul style="list-style-type: none"> - AV-90, "Diagnosis Procedure" (front door speaker). - AV-92, "Diagnosis Procedure" (front speaker). - AV-94, "Diagnosis Procedure" (rear speaker). • Malfunction in speaker. Refer to: <ul style="list-style-type: none"> - AV-113, "Removal and Installation" (front door speaker). - AV-112, "Removal and Installation" (front speaker). - AV-114, "Removal and Installation" (rear speaker). • Malfunction in audio unit. Refer to AV-65, "On Board Diagnosis Function".

AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

Symptoms	Check items	Probable malfunction location
Noise is mixed with audio.	Noise comes out from all speakers.	Malfunction in audio unit. Refer to AV-65, "On Board Diagnosis Function" .
	Noise comes out only from a certain speaker (front door speaker LH, front door speaker RH, front speaker LH, front speaker RH, rear speaker LH, rear speaker RH).	<ul style="list-style-type: none"> • Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and speaker. Refer to: <ul style="list-style-type: none"> - AV-90, "Diagnosis Procedure" (front door speaker). - AV-92, "Diagnosis Procedure" (front speaker). - AV-94, "Diagnosis Procedure" (rear speaker). • Malfunction in speaker. • Poor Installation of speaker (e.g. backlash and looseness). Refer to: <ul style="list-style-type: none"> - AV-113, "Removal and Installation" (front door speaker). - AV-112, "Removal and Installation" (front speaker). - AV-114, "Removal and Installation" (rear speaker). • Malfunction in audio unit. Refer to AV-65, "On Board Diagnosis Function".
	Noise is mixed with radio only (when the vehicle hits a bump or while driving over bad roads)	Poor connector connection of antenna or antenna feeder. Refer to AV-117, "Location of Antenna" .
No radio reception or poor reception.	<ul style="list-style-type: none"> • Other audio sounds are normal. • Any radio station cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises). 	<ul style="list-style-type: none"> • Antenna amp. ON signal circuit malfunction. Refer to AV-71, "Reference Value". • Poor connector connection of antenna or antenna feeder. Refer to AV-117, "Location of Antenna".
No satellite radio reception.	Satellite radio antenna malfunction.	<ul style="list-style-type: none"> • Poor continuity in antenna feeder. • Poor connector connection of antenna or antenna feeder. • Loose satellite radio antenna mounting nut. Refer to AV-117, "Location of Antenna".
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.

RELATED TO HANDS-FREE PHONE

- Before performing diagnosis, confirm that the cellular phone being used by the customer is compatible with the vehicle.
- It is possible that a malfunction is occurring due to a version change of the phone even though the phone is a compatible type. This can be confirmed by changing the cellular phone to another compatible type, and check that it operates normally. It is important to determine whether the cause of the malfunction is the vehicle or the cellular phone.

Check Compatibility

1. Make sure the customer's Bluetooth[®] related concern is understood.
2. Verify the customer's concern.

NOTE:

The customer's phone may be required, depending upon their concern.

3. Write down the customer's phone brand, model and service provider.

NOTE:

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AV









AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

It is necessary to know the service provider. On occasion, a given phone may be on the approved list with one provider, but may not be on the approved list with other providers.

4. Go to “www.nissanusa.com/bluetooth/”.
 - a. Using the website’s search engine, find out if the customer’s phone is on the approved list.
 - b. If the customer’s phone is NOT on the approved list:
Stop diagnosis here. The customer needs to obtain a Bluetooth® phone that is on the approved list before any further action.
 - c. If the feature related to the customer’s concern shows as “N” (not compatible):
Stop diagnosis here. If the customer still wants the feature to function, they will need to get an approved phone showing the feature as “Y” (compatible) in the “Basic Features”.
 - d. If the feature related to the customer’s concern shows as “Y” (compatible):
Perform diagnosis as per the following table.

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection (no connection is displayed on the display at the guide).	Repeat the registration of cellular phone.	
Hands-free phone cannot be established.	<ul style="list-style-type: none"> • Hands-free phone operation can be made, but the communication cannot be established. • Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation. 	Malfunction in audio unit. Replace audio unit. Refer to AV-109, "Removal and Installation" .
The other party's voice cannot be heard by hands-free phone.	Check the “microphone speaker” in Inspection & Adjustment Mode if sound is heard.	
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-98, "Diagnosis Procedure" .
The system cannot be operated.	<ul style="list-style-type: none"> • The voice recognition can be controlled. • Steering switch's , , and  switch works, but  does not work. 	Steering switch malfunction. Replace steering switch. Refer to AV-116, "Removal and Installation" .
	Steering switch's  ,  ,  , and  switches do not work.	Steering switch signal circuit malfunction. Refer to AV-100, "Diagnosis Procedure" .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-100, "Diagnosis Procedure" .

RELATED TO REAR VIEW CAMERA

Symptoms	Check items	Probable malfunction location
Rear view camera is inoperative.	Reverse signal circuit malfunction.	Reverse signal circuit malfunction between BCM and audio unit. Refer to AV-96, "Diagnosis Procedure" .
	Camera image signal circuit malfunction.	Camera image signal circuit malfunction between rear view camera and audio unit. Refer to AV-96, "Diagnosis Procedure" .
	Rear view camera malfunction.	Replace rear view camera. Refer to AV-122, "Removal and Installation" .

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

NORMAL OPERATING CONDITION

Description

INFOID:000000010480140

RELATED TO NOISE

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

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"> • Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		<ul style="list-style-type: none"> • Fuel pump condenser
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"> • Relay malfunction, audio unit malfunction
	The noise occurs when various motors are operating.	<ul style="list-style-type: none"> • Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		<ul style="list-style-type: none"> • 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.		<ul style="list-style-type: none"> • Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

RELATED TO HANDS-FREE PHONE

Symptom	Cause and Counter measure
Does not recognize cellular phone connection (No connection is displayed on the display at the guide).	<p>Some Bluetooth[®] enabled cellular phones may not be recognized by the in-vehicle phone module.</p> <p>Refer to "RELATED TO HANDS-FREE PHONE (Check Compatibility)" in AV-104, "Symptom Table".</p>
Cannot use hands-free phone.	<p>Customer will not be able to use a hands-free phone under the following conditions:</p> <ul style="list-style-type: none"> • The vehicle is outside of the telephone service area. • The vehicle is in an area where it is difficult to receive radio waves; such as in a tunnel, in an underground parking garage, near a tall building or in a mountainous area. • The cellular phone is locked to prevent it from being dialed. <p>NOTE:</p> <p>While a cellular phone is connected through the Bluetooth[®] wireless connection, the battery power of the cellular phone may discharge quicker than usual. The Bluetooth[®] Hands-Free Phone System cannot charge cellular phones.</p>

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO WITHOUT BOSE]

Symptom	Cause and Counter measure
The other party's voice cannot be heard by hands-free phone.	When the radio wave condition is not ideal or ambient sound is too loud, it may be difficult to hear the other person's voice during a call.
Poor sound quality.	Do not place the cellular phone in an area surrounded by metal or far away from the in-vehicle phone module to prevent tone quality degradation and wireless connection disruption.

AUDIO UNIT

< REMOVAL AND INSTALLATION >

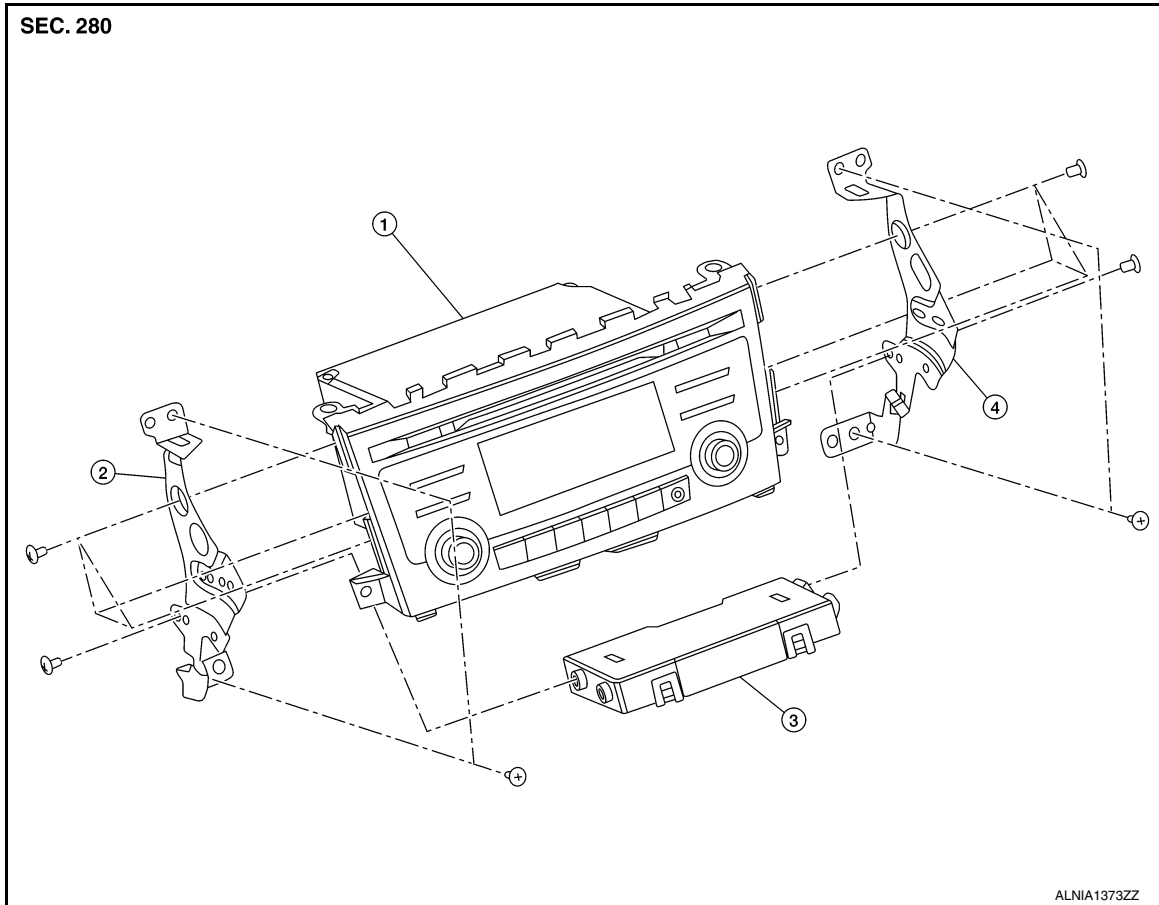
[DISPLAY AUDIO WITHOUT BOSE]

REMOVAL AND INSTALLATION

AUDIO UNIT

Exploded View

INFOID:000000010480141



1. Audio unit
2. Audio unit bracket (LH)
3. A/C auto amp. (if equipped)
4. Audio unit bracket (RH)

Removal and Installation

INFOID:000000010480142

REMOVAL

1. Disconnect the negative battery terminal. Refer to [PG-78, "Removal and Installation"](#).
2. Remove cluster lid C. Refer to [IP-20, "Cluster Lid C"](#).
3. Remove the A/C switch assembly (if equipped). Refer to [HAC-101, "Removal and Installation"](#).
4. Remove the front air control (if equipped). Refer to [HAC-162, "Removal and Installation"](#).
5. Remove the audio unit bracket screws, then pull out the audio unit.
6. Disconnect the harness connectors from the audio unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

When replacing audio unit, the audio unit must be registered. Refer to [AV-161, "REGISTRATION \(AUDIO UNIT\) : Work Procedure"](#).

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
USB INTERFACE

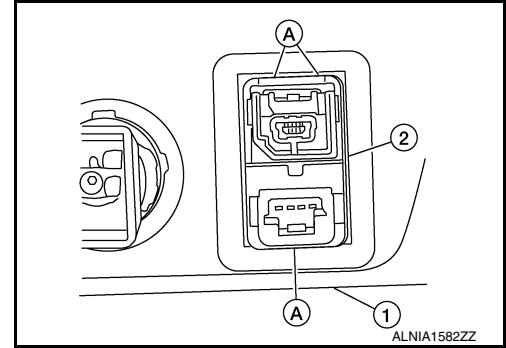
Removal and Installation

INFOID:000000010480143

REMOVAL

1. Remove the shift selector finisher. Refer to [IP-23, "Exploded View"](#).
2. Release the pawls (A) and remove the USB interface (2) from the back of the shift selector finisher (1).

: Pawl



INSTALLATION

Installation is in the reverse order of removal.

AUX IN JACK

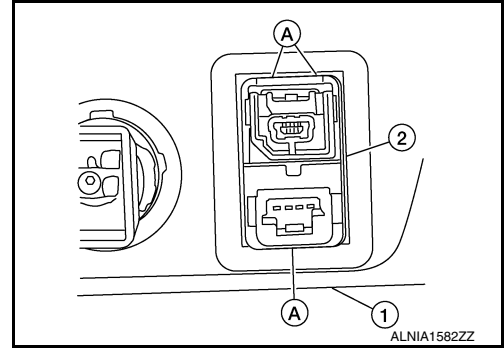
Removal and Installation

INFOID:000000010480144

REMOVAL

1. Remove the shift selector finisher. Refer to [IP-18. "Removal and Installation"](#).
2. Release the pawls (A) and remove the AUX in jack (2) from the back of the shift selector finisher (1).

○: Pawl



INSTALLATION

Installation is in the reverse order of removal.

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FRONT SPEAKER

< REMOVAL AND INSTALLATION >

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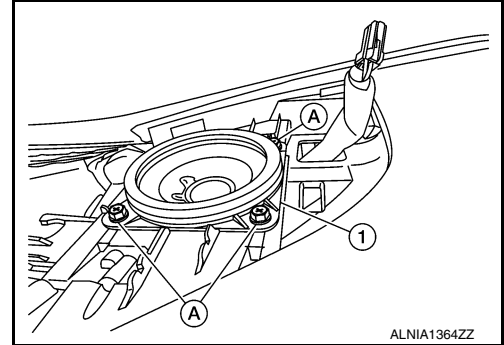
FRONT SPEAKER

Removal and Installation

INFOID:000000010480145

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-21, "FRONT PILLAR FINISHER : Removal and Installation"](#).
2. Remove the front speaker grille using a suitable tool.
3. Remove the front speaker screws (A).
4. Pull out the front speaker (1), disconnect the harness connector from front speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITHOUT BOSE]

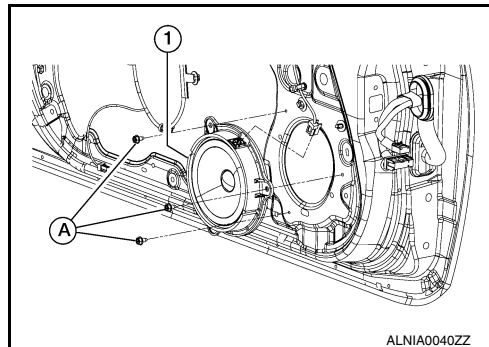
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000010480146

REMOVAL

1. Remove the front door finisher. Refer to [INT-15, "Removal and Installation"](#).
2. Remove the front door speaker screws (A).
3. Disconnect the harness connector from the front door speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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REAR SPEAKER

< REMOVAL AND INSTALLATION >

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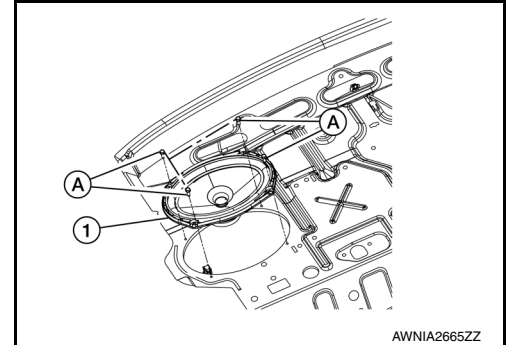
REAR SPEAKER

Removal and Installation

INFOID:000000010480147

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
2. Remove the rear speaker screws (A).
3. Disconnect the harness connector from the rear speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

SATELLITE RADIO ANTENNA

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITHOUT BOSE]

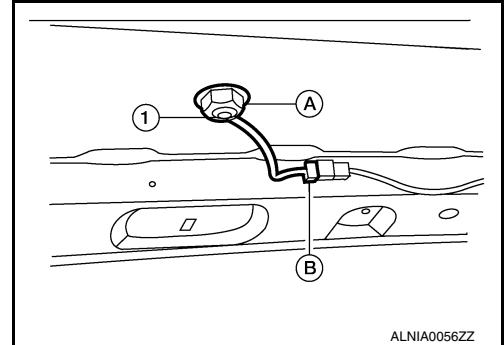
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:000000010480148

REMOVAL

1. Lower the headlining at the rear. Refer to [INT-30, "Removal and Installation"](#).
2. Remove the satellite radio antenna nut (A).
3. Disconnect the harness connector (B) from the satellite radio antenna (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

Satellite radio antenna nut : 6.5 N·m (0.66 kg·m, 58 in·lb)

CAUTION:

If the satellite radio antenna nut is not tightened to the specified torque, lower sensitivity of the antenna may be experienced. If the nut is tightened tighter than the specified torque, this will deform the roof panel.

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STEERING SWITCH

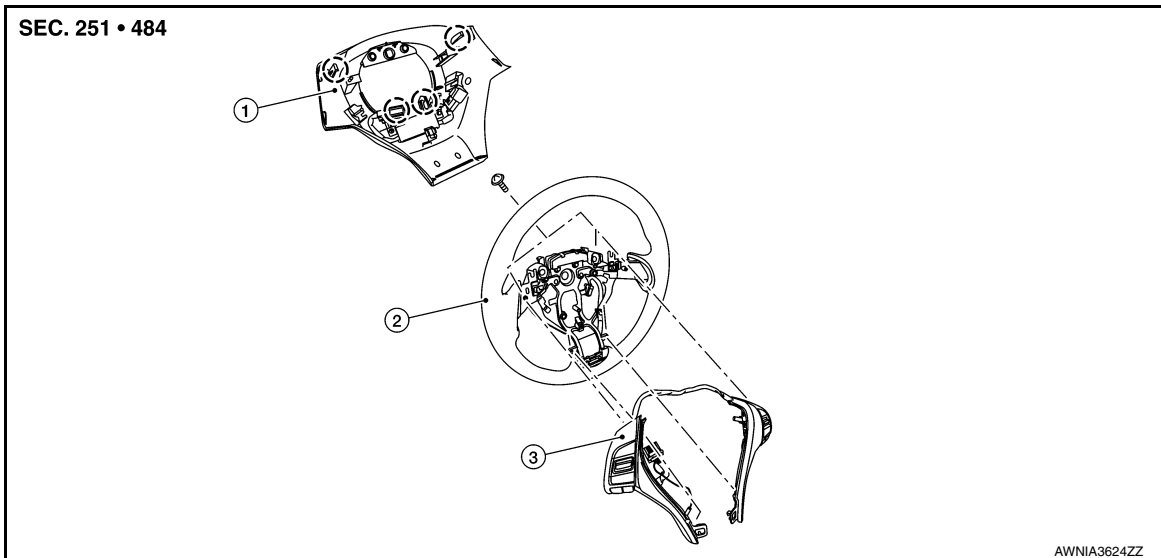
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITHOUT BOSE]

STEERING SWITCH

Exploded View

INFOID:000000010480149



1. Steering wheel rear finisher

2. Steering wheel

3. Steering switches

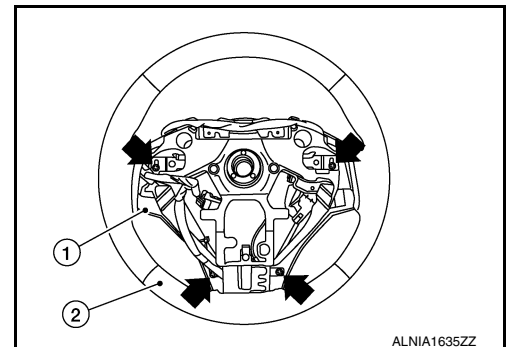
○ Pawl

Removal and Installation

INFOID:000000010480150

REMOVAL

1. Remove the steering wheel. Refer to [ST-31. "Removal and Installation"](#)
2. Release the pawls on the steering wheel rear finisher and remove.
3. Remove the steering switches screws (←).
4. Remove the steering switches (1) from steering wheel (2).



INSTALLATION

Installation is in the reverse order of removal.

ANTENNA FEEDER

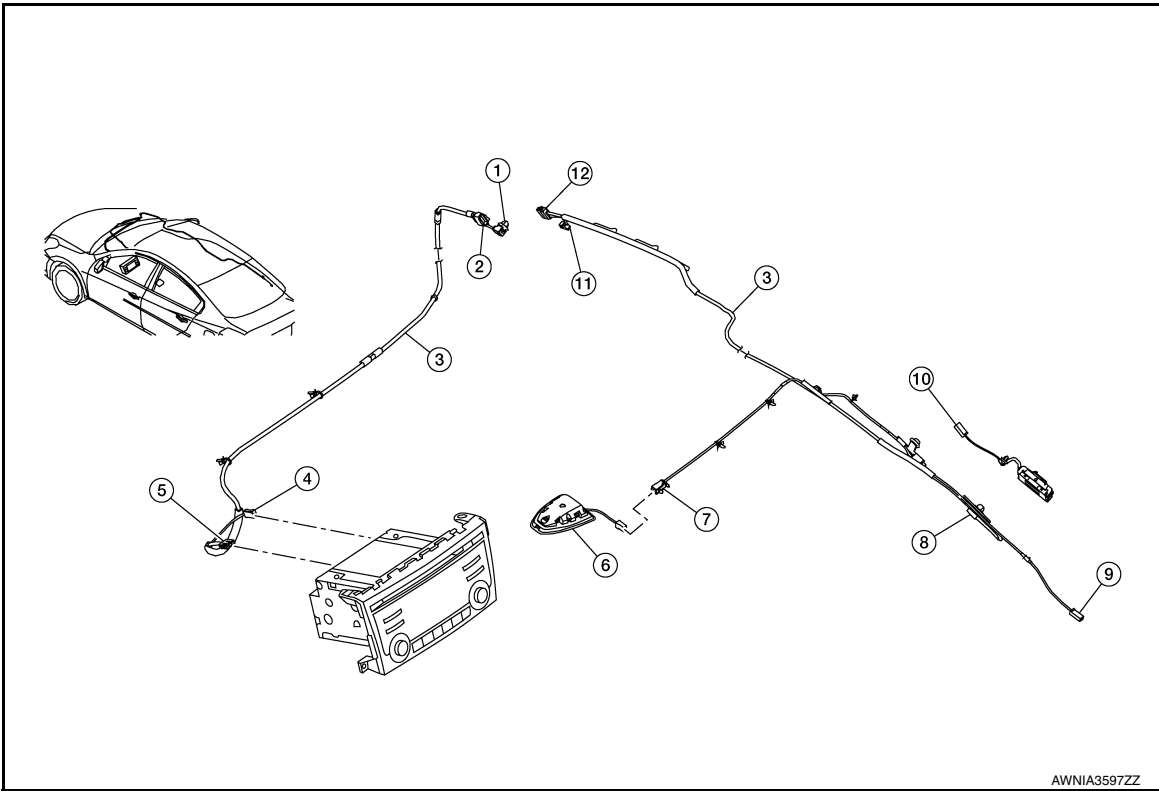
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITHOUT BOSE]

ANTENNA FEEDER

Location of Antenna

INFOID:000000010480151



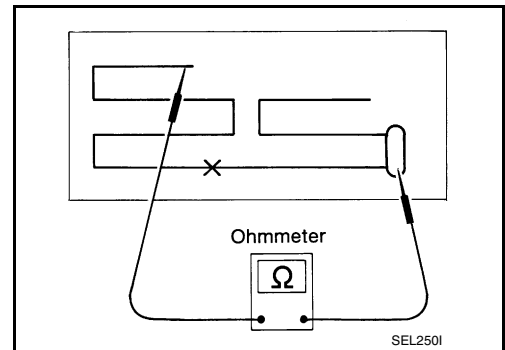
- | | | |
|----------|----------|----------------------|
| 1. M102 | 2. M101 | 3. Antenna feeder |
| 4. M110 | 5. M148 | 6. Satellite antenna |
| 7. B59 | 8. M502 | 9. M504 |
| 10. M503 | 11. M500 | 12. M501 |

Window Antenna Repair

INFOID:000000010480152

ELEMENT CHECK

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



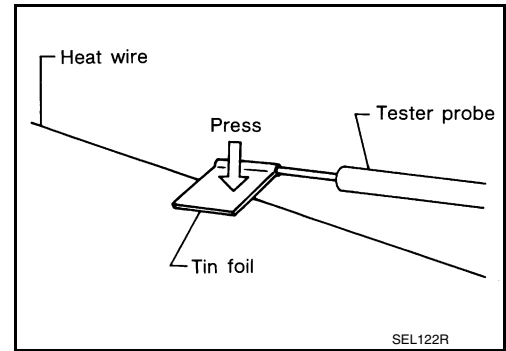
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ANTENNA FEEDER

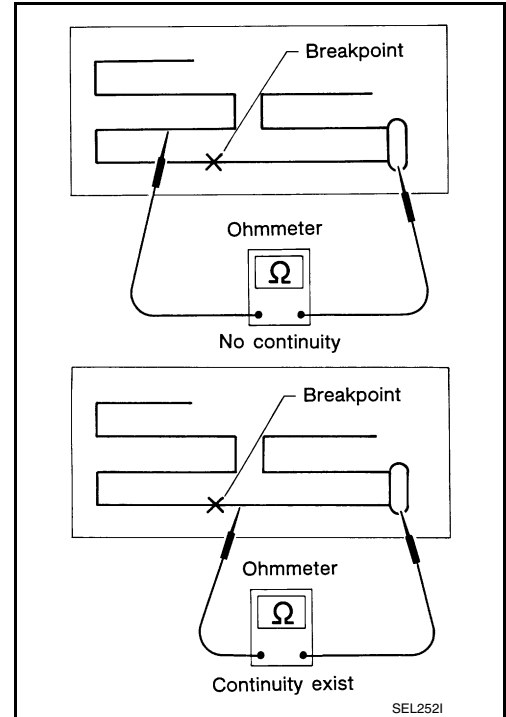
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITHOUT BOSE]

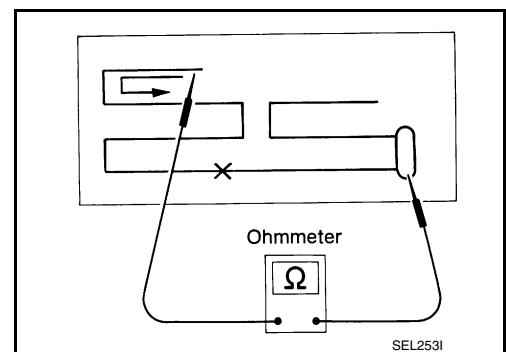
- When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



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



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



REPAIR EQUIPMENT

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

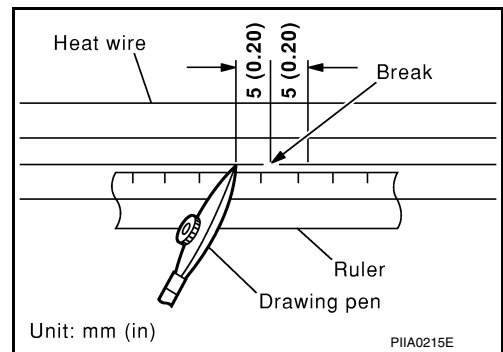
REPAIRING PROCEDURE

ANTENNA FEEDER

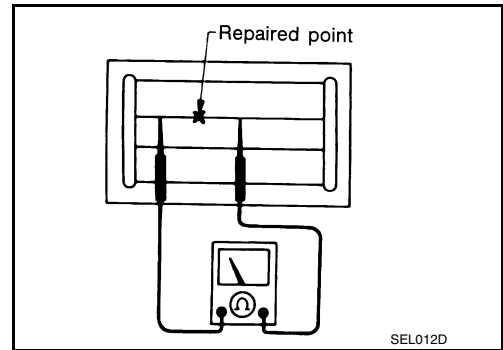
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITHOUT BOSE]

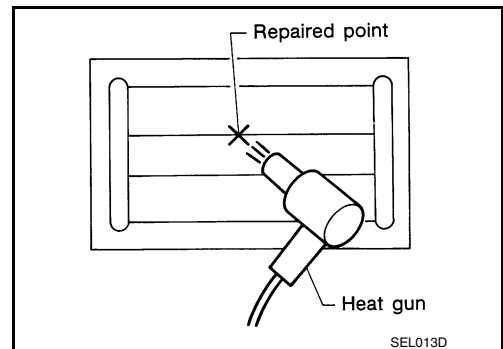
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.



4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited. Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.



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ANTENNA AMP.

< REMOVAL AND INSTALLATION >

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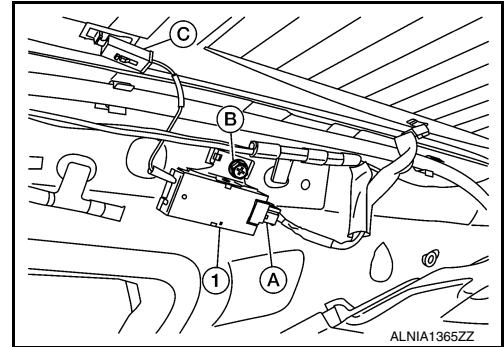
ANTENNA AMP.

Removal and Installation

INFOID:000000010480153

REMOVAL

1. Remove the rear pillar finisher (RH). Refer to [INT-25. "REAR PILLAR FINISHER : Removal and Installation"](#).
2. Disconnect the harness connector (A) from the antenna amp. (1).
3. Disconnect the antenna amp. harness connector (C) from the rear window glass.
4. Remove the antenna amp. screw (B) and the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

MICROPHONE

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITHOUT BOSE]

MICROPHONE

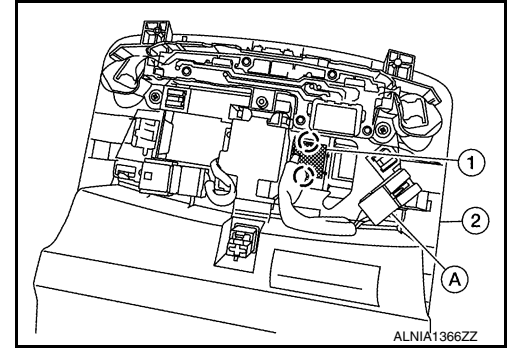
Removal and Installation

INFOID:000000010480154

REMOVAL

1. Remove the front room/map lamp assembly. Refer to [INL-62. "Removal and Installation"](#).
2. Disconnect the microphone connector (A) from the front room/map lamp assembly (2).
3. Release the microphone pawls, then remove the microphone (1).

○: Pawl



INSTALLATION

Installation is in the reverse order of removal.

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REAR VIEW CAMERA

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITHOUT BOSE]

REAR VIEW CAMERA

Removal and Installation

INFOID:000000010480155

REMOVAL

1. Remove license lamp finisher. Refer to [EXT-36. "Removal and Installation"](#).
2. Disconnect the harness connector from rear view camera.
3. Remove rear view camera.

INSTALLATION

Installation is in the reverse order of removal.

PRECAUTION

PRECAUTIONS

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

INFOID:000000011046224

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. 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 three minutes before performing any service.

Precaution for Trouble Diagnosis

INFOID:0000000110480157

AV COMMUNICATION SYSTEM

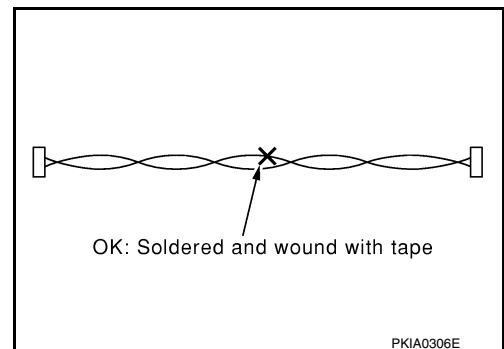
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

INFOID:0000000110480158

AV COMMUNICATION SYSTEM

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



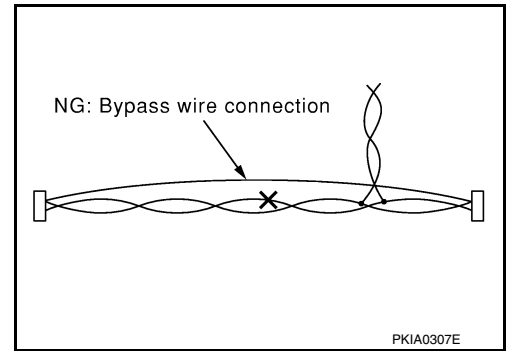
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PRECAUTIONS

[DISPLAY AUDIO WITH BOSE]

< PRECAUTION >

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



Precaution for Work

INFOID:000000010480159

- 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:
 - 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 >

[DISPLAY AUDIO WITH BOSE]

PREPARATION

PREPARATION

Special Service Tools

INFOID:0000000010480160

The actual shape of the tools may differ from those illustrated here.

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

AWJIA0483ZZ

Commercial Service Tools

INFOID:0000000010480161

Tool name	Description
Power tool	Loosening nuts, screws and bolts

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COMPONENT PARTS

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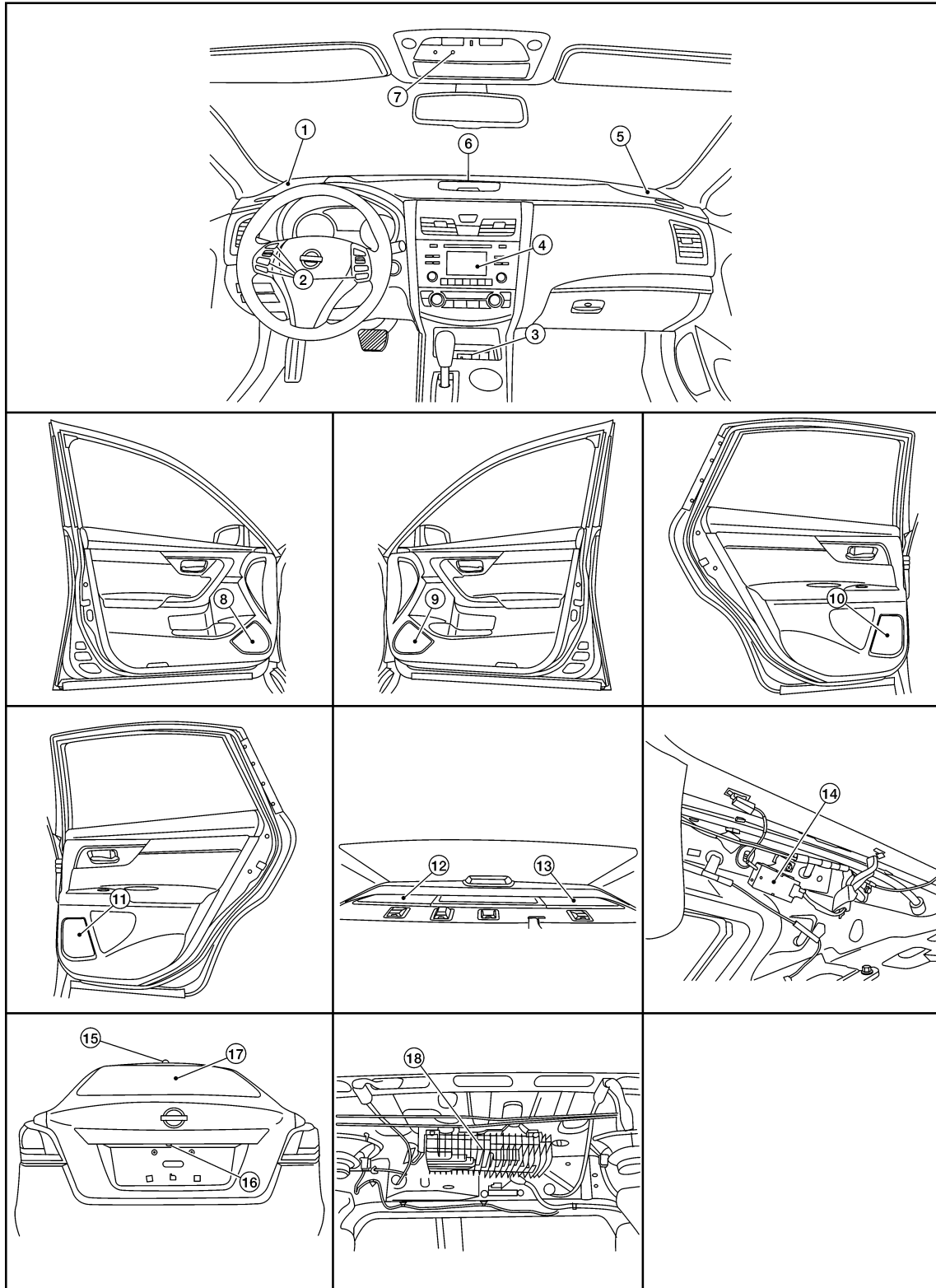
[DISPLAY AUDIO WITH BOSE]

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:000000010480162



ALN1A1371ZZ

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO WITH BOSE]

- | | | |
|--------------------------|--------------------------|----------------------------------|
| 1. Front speaker LH | 2. Steering switches | 3. USB interface and AUX in jack |
| 4. Audio unit | 5. Front speaker RH | 6. Center speaker |
| 7. Microphone | 8. Front door speaker LH | 9. Front door speaker RH |
| 10. Rear door speaker LH | 11. Rear door speaker RH | 12. Rear speaker RH |
| 13. Rear speaker LH | 14. Antenna amp. | 15. Satellite antenna |
| 16. Rear view camera | 17. Window antenna | 18. Bose speaker amp. |

Component Description

INFOID:000000010480163

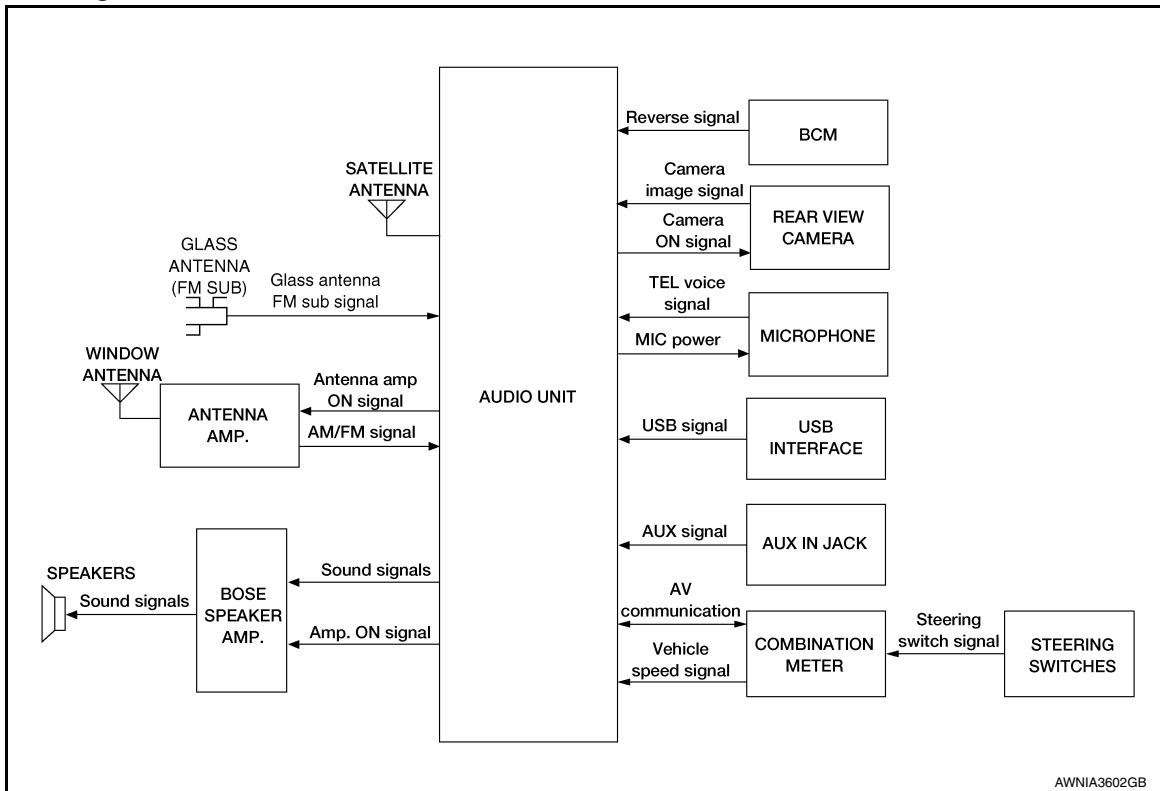
Part name	Description
Audio unit	<ul style="list-style-type: none"> Controls audio, hands-free phone, USB interface and AUX in jack connection, satellite radio and rear view camera functions. Display unit is built in to audio unit.
Bose speaker amp.	Receives audio signals from audio unit and outputs audio signals to each speaker.
Front speakers	Outputs high, mid and low range audio signals from Bose speaker amp.
Center speaker	
Front door speakers	
Rear door speakers	
Rear speakers	
Steering switches	<ul style="list-style-type: none"> Operations for audio, hands-free phone and voice recognition are possible. Steering switch signal is output to combination meter. Combination meter outputs steering switch signal to audio unit.
Microphone	<ul style="list-style-type: none"> Used for hands-free phone operations. Microphone signal is transmitted to audio unit. Power is supplied from audio unit.
USB interface and AUX in jack	<ul style="list-style-type: none"> USB sound and data input signals are transmitted to audio unit. AUX sound and data input signals are transmitted to audio unit.
Rear view camera	<ul style="list-style-type: none"> Outputs image of vehicle rear to audio unit. Power is supplied from audio unit (without driver assistance system). Power is supplied from ITS control unit (with driver assistance system).
Satellite antenna	Satellite radio signal is received and transmitted to audio unit.
Antenna amp.	<ul style="list-style-type: none"> AM/FM signal received by window antenna is amplified and transmitted to audio unit. Power is supplied from audio unit.
Window antenna	AM/FM signal is received and transmitted to antenna amp.

AV

SYSTEM

System Diagram

INFOID:000000010480164



AWNIA3602GB

System Description

INFOID:000000010480165

AUDIO SYSTEM

The audio system consists of the following components:

- Audio unit
- Bose speaker amp.
- Front speakers
- Center speaker
- Front door speakers
- Rear door speakers
- Rear speakers
- Steering switches
- Microphone
- USB interface and AUX in jack
- Rear view camera
- Satellite antenna
- Antenna amp.
- Window antenna

When the audio system is on, AM/FM signals received by the window antenna are amplified by the antenna amp. and sent to the audio unit. The audio unit then sends audio signals to the Bose speaker amp. The Bose speaker amp. then sends audio signals to the front speakers, center speaker, front door speakers, rear door speakers and rear speakers.

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

HANDS-FREE PHONE SYSTEM

System Operation

NOTE:

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

The Bluetooth® telephone system allows users who have a Bluetooth® cellular telephone to make a wireless connection between their cellular telephone and the audio unit. Hands-free cellular telephone calls can be sent and received. Some Bluetooth® cellular telephones may not be recognized by the audio unit. When a cellular telephone or the audio unit is replaced, the telephone must be paired with the audio unit. Different cellular telephones may have different pairing procedures, refer to the cellular telephone operating manual.

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

Audio Unit

When the ignition switch is turned to ACC or ON, the audio unit will power up. During power up, the audio unit is initialized and performs various self-checks. Initialization may take up to 20 seconds.

Steering Switches

When buttons on the steering switches are pushed, the resistance in steering switches circuits change, depending on which button is pushed.

The following functions can be performed using the steering switches:

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

Microphone

The microphone is located in the roof console assembly. The microphone sends a signal to the audio unit.

REAR VIEW CAMERA SYSTEM

- The audio unit supplies power to the rear view camera when the reverse signal is received from the BCM.
- The rear view camera transmits rear view camera images to the audio unit when power is supplied from the audio unit.
- The audio unit combines a warning message and fixed guide lines with an image received from the rear view camera to display a rear view camera image on the screen.

SATELLITE RADIO FUNCTION

- Satellite radio function is built into audio unit.
- Sound signal (satellite radio) is received by satellite antenna and transmitted to audio unit. Audio unit outputs sound signal to each speaker.

USB INTERFACE AND AUX IN JACK FUNCTION

- Sound and data signals are transmitted from USB interface to the audio unit and output to each speaker and tweeter.
- Sound signals are transmitted from AUX in jack to the audio unit and output to each speaker and tweeter.

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.

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DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO WITH BOSE]

DIAGNOSIS SYSTEM (AUDIO UNIT)

Description

INFOID:000000010480166

The audio unit on board diagnosis performs the functions listed in the table below:

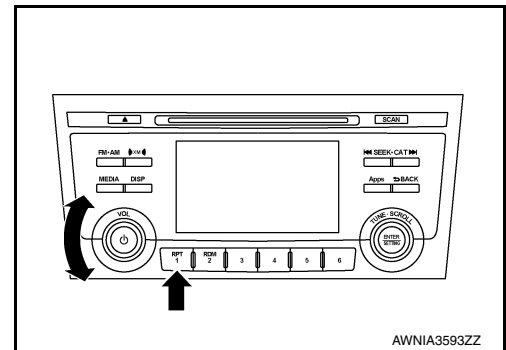
Mode		Description
Self Diagnosis		<ul style="list-style-type: none"> • Audio unit diagnosis. • Diagnoses the connections across system components.
Confirmation/ Adjustment	Display Diagnosis	The following check functions are available: color tone check by color bar display and white display, light and shade check by gray scale display.
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, lights, reverse, EQ pin, destination and camera type.
	Speaker Test	The connection of a speaker can be confirmed by test tone.
	Error History	The system malfunction and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.
	Camera System	Guiding line position that overlaps rear view camera image can be adjusted.
	AV COMM Diagnosis	The communication condition of each unit of display audio system can be monitored.
	Delete Unit Connection Log	Erase the connection history of unit and error history.
	Initialize Setting	Initializes the audio unit memory.

On Board Diagnosis Function

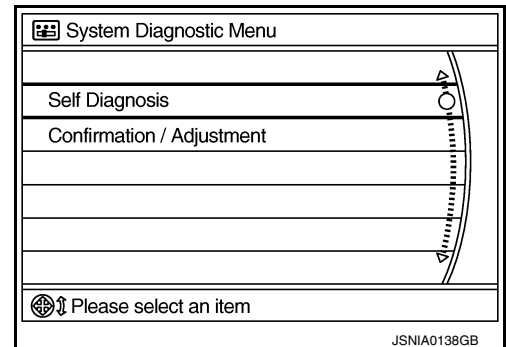
INFOID:000000010480167

METHOD OF STARTING

1. Turn the ignition ON.
2. Turn the audio system OFF.
3. While pressing the preset 1 button, turn the volume control dial clockwise and counterclockwise quickly approximately 15 times or more. Shifting from current screen to previous screen is performed by pressing BACK button.



4. The trouble diagnosis initial screen is displayed, and Self Diagnosis or Confirmation/Adjustment can be selected.



SELF DIAGNOSIS MODE

Audio Unit Self Diagnosis

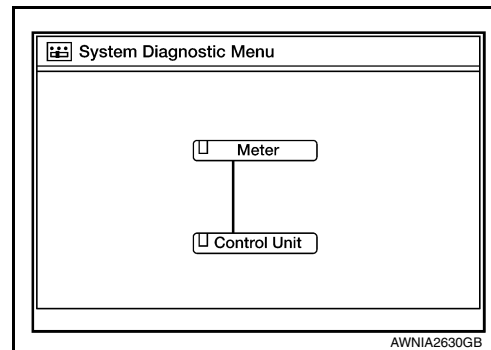
1. Select Self Diagnosis.

DIAGNOSIS SYSTEM (AUDIO UNIT)

[DISPLAY AUDIO WITH BOSE]

< SYSTEM DESCRIPTION >

- Self diagnosis screen is displayed. The bar graph visible in center of screen indicates progress of self diagnosis.
- Diagnosis results are displayed after the self diagnosis is completed. The unit names and the connection lines are color coded according to the diagnostic results.

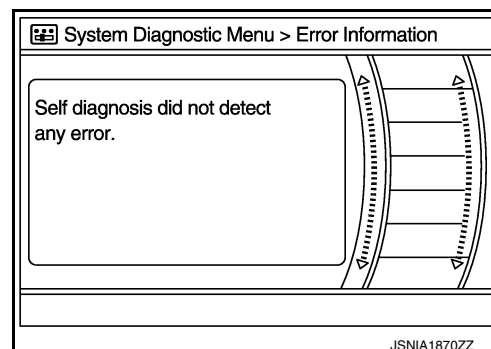


Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction ¹	Red	Green

1: Control unit (audio unit) is displayed in red.

- Replace audio unit if Self Diagnosis did not run because control unit malfunction is indicated. The symptom is audio unit internal error. Refer to [AV-195, "Removal and Installation"](#).
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.

- Comments of self diagnosis results can be viewed in the diagnosis result screen.



Audio Unit Self Diagnosis Results

Only Unit Part Is Displayed In Red		
Screen switch	Description	Possible cause
Control unit	Malfunction is detected in audio unit power supply and ground circuits.	<ul style="list-style-type: none"> Audio unit power supply or ground circuits. Refer to AV-163, "AUDIO UNIT : Diagnosis Procedure". If no malfunction is detected in audio unit power supply and ground circuits, replace audio unit. Refer to AV-195, "Removal and Installation".

A Connecting Cable Between Units Is Displayed In Yellow		
Area with yellow connection lines	Description	Possible cause
Control unit ↔ Meter	When one of the following is detected: <ul style="list-style-type: none"> malfunction is detected in combination meter power supply and ground circuits. malfunction is detected in AV communication circuits between audio unit and combination meter. 	<ul style="list-style-type: none"> Combination meter power supply or ground circuits. Refer to MWI-57, "COMBINATION METER : Diagnosis Procedure". AV communication circuits between audio unit and combination meter.

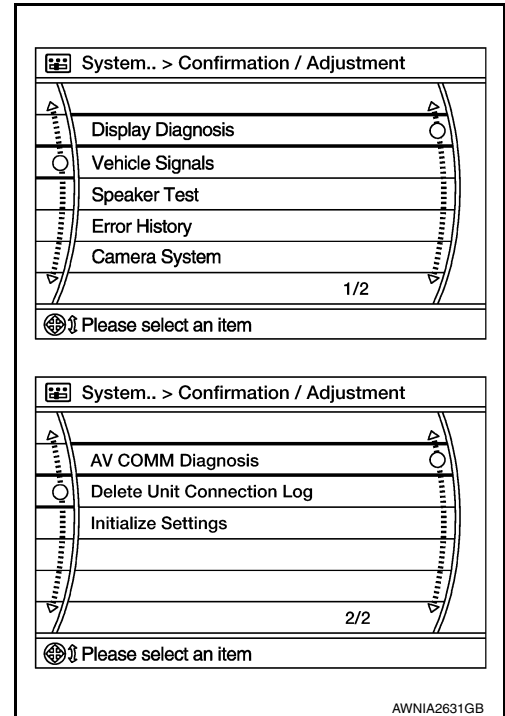
DIAGNOSIS SYSTEM (AUDIO UNIT)

[DISPLAY AUDIO WITH BOSE]

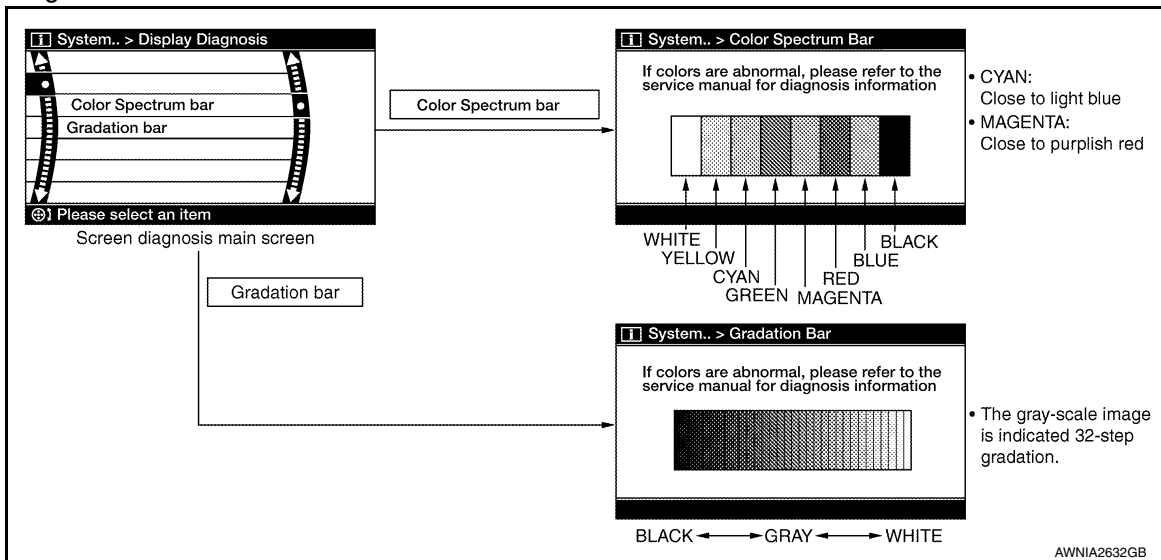
< SYSTEM DESCRIPTION >

Audio Unit Confirmation/Adjustment

1. Select Confirmation/Adjustment.
2. Select each switch on the Confirmation/Adjustment screen to display the relevant trouble diagnosis screen. Press the BACK switch to return to the initial Confirmation/Adjustment screen.

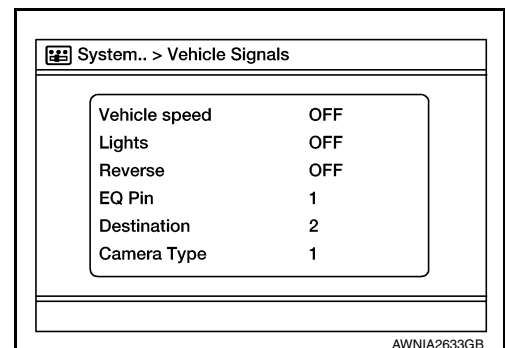


Display Diagnosis



Vehicle Signals

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



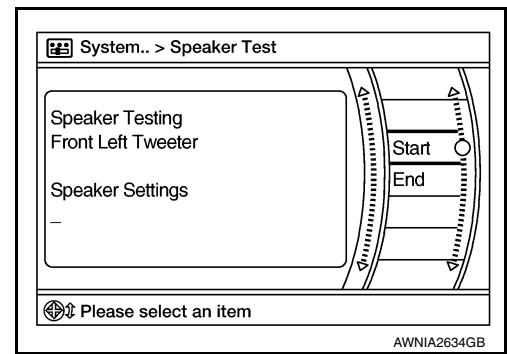
Speaker Test

DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO WITH BOSE]

Select Speaker Test to display the Speaker Diagnosis screen. Press Start to generate a test tone in a speaker. Press Start again to generate a test tone in the next speaker. Press End to stop the test tones.



Error History

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

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

The frequency of occurrence is displayed in a count up manner. The actual count up method differs depending on the error item.

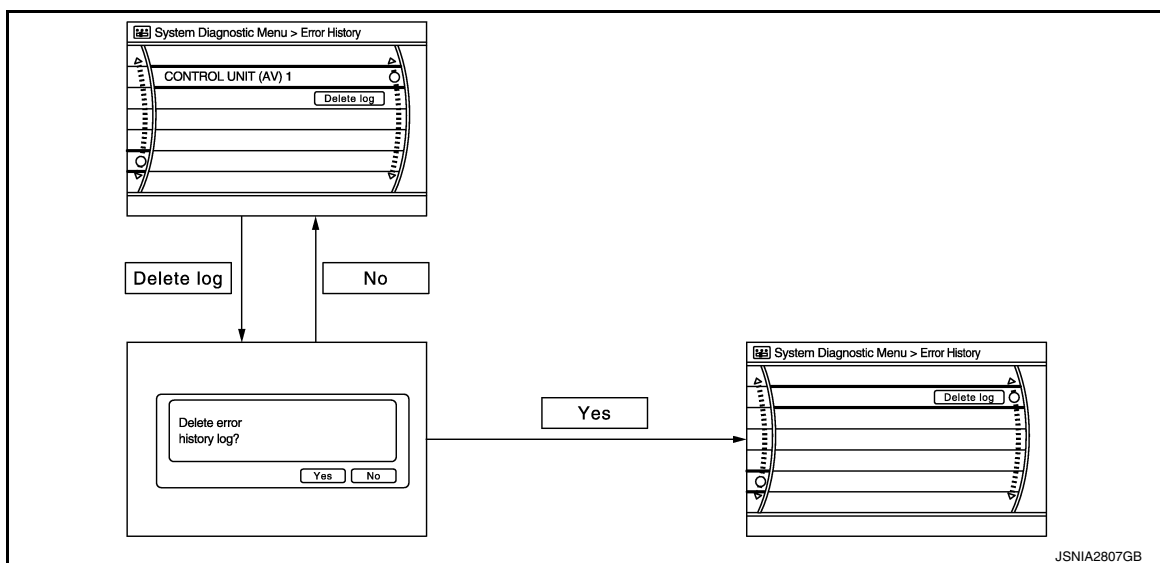
Count up method A

- The counter is set to 40 if an error occurs. 1 is subtracted from the counter if the condition is normal at a next ignition ON cycle.
- The counter lower limit is 1. The counter can be reset (no error record display) with the Delete log switch.

Count up method B

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

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



Error item

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

DIAGNOSIS SYSTEM (AUDIO UNIT)

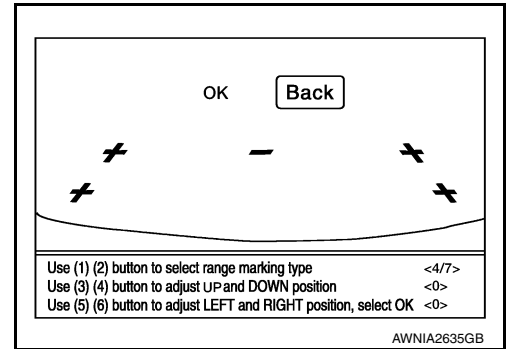
< SYSTEM DESCRIPTION >

[DISPLAY AUDIO WITH BOSE]

Error item	Description	Possible cause
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	Replace the audio unit if the malfunction occurs constantly. Refer to AV-195, "Removal and Installation" .
AV COMM CIRCUIT	When one of the following is detected: <ul style="list-style-type: none"> malfunction is detected in combination meter power supply and ground circuits. malfunction is detected in AV communication circuits between audio unit and combination meter. 	<ul style="list-style-type: none"> Combination meter power supply or ground circuits. Refer to MWI-57, "COMBINATION METER : Diagnosis Procedure". AV communication circuits between audio unit and combination meter.

Camera System

This mode is used to adjust the guide line display position of the rear view camera.



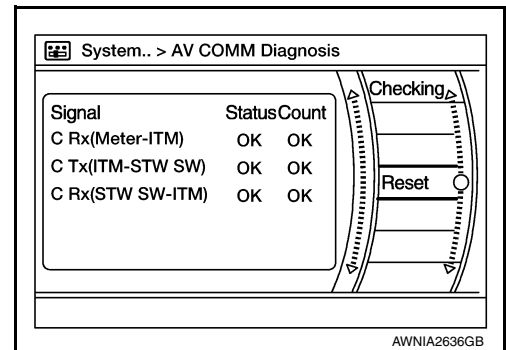
AV COMM Diagnosis

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

Items	Status (Current)	Counter (Past)
C Rx(Meter-ITM)	OK / ???	OK / 0 - 39
C Tx(ITM-TW SW)	OK / ???	OK / 0 - 39
C Rx(STW SW-ITM)	OK / ???	OK / 0 - 39

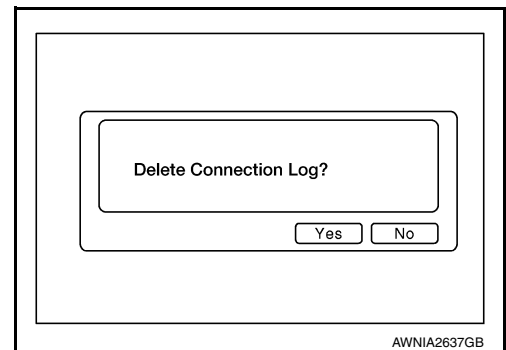
NOTE:

"???" indicates UNKWN.



Delete Unit Connection Log

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



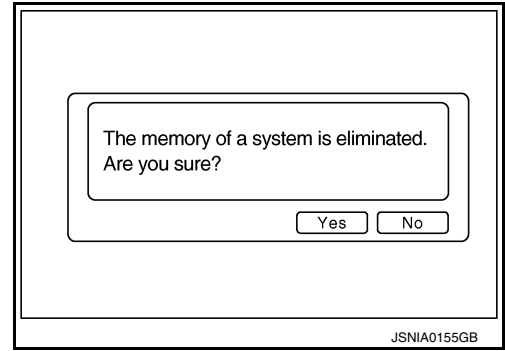
Initialize Settings

DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO WITH BOSE]

Deletes data stored from the audio unit.



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AUDIO UNIT

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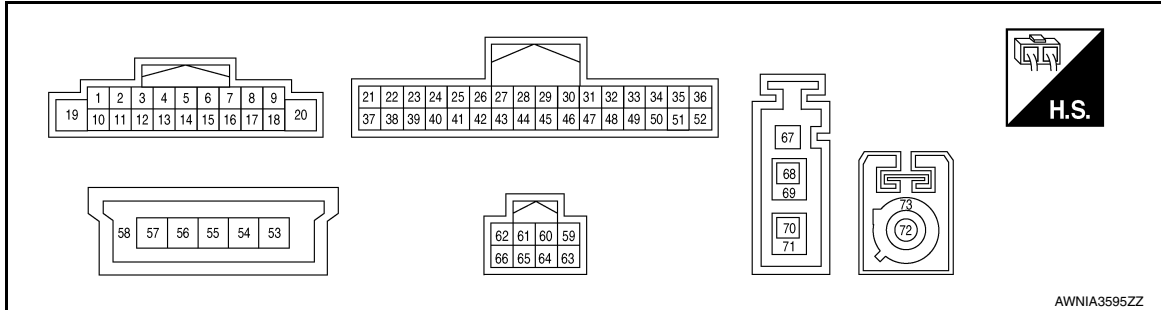
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AUDIO UNIT

Reference Value

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TERMINAL LAYOUT



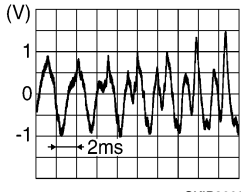
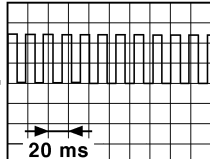
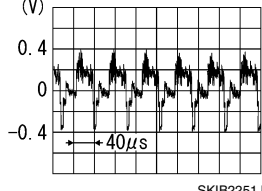
PHYSICAL VALUES

Terminal (Wire color)		Description	Input/ Output	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
1 (W)	Ground	BOSE amp. ON signal	Output	ACC	—	Battery voltage
2 (B)	3 (W)	Sound signal front speaker LH	Output	ON	Sound output	 SKIB3609E
4 (G)	5 (R)	Sound signal rear speaker LH	Output	ON	Sound output	 SKIB3609E
7 (P)	Ground	ACC power supply	Input	ACC	—	Battery voltage
9 (R)	8 (GR)	Illumination control signal	Input	ON	Headlamps ON	Battery voltage
10 (B)	—	Shield	—	—	—	—
11 (B)	12 (W)	Sound signal front speaker RH	Output	ON	Sound output	 SKIB3609E

AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO WITH BOSE]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
13 (G)	14 (R)	Sound signal rear speaker RH	Output	ON	Sound output	
18 (G)	Ground	Vehicle speed signal	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	
19 (G)	Ground	Battery power supply	Input	OFF	—	Battery voltage
20 (GR)	Ground	Ground	—	ON	—	0 V
21 (Shield)	—	Camera image signal shield	—	—	—	—
22 (B)	Ground	Camera image signal	Input	ON	When camera image is displayed	
23 (W)	Ground	Camera power supply	Output	ON	When camera image is displayed	6.0 V
					Except for above	0 V
24 (R)	Ground	Camera ground	—	ON	—	0 V
25 (LG)	—	AV communication (L)	Input/ Output	—	—	—
26 (SB)	—	AV communication (H)	Input/ Output	—	—	—
28 (LG)	—	AV communication (L)	Input/ Output	—	—	—
29 (SB)	—	AV communication (H)	Input/ Output	—	—	—
39 (G)	Ground	Reverse signal	Input	ON	Selector lever in R (reverse)	Battery voltage
					Selector lever in any position other than R (reverse)	0 V
44 (B)	Ground	Ground	—	ON	—	0 V
45 (B)	Ground	Camera ground	—	ON	—	0 V

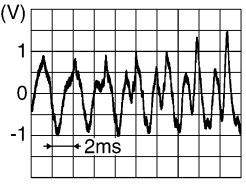
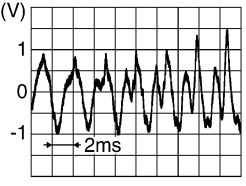
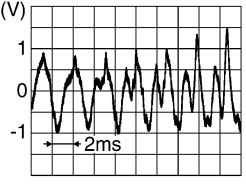
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AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO WITH BOSE]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
51 (W)	Ground	Microphone power supply	Output	ON	—	5.0 V
52 (B)	50 (Shield)	Microphone signal	Input	ON	While speaking into microphone.	
53 (B)	—	USB ground	—	—	—	—
55 (G)	—	USB D+ signal	—	—	—	—
56 (W)	—	USB D- signal	—	—	—	—
57 (R)	—	V BUS signal	—	—	—	—
58 (Shield)	—	USB shield	—	—	—	—
59 (Shield)	—	AUX shield	—	—	—	—
60 (B)	—	AUX ground	—	ON	—	0V
61 (W)	Ground	AUX audio signal RH	Input	ON	AUX audio signal received	
62 (R)	Ground	AUX audio signal LH	Input	ON	AUX audio signal received	
67 (B)	Ground	Antenna amp. ON signal	Output	ON	—	Battery voltage
68 (B)	Ground	AM/FM antenna signal	Input	ON	—	5.0 V
69 (Shield)	—	AM/FM antenna signal shield	—	—	—	—
70 (B)	Ground	Glass antenna (FM sub) signal	Input	ON	—	5.0 V
71 (Shield)	—	Glass antenna (FM sub) signal shield	—	—	—	—

AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO WITH BOSE]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
72 (B)	Ground	Satellite antenna signal	Input	ON	—	5.0 V
73 (Shield)	—	Satellite antenna signal shield	—	—	—	—

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BOSE SPEAKER AMP

< ECU DIAGNOSIS INFORMATION >

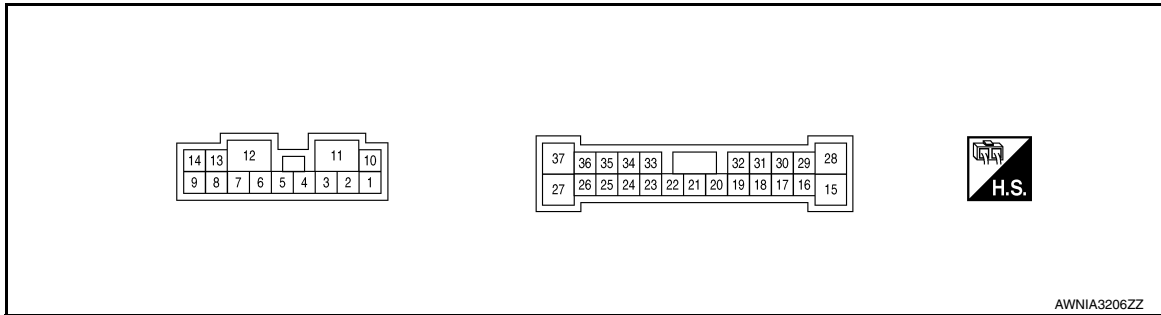
[DISPLAY AUDIO WITH BOSE]

BOSE SPEAKER AMP

Reference Value

INFOID:000000010480169

TERMINAL LAYOUT



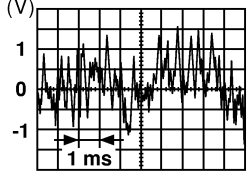
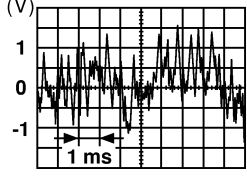
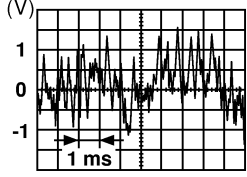
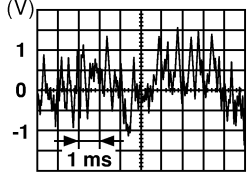
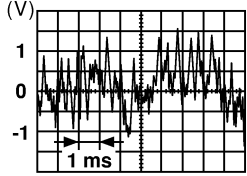
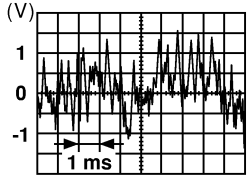
PHYSICAL VALUES

Terminal (wire color)		Description	Input/Output	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
1 (W)	10 (G)	Rear speaker signal LH	Output	ON	Sound output	<p style="text-align: right;">SKIA0177E</p>
2 (W)	3 (G)	Rear speaker signal RH	Output	ON	Sound output	<p style="text-align: right;">SKIA0177E</p>
4 (P)	5 (R)	Front door speaker and front speaker signal LH	Output	ON	Sound output	<p style="text-align: right;">SKIA0177E</p>
6 (G)	7 (R)	Center speaker signal	Output	ON	Sound output	<p style="text-align: right;">SKIA0177E</p>

BOSE SPEAKER AMP

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO WITH BOSE]

Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
8 (P)	13 (BG)	Front door speaker and front speaker signal RH	Output	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
11 (G)	Ground	Battery power supply	Input	-	-	Battery voltage
12 (GR)	Ground	Ground	-	ON	-	0V
15 (G)	28 (W)	Rear door speaker signal LH	Output	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
18 (G)	32 (R)	Sound signal front speaker LH	Input	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
19 (G)	20 (R)	Sound signal front speaker RH	Input	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
21 (B)	22 (W)	Sound signal rear speaker LH	Input	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
23 (B)	33 (W)	Sound signal rear speaker RH	Input	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>

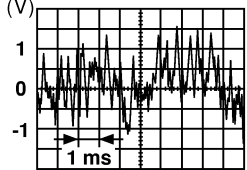
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BOSE SPEAKER AMP

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO WITH BOSE]

Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
31 (G)	Ground	Amp. ON signal	Input	ON	-	Greater than 6.5V
37 (G)	27 (W)	Rear door speaker signal RH	Output	ON	Sound output	

SKIA0177E

DISPLAY AUDIO WITH BOSE

[DISPLAY AUDIO WITH BOSE]

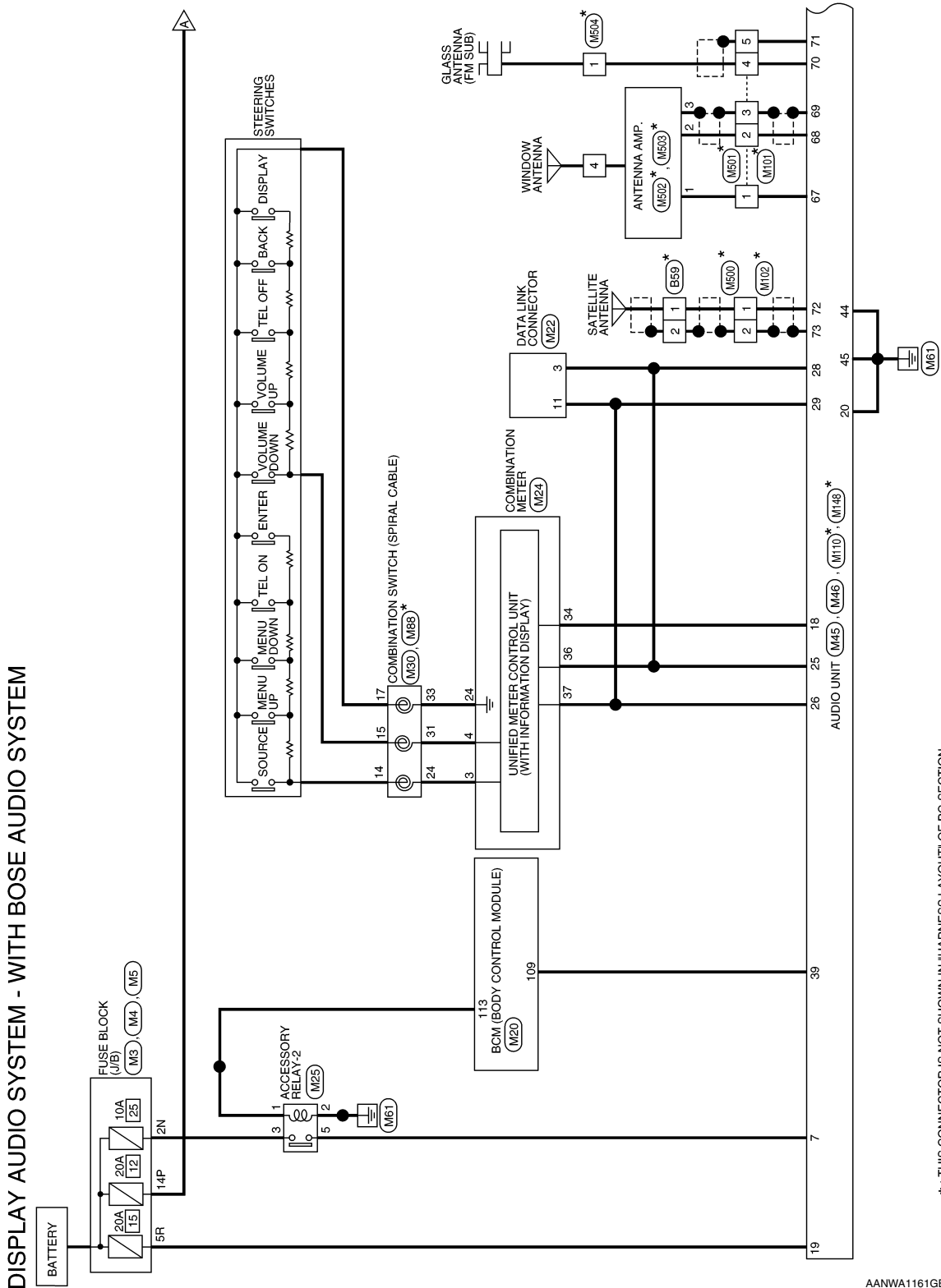
< WIRING DIAGRAM >

WIRING DIAGRAM

DISPLAY AUDIO WITH BOSE

Wiring Diagram

INFOID:0000000010480170



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

AANWA1161GB

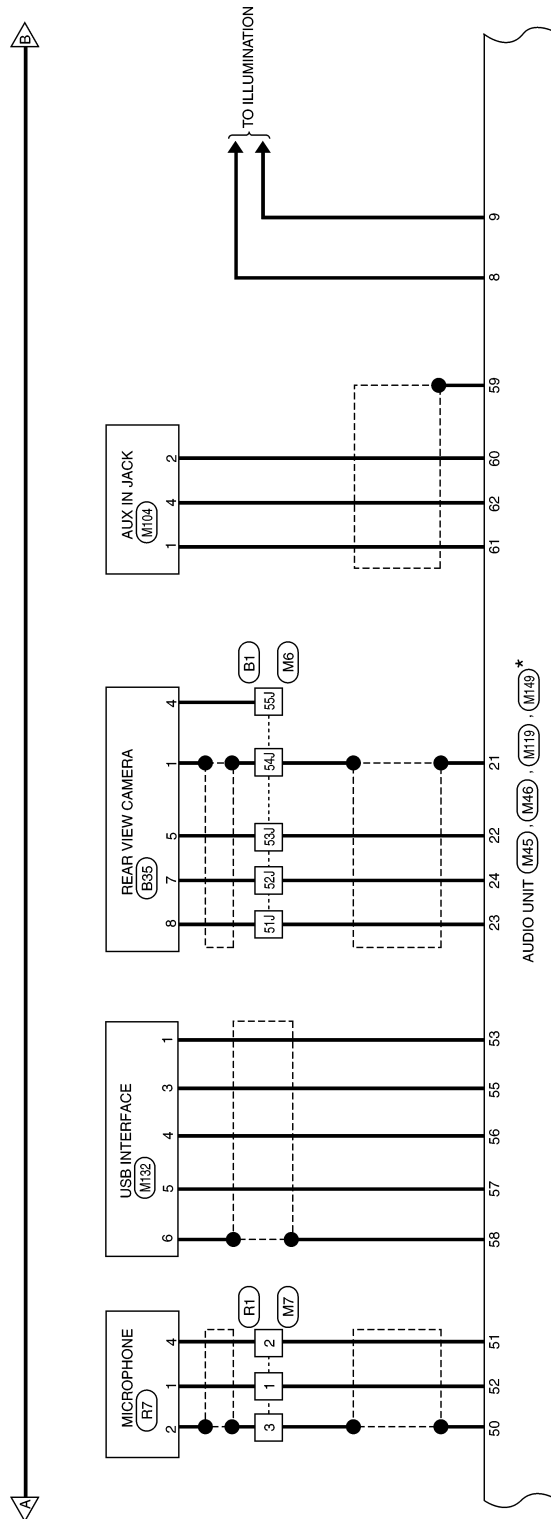
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DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

[DISPLAY AUDIO WITH BOSE]



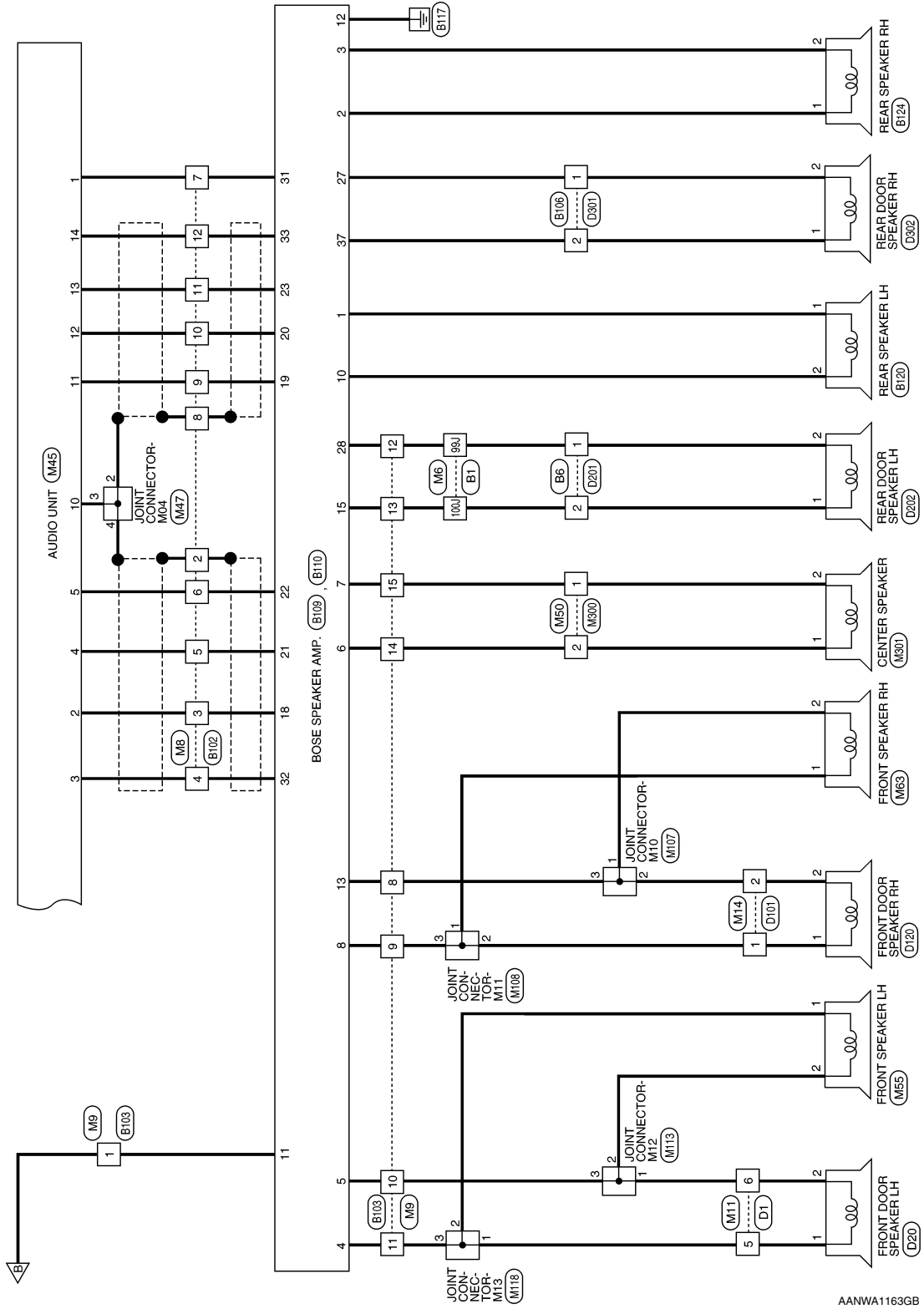
* : THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT" OF PG SECTION.

AANWA1162GB

DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

[DISPLAY AUDIO WITH BOSE]



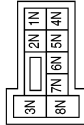
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DISPLAY AUDIO SYSTEM CONNECTORS - WITH BOSE AUDIO SYSTEM

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	2N	Color of Wire	LG	Signal Name	-
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Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



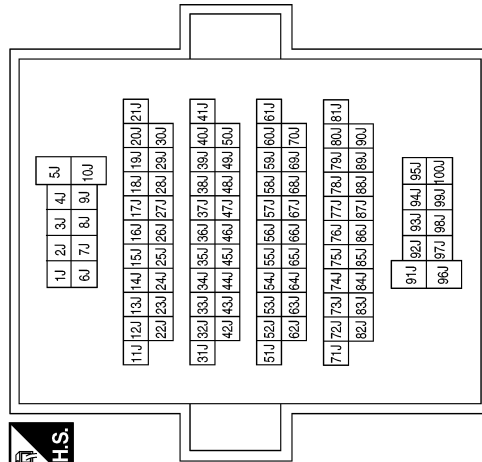
Terminal No.	5R	Color of Wire	G	Signal Name	-
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Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



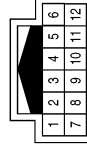
Terminal No.	14P	Color of Wire	G	Signal Name	-
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Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
51J	W	-
52J	R	-
53J	B	-
54J	SHIELD	-
99J	R	-
100J	G	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



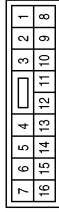
Terminal No.	Color of Wire	Signal Name
1	B	-
2	W	-
3	SHIELD	-

DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

[DISPLAY AUDIO WITH BOSE]

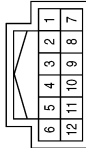
Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
8	BG	-
9	P	-
10	R	-
11	P	-
12	R	-
13	G	-
14	P	-
15	R	-

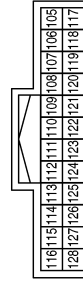
Terminal No.	Color of Wire	Signal Name
9	B	-
10	W	-
11	G	-
12	R	-

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



Terminal No.	Color of Wire	Signal Name
2	SHIELD	-
3	B	-
4	W	-
5	G	-
6	R	-
7	W	-
8	SHIELD	-

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



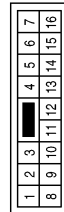
Terminal No.	Color of Wire	Signal Name
109	G	REVERSE SIGNAL
113	P	ACC RELAY OUT

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	P	-(WITH BOSE AUDIO SYSTEM)
2	BG	-(WITH BOSE AUDIO SYSTEM)

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	P	-(WITH BOSE AUDIO SYSTEM)
6	R	-(WITH BOSE AUDIO SYSTEM)

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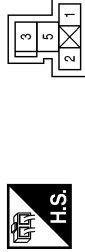


DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

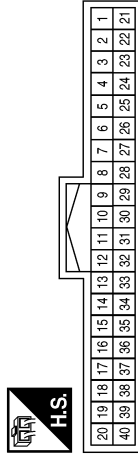
[DISPLAY AUDIO WITH BOSE]

Connector No.	M25
Connector Name	ACCESSORY RELAY-2
Connector Color	BLUE



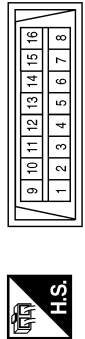
Terminal No.	Color of Wire	Signal Name
1	W	-
2	B	-
3	LG	-
5	P	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	P	STRG SW INPUT1
4	R	STRG SW INPUT2
24	W	STRG SW GND
34	G	SPEED 8P/R
36	LG	M-CAN-L
37	SB	M-CAN-H

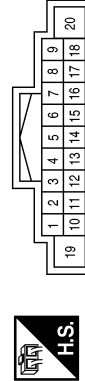
Connector No.	M22
Connector Name	DATA LINK CONNECTOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	LG	-
11	SB	-

Terminal No.	Color of Wire	Signal Name
8	GR	ILL (-)
9	R	ILL (+), LIGHT SW
10	B	PREAMP SHIELD
11	B	FR SP RH (+)
12	W	FR SP RH (-)
13	G	RR SP RH (+)
14	R	RR SP RH (-)
15	-	-
16	-	-
17	-	-
18	G	SPEED SIGNAL
19	G	+B
20	GR	GND

Connector No.	M45
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM AND BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	AMP ON
2	B	FR SP LH (+)
3	W	FR SP LH (-)
4	G	RR SP LH (+)
5	R	RR SP LH (-)
6	-	-
7	P	ACC

Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	P	-
31	R	-
33	W	-

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DISPLAY AUDIO WITH BOSE

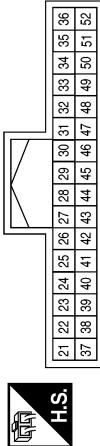
< WIRING DIAGRAM >

[DISPLAY AUDIO WITH BOSE]

Terminal No.	Color of Wire	Signal Name
39	G	REV
40	-	-
41	-	-
42	-	-
43	-	-
44	B	GND
45	B	CAM DET
46	-	-
47	-	-
48	-	-
49	-	-
50	SHIELD	MIC GND
51	W	MIC V+
52	B	MIC +

Terminal No.	Color of Wire	Signal Name
26	SB	M-CAN1-H
27	-	-
28	LG	M-CAN2-L
29	SB	M-CAN2-H
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-

Connector No.	M46
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM AND BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	SHIELD	COMPOSITE -
22	B	COMPOSITE +
23	W	CAMERA 6.2V
24	R	CAMERA GND
25	LG	M-CAN1-L

Connector No.	M55
Connector Name	FRONT SPEAKER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	P	-(WITH BOSE AUDIO SYSTEM)
2	R	-(WITH BOSE AUDIO SYSTEM)

Connector No.	M50
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	-
2	P	-

Connector No.	M47
Connector Name	JOINT CONNECTOR-M04
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	SHIELD	-
3	B	-
4	SHIELD	-

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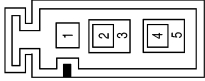
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DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

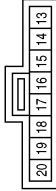
[DISPLAY AUDIO WITH BOSE]

Connector No.	M101
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-
4	B	-
5	SHIELD	-

Connector No.	M88
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14	P	-
15	L	-
17	G	-

Connector No.	M63
Connector Name	FRONT SPEAKER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	P	- (WITH BOSE AUDIO SYSTEM)
2	BG	- (WITH BOSE AUDIO SYSTEM)

Connector No.	M107
Connector Name	JOINT CONNECTOR-M10
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	BG	-
2	BG	-
3	BG	-

Connector No.	M104
Connector Name	AUX IN JACK
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	B	-
4	R	-

Connector No.	M102
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

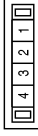
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DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

[DISPLAY AUDIO WITH BOSE]

Connector No.	M113
Connector Name	JOINT CONNECTOR-M12
Connector Color	WHITE



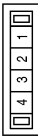
Terminal No.	Color of Wire	Signal Name
1	R	-
2	R	-
3	R	-

Connector No.	M110
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM)
Connector Color	PINK



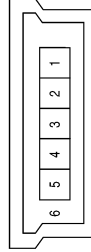
Terminal No.	Color of Wire	Signal Name
72	B	SAT ANT
73	SHIELD	SAT SHIELD

Connector No.	M108
Connector Name	JOINT CONNECTOR-M11
Connector Color	WHITE



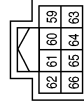
Terminal No.	Color of Wire	Signal Name
1	P	-
2	P	-
3	P	-

Connector No.	M132
Connector Name	USB INTERFACE
Connector Color	BLACK



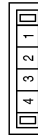
Terminal No.	Color of Wire	Signal Name
1	B	-
2	-	-
3	G	-
4	W	-
5	R	-
6	SHIELD	-

Connector No.	M119
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM AND BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
59	SHIELD	AUX SHIELD
60	B	AUX GND
61	W	AUX R
62	R	AUX L
63	-	-
64	-	-
65	-	-
66	-	-

Connector No.	M118
Connector Name	JOINT CONNECTOR-M13
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	P	-
2	P	-
3	P	-

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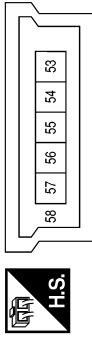
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DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

[DISPLAY AUDIO WITH BOSE]

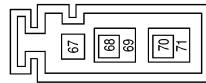
Connector No.	M149
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
53	B	USB GND
54	-	-
55	G	USB D+
56	W	USB D-
57	R	VBUS
58	SHIELD	SHIELD

Terminal No.	Color of Wire	Signal Name
67	B	ANT +B
68	B	MAIN ANT
69	SHIELD	MAIN GND
70	B	ANT SUB
71	SHIELD	SUB GND

Connector No.	M148
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM)
Connector Color	GRAY



Connector No.	M500
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

Connector No.	M301
Connector Name	CENTER SPEAKER
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-

Connector No.	M300
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-

AANIA3077GB

DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

[DISPLAY AUDIO WITH BOSE]

Connector No.	M503
Connector Name	ANTENNA AMP.
Connector Color	BLACK



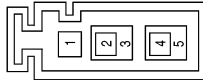
Terminal No.	Color of Wire	Signal Name
4	B	-

Connector No.	M502
Connector Name	ANTENNA AMP.
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-

Connector No.	M501
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-
4	B	-
5	SHIELD	-

Connector No.	M504
Connector Name	GLASS ANTENNA
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	B	-

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DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

[DISPLAY AUDIO WITH BOSE]

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

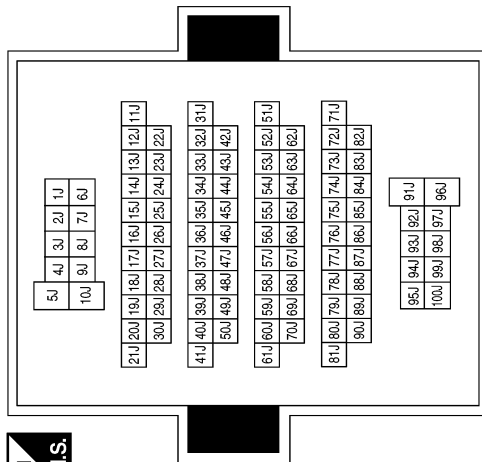


1	2	3
4	5	6
7	8	

Terminal No.	Color of Wire	Signal Name
1	R	-
2	P	-

Terminal No.	Color of Wire	Signal Name
51J	W	-
52J	B	-
53J	R	-
54J	SHIELD	-
55J	G	-
99J	R	-
100J	P	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	GRAY

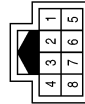


Connector No.	B59
Connector Name	SATELLITE RADIO ANTENNA
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

Connector No.	B35
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	SHIELD	-
4	G	-
5	R	-
7	B	-
8	W	-

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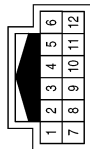
DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

[DISPLAY AUDIO WITH BOSE]

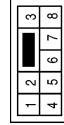
Terminal No.	Color of Wire	Signal Name
7	G	-
8	SHIELD	-
9	G	-
10	R	-
11	B	-
12	W	-

Connector No.	B102
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	SHIELD	-
3	G	-
4	R	-
5	B	-
6	W	-

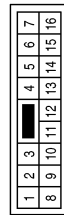
Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-

Terminal No.	Color of Wire	Signal Name
11	P	-
12	W	-
13	G	-
14	G	-
15	R	-

Connector No.	B103
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
8	BG	-
9	P	-
10	R	-

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DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

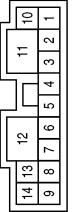
[DISPLAY AUDIO WITH BOSE]

Connector No.	B120
Connector Name	REAR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	WHITE



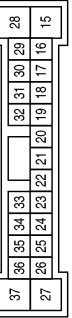
Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-

Connector No.	B110
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



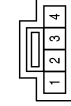
Terminal No.	Color of Wire	Signal Name
1	W	-
2	W	-
3	G	-
4	P	-
5	R	-
6	G	-
7	R	-
8	P	-
10	G	-
11	G	-
12	GR	-
13	BG	-

Connector No.	B109
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



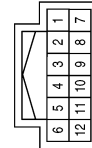
Terminal No.	Color of Wire	Signal Name
15	G	-
18	G	-
19	G	-
20	R	-
21	B	-
22	W	-
23	B	-
27	W	-
28	W	-
31	G	-
32	R	-
33	W	-
37	G	-

Connector No.	R7
Connector Name	MICROPHONE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	SHIELD	-
4	Y	-

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



Terminal No.	Color of Wire	Signal Name
1	L	-
2	Y	-
3	SHIELD	-

Connector No.	B124
Connector Name	REAR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-

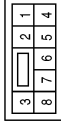
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DISPLAY AUDIO WITH BOSE

[DISPLAY AUDIO WITH BOSE]

< WIRING DIAGRAM >

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



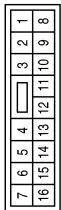
Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-(WITH NAVI OR BOSE AUDIO SYSTEM)

Connector No.	D20
Connector Name	FRONT DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



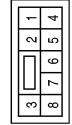
Terminal No.	Color of Wire	Signal Name
5	G	-
6	W	-(WITH NAVI OR BOSE AUDIO SYSTEM)

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	Y	-

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



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	LG	-

Connector No.	D120
Connector Name	FRONT DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-

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DISPLAY AUDIO WITH BOSE

< WIRING DIAGRAM >

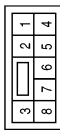
[DISPLAY AUDIO WITH BOSE]

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



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	Y	-

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



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	LG	-

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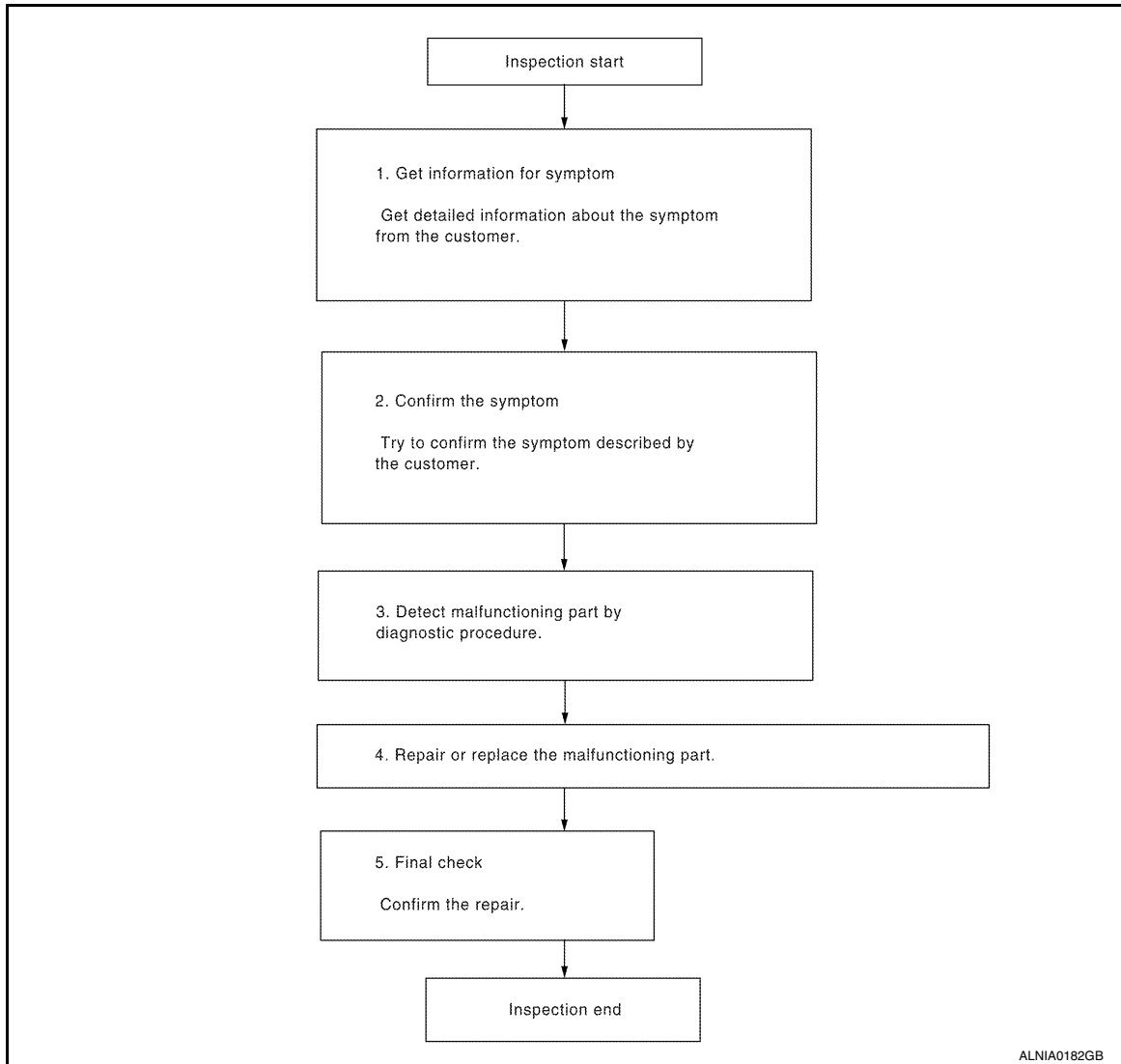
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000010480171

OVERALL SEQUENCE



DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CONFIRM THE SYMPTOM

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

>> GO TO 3.

3.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[DISPLAY AUDIO WITH BOSE]

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.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[DISPLAY AUDIO WITH BOSE]

INSPECTION AND ADJUSTMENT REGISTRATION (AUDIO UNIT)

REGISTRATION (AUDIO UNIT) : Description

INFOID:000000011108799

AFTER REPLACEMENT

If the audio unit is replaced with a new audio unit, the new audio unit must be registered using the Bluetooth D/C(serial #).

CAUTION:

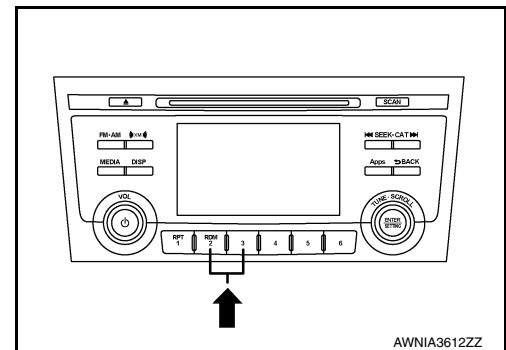
If the new audio unit Bluetooth D/C(serial #) is not registered, the “APPS” mode will not function.

REGISTRATION (AUDIO UNIT) : Work Procedure

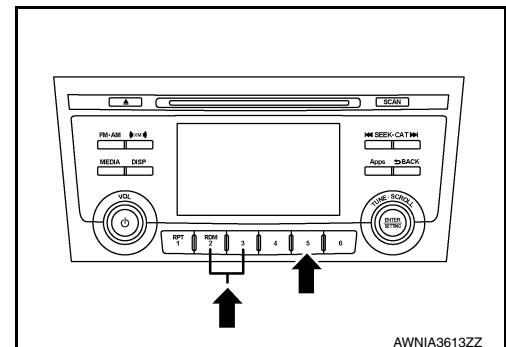
INFOID:000000011108800

1. RECORD BLUETOOTH D/C(SERIAL #) FOR REPLACEMENT AUDIO UNIT

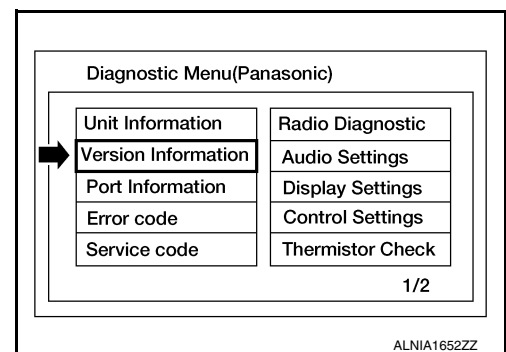
1. Turn ignition switch ON.
2. Turn audio unit OFF.
3. Access the diagnostic menu as follows:
 - Press and hold preset buttons 2 and 3.



- While holding preset buttons 2 and 3, press preset button 5 three times.



4. Select Version Information from the Diagnostic Menu.

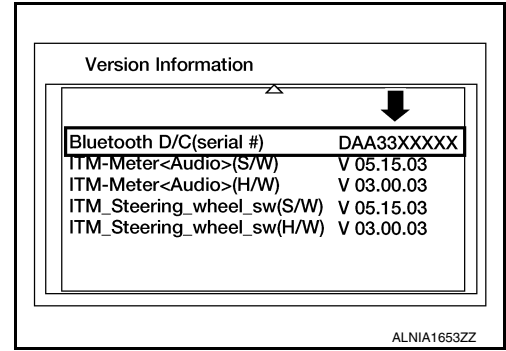


INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[DISPLAY AUDIO WITH BOSE]

5. Scroll through the menu pages to Bluetooth D/C(serial #) and record the number displayed.



>> GO TO 2.

2. REGISTER REPLACEMENT AUDIO UNIT

Register the replacement audio unit by contacting NISSAN Owner Services. Refer to TSB.

>> GO TO 3.

3. OPERATION CHECK

Verify that the audio unit "APPS" function operates normally.

>> Work End.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:000000010480172

Regarding Wiring Diagram information, refer to [AV-143, "Wiring Diagram"](#).

1. CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
7	ACC power supply	25 (10A)
19	Battery power supply	15 (20A)

Are the fuses blown?

- YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M45.
3. Check voltage between audio unit connector M45 and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M45	7	—	Ignition switch: ON	Battery voltage
	19		Ignition switch: OFF	

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M46.
3. Check continuity between audio unit connectors and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M45	20	—	Yes
M46	44		
	45		

Is the inspection result normal?

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

BOSE SPEAKER AMP

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:000000010480173

Regarding Wiring Diagram information, refer to [AV-143, "Wiring Diagram"](#).

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

1. CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
11	Battery power supply	12 (20A)

Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bose speaker amp. connector B110.
3. Check voltage between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
B110	11	—	Ignition switch: OFF	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bose speaker amp. connector B110.
3. Check continuity between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B110	12	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

FRONT DOOR SPEAKER

Diagnosis Procedure

INFOID:000000010480174

Regarding Wiring Diagram information, refer to [AV-143. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the audio unit, Bose speaker amp. 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 terminals or connectors.

2. CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY (BOSE SPEAKER AMP.)

1. Disconnect Bose speaker amp. connector B110 and suspect front door speaker connector.
2. Check continuity between Bose speaker amp. connector B110 and suspect front door speaker connector.

Bose speaker amp.		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
B110	4	D20 (LH)	1	Yes
	5		2	
	8	D120 (RH)	1	
	13		2	

3. Check continuity between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B110	4	—	No
	5		
	8		
	13		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT DOOR SPEAKER SIGNAL (BOSE SPEAKER AMP.)

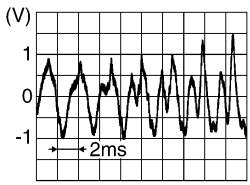
1. Connect Bose speaker amp. connector B110 and suspect front door speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between Bose speaker amp. connector B110 and ground.

Bose speaker amp. connector B110		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

4	5	Audio signal output	
8	13		

Is the inspection result normal?

YES >> Replace front door speaker. Refer to [AV-200, "Removal and Installation"](#).

NO >> GO TO 4.

4. CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY (AUDIO UNIT)

1. Turn ignition switch to OFF.
2. Disconnect Bose speaker amp. connector B109 and audio unit connector M45.
3. Check continuity between Bose speaker amp. connector B109 and audio unit connector M45.

Bose speaker amp.		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
B109	32	M45	3	Yes
	18		2	
	20		12	
	19		11	

4. Check continuity between Bose speaker amp. connector B109 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	32	—	No
	18		
	20		
	19		

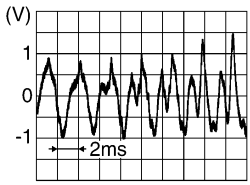
Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5. CHECK FRONT DOOR SPEAKER SIGNAL (AUDIO UNIT)

1. Connect Bose speaker amp. connector B109 and audio unit connector M45.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between audio unit connector M45 and ground.

Audio unit connector M45		Condition	Reference value
(+) Terminal	(-) Terminal		
2	3	Audio signal output	
11	12		

Is the inspection result normal?

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

-
- YES >> Replace Bose speaker amp. Refer to [AV-203, "Removal and Installation"](#).
 - NO >> Replace audio unit. Refer to [AV-195, "Removal and Installation"](#).

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FRONT SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

FRONT SPEAKER

Diagnosis Procedure

INFOID:000000010480175

Regarding Wiring Diagram information, refer to [AV-143. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the audio unit, Bose speaker amp. 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 terminals or connectors.

2. CHECK FRONT SPEAKER SIGNAL CIRCUIT CONTINUITY (BOSE SPEAKER AMP.)

1. Disconnect Bose speaker amp. connector B110 and suspect front speaker connector.
2. Check continuity between Bose speaker amp. connector B110 and suspect front speaker connector.

Bose speaker amp.		Front speaker		Continuity
Connector	Terminal	Connector	Terminal	
B110	4	M55 (LH)	1	Yes
	5		2	
	8	M63 (RH)	1	
	13		2	

3. Check continuity between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B110	4	—	No
	5		
	8		
	13		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT SPEAKER SIGNAL (BOSE SPEAKER AMP.)

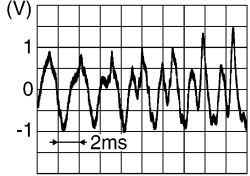
1. Connect Bose speaker amp. connector B110 and suspect front speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between Bose speaker amp. connector B110 and ground.

Bose speaker amp. connector B110		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

4	5	Audio signal output	
8	13		

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Is the inspection result normal?

- YES >> Replace front speaker. Refer to [AV-198, "Removal and Installation"](#).
- NO >> GO TO 4.

4. CHECK FRONT SPEAKER SIGNAL CIRCUIT CONTINUITY (AUDIO UNIT)

1. Turn ignition switch to OFF.
2. Disconnect Bose speaker amp. connector B109 and audio unit connector M45.
3. Check continuity between Bose speaker amp. connector B109 and audio unit connector M45.

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Bose speaker amp.		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
B109	32	M45	3	Yes
	18		2	
	20		12	
	19		11	

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4. Check continuity between Bose speaker amp. connector B109 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	32	—	No
	18		
	20		
	19		

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Is the inspection result normal?

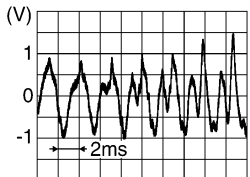
- YES >> GO TO 5.
- NO >> Repair or replace harness or connectors.

5. CHECK FRONT SPEAKER SIGNAL (AUDIO UNIT)

1. Connect Bose speaker amp. connector B109 and audio unit connector M45.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between audio unit connector M45 and ground.

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Audio unit connector M45		Condition	Reference value
(+)	(-)		
Terminal	Terminal	Audio signal output	
2	3		
11	12		

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Is the inspection result normal?

FRONT SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

-
- YES >> Replace Bose speaker amp. Refer to [AV-203. "Removal and Installation"](#).
NO >> Replace audio unit. Refer to [AV-195. "Removal and Installation"](#).

CENTER SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

CENTER SPEAKER

Diagnosis Procedure

INFOID:000000010480176

Regarding Wiring Diagram information, refer to [AV-143. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the audio unit, Bose speaker amp. 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 terminals or connectors.

2. CHECK CENTER SPEAKER SIGNAL CIRCUIT CONTINUITY (BOSE SPEAKER AMP.)

1. Disconnect Bose speaker amp. connector B110 and center speaker connector M301.
2. Check continuity between Bose speaker amp. connector B110 and center speaker connector M301.

Bose speaker amp.		Center speaker		Continuity
Connector	Terminal	Connector	Terminal	
B110	6	M301	1	Yes
	7		2	

3. Check continuity between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B110	6	—	No
	7		

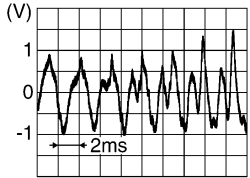
Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK CENTER SPEAKER SIGNAL (BOSE SPEAKER AMP.)

1. Connect Bose speaker amp. connector B110 and center speaker connector M301.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between Bose speaker amp. connector B110 and ground.

Bose speaker amp. connector B110		Condition	Reference value
(+) Terminal	(-) Terminal		
6	7	Audio signal output	

Is the inspection result normal?

CENTER SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

- YES >> Replace center speaker. Refer to [AV-199. "Removal and Installation"](#).
 NO >> GO TO 4.

4. CHECK CENTER SPEAKER SIGNAL CIRCUIT CONTINUITY (AUDIO UNIT)

1. Turn ignition switch to OFF.
2. Disconnect Bose speaker amp. connector B109 and audio unit connector M45.
3. Check continuity between Bose speaker amp. connector B109 and audio unit connector M45.

Bose speaker amp.		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
B109	32	M45	3	Yes
	18		2	
	20		12	
	19		11	

4. Check continuity between Bose speaker amp. connector B109 and ground.

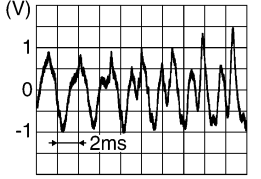
Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	32	—	No
	18		
	20		
	19		

Is the inspection result normal?

- YES >> GO TO 5.
 NO >> Repair or replace harness or connectors.

5. CHECK CENTER SPEAKER SIGNAL (AUDIO UNIT)

1. Connect Bose speaker amp. connector B109 and audio unit connector M45.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between audio unit connector M45 and ground.

Audio unit connector M45		Condition	Reference value
(+) Terminal	(-) Terminal		
2	3	Audio signal output	
11	12		

Is the inspection result normal?

- YES >> Replace Bose speaker amp. Refer to [AV-203. "Removal and Installation"](#).
 NO >> Replace audio unit. Refer to [AV-195. "Removal and Installation"](#).

REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

REAR DOOR SPEAKER

Diagnosis Procedure

INFOID:000000010480177

Regarding Wiring Diagram information, refer to [AV-143. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the audio unit, Bose speaker amp. 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 terminals or connectors.

2. CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY (BOSE SPEAKER AMP.)

1. Disconnect Bose speaker amp. connectors B109 and suspect rear door speaker connector.
2. Check continuity between Bose speaker amp. connectors B109 and suspect rear door speaker connector.

Bose speaker amp.		Rear door speaker		Continuity
Connector	Terminal	Connector	Terminal	
B109	15	D202 (LH)	1	Yes
	28		2	
	37	D302 (RH)	1	
	27		2	

3. Check continuity between Bose speaker amp. connectors B109 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	15	—	No
	28		
	37		
	27		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK REAR DOOR SPEAKER SIGNAL (BOSE SPEAKER AMP.)

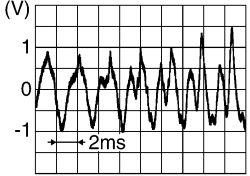
1. Connect Bose speaker amp. connectors B109 and suspect rear door speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between Bose speaker amp. connectors B109 and ground.

Bose speaker amp.			Condition	Reference value
Connector	(+)	(-)		
	Terminal	Terminal		

REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

B109	15	28	Audio signal output	
	37	27		

Is the inspection result normal?

- YES >> Replace rear door speaker. Refer to [AV-201. "Removal and Installation"](#).
 NO >> GO TO 4.

4. CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY (AUDIO UNIT)

- Turn ignition switch to OFF.
- Disconnect Bose speaker amp. connector B109 and audio unit connector M45.
- Check continuity between Bose speaker amp. connector B109 and audio unit connector M45.

Bose speaker amp.		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
B109	21	M45	4	Yes
	22		5	
	23		13	
	33		14	

- Check continuity between Bose speaker amp. connector B109 and ground.

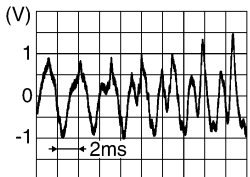
Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	21	—	No
	22		
	23		
	33		

Is the inspection result normal?

- YES >> GO TO 5.
 NO >> Repair or replace harness or connectors.

5. CHECK REAR DOOR SPEAKER SIGNAL (AUDIO UNIT)

- Connect Bose speaker amp. connector B109 and audio unit connector M45.
- Turn ignition switch to ACC.
- Push audio unit POWER switch.
- Check signal between audio unit connector M45 and ground.

Audio unit connector M45		Condition	Reference value
(+) Terminal	(-) Terminal		
4	5	Audio signal output	
13	14		

Is the inspection result normal?

REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

-
- YES >> Replace Bose speaker amp. Refer to [AV-203, "Removal and Installation"](#).
NO >> Replace audio unit. Refer to [AV-195, "Removal and Installation"](#).

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REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

REAR SPEAKER

Diagnosis Procedure

INFOID:000000010480178

Regarding Wiring Diagram information, refer to [AV-143. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the audio unit, Bose speaker amp. 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 terminals or connectors.

2. CHECK REAR SPEAKER SIGNAL CIRCUIT CONTINUITY (BOSE SPEAKER AMP.)

1. Disconnect Bose speaker amp. connector B110 and suspect rear speaker connector.
2. Check continuity between Bose speaker amp. connector B110 and suspect rear speaker connector.

Bose speaker amp.		Rear speaker		Continuity
Connector	Terminal	Connector	Terminal	
B110	1	B120 (LH)	1	Yes
	10		2	
	2	B124 (RH)	1	
	3		2	

3. Check continuity between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B110	1	—	No
	10		
	2		
	3		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK REAR SPEAKER SIGNAL (BOSE SPEAKER AMP.)

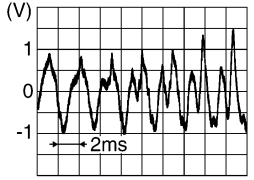
1. Connect Bose speaker amp. connector B110 and suspect rear door speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between Bose speaker amp. connector B110 and ground.

Bose speaker amp. connector B110		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

1	10	Audio signal output	
2	3		

Is the inspection result normal?

- YES >> Replace rear speaker. Refer to [AV-202. "Removal and Installation"](#).
- NO >> GO TO 4.

4. CHECK REAR SPEAKER SIGNAL CIRCUIT CONTINUITY (AUDIO UNIT)

1. Turn ignition switch to OFF.
2. Disconnect Bose speaker amp. connector B109 and audio unit connector M45.
3. Check continuity between Bose speaker amp. connector B109 and audio unit connector M45.

Bose speaker amp.		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
B109	21	M45	4	Yes
	22		5	
	23		13	
	33		14	

4. Check continuity between Bose speaker amp. connector B109 and ground.

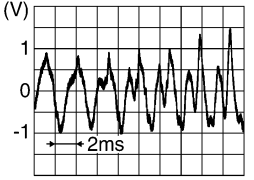
Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	21	—	No
	22		
	23		
	33		

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Repair or replace harness or connectors.

5. CHECK REAR SPEAKER SIGNAL (AUDIO UNIT)

1. Connect Bose speaker amp. connector B109 and audio unit connector M45.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check signal between audio unit connector M45 and ground.

Audio unit connector M45		Condition	Reference value
(+) Terminal	(-) Terminal		
4	5	Audio signal output	
13	14		

Is the inspection result normal?

REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

-
- YES >> Replace Bose speaker amp. Refer to [AV-203. "Removal and Installation"](#).
NO >> Replace audio unit. Refer to [AV-195. "Removal and Installation"](#).

AMP ON SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

AMP ON SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000010480179

Regarding Wiring Diagram information, refer to [AV-143. "Wiring Diagram"](#).

1. CHECK CONTINUITY BETWEEN AUDIO UNIT AND BOSE SPEAKER AMP.

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M45 and Bose speaker amp. connector B109.
3. Check continuity between audio unit connector M45 and Bose speaker amp. connector M109.

Audio unit		Bose speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M45	1	B109	31	Yes

4. Check continuity between audio unit connector M45 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M45	1	—	No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK AUDIO UNIT VOLTAGE

1. Connect audio unit connector M45.
2. Turn ignition switch ON.
3. Check voltage between audio unit connector M45 and ground.

Audio unit (+)		Ground (-)	Voltage (Approx.)
Connector	Terminal		
M45	1	—	Battery voltage

Is the inspection result normal?

YES >> Replace Bose speaker amp. Refer to [AV-203. "Removal and Installation"](#).

NO >> Replace audio unit. Refer to [AV-195. "Removal and Installation"](#).

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AV

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000010480180

Regarding Wiring Diagram information, refer to [AV-143, "Wiring Diagram"](#).

1. CHECK REVERSE INPUT SIGNAL

1. Turn ignition switch ON.
2. Shift the selector lever to R (reverse).
3. Check voltage between audio unit connector M46 and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M46	39	—	Selector lever in R (reverse)	Battery Voltage

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK CAMERA POWER SUPPLY CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M46 and rear view camera connector.
3. Check continuity between audio unit connector M46 and rear view camera connector B35.

Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M46	23	B35	8	Yes

4. Check continuity between audio unit connector M46 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M46	23		No

Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK CAMERA POWER SUPPLY VOLTAGE

1. Connect audio unit connector M46 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to R (reverse).
4. Check voltage between audio unit connector M46 and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M46	23	—	Selector lever is in "R".	6.0 V

Is inspection result normal?

YES >> GO TO 4.

NO >> Replace audio unit. Refer to [AV-195, "Removal and Installation"](#).

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

[DISPLAY AUDIO WITH BOSE]

< DTC/CIRCUIT DIAGNOSIS >

4. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M46 and rear view camera connector.
3. Check continuity between audio unit connector M46 and rear view camera connector B35.

Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M46	22	B35	5	Yes

4. Check continuity between audio unit connector M44 terminal 82 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M44	22		No

Is inspection result normal?

- YES >> GO TO 5.
 NO >> Repair or replace harness or connectors.

5. CHECK CAMERA GROUND CIRCUIT CONTINUITY

Check continuity between audio unit connector M46 and rear view camera connector B35.

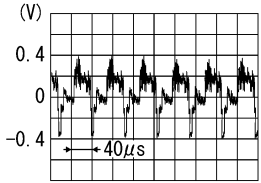
Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M46	24	B35	7	Yes

Is inspection result normal?

- YES >> GO TO 6.
 NO >> Repair or replace harness or connectors.

6. CHECK CAMERA IMAGE SIGNAL

1. Connect audio unit connector M46 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to R (reverse).
4. Check signal between audio unit connector M46 and ground.

Audio unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M46	22	—	Camera image displayed.	 <p>SKIB2251J</p>

Is inspection result normal?

- YES >> Replace audio unit. Refer to [AV-195, "Removal and Installation"](#).
 NO >> Replace rear view camera. Refer to [AV-211, "Removal and Installation"](#).

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AV

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

MICROPHONE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000010480181

Regarding Wiring Diagram information, refer to [AV-143. "Wiring Diagram"](#).

1. CHECK MICROPHONE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M46 and microphone connector R7.
3. Check continuity between audio unit connector M46 and microphone connector R7.

Audio unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M46	50	R7	2	Yes
	51		4	
	52		1	

4. Check continuity between audio unit connector M46 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M46	50	—	No
	51		
	52		

Is inspection result normal?

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

2. CHECK MICROPHONE VCC VOLTAGE

1. Connect audio unit connector M46.
2. Turn ignition switch ON.
3. Check voltage between terminals of audio unit connector M46.

Audio unit connector M46		Voltage (Approx.)
(+)	(-)	
Terminal	Terminal	
51	50	5.0 V

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Replace audio unit. Refer to [AV-195. "Removal and Installation"](#).

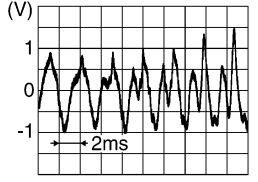
3. CHECK MICROPHONE SIGNAL

1. Connect microphone connector.
2. Check signal between terminals of audio unit connector M46.

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

Audio unit connector M46		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
52	50	Speak into microphone.	

Is the inspection result normal?

- YES >> Replace audio unit. Refer to [AV-195. "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-210. "Removal and Installation"](#).

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STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

STEERING SWITCH






Diagnosis Procedure

INFOID:000000010480182

Regarding Wiring Diagram information, refer to [AV-143. "Wiring Diagram"](#).

1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect combination switch connector M88.
3. Check resistance between combination switch connector terminals.

Combination switch connector M88		Condition	Resistance Ω (Approx.)
Terminal	Terminal		
14	17	Depress SOURCE switch.	1
		Depress Δ switch.	121
		Depress ∇ switch.	321
		Depress  switch.	723
		Depress ENTER switch.	2023
15	17	Depress -  switch.	1
		Depress  + switch.	121
		Depress  switch.	321
		Depress  switch.	723
		Depress DISP switch.	2023

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering switches. Refer to [AV-205. "Removal and Installation"](#).

2. CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

1. Disconnect combination meter connector M24 and combination switch connector M30.
2. Check continuity between combination meter connector M24 and combination switch connector M30.

Combination meter		Combination switch		Continuity
Connector	Terminal	Connector	Terminal	
M24	3	M30	24	Yes
	24		33	
	4		31	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	3	—	No
	24		
	4		

Is the inspection result normal?

STEERING SWITCH

[DISPLAY AUDIO WITH BOSE]

< DTC/CIRCUIT DIAGNOSIS >

- YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3. CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M88.

Combination switch				Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M88	14	Yes
	31		15	
	33		17	

Is the inspection result normal?

- YES >> GO TO 4.
NO >> Replace spiral cable. Refer to [SR-15. "Removal and Installation"](#).

4. CHECK HARNESS BETWEEN COMBINATION METER AND AUDIO UNIT

1. Disconnect audio unit connector M46.
2. Check continuity between combination meter connector M24 and audio unit connector M46.

Combination meter		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
M24	37	M46	26	Yes
	36		25	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	37	—	No
	36		

Is the inspection result normal?

- YES >> Replace audio unit. Refer to [AV-195. "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

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USB CONNECTOR

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

USB CONNECTOR

Diagnosis Procedure

INFOID:000000010480183

Regarding Wiring Diagram information, refer to [AV-143. "Wiring Diagram"](#).

1. CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M149 and USB interface connector M132.
3. Check continuity between audio unit connector M149 and USB interface connector M132.

Audio unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M149	53	M132	1	Yes
	55		3	
	56		4	
	57		5	
	58		6	

4. Check continuity between audio unit connector M149 and ground.

Audio unit		—	Continuity
Connector	Terminal		
M149	55	Ground	No
	57		

Is the inspection result normal?

- YES >> Replace the USB interface. Refer to [AV-196. "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

AUXILIARY INPUT JACK

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

AUXILIARY INPUT JACK

Diagnosis Procedure

INFOID:000000010480184

Regarding Wiring Diagram information, refer to [AV-143. "Wiring Diagram"](#).

1. CHECK AUX IN JACK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M119 and AUX in jack connector M104.
3. Check continuity between audio unit connector M119 and AUX in jack connector M104.

Audio unit		AUX in jack		Continuity
Connector	Terminal	Connector	Terminal	
M119	61	M104	1	Yes
	60		2	
	62		4	

4. Check continuity between audio unit connector M119 and ground.

Audio unit		—	Continuity
Connector	Terminal		
M119	61	Ground	No
	62		

Is the inspection result normal?

- YES >> Replace the AUX in jack. Refer to [AV-197. "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

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SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:000000010480185

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	Audio unit	Malfunction in audio unit. Refer to AV-130. "On Board Diagnosis Function" .

AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

Symptoms	Check items	Probable malfunction location
	No sound from all speakers.	<ul style="list-style-type: none"> • Speaker circuit shorted to ground. Refer to AV-143. "Wiring Diagram". • Bose amp. ON signal circuit malfunction. Refer to AV-179. "Diagnosis Procedure". • Bose speaker amp. power supply and ground circuits malfunction. Refer to AV-163. "BOSE SPEAKER AMP : Diagnosis Procedure".
No sound comes out or the level of the sound is low.	Only a certain speaker (front door speaker LH, front door speaker RH, front speaker LH, front speaker RH, center speaker, rear door speaker LH, rear door speaker RH, rear speaker LH, rear speaker RH) does not output sound.	<ul style="list-style-type: none"> • Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and Bose speaker amp. Refer to: <ul style="list-style-type: none"> - AV-165. "Diagnosis Procedure" (front door speaker). - AV-168. "Diagnosis Procedure" (front speaker). - AV-171. "Diagnosis Procedure" (center speaker). - AV-173. "Diagnosis Procedure" (rear door speaker). - AV-176. "Diagnosis Procedure" (rear speaker). • Sound signal circuit malfunction between Bose speaker amp. and speaker. Refer to: <ul style="list-style-type: none"> - AV-165. "Diagnosis Procedure" (front door speaker). - AV-168. "Diagnosis Procedure" (front speaker). - AV-171. "Diagnosis Procedure" (center speaker). - AV-173. "Diagnosis Procedure" (rear door speaker). - AV-176. "Diagnosis Procedure" (rear speaker). • Malfunction in speaker. Refer to: <ul style="list-style-type: none"> - AV-200. "Removal and Installation" (front door speaker). - AV-198. "Removal and Installation" (front speaker). - AV-199. "Removal and Installation" (center speaker). - AV-201. "Removal and Installation" (rear door speaker). - AV-202. "Removal and Installation" (rear speaker). • Malfunction in audio unit. Refer to AV-130. "On Board Diagnosis Function". • Malfunction in Bose speaker amp. Replace Bose speaker amp. Refer to AV-203. "Removal and Installation".

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AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

Symptoms	Check items	Probable malfunction location
	Noise comes out from all speakers.	<ul style="list-style-type: none"> • Malfunction in audio unit. Refer to AV-130. "On Board Diagnosis Function". • Malfunction in Bose speaker amp. Replace Bose speaker amp. Refer to AV-203. "Removal and Installation".
Noise is mixed with audio.	Noise comes out only from a certain speaker (front door speaker LH, front door speaker RH, front speaker LH, front speaker RH, center speaker, rear speaker door LH, rear door speaker RH, rear speaker LH, rear speaker RH).	<ul style="list-style-type: none"> • Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and Bose speaker amp. Refer to: <ul style="list-style-type: none"> - AV-165. "Diagnosis Procedure" (front door speaker). - AV-168. "Diagnosis Procedure" (front speaker). - AV-171. "Diagnosis Procedure" (center speaker). - AV-173. "Diagnosis Procedure" (rear door speaker). - AV-176. "Diagnosis Procedure" (rear speaker). • Sound signal circuit malfunction between Bose speaker amp. and speaker. Refer to: <ul style="list-style-type: none"> - AV-165. "Diagnosis Procedure" (front door speaker). - AV-168. "Diagnosis Procedure" (front speaker). - AV-171. "Diagnosis Procedure" (center speaker). - AV-173. "Diagnosis Procedure" (rear door speaker). - AV-176. "Diagnosis Procedure" (rear speaker). • Malfunction in speaker. • Poor Installation of speaker (e.g. backlash and looseness). Refer to: <ul style="list-style-type: none"> - AV-200. "Removal and Installation" (front door speaker). - AV-198. "Removal and Installation" (front speaker). - AV-199. "Removal and Installation" (center speaker). - AV-201. "Removal and Installation" (rear door speaker). - AV-202. "Removal and Installation" (rear speaker). • Malfunction in audio unit. Refer to AV-130. "On Board Diagnosis Function". • Malfunction in Bose speaker amp. Replace Bose speaker amp. Refer to AV-203. "Removal and Installation".
	Noise is mixed with radio only (when the vehicle hits a bump or while driving over bad roads)	<ul style="list-style-type: none"> • Poor connector connection of antenna or antenna feeder. Refer to AV-206. "Location of Antenna".
No radio reception or poor reception.	<ul style="list-style-type: none"> • Other audio sounds are normal. • Any radio station cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises). 	<ul style="list-style-type: none"> • Antenna amp. ON signal circuit malfunction. Refer to AV-136. "Reference Value". • Poor connector connection of antenna or antenna feeder. Refer to AV-206. "Location of Antenna".

AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

Symptoms	Check items	Probable malfunction location
No satellite radio reception.	Satellite radio antenna malfunction.	<ul style="list-style-type: none"> • Poor continuity in antenna feeder. • Poor connector connection of antenna or antenna feeder. • Loose satellite radio antenna mounting nut. Refer to AV-206, "Location of Antenna".
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.

RELATED TO HANDS-FREE PHONE

- Before performing diagnosis, confirm that the cellular phone being used by the customer is compatible with the vehicle.
- It is possible that a malfunction is occurring due to a version change of the phone even though the phone is a compatible type. This can be confirmed by changing the cellular phone to another compatible type, and check that it operates normally. It is important to determine whether the cause of the malfunction is the vehicle or the cellular phone.

Check Compatibility








1. Make sure the customer's Bluetooth[®] related concern is understood.
2. Verify the customer's concern.
NOTE:
The customer's phone may be required, depending upon their concern.
3. Write down the customer's phone brand, model and service provider.
NOTE:
It is necessary to know the service provider. On occasion, a given phone may be on the approved list with one provider, but may not be on the approved list with other providers.
4. Go to "www.nissanusa.com/bluetooth/".
 - a. Using the website's search engine, find out if the customer's phone is on the approved list.
 - b. If the customer's phone is NOT on the approved list:
Stop diagnosis here. The customer needs to obtain a Bluetooth[®] phone that is on the approved list before any further action.
 - c. If the feature related to the customer's concern shows as "N" (not compatible):
Stop diagnosis here. If the customer still wants the feature to function, they will need to get an approved phone showing the feature as "Y" (compatible) in the "Basic Features".
 - d. If the feature related to the customer's concern shows as "Y" (compatible):
Perform diagnosis as per the following table.

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection (no connection is displayed on the display at the guide).	Repeat the registration of cellular phone.	Malfunction in audio unit. Replace audio unit. Refer to AV-195, "Removal and Installation" .
Hands-free phone cannot be established.	<ul style="list-style-type: none"> • Hands-free phone operation can be made, but the communication cannot be established. • Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation. 	
The other party's voice cannot be heard by hands-free phone.	Check the "microphone speaker" in Inspection & Adjustment Mode if sound is heard.	
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-182, "Diagnosis Procedure" .

AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

Symptoms	Check items	Probable malfunction location
The system cannot be operated.	<ul style="list-style-type: none"> • The voice recognition can be controlled. • Steering switch's + , - , and  does not work. 	Steering switch malfunction. Replace steering switch. Refer to AV-205 , " Removal and Installation ".
	Steering switch's  ,  + ,  - , and  switches do not work.	Steering switch signal circuit malfunction. Refer to AV-184 , " Diagnosis Procedure ".
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-184 , " Diagnosis Procedure ".

RELATED TO REAR VIEW CAMERA

Symptoms	Check items	Probable malfunction location
Rear view camera is inoperative.	Reverse signal circuit malfunction.	Reverse signal circuit malfunction between BCM and audio unit. Refer to AV-180 , " Diagnosis Procedure ".
	Camera image signal circuit malfunction.	Camera image signal circuit malfunction between rear view camera and audio unit. Refer to AV-180 , " Diagnosis Procedure ".
	Rear view camera malfunction.	Replace rear view camera. Refer to AV-211 , " Removal and Installation ".

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

NORMAL OPERATING CONDITION

Description

INFOID:000000010480186

RELATED TO NOISE

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

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"> • Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		<ul style="list-style-type: none"> • Fuel pump condenser
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"> • Relay malfunction, audio unit malfunction
	The noise occurs when various motors are operating.	<ul style="list-style-type: none"> • Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		<ul style="list-style-type: none"> • 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.		<ul style="list-style-type: none"> • Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

RELATED TO HANDS-FREE PHONE

Symptom	Cause and Counter measure
Does not recognize cellular phone connection (No connection is displayed on the display at the guide).	<p>Some Bluetooth® enabled cellular phones may not be recognized by the in-vehicle phone module.</p> <p>Refer to "RELATED TO HANDS-FREE PHONE (Check Compatibility)" in AV-188, "Symptom Table".</p>
Cannot use hands-free phone.	<p>Customer will not be able to use a hands-free phone under the following conditions:</p> <ul style="list-style-type: none"> • The vehicle is outside of the telephone service area. • The vehicle is in an area where it is difficult to receive radio waves; such as in a tunnel, in an underground parking garage, near a tall building or in a mountainous area. • The cellular phone is locked to prevent it from being dialed. <p>NOTE:</p> <p>While a cellular phone is connected through the Bluetooth® wireless connection, the battery power of the cellular phone may discharge quicker than usual. The Bluetooth® Hands-Free Phone System cannot charge cellular phones.</p>

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO WITH BOSE]

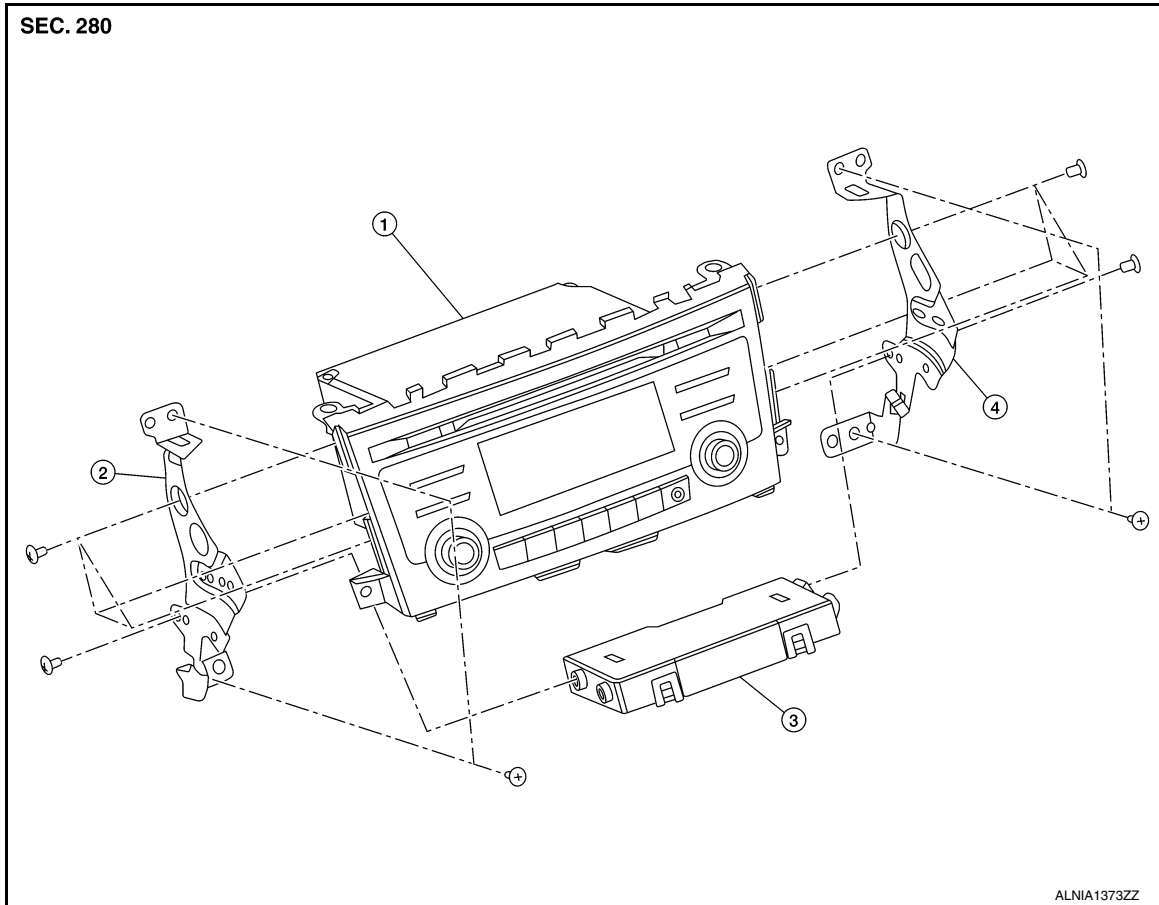
Symptom	Cause and Counter measure
The other party's voice cannot be heard by hands-free phone.	When the radio wave condition is not ideal or ambient sound is too loud, it may be difficult to hear the other person's voice during a call.
Poor sound quality.	Do not place the cellular phone in an area surrounded by metal or far away from the in-vehicle phone module to prevent tone quality degradation and wireless connection disruption.

REMOVAL AND INSTALLATION

AUDIO UNIT

Exploded View

INFOID:000000010480187



- | | | |
|----------------------------|----------------------------|------------------|
| 1. Audio unit | 2. Audio unit bracket (LH) | 3. A/C auto amp. |
| 4. Audio unit bracket (RH) | | |

Removal and Installation

INFOID:000000010480188

REMOVAL

1. Disconnect the negative battery terminal. Refer to [PG-78, "Removal and Installation"](#).
2. Remove cluster lid C. Refer to [IP-20, "Cluster Lid C"](#).
3. Remove the A/C switch assembly. Refer to [HAC-101, "Removal and Installation"](#).
4. Remove the audio unit bracket screws, then pull out the audio unit.
5. Disconnect the harness connectors from the audio unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

When replacing audio unit, the audio unit must be registered. Refer to [AV-161, "REGISTRATION \(AUDIO UNIT\) : Work Procedure"](#).

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USB INTERFACE

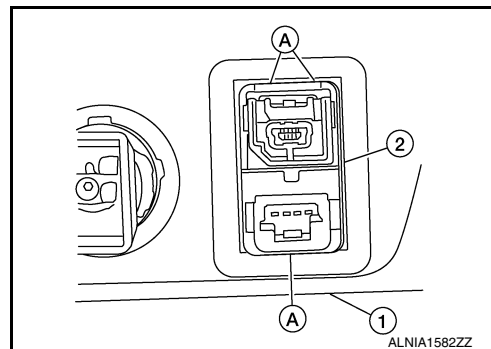
Removal and Installation

INFOID:000000010480189

REMOVAL

1. Remove the shift selector finisher. Refer to [IP-23, "Exploded View"](#).
2. Release the pawls (A) and remove the USB interface (2) from the back of the shift selector finisher (1).

: Pawl



INSTALLATION

Installation is in the reverse order of removal.

AUX IN JACK

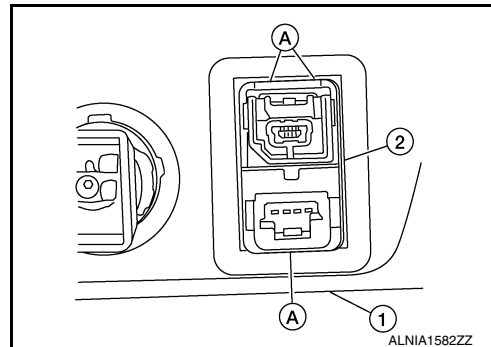
Removal and Installation

INFOID:000000010480190

REMOVAL

1. Remove the shift selector finisher. Refer to [IP-18. "Removal and Installation"](#).
2. Release the pawls (A) and remove the AUX in jack (2) from the back of the shift selector finisher (1).

⊖: Pawl



INSTALLATION

Installation is in the reverse order of removal.

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FRONT SPEAKER

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

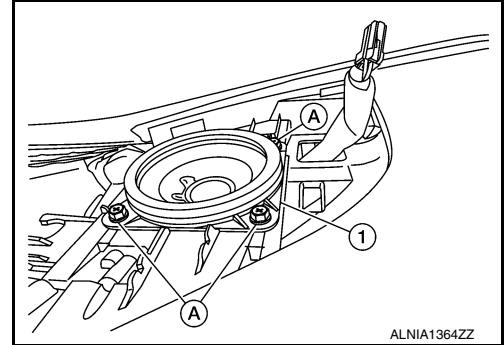
FRONT SPEAKER

Removal and Installation

INFOID:000000010480191

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-21, "FRONT PILLAR FINISHER : Removal and Installation"](#).
2. Remove the front speaker grille using a suitable tool.
3. Remove the front speaker screws (A).
4. Pull out the front speaker (1), disconnect the harness connector from front speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

CENTER SPEAKER

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

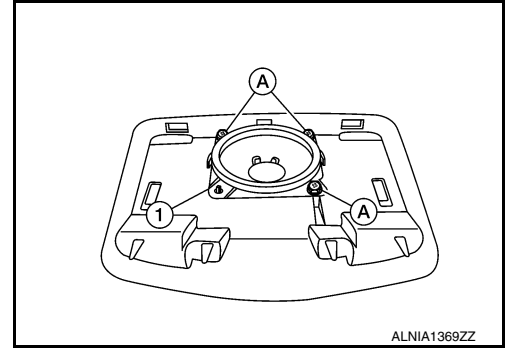
CENTER SPEAKER

Removal and Installation

INFOID:000000010480192

REMOVAL

1. Remove the center speaker grille using a suitable tool.
2. Remove the center speaker screws (A).
3. Pull out the center speaker (1), disconnect the harness connector from the center speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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FRONT DOOR SPEAKER

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

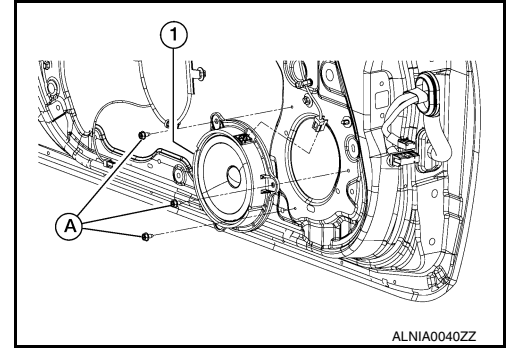
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000010480193

REMOVAL

1. Remove the front door finisher. Refer to [INT-15, "Removal and Installation"](#).
2. Remove the front door speaker screws (A).
3. Disconnect the harness connector from the front door speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

REAR DOOR SPEAKER

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

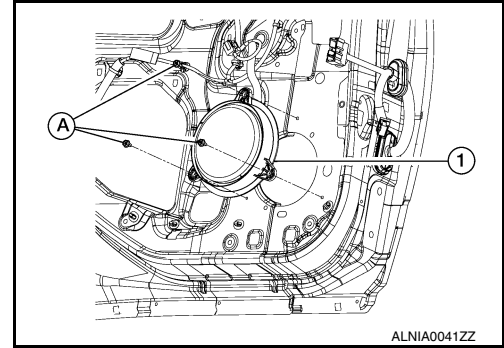
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000010480194

REMOVAL

1. Remove the rear door finisher. Refer to [INT-18. "Removal and Installation"](#).
2. Remove the rear door speaker screws (A).
3. Disconnect the harness connector from the rear door speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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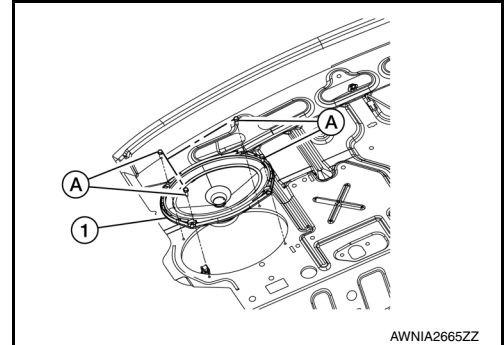
REAR SPEAKER

Removal and Installation

INFOID:000000010480195

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
2. Remove the rear speaker screws (A).
3. Disconnect the harness connector from the rear speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

BOSE SPEAKER AMP

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

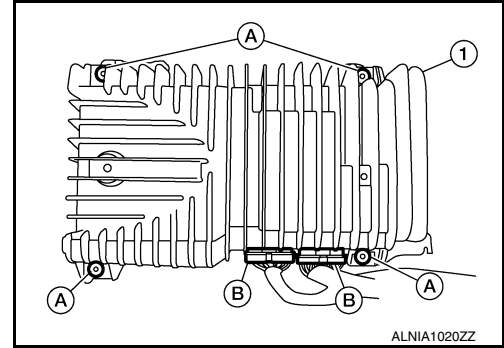
BOSE SPEAKER AMP

Removal and Installation

INFOID:000000010480196

REMOVAL

1. Open the trunk lid.
2. Remove the Bose speaker amp. screws (A).
3. Disconnect the harness connectors (B) from the Bose speaker amp. (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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SATELLITE RADIO ANTENNA

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

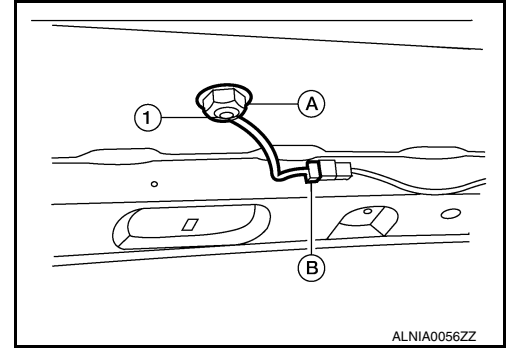
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:000000010480197

REMOVAL

1. Lower the headlining at the rear. Refer to [INT-30, "Removal and Installation"](#).
2. Remove the satellite radio antenna nut (A).
3. Disconnect the harness connector (B) from the satellite radio antenna (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

Satellite radio antenna nut : 6.5 N·m (0.66 kg-m, 58 in-lb)

CAUTION:

If the satellite radio antenna nut is not tightened to the specified torque, lower sensitivity of the antenna may be experienced. If the nut is tightened tighter than the specified torque, this will deform the roof panel.

STEERING SWITCH

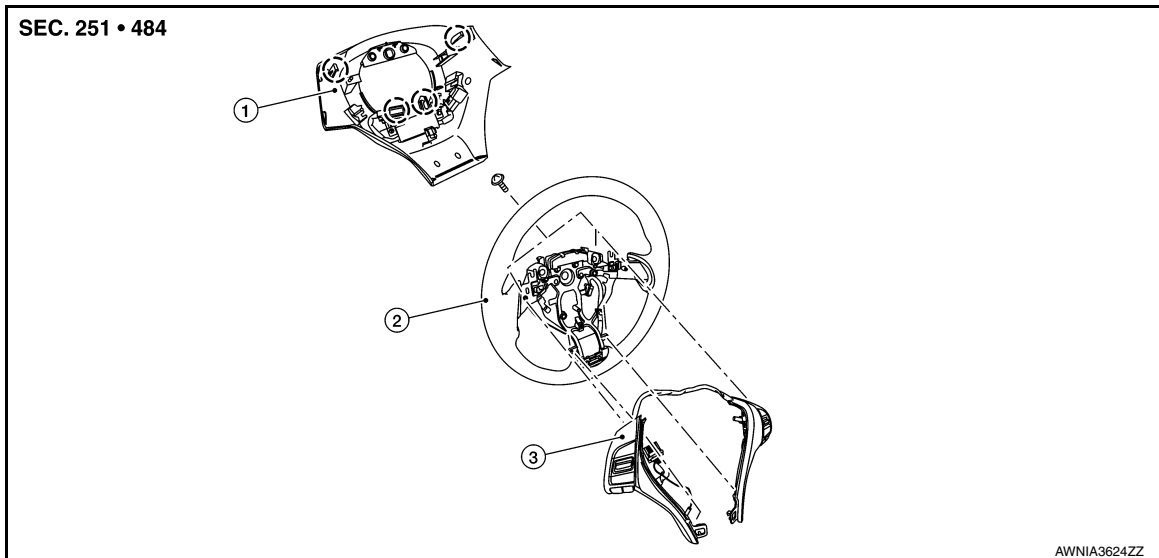
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

STEERING SWITCH

Exploded View

INFOID:000000010480198



1. Steering wheel rear finisher 2. Steering wheel 3. Steering switches

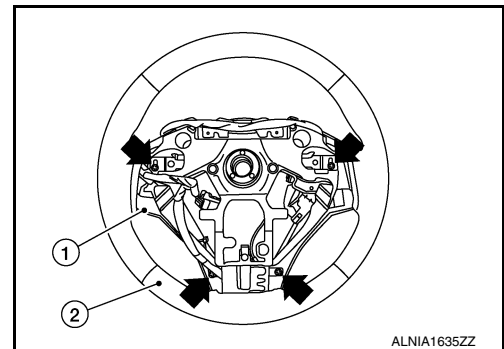
○ Pawl

Removal and Installation

INFOID:000000010480199

REMOVAL

1. Remove the steering wheel. Refer to [ST-31. "Removal and Installation"](#)
2. Release the pawls on the steering wheel rear finisher and remove.
3. Remove the steering switches screws (←).
4. Remove the steering switches (1) from steering wheel (2).



INSTALLATION

Installation is in the reverse order of removal.

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ANTENNA FEEDER

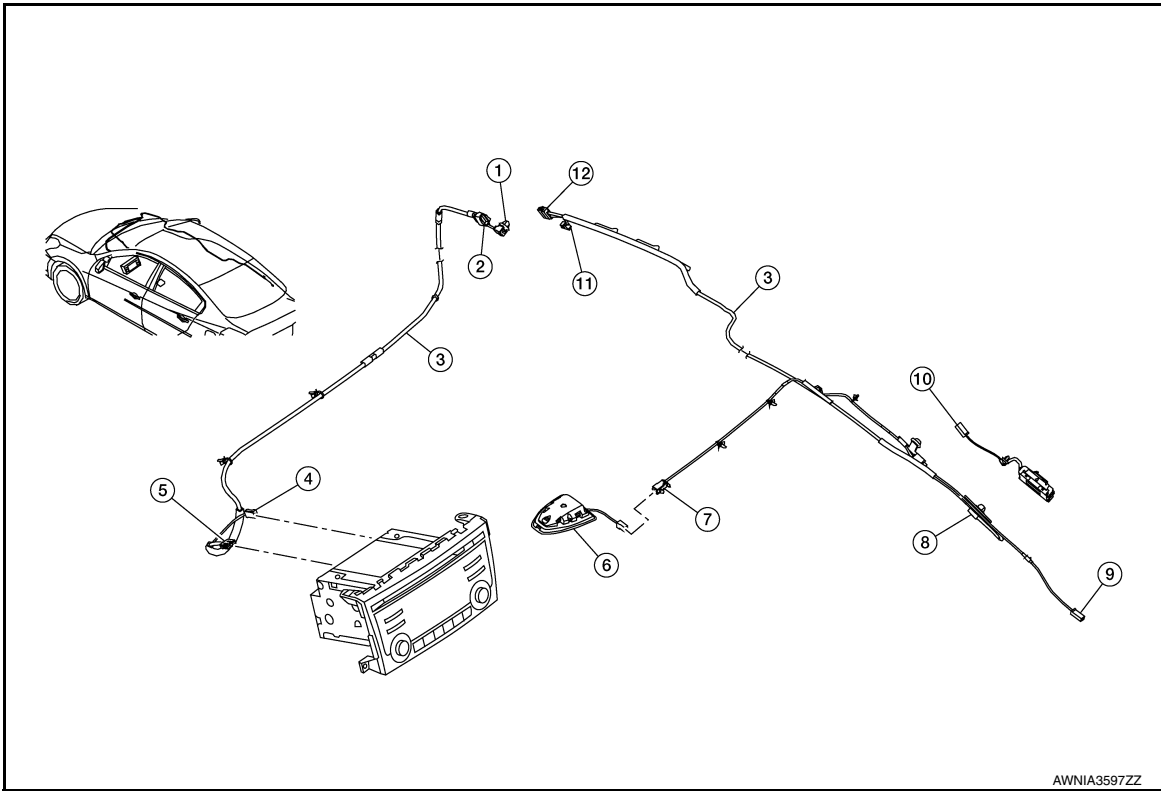
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

ANTENNA FEEDER

Location of Antenna

INFOID:000000010480200



AWNIA3597ZZ

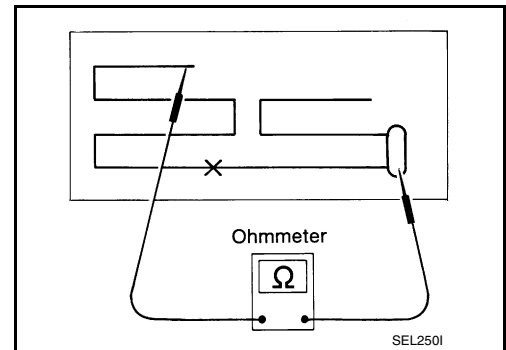
- | | | |
|----------|----------|----------------------|
| 1. M102 | 2. M101 | 3. Antenna feeder |
| 4. M110 | 5. M148 | 6. Satellite antenna |
| 7. B59 | 8. M502 | 9. M504 |
| 10. M503 | 11. M500 | 12. M501 |

Window Antenna Repair

INFOID:000000010480201

ELEMENT CHECK

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

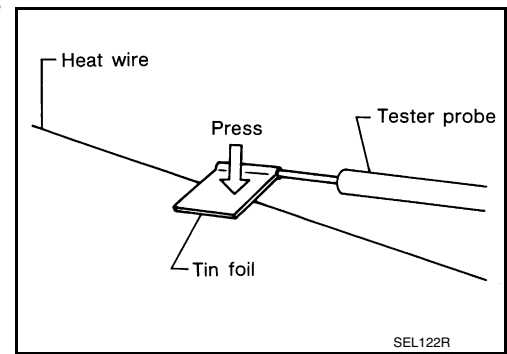


ANTENNA FEEDER

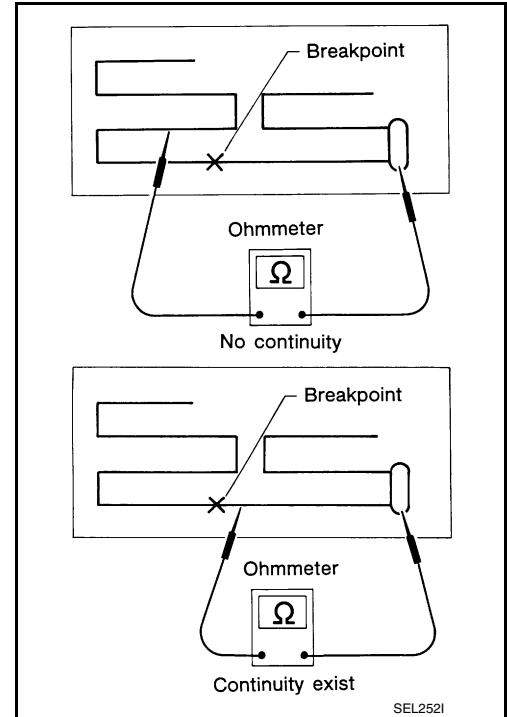
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

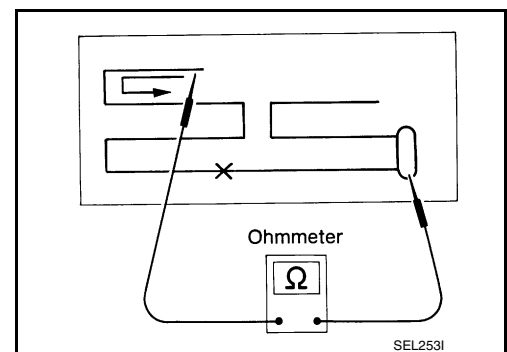
- When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



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



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



REPAIR EQUIPMENT

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

REPAIRING PROCEDURE

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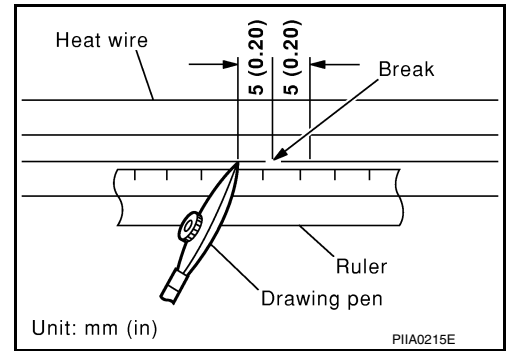
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ANTENNA FEEDER

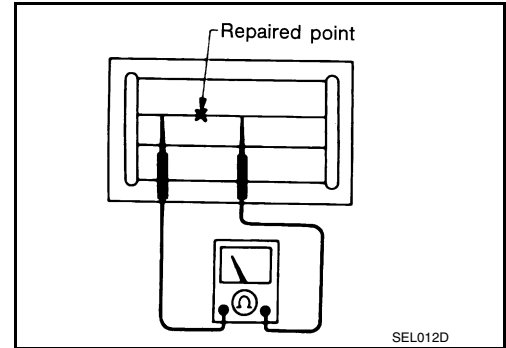
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

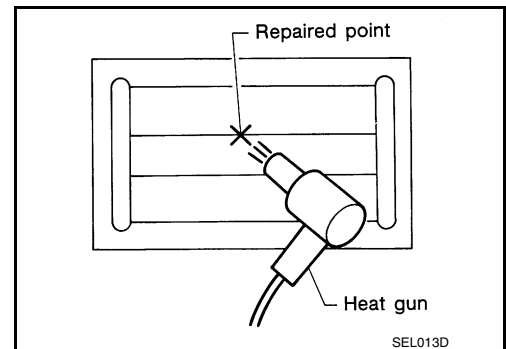
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.



4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited. Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.



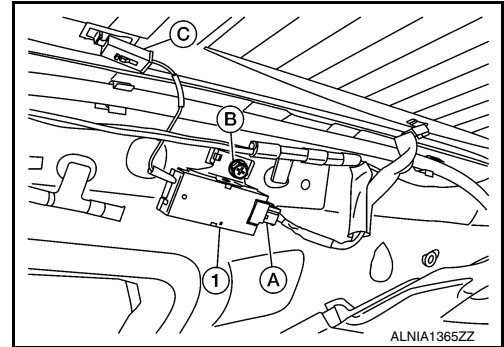
ANTENNA AMP.

Removal and Installation

INFOID:000000010480202

REMOVAL

1. Remove the rear pillar finisher (RH). Refer to [INT-25. "REAR PILLAR FINISHER : Removal and Installation"](#).
2. Disconnect the harness connector (A) from the antenna amp. (1).
3. Disconnect the antenna amp. harness connector (C) from the rear window glass.
4. Remove the antenna amp. screw (B) and the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

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MICROPHONE

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

MICROPHONE

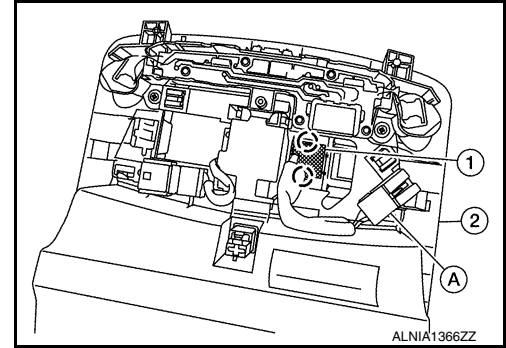
Removal and Installation

INFOID:000000010480203

REMOVAL

1. Remove the front room/map lamp assembly. Refer to [INL-62. "Removal and Installation"](#).
2. Disconnect the microphone connector (A) from the front room/map lamp assembly (2).
3. Release the microphone pawls, then remove the microphone (1).

○: Pawl



INSTALLATION

Installation is in the reverse order of removal.

REAR VIEW CAMERA

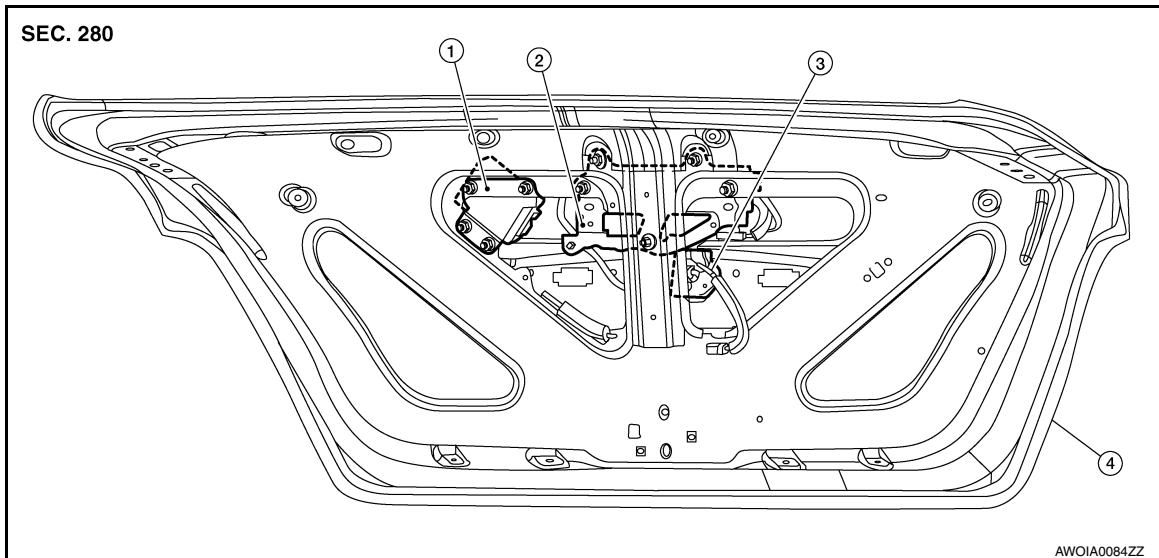
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO WITH BOSE]

REAR VIEW CAMERA

Exploded View

INFOID:0000000011181134



1. Rear view camera washer control unit
2. Rear view camera air pump motor
3. Rear view camera
4. Trunk lid

Removal and Installation

INFOID:0000000010480204

REMOVAL

1. Remove license lamp finisher. Refer to [EXT-36, "Removal and Installation"](#).
2. Disconnect the harness connector from rear view camera.
3. Disconnect rear washer tubes from rear view camera.
4. Remove rear view camera.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Perform rear view camera calibration. Refer to [DAS-40, "Description"](#).

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AV

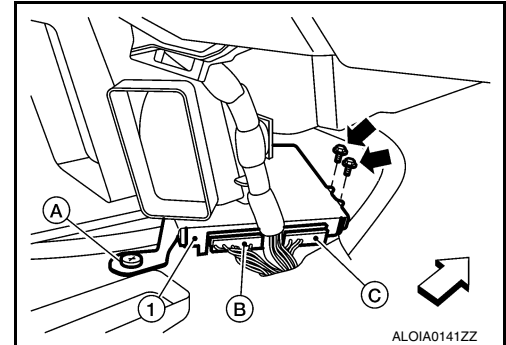
ITS CONTROL UNIT

Removal and Installation

INFOID:000000010480205

REMOVAL

1. Disconnect the battery negative terminal. Refer to [PG-78, "Removal and Installation"](#).
2. Remove the center console assembly. Refer to [IP-18, "Removal and Installation"](#).
3. Disconnect the harness connectors (B,C) from the ITS control unit (1).
↔: Front
4. Remove bolts (←) and plastic screw (A) that retain the ITS control unit (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

PRECAUTION

PRECAUTIONS

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

INFOID:000000011046225

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. 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 three minutes before performing any service.

Cautions in Removing Battery Terminal and AV Control Unit (Models with AV Control Unit)

INFOID:000000011085778

CAUTION:

Remove battery terminal and AV control unit 30 seconds or more after turning the ignition switch OFF.

NOTE:

After the ignition switch is turned OFF, the AV control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

Precaution for Trouble Diagnosis

INFOID:000000010480207

AV COMMUNICATION SYSTEM

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

AV

Precaution for Harness Repair

INFOID:000000010480208

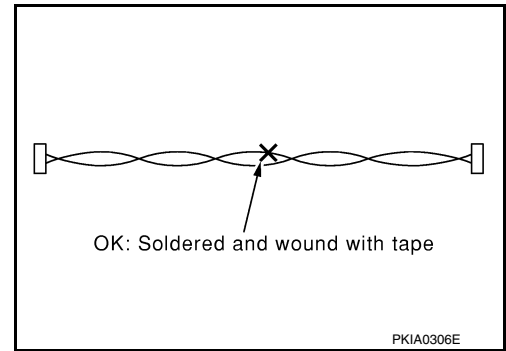
AV COMMUNICATION SYSTEM

PRECAUTIONS

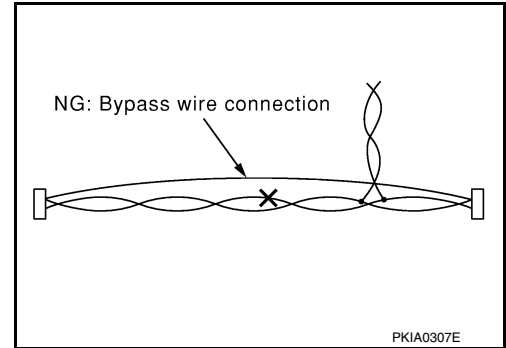
[NAVIGATION WITHOUT BOSE]

< PRECAUTION >

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



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



Precaution for Work

INFOID:000000010480209

- 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:
 - 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 >

[NAVIGATION WITHOUT BOSE]

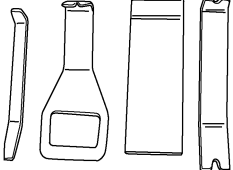
PREPARATION

PREPARATION

Special Service Tools


INFOID:0000000010480210

The actual shape of the tools may differ from those illustrated here.

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

Commercial Service Tools

INFOID:0000000010480211

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

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COMPONENT PARTS

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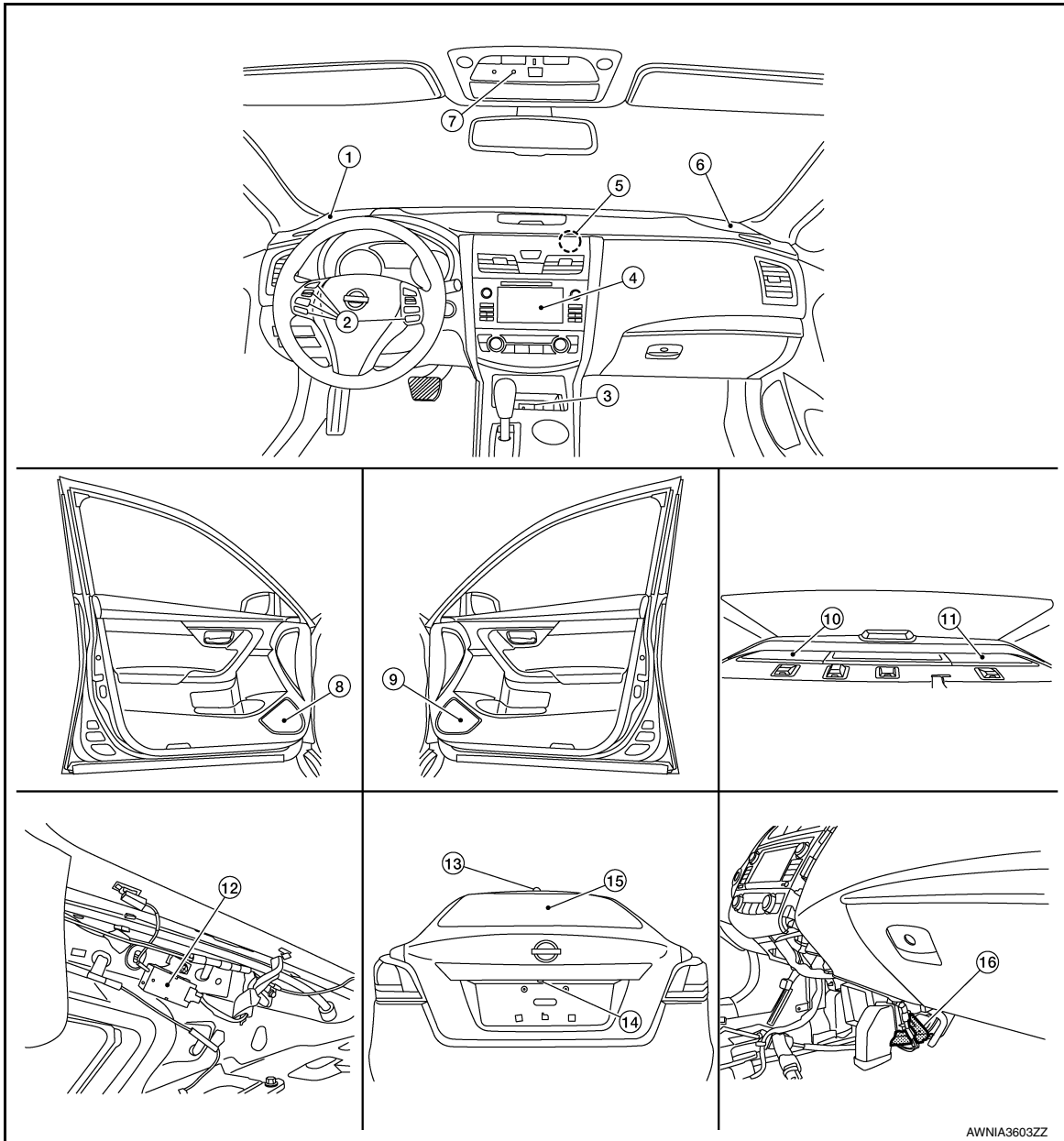
[NAVIGATION WITHOUT BOSE]

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:000000010480212



AWNIA3603ZZ

- | | | |
|---|--------------------------|----------------------------------|
| 1. Front speaker LH | 2. Steering switches | 3. USB interface and AUX in jack |
| 4. AV control unit | 5. GPS antenna | 6. Front speaker RH |
| 7. Microphone | 8. Front door speaker LH | 9. Front door speaker RH |
| 10. Rear speaker RH | 11. Rear speaker LH | 12. Antenna amp. |
| 13. Satellite antenna | 14. Rear view camera | 15. Window antenna |
| 16. ITS control unit (view with center console removed) | | |

Component Description

INFOID:000000010480213

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[NAVIGATION WITHOUT BOSE]

Part name	Description	
AV control unit	<ul style="list-style-type: none"> • Operation of navigation and audio systems are integrated. • Includes the audio, hands-free phone, navigation, satellite radio, rear view monitor, USB interface and AUX in jack connection functions. • Map data can be loaded from SD-card inserted in SD-card slot. • Audio signals are output to each speaker. • Inputs illumination signals required for display dimming control. • Inputs signals for driving status recognition (vehicle speed and reverse). • Touch panel functions can be operated by touching display directly. 	A
Map SD-card	A collection of Map data.	B
Front door speakers	Outputs high, mid and low range audio signals from AV control unit.	C
Front speakers		D
Rear speakers		E
Steering switches	<ul style="list-style-type: none"> • Operations for audio, hands-free phone and voice recognition are possible. • Steering switch signal is output to combination meter. • Combination meter outputs steering switch signal to AV control unit. 	F
Microphone	<ul style="list-style-type: none"> • Used for hands-free phone operations. • Microphone signal is transmitted to AV control unit. • Power is supplied from AV control unit. 	G
USB interface and AUX in jack	<ul style="list-style-type: none"> • USB sound and data input signals are transmitted to AV control unit. • AUX sound input signals are transmitted to AV control unit. 	H
Rear view camera	<ul style="list-style-type: none"> • Outputs image of vehicle rear to AV control unit. • Power is supplied from AV control unit. 	I
Satellite antenna	Satellite radio signal is received and transmitted to AV control unit.	J
GPS antenna	GPS signal is received and transmitted to AV control unit.	K
Antenna amp.	<ul style="list-style-type: none"> • AM/FM signal received by window antenna is amplified and transmitted to AV control unit. • Power is supplied from AV control unit. 	L
Window antenna	AM/FM signal is received and transmitted to antenna amp.	M
ITS control unit	<ul style="list-style-type: none"> • Controls each system, based on signals received from the rear view camera and CAN communication signals received from each control unit • Transmits signals necessary for control between CAN communication 	O

AV

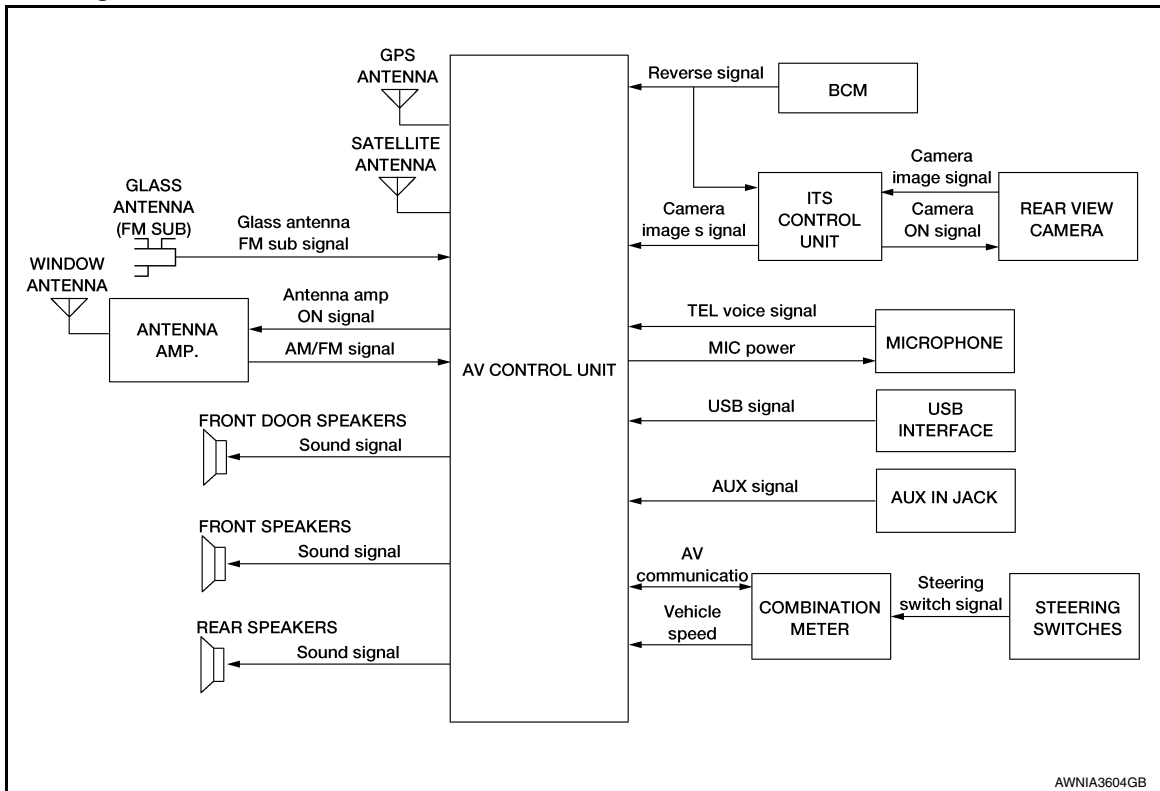
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SYSTEM

System Diagram

INFOID:000000010480214



AWNIA3604GB

System Description

INFOID:000000010480215

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

Audio function and display are built into AV control unit.

This navigation unit has the following functions:

- Map data on SD-card
- High resolution color 5 inch display with touch panel function
- FM/AM twin digital tuner
- USB interface and AUX in jack
- Full support for playback of music from iPod®
- Satellite radio
- Hands-free phone system

iPod® is a trademark of Apple inc., registered in the U.S. and other countries.

NAVIGATION SYSTEM FUNCTION

Description

- The navigation system can be operated by control panel of the AV control unit and display (touch panel) of the AV control unit.
- Guide sound during the operation of the navigation system is output from AV control unit to front speakers.
- AV control unit calculates the vehicle location based on the signals from GYRO (angle speed sensor), vehicle sensor, and GPS satellite, as well as the map data from map SD-card. The vehicle location is displayed on the AV control unit.

POSITION DETECTION PRINCIPLE

The navigation system periodically calculates the vehicle's current position according to the following three signals:

- Travel distance of the vehicle as determined by the vehicle speed sensor
- Turning angle of the vehicle as determined by the gyroscope (angular velocity sensor)
- Direction of vehicle travel as determined by the GPS antenna (GPS information)

SYSTEM

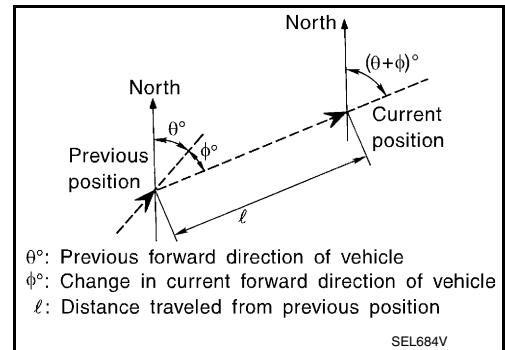
< SYSTEM DESCRIPTION >

[NAVIGATION WITHOUT BOSE]

The current position of the vehicle is then identified by comparing the calculated vehicle position with map data read from the map SD-card (map-matching), and indicated on the screen as a vehicle mark. More accurate data is judged and used by comparing vehicle position detection results found by the GPS with the result by map-matching.

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

- Travel distance
Travel distance calculations are based on the vehicle speed sensor input signal. Therefore, the calculation may become incorrect as the tires wear down. To prevent this, an automatic distance correction function has been adopted.
- Travel direction
Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). They have both advantages and disadvantages.



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

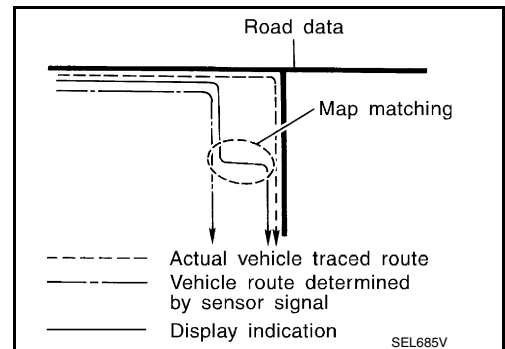
More accurate traveling direction is detected because priorities are set for the signals from these two devices according to the situation.

MAP-MATCHING

Map-matching compares a current location detected by the method in the "Location Detection Principle" with a road map data from map SD-card.

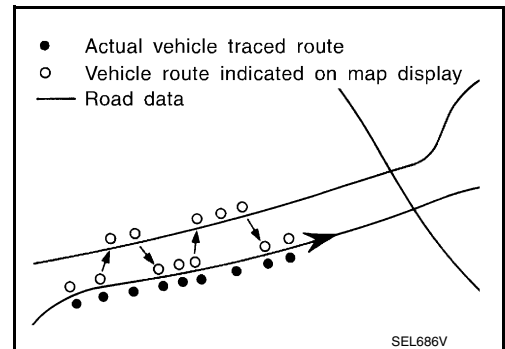
NOTE:

The road map data is based on data stored in the map SD-card.



The vehicle position may not be corrected under the following circumstances and after driving for a certain time when GPS information is difficult to receive. In this case, the vehicle mark on the display must be corrected manually.

- In map-matching, alternative routes to reach the destination will be shown and prioritized, after the road on which the vehicle is currently driven has been judged and the vehicle mark has been repositioned. Alternative routes will be shown in different order of priority, and the incorrect road can be avoided if there is an error in distance and/or direction. Routes are of the same priority if two roads are running in parallel. Therefore, the vehicle mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.

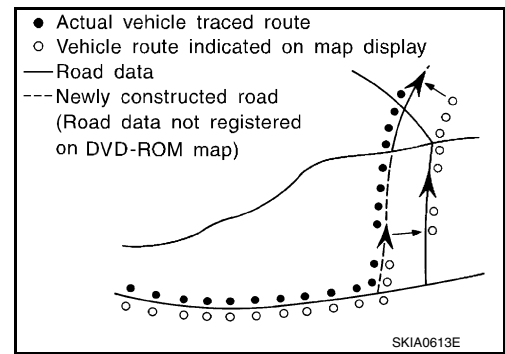


SYSTEM

< SYSTEM DESCRIPTION >

[NAVIGATION WITHOUT BOSE]

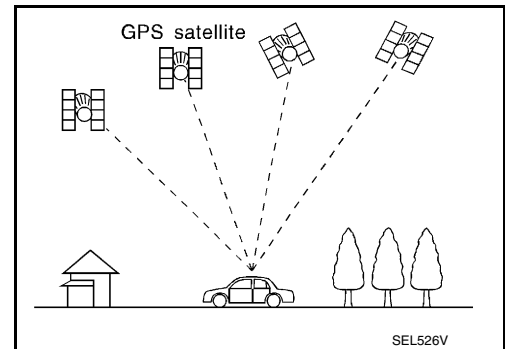
- Map-matching does not function correctly when a road on which the vehicle is driving is new and not recorded in the map SD-card, or when road pattern stored in the map data and the actual road pattern are different due to repair. The map-matching function may find another road and position the vehicle mark on it when driving on a road not present in the map. Then, the vehicle mark may change to it when the correct road is detected.
- Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the map SD-card is limited. Therefore, correction by map-matching is not possible when there is an excessive gap between current vehicle position and the position on the map.



GPS (Global Positioning System)

GPS (Global Positioning System) is developed for and is controlled by the US Department of Defense. The system utilizes GPS satellites (NAVSTAR), transmitting out radio waves while flying on an orbit around the earth at an altitude of approximately 21,000 km (13,049 mile).

The receiver calculates the travel position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves that four or more GPS satellites transmit (three-dimensional positioning). The GPS receiver calculates the travel position in two dimensions (latitude/longitude) with the previous altitude data if the GPS receiver receives only three radio waves (two-dimensional positioning). GPS position correction is not performed while stopping the vehicle.



Accuracy of the GPS will deteriorate under the following conditions:

- In two-dimensional positioning, GPS accuracy will deteriorate when altitude of the vehicle position changes.
- The position of GPS satellite affects GPS detection precision. The position detection may not be precisely performed.
- The position detection is not performed if GPS receiver does not receive radio waves from GPS satellites. (Inside a tunnel, parking in a building, under an elevated highway etc.) GPS receiver may not receive radio waves from GPS satellites if any object is placed on the GPS antenna.

NOTE:

- The detection result has an error of approximately 10 m (32.81 ft) even with a high-precision three dimensional positioning.
- There may be cases when the accuracy is lowered and radio waves are stopped intentionally because the GPS satellite signal is controlled by the US trace control center.

REAR VIEW MONITOR FUNCTION (WITH DRIVER ASSISTANCE SYSTEM)

Camera Image Operation Principle

- The ITS control unit supplies power to the rear view camera when receiving a reverse signal.
- The rear view camera transmits camera images to the ITS control unit when power is supplied from the ITS control unit.
- The ITS control unit transmits camera images to the AV control unit.
- The AV control unit combines a warning message and fixed guide lines with an image received from the ITS control unit to display a rear view camera image on the screen.

REAR VIEW MONITOR FUNCTION (WITHOUT DRIVER ASSISTANCE SYSTEM)

Camera Image Operation Principle

- The AV control unit supplies power to the rear view camera when receiving a reverse signal.
- The rear view camera transmits camera images to the AV control unit when power is supplied from the AV control unit.
- The AV control unit combines a warning message and fixed guide lines with an image received from the rear view camera to display a rear view camera image on the screen.

SATELLITE RADIO FUNCTION

- Satellite radio function is built into AV control unit.

SYSTEM

< SYSTEM DESCRIPTION >

[NAVIGATION WITHOUT BOSE]

- Sound signal (satellite radio) is received by satellite antenna and transmitted to AV control unit. AV control unit outputs sound signal to each speaker.

A

USB INTERFACE AND AUX IN JACK FUNCTION

- Sound and data signals are transmitted from USB interface to the AV control unit and output to each speaker and tweeter.
- Sound signals are transmitted from AUX in jack to the AV control unit and output to each speaker and tweeter.

B

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.

C

HANDS-FREE PHONE SYSTEM

- Bluetooth® control is built into AV control unit.
- The connection between cellular phone and AV control unit is performed with Bluetooth® communication.
- The voice guidance signal is input from the AV control unit and output to the front speakers when operating the cellular phone.

D

When A Call Is Originated

- Spoken voice sound output from the microphone (microphone signal) is input to AV control unit.
- AV control unit outputs to cellular phone with Bluetooth® communication as a TEL voice signal.
- Voice sound is then heard at the other party.

F

When Receiving A Call

- Voice sound is input to own cellular phone from the other party.
- TEL voice signal is input to AV control unit by establishing Bluetooth® communication from cellular phone, and the signal is output to front speakers.

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[NAVIGATION WITHOUT BOSE]

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description

INFOID:000000010480216

The AV control unit on board diagnosis performs the functions listed in the table below:

Mode	Item	Content
VERSION	<ul style="list-style-type: none">• Update System Software• Overall SW version:• Bosch software version label:• Customer configuration number & hash...• Bosch configuration ID(hash value):• Hardware:• NAV - SW:• ADR Version:• CD MODULE:• BT MODULE:• BT FIRMWARE:	Displays SYSTEM VERSIONS of the AV control unit.
NAVIGATION	<ul style="list-style-type: none">• MAP-INFO• GNSS• DEAD RECKONING• MATCHED POSITION• BEST SATELLITES• MERIDIANS	Displays NAVIGATION information of the AV control unit.
SYSTEM	<ul style="list-style-type: none">• DRIVE STATUS• TEMPERATURE & VOLTAGE• RESET COUNTER LIST• DISPLAY TEST• BLUETOOTH• #BT DEVICE TEST MODE• Bluetooth EC/NR Engine• TRACE TO SD CARD• NETWORK MESSAGES• Language	Displays SYSTEM information of the AV control unit.
Radio	<ul style="list-style-type: none">• MONITOR SELECTION• AM/FM SETTINGS• SXM SETTINGS	Displays RADIO information of the AV control unit.
TMC	<ul style="list-style-type: none">• MESSAGE INFO• TMC MESSAGE LIST	Displays TMC information of the AV control unit.
AUDIO	LINEAR AUDIO	Displays AUDIO information of the AV control unit.

Perform CONSULT diagnosis if the AV control unit on board diagnosis does not start or the screen does not display anything.

On Board Diagnosis Function

INFOID:000000010480217

METHOD OF STARTING

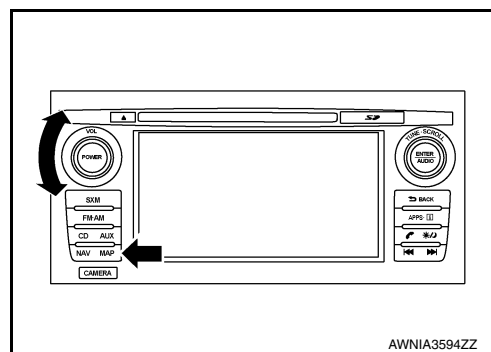
1. Turn the ignition ON.
2. Turn the audio system OFF.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[NAVIGATION WITHOUT BOSE]

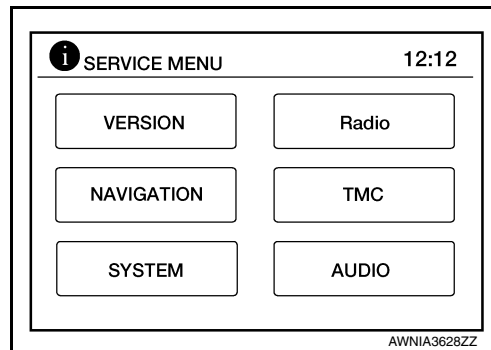
< SYSTEM DESCRIPTION >

- While pressing the MAP button, turn the VOL dial clockwise and counterclockwise quickly approximately 60 times or more. Shifting from current screen to previous screen is performed by pressing BACK button.



AWNIA3594ZZ

- The trouble diagnosis initial screen is displayed, and VERSION, NAVIGATION, SYSTEM, Radio, TMC or AUDIO can be selected.



AWNIA3628ZZ

CONSULT Function

INFOID:000000010480218

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

CONSULT FUNCTIONS

CONSULT performs the following functions via communication with the AV control unit.

Direct Diagnostic Mode	Description
Ecu Identification	The AV control unit part number is displayed.
Self Diagnostic Result	The AV control unit self diagnostic results are displayed.
Data Monitor	The AV control unit input/output data is displayed in real time.
Configuration	<ul style="list-style-type: none"> The vehicle specification can be read and saved. The vehicle specification can be written when replacing AV control unit.
CAN Diag Support Mntr	<ul style="list-style-type: none"> The result of transmit/receive diagnosis of AV communication is displayed. The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The part number of AV control unit is displayed.

SELF DIAGNOSTIC RESULT

Refer to [AV-228, "DTC Index"](#).

DATA MONITOR

Monitor Item [Unit]	Description
VHCL SPD SIG [On/Off]	Indicates vehicle speed signal received from combination meter on CAN communication line.
ILLUM SIG [On/Off]	Indicates condition of illumination signal for the AV control unit.
IGN SIG [On/Off]	Indicates condition of ignition signal.
REV SIG [On/Off]	Indicates condition of reverse signal received from BCM.

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[NAVIGATION WITHOUT BOSE]

CONFIGURATION

Refer to [AV-244, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

CAN DIAG SUPPORT MNTR

Refer to [LAN-13, "CAN Diagnostic Support Monitor"](#).

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION WITHOUT BOSE]

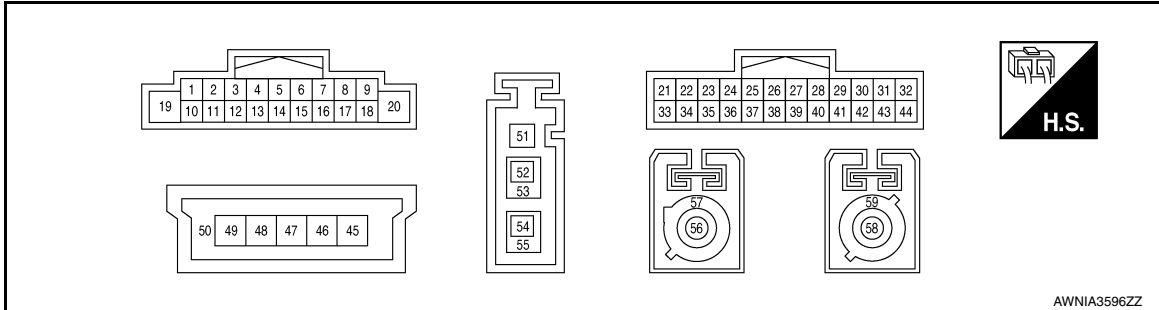
ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

Reference Value

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TERMINAL LAYOUT



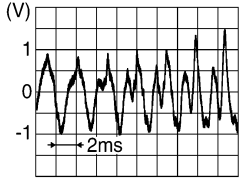
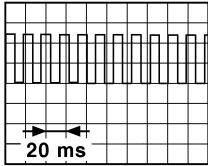
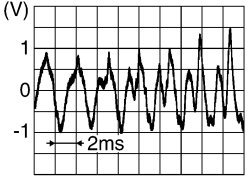
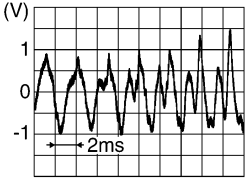
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
2 (V)	3 (SB)	Sound signal front speaker LH	Output	ON	Sound output	 SKIB3609E
4 (BR)	5 (Y)	Sound signal rear speaker LH	Output	ON	Sound output	 SKIB3609E
7 (P)	Ground	ACC power supply	Input	ACC	—	Battery voltage
8 (L)	—	CAN high	Input/ Output	—	—	—
9 (R)	33 (GR)	Illumination control signal	Input	ON	Headlamps ON	Battery voltage
11 (Y)	12 (BR)	Sound signal front speaker RH	Output	ON	Sound output	 SKIB3609E

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

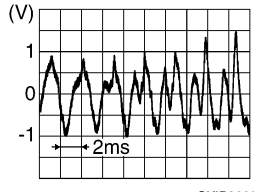
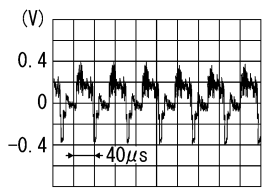
[NAVIGATION WITHOUT BOSE]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
13 (LG)	14 (V)	Sound signal rear speaker RH	Output	ON	Sound output	 SKIB3609E
17 (P)	—	CAN low	Input/ Output	—	—	—
18 (G)	Ground	Vehicle speed signal	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	 JSNIA0012GB
19 (G)	Ground	Battery power supply	Input	OFF	—	Battery voltage
20 (GR)	Ground	Ground	—	ON	—	0 V
21 (W)	Ground	AUX audio signal RH	Input	ON	AUX audio signal received	 SKIB3609E
22 (B)	—	AUX ground	—	ON	—	0V
23 (R)	Ground	AUX audio signal LH	Input	ON	AUX audio signal received	 SKIB3609E
24 (BR)	—	BF mic	Input	—	—	—
25 (G)	Ground	Reverse signal	Input	ON	Selector lever in R (reverse)	Battery voltage
					Selector lever in any position other than R (reverse)	0 V
30 (P)	—	MR output	Output	—	—	—
31 (SB)	—	AV communication (H)	Input/ Output	—	—	—
32 (LG)	—	AV communication (L)	Input/ Output	—	—	—

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION WITHOUT BOSE]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
34 (B)	36 (Shield)	Microphone signal	Input	ON	While speaking into microphone.	 SKIB3609E
35 (W)	Ground	Microphone power supply	Output	ON	—	5.0 V
37 (Shield)	—	AUX shield	—	—	—	—
38 (SB)	—	AV communication (H)	Input/ Output	—	—	—
39 (LG)	—	AV communication (L)	Input/ Output	—	—	—
40 (BG)	Ground	Ignition power supply	Input	ON or START	—	Battery voltage
41 (B)	Ground	Camera image signal	Input	ON	When camera image is displayed	 SKIB2251J
42 (Shield)	—	Camera shield	—	—	—	—
43 (W)	Ground	Camera power supply	Output	ON	When camera image is displayed	6.0 V
					Except for above	0 V
44 (R)	Ground	Camera ground	—	ON	—	0 V
45 (B)	—	USB ground	—	—	—	—
47 (G)	—	USB D+ signal	—	—	—	—
48 (W)	—	USB D- signal	—	—	—	—
49 (R)	—	V BUS signal	—	—	—	—
50 (Shield)	—	USB shield	—	—	—	—
51 (B)	Ground	Antenna amp. ON signal	Output	ON	—	Battery voltage
52 (B)	Ground	AM/FM antenna signal	Input	ON	—	5.0 V
53 (Shield)	—	AM/FM antenna shield	—	—	—	—
54 (B)	Ground	Glass antenna (FM sub) signal	Input	ON	—	5.0 V

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AV

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION WITHOUT BOSE]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
55 (Shield)	—	Glass antenna shield	—	—	—	—
56 (B)	Ground	Satellite antenna signal	Input	ON	—	5.0 V
57 (Shield)	—	Satellite antenna shield	—	—	—	—
58 (B)	Ground	GPS antenna signal	Input	ON	—	5.0 V
59 (Shield)	—	GPS antenna shield	—	—	—	—

DTC Index

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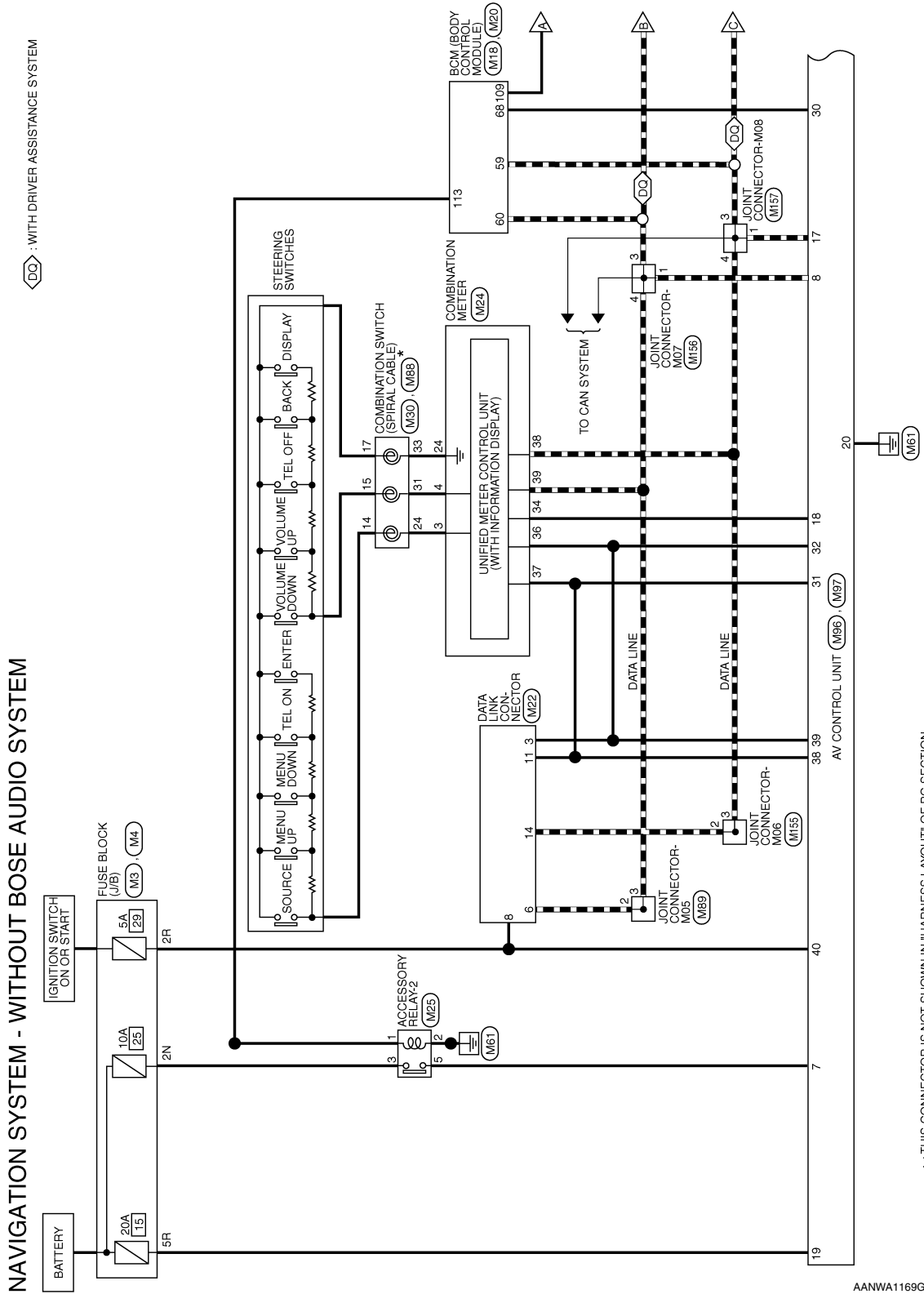
CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-247, "DTC Logic"
U1010: CONTROL UNIT (CAN)	AV-248, "DTC Logic"
U1217: BLUETOOTH MODULE	AV-249, "DTC Logic"
U1229: iPod CERTIFICATION	AV-250, "DTC Logic"
U122F: Digital broadcasting connection error	AV-251, "DTC Logic"
U1244: GPS ANTENNA CONN	AV-252, "DTC Logic"
U1258: XM ANTENNA CONN	AV-253, "DTC Logic"
U1263: USB OVERCURRENT	AV-254, "DTC Logic"
U1264: ANTENNA AMP TERMINAL	AV-255, "DTC Logic"
U12AA: Configuration Error	AV-256, "DTC Logic"
U12AB: FM Antenna error	AV-257, "DTC Logic"
U12AC: Display Temperature too High	AV-258, "DTC Logic"
U12AD: ECU Temperature too High	AV-259, "DTC Logic"
U12AE: Internal Amplifier temperature Warning	AV-260, "DTC Logic"
U12AF: CD Mechanism Temperature Warning	AV-261, "DTC Logic"
U12B0: Supply Voltage Goes below 9V > 20s	AV-262, "DTC Logic"
U12B1: Supply Voltage Goes High > 16V for 20s	AV-263, "DTC Logic"
U1300: AV COMM CIRCUIT	AV-264, "DTC Logic"
U1310: CONTROL UNIT (AV)	AV-266, "DTC Logic"

WIRING DIAGRAM

NAVIGATION WITHOUT BOSE

Wiring Diagram

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

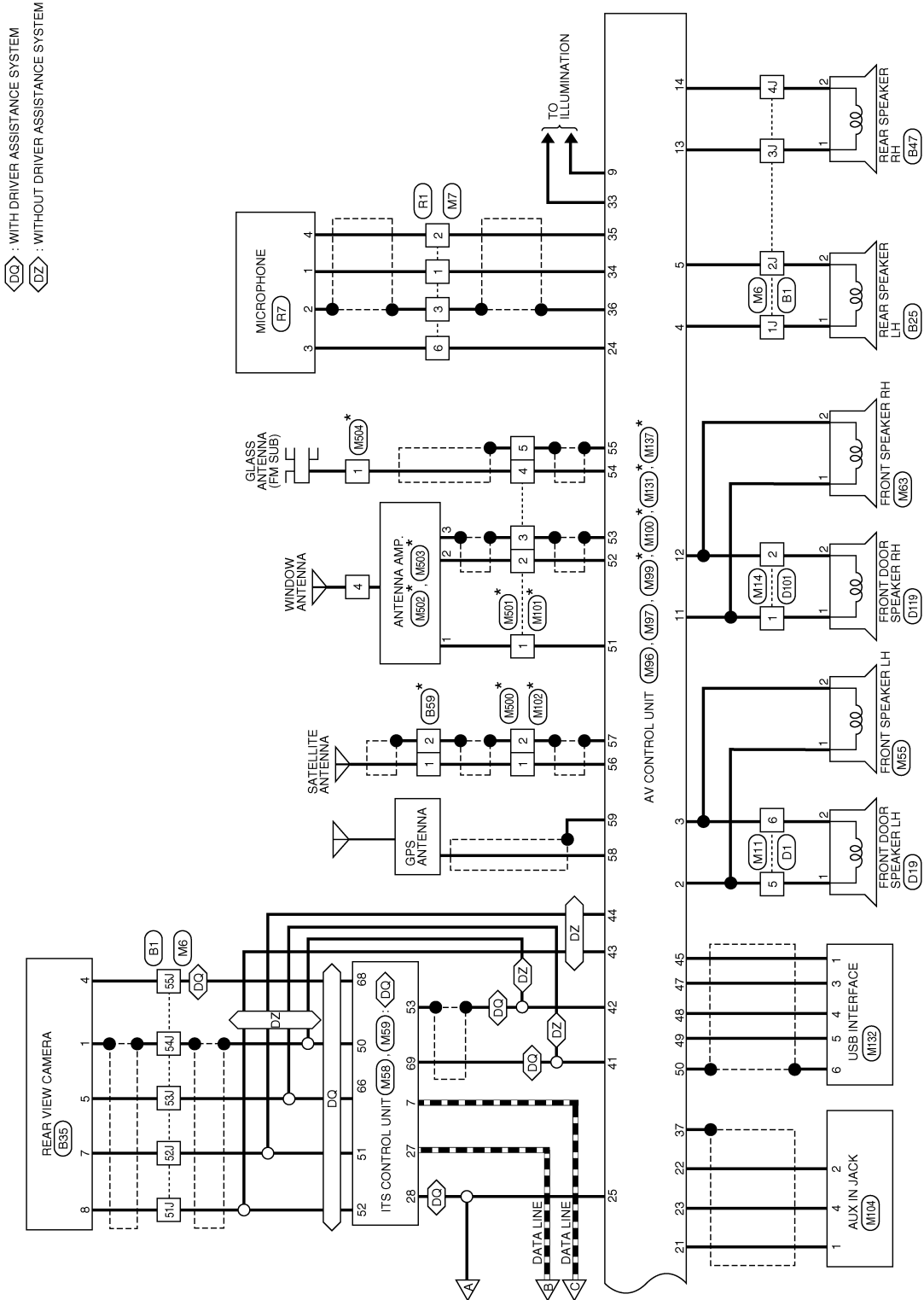
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NAVIGATION WITHOUT BOSE

< WIRING DIAGRAM >

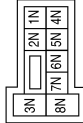
[NAVIGATION WITHOUT BOSE]



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NAVIGATION SYSTEM CONNECTORS - WITHOUT BOSE AUDIO SYSTEM

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



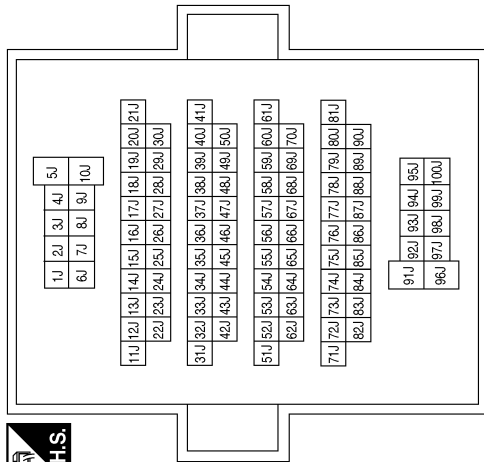
Terminal No.	Color of Wire	Signal Name
2N	LG	-

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



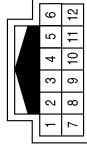
Terminal No.	Color of Wire	Signal Name
2R	BG	-
5R	G	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1J	BR	-
2J	Y	-
3J	LG	-
4J	V	-
5J	W	-
52J	R	-
53J	B	-
54J	SHIELD	-
55J	G	-(WITH DRIVER ASSISTANCE SYSTEM)

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE




Terminal No.	Color of Wire	Signal Name
1	B	-
2	W	-
3	SHIELD	-
6	BR	-

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Connector No.	M11
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
5	V	-(WITHOUT BOSE AUDIO SYSTEM)
6	SB	-(WITHOUT BOSE AUDIO SYSTEM)


Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



118	115	114	113	112	111	110	108	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

Terminal No.	Color of Wire	Signal Name
109	G	REVERSE SIGNAL
113	P	ACC RELAY OUT


Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3		
4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	Y	-(WITHOUT BOSE AUDIO SYSTEM)
2	BR	-(WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M22
Connector Name	DATA LINK CONNECTOR
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
3	LG	-
6	L	-
8	BG	-
11	SB	-
14	P	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
59	P	CAN-L
60	L	CAN-H
68	P	MR OUTPUT

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
3	P	STRG SW INPUT1
4	R	STRG SW INPUT2
24	W	STRG SW GND
34	G	SPEED 8P/R
36	LG	M-CAN-L
37	SB	M-CAN-H
38	P	CAN-L
39	L	CAN-H

NAVIGATION WITHOUT BOSE

< WIRING DIAGRAM >

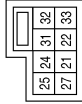
[NAVIGATION WITHOUT BOSE]

Connector No.	M55
Connector Name	FRONT SPEAKER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	V	-(WITHOUT BOSE AUDIO SYSTEM)
2	SB	-(WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	P	-
31	R	-
33	W	-

Connector No.	M25
Connector Name	ACCESSORY RELAY-2
Connector Color	BLUE



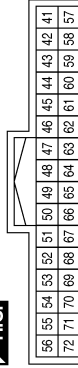
Terminal No.	Color of Wire	Signal Name
1	W	-
2	B	-
3	LG	-
5	P	-

Connector No.	M63
Connector Name	FRONT SPEAKER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	Y	-(WITHOUT BOSE AUDIO SYSTEM)
2	BR	-(WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M59
Connector Name	ITS CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
50	SHIELD	RV-VIDEO GND
51	R	RV-POWER GND
52	W	RV-POWER 6.2V
53	SHIELD	VIDEO OUTPUT GND
66	B	RV-VIDEO SIGNAL
68	G	RV SIGNAL GND
69	B	VIDEO OUTPUT SIGNAL

Connector No.	M58
Connector Name	ITS CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	P	CAN-L
27	L	CAN-H
28	R	REVERSE

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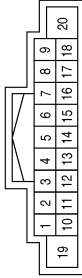
AV

NAVIGATION WITHOUT BOSE

< WIRING DIAGRAM >

[NAVIGATION WITHOUT BOSE]

Connector No.	M96
Connector Name	AV CONTROL UNIT (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



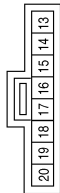
Terminal No.	Color of Wire	Signal Name
1	-	-
2	V	FR SP LH (+)
3	SB	FR SP LH (-)
4	BR	RR SP LH (+)
5	Y	RR SP LH (-)
6	-	-
7	P	ACC
8	L	CAN-H
9	R	ILL (+), LIGHT SW
10	-	-
11	Y	FR SP RH (+)
12	BR	FR SP RH (-)
13	LG	RR SP RH (+)
14	V	RR SP RH (-)
15	-	-
16	-	-
17	P	CAN-L
18	G	SPEED SIGNAL
19	G	BAT
20	GR	GND

Connector No.	M89
Connector Name	JOINT CONNECTOR-M05
Connector Color	WHITE



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

Connector No.	M88
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14	P	-
15	L	-
17	G	-

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NAVIGATION WITHOUT BOSE

< WIRING DIAGRAM >

[NAVIGATION WITHOUT BOSE]

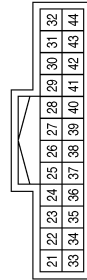
Connector No.	M99
Connector Name	AV CONTROL UNIT
Connector Color	PINK



Terminal No.	Color of Wire	Signal Name
56	B	SAT ANT
57	SHIELD	SAR SHIELD

Terminal No.	Color of Wire	Signal Name
30	P	MR OUTPUT
31	SB	M-CAN-H
32	LG	M-CAN-L
33	GR	ILL (-)
34	B	MIC SIGNAL
35	W	MIC VCC
36	SHIELD	MIC GND
37	SHIELD	AUX SHIELD
38	SB	M-CAN-H
39	LG	M-CAN-L
40	BG	IGNITION
41	B	CAMERA +
42	SHIELD	CAMERA - (SHIELD)
43	W	CAMERA ON
44	R	CAMERA GND

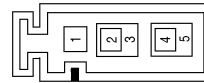
Connector No.	M97
Connector Name	AV CONTROL UNIT (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	W	AUX R
22	B	AUX GND
23	R	AUX L
24	BR	BF MIC
25	G	REVERSE
26	-	-
27	-	-
28	-	-
29	-	-

Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-
4	B	-
5	SHIELD	-

Connector No.	M101
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Connector No.	M100
Connector Name	AV CONTROL UNIT
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
58	B	GPS ANT
59	SHIELD	GPS SHIELD

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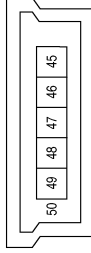
AV

NAVIGATION WITHOUT BOSE

< WIRING DIAGRAM >

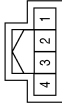
[NAVIGATION WITHOUT BOSE]

Connector No.	M131
Connector Name	AV CONTROL UNIT
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
45	B	USB GND
46	-	-
47	G	USB D+
48	W	USB D-
49	R	VBUS
50	SHIELD	SHIELD

Connector No.	M104
Connector Name	AUX IN JACK
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	B	-
4	R	-

Connector No.	M102
Connector Name	WIRE TO WIRE
Connector Color	BROWN



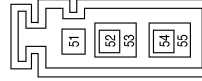
Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

Connector No.	M155
Connector Name	JONIT CONNECTOR-M06
Connector Color	WHITE



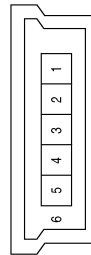
Terminal No.	Color of Wire	Signal Name
2	P	-
3	P	-

Connector No.	M137
Connector Name	AV CONTROL UNIT
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
51	B	ANT B+
52	B	MAIN ANT
53	SHIELD	MAIN GND
54	B	ANT SUB
55	SHIELD	SUB GND

Connector No.	M132
Connector Name	USB INTERFACE
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	B	-
2	-	-
3	G	-
4	W	-
5	R	-
6	SHIELD	-

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NAVIGATION WITHOUT BOSE

< WIRING DIAGRAM >

[NAVIGATION WITHOUT BOSE]

Connector No.	M500
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

Connector No.	M157
Connector Name	JOINT CONNECTOR-M08
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	P	-
3	P	-
4	P	-

Connector No.	M156
Connector Name	JOINT CONNECTOR-M07
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
3	L	-
4	L	-

Connector No.	M503
Connector Name	ANTENNA AMP.
Connector Color	BLACK



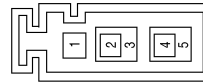
Terminal No.	Color of Wire	Signal Name
4	B	-

Connector No.	M502
Connector Name	ANTENNA AMP.
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-

Connector No.	M501
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-
4	B	-
5	SHIELD	-

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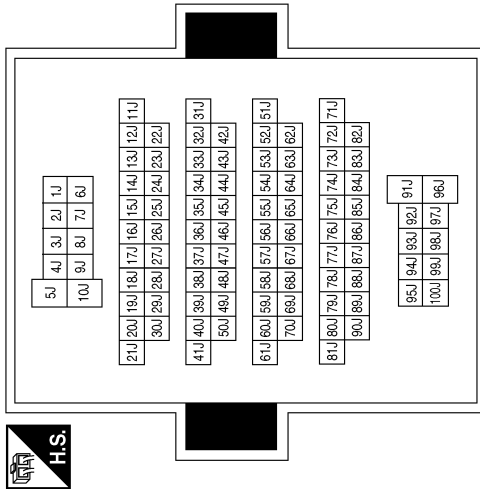
NAVIGATION WITHOUT BOSE

< WIRING DIAGRAM >

[NAVIGATION WITHOUT BOSE]

Terminal No.	Color of Wire	Signal Name
1J	Y	-
2J	LG	-
3J	LG	-
4J	L	-
51J	W	-
52J	B	-
53J	R	-
54J	SHIELD	-
55J	G	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Connector No.	M504
Connector Name	GLASS ANTENNA
Connector Color	BLACK



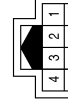
Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	B47
Connector Name	REAR SPEAKER RH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	L	-

Connector No.	B35
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	SHIELD	-
4	G	-
5	R	-
7	B	-
8	W	-

Connector No.	B25
Connector Name	REAR SPEAKER LH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	LG	-

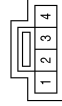
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NAVIGATION WITHOUT BOSE

< WIRING DIAGRAM >

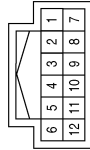
[NAVIGATION WITHOUT BOSE]

Connector No.	R7
Connector Name	MICROPHONE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	SHIELD	-
3	BR	-
4	Y	-

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



Terminal No.	Color of Wire	Signal Name
1	L	-
2	Y	-
3	SHIELD	-
6	BR	-

Connector No.	B59
Connector Name	SATELLITE RADIO ANTENNA
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

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



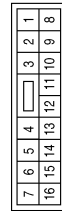
Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-(WITH NAVI OR BOSE AUDIO SYSTEM)

Connector No.	D19
Connector Name	FRONT DOOR SPEAKER LH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-(WITH NAVI)

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	G	-
6	W	-(WITH NAVI OR BOSE AUDIO SYSTEM)

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NAVIGATION WITHOUT BOSE

< WIRING DIAGRAM >

[NAVIGATION WITHOUT BOSE]

Connector No.	D119
Connector Name	FRONT DOOR SPEAKER RH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-(WITH NAVI)

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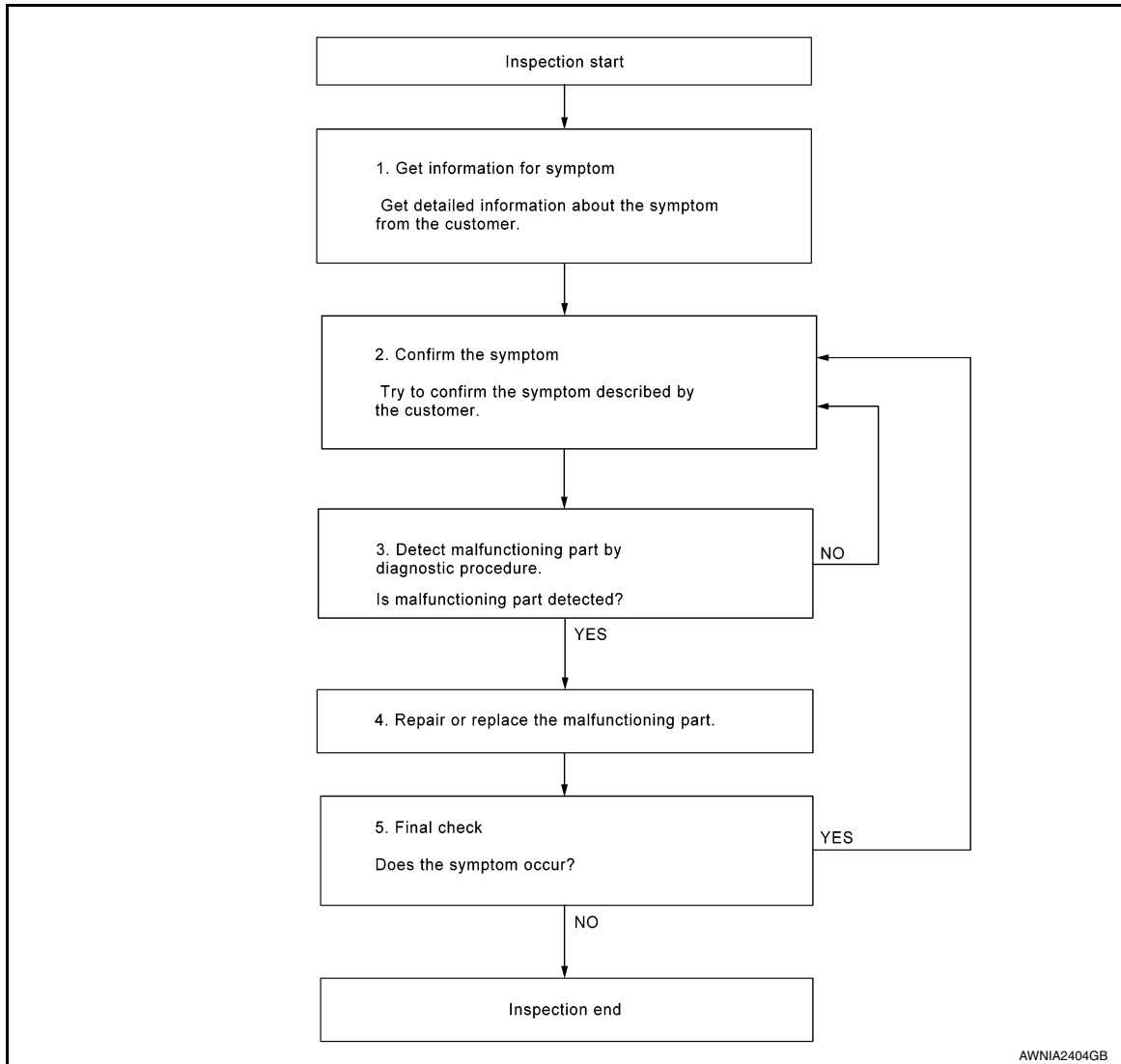
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000010480222

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. Refer to [AV-285. "Symptom Table"](#).

>> GO TO 3.

3.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[NAVIGATION WITHOUT BOSE]

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.

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Description

INFOID:000000010480223

BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing AV control unit.

AFTER REPLACEMENT

CAUTION:

When replacing AV control unit, you must perform "After Replace ECU" with CONSULT.

- Complete the procedure of "After Replace ECU" in order.
- If you set incorrect "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Work Procedure

INFOID:000000010480224

1. SAVING VEHICLE SPECIFICATION

④-CONSULT

Enter "Re/Programming, Configuration" and perform "Before Replace ECU" to save or print current vehicle specification.

NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing AV control unit.

>> GO TO 2.

2. REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to [AV-298, "Removal and Installation"](#).

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

④CONSULT

1. Enter "Re/Programming, Configuration".
2. If "Before Replace ECU" operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press "Confirm" to write vehicle specification. Refer to [AV-244, "CONFIGURATION \(AV CONTROL UNIT\) : Work Procedure"](#).
3. If "Before Replace ECU" operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to [AV-244, "CONFIGURATION \(AV CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 4.

4. REGISTER AV CONTROL UNIT

Perform AV control unit registration. Refer to [AV-245, "REGISTRATION \(AV CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 5.

5. OPERATION CHECK

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

>> Work End.

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:000000010480225

Vehicle specification needs to be written with CONSULT because it is not written after replacing AV control unit.

Configuration has three functions as follows:

Function	Description
"Before Replace ECU"	<ul style="list-style-type: none"> • Reads the vehicle configuration of current AV control unit. • Saves the read vehicle configuration.
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

CAUTION:

- When replacing AV control unit, you must perform "Select Saved Data List" or "After Replace ECU" with CONSULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new AV control unit.

CONFIGURATION (AV CONTROL UNIT) : Work Procedure

INFOID:000000010480226

1. WRITING MODE SELECTION

CONSULT

Select "Reprogramming, Configuration" of "MULTI AV".

When writing saved data>>GO TO 2.

When writing manually>>GO TO 3.

2. PERFORM "SAVED DATA LIST"

CONSULT

Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm".

>> Work End.

3. PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"

CONSULT

1. Select "After Replace ECU" or "Manual Configuration".
2. Identify the correct model and configuration list. Refer to [AV-245, "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).
3. Confirm and/or change setting value for each item.

CAUTION:
Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
4. Select "Next".

CAUTION:
Make sure to select "Next", confirm each setting value and press "OK" even if the indicated configuration of brand new AV control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.
5. When "Completed", select "End".

>> GO TO 4.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[NAVIGATION WITHOUT BOSE]

4. OPERATION CHECK

Confirm that each function controlled by AV control unit operates normally.

>> Work End.

CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:000000010480227

CAUTION:

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

MANUAL SETTING ITEM	
Items	Setting value
SOUND SYSTEM	BASE ⇔ BOSE
CAMERA SYSTEM	NONE/AVM ⇔ REAR CAMERA

⇔: Items which confirm vehicle specifications

REGISTRATION (AV CONTROL UNIT)

REGISTRATION (AV CONTROL UNIT) : Description

INFOID:000000011108797

AFTER REPLACEMENT

If the AV control unit is replaced with a new AV control unit, the new AV control unit must be registered using the registration code.

CAUTION:

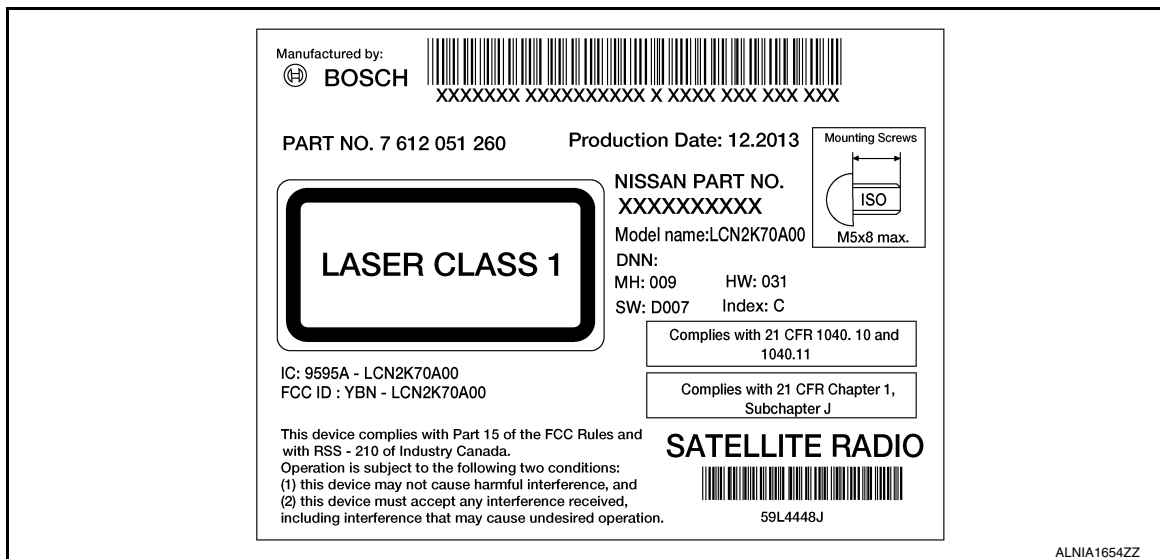
If the new AV control unit registration code is not registered, the "APPS" mode will not function.

REGISTRATION (AV CONTROL UNIT) : Work Procedure

INFOID:000000011108798

1. RECORD REGISTRATION CODE FOR REPLACEMENT AV CONTROL UNIT

1. Refer to the replacement AV control unit's label located on the top of the AV control unit.

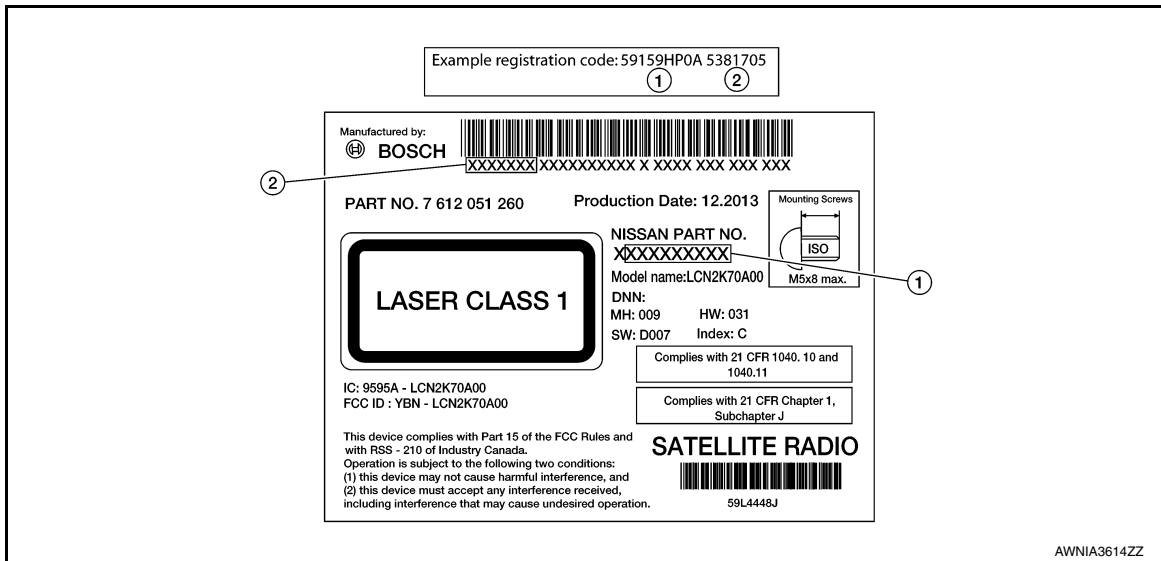


2. Create a registration code to supply to NISSAN Owner Services by combining the last 9 digits of the NISSAN PART NO. (1) and the first 7 digits of the bar code number (2).

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[NAVIGATION WITHOUT BOSE]



3. Record the registration code.

>> GO TO 2.

2. REGISTER REPLACEMENT AV CONTROL UNIT

Register the replacement AV control unit by contacting NISSAN Owner Services. Refer to TSB.

>> GO TO 3.

3. OPERATION CHECK

Verify that the AV control unit "APPS" function operates normally.

>> Work End.

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

DTC Logic

INFOID:000000010480228

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000]	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

Diagnosis Procedure

INFOID:000000010480229

1. PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform "Self Diagnostic Result" of "MULTI AV" using CONSULT.

Is CAN COMM CIRCUIT displayed?

- YES >> Refer to [LAN-16, "Trouble Diagnosis Flow Chart"](#).
NO >> Refer to [GI-44, "Intermittent Incident"](#).

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AV

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000010480230

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	Error during CAN controller hardware initialization (VCAN).	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-298, "Removal and Installation" .

U1217 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U1217 AV CONTROL UNIT

DTC Logic

INFOID:000000010480231

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
BLUETOOTH MODULE [U1217]	Connection failure to the internal Bluetooth [®] sub unit is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-298, "Removal and Installation" .

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U1229 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U1229 AV CONTROL UNIT

DTC Logic

INFOID:000000010480232

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
iPod CERTIFICATION [U1229]	iPod authentication chip error.	Replace AV control unit if malfunction occurs constantly. Refer to AV-298, "Removal and Installation" .

U122F AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U122F AV CONTROL UNIT

DTC Logic

INFOID:000000010480233

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Digital broadcasting connection error [U122F]	Communication error with digital audio broadcast module internal to AV control unit.	Replace AV control unit if malfunction occurs constantly. Refer to AV-298, "Removal and Installation" .

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U1244 GPS ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U1244 GPS ANTENNA

DTC Logic

INFOID:000000010480234

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ANTENNA CONN [U1244]	Open or short to ground is detected in GPS antenna connection.	<ul style="list-style-type: none">GPS antenna disconnection.Open or short to ground in GPS antenna signal circuit.

Diagnosis Procedure

INFOID:000000010480235

Regarding Wiring Diagram information, refer to [AV-229. "Wiring Diagram"](#).

1. GPS ANTENNA INSPECTION

Visually inspect the GPS antenna and antenna feeder. Refer to [AV-305. "Removal and Installation"](#).

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning components.

2. CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect AV control unit connector M100.
2. Turn ignition switch ON.
3. Check voltage between AV control unit terminal 58 and ground.

AV control unit terminal	Ground	Voltage
(+)	(-)	
58	—	5.0 V

Is inspection result normal?

YES >> Replace GPS antenna. Refer to [AV-305. "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-298. "Removal and Installation"](#).

U1258 SATELLITE RADIO ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U1258 SATELLITE RADIO ANTENNA

DTC Logic

INFOID:000000010480236

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
XM ANTENNA CONN [U1258]	Open or short to ground is detected in satellite antenna connection.	<ul style="list-style-type: none">Satellite antenna disconnection.Open or short to ground in satellite antenna signal circuit.

Diagnosis Procedure

INFOID:000000010480237

Regarding Wiring Diagram information, refer to [AV-229, "Wiring Diagram"](#).

1. SATELLITE ANTENNA INSPECTION

Visually inspect the satellite antenna and antenna feeder. Refer to [AV-307, "Location of Antenna"](#).

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning components.

2. CHECK SATELLITE ANTENNA FEEDER CONTINUITY

- Disconnect AV control unit connector M99 and satellite radio antenna connector B59.
- Check continuity between AV control unit connector M99 and satellite radio antenna connector B59.

AV control unit		Satellite radio antenna		Continuity
Connector	Terminal	Connector	Terminal	
M99	56	B59	1	Yes

- Check continuity between AV control unit connector M99 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M99	56	—	No

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

3. CHECK AV CONTROL UNIT VOLTAGE

- Turn ignition switch ON.
- Check voltage between AV control unit terminal 56 and ground.

AV control unit terminal	Ground	Voltage
(+)	(-)	
56	—	5.0 V

Is inspection result normal?

YES >> Replace satellite radio antenna [AV-304, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-298, "Removal and Installation"](#).

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AV

U1263 USB

DTC Logic

INFOID:000000010480238

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
USB OVERCURRENT [U1263]	Overcurrent in USB harness is detected.	<ul style="list-style-type: none"> • Device connected to USB interface. • Harness between the AV control unit and USB interface.

DTC CONFIRMATION PROCEDURE

1. PERFORM SELF DIAGNOSTIC RESULT

1. If there is a device connected to the USB interface, disconnect it.
2. Turn ignition switch ON and wait for 2 seconds or more.
3. Perform "Self Diagnostic Result" of "MULTI AV" using CONSULT.

Is DTC U1263 displayed?

- YES >> Refer to [AV-254, "Diagnosis Procedure"](#).
 NO >> Inspection End.

Diagnosis Procedure

INFOID:000000010480239

1. CHECK USB INTERFACE HARNESS

Visually inspect USB interface harness. Refer to [AV-299, "Removal and Installation"](#).

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Replace USB interface harness. Refer to [AV-299, "Removal and Installation"](#).

2. CHECK USB INTERFACE HARNESS

Check USB interface harness. Refer to [AV-283, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-298, "Removal and Installation"](#).
 NO >> Replace USB interface harness. Refer to [AV-299, "Removal and Installation"](#).

U1264 ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U1264 ANTENNA AMP.

DTC Logic

INFOID:000000010480240

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
ANTENNA AMP TERMINAL [U1264]	Open or short to ground is detected in Antenna amp. connection.	<ul style="list-style-type: none"> Antenna amp. disconnection. Open or short to ground in antenna amp. ON signal circuit.

Diagnosis Procedure

INFOID:000000010480241

Regarding Wiring Diagram information, refer to [AV-229, "Wiring Diagram"](#).

1. ANTENNA AMP. INSPECTION

Visually inspect the antenna amp. and antenna feeder. Refer to [AV-307, "Location of Antenna"](#).

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning components.

2. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND ANTENNA AMP.

- Turn ignition switch OFF.
- Disconnect AV control unit connector M137 and antenna amp. connector M502.
- Check continuity between AV control unit connector M137 and antenna amp. connector M502.

AV control unit		Antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
M137	51	M502	1	Yes

- Check continuity between AV control unit connector M137 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M137	51	—	No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

3. CHECK AV CONTROL UNIT VOLTAGE

- Connect AV control unit connector M137.
- Turn ignition switch ON.
- Check voltage between AV control unit connector M137 and ground.

AV control unit		Ground	Voltage (Approx.)
(+)		(-)	
Connector	Terminal		
M137	51	—	Battery voltage

Is the inspection result normal?

YES >> Replace antenna amp. Refer to [AV-310, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-298, "Removal and Installation"](#).

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AV

U12AA CONFIGURATION ERROR

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U12AA CONFIGURATION ERROR

DTC Logic

INFOID:000000010480242

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Configuration Error [U12AA]	AV control unit is not properly configured or configuration is corrupt.	Configuration data needs to be written. Refer to AV-244, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure" .

Diagnosis Procedure

INFOID:000000010480243

1.PERFORM CONFIGURATION

When U12AA is detected, configuration data must be written.

>> Write configuration data with CONSULT. Refer to [AV-244, "CONFIGURATION \(AV CONTROL UNIT\) : Work Procedure"](#).

U12AB ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U12AB ANTENNA

DTC Logic

INFOID:000000010480244

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FM Antenna error [U12AB]	Open or short to ground is detected in glass antenna (FM sub) connection.	<ul style="list-style-type: none">• Glass antenna (FM sub) disconnection.• Open or short to ground in glass antenna (FM sub) signal circuit.

Diagnosis Procedure

INFOID:000000010480245

Regarding Wiring Diagram information, refer to [AV-229, "Wiring Diagram"](#).

1. GLASS ANTENNA (FM SUB) INSPECTION

Visually inspect the glass antenna (FM sub) and antenna feeder. Refer to [AV-307, "Location of Antenna"](#).

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning components.

2. CHECK GLASS ANTENNA (FM SUB) FEEDER CONTINUITY

1. Disconnect AV control unit connector M137 and inline connector M504.
2. Check continuity between AV control unit connector M137 and inline connector M504.

AV control unit		Inline		Continuity
Connector	Terminal	Connector	Terminal	
M137	54	M504	1	Yes

3. Check continuity between AV control unit connector M137 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M137	54	—	No

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect AV control unit connector M137.
2. Turn ignition switch ON.
3. Check voltage between AV control unit terminal 54 and ground.

AV control unit terminal	Ground	Voltage
(+)	(-)	
54	—	5.0 V

Is inspection result normal?

YES >> Replace glass antenna (FM sub). Refer to [GW-25, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-298, "Removal and Installation"](#).

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U12AC AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U12AC AV CONTROL UNIT

DTC Logic

INFOID:000000010480246

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Display Temperature too High [U12AC]	Display temperature has exceeded maximum temperature. Display is switched OFF to avoid irreversible damage.	Replace AV control unit if malfunction occurs constantly. Refer to AV-298, "Removal and Installation" .

U12AD AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U12AD AV CONTROL UNIT

DTC Logic

INFOID:000000010480247

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
ECU Temperature too High [U12AD]	AV control unit temperature has exceeded maximum temperature.	Replace AV control unit if malfunction occurs constantly. Refer to AV-298, "Removal and Installation" .

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U12AE AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U12AE AV CONTROL UNIT

DTC Logic

INFOID:000000010480248

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Internal Amplifier temperature Warning [U12AE]	Internal amplifier temperature has exceeded maximum temperature.	Replace AV control unit if malfunction occurs constantly. Refer to AV-298, "Removal and Installation" .

U12AF AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U12AF AV CONTROL UNIT

DTC Logic

INFOID:000000010480249

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CD Mechanism Temperature Warning [U12AF]	CD drive temperature has exceeded maximum temperature. CD drive is switched OFF to avoid irreversible damage.	Replace AV control unit if malfunction occurs constantly. Refer to AV-298, "Removal and Installation" .

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U12B0 POWER SUPPLY VOLTAGE

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U12B0 POWER SUPPLY VOLTAGE

DTC Logic

INFOID:000000010480250

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Supply Voltage Goes below 9V > 20s [U12B0]	AV control unit supply voltage exceeds lower limits.	<ul style="list-style-type: none">• Charging system malfunction.• AV control unit power supply or ground circuits.

Diagnosis Procedure

INFOID:000000010480251

1. CHECK CHARGING SYSTEM

Check the vehicle charging system. Refer to [CHG-17, "Work Flow \(With EXP-800 NI or GR8-1200 NI\)"](#) or [CHG-20, "Work Flow \(Without EXP-800 NI or GR8-1200 NI\)"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning components.

2. CHECK AV CONTROL UNIT POWER SUPPLY AND GROUND CIRCUITS

Perform the AV control unit power supply and ground circuit diagnosis procedure. Refer to [AV-267, "AV CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Replace the AV control unit. Refer to [AV-298, "Removal and Installation"](#).

NO >> Repair or replace harness or connectors.

U12B1 POWER SUPPLY VOLTAGE

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U12B1 POWER SUPPLY VOLTAGE

DTC Logic

INFOID:000000010480252

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Supply Voltage Goes High > 16V for 20s [U12B1]	AV control unit supply voltage exceeds upper limits.	Charging system malfunction.

Diagnosis Procedure

INFOID:000000010480253

1. CHECK CHARGING SYSTEM

Check the vehicle charging system. Refer to [CHG-17, "Work Flow \(With EXP-800 NI or GR8-1200 NI\)"](#) or [CHG-20, "Work Flow \(Without EXP-800 NI or GR8-1200 NI\)"](#).

Is the inspection result normal?

- YES >> Replace the AV control unit. Refer to [AV-298, "Removal and Installation"](#).
- NO >> Repair or replace the malfunctioning components.

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AV

U1300 AV COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U1300 AV COMM CIRCUIT

DTC Logic

INFOID:000000010480254

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
AV COMM CIRCUIT [U1300]	AV communication circuit malfunction (MCAN) between AV control unit and combination meter.	AV communication circuits between AV control unit and combination meter.

Diagnosis Procedure

INFOID:000000010480255

1. PERFORM SELF DIAGNOSTIC RESULT FOR METER M&A

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform "Self Diagnostic Result" of "METER M&A" using CONSULT.

Are any DTCs displayed?

YES >> Refer to [MWI-27, "DTC Index"](#).

NO >> GO TO 2.

2. CHECK AV COMMUNICATION CIRCUIT (L) CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M97 and combination meter connector M24.
3. Check continuity between AV control unit connector M97 and combination meter connector M24.

AV control unit		Combination meter		Continuity
Connector	Terminal	Connector	Terminal	
M97	32	M24	36	Yes
	39			

4. Check continuity between AV control unit connector M97 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M97	32	—	No
	39		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK AV COMMUNICATION CIRCUIT (H) CONTINUITY

1. Check continuity between AV control unit connector M97 and combination meter connector M24.

AV control unit		Combination meter		Continuity
Connector	Terminal	Connector	Terminal	
M97	31	M24	37	Yes
	38			

2. Check continuity between AV control unit connector M97 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M97	31	—	No
	38		

U1300 AV COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

Is the inspection result normal?

YES >> Replace the AV control unit. Refer to [AV-298, "Removal and Installation"](#).

NO >> Repair or replace harness or connectors.

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U1310 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

U1310 AV CONTROL UNIT

DTC Logic

INFOID:000000010480256

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (AV) [U1310]	Error during CAN controller hardware initialization (MCAN).	Replace AV control unit if malfunction occurs constantly. Refer to AV-298, "Removal and Installation" .

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:000000010480257

Regarding Wiring Diagram information, refer to [AV-229. "Wiring Diagram"](#).

1. CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
7	ACC power supply	25 (10A)
19	Battery power supply	15 (20A)
40	Ignition power supply	29 (5A)

Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connectors M96 and M97.
3. Check voltage between AV control unit connectors M96 and M97 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M96	19	—	Ignition switch: OFF	Battery voltage
	7		Ignition switch: ON	
M97	40			

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between AV control unit connector M96 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M96	20	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

FRONT DOOR SPEAKER

Diagnosis Procedure

INFOID:000000010480258

Regarding Wiring Diagram information, refer to [AV-229. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the AV control 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 terminals or connectors.

2. CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M96 and suspect front door speaker connector.
2. Check continuity between AV control unit connector M96 and suspect front door speaker connector.

AV control unit		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M96	2	D19 (LH)	1	Yes
	3		2	
	11	D119 (RH)	1	
	12		2	

3. Check continuity between AV control unit connector M96 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M96	2	—	No
	3		
	11		
	12		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT DOOR SPEAKER SIGNAL

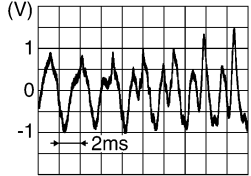
1. Connect AV control unit connector M96 and suspect front door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between AV control unit connector M96 and ground.

AV control unit connector M96		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

2	3	Audio signal output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
11	12		

Is the inspection result normal?

- YES >> Replace front door speaker. Refer to [AV-302. "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-298. "Removal and Installation"](#).

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AV

FRONT SPEAKER

Diagnosis Procedure

INFOID:000000010480259

Regarding Wiring Diagram information, refer to [AV-229. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the AV control 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 terminals or connectors.

2. CHECK FRONT SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M96 and suspect front speaker connector.
2. Check continuity between AV control unit connector M96 and suspect front speaker connector.

AV control unit		Front speaker		Continuity
Connector	Terminal	Connector	Terminal	
M96	2	M55 (LH)	1	Yes
	3		2	
	11	M63 (RH)	1	
	12		2	

3. Check continuity between AV control unit connector M96 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M96	2	—	No
	3		
	11		
	12		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT SPEAKER SIGNAL

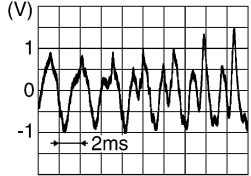
1. Connect AV control unit connector M96 and suspect front speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between AV control unit connector M96 and ground.

AV control unit connector M96		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

2	3	Audio signal output	
11	12		

Is the inspection result normal?

- YES >> Replace front speaker. Refer to [AV-301, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-298, "Removal and Installation"](#).

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AV

REAR SPEAKER

Diagnosis Procedure

INFOID:000000010480260

Regarding Wiring Diagram information, refer to [AV-229. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the AV control 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 terminals or connectors.

2. CHECK REAR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M96 and suspect rear speaker connector.
2. Check continuity between AV control unit connector M96 and suspect rear speaker connector.

AV control unit		Rear speaker		Continuity
Connector	Terminal	Connector	Terminal	
M96	4	B25 (LH)	1	Yes
	5		2	
	13	B47 (RH)	1	
	14		2	

3. Check continuity between AV control unit connector M96 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M96	4	—	No
	5		
	13		
	14		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK REAR SPEAKER SIGNAL

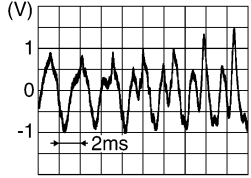
1. Connect AV control unit connector M96 and suspect rear speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between AV control unit connector M96 and ground.

AV control unit connector M96		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

4	5	Audio signal output	
13	14		

Is the inspection result normal?

- YES >> Replace rear speaker. Refer to [AV-303. "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-298. "Removal and Installation"](#).

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REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000010480261

Regarding Wiring Diagram information, refer to [AV-229. "Wiring Diagram"](#).

WITH DRIVER ASSISTANCE SYSTEM

1. CHECK REVERSE INPUT SIGNAL

1. Turn ignition switch ON.
2. Shift the selector lever to R (reverse).
3. Check voltage between ITS control unit connector M58 and ground.

ITS control unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M58	28	—	Selector lever in R (reverse)	Battery Voltage

4. Check voltage between AV control unit connector M97 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M97	25	—	Selector lever in R (reverse)	Battery Voltage

Is inspection result normal?

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

2. CHECK CAMERA POWER SUPPLY CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect ITS control unit connector M59 and rear view camera connector.
3. Check continuity between ITS control unit connector M59 and rear view camera connector B35.

ITS control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M59	52	B35	8	Yes

4. Check continuity between ITS control unit connector M59 and ground.

ITS control unit		Ground	Continuity
Connector	Terminal		
M59	52		No

Is inspection result normal?

- YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3. CHECK CAMERA POWER SUPPLY VOLTAGE

1. Connect ITS control unit connector M59 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to R (reverse).
4. Check voltage between ITS control unit connector M59 and ground.

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

ITS control unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M59	52	—	Selector lever in R (reverse)	6.0 V

Is inspection result normal?

YES >> GO TO 4.

NO >> Replace ITS control unit. Refer to [AV-313. "Removal and Installation"](#).

4. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY (ITS CONTROL UNIT)

1. Turn ignition switch OFF.
2. Disconnect ITS control unit connector M59 and rear view camera connector.
3. Check continuity between ITS control unit connector M59 and rear view camera connector B35.

ITS control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M59	66	B35	5	Yes

4. Check continuity between ITS control unit connector M59 and ground.

ITS control unit		Ground	Continuity
Connector	Terminal		
M59	66		No

Is inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5. CHECK CAMERA GROUND CIRCUIT CONTINUITY

Check continuity between ITS control unit connector M59 and rear view camera connector B35.

ITS control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M59	51	B35	7	Yes

Is inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness or connectors.

6. CHECK CAMERA IMAGE SIGNAL (ITS CONTROL UNIT)

1. Connect ITS control unit connector M59 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to R (reverse).
4. Check signal between ITS control unit connector M59 and ground.

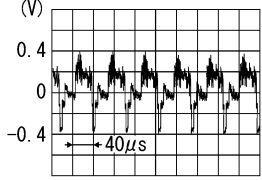
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REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

ITS control unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M59	66	—	Camera image displayed.	 <p style="text-align: right; font-size: small;">SKIB2251J</p>

Is inspection result normal?

YES >> GO TO 7.

NO >> Replace ITS control unit. Refer to [AV-313, "Removal and Installation"](#).

7. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY (AV CONTROL UNIT)

1. Turn ignition switch OFF.
2. Disconnect ITS control unit connector M59 and AV control unit connector M97.
3. Check continuity between ITS control unit connector M59 and AV control unit connector M97.

ITS control unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M59	69	M97	41	Yes

4. Check continuity between ITS control unit connector M59 and ground.

ITS control unit		Ground	Continuity
Connector	Terminal		
M59	69		No

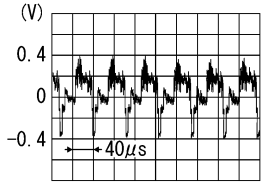
Is inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness or connectors.

8. CHECK CAMERA IMAGE SIGNAL (AV CONTROL UNIT)

1. Connect ITS control unit connector M59 and AV control unit connector M97.
2. Turn ignition switch ON.
3. Shift the selector lever to R (reverse).
4. Check signal between AV control unit connector M97 and ground.

AV control unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M153	41	—	Camera image displayed.	 <p style="text-align: right; font-size: small;">SKIB2251J</p>

Is inspection result normal?

YES >> Replace AV control unit. Refer to [AV-298, "Removal and Installation"](#).

NO >> Replace rear view camera. Refer to [AV-312, "Removal and Installation"](#).

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

[NAVIGATION WITHOUT BOSE]

< DTC/CIRCUIT DIAGNOSIS >

WITHOUT DRIVER ASSISTANCE SYSTEM

1. CHECK REVERSE INPUT SIGNAL

1. Turn ignition switch ON.
2. Shift the selector lever to R (reverse).
3. Check voltage between AV control unit connector M97 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M97	25	—	Selector lever in R (reverse)	Battery Voltage

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK CAMERA POWER SUPPLY CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M97 and rear view camera connector.
3. Check continuity between AV control unit connector M97 and rear view camera connector B35.

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	43	B35	8	Yes

4. Check continuity between AV control unit connector M97 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M97	43		No

Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK CAMERA POWER SUPPLY VOLTAGE

1. Connect AV control unit connector M97 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to R (reverse).
4. Check voltage between AV control unit connector M97 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M97	43	—	Selector lever is in "R".	6.0 V

Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit. Refer to [AV-298. "Removal and Installation"](#).

4. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M97 and rear view camera connector.
3. Check continuity between AV control unit connector M97 and rear view camera connector B35.

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	41	B35	5	Yes

4. Check continuity between AV control unit connector M97 terminal 82 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M97	41		No

Is inspection result normal?

- YES >> GO TO 5.
- NO >> Repair or replace harness or connectors.

5. CHECK CAMERA GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M97 and rear view camera connector B35.

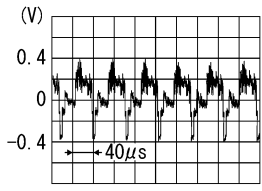
AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	44	B35	7	Yes

Is inspection result normal?

- YES >> GO TO 6.
- NO >> Repair or replace harness or connectors.

6. CHECK CAMERA IMAGE SIGNAL

1. Connect AV control unit connector M97 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to R (reverse).
4. Check signal between AV control unit connector M97 and ground.

AV control unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M97	41	—	Camera image displayed.	 <p style="text-align: right; font-size: small;">SKIB2251J</p>

Is inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-298. "Removal and Installation"](#).
- NO >> Replace rear view camera. Refer to [AV-312. "Removal and Installation"](#).

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

MICROPHONE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000010480262

Regarding Wiring Diagram information, refer to [AV-229. "Wiring Diagram"](#).

1. CHECK MICROPHONE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M97 and microphone connector R7.
3. Check continuity between AV control unit connector M97 and microphone connector R7.

AV control unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M97	36	R7	2	Yes
	35		4	
	34		1	

4. Check continuity between AV control unit connector M97 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M97	36	—	No
	35		
	34		

Is inspection result normal?

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

2. CHECK MICROPHONE VCC VOLTAGE

1. Connect AV control unit connector M97.
2. Turn ignition switch ON.
3. Check voltage between terminals of AV control unit connector M97.

AV control unit connector M97		Voltage (Approx.)
(+)	(-)	
Terminal	Terminal	
35	36	5.0 V

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Replace AV control unit. Refer to [AV-298. "Removal and Installation"](#).

3. CHECK MICROPHONE SIGNAL

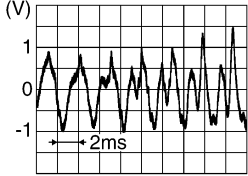
1. Connect microphone connector.
2. Check signal between terminals of AV control unit connector M97.

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MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

AV control unit connector M97		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
34	36	Speak into microphone.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-298, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-311, "Removal and Installation"](#).

STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

STEERING SWITCH






Diagnosis Procedure

INFOID:000000010480263

Regarding Wiring Diagram information, refer to [AV-229. "Wiring Diagram"](#).

1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect combination switch connector M88.
3. Check resistance between combination switch connector terminals.

Combination switch connector M88		Condition	Resistance Ω (Approx.)
Terminal	Terminal		
14	17	Depress SOURCE switch.	1
		Depress Δ switch.	121
		Depress ∇ switch.	321
		Depress  switch.	723
		Depress ENTER switch.	2023
15	17	Depress -  switch.	1
		Depress  + switch.	121
		Depress  switch.	321
		Depress  switch.	723
		Depress DISP switch.	2023

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering switches. Refer to [AV-306. "Removal and Installation"](#).

2. CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

1. Disconnect combination meter connector M24 and combination switch connector M30.
2. Check continuity between combination meter connector M24 and combination switch connector M30.

Combination meter		Combination switch		Continuity
Connector	Terminal	Connector	Terminal	
M24	3	M30	24	Yes
	24		33	
	4		31	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	3	—	No
	24		
	4		

Is the inspection result normal?

STEERING SWITCH

[NAVIGATION WITHOUT BOSE]

< DTC/CIRCUIT DIAGNOSIS >

- YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3. CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M88.

Combination switch				Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M88	14	Yes
	31		15	
	33		17	

Is the inspection result normal?

- YES >> GO TO 4.
NO >> Replace spiral cable. Refer to [SR-15. "Removal and Installation"](#).

4. CHECK HARNESS BETWEEN COMBINATION METER AND AV CONTROL UNIT

1. Disconnect AV control unit connector M97.
2. Check continuity between combination meter connector M24 and AV control unit connector M97.

Combination meter		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M24	37	M97	31	Yes
	36		32	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	37	—	No
	36		

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-298. "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

USB CONNECTOR

Diagnosis Procedure

INFOID:000000010480264

Regarding Wiring Diagram information, refer to [AV-229. "Wiring Diagram"](#).

1. CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M131 and USB interface connector M132.
3. Check continuity between AV control unit connector M131 and USB interface connector M132.

AV control unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M131	45	M132	1	Yes
	47		3	
	48		4	
	49		5	
	50		6	

4. Check continuity between AV control unit connector M131 and ground.

AV control unit		—	Continuity
Connector	Terminal		
M131	47	Ground	No
	49		

Is the inspection result normal?

- YES >> Replace the USB interface. Refer to [AV-299. "Removal and Installation"](#).
 NO >> Repair or replace harness or connectors.

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AUXILIARY INPUT JACK

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

AUXILIARY INPUT JACK

Diagnosis Procedure

INFOID:000000010480265

Regarding Wiring Diagram information, refer to [AV-229. "Wiring Diagram"](#).

1. CHECK AUX IN JACK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M97 and AUX in jack connector M104.
3. Check continuity between AV control unit connector M97 and AUX in jack connector M104.

AV control unit		AUX in jack		Continuity
Connector	Terminal	Connector	Terminal	
M97	21	M104	1	Yes
	22		2	
	23		4	

4. Check continuity between AV control unit connector M97 and ground.

AV control unit		—	Continuity
Connector	Terminal		
M97	21	Ground	No
	23		

Is the inspection result normal?

- YES >> Replace the AUX in jack. Refer to [AV-300. "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM

Symptom Table

INFOID:0000000010480266

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	AV control unit	Malfunction in AV control unit. Refer to AV-222, "On Board Diagnosis Function" .
No sound comes out or the level of the sound is low.	No sound from all speakers.	<ul style="list-style-type: none"> • Speaker circuit shorted to ground. Refer to AV-229, "Wiring Diagram". • AV control unit power supply and ground circuits malfunction. Refer to AV-267, "AV CONTROL UNIT : Diagnosis Procedure".
	Only a certain speaker (front door speaker LH, front door speaker RH, front speaker LH, front speaker RH, rear speaker LH, rear speaker RH) does not output sound.	<ul style="list-style-type: none"> • Poor connector connection of speaker. • Sound signal circuit malfunction between AV control unit and speaker. Refer to: <ul style="list-style-type: none"> - AV-268, "Diagnosis Procedure" (front door speaker). - AV-270, "Diagnosis Procedure" (front speaker). - AV-272, "Diagnosis Procedure" (rear speaker). • Malfunction in speaker. Refer to: <ul style="list-style-type: none"> - AV-302, "Removal and Installation" (front door speaker). - AV-301, "Removal and Installation" (front speaker). - AV-303, "Removal and Installation" (rear speaker). • Malfunction in AV control unit. Refer to AV-222, "On Board Diagnosis Function".

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AV

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

Symptoms	Check items	Probable malfunction location
Noise is mixed with audio.	Noise comes out from all speakers.	Malfunction in AV control unit. Refer to AV-222, "On Board Diagnosis Function" .
	Noise comes out only from a certain speaker (front door speaker LH, front door speaker RH, front speaker LH, front speaker RH, rear speaker LH, rear speaker RH).	<ul style="list-style-type: none"> Poor connector connection of speaker. Sound signal circuit malfunction between AV control unit and speaker. Refer to: <ul style="list-style-type: none"> AV-268, "Diagnosis Procedure" (front door speaker). AV-270, "Diagnosis Procedure" (front speaker). AV-272, "Diagnosis Procedure" (rear speaker). Malfunction in speaker. Poor Installation of speaker (e.g. backlash and looseness). Refer to: <ul style="list-style-type: none"> AV-302, "Removal and Installation" (front door speaker). AV-301, "Removal and Installation" (front speaker). AV-303, "Removal and Installation" (rear speaker). Malfunction in AV control unit. Refer to AV-222, "On Board Diagnosis Function".
	Noise is mixed with radio only (when the vehicle hits a bump or while driving over bad roads)	Poor connector connection of antenna or antenna feeder. Refer to AV-307, "Location of Antenna" .
No radio reception or poor reception.	<ul style="list-style-type: none"> Other audio sounds are normal. Any radio station cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises). 	<ul style="list-style-type: none"> Antenna amp. ON signal circuit malfunction. Refer to AV-225, "Reference Value". Poor connector connection of antenna or antenna feeder. Refer to AV-307, "Location of Antenna".
No satellite radio reception.	There is malfunction in the CONSULT self diagnosis result. Refer to AV-223, "CONSULT Function" .	<ul style="list-style-type: none"> Malfunction in antenna, antenna feeder or AV control unit. Perform DTC diagnosis. Refer to AV-253, "Diagnosis Procedure". Poor continuity in antenna feeder. Poor connector connection of antenna or antenna feeder. Refer to AV-307, "Location of Antenna".
	There is no malfunction in the CONSULT self diagnosis result. Refer to AV-223, "CONSULT Function" .	<ul style="list-style-type: none"> Poor continuity in antenna feeder. Poor connector connection of antenna or antenna feeder. Loose satellite radio antenna mounting nut. Refer to AV-307, "Location of Antenna".
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.

RELATED TO HANDS-FREE PHONE

- Before performing diagnosis, confirm that the cellular phone being used by the customer is compatible with the vehicle.
- It is possible that a malfunction is occurring due to a version change of the phone even though the phone is a compatible type. This can be confirmed by changing the cellular phone to another compatible type, and check that it operates normally. It is important to determine whether the cause of the malfunction is the vehicle or the cellular phone.

MULTI AV SYSTEM

[NAVIGATION WITHOUT BOSE]

< SYMPTOM DIAGNOSIS >

Check Compatibility

1. Make sure the customer's Bluetooth® related concern is understood.
2. Verify the customer's concern.









NOTE:
The customer's phone may be required, depending upon their concern.
3. Write down the customer's phone brand, model and service provider.

NOTE:
It is necessary to know the service provider. On occasion, a given phone may be on the approved list with one provider, but may not be on the approved list with other providers.
4. Go to "www.nissanusa.com/bluetooth/".
 - a. Using the website's search engine, find out if the customer's phone is on the approved list.
 - b. If the customer's phone is NOT on the approved list:

Stop diagnosis here. The customer needs to obtain a Bluetooth® phone that is on the approved list before any further action.
 - c. If the feature related to the customer's concern shows as "N" (not compatible):

Stop diagnosis here. If the customer still wants the feature to function, they will need to get an approved phone showing the feature as "Y" (compatible) in the "Basic Features".
 - d. If the feature related to the customer's concern shows as "Y" (compatible):

Perform diagnosis as per the following table.

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection (no connection is displayed on the display at the guide).	Repeat the registration of cellular phone.	
Hands-free phone cannot be established.	<ul style="list-style-type: none"> • Hands-free phone operation can be made, but the communication cannot be established. • Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation. 	Malfunction in AV control unit. Replace AV control unit. Refer to AV-298, "Removal and Installation" .
The other party's voice cannot be heard by hands-free phone.	Check the "microphone speaker" in Inspection & Adjustment Mode if sound is heard.	
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-279, "Diagnosis Procedure" .
The system cannot be operated.	<ul style="list-style-type: none"> • The voice recognition can be controlled. • Steering switch's +, -, and  switch works, but  does not work. 	Steering switch malfunction. Replace steering switch. Refer to AV-306, "Removal and Installation" .
	Steering switch's  ,  +,  -, and  switches do not work.	Steering switch signal circuit malfunction. Refer to AV-281, "Diagnosis Procedure" .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-281, "Diagnosis Procedure" .

RELATED TO NAVIGATION

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

Symptoms	Check items	Probable malfunction location
Navigation system is inoperative.	Navigation malfunction.	<ul style="list-style-type: none"> • Malfunction in SD card. • Malfunction in AV control unit. Refer to AV-222, "On Board Diagnosis Function".
	Steering switches malfunction.	Steering switch signal circuit malfunction. Refer to AV-281, "Diagnosis Procedure" .
	Voice activated control malfunction.	Microphone signal circuit malfunction. Refer to AV-279, "Diagnosis Procedure" . Steering switch signal circuit malfunction. Refer to AV-281, "Diagnosis Procedure" .

RELATED TO REAR VIEW CAMERA

Symptoms	Check items	Probable malfunction location
Rear view camera is inoperative.	Reverse signal circuit malfunction.	Reverse signal circuit malfunction between BCM and AV control unit. Refer to AV-274, "Diagnosis Procedure" .
	Camera image signal circuit malfunction.	Camera image signal circuit malfunction between rear view camera and AV control unit. Refer to AV-274, "Diagnosis Procedure" .
	Rear view camera malfunction.	Replace rear view camera. Refer to AV-312, "Removal and Installation" .

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

NORMAL OPERATING CONDITION

Description

INFOID:000000010480267

RELATED TO NOISE

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

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"> • Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		<ul style="list-style-type: none"> • Fuel pump condenser
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"> • Relay malfunction, AV control unit malfunction
	The noise occurs when various motors are operating.	<ul style="list-style-type: none"> • Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		<ul style="list-style-type: none"> • 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.		<ul style="list-style-type: none"> • Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

RELATED TO HANDS-FREE PHONE

Symptom	Cause and Counter measure
Does not recognize cellular phone connection (No connection is displayed on the display at the guide).	<p>Some Bluetooth[®] enabled cellular phones may not be recognized by the in-vehicle phone module.</p> <p>Refer to "RELATED TO HANDS-FREE PHONE (Check Compatibility)" in AV-285, "Symptom Table".</p>
Cannot use hands-free phone.	<p>Customer will not be able to use a hands-free phone under the following conditions:</p> <ul style="list-style-type: none"> • The vehicle is outside of the telephone service area. • The vehicle is in an area where it is difficult to receive radio waves; such as in a tunnel, in an underground parking garage, near a tall building or in a mountainous area. • The cellular phone is locked to prevent it from being dialed. <p>NOTE:</p> <p>While a cellular phone is connected through the Bluetooth[®] wireless connection, the battery power of the cellular phone may discharge quicker than usual. The Bluetooth[®] Hands-Free Phone System cannot charge cellular phones.</p>

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

Symptom	Cause and Counter measure
The other party's voice cannot be heard by hands-free phone.	When the radio wave condition is not ideal or ambient sound is too loud, it may be difficult to hear the other person's voice during a call.
Poor sound quality.	Do not place the cellular phone in an area surrounded by metal or far away from the in-vehicle phone module to prevent tone quality degradation and wireless connection disruption.

RELATED TO NAVIGATION

Basic Operation

Symptom	Cause	Remedy
No image is shown.	Display brightness adjustment is set fully to DARK side.	Adjust the display brightness.
No guide sound is heard. Audio guide volume is too low or too high.	Volume control is set to OFF, MIN or MAX.	Adjust the audio guide volume.
	Audio guidance is not available while the vehicle is driving on a dark pink route.	System is not malfunctioning.
Screen is too dark. Motion of the image is too slow.	Temperature inside the vehicle is low.	Wait until the temperature inside the vehicle reaches the proper temperature.
Small black or bright spots appear on the screen.	Symptom peculiar to a liquid crystal display (display unit).	System is not malfunctioning.

Vehicle Mark

Symptom	Cause	Remedy
Map screen and BIRDVIEW™ Name of the place vary with the screen.	Some thinning of the character data is done to prevent the display becoming to complex. In some cases and in some locations, the display contents may differ. The same place name, street name, etc. may not be displayed every time on account of the data processing.	System is not malfunctioning.
Vehicle mark is not positioned correctly.	Vehicle is transferred by ferry or by towing after its ignition switch is turned to OFF.	Drive the vehicle for a while in the GPS satellite signal receiving condition.
Screen will not switch to nighttime mode after the lighting switch is turned ON.	The daytime screen is selected by the "SWITCH SCREENS" when the last time the screen dimming setting is done. Switching between daytime/nighttime screen may be inhibited by the automatic illumination adjustment function.	Perform screen dimming and select the nighttime screen by "SWITCH SCREENS".
Map screen will not scroll in accordance with the vehicle travel.	Current location is not displayed.	Press "MAP" button to display the current location.
Vehicle mark will not be shown.	Current location is not displayed.	Press "MAP" button to display the current location.
Accuracy indicator (GPS satellite mark) on the map screen stays gray.	GPS satellite signal is intercepted because the vehicle is in or behind a building.	Move the vehicle out to an open space.
	GPS satellite signal cannot be received because an obstacle is placed on top of the instrument panel.	Do not place anything on top of the meter display (instrument panel).
	GPS satellites are not visible from current location.	Wait until GPS satellites are visible by moving the vehicle.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

Symptom	Cause	Remedy
Vehicle location accuracy is low.	Accuracy indicator (GPS satellite mark) on the map screen stays gray.	Current location is not determined.
	Vehicle speed setting by the vehicle speed pulse has been deviated (advanced or retarded) from the actual vehicle speed because tire chain is fitted or the system has been used on another vehicle.	Drive the vehicle for a while [for approx. 30 minutes at approx. 30 km/h (19 MPH)] and the deviation will be automatically adjusted. If advancement or retard still occur, perform the distance adjustment by CONFIRMATION/ADJUSTMENT mode of diagnosis function.
	Map data has error or omission. (Vehicle mark is always deviated to the same position.)	As a rule, an updated map DVD-ROM will be released once a year.

Destination, Passing Points and Menu Items Cannot be Selected/Set

Symptom	Cause	Remedy
Destination cannot be set.	Destination to be set is on an expressway.	Set the destination on an ordinary road.
Passing point is not searched when re-searching the route.	The vehicle has already passed the passing point, or the system judged so.	To include the passing points that have been passed into the route again, set the route again.
Route information will not be displayed.	Route searching has not been done.	Set the destination and perform route searching.
	Vehicle mark is not on the recommended route.	Drive on the recommended route.
	Route guide is turned OFF.	Turn route guide ON.
	Route information is not available on the dark pink route.	System is not malfunctioning.
After the route searching, no guide sign will appear as the vehicle goes near the entrance/exit to the toll road.	Vehicle mark is not on the recommended route. (On the display, only guide signs related to the recommended route will be shown.)	Drive on the recommended route.
Automatic route searching is not possible.	Vehicle is driving on a highway (gray route), or no recommended route is available.	Drive on a road to be searched. Or re-search the route manually. In this case, however, the whole route will be searched.
Performed automatic detour search (or detour search). However, the result is the same as that of the previous search.	Performed search with every conditions considered. However, the result is the same as that of the previous search.	System is not malfunctioning.
Passing points cannot be set.	More than five passing points were set.	Passing points can be set up to five. To stop at more than five points, perform sharing in several steps.
When setting the route, the starting point cannot be selected.	The current vehicle location is always set as the starting point of a route.	System is not malfunctioning.
Some menu items cannot be selected.	The vehicle is being driven.	Stop the vehicle at a safe place and then operate the system.

Voice Guide

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

Symptom	Cause	Remedy
Voice guide will not operate.	Note: Voice guide is only available at intersections that satisfy certain conditions (indicated by ● on the map). Therefore, guidance may not be given even when the route on the map changes direction.	System is not malfunctioning.
	The vehicle is not on the recommended route.	Return to the recommended route or re-search the route.
	Voice guide is turned OFF.	Turn voice guide ON.
	Route guide is turned OFF.	Turn route guide ON.
Voice guide does not match the actual road pattern.	Voice guide may vary with the direction to which the vehicle is turn and the connection of the road to other roads.	Drive in conformity to the actual traffic rules.

Route Search

Symptom	Cause	Remedy
No route is shown.	No road to be searched is found around the destination.	Find wider road (orange road or wider) nearby and reset the destination and passing points onto it. Take care of the traveling direction when there are separate up and down roads.
	Starting point and the destination are too close.	Set the destination at more distant point.
	Conditional traffic regulation (day of the week/ time of the day) is set at the area around the current location or the destination.	Turn the time-regulating search conditions OFF. Turn "Avoid regulation time" in the search conditions OFF.
Indicated route is intermittent.	In some areas, highways (gray routes) are not used for the search ^(Note) Therefore, the route to the current location or the passing points may be intermittent.	System is not malfunctioning.
When the vehicle has passed the recommended route, it is deleted from the screen.	A recommended route is controlled by each section. When the vehicle has passed the passing point 1, then the map data from the starting point up to the passing point 1 will be deleted. (The data may remain undeleted in some area.)	System is not malfunctioning.
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, etc.) is set at the area around the starting point or the destination.	Slightly move the starting point or the destination, or set the passing point on the route of your choice.
	In the area where highways (gray routes) are used for the search, left turn has priority around the current location and the destination (passing points). For this reason, the recommended route may be detouring.	System is not malfunctioning.
Landmarks on the map do not match the actual ones.	This can be happen due to omission or error in the map data.	As a rule, an updated map DVD-ROM will be released once a year. Wait until the latest map has become available.
Recommended route is far from the starting point, passing points, and destination.	Starting point, passing points, and destination of the route guide were set far from the desired points because route searching data around these area were not stored.	Reset the destination onto the road nearby. If this road is one of the highways (gray routes), an ordinary road nearby may be displayed as the recommended route.

NOTE:

Except for the ordinance-designated cities. (Malfunctioning areas may be changed in the updated map disc.)

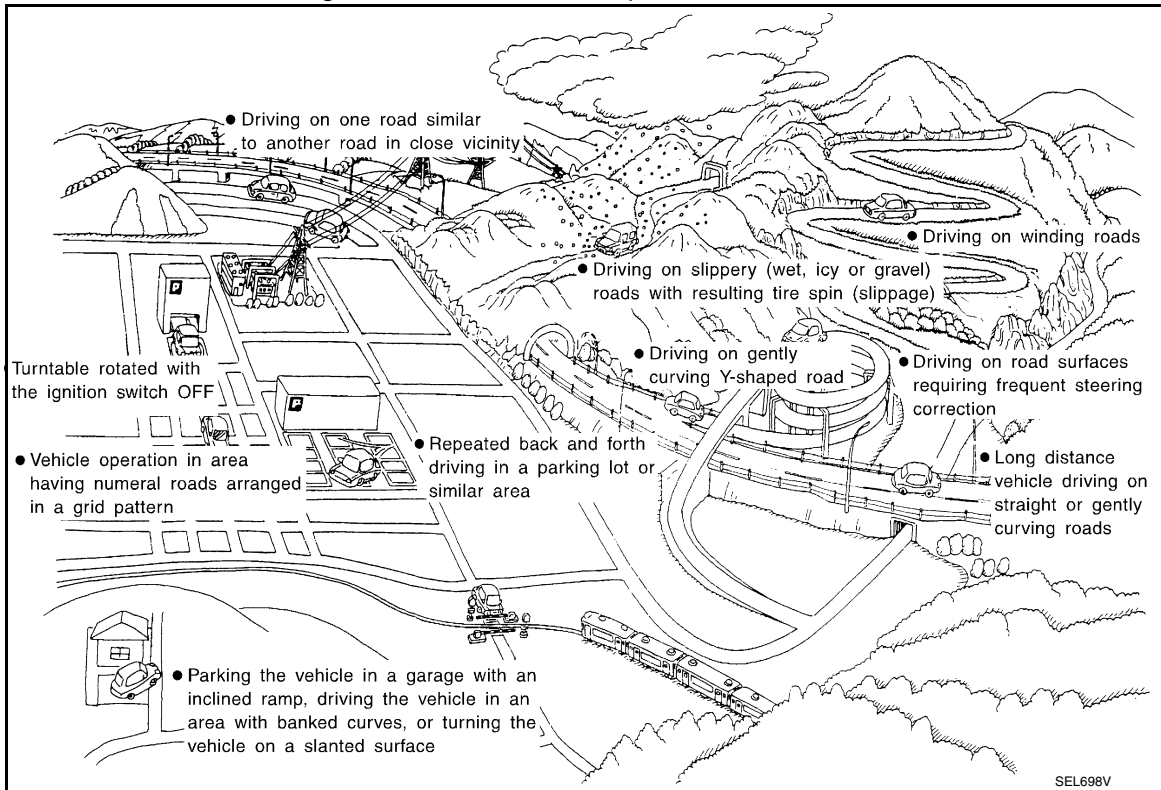
Examples of Current-Location Mark Displacement

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

Vehicle's travel amount is calculated by reading its travel distance and turning angle. Therefore, if the vehicle is driven in the following manner, an error will occur in the vehicle's current location display. If correct location has not been restored after driving the vehicle for a while, perform location correction.

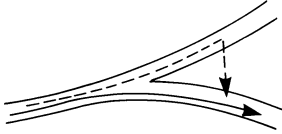
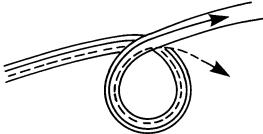
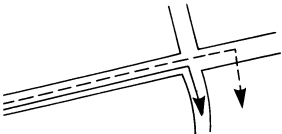
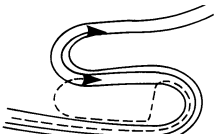
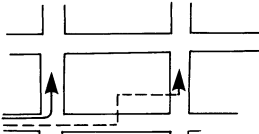
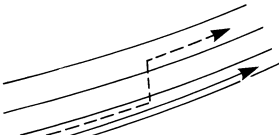


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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

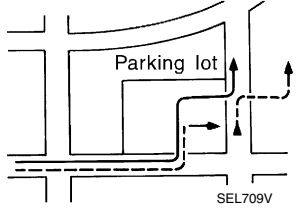
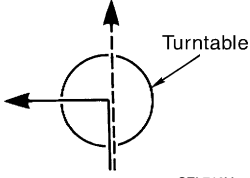
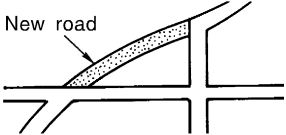
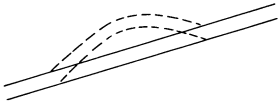
[NAVIGATION WITHOUT BOSE]

Cause (condition) -: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
<p>Y-intersections</p>  <p style="text-align: center;">ELK0192D</p>	<p>At a Y intersection or similar gradual division of roads, an error in the direction of travel deduced by the sensor may result in the current-location mark appearing on the wrong road.</p>	<p>If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.</p>
<p>Spiral roads</p>  <p style="text-align: center;">ELK0193D</p>	<p>When driving on a large, continuous spiral road (such as loop bridge), turning angle error is accumulated and the vehicle mark may deviate from the correct location.</p>	
<p>Straight roads</p>  <p style="text-align: center;">ELK0194D</p>	<p>When driving on a long, straight road and slow curve without stopping, map-matching does not work effectively enough and distance errors may accumulate. As a result, the vehicle mark may deviate from the correct location when the vehicle is turned at a corner.</p>	
<p>Zigzag roads</p>  <p style="text-align: center;">ELK0195D</p>	<p>When driving on a zigzag road, the map may be matched to other roads in the similar direction nearby at every turn, and the vehicle mark may deviate from the correct location.</p>	
<p>Roads laid out in a grid pattern</p>  <p style="text-align: center;">ELK0196D</p>	<p>When driving where roads are laid out in a grid pattern, or where many roads are running in the similar direction nearby, the map may be matched to them by mistake and the vehicle mark may deviate from the correct location.</p>	
<p>Parallel roads</p>  <p style="text-align: center;">ELK0197D</p>	<p>When two roads are running in parallel (such as highway and sideway), the map may be matched to the other road by mistake and the vehicle mark may deviate from the correct location.</p>	

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

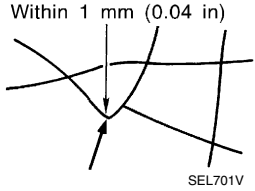
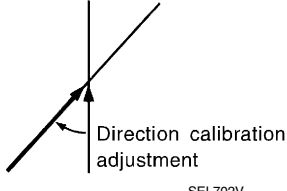
	Cause (condition) -: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
Place	In a parking lot  SEL709V	When driving in a parking lot, or other location where there are no roads on the map, matching may place the vehicle mark on a nearby road. When the vehicle returns to the road, the vehicle mark may have deviated from the correct location. When driving in circle or turning the steering wheel repeatedly, direction errors accumulate, and the vehicle mark may deviate from the correct location.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
	Turntable  SEL710V	When the ignition switch is OFF, the navigation system cannot get the signal from the gyroscope (angular speed sensor). Therefore, the displayed direction may be wrong and the correct road may not be easily returned to after rotating the vehicle on a turntable with the ignition OFF.	
	Slippery roads	On snow, wet roads, gravel, or other roads where tires may slip easily, accumulated mileage errors may cause the vehicle mark to deviate from the correct road.	
	Slopes	When parking in sloped garages, when travelling on banked roads, or in other cases where the vehicle turns when tilted, an error in the turning angle will occur, and the vehicle mark may deviate from the road.	
Map data	Road not displayed on the map screen  SEL699V	When driving on new roads or other roads not displayed on the map screen, map matching does not function correctly and matches the location to a nearby road. When the vehicle returns to a road which is on the map, the vehicle mark may deviate from the correct road.	
	Different road pattern (Changed due to repair)  ELK0201D	If the road pattern stored in the map data and the actual road pattern are different, map matching does not function correctly and matches the location to a nearby road. The vehicle mark may deviate from the correct road.	
Vehicle	Use of tire chains	When tire chains are used, the mileage is not correctly detected, and the vehicle mark may deviate from the correct road.	Drive the vehicle for a while. If the distance still deviates, adjust it by using the distance adjustment function. (If the tire chain is removed, recover the original value.)

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

Cause (condition)	-: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
Precautions for driving	Just after the engine is started	If the vehicle is driven just after the engine is started when the gyroscope (angular speed sensor) correction is not completed, the vehicle can lose its direction and may have deviated from the correct location.	Wait for a short while before driving after starting the engine.
	Continuous driving without stopping	When driving long distances without stopping, direction errors may accumulate, and the current-location mark may deviate from the correct road.	Stop and adjust the orientation.
	Abusive driving	Spinning the wheels or engaging in other kinds of abusive driving may result in the system being unable perform correct detection, and may cause the vehicle mark to deviate from the correct road.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
How to correct location	Position correction accuracy 	If the accuracy of location settings is poor, accuracy may be reduced when the correct road cannot be found, particularly in places where there are many roads.	Enter in the road displayed on the screen with an accuracy of approx. 1mm. Caution: Whenever possible, use detailed map for the correction.
	Direction when location is corrected 	If the accuracy of location settings during correction is poor, accuracy may be reduced afterwards.	Perform direction correction.

Location Correction by Map-Matching is Slow

- The map-matching function needs to refer to the data of the surrounding area. It is necessary to drive some distance for the function to work.
- Because map-matching operates on this principle, when there are many roads running in similar directions in the surrounding area, no matching determination may be made. The location may not be corrected until some special feature is found.

Name of Road is Not Displayed

The current road name may not be displayed if there are no road names displayed on the map screen.

Contents of Display Differ for Birdview™ and the (Flat) Map Screen

Difference of the BIRDVIEW™ screen from the flat map screen are as follows.

- The current place name displays names which are primarily in the direction of vehicle travel.
- The amount of time before the vehicle travel or turn angle is updated on the screen is longer than for the (flat) map display.
- The conditions for display of place names, roads, and other data are different for nearby areas and for more distant areas.
- Some thinning of the character data is done to prevent the display becoming too complex. In some cases and in some locations, the display contents may differ.
- The same place name, street name, etc. may be displayed multiple times.

Vehicle Mark Shows a Position Which is Completely Wrong

In the following cases, the vehicle mark may appear on completely different position in the map depending on the GPS satellite signal receiving conditions. In this case, perform location correction and direction correction.

- When location correction has not been done
- If the receiving conditions of the GPS satellite signal is poor, if the vehicle mark becomes out of place, it may move to a completely different location and not come back if location correction is not done. The position will be corrected if the GPS signal can be received.
- When the vehicle has traveled by ferry, or when the vehicle has been being towed

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITHOUT BOSE]

- Because calculation of the current location cannot be done when traveling with the ignition off, for example when traveling by ferry or when being towed, the location before travel is displayed. If the precise location can be detected with GPS, the location will be corrected.

A

Vehicle Mark Jumps

In the following cases, the vehicle mark may appear to jump as a result of automatic correction of the current location.

B

- When map matching has been done
- If the current location and the vehicle mark are different when map matching is done, the vehicle mark may seem to jump. At this time, the location may be “corrected” to the wrong road or to a location which is not on a road.
- When GPS location correction has been done
- If the current location and the vehicle mark are different when the location is corrected using GPS measurements, the vehicle mark may seem to jump. At this time, the location may be “corrected” to a location which is not on a road.

C

D

Vehicle Mark is in a River or Sea

The navigation system moves the vehicle mark with no distinction between land and rivers or sea. If the vehicle mark is somehow out of place, it may appear that the vehicle is driving in a river or the sea.

E

Vehicle Mark Automatically Rotates

The system wrongly memorizes the rotating status as stopping when the ignition switch is turned ON with the turntable rotating. That causes the vehicle mark to rotate when the vehicle is stopped.

F

When Driving on Same Road, Sometimes Vehicle Mark is in Right Place and Sometimes it is in Wrong Place

The conditions of the GPS antenna (GPS data) and gyroscope (angular speed sensor) change gradually. Depending on the road traveled and the operation of the steering wheel, the location detection results will be different. Therefore, even on a road on which the location has never been wrong, conditions may cause the vehicle mark to deviate.

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AV CONTROL UNIT

< REMOVAL AND INSTALLATION >

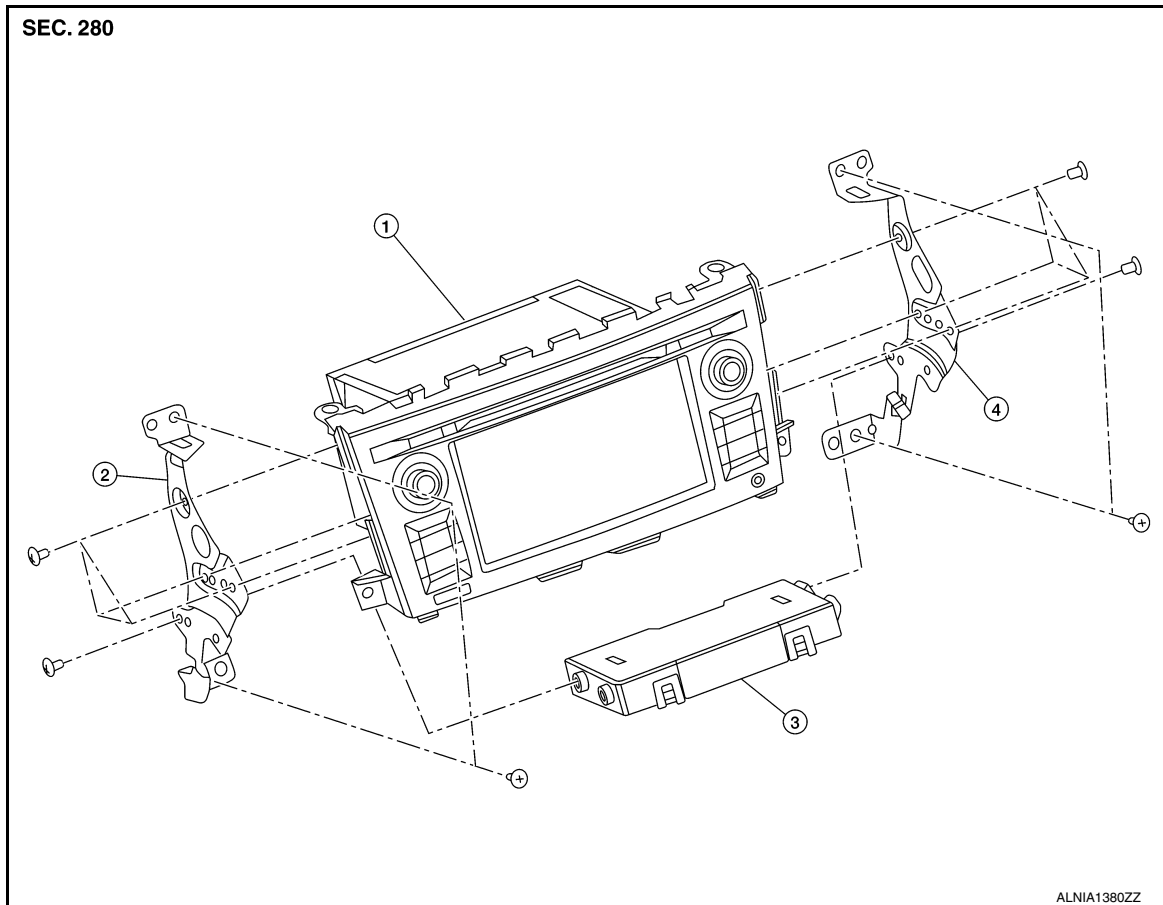
[NAVIGATION WITHOUT BOSE]

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Exploded View

INFOID:000000010480268



1. AV control unit
2. AV control unit bracket (LH)
3. A/C auto amp.
4. AV control unit bracket (RH)

Removal and Installation

INFOID:000000010480269

REMOVAL

CAUTION:

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to [AV-244, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

1. Disconnect the negative battery terminal. Refer to [PG-78, "Removal and Installation"](#).
2. Remove cluster lid C. Refer to [IP-20, "Cluster Lid C"](#).
3. Remove the A/C switch assembly. Refer to [HAC-101, "Removal and Installation"](#).
4. Remove the AV control unit bracket screws, then pull out the AV control unit.
5. Disconnect the harness connectors from the AV control unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to [AV-245, "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).
- When replacing audio control unit, the audio unit must be registered. Refer to [AV-245, "REGISTRATION \(AV CONTROL UNIT\) : Work Procedure"](#).

USB INTERFACE

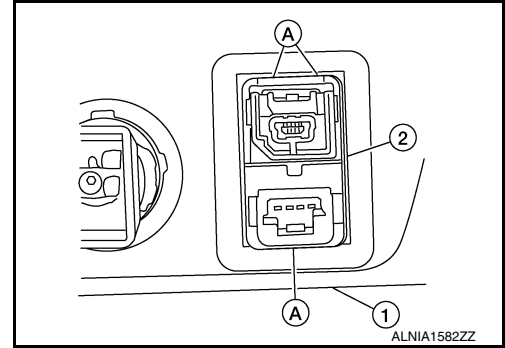
Removal and Installation

INFOID:000000010480270

REMOVAL

1. Remove the shift selector finisher. Refer to [IP-18. "Removal and Installation"](#).
2. Release the pawls (A) and remove the USB interface (2) from the back of the shift selector finisher (1).

⊖: Pawl



INSTALLATION

Installation is in the reverse order of removal.

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AV

AUX IN JACK

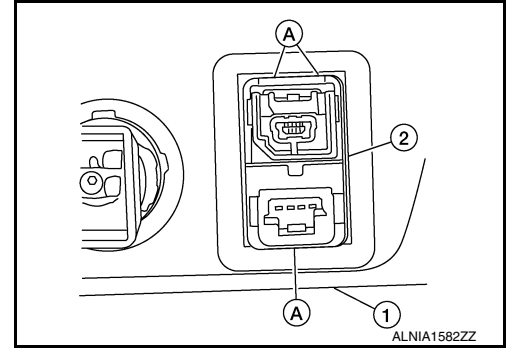
Removal and Installation

INFOID:000000010480271

REMOVAL

1. Remove the shift selector finisher. Refer to [IP-18, "Removal and Installation"](#).
2. Release the pawls (A) and remove the AUX in jack (2) from the back of the shift selector finisher (1).

○: Pawl



INSTALLATION

Installation is in the reverse order of removal.

FRONT SPEAKER

< REMOVAL AND INSTALLATION >

[NAVIGATION WITHOUT BOSE]

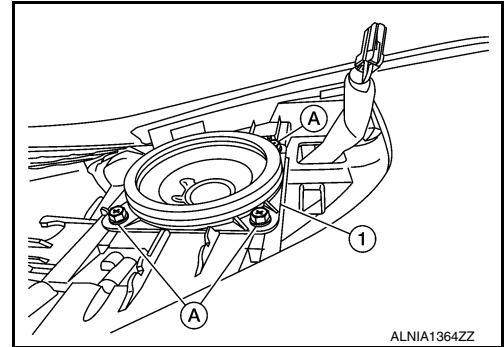
FRONT SPEAKER

Removal and Installation

INFOID:000000010480272

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-21. "FRONT PILLAR FINISHER : Removal and Installation"](#).
2. Remove the front speaker grille using a suitable tool.
3. Remove the front speaker screws (A).
4. Pull out the front speaker (1), disconnect the harness connector from front speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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AV

FRONT DOOR SPEAKER

< REMOVAL AND INSTALLATION >

[NAVIGATION WITHOUT BOSE]

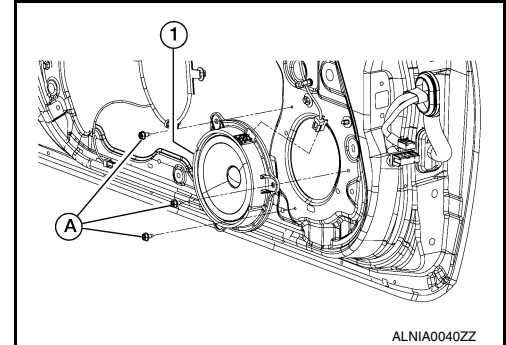
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000010480273

REMOVAL

1. Remove the front door finisher. Refer to [INT-15, "Removal and Installation"](#).
2. Remove the front door speaker screws (A).
3. Disconnect the harness connector from the front door speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

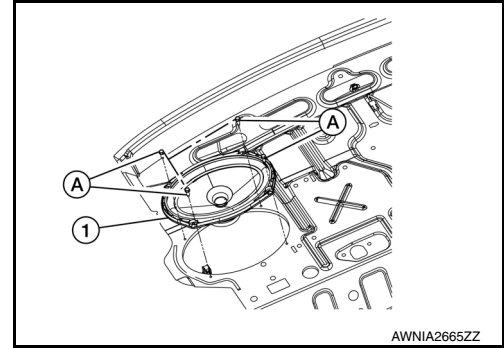
REAR SPEAKER

Removal and Installation

INFOID:0000000110480274

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-26, "Removal and Installation"](#).
2. Remove the rear speaker screws (A).
3. Disconnect the harness connector from the rear speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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SATELLITE RADIO ANTENNA

< REMOVAL AND INSTALLATION >

[NAVIGATION WITHOUT BOSE]

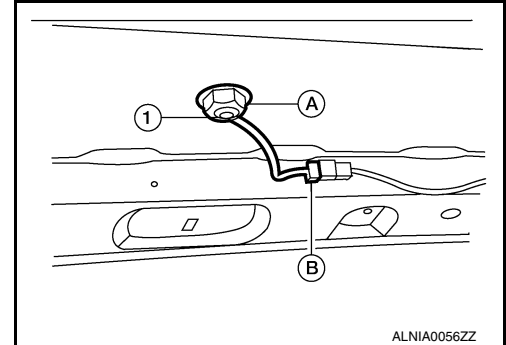
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:000000010480275

REMOVAL

1. Lower the headlining at the rear. Refer to [INT-30, "Removal and Installation"](#).
2. Remove the satellite radio antenna nut (A).
3. Disconnect the harness connector (B) from the satellite radio antenna (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

Satellite radio antenna nut : 6.5 N·m (0.66 kg-m, 58 in-lb)

CAUTION:

If the satellite radio antenna nut is not tightened to the specified torque, lower sensitivity of the antenna may be experienced. If the nut is tightened tighter than the specified torque, this will deform the roof panel.

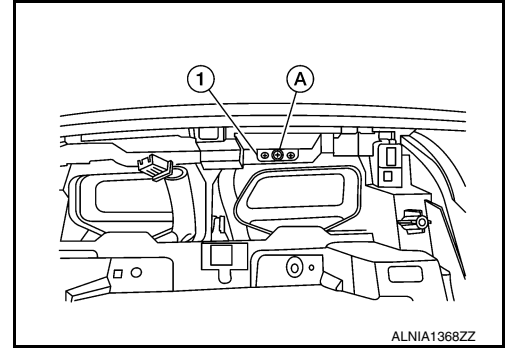
GPS ANTENNA

Removal and Installation

INFOID:000000010480276

REMOVAL

1. Remove the AV control unit. Refer to [AV-109. "Removal and Installation"](#).
2. Remove the GPS antenna screw (A) and the GPS antenna (1).



INSTALLATION

Installation is in the reverse order of removal.

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AV

STEERING SWITCH

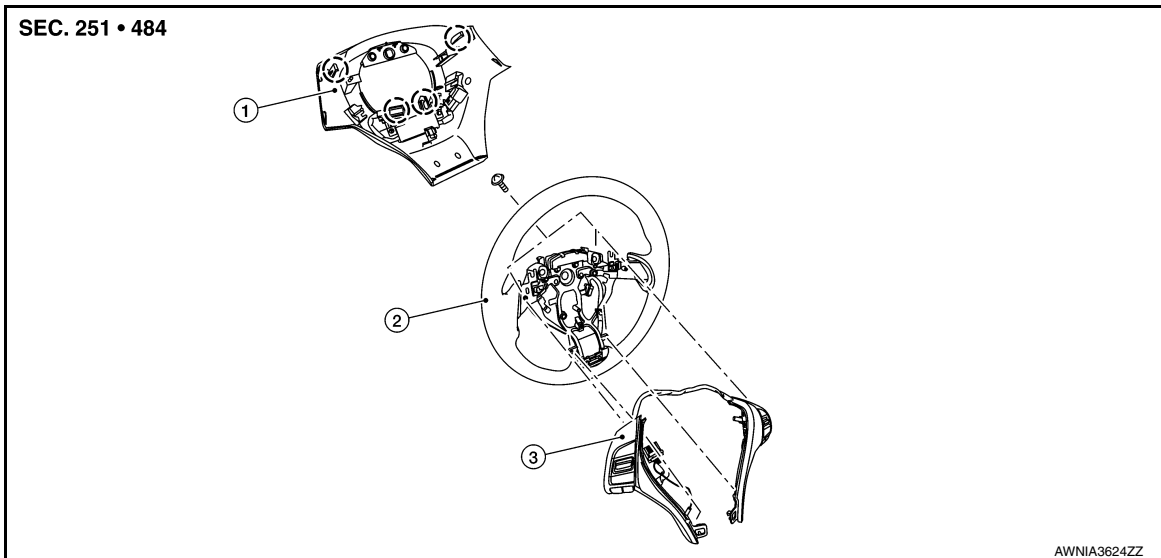
< REMOVAL AND INSTALLATION >

[NAVIGATION WITHOUT BOSE]

STEERING SWITCH

Exploded View

INFOID:000000010480277



1. Steering wheel rear finisher

2. Steering wheel

3. Steering switches

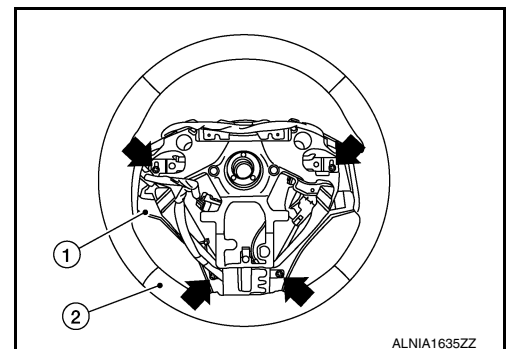
○ Pawl

Removal and Installation

INFOID:000000010480278

REMOVAL

1. Remove the steering wheel. Refer to [ST-31. "Removal and Installation"](#)
2. Release the pawls on the steering wheel rear finisher and remove.
3. Remove the steering switches screws (←).
4. Remove the steering switches (1) from steering wheel (2).



INSTALLATION

Installation is in the reverse order of removal.

ANTENNA FEEDER

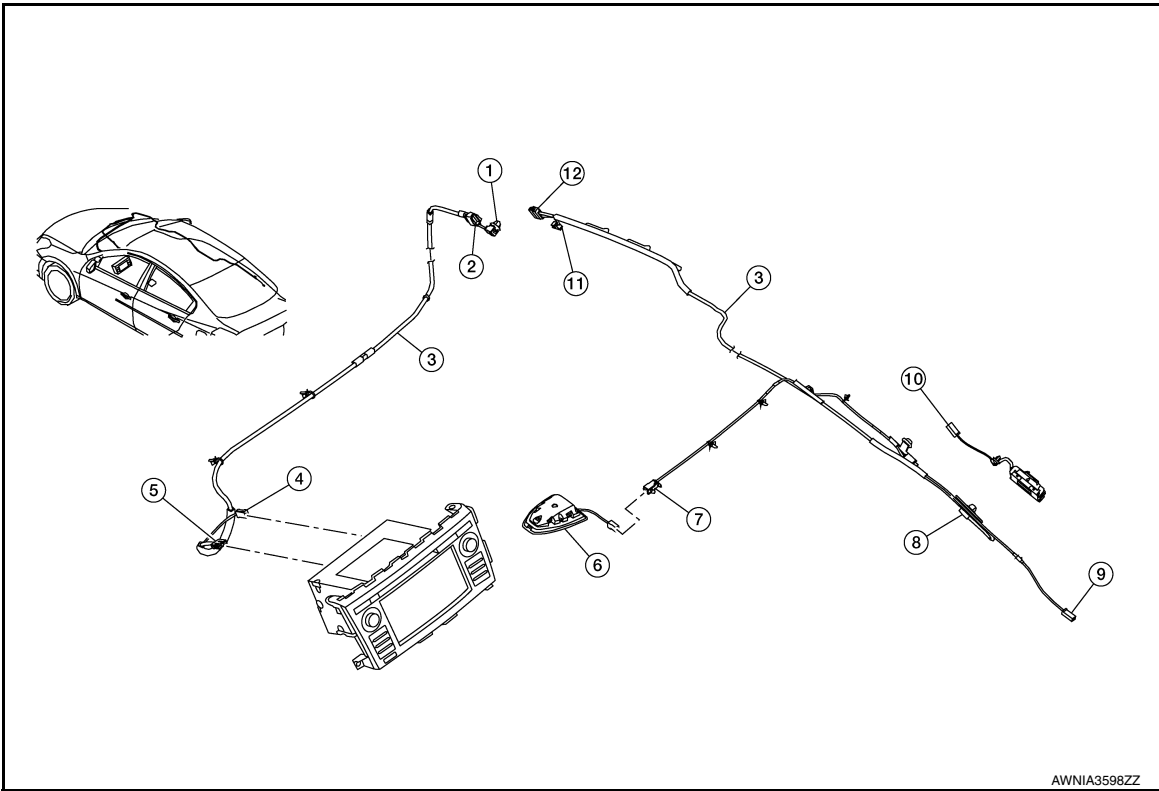
< REMOVAL AND INSTALLATION >

[NAVIGATION WITHOUT BOSE]

ANTENNA FEEDER

Location of Antenna

INFOID:000000010480279



AWNIA3598ZZ

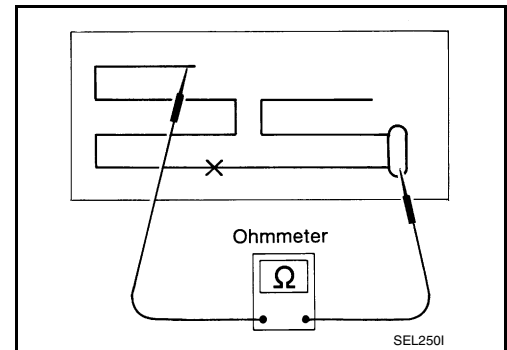
- | | | |
|----------|----------|----------------------|
| 1. M102 | 2. M101 | 3. Antenna feeder |
| 4. M99 | 5. M137 | 6. Satellite antenna |
| 7. B59 | 8. M502 | 9. M504 |
| 10. M503 | 11. M500 | 12. M501 |

Window Antenna Repair

INFOID:000000010480280

ELEMENT CHECK

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



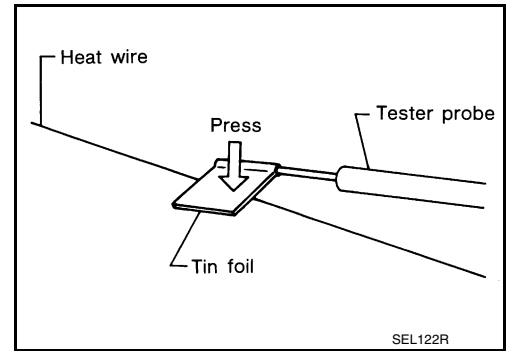
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ANTENNA FEEDER

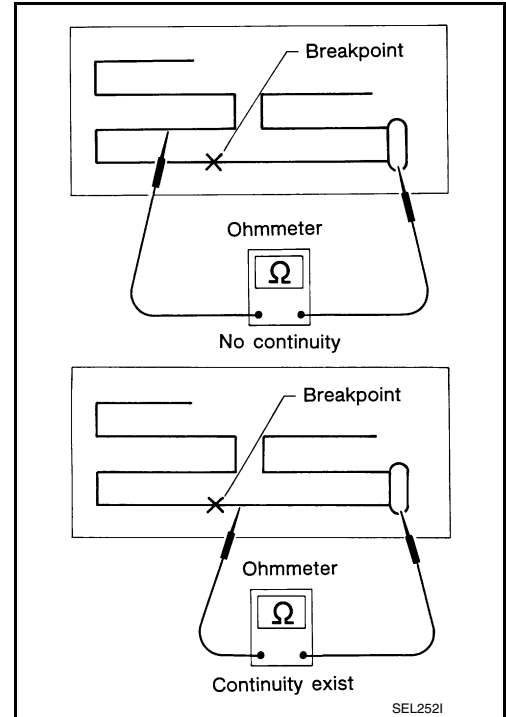
< REMOVAL AND INSTALLATION >

[NAVIGATION WITHOUT BOSE]

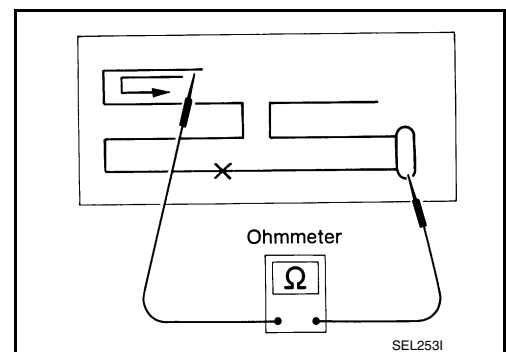
- When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



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



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



REPAIR EQUIPMENT

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

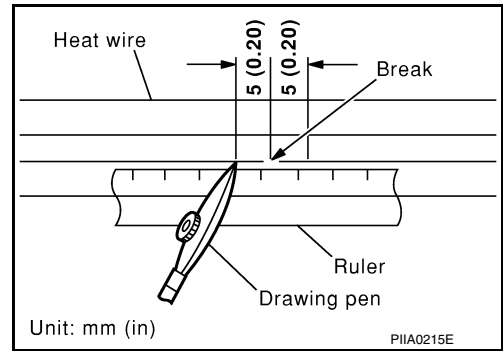
REPAIRING PROCEDURE

ANTENNA FEEDER

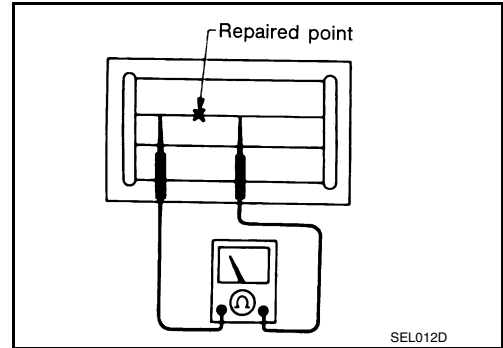
< REMOVAL AND INSTALLATION >

[NAVIGATION WITHOUT BOSE]

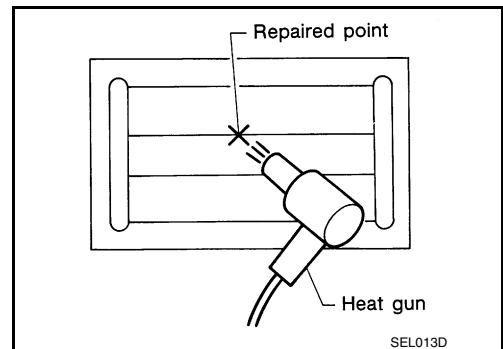
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.



4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited. Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.



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AV

ANTENNA AMP.

< REMOVAL AND INSTALLATION >

[NAVIGATION WITHOUT BOSE]

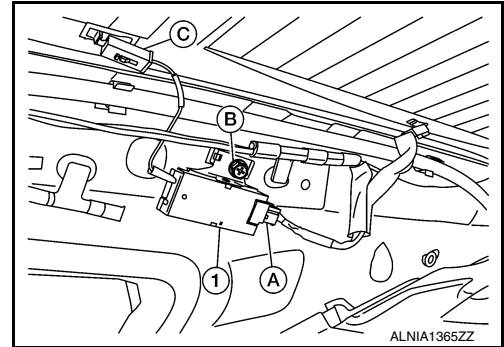
ANTENNA AMP.

Removal and Installation

INFOID:000000010480281

REMOVAL

1. Remove the rear pillar finisher (RH). Refer to [INT-25. "REAR PILLAR FINISHER : Removal and Installation"](#).
2. Disconnect the harness connector (A) from the antenna amp. (1).
3. Disconnect the antenna amp. harness connector (C) from the rear window glass.
4. Remove the antenna amp. screw (B) and the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

MICROPHONE

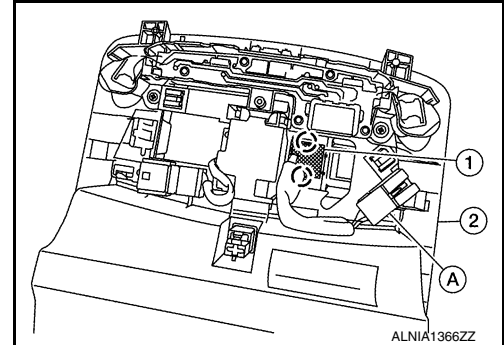
Removal and Installation

INFOID:000000010480282

REMOVAL

1. Remove the front room/map lamp assembly. Refer to [INL-62. "Removal and Installation"](#).
2. Disconnect the microphone connector (A) from the front room/map lamp assembly (2).
3. Release the microphone pawls, then remove the microphone (1).

○: Pawl



INSTALLATION

Installation is in the reverse order of removal.

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REAR VIEW CAMERA

Removal and Installation

INFOID:000000010480283

REMOVAL

1. Remove license lamp finisher. Refer to [EXT-36. "Removal and Installation"](#).
2. Disconnect the harness connector from rear view camera.
3. Remove rear view camera.

INSTALLATION

Installation is in the reverse order of removal.

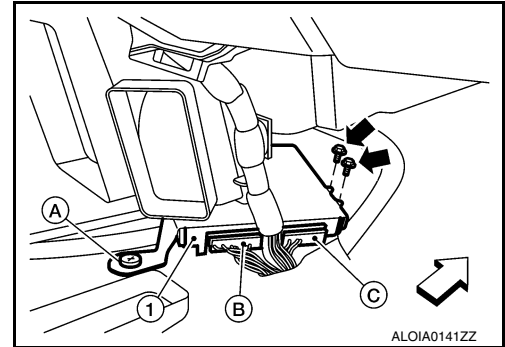
ITS CONTROL UNIT

Removal and Installation

INFOID:000000011349828

REMOVAL

1. Disconnect the battery negative terminal. Refer to [PG-78. "Removal and Installation"](#).
2. Remove the center console assembly. Refer to [IP-18. "Removal and Installation"](#).
3. Disconnect the harness connectors (B,C) from the ITS control unit (1).
 ⇐: Front
4. Remove bolts (←) and plastic screw (A) that retain the ITS control unit (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000011046226

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. 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 three minutes before performing any service.

Cautions in Removing Battery Terminal and AV Control Unit (Models with AV Control Unit)

INFOID:000000011085782

CAUTION:

Remove battery terminal and AV control unit 30 seconds or more after turning the ignition switch OFF.

NOTE:

After the ignition switch is turned OFF, the AV control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

Precaution for Trouble Diagnosis

INFOID:000000010480285

AV COMMUNICATION SYSTEM

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

Precaution for Harness Repair

INFOID:000000010480286

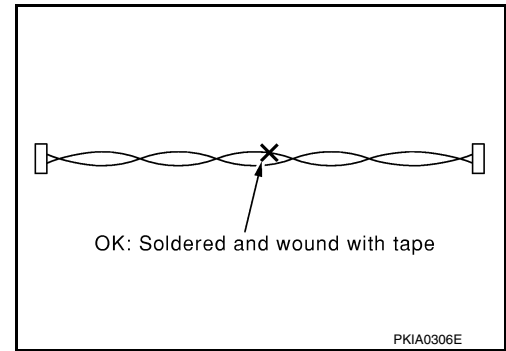
AV COMMUNICATION SYSTEM

PRECAUTIONS

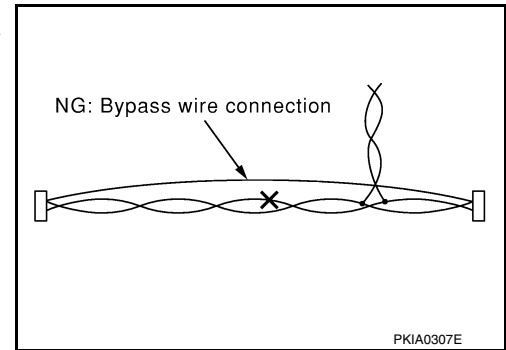
[NAVIGATION WITH BOSE]

< PRECAUTION >

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



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



Precaution for Work

INFOID:000000010480287

- 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:
 - 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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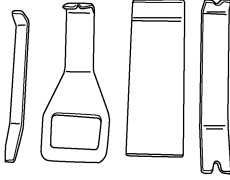
PREPARATION

PREPARATION

Special Service Tools


INFOID:000000010480288

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set <div style="text-align: center;">  <p>AWJIA0483ZZ</p> </div>	Removing trim components

Commercial Service Tools

INFOID:000000010480289

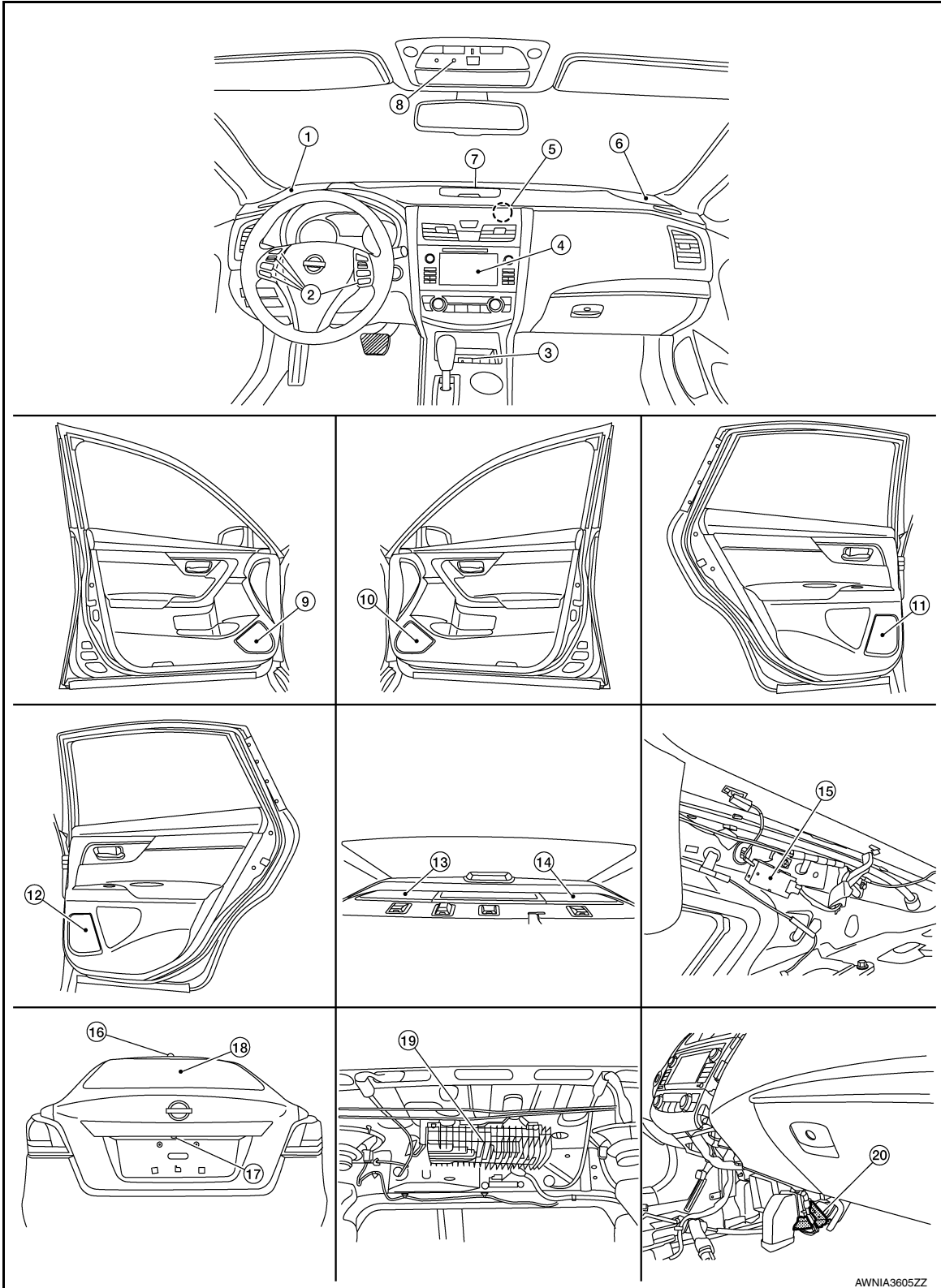
Tool name	Description
Power tool <div style="text-align: center;">  <p>PIIB1407E</p> </div>	Loosening nuts, screws and bolts

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000010480290



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COMPONENT PARTS

< SYSTEM DESCRIPTION >

[NAVIGATION WITH BOSE]

- | | | |
|---------------------------|---|----------------------------------|
| 1. Front speaker LH | 2. Steering switches | 3. USB interface and AUX in jack |
| 4. AV control unit | 5. GPS antenna | 6. Front speaker RH |
| 7. Center speaker | 8. Microphone | 9. Front door speaker LH |
| 10. Front door speaker RH | 11. Rear door speaker LH | 12. Rear door speaker RH |
| 13. Rear speaker RH | 14. Rear speaker LH | 15. Antenna amp. |
| 16. Satellite antenna | 17. Rear view camera | 18. Window antenna |
| 19. Bose speaker amp. | 20. ITS control unit (view with center console removed) | |

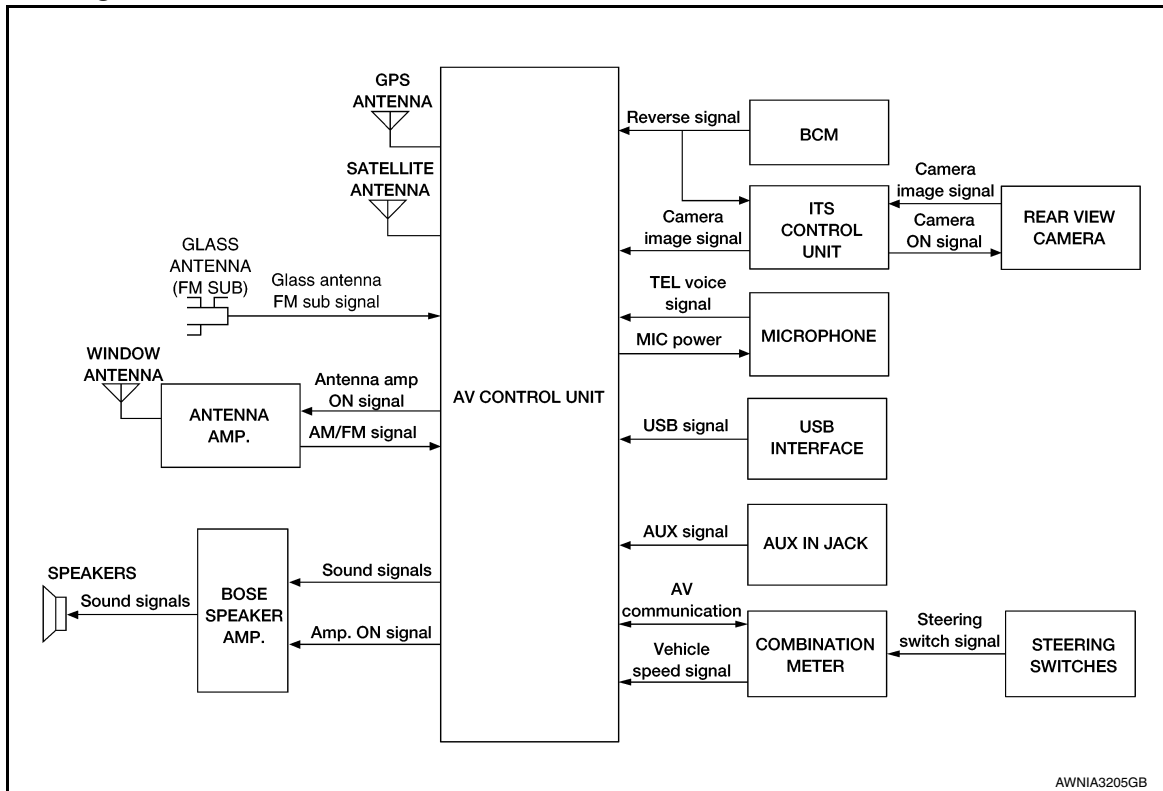
Component Description

INFOID:000000010480291

Part name	Description
AV control unit	<ul style="list-style-type: none"> • Operation of navigation and audio systems are integrated. • Includes the audio, hands-free phone, navigation, satellite radio, rear view monitor, USB interface and AUX in jack connection functions. • Map data can be loaded from SD-card inserted in SD-card slot. • Audio signals are output to Bose speaker amp. • Inputs illumination signals required for display dimming control. • Inputs signals for driving status recognition (vehicle speed and reverse). • Touch panel functions can be operated by touching display directly.
Map SD-card	A collection of Map data.
Bose speaker amp.	Receives audio signals from AV control unit and outputs audio signals to each speaker.
Front speakers	Outputs high, mid and low range audio signals from Bose speaker amp.
Center speaker	
Front door speakers	
Rear door speakers	
Rear speakers	
Steering switches	<ul style="list-style-type: none"> • Operations for audio, hands-free phone and voice recognition are possible. • Steering switch signal is output to combination meter. • Combination meter outputs steering switch signal to AV control unit.
Microphone	<ul style="list-style-type: none"> • Used for hands-free phone operations. • Microphone signal is transmitted to AV control unit. • Power is supplied from AV control unit.
USB interface and AUX in jack	<ul style="list-style-type: none"> • USB sound and data input signals are transmitted to AV control unit. • AUX sound input signals are transmitted to AV control unit.
Rear view camera	<ul style="list-style-type: none"> • Outputs image of vehicle rear to AV control unit. • Power is supplied from AV control unit (without driver assistance system). • Power is supplied from ITS control unit (with driver assistance system).
Satellite antenna	Satellite radio signal is received and transmitted to AV control unit.
GPS antenna	GPS signal is received and transmitted to AV control unit.
Antenna amp.	<ul style="list-style-type: none"> • AM/FM signal received by window antenna is amplified and transmitted to AV control unit. • Power is supplied from AV control unit.
Window antenna	AM/FM signal is received and transmitted to antenna amp.
ITS control unit	<ul style="list-style-type: none"> • Controls each system, based on signals received from the rear view camera and CAN communication signals received from each control unit • Transmits signals necessary for control between CAN communication

SYSTEM

System Diagram



System Description

INFOID:000000010480293

Refer to Owner's Manual for navigation and audio system operating instructions. Audio function and display are built into AV control unit.

This navigation has the following functions.

- Map data on SD-card
- High resolution color 5 inch display with touch panel function
- FM/AM twin digital tuner
- USB interface and AUX in jack
- Full support for playback of music from iPod®
- Satellite radio
- Hands-free phone system

iPod® is a trademark of Apple inc., registered in the U.S. and other countries.

NAVIGATION SYSTEM FUNCTION

Description

- The navigation system can be operated by control panel of the AV control unit and display (touch panel) of the AV control unit.
- Guide sound during the operation of the navigation system is output from AV control unit to front speakers.
- AV control unit calculates the vehicle location based on the signals from GYRO (angle speed sensor), vehicle sensor, and GPS satellite, as well as the map data from map SD-card. The vehicle location is displayed on the AV control unit.

POSITION DETECTION PRINCIPLE

The navigation system periodically calculates the vehicle's current position according to the following three signals:

- Travel distance of the vehicle as determined by the vehicle speed sensor
- Turning angle of the vehicle as determined by the gyroscope (angular velocity sensor)
- Direction of vehicle travel as determined by the GPS antenna (GPS information)

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SYSTEM

< SYSTEM DESCRIPTION >

[NAVIGATION WITH BOSE]

The current position of the vehicle is then identified by comparing the calculated vehicle position with map data read from the map SD-card (map-matching), and indicated on the screen as a vehicle mark. More accurate data is judged and used by comparing vehicle position detection results found by the GPS with the result by map-matching.

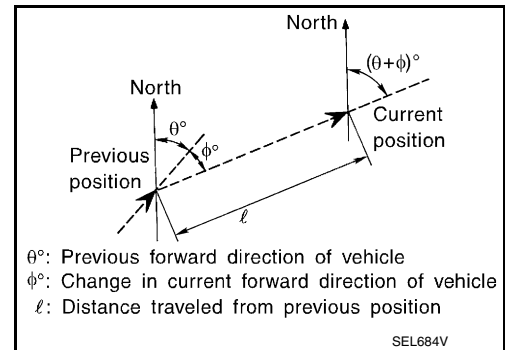
The current vehicle position will be calculated by detecting the distance the vehicle moved from the previous calculation point and its direction.

- Travel distance

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

- Travel direction

Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). They have both advantages and disadvantages.



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

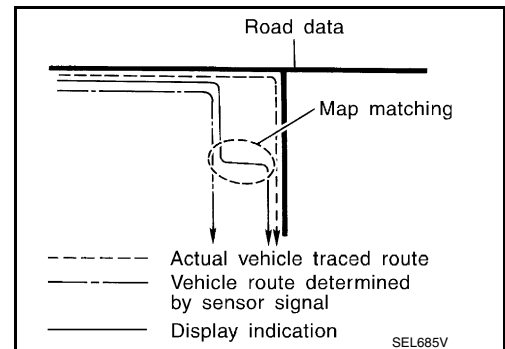
More accurate traveling direction is detected because priorities are set for the signals from these two devices according to the situation.

MAP-MATCHING

Map-matching compares a current location detected by the method in the "Location Detection Principle" with a road map data from map SD-card.

NOTE:

The road map data is based on data stored in the map SD-card.

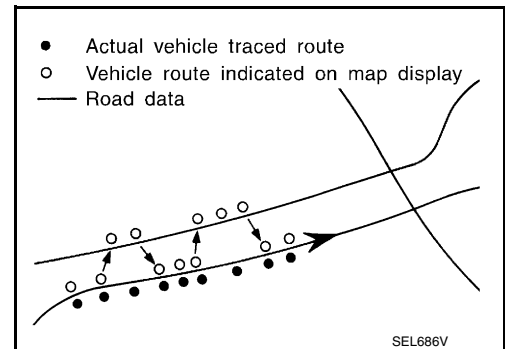


The vehicle position may not be corrected under the following circumstances and after driving for a certain time when GPS information is difficult to receive. In this case, the vehicle mark on the display must be corrected manually.

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

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

Roads are of the same priority if two roads are running in parallel. Therefore, the vehicle mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.

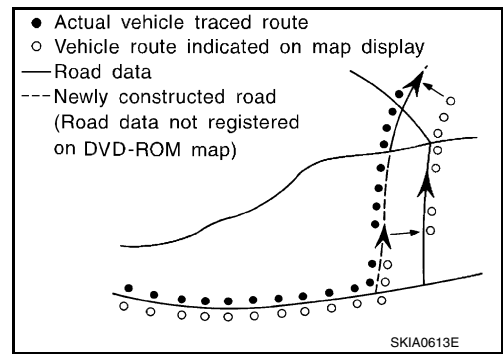


SYSTEM

< SYSTEM DESCRIPTION >

[NAVIGATION WITH BOSE]

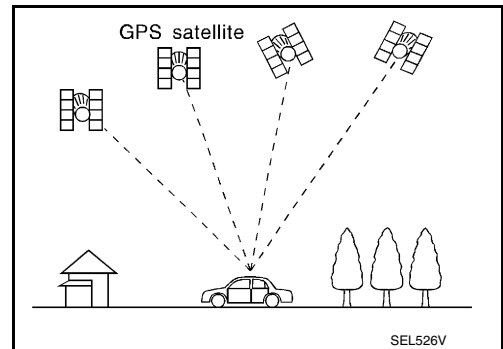
- Map-matching does not function correctly when a road on which the vehicle is driving is new and not recorded in the map SD-card, or when road pattern stored in the map data and the actual road pattern are different due to repair. The map-matching function may find another road and position the vehicle mark on it when driving on a road not present in the map. Then, the vehicle mark may change to it when the correct road is detected.
- Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the map SD-card is limited. Therefore, correction by map-matching is not possible when there is an excessive gap between current vehicle position and the position on the map.



GPS (Global Positioning System)

GPS (Global Positioning System) is developed for and is controlled by the US Department of Defense. The system utilizes GPS satellites (NAVSTAR), transmitting out radio waves while flying on an orbit around the earth at an altitude of approximately 21,000 km (13,049 mile).

The receiver calculates the travel position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves that four or more GPS satellites transmit (three-dimensional positioning). The GPS receiver calculates the travel position in two dimensions (latitude/longitude) with the previous altitude data if the GPS receiver receives only three radio waves (two-dimensional positioning). GPS position correction is not performed while stopping the vehicle.



Accuracy of the GPS will deteriorate under the following conditions:

- In two-dimensional positioning, GPS accuracy will deteriorate when altitude of the vehicle position changes.
- The position of GPS satellite affects GPS detection precision. The position detection may not be precisely performed.
- The position detection is not performed if GPS receiver does not receive radio waves from GPS satellites. (Inside a tunnel, parking in a building, under an elevated highway etc.) GPS receiver may not receive radio waves from GPS satellites if any object is placed on the GPS antenna.

NOTE:

- The detection result has an error of approximately 10 m (32.81 ft) even with a high-precision three dimensional positioning.
- There may be cases when the accuracy is lowered and radio waves are stopped intentionally because the GPS satellite signal is controlled by the US trace control center.

REAR VIEW MONITOR FUNCTION

Camera Image Operation Principle

- The ITS control unit supplies power to the rear view camera when receiving a reverse signal.
- The rear view camera transmits camera images to the ITS control unit when power is supplied from the ITS control unit.
- The ITS control unit transmits camera images to the AV control unit.
- The AV control unit combines a warning message and fixed guide lines with an image received from the ITS control unit to display a rear view camera image on the screen.

SATELLITE RADIO FUNCTION

- Satellite radio function is built into AV control unit.
- Sound signal (satellite radio) is received by satellite antenna and transmitted to AV control unit. AV control unit outputs sound signal to each speaker.

USB INTERFACE AND AUX IN JACK FUNCTION

- Sound and data signals are transmitted from USB interface to the AV control unit and output to each speaker and tweeter.
- Sound signals are transmitted from AUX in jack to the AV control unit and output to each speaker and tweeter.

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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.

HANDS-FREE PHONE SYSTEM

- Bluetooth® control is built into AV control unit.
- The connection between cellular phone and AV control unit is performed with Bluetooth® communication.
- The voice guidance signal is input from the AV control unit and output to the front speakers when operating the cellular phone.

When A Call Is Originated

- Spoken voice sound output from the microphone (microphone signal) is input to AV control unit.
- AV control unit outputs to cellular phone with Bluetooth® communication as a TEL voice signal.
- Voice sound is then heard at the other party.

When Receiving A Call

- Voice sound is input to own cellular phone from the other party.
- TEL voice signal is input to AV control unit by establishing Bluetooth® communication from cellular phone, and the signal is output to front speakers.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[NAVIGATION WITH BOSE]

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description

INFOID:000000010480294

The AV control unit on board diagnosis performs the functions listed in the table below:

Mode	Item	Content
VERSION	<ul style="list-style-type: none">• Update System Software• Overall SW version:• Bosch software version label:• Customer configuration number & hash...• Bosch configuration ID(hash value):• Hardware:• NAV - SW:• ADR Version:• CD MODULE:• BT MODULE:• BT FIRMWARE:	Displays SYSTEM VERSIONS of the AV control unit.
NAVIGATION	<ul style="list-style-type: none">• MAP-INFO• GNSS• DEAD RECKONING• MATCHED POSITION• BEST SATELLITES• MERIDIANS	Displays NAVIGATION information of the AV control unit.
SYSTEM	<ul style="list-style-type: none">• DRIVE STATUS• TEMPERATURE & VOLTAGE• RESET COUNTER LIST• DISPLAY TEST• BLUETOOTH• #BT DEVICE TEST MODE• Bluetooth EC/NR Engine• TRACE TO SD CARD• NETWORK MESSAGES• Language	Displays SYSTEM information of the AV control unit.
Radio	<ul style="list-style-type: none">• MONITOR SELECTION• AM/FM SETTINGS• SXM SETTINGS	Displays RADIO information of the AV control unit.
TMC	<ul style="list-style-type: none">• MESSAGE INFO• TMC MESSAGE LIST	Displays TMC information of the AV control unit.
AUDIO	LINEAR AUDIO	Displays AUDIO information of the AV control unit.

Perform CONSULT diagnosis if the AV control unit on board diagnosis does not start or the screen does not display anything.

On Board Diagnosis Function

INFOID:000000010480295

METHOD OF STARTING

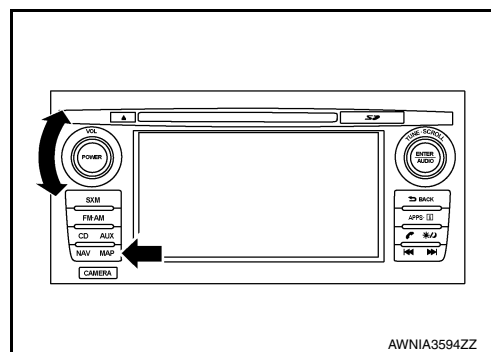
1. Turn the ignition ON.
2. Turn the audio system OFF.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

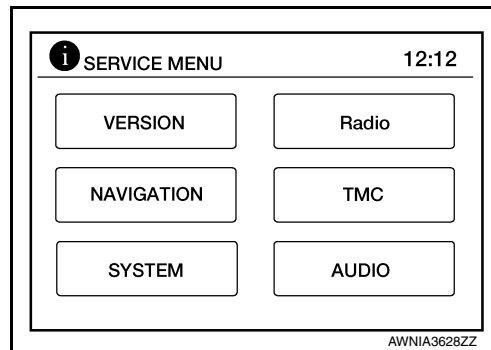
[NAVIGATION WITH BOSE]

< SYSTEM DESCRIPTION >

- While pressing the MAP button, turn the VOL dial clockwise and counterclockwise quickly approximately 60 times or more. Shifting from current screen to previous screen is performed by pressing BACK button.



- The trouble diagnosis initial screen is displayed, and VERSION, NAVIGATION, SYSTEM, Radio, TMC or AUDIO can be selected.



CONSULT Function

INFOID:000000010480296

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

CONSULT FUNCTIONS

CONSULT performs the following functions via communication with the AV control unit.

Direct Diagnostic Mode	Description
Ecu Identification	The AV control unit part number is displayed.
Self Diagnostic Result	The AV control unit self diagnostic results are displayed.
Data Monitor	The AV control unit input/output data is displayed in real time.
Configuration	<ul style="list-style-type: none"> The vehicle specification can be read and saved. The vehicle specification can be written when replacing AV control unit.
CAN Diag Support Mntr	<ul style="list-style-type: none"> The result of transmit/receive diagnosis of AV communication is displayed. The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The part number of AV control unit is displayed.

SELF DIAGNOSTIC RESULT

Refer to [AV-329, "DTC Index"](#).

DATA MONITOR

Monitor Item [Unit]	Description
VHCL SPD SIG [On/Off]	Indicates vehicle speed signal received from combination meter on CAN communication line.
ILLUM SIG [On/Off]	Indicates condition of illumination signal for the AV control unit.
IGN SIG [On/Off]	Indicates condition of ignition signal.
REV SIG [On/Off]	Indicates condition of reverse signal received from BCM.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[NAVIGATION WITH BOSE]

CONFIGURATION

Refer to [AV-352, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

CAN DIAG SUPPORT MNTR

Refer to [LAN-13, "CAN Diagnostic Support Monitor"](#).

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AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION WITH BOSE]

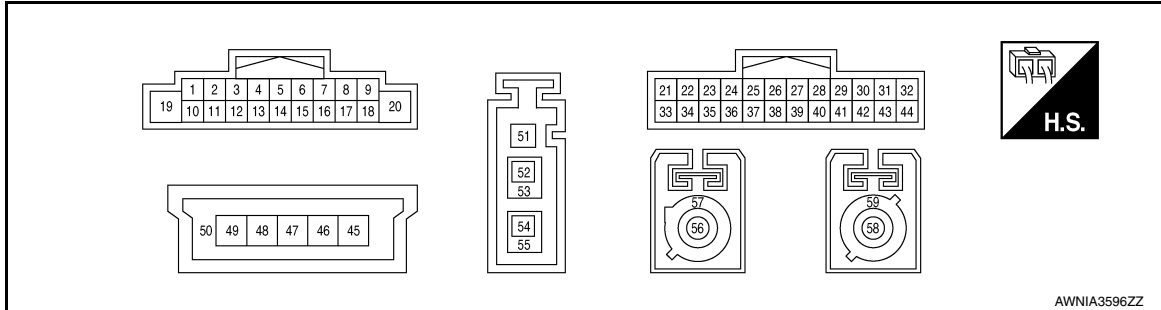
ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

Reference Value

INFOID:0000000010480297

TERMINAL LAYOUT



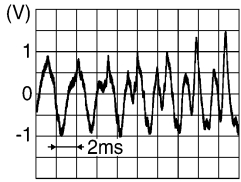
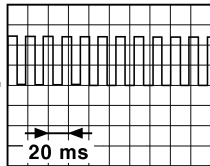
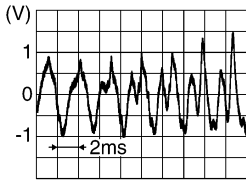
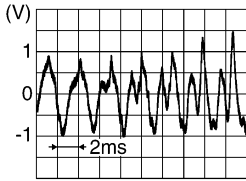
PHYSICAL VALUES

Terminal (Wire color)		Description	Input/ Output	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
1 (W)	Ground	BOSE amp. ON signal	Output	ACC	—	Battery voltage
2 (B)	3 (W)	Sound signal front speaker LH	Output	ON	Sound output	 SKIB3609E
4 (G)	5 (R)	Sound signal rear speaker LH	Output	ON	Sound output	 SKIB3609E
7 (P)	Ground	ACC power supply	Input	ACC	—	Battery voltage
8 (L)	—	CAN high	Input/ Output	—	—	—
9 (R)	33 (GR)	Illumination control signal	Input	ON	Headlamps ON	Battery voltage
10 (B)	—	Sound signal shield	—	—	—	—
11 (B)	12 (W)	Sound signal front speaker RH	Output	ON	Sound output	 SKIB3609E

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION WITH BOSE]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
13 (G)	14 (R)	Sound signal rear speaker RH	Output	ON	Sound output	 SKIB3609E
17 (P)	—	CAN low	Input/ Output	—	—	—
18 (G)	Ground	Vehicle speed signal	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	 JSNIA0012GB
19 (G)	Ground	Battery power supply	Input	OFF	—	Battery voltage
20 (GR)	Ground	Ground	—	ON	—	0 V
21 (W)	Ground	AUX audio signal RH	Input	ON	AUX audio signal received	 SKIB3609E
22 (B)	—	AUX ground	—	ON	—	0V
23 (R)	Ground	AUX audio signal LH	Input	ON	AUX audio signal received	 SKIB3609E
24 (BR)	—	BF mic	Input	—	—	—
25 (G)	Ground	Reverse signal	Input	ON	Selector lever in R (reverse)	Battery voltage
					Selector lever in any position other than R (reverse)	0 V
30 (P)	—	MR output	Output	—	—	—
31 (SB)	—	AV communication (H)	Input/ Output	—	—	—
32 (LG)	—	AV communication (L)	Input/ Output	—	—	—

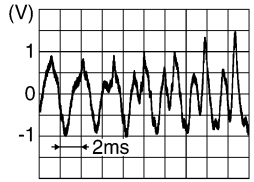
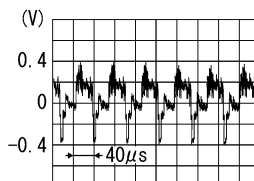
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AV

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION WITH BOSE]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
34 (B)	36 (Shield)	Microphone signal	Input	ON	While speaking into microphone.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
35 (W)	Ground	Microphone power supply	Output	ON	—	5.0 V
37 (Shield)	—	AUX shield	—	—	—	—
38 (SB)	—	AV communication (H)	Input/ Output	—	—	—
39 (LG)	—	AV communication (L)	Input/ Output	—	—	—
40 (BG)	Ground	Ignition power supply	Input	ON or START	—	Battery voltage
41 (B)	42 (Shield)	Camera image signal	Input	ON	When camera image is displayed	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
45 (B)	—	USB ground	—	—	—	—
47 (G)	—	USB D+ signal	—	—	—	—
48 (W)	—	USB D- signal	—	—	—	—
49 (R)	—	V BUS signal	—	—	—	—
50 (Shield)	—	USB shield	—	—	—	—
51 (B)	Ground	Antenna amp. ON signal	Output	ON	—	Battery voltage
52 (B)	Ground	AM/FM antenna signal	Input	ON	—	5.0 V
53 (Shield)	—	AM/FM antenna shield	—	—	—	—
54 (B)	Ground	Glass antenna (FM sub) signal	Input	ON	—	5.0 V
55 (Shield)	—	Glass antenna shield	—	—	—	—
56 (B)	Ground	Satellite antenna signal	Input	ON	—	5.0 V
57 (Shield)	—	USB shield	—	—	—	—

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION WITH BOSE]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
58 (B)	Ground	GPS antenna signal	Input	ON	—	5.0 V
59 (Shield)	—	GPS antenna shield	—	—	—	—

DTC Index

INFOID:000000010480298

CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-355, "DTC Logic"
U1010: CONTROL UNIT (CAN)	AV-356, "DTC Logic"
U1217: BLUETOOTH MODULE	AV-357, "DTC Logic"
U1229: iPod CERTIFICATION	AV-358, "DTC Logic"
U122F: Digital broadcasting connection error	AV-359, "DTC Logic"
U1244: GPS ANTENNA CONN	AV-360, "DTC Logic"
U1258: XM ANTENNA CONN	AV-361, "DTC Logic"
U1263: USB OVERCURRENT	AV-362, "DTC Logic"
U1264: ANTENNA AMP TERMINAL	AV-363, "DTC Logic"
U1265: AMP ON TERMINAL	AV-364, "DTC Logic"
U12AA: Configuration Error	AV-365, "DTC Logic"
U12AB: FM Antenna error	AV-366, "DTC Logic"
U12AC: Display Temperature too High	AV-367, "DTC Logic"
U12AD: ECU Temperature too High	AV-368, "DTC Logic"
U12AE: Internal Amplifier temperature Warning	AV-369, "DTC Logic"
U12AF: CD Mechanism Temperature Warning	AV-370, "DTC Logic"
U12B0: Supply Voltage Goes below 9V > 20s	AV-371, "DTC Logic"
U12B1: Supply Voltage Goes High > 16V for 20s	AV-372, "DTC Logic"
U1300: AV COMM CIRCUIT	AV-373, "DTC Logic"
U1310: CONTROL UNIT (AV)	AV-375, "DTC Logic"

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BOSE SPEAKER AMP

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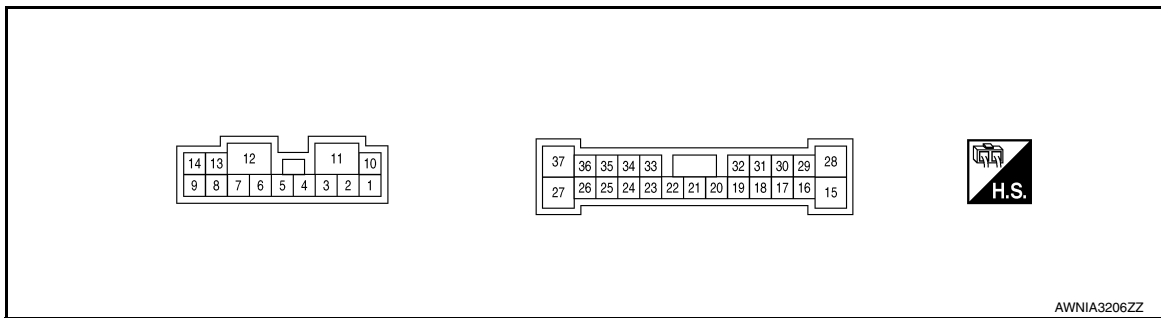
[NAVIGATION WITH BOSE]

BOSE SPEAKER AMP

Reference Value

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TERMINAL LAYOUT



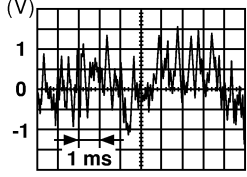
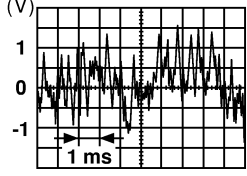
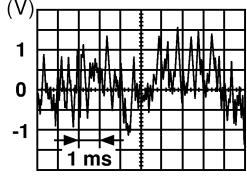
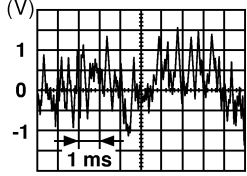
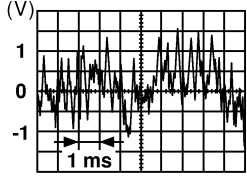
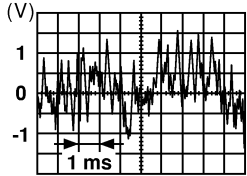
PHYSICAL VALUES

Terminal (wire color)		Description	Input/Output	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
1 (W)	10 (G)	Rear speaker signal LH	Output	ON	Sound output	<p style="text-align: right;">SKIA0177E</p>
2 (W)	3 (G)	Rear speaker signal RH	Output	ON	Sound output	<p style="text-align: right;">SKIA0177E</p>
4 (P)	5 (R)	Front door speaker and front speaker signal LH	Output	ON	Sound output	<p style="text-align: right;">SKIA0177E</p>
6 (G)	7 (R)	Center speaker signal	Output	ON	Sound output	<p style="text-align: right;">SKIA0177E</p>

BOSE SPEAKER AMP

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION WITH BOSE]

Terminal (wire color)		Description	Condition			Reference value (Approx.)
+	-		Signal name	Input/ Output	Ignition switch	
8 (P)	13 (BG)	Front door speaker and front speaker signal RH	Output	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
11 (G)	Ground	Battery power supply	Input	-	-	Battery voltage
12 (GR)	Ground	Ground	-	ON	-	0V
15 (G)	28 (W)	Rear door speaker signal LH	Output	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
18 (G)	32 (R)	Sound signal front speaker LH	Input	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
19 (G)	20 (R)	Sound signal front speaker RH	Input	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
21 (B)	22 (W)	Sound signal rear speaker LH	Input	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>
23 (B)	33 (W)	Sound signal rear speaker RH	Input	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIA0177E</p>

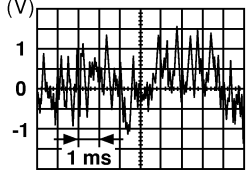
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BOSE SPEAKER AMP

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION WITH BOSE]

Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
31 (G)	Ground	Amp. ON signal	Input	ON	-	Greater than 6.5V
37 (G)	27 (W)	Rear door speaker signal RH	Output	ON	Sound output	

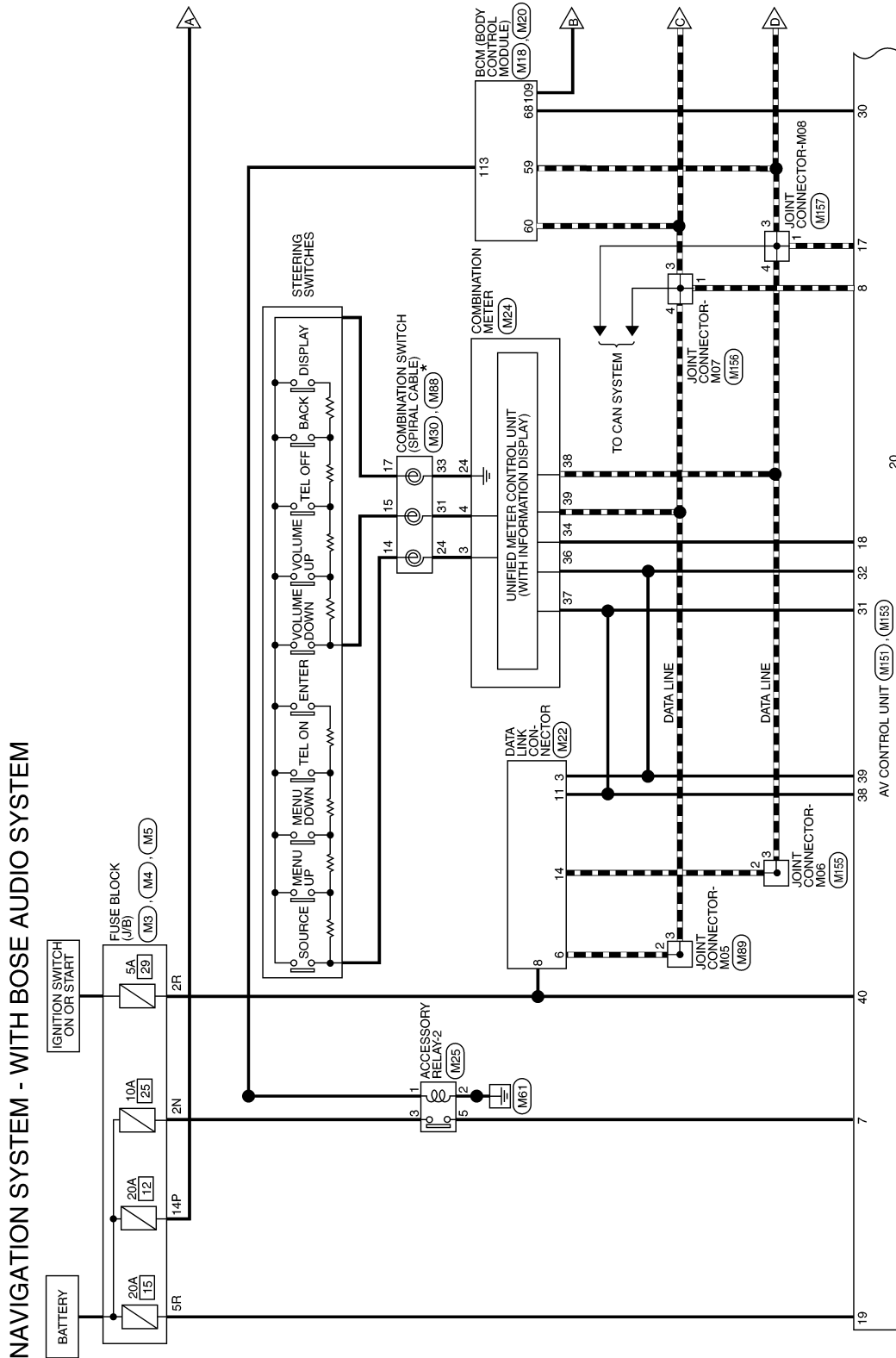
SKIA0177E

WIRING DIAGRAM

NAVIGATION WITH BOSE

Wiring Diagram

INFOID:0000000010480300



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

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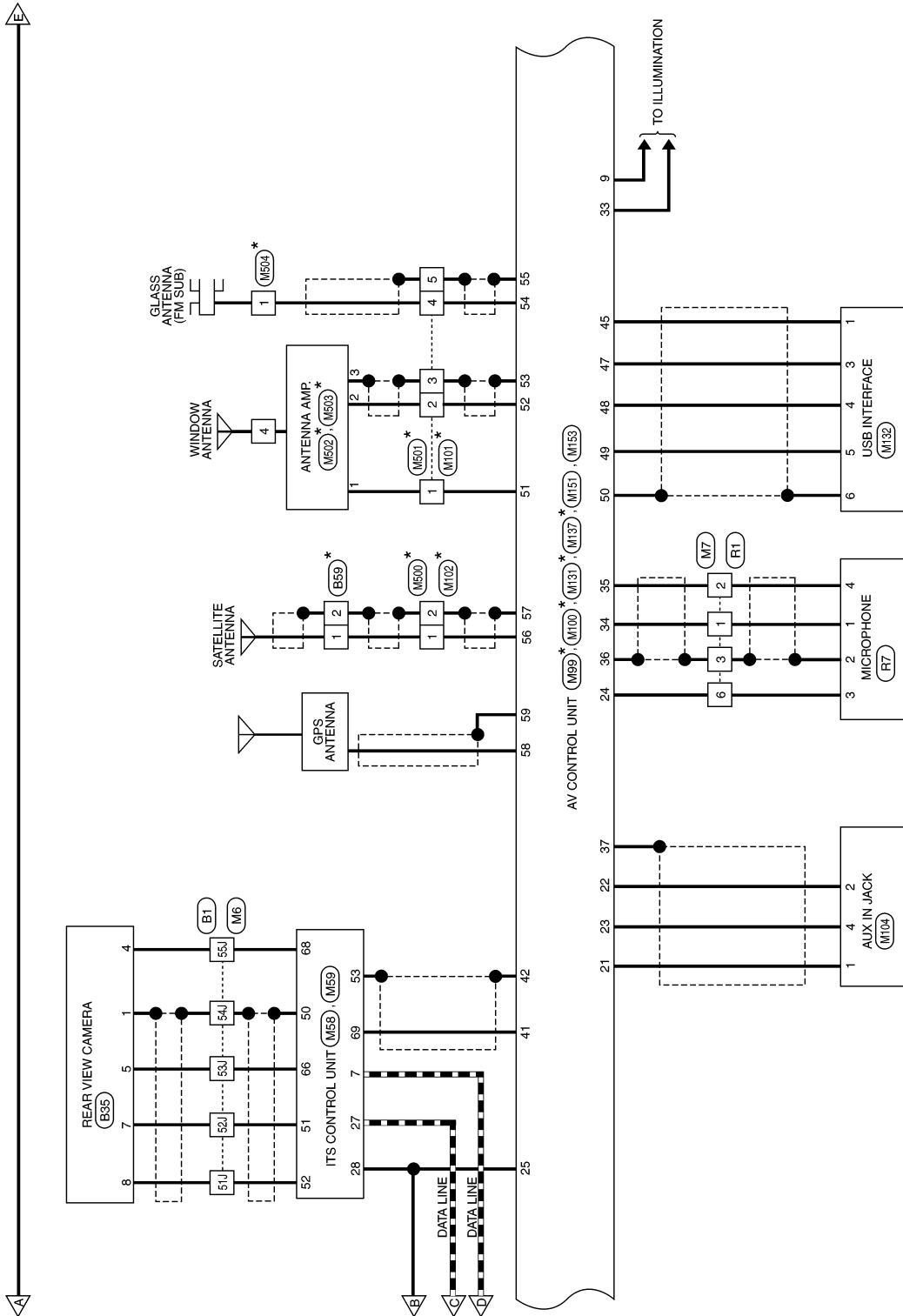
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NAVIGATION WITH BOSE

< WIRING DIAGRAM >

[NAVIGATION WITH BOSE]

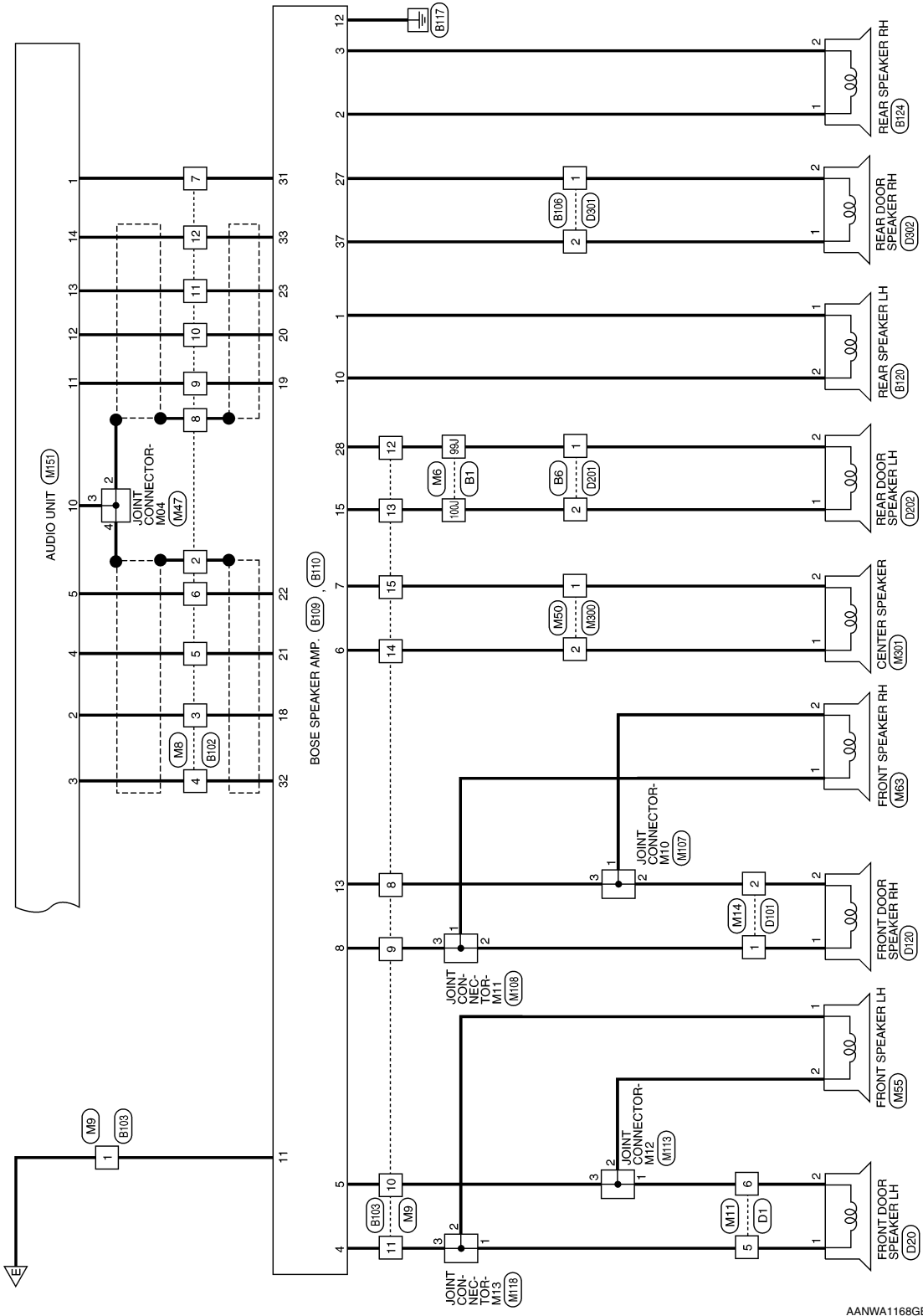


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NAVIGATION WITH BOSE

< WIRING DIAGRAM >

[NAVIGATION WITH BOSE]

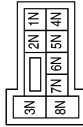


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NAVIGATION SYSTEM CONNECTORS - WITH BOSE AUDIO SYSTEM

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2N	LG	-

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



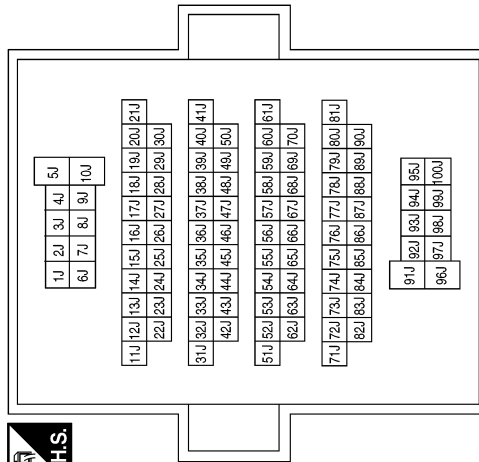
Terminal No.	Color of Wire	Signal Name
2R	BG	-
5R	G	-

Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



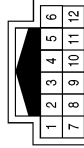
Terminal No.	Color of Wire	Signal Name
14P	G	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	GRAY



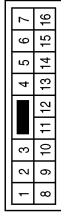
Terminal No.	Color of Wire	Signal Name
51J	W	-
52J	R	-
53J	B	-
54J	SHIELD	-
55J	G	-
99J	R	-
100J	G	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



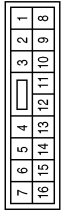
Terminal No.	Color of Wire	Signal Name
1	B	-
2	W	-
3	SHIELD	-
6	BR	-

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



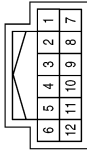
Terminal No.	Color of Wire	Signal Name
5	P	-(WITH BOSE AUDIO SYSTEM)
6	R	-(WITH BOSE AUDIO SYSTEM)

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE



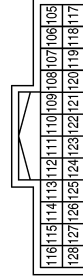
Terminal No.	Color of Wire	Signal Name
1	G	-
8	BG	-
9	P	-
10	R	-
11	P	-
12	R	-
13	G	-
14	P	-
15	R	-

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



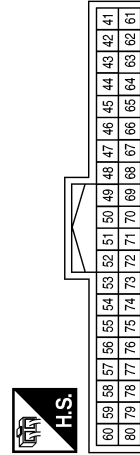
Terminal No.	Color of Wire	Signal Name
2	SHIELD	-
3	B	-
4	W	-
5	G	-
6	R	-
7	W	-
8	SHIELD	-
9	B	-
10	W	-
11	G	-
12	R	-

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
109	G	REVERSE SIGNAL
113	P	ACC RELAY OUT

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
59	P	CAN-L
60	L	CAN-H
68	P	MR OUTPUT

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	P	-(WITH BOSE AUDIO SYSTEM)
2	BG	-(WITH BOSE AUDIO SYSTEM)

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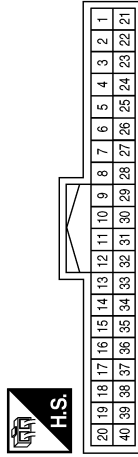


Connector No.	M25
Connector Name	ACCESSORY RELAY-2
Connector Color	BLUE



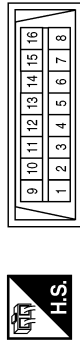
Terminal No.	Color of Wire	Signal Name
1	W	-
2	B	-
3	LG	-
5	P	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	P	STRG SW INPUT1
4	R	STRG SW INPUT2
24	W	STRG SW GND
34	G	SPEED 8P/R
36	LG	M-CAN-L
37	SB	M-CAN-H
38	P	CAN-L
39	L	CAN-H

Connector No.	M22
Connector Name	DATA LINK CONNECTOR
Connector Color	WHITE



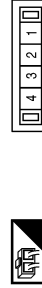
Terminal No.	Color of Wire	Signal Name
3	LG	-
6	L	-
8	BG	-
11	SB	-
14	P	-

Connector No.	M50
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	-
2	P	-

Connector No.	M47
Connector Name	JOINT CONNECTOR-M04
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	SHIELD	-
3	B	-
4	SHIELD	-

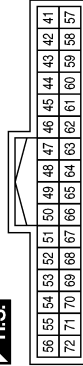
Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	P	-
31	R	-
33	W	-

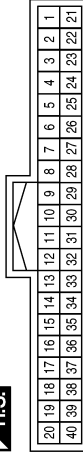
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Connector No.	M59
Connector Name	ITS CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
50	SHIELD	RV-VIDEO GND
51	R	RV-POWER GND
52	W	RV-POWER 6.2V
53	SHIELD	VIDEO OUTPUT GND
66	B	RV-VIDEO SIGNAL
68	G	RV SIGNAL GND
69	B	VIDEO OUTPUT SIGNAL

Connector No.	M58
Connector Name	ITS CONTROL UNIT
Connector Color	WHITE



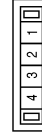
Terminal No.	Color of Wire	Signal Name
7	P	CAN-L
27	L	CAN-H
28	R	REVERSE

Connector No.	M55
Connector Name	FRONT SPEAKER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	P	-(WITH BOSE AUDIO SYSTEM)
2	R	-(WITH BOSE AUDIO SYSTEM)

Connector No.	M89
Connector Name	JOINT CONNECTOR-M05
Connector Color	WHITE



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

Connector No.	M88
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14	P	-
15	L	-
17	G	-

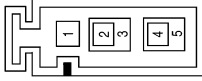
Connector No.	M63
Connector Name	FRONT SPEAKER RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	P	-(WITH BOSE AUDIO SYSTEM)
2	BG	-(WITH BOSE AUDIO SYSTEM)

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Connector No.	M101
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-
4	B	-
5	SHIELD	-

Connector No.	M100
Connector Name	AV CONTROL UNIT
Connector Color	BLUE



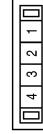
Terminal No.	Color of Wire	Signal Name
58	B	GPS ANT
59	SHIELD	GPS SHIELD

Connector No.	M99
Connector Name	AV CONTROL UNIT
Connector Color	PINK



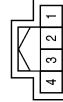
Terminal No.	Color of Wire	Signal Name
56	B	SAT ANT
57	SHIELD	SAT SHIELD

Connector No.	M107
Connector Name	JOINT CONNECTOR-M10
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	BG	-
2	BG	-
3	BG	-

Connector No.	M104
Connector Name	AUX IN JACK
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	B	-
4	R	-

Connector No.	M102
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

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NAVIGATION WITH BOSE

< WIRING DIAGRAM >

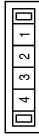
[NAVIGATION WITH BOSE]

Connector No.	M118
Connector Name	JOINT CONNECTOR-M113
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	P	-
2	P	-
3	P	-

Connector No.	M113
Connector Name	JOINT CONNECTOR-M12
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	-
2	R	-
3	R	-

Connector No.	M108
Connector Name	JOINT CONNECTOR-M11
Connector Color	WHITE



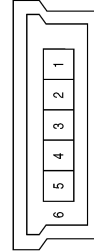
Terminal No.	Color of Wire	Signal Name
1	P	-
2	P	-
3	P	-

Connector No.	M137
Connector Name	AV CONTROL UNIT
Connector Color	GRAY



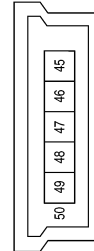
Terminal No.	Color of Wire	Signal Name
51	B	ANT +B
52	B	MAIN ANT
53	SHIELD	MAIN GND
54	B	ANT SUB
55	SHIELD	SUB GND

Connector No.	M132
Connector Name	USB INTERFACE
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	B	-
2	-	-
3	G	-
4	W	-
5	R	-
5	SHIELD	-

Connector No.	M131
Connector Name	AV CONTROL UNIT
Connector Color	BLACK



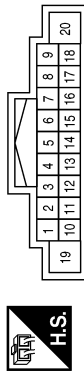
Terminal No.	Color of Wire	Signal Name
45	B	USB GND
46	-	-
47	G	USB D+
48	W	USB D-
49	R	VBUS
50	SHIELD	SHIELD

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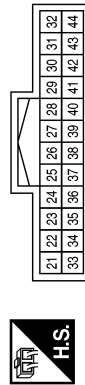
AV

Connector No.	M151
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	AMP ON
2	B	FR SP LH (+)
3	W	FR SP LH (-)
4	G	RR SP LH (+)
5	R	RR SP LH (-)
6	-	-

Connector No.	M153
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	W	AUX R
22	B	AUX GND
23	R	AUX L
24	BR	BF MIC
25	G	REVERSE
26	-	-
27	-	-
28	-	-

Terminal No.	Color of Wire	Signal Name
7	P	ACC
8	L	CAN-H
9	R	ILL (+), LIGHT SW
10	B	PREAMP SHIELD
11	B	FR SP RH (+)
12	W	FR SP RH (-)
13	G	RR SP RH (+)
14	R	RR SP RH (-)
15	-	-
16	-	-
17	P	CAN-L
18	G	SPEED SIGNAL
19	G	BAT
20	GR	GND

Terminal No.	Color of Wire	Signal Name
29	-	-
30	P	MR OUTPUT
31	SB	M-CAN-H
32	LG	M-CAN-L
33	GR	ILL (-)
34	B	MIC SIGNAL
35	W	MIC VCC
36	SHIELD	MIC GND
37	SHIELD	AUX SHIELD
38	SB	M-CAN-H
39	LG	M-CAN-L
40	BG	IGNITION
41	B	CAMERA +
42	SHIELD	CAMERA - (SHIELD)
43	-	-
44	-	-

Connector No.	M155
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	P	-
3	P	-

NAVIGATION WITH BOSE

< WIRING DIAGRAM >

[NAVIGATION WITH BOSE]

Connector No.	M300
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-

Connector No.	M157
Connector Name	JOINT CONNECTOR-M08
Connector Color	WHITE



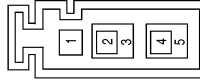
Terminal No.	Color of Wire	Signal Name
1	P	-
3	P	-
4	P	-

Connector No.	M156
Connector Name	JOINT CONNECTOR-M07
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
3	L	-
4	L	-

Connector No.	M501
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-
2	B	-
3	SHIELD	-

Connector No.	M500
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

Connector No.	M301
Connector Name	CENTER SPEAKER
Connector Color	BROWN

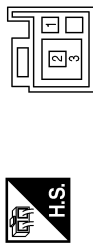


Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-

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Connector No.	M502
Connector Name	ANTENNA AMP.
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	SHIELD	-

Connector No.	M503
Connector Name	ANTENNA AMP.
Connector Color	BLACK



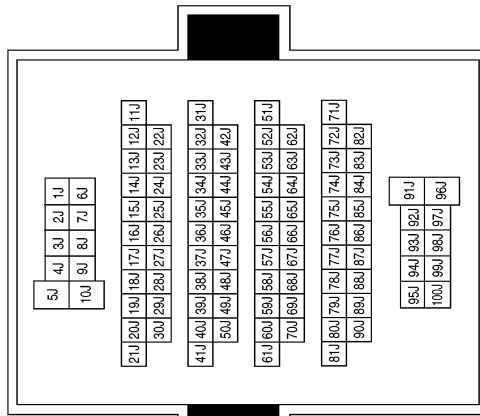
Terminal No.	Color of Wire	Signal Name
4	B	-

Connector No.	M504
Connector Name	GLASS ANTENNA
Connector Color	BLACK



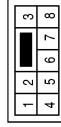
Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
51J	W	-
52J	B	-
53J	R	-
54J	SHIELD	-
55J	G	-
99J	R	-
100J	P	-

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



Terminal No.	Color of Wire	Signal Name
1	R	-
2	P	-

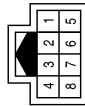
AANIA3095GB

NAVIGATION WITH BOSE

< WIRING DIAGRAM >

[NAVIGATION WITH BOSE]

Connector No.	B35
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE



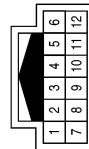
Terminal No.	Color of Wire	Signal Name
1	SHIELD	-
4	G	-
5	R	-
7	B	-
8	W	-

Connector No.	B59
Connector Name	SATELLITE RADIO ANTENNA
Connector Color	BROWN



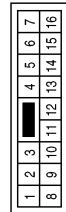
Terminal No.	Color of Wire	Signal Name
1	B	-
2	SHIELD	-

Connector No.	B102
Connector Name	WIRE TO WIRE
Connector Color	WHITE



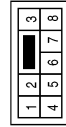
Terminal No.	Color of Wire	Signal Name
2	SHIELD	-
3	G	-
4	R	-
5	B	-
6	W	-
7	G	-
8	SHIELD	-
9	G	-
10	R	-
11	B	-
12	W	-

Connector No.	B103
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
8	BG	-
9	P	-
10	R	-
11	P	-
12	W	-
13	G	-
14	G	-
15	R	-

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



Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-

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NAVIGATION WITH BOSE

< WIRING DIAGRAM >

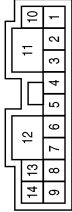
[NAVIGATION WITH BOSE]

Connector No.	B120
Connector Name	REAR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-

Connector No.	B110
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



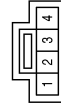
Terminal No.	Color of Wire	Signal Name
1	W	-
2	W	-
3	G	-
4	P	-
5	R	-
6	G	-
7	R	-
8	P	-
10	G	-
11	G	-
12	GR	-
13	BG	-

Connector No.	B109
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



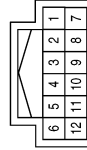
Terminal No.	Color of Wire	Signal Name
15	G	-
18	G	-
19	G	-
20	R	-
21	B	-
22	W	-
23	B	-
27	W	-
28	W	-
31	G	-
32	R	-
33	W	-
37	G	-

Connector No.	R7
Connector Name	MICROPHONE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	SHIELD	-
3	BR	-
4	Y	-

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



Terminal No.	Color of Wire	Signal Name
1	L	-
2	Y	-
3	SHIELD	-
6	BR	-

Connector No.	B124
Connector Name	REAR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-

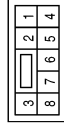
AANIA3097GB

NAVIGATION WITH BOSE

< WIRING DIAGRAM >

[NAVIGATION WITH BOSE]

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



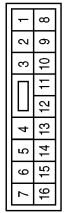
Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	- (WITH NAVI OR BOSE AUDIO SYSTEM)

Connector No.	D20
Connector Name	FRONT DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



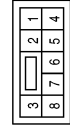
Terminal No.	Color of Wire	Signal Name
5	G	-
6	W	- (WITH NAVI OR BOSE AUDIO SYSTEM)

Connector No.	D202
Connector Name	REAR DOOR SPEAKER LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	Y	-

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



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	LG	-

Connector No.	D120
Connector Name	FRONT DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-

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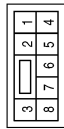
AV

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



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	Y	-

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



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	LG	-

AANIA3099GB

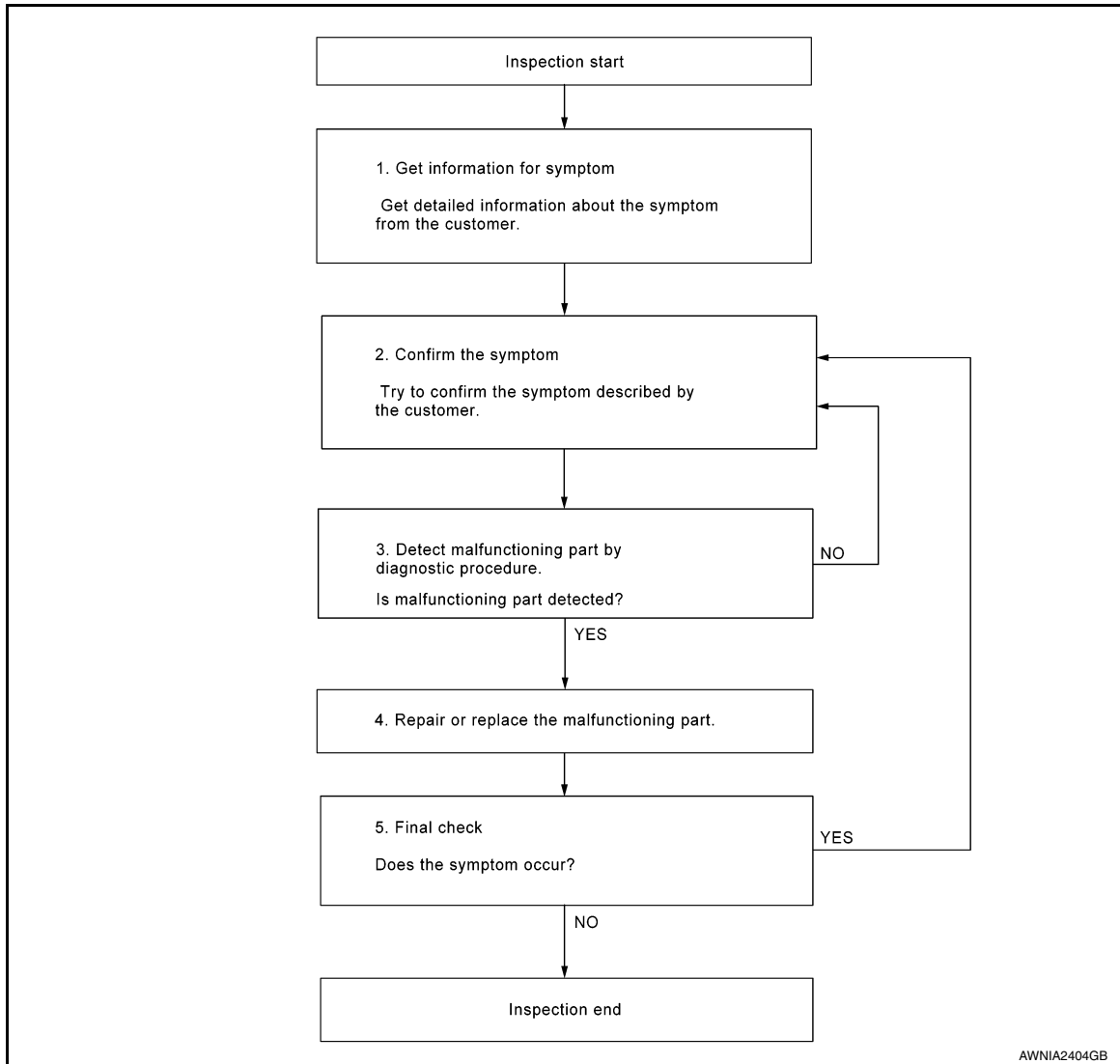
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000010480301

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. Refer to [AV-402, "Symptom Table"](#).

>> GO TO 3.

3.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[NAVIGATION WITH BOSE]

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.

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Description

INFOID:000000010480302

BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing AV control unit.

AFTER REPLACEMENT

CAUTION:

When replacing AV control unit, you must perform "After Replace ECU" with CONSULT.

- Complete the procedure of "After Replace ECU" in order.
- If you set incorrect "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Work Procedure

INFOID:000000010480303

1. SAVING VEHICLE SPECIFICATION

④-CONSULT

Enter "Re/Programming, Configuration" and perform "Before Replace ECU" to save or print current vehicle specification.

NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing AV control unit.

>> GO TO 2.

2. REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to [AV-416, "Removal and Installation"](#).

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

④CONSULT

1. Enter "Re/Programming, Configuration".
2. If "Before Replace ECU" operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press "Confirm" to write vehicle specification. Refer to [AV-352, "CONFIGURATION \(AV CONTROL UNIT\) : Work Procedure"](#).
3. If "Before Replace ECU" operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to [AV-352, "CONFIGURATION \(AV CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 4.

4. REGISTER AV CONTROL UNIT

Perform AV control unit registration. Refer to [AV-353, "REGISTRATION \(AV CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 5.

5. OPERATION CHECK

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

>> Work End.

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:000000010480304

Vehicle specification needs to be written with CONSULT because it is not written after replacing AV control unit.

Configuration has three functions as follows:

Function	Description
"Before Replace ECU"	<ul style="list-style-type: none"> • Reads the vehicle configuration of current AV control unit. • Saves the read vehicle configuration.
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

CAUTION:

- When replacing AV control unit, you must perform "Select Saved Data List" or "After Replace ECU" with CONSULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new AV control unit.

CONFIGURATION (AV CONTROL UNIT) : Work Procedure

INFOID:000000010480305

1. WRITING MODE SELECTION

CONSULT

Select "Reprogramming, Configuration" of "MULTI AV".

When writing saved data>>GO TO 2.

When writing manually>>GO TO 3.

2. PERFORM "SAVED DATA LIST"

CONSULT

Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm".

>> Work End.

3. PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"

CONSULT

1. Select "After Replace ECU" or "Manual Configuration".
2. Identify the correct model and configuration list. Refer to [AV-353, "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).
3. Confirm and/or change setting value for each item.

CAUTION:
Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
4. Select "Next".

CAUTION:
Make sure to select "Next", confirm each setting value and press "OK" even if the indicated configuration of brand new AV control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.
5. When "Completed", select "End".

>> GO TO 4.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[NAVIGATION WITH BOSE]

4. OPERATION CHECK

Confirm that each function controlled by AV control unit operates normally.

>> Work End.

CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:000000010480306

CAUTION:

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

MANUAL SETTING ITEM	
Items	Setting value
SOUND SYSTEM	BASE ↔ BOSE
CAMERA SYSTEM	NONE/AVM ↔ REAR CAMERA

↔: Items which confirm vehicle specifications

REGISTRATION (AV CONTROL UNIT)

REGISTRATION (AV CONTROL UNIT) : Description

INFOID:000000011108801

AFTER REPLACEMENT

If the AV control unit is replaced with a new AV control unit, the new AV control unit must be registered using the registration code.

CAUTION:

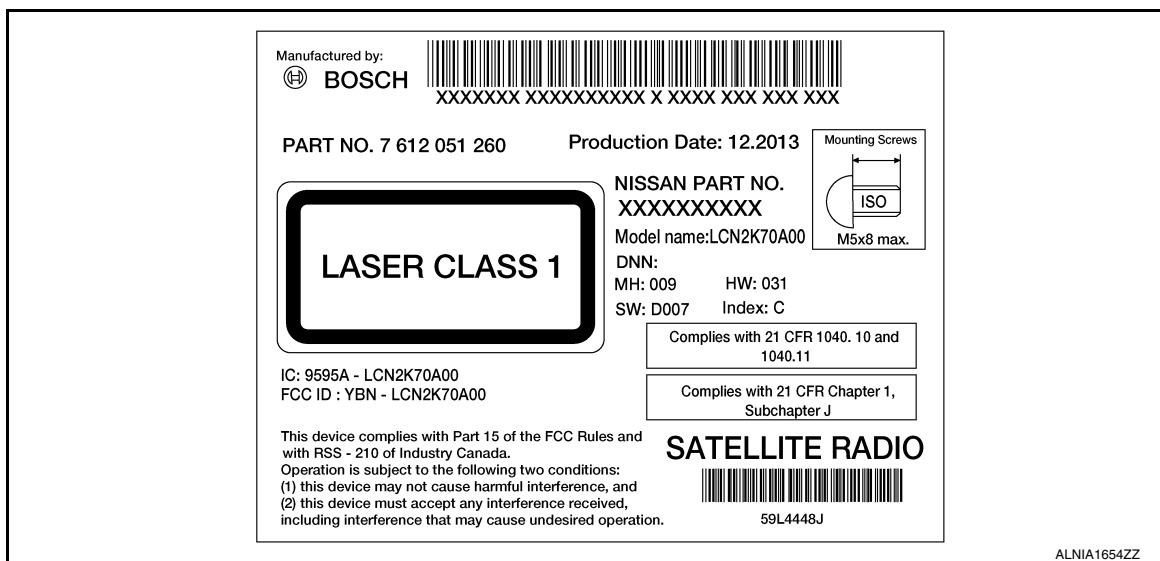
If the new AV control unit registration code is not registered, the “APPS” mode will not function.

REGISTRATION (AV CONTROL UNIT) : Work Procedure

INFOID:000000011108802

1. RECORD REGISTRATION CODE FOR REPLACEMENT AV CONTROL UNIT

1. Refer to the replacement AV control unit's label located on the top of the AV control unit.

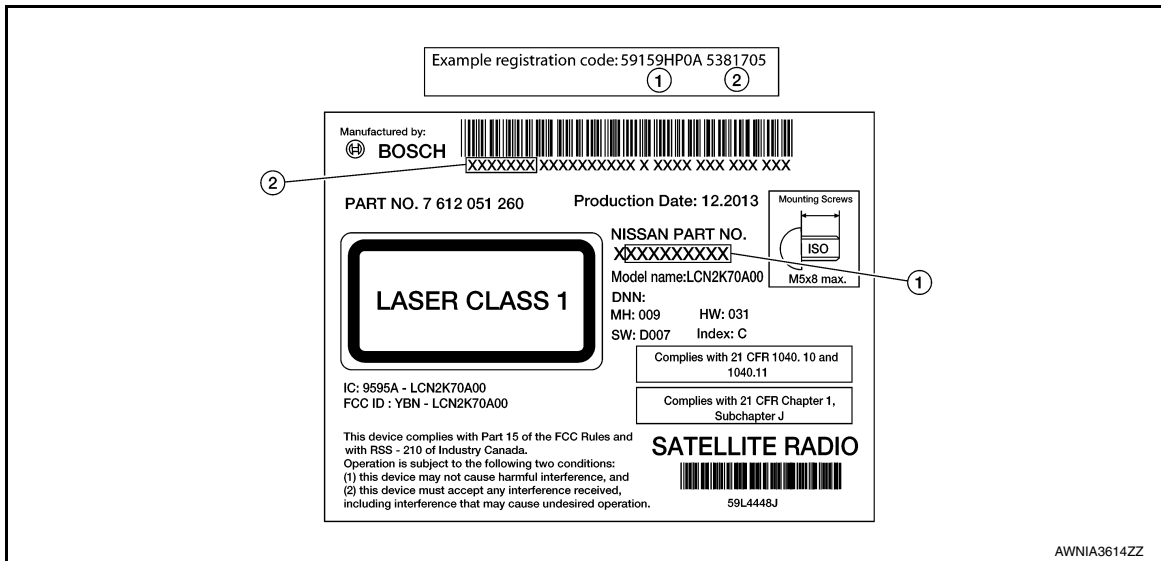


2. Create a registration code to supply to NISSAN Owner Services by combining the last 9 digits of the NISSAN PART NO. (1) and the first 7 digits of the bar code number (2).

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[NAVIGATION WITH BOSE]



3. Record the registration code.

>> GO TO 2.

2. REGISTER REPLACEMENT AV CONTROL UNIT

Register the replacement AV control unit by contacting NISSAN Owner Services. Refer to TSB.

>> GO TO 3.

3. OPERATION CHECK

Verify that the AV control unit "APPS" function operates normally.

>> Work End.

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

DTC Logic

INFOID:000000010480307

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000]	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

Diagnosis Procedure

INFOID:000000010480308

1. PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform "Self Diagnostic Result" of "MULTI AV" using CONSULT.

Is CAN COMM CIRCUIT displayed?

- YES >> Refer to [LAN-16, "Trouble Diagnosis Flow Chart"](#).
- NO >> Refer to [GI-44, "Intermittent Incident"](#).

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U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000010480309

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	Error during CAN controller hardware initialization (VCAN).	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-416 , "Removal and Installation".

U1217 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U1217 AV CONTROL UNIT

DTC Logic

INFOID:000000010480310

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
BLUETOOTH MODULE [U1217]	Connection failure to the internal Bluetooth [®] sub unit is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-416, "Removal and Installation" .

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U1229 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U1229 AV CONTROL UNIT

DTC Logic

INFOID:000000010480311

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
iPod CERTIFICATION [U1229]	iPod authentication chip error.	Replace AV control unit if malfunction occurs constantly. Refer to AV-416, "Removal and Installation" .

U122F AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U122F AV CONTROL UNIT

DTC Logic

INFOID:000000010480312

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Digital broadcasting connection error [U122F]	Communication error with digital audio broadcast module internal to AV control unit.	Replace AV control unit if malfunction occurs constantly. Refer to AV-416, "Removal and Installation" .

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U1244 GPS ANTENNA

[NAVIGATION WITH BOSE]

< DTC/CIRCUIT DIAGNOSIS >

U1244 GPS ANTENNA

DTC Logic

INFOID:000000010480313

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ANTENNA CONN [U1244]	Open or short to ground is detected in GPS antenna connection.	<ul style="list-style-type: none">GPS antenna disconnection.Open or short to ground in GPS antenna signal circuit.

Diagnosis Procedure

INFOID:000000010480314

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. GPS ANTENNA INSPECTION

Visually inspect the GPS antenna and antenna feeder. Refer to [AV-426. "Removal and Installation"](#).

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning components.

2. CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect AV control unit connector M100.
2. Turn ignition switch ON.
3. Check voltage between AV control unit terminal 58 and ground.

AV control unit terminal	Ground	Voltage
(+)	(-)	
58	—	5.0 V

Is inspection result normal?

YES >> Replace GPS antenna. Refer to [AV-426. "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-416. "Removal and Installation"](#).

U1258 SATELLITE RADIO ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U1258 SATELLITE RADIO ANTENNA

DTC Logic

INFOID:000000010480315

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
XM ANTENNA CONN [U1258]	Open or short to ground is detected in satellite antenna connection.	<ul style="list-style-type: none">Satellite antenna disconnection.Open or short to ground in satellite antenna signal circuit.

Diagnosis Procedure

INFOID:000000010480316

Regarding Wiring Diagram information, refer to [AV-333, "Wiring Diagram"](#).

1. SATELLITE ANTENNA INSPECTION

Visually inspect the satellite antenna and antenna feeder. Refer to [AV-428, "Location of Antenna"](#).

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning components.

2. CHECK SATELLITE ANTENNA FEEDER CONTINUITY

- Disconnect AV control unit connector M99 and satellite radio antenna connector B59.
- Check continuity between AV control unit connector M99 and satellite radio antenna connector B59.

AV control unit		Satellite radio antenna		Continuity
Connector	Terminal	Connector	Terminal	
M99	56	B59	1	Yes

- Check continuity between AV control unit connector M99 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M99	56	—	No

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

3. CHECK AV CONTROL UNIT VOLTAGE

- Turn ignition switch ON.
- Check voltage between AV control unit terminal 56 and ground.

AV control unit terminal	Ground	Voltage
(+)	(-)	
56	—	5.0 V

Is inspection result normal?

YES >> Replace satellite radio antenna. Refer to [AV-425, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-416, "Removal and Installation"](#).

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U1263 USB

DTC Logic

INFOID:0000000010480317

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
USB OVERCURRENT [U1263]	Overcurrent in USB harness is detected.	<ul style="list-style-type: none"> Device connected to USB interface. Harness between the AV control unit and USB interface.

DTC CONFIRMATION PROCEDURE

1. PERFORM SELF DIAGNOSTIC RESULT

1. If there is a device connected to the USB interface, disconnect it.
2. Turn ignition switch ON and wait for 2 seconds or more.
3. Perform "Self Diagnostic Result" of "MULTI AV" using CONSULT.

Is DTC U1263 displayed?

- YES >> Refer to [AV-362, "Diagnosis Procedure"](#).
- NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010480318

1. CHECK USB INTERFACE HARNESS

Visually inspect USB interface harness. Refer to [AV-417, "Removal and Installation"](#).

Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Replace USB interface harness. Refer to [AV-417, "Removal and Installation"](#).

2. CHECK USB INTERFACE HARNESS

Check USB interface harness. Refer to [AV-400, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-416, "Removal and Installation"](#).
- NO >> Replace USB interface harness. Refer to [AV-417, "Removal and Installation"](#).

U1264 ANTENNA AMP.

[NAVIGATION WITH BOSE]

< DTC/CIRCUIT DIAGNOSIS >

U1264 ANTENNA AMP.

DTC Logic

INFOID:000000010480319

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
ANTENNA AMP TERMINAL [U1264]	Open or short to ground is detected in Antenna amp. connection.	<ul style="list-style-type: none"> Antenna amp. disconnection. Open or short to ground in antenna amp. ON signal circuit.

Diagnosis Procedure

INFOID:000000010480320

Regarding Wiring Diagram information, refer to [AV-333, "Wiring Diagram"](#).

1. ANTENNA AMP. INSPECTION

Visually inspect the antenna amp. and antenna feeder. Refer to [AV-428, "Location of Antenna"](#).

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning components.

2. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND ANTENNA AMP.

- Turn ignition switch OFF.
- Disconnect AV control unit connector M137 and antenna amp. connector M502.
- Check continuity between AV control unit connector M137 and antenna amp. connector M502.

AV control unit		Antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
M137	51	M502	1	Yes

- Check continuity between AV control unit connector M137 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M137	51	—	No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

3. CHECK AV CONTROL UNIT VOLTAGE

- Connect AV control unit connector M137.
- Turn ignition switch ON.
- Check voltage between AV control unit connector M137 and ground.

AV control unit		Ground	Voltage (Approx.)
(+)		(-)	
Connector	Terminal		
M137	51	—	Battery voltage

Is the inspection result normal?

YES >> Replace antenna amp. Refer to [AV-431, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-416, "Removal and Installation"](#).

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U1265 BOSE AMP.

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U1265 BOSE AMP.

DTC Logic

INFOID:000000010480321

CONSULT Display	DTC Detection Condition	Possible Cause
AMP ON TERMINAL [U1265]	Open or short to ground is detected in BOSE amp. ON signal circuit.	Open or short to ground in BOSE amp. ON signal circuit.

Diagnosis Procedure

INFOID:000000010480322

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND BOSE SPEAKER AMP.

- Turn ignition switch OFF.
- Disconnect AV control unit connector M151 and Bose speaker amp. connector B109.
- Check continuity between AV control unit connector M151 and Bose speaker amp. connector B109.

AV control unit		Bose speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M151	1	B109	31	Yes

- Check continuity between AV control unit connector M151 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M151	1	—	No

Is the inspection result normal?

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

2. CHECK AV CONTROL UNIT VOLTAGE

- Connect AV control unit connector M151.
- Turn ignition switch ON.
- Check voltage between AV control unit connector M151 and ground.

AV control unit		Ground	Voltage (Approx.)
(+)			
Connector	Terminal	(-)	
M151	1	—	Battery voltage

Is the inspection result normal?

- YES >> Replace Bose speaker amp. Refer to [AV-424. "Removal and Installation"](#).
NO >> Replace AV control unit. Refer to [AV-416. "Removal and Installation"](#).

U12AA CONFIGURATION ERROR

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U12AA CONFIGURATION ERROR

DTC Logic

INFOID:000000010480323

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Configuration Error [U12AA]	AV control unit is not properly configured or configuration is corrupt.	Configuration data needs to be written. Refer to AV-352, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure" .

Diagnosis Procedure

INFOID:000000010480324

1.PERFORM CONFIGURATION

When U12AA is detected, configuration data must be written.

>> Write configuration data with CONSULT. Refer to [AV-352, "CONFIGURATION \(AV CONTROL UNIT\) : Work Procedure"](#).

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U12AB ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U12AB ANTENNA

DTC Logic

INFOID:000000010480325

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FM Antenna error [U12AB]	Open or short to ground is detected in glass antenna (FM sub) connection.	<ul style="list-style-type: none">Glass antenna (FM sub) disconnection.Open or short to ground in glass antenna (FM sub) signal circuit.

Diagnosis Procedure

INFOID:000000010480326

Regarding Wiring Diagram information, refer to [AV-333, "Wiring Diagram"](#).

1. GLASS ANTENNA (FM SUB) INSPECTION

Visually inspect the glass antenna (FM sub) and antenna feeder. Refer to [AV-428, "Location of Antenna"](#).

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning components.

2. CHECK GLASS ANTENNA (FM SUB) FEEDER CONTINUITY

1. Disconnect AV control unit connector M137 and inline connector M504.
2. Check continuity between AV control unit connector M137 and inline connector M504.

AV control unit		Inline		Continuity
Connector	Terminal	Connector	Terminal	
M137	54	M504	1	Yes

3. Check continuity between AV control unit connector M137 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M137	54	—	No

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect AV control unit connector M137.
2. Turn ignition switch ON.
3. Check voltage between AV control unit terminal 54 and ground.

AV control unit terminal	Ground	Voltage
(+)	(-)	
54	—	5.0 V

Is inspection result normal?

YES >> Replace glass antenna (FM sub). Refer to [GW-25, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-416, "Removal and Installation"](#).

U12AC AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U12AC AV CONTROL UNIT

DTC Logic

INFOID:000000010480327

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Display Temperature too High [U12AC]	Display temperature has exceeded maximum temperature. Display is switched OFF to avoid irreversible damage.	Replace AV control unit if malfunction occurs constantly. Refer to AV-416, "Removal and Installation" .

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U12AD AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U12AD AV CONTROL UNIT

DTC Logic

INFOID:000000010480328

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
ECU Temperature too High [U12AD]	AV control unit temperature has exceeded maximum temperature.	Replace AV control unit if malfunction occurs constantly. Refer to AV-416, "Removal and Installation" .

U12AE AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U12AE AV CONTROL UNIT

DTC Logic

INFOID:000000010480329

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Internal Amplifier temperature Warning [U12AE]	Internal amplifier temperature has exceeded maximum temperature.	Replace AV control unit if malfunction occurs constantly. Refer to AV-416, "Removal and Installation" .

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U12AF AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U12AF AV CONTROL UNIT

DTC Logic

INFOID:000000010480330

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CD Mechanism Temperature Warning [U12AF]	CD drive temperature has exceeded maximum temperature. CD drive is switched OFF to avoid irreversible damage.	Replace AV control unit if malfunction occurs constantly. Refer to AV-416, "Removal and Installation" .

U12B0 POWER SUPPLY VOLTAGE

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U12B0 POWER SUPPLY VOLTAGE

DTC Logic

INFOID:000000010480331

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Supply Voltage Goes below 9V > 20s [U12B0]	AV control unit supply voltage exceeds lower limits.	<ul style="list-style-type: none">• Charging system malfunction.• AV control unit power supply or ground circuits.

Diagnosis Procedure

INFOID:000000010480332

1. CHECK CHARGING SYSTEM

Check the vehicle charging system. Refer to [CHG-17, "Work Flow \(With EXP-800 NI or GR8-1200 NI\)"](#) or [CHG-20, "Work Flow \(Without EXP-800 NI or GR8-1200 NI\)"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning components.

2. CHECK AV CONTROL UNIT POWER SUPPLY AND GROUND CIRCUITS

Perform the AV control unit power supply and ground circuit diagnosis procedure. Refer to [AV-376, "AV CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Replace the AV control unit. Refer to [AV-416, "Removal and Installation"](#).

NO >> Repair or replace harness or connectors.

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U12B1 POWER SUPPLY VOLTAGE

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U12B1 POWER SUPPLY VOLTAGE

DTC Logic

INFOID:000000010480333

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Supply Voltage Goes High > 16V for 20s [U12B1]	AV control unit supply voltage exceeds upper limits.	Charging system malfunction.

Diagnosis Procedure

INFOID:000000010480334

1. CHECK CHARGING SYSTEM

Check the vehicle charging system. Refer to [CHG-17, "Work Flow \(With EXP-800 NI or GR8-1200 NI\)"](#) or [CHG-20, "Work Flow \(Without EXP-800 NI or GR8-1200 NI\)"](#).

Is the inspection result normal?

- YES >> Replace the AV control unit. Refer to [AV-416, "Removal and Installation"](#).
- NO >> Repair or replace the malfunctioning components.

U1300 AV COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U1300 AV COMM CIRCUIT

DTC Logic

INFOID:000000010480335

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
AV COMM CIRCUIT [U1300]	AV communication circuit malfunction (MCAN) between AV control unit and combination meter.	AV communication circuits between AV control unit and combination meter.

Diagnosis Procedure

INFOID:000000010480336

1. PERFORM SELF DIAGNOSTIC RESULT FOR METER M&A

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform "Self Diagnostic Result" of "METER M&A" using CONSULT.

Are any DTCs displayed?

YES >> Refer to [MWI-27, "DTC Index"](#).

NO >> GO TO 2.

2. CHECK AV COMMUNICATION CIRCUIT (L) CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M153 and combination meter connector M24.
3. Check continuity between AV control unit connector M153 and combination meter connector M24.

AV control unit		Combination meter		Continuity
Connector	Terminal	Connector	Terminal	
M153	32	M24	36	Yes
	39			

4. Check continuity between AV control unit connector M153 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M153	32	—	No
	39		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK AV COMMUNICATION CIRCUIT (H) CONTINUITY

1. Check continuity between AV control unit connector M153 and combination meter connector M24.

AV control unit		Combination meter		Continuity
Connector	Terminal	Connector	Terminal	
M153	31	M24	37	Yes
	38			

2. Check continuity between AV control unit connector M153 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M153	31	—	No
	38		

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U1300 AV COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

Is the inspection result normal?

- YES >> Replace the AV control unit. Refer to [AV-416, "Removal and Installation"](#).
- NO >> Repair or replace harness or connectors.

U1310 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

U1310 AV CONTROL UNIT

DTC Logic

INFOID:000000010480337

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (AV) [U1310]	Error during CAN controller hardware initialization (MCAN).	Replace AV control unit if malfunction occurs constantly. Refer to AV-416, "Removal and Installation" .

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:000000010480338

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
7	ACC power supply	25 (10A)
19	Battery power supply	15 (20A)
40	Ignition power supply	29 (5A)

Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connectors M151 and M153.
3. Check voltage between AV control unit connectors M151 and M153 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M151	19	—	Ignition switch: OFF	Battery voltage
	7		Ignition switch: ON	
M153	40			

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between AV control unit connector M151 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M151	20	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

BOSE SPEAKER AMP

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:000000010480339

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1.CHECK FUSE

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
11	Battery power supply	12 (20A)

Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bose speaker amp. connector B110.
3. Check voltage between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
B110	11	—	Ignition switch: OFF	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bose speaker amp. connector B110.
3. Check continuity between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B110	12	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

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FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

FRONT DOOR SPEAKER

Diagnosis Procedure

INFOID:000000010480340

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the AV control unit, Bose speaker amp. 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 terminals or connectors.

2. CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY (BOSE SPEAKER AMP.)

1. Disconnect Bose speaker amp. connector B110 and suspect front door speaker connector.
2. Check continuity between Bose speaker amp. connector B110 and suspect front door speaker connector.

Bose speaker amp.		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
B110	4	D20 (LH)	1	Yes
	5		2	
	8	D120 (RH)	1	
	13		2	

3. Check continuity between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B110	4	—	No
	5		
	8		
	13		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT DOOR SPEAKER SIGNAL (BOSE SPEAKER AMP.)

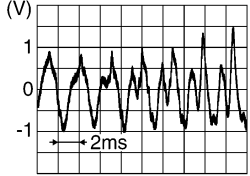
1. Connect Bose speaker amp. connector B110 and suspect front door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between Bose speaker amp. connector B110 and ground.

Bose speaker amp. connector B110		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

4	5	Audio signal output	
8	13		

Is the inspection result normal?

- YES >> Replace front door speaker. Refer to [AV-421, "Removal and Installation"](#).
- NO >> GO TO 4.

4. CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY (AV CONTROL UNIT)

1. Turn ignition switch to OFF.
2. Disconnect Bose speaker amp. connector B109 and AV control unit connector M151.
3. Check continuity between Bose speaker amp. connector B109 and AV control unit connector M151.

Bose speaker amp.		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
B109	32	M151	3	Yes
	18		2	
	20		12	
	19		11	

4. Check continuity between Bose speaker amp. connector B109 and ground.

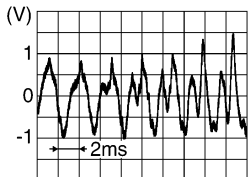
Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	32	—	No
	18		
	20		
	19		

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Repair or replace harness or connectors.

5. CHECK FRONT DOOR SPEAKER SIGNAL (AV CONTROL UNIT)

1. Connect Bose speaker amp. connector B109 and AV control unit connector M151.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between AV control unit connector M151 and ground.

AV control unit connector M151		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
2	3	Audio signal output	
11	12		

Is the inspection result normal?

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

- YES >> Replace Bose speaker amp. Refer to [AV-424, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-416, "Removal and Installation"](#).

FRONT SPEAKER

Diagnosis Procedure

INFOID:000000010480341

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the AV control unit, Bose speaker amp. 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 terminals or connectors.

2. CHECK FRONT SPEAKER SIGNAL CIRCUIT CONTINUITY (BOSE SPEAKER AMP.)

1. Disconnect Bose speaker amp. connector B110 and suspect front speaker connector.
2. Check continuity between Bose speaker amp. connector B110 and suspect front speaker connector.

Bose speaker amp.		Front speaker		Continuity
Connector	Terminal	Connector	Terminal	
B110	4	M55 (LH)	1	Yes
	5		2	
	8	M63 (RH)	1	
	13		2	

3. Check continuity between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B110	4	—	No
	5		
	8		
	13		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT SPEAKER SIGNAL (BOSE SPEAKER AMP.)

1. Connect Bose speaker amp. connector B110 and suspect front speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between Bose speaker amp. connector B110 and ground.

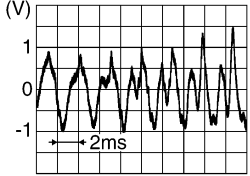
Bose speaker amp. connector B110		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

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FRONT SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

4	5	Audio signal output	
8	13		

Is the inspection result normal?

- YES >> Replace front speaker. Refer to [AV-419. "Removal and Installation"](#).
 NO >> GO TO 4.

4. CHECK FRONT SPEAKER SIGNAL CIRCUIT CONTINUITY (AV CONTROL UNIT)

1. Turn ignition switch to OFF.
2. Disconnect Bose speaker amp. connector B109 and AV control unit connector M151.
3. Check continuity between Bose speaker amp. connector B109 and AV control unit connector M151.

Bose speaker amp.		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
B109	32	M151	3	Yes
	18		2	
	20		12	
	19		11	

4. Check continuity between Bose speaker amp. connector B109 and ground.

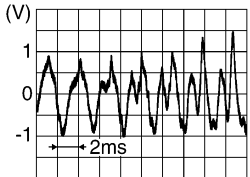
Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	32	—	No
	18		
	20		
	19		

Is the inspection result normal?

- YES >> GO TO 5.
 NO >> Repair or replace harness or connectors.

5. CHECK FRONT SPEAKER SIGNAL (AV CONTROL UNIT)

1. Connect Bose speaker amp. connector B109 and AV control unit connector M151.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between AV control unit connector M151 and ground.

AV control unit connector M151		Condition	Reference value
(+)	(-)		
Terminal	Terminal	Audio signal output	
2	3		
11	12		

Is the inspection result normal?

FRONT SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

-
- YES >> Replace Bose speaker amp. Refer to [AV-424, "Removal and Installation"](#).
 - NO >> Replace AV control unit. Refer to [AV-416, "Removal and Installation"](#).

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CENTER SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

CENTER SPEAKER

Diagnosis Procedure

INFOID:000000010480342

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the AV control unit, Bose speaker amp. 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 terminals or connectors.

2. CHECK CENTER SPEAKER SIGNAL CIRCUIT CONTINUITY (BOSE SPEAKER AMP.)

1. Disconnect Bose speaker amp. connector B110 and center speaker connector M301.
2. Check continuity between Bose speaker amp. connector B110 and center speaker connector M301.

Bose speaker amp.		Center speaker		Continuity
Connector	Terminal	Connector	Terminal	
B110	6	M301	1	Yes
	7		2	

3. Check continuity between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B110	6	—	No
	7		

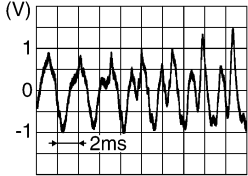
Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK CENTER SPEAKER SIGNAL (BOSE SPEAKER AMP.)

1. Connect Bose speaker amp. connector B110 and center speaker connector M301.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between Bose speaker amp. connector B110 and ground.

Bose speaker amp. connector B110		Condition	Reference value
(+) Terminal	(-) Terminal		
6	7	Audio signal output	

Is the inspection result normal?

CENTER SPEAKER

[NAVIGATION WITH BOSE]

< DTC/CIRCUIT DIAGNOSIS >

- YES >> Replace center speaker. Refer to [AV-420. "Removal and Installation"](#).
 NO >> GO TO 4.

4. CHECK CENTER SPEAKER SIGNAL CIRCUIT CONTINUITY (AV CONTROL UNIT)

1. Turn ignition switch to OFF.
2. Disconnect Bose speaker amp. connector B109 and AV control unit connector M151.
3. Check continuity between Bose speaker amp. connector B109 and AV control unit connector M151.

Bose speaker amp.		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
B109	32	M151	3	Yes
	18		2	
	20		12	
	19		11	

4. Check continuity between Bose speaker amp. connector B109 and ground.

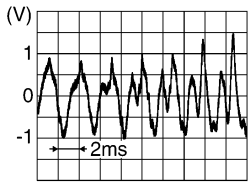
Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	32	—	No
	18		
	20		
	19		

Is the inspection result normal?

- YES >> GO TO 5.
 NO >> Repair or replace harness or connectors.

5. CHECK CENTER SPEAKER SIGNAL (AV CONTROL UNIT)

1. Connect Bose speaker amp. connector B109 and AV control unit connector M151.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between AV control unit connector M151 and ground.

AV control unit connector M151		Condition	Reference value
(+) Terminal	(-) Terminal		
2	3	Audio signal output	
11	12		

Is the inspection result normal?

- YES >> Replace Bose speaker amp. Refer to [AV-424. "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-416. "Removal and Installation"](#).

REAR DOOR SPEAKER

Diagnosis Procedure

INFOID:000000010480343

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the AV control unit, Bose speaker amp. 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 terminals or connectors.

2. CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY (BOSE SPEAKER AMP.)

1. Disconnect Bose speaker amp. connectors and suspect rear door speaker connector.
2. Check continuity between Bose speaker amp. connectors and suspect rear door speaker connector.

Bose speaker amp.		Rear door speaker		Continuity
Connector	Terminal	Connector	Terminal	
B109	15	D202 (LH)	1	Yes
	28		2	
	37	D302 (RH)	1	
	27		2	

3. Check continuity between Bose speaker amp. connectors and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	15	—	No
	28		
	37		
	27		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK REAR DOOR SPEAKER SIGNAL (BOSE SPEAKER AMP.)

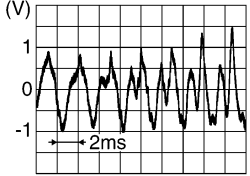
1. Connect Bose speaker amp. connectors and suspect rear door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between Bose speaker amp. connectors and ground.

Bose speaker amp.			Condition	Reference value
Connector	(+)	(-)		
		Terminal	Terminal	

REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

B109	15	28	Audio signal output	
	37	27		

Is the inspection result normal?

- YES >> Replace rear door speaker. Refer to [AV-422. "Removal and Installation"](#).
- NO >> GO TO 4.

4. CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY (AV CONTROL UNIT)

1. Turn ignition switch to OFF.
2. Disconnect Bose speaker amp. connector B109 and AV control unit connector M151.
3. Check continuity between Bose speaker amp. connector B109 and AV control unit connector M151.

Bose speaker amp.		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
B109	21	M151	4	Yes
	22		5	
	23		13	
	33		14	

4. Check continuity between Bose speaker amp. connector B109 and ground.

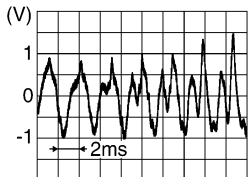
Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	21	—	No
	22		
	23		
	33		

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Repair or replace harness or connectors.

5. CHECK REAR DOOR SPEAKER SIGNAL (AV CONTROL UNIT)

1. Connect Bose speaker amp. connector B109 and AV control unit connector M151.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between AV control unit connector M151 and ground.

AV control unit connector M151		Condition	Reference value
(+)	(-)		
Terminal	Terminal	Audio signal output	
4	5		
13	14		

Is the inspection result normal?

REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

-
- YES >> Replace Bose speaker amp. Refer to [AV-424, "Removal and Installation"](#).
NO >> Replace AV control unit. Refer to [AV-416, "Removal and Installation"](#).

REAR SPEAKER

Diagnosis Procedure

INFOID:000000010480344

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CONNECTOR CHECK

Check the AV control unit, Bose speaker amp. 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 terminals or connectors.

2. CHECK REAR SPEAKER SIGNAL CIRCUIT CONTINUITY (BOSE SPEAKER AMP.)

1. Disconnect Bose speaker amp. connector B110 and suspect rear speaker connector.
2. Check continuity between Bose speaker amp. connector B110 and suspect rear speaker connector.

Bose speaker amp.		Rear speaker		Continuity
Connector	Terminal	Connector	Terminal	
B110	1	B120 (LH)	1	Yes
	10		2	
	2	B124 (RH)	1	
	3		2	

3. Check continuity between Bose speaker amp. connector B110 and ground.

Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B110	1	—	No
	10		
	2		
	3		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK REAR SPEAKER SIGNAL (BOSE SPEAKER AMP.)

1. Connect Bose speaker amp. connector B110 and suspect rear door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between Bose speaker amp. connector B110 and ground.

Bose speaker amp. connector B110		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

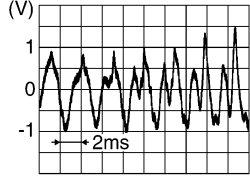
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AV

REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

1	10	Audio signal output	
2	3		

Is the inspection result normal?

- YES >> Replace rear speaker. Refer to [AV-423. "Removal and Installation"](#).
 NO >> GO TO 4.

4. CHECK REAR SPEAKER SIGNAL CIRCUIT CONTINUITY (AV CONTROL UNIT)

1. Turn ignition switch to OFF.
2. Disconnect Bose speaker amp. connector B109 and AV control unit connector M151.
3. Check continuity between Bose speaker amp. connector B109 and AV control unit connector M151.

Bose speaker amp.		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
B109	21	M151	4	Yes
	22		5	
	23		13	
	33		14	

4. Check continuity between Bose speaker amp. connector B109 and ground.

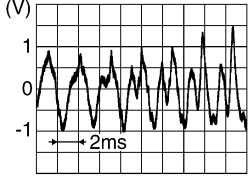
Bose speaker amp.		Ground	Continuity
Connector	Terminal		
B109	21	—	No
	22		
	23		
	33		

Is the inspection result normal?

- YES >> GO TO 5.
 NO >> Repair or replace harness or connectors.

5. CHECK REAR SPEAKER SIGNAL (AV CONTROL UNIT)

1. Connect Bose speaker amp. connector B109 and AV control unit connector M151.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between AV control unit connector M151 and ground.

AV control unit connector M151		Condition	Reference value
(+)	(-)		
Terminal	Terminal	Audio signal output	
4	5		
13	14		

Is the inspection result normal?

REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

YES >> Replace Bose speaker amp. Refer to [AV-424, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-416, "Removal and Installation"](#).

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AMP ON SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

AMP ON SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000010480345

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND BOSE SPEAKER AMP.

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M151 and Bose speaker amp. connector B109.
3. Check continuity between AV control unit connector M151 and Bose speaker amp. connector B109.

AV control unit		Bose speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M151	1	B109	31	Yes

4. Check continuity between AV control unit connector M151 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M151	1	—	No

Is the inspection result normal?

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

2. CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M151.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M151 and ground.

AV control unit (+)		Ground (-)	Voltage (Approx.)
Connector	Terminal		
M151	1	—	Battery voltage

Is the inspection result normal?

- YES >> Replace Bose speaker amp. Refer to [AV-424. "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-416. "Removal and Installation"](#).

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000010480346

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CHECK REVERSE INPUT SIGNAL

1. Turn ignition switch ON.
2. Shift the selector lever to R (reverse).
3. Check voltage between ITS control unit connector M58 and ground.

ITS control unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M58	28	—	Selector lever in R (reverse)	Battery Voltage

4. Check voltage between AV control unit connector M153 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M153	25	—	Selector lever in R (reverse)	Battery Voltage

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK CAMERA POWER SUPPLY CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect ITS control unit connector M59 and rear view camera connector.
3. Check continuity between ITS control unit connector M59 and rear view camera connector B35.

ITS control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M59	52	B35	8	Yes

4. Check continuity between ITS control unit connector M59 and ground.

ITS control unit		Ground	Continuity
Connector	Terminal		
M59	52		No

Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK CAMERA POWER SUPPLY VOLTAGE

1. Connect ITS control unit connector M59 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to R (reverse).
4. Check voltage between ITS control unit connector M59 and ground.

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

ITS control unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M59	52	—	Selector lever in R (reverse)	6.0 V

Is inspection result normal?

YES >> GO TO 4.

NO >> Replace ITS control unit. Refer to [AV-434. "Removal and Installation"](#).

4. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY (ITS CONTROL UNIT)

1. Turn ignition switch OFF.
2. Disconnect ITS control unit connector M59 and rear view camera connector.
3. Check continuity between ITS control unit connector M59 and rear view camera connector B35.

ITS control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M59	66	B35	5	Yes

4. Check continuity between ITS control unit connector M59 and ground.

ITS control unit		Ground	Continuity
Connector	Terminal		
M59	66		No

Is inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5. CHECK CAMERA GROUND CIRCUIT CONTINUITY

Check continuity between ITS control unit connector M59 and rear view camera connector B35.

ITS control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M59	51	B35	7	Yes

Is inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness or connectors.

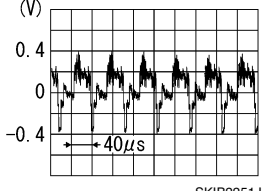
6. CHECK CAMERA IMAGE SIGNAL (ITS CONTROL UNIT)

1. Connect ITS control unit connector M59 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to R (reverse).
4. Check signal between ITS control unit connector M59 and ground.

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

ITS control unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M59	66	—	Camera image displayed.	

Is inspection result normal?

YES >> GO TO 7.

NO >> Replace ITS control unit. Refer to [AV-434, "Removal and Installation"](#).

7. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY (AV CONTROL UNIT)

- Turn ignition switch OFF.
- Disconnect ITS control unit connector M59 and AV control unit connector M153.
- Check continuity between ITS control unit connector M59 and AV control unit connector M153.

ITS control unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M59	69	M153	41	Yes

- Check continuity between ITS control unit connector M59 and ground.

ITS control unit		Ground	Continuity
Connector	Terminal		
M59	69		No

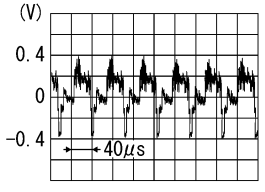
Is inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness or connectors.

8. CHECK CAMERA IMAGE SIGNAL (AV CONTROL UNIT)

- Connect ITS control unit connector M59 and AV control unit connector M153.
- Turn ignition switch ON.
- Shift the selector lever to R (reverse).
- Check signal between AV control unit connector M153 and ground.

AV control unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M153	41	—	Camera image displayed.	

Is inspection result normal?

YES >> Replace AV control unit. Refer to [AV-416, "Removal and Installation"](#).

NO >> Replace rear view camera. Refer to [AV-433, "Removal and Installation"](#).

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

MICROPHONE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000010480347

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CHECK MICROPHONE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M153 and microphone connector R7.
3. Check continuity between AV control unit connector M153 and microphone connector R7.

AV control unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M153	36	R7	2	Yes
	35		4	
	34		1	

4. Check continuity between AV control unit connector M153 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M153	36	—	No
	35		
	34		

Is inspection result normal?

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

2. CHECK MICROPHONE VCC VOLTAGE

1. Connect AV control unit connector M153.
2. Turn ignition switch ON.
3. Check voltage between terminals of AV control unit connector M153.

AV control unit connector M153		Voltage (Approx.)
(+)	(-)	
Terminal	Terminal	
35	36	5.0 V

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Replace AV control unit. Refer to [AV-416. "Removal and Installation"](#).

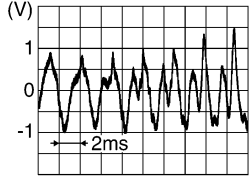
3. CHECK MICROPHONE SIGNAL

1. Connect microphone connector.
2. Check signal between terminals of AV control unit connector M153.

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION WITH BOSE]

AV control unit connector M153		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
34	36	Speak into microphone.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-416. "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-432. "Removal and Installation"](#).

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STEERING SWITCH






Diagnosis Procedure

INFOID:000000010480348

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect combination switch connector M88.
3. Check resistance between combination switch connector terminals.

Combination switch connector M88		Condition	Resistance Ω (Approx.)
Terminal	Terminal		
14	17	Depress SOURCE switch.	1
		Depress Δ switch.	121
		Depress ∇ switch.	321
		Depress  switch.	723
		Depress ENTER switch.	2023
15		Depress -  switch.	1
		Depress  + switch.	121
		Depress  switch.	321
		Depress  switch.	723
		Depress DISP switch.	2023

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering switches. Refer to [AV-427. "Removal and Installation"](#).

2. CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

1. Disconnect combination meter connector M24 and combination switch connector M30.
2. Check continuity between combination meter connector M24 and combination switch connector M30.

Combination meter		Combination switch		Continuity
Connector	Terminal	Connector	Terminal	
M24	3	M30	24	Yes
	24		33	
	4		31	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	3	—	No
	24		
	4		

Is the inspection result normal?

STEERING SWITCH

[NAVIGATION WITH BOSE]

< DTC/CIRCUIT DIAGNOSIS >

- YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3. CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M88.

Combination switch				Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M88	14	Yes
	31		15	
	33		17	

Is the inspection result normal?

- YES >> GO TO 4.
NO >> Replace spiral cable. Refer to [SR-15, "Removal and Installation"](#).

4. CHECK HARNESS BETWEEN COMBINATION METER AND AV CONTROL UNIT

1. Disconnect AV control unit connector M153.
2. Check continuity between combination meter connector M24 and AV control unit connector M153.

Combination meter		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M24	37	M153	31	Yes
	36		32	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	37	—	No
	36		

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-416, "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

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USB CONNECTOR

Diagnosis Procedure

INFOID:000000010480349

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M131 and USB interface connector M132.
3. Check continuity between AV control unit connector M131 and USB interface connector M132.

AV control unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M131	45	M132	1	Yes
	47		3	
	48		4	
	49		5	
	50		6	

4. Check continuity between AV control unit connector M131 and ground.

AV control unit		—	Continuity
Connector	Terminal		
M131	47	Ground	No
	49		

Is the inspection result normal?

- YES >> Replace the USB interface. Refer to [AV-417. "Removal and Installation"](#).
 NO >> Repair or replace harness or connectors.

AUXILIARY INPUT JACK

Diagnosis Procedure

INFOID:000000010480350

Regarding Wiring Diagram information, refer to [AV-333. "Wiring Diagram"](#).

1. CHECK AUX IN JACK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M153 and AUX in jack connector M104.
3. Check continuity between AV control unit connector M153 and AUX in jack connector M104.

AV control unit		AUX in jack		Continuity
Connector	Terminal	Connector	Terminal	
M153	21	M104	1	Yes
	22		2	
	23		4	

4. Check continuity between AV control unit connector M153 and ground.

AV control unit		—	Continuity
Connector	Terminal		
M153	21	Ground	No
	22		

Is the inspection result normal?

- YES >> Replace the AUX in jack. Refer to [AV-418. "Removal and Installation"](#).
 NO >> Repair or replace harness or connectors.

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SYMPTOM DIAGNOSIS

MULTI AV SYSTEM

Symptom Table

INFOID:0000000010480351

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	AV control unit	Malfunction in AV control unit. Refer to AV-323. "On Board Diagnosis Function" .

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

Symptoms	Check items	Probable malfunction location
	No sound from all speakers.	<ul style="list-style-type: none"> • Speaker circuit shorted to ground. Refer to AV-333. "Wiring Diagram". • Bose amp. ON signal circuit malfunction. Refer to AV-392. "Diagnosis Procedure". • Bose speaker amp. power supply and ground circuits malfunction. Refer to AV-376. "BOSE SPEAKER AMP : Diagnosis Procedure".
No sound comes out or the level of the sound is low.	Only a certain speaker (front door speaker LH, front door speaker RH, front speaker LH, front speaker RH, center speaker, rear door speaker LH, rear door speaker RH, rear speaker LH, rear speaker RH) does not output sound.	<ul style="list-style-type: none"> • Poor connector connection of speaker. • Sound signal circuit malfunction between AV control unit and Bose speaker amp. Refer to: <ul style="list-style-type: none"> - AV-378. "Diagnosis Procedure" (front door speaker). - AV-381. "Diagnosis Procedure" (front speaker). - AV-384. "Diagnosis Procedure" (center speaker). - AV-386. "Diagnosis Procedure" (rear door speaker). - AV-389. "Diagnosis Procedure" (rear speaker). • Sound signal circuit malfunction between Bose speaker amp. and speaker. Refer to: <ul style="list-style-type: none"> - AV-378. "Diagnosis Procedure" (front door speaker). - AV-381. "Diagnosis Procedure" (front speaker). - AV-384. "Diagnosis Procedure" (center speaker). - AV-386. "Diagnosis Procedure" (rear door speaker). - AV-389. "Diagnosis Procedure" (rear speaker). • Malfunction in speaker. Refer to: <ul style="list-style-type: none"> - AV-421. "Removal and Installation" (front door speaker). - AV-419. "Removal and Installation" (front speaker). - AV-420. "Removal and Installation" (center speaker). - AV-422. "Removal and Installation" (rear door speaker). - AV-423. "Removal and Installation" (rear speaker). • Malfunction in AV control unit. Refer to AV-323. "On Board Diagnosis Function". • Malfunction in Bose speaker amp. Replace Bose speaker amp. Refer to AV-424. "Removal and Installation".

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MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

Symptoms	Check items	Probable malfunction location
	Noise comes out from all speakers.	<ul style="list-style-type: none"> Malfunction in AV control unit. Refer to AV-323. "On Board Diagnosis Function". Malfunction in Bose speaker amp. Replace Bose speaker amp. Refer to AV-424. "Removal and Installation".
Noise is mixed with audio.	Noise comes out only from a certain speaker (front door speaker LH, front door speaker RH, front speaker LH, front speaker RH, center speaker, rear door speaker LH, rear door speaker RH, rear speaker LH, rear speaker RH).	<ul style="list-style-type: none"> Poor connector connection of speaker. Sound signal circuit malfunction between AV control unit and Bose speaker amp. Refer to: <ul style="list-style-type: none"> AV-378. "Diagnosis Procedure" (front door speaker). AV-381. "Diagnosis Procedure" (front speaker). AV-384. "Diagnosis Procedure" (center speaker). AV-386. "Diagnosis Procedure" (rear door speaker). AV-389. "Diagnosis Procedure" (rear speaker). Sound signal circuit malfunction between Bose speaker amp. and speaker. Refer to: <ul style="list-style-type: none"> AV-378. "Diagnosis Procedure" (front door speaker). AV-381. "Diagnosis Procedure" (front speaker). AV-384. "Diagnosis Procedure" (center speaker). AV-386. "Diagnosis Procedure" (rear door speaker). AV-389. "Diagnosis Procedure" (rear speaker). Malfunction in speaker. Poor Installation of speaker (e.g. backlash and looseness). Refer to: <ul style="list-style-type: none"> AV-421. "Removal and Installation" (front door speaker). AV-419. "Removal and Installation" (front speaker). AV-420. "Removal and Installation" (center speaker). AV-422. "Removal and Installation" (rear door speaker). AV-423. "Removal and Installation" (rear speaker). Malfunction in AV control unit. Refer to AV-323. "On Board Diagnosis Function". Malfunction in Bose speaker amp. Replace Bose speaker amp. Refer to AV-424. "Removal and Installation".
	Noise is mixed with radio only (when the vehicle hits a bump or while driving over bad roads)	<ul style="list-style-type: none"> Poor connector connection of antenna or antenna feeder. Refer to AV-428. "Location of Antenna".
No radio reception or poor reception.	<ul style="list-style-type: none"> Other audio sounds are normal. Any radio station cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises). 	<ul style="list-style-type: none"> Antenna amp. ON signal circuit malfunction. Refer to AV-326. "Reference Value". Poor connector connection of antenna or antenna feeder. Refer to AV-428. "Location of Antenna".

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

Symptoms	Check items	Probable malfunction location
No satellite radio reception.	There is malfunction in the CONSULT self diagnosis result. Refer to AV-324, "CONSULT Function" .	<ul style="list-style-type: none"> Malfunction in antenna, antenna feeder or AV control unit. Perform DTC diagnosis. Refer to AV-361, "Diagnosis Procedure". Poor continuity in antenna feeder. Poor connector connection of antenna or antenna feeder. Refer to AV-428, "Location of Antenna".
	There is no malfunction in the CONSULT self diagnosis result. Refer to AV-324, "CONSULT Function" .	<ul style="list-style-type: none"> Poor continuity in antenna feeder. Poor connector connection of antenna or antenna feeder. Loose satellite radio antenna mounting nut. Refer to AV-428, "Location of Antenna".
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.

RELATED TO HANDS-FREE PHONE

- Before performing diagnosis, confirm that the cellular phone being used by the customer is compatible with the vehicle.
- It is possible that a malfunction is occurring due to a version change of the phone even though the phone is a compatible type. This can be confirmed by changing the cellular phone to another compatible type, and check that it operates normally. It is important to determine whether the cause of the malfunction is the vehicle or the cellular phone.

Check Compatibility

- Make sure the customer's Bluetooth® related concern is understood.
- Verify the customer's concern.

NOTE:
The customer's phone may be required, depending upon their concern.
- Write down the customer's phone brand, model and service provider.

NOTE:
It is necessary to know the service provider. On occasion, a given phone may be on the approved list with one provider, but may not be on the approved list with other providers.
- Go to "www.nissanusa.com/bluetooth/".
 - Using the website's search engine, find out if the customer's phone is on the approved list.
 - If the customer's phone is NOT on the approved list:

Stop diagnosis here. The customer needs to obtain a Bluetooth® phone that is on the approved list before any further action.
 - If the feature related to the customer's concern shows as "N" (not compatible):

Stop diagnosis here. If the customer still wants the feature to function, they will need to get an approved phone showing the feature as "Y" (compatible) in the "Basic Features".
 - If the feature related to the customer's concern shows as "Y" (compatible):

Perform diagnosis as per the following table.

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection (no connection is displayed on the display at the guide).	Repeat the registration of cellular phone.	
Hands-free phone cannot be established.	<ul style="list-style-type: none"> Hands-free phone operation can be made, but the communication cannot be established. Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation. 	Malfunction in AV control unit. Replace AV control unit. Refer to AV-427, "Removal and Installation" .
The other party's voice cannot be heard by hands-free phone.	Check the "microphone speaker" in Inspection & Adjustment Mode if sound is heard.	
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-396, "Diagnosis Procedure" .
The system cannot be operated.	<ul style="list-style-type: none"> The voice recognition can be controlled. Steering switch's , , and switch works, but does not work. 	Steering switch malfunction. Replace steering switch. Refer to AV-427, "Removal and Installation" .
	Steering switch's , , , and switches do not work.	Steering switch signal circuit malfunction. Refer to AV-398, "Diagnosis Procedure" .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-398, "Diagnosis Procedure" .

RELATED TO NAVIGATION

Symptoms	Check items	Probable malfunction location
Navigation system is inoperative.	Navigation malfunction.	<ul style="list-style-type: none"> Malfunction in SD card. Malfunction in AV control unit. Refer to AV-323, "On Board Diagnosis Function".
	Steering switches malfunction.	Steering switch signal circuit malfunction. Refer to AV-398, "Diagnosis Procedure" .
	Voice activated control malfunction.	Microphone signal circuit malfunction. Refer to AV-396, "Diagnosis Procedure" . Steering switch signal circuit malfunction. Refer to AV-398, "Diagnosis Procedure" .

RELATED TO REAR VIEW CAMERA

Symptoms	Check items	Probable malfunction location
Rear view camera is inoperative.	Reverse signal circuit malfunction.	Reverse signal circuit malfunction between BCM and AV control unit. Refer to AV-393, "Diagnosis Procedure" .
	Camera image signal circuit malfunction.	Camera image signal circuit malfunction between rear view camera and AV control unit. Refer to AV-393, "Diagnosis Procedure" .
	Rear view camera malfunction.	Replace rear view camera. Refer to AV-433, "Removal and Installation" .

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

NORMAL OPERATING CONDITION

Description

INFOID:000000010480352

RELATED TO NOISE

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

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"> • Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		<ul style="list-style-type: none"> • Fuel pump condenser
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"> • Relay malfunction, AV control unit malfunction
	The noise occurs when various motors are operating.	<ul style="list-style-type: none"> • Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		<ul style="list-style-type: none"> • 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.		<ul style="list-style-type: none"> • Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

RELATED TO HANDS-FREE PHONE

Symptom	Cause and Counter measure
Does not recognize cellular phone connection (No connection is displayed on the display at the guide).	<p>Some Bluetooth® enabled cellular phones may not be recognized by the in-vehicle phone module.</p> <p>Refer to "RELATED TO HANDS-FREE PHONE (Check Compatibility)" in AV-402. "Symptom Table".</p>
Cannot use hands-free phone.	<p>Customer will not be able to use a hands-free phone under the following conditions:</p> <ul style="list-style-type: none"> • The vehicle is outside of the telephone service area. • The vehicle is in an area where it is difficult to receive radio waves; such as in a tunnel, in an underground parking garage, near a tall building or in a mountainous area. • The cellular phone is locked to prevent it from being dialed. <p>NOTE:</p> <p>While a cellular phone is connected through the Bluetooth® wireless connection, the battery power of the cellular phone may discharge quicker than usual. The Bluetooth® Hands-Free Phone System cannot charge cellular phones.</p>

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

Symptom	Cause and Counter measure
The other party's voice cannot be heard by hands-free phone.	When the radio wave condition is not ideal or ambient sound is too loud, it may be difficult to hear the other person's voice during a call.
Poor sound quality.	Do not place the cellular phone in an area surrounded by metal or far away from the in-vehicle phone module to prevent tone quality degradation and wireless connection disruption.

RELATED TO NAVIGATION

Basic Operation

Symptom	Cause	Remedy
No image is shown.	Display brightness adjustment is set fully to DARK side.	Adjust the display brightness.
No guide sound is heard. Audio guide volume is too low or too high.	Volume control is set to OFF, MIN or MAX.	Adjust the audio guide volume.
	Audio guidance is not available while the vehicle is driving on a dark pink route.	System is not malfunctioning.
Screen is too dark. Motion of the image is too slow.	Temperature inside the vehicle is low.	Wait until the temperature inside the vehicle reaches the proper temperature.
Small black or bright spots appear on the screen.	Symptom peculiar to a liquid crystal display (display unit).	System is not malfunctioning.

Vehicle Mark

Symptom	Cause	Remedy
Map screen and BIRDVIEW™ Name of the place vary with the screen.	Some thinning of the character data is done to prevent the display becoming to complex. In some cases and in some locations, the display contents may differ. The same place name, street name, etc. may not be displayed every time on account of the data processing.	System is not malfunctioning.
Vehicle mark is not positioned correctly.	Vehicle is transferred by ferry or by towing after its ignition switch is turned to OFF.	Drive the vehicle for a while in the GPS satellite signal receiving condition.
Screen will not switch to nighttime mode after the lighting switch is turned ON.	The daytime screen is selected by the "SWITCH SCREENS" when the last time the screen dimming setting is done. Switching between daytime/nighttime screen may be inhibited by the automatic illumination adjustment function.	Perform screen dimming and select the nighttime screen by "SWITCH SCREENS".
Map screen will not scroll in accordance with the vehicle travel.	Current location is not displayed.	Press "MAP" button to display the current location.
Vehicle mark will not be shown.	Current location is not displayed.	Press "MAP" button to display the current location.
Accuracy indicator (GPS satellite mark) on the map screen stays gray.	GPS satellite signal is intercepted because the vehicle is in or behind a building.	Move the vehicle out to an open space.
	GPS satellite signal cannot be received because an obstacle is placed on top of the instrument panel.	Do not place anything on top of the meter display (instrument panel).
	GPS satellites are not visible from current location.	Wait until GPS satellites are visible by moving the vehicle.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

Symptom	Cause	Remedy
Vehicle location accuracy is low.	Accuracy indicator (GPS satellite mark) on the map screen stays gray.	Current location is not determined.
	Vehicle speed setting by the vehicle speed pulse has been deviated (advanced or retarded) from the actual vehicle speed because tire chain is fitted or the system has been used on another vehicle.	Drive the vehicle for a while [for approx. 30 minutes at approx. 30 km/h (19 MPH)] and the deviation will be automatically adjusted. If advancement or retard still occur, perform the distance adjustment by CONFIRMATION/ADJUSTMENT mode of diagnosis function.
	Map data has error or omission. (Vehicle mark is always deviated to the same position.)	As a rule, an updated map DVD-ROM will be released once a year.

Destination, Passing Points and Menu Items Cannot be Selected/Set

Symptom	Cause	Remedy
Destination cannot be set.	Destination to be set is on an expressway.	Set the destination on an ordinary road.
Passing point is not searched when re-searching the route.	The vehicle has already passed the passing point, or the system judged so.	To include the passing points that have been passed into the route again, set the route again.
Route information will not be displayed.	Route searching has not been done.	Set the destination and perform route searching.
	Vehicle mark is not on the recommended route.	Drive on the recommended route.
	Route guide is turned OFF.	Turn route guide ON.
	Route information is not available on the dark pink route.	System is not malfunctioning.
After the route searching, no guide sign will appear as the vehicle goes near the entrance/exit to the toll road.	Vehicle mark is not on the recommended route. (On the display, only guide signs related to the recommended route will be shown.)	Drive on the recommended route.
Automatic route searching is not possible.	Vehicle is driving on a highway (gray route), or no recommended route is available.	Drive on a road to be searched. Or re-search the route manually. In this case, however, the whole route will be searched.
Performed automatic detour search (or detour search). However, the result is the same as that of the previous search.	Performed search with every conditions considered. However, the result is the same as that of the previous search.	System is not malfunctioning.
Passing points cannot be set.	More than five passing points were set.	Passing points can be set up to five. To stop at more than five points, perform sharing in several steps.
When setting the route, the starting point cannot be selected.	The current vehicle location is always set as the starting point of a route.	System is not malfunctioning.
Some menu items cannot be selected.	The vehicle is being driven.	Stop the vehicle at a safe place and then operate the system.

Voice Guide

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

Symptom	Cause	Remedy
Voice guide will not operate.	Note: Voice guide is only available at intersections that satisfy certain conditions (indicated by ● on the map). Therefore, guidance may not be given even when the route on the map changes direction.	System is not malfunctioning.
	The vehicle is not on the recommended route.	Return to the recommended route or re-search the route.
	Voice guide is turned OFF.	Turn voice guide ON.
	Route guide is turned OFF.	Turn route guide ON.
Voice guide does not match the actual road pattern.	Voice guide may vary with the direction to which the vehicle is turn and the connection of the road to other roads.	Drive in conformity to the actual traffic rules.

Route Search

Symptom	Cause	Remedy
No route is shown.	No road to be searched is found around the destination.	Find wider road (orange road or wider) nearby and reset the destination and passing points onto it. Take care of the traveling direction when there are separate up and down roads.
	Starting point and the destination are too close.	Set the destination at more distant point.
	Conditional traffic regulation (day of the week/ time of the day) is set at the area around the current location or the destination.	Turn the time-regulating search conditions OFF. Turn "Avoid regulation time" in the search conditions OFF.
Indicated route is intermittent.	In some areas, highways (gray routes) are not used for the search ^(Note) Therefore, the route to the current location or the passing points may be intermittent.	System is not malfunctioning.
When the vehicle has passed the recommended route, it is deleted from the screen.	A recommended route is controlled by each section. When the vehicle has passed the passing point 1, then the map data from the starting point up to the passing point 1 will be deleted. (The data may remain undeleted in some area.)	System is not malfunctioning.
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, etc.) is set at the area around the starting point or the destination.	Slightly move the starting point or the destination, or set the passing point on the route of your choice.
	In the area where highways (gray routes) are used for the search, left turn has priority around the current location and the destination (passing points). For this reason, the recommended route may be detouring.	System is not malfunctioning.
Landmarks on the map do not match the actual ones.	This can be happen due to omission or error in the map data.	As a rule, an updated map DVD-ROM will be released once a year. Wait until the latest map has become available.
Recommended route is far from the starting point, passing points, and destination.	Starting point, passing points, and destination of the route guide were set far from the desired points because route searching data around these area were not stored.	Reset the destination onto the road nearby. If this road is one of the highways (gray routes), an ordinary road nearby may be displayed as the recommended route.

NOTE:

Except for the ordinance-designated cities. (Malfunctioning areas may be changed in the updated map disc.)

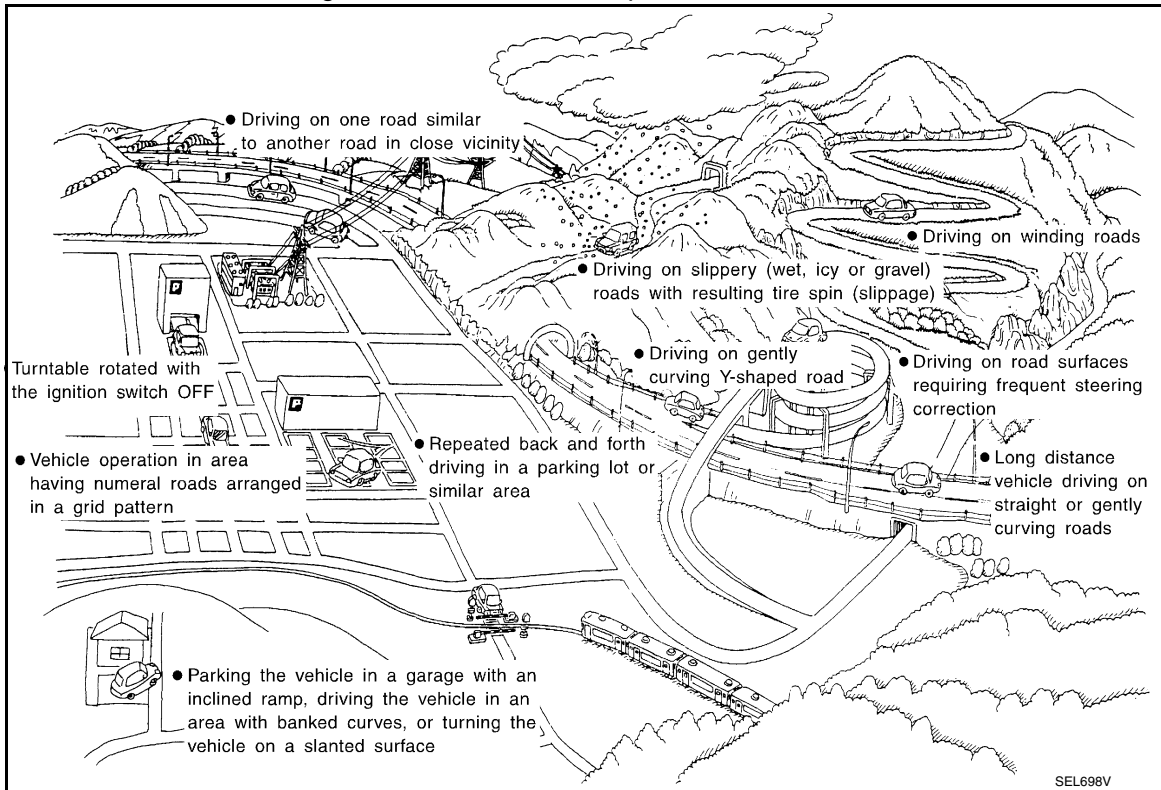
Examples of Current-Location Mark Displacement

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

Vehicle's travel amount is calculated by reading its travel distance and turning angle. Therefore, if the vehicle is driven in the following manner, an error will occur in the vehicle's current location display. If correct location has not been restored after driving the vehicle for a while, perform location correction.

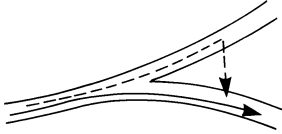
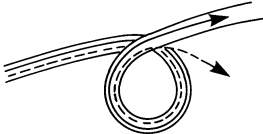
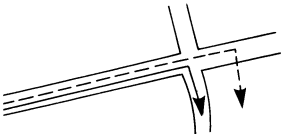
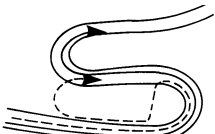
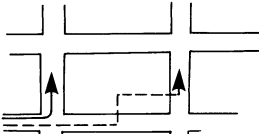
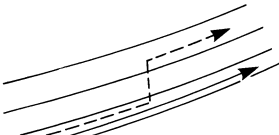


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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

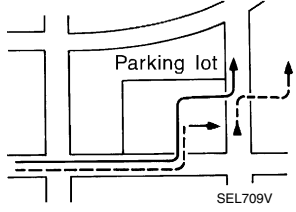
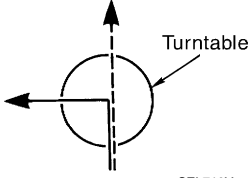
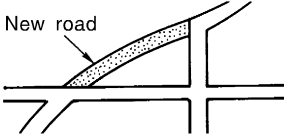
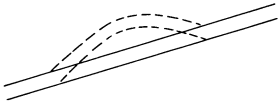
[NAVIGATION WITH BOSE]

Cause (condition) -: While driving ooo: Display	Driving condition	Remarks (correction, etc.)	
<p>Y-intersections</p>  <p style="text-align: center;">ELK0192D</p>	<p>At a Y intersection or similar gradual division of roads, an error in the direction of travel deduced by the sensor may result in the current-location mark appearing on the wrong road.</p>		
<p>Spiral roads</p>  <p style="text-align: center;">ELK0193D</p>	<p>When driving on a large, continuous spiral road (such as loop bridge), turning angle error is accumulated and the vehicle mark may deviate from the correct location.</p>		
<p>Straight roads</p>  <p style="text-align: center;">ELK0194D</p>	<p>When driving on a long, straight road and slow curve without stopping, map-matching does not work effectively enough and distance errors may accumulate. As a result, the vehicle mark may deviate from the correct location when the vehicle is turned at a corner.</p>	<p>If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.</p>	
<p>Zigzag roads</p>  <p style="text-align: center;">ELK0195D</p>	<p>When driving on a zigzag road, the map may be matched to other roads in the similar direction nearby at every turn, and the vehicle mark may deviate from the correct location.</p>		
<p>Roads laid out in a grid pattern</p>  <p style="text-align: center;">ELK0196D</p>	<p>When driving where roads are laid out in a grid pattern, or where many roads are running in the similar direction nearby, the map may be matched to them by mistake and the vehicle mark may deviate from the correct location.</p>		
<p>Parallel roads</p>  <p style="text-align: center;">ELK0197D</p>	<p>When two roads are running in parallel (such as highway and sideway), the map may be matched to the other road by mistake and the vehicle mark may deviate from the correct location.</p>		
Road configuration			

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

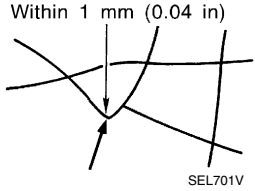
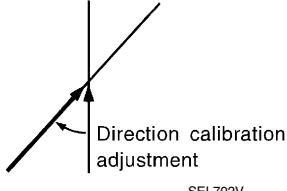
	Cause (condition) -: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
Place	In a parking lot  SEL709V	When driving in a parking lot, or other location where there are no roads on the map, matching may place the vehicle mark on a nearby road. When the vehicle returns to the road, the vehicle mark may have deviated from the correct location. When driving in circle or turning the steering wheel repeatedly, direction errors accumulate, and the vehicle mark may deviate from the correct location.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
	Turntable  SEL710V	When the ignition switch is OFF, the navigation system cannot get the signal from the gyroscope (angular speed sensor). Therefore, the displayed direction may be wrong and the correct road may not be easily returned to after rotating the vehicle on a turntable with the ignition OFF.	
	Slippery roads	On snow, wet roads, gravel, or other roads where tires may slip easily, accumulated mileage errors may cause the vehicle mark to deviate from the correct road.	
	Slopes	When parking in sloped garages, when travelling on banked roads, or in other cases where the vehicle turns when tilted, an error in the turning angle will occur, and the vehicle mark may deviate from the road.	
Map data	Road not displayed on the map screen  SEL699V	When driving on new roads or other roads not displayed on the map screen, map matching does not function correctly and matches the location to a nearby road. When the vehicle returns to a road which is on the map, the vehicle mark may deviate from the correct road.	
	Different road pattern (Changed due to repair)  ELK0201D	If the road pattern stored in the map data and the actual road pattern are different, map matching does not function correctly and matches the location to a nearby road. The vehicle mark may deviate from the correct road.	
Vehicle	Use of tire chains	When tire chains are used, the mileage is not correctly detected, and the vehicle mark may deviate from the correct road.	Drive the vehicle for a while. If the distance still deviates, adjust it by using the distance adjustment function. (If the tire chain is removed, recover the original value.)

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

Cause (condition)	-: While driving ooo: Display	Driving condition	Remarks (correction, etc.)
Precautions for driving	Just after the engine is started	If the vehicle is driven just after the engine is started when the gyroscope (angular speed sensor) correction is not completed, the vehicle can lose its direction and may have deviated from the correct location.	Wait for a short while before driving after starting the engine.
	Continuous driving without stopping	When driving long distances without stopping, direction errors may accumulate, and the current-location mark may deviate from the correct road.	Stop and adjust the orientation.
	Abusive driving	Spinning the wheels or engaging in other kinds of abusive driving may result in the system being unable to perform correct detection, and may cause the vehicle mark to deviate from the correct road.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
How to correct location	Position correction accuracy 	If the accuracy of location settings is poor, accuracy may be reduced when the correct road cannot be found, particularly in places where there are many roads.	Enter in the road displayed on the screen with an accuracy of approx. 1mm. Caution: Whenever possible, use detailed map for the correction.
	Direction when location is corrected 	If the accuracy of location settings during correction is poor, accuracy may be reduced afterwards.	Perform direction correction.

Location Correction by Map-Matching is Slow

- The map-matching function needs to refer to the data of the surrounding area. It is necessary to drive some distance for the function to work.
- Because map-matching operates on this principle, when there are many roads running in similar directions in the surrounding area, no matching determination may be made. The location may not be corrected until some special feature is found.

Name of Road is Not Displayed

The current road name may not be displayed if there are no road names displayed on the map screen.

Contents of Display Differ for Birdview™ and the (Flat) Map Screen

Difference of the BIRDVUE™ screen from the flat map screen are as follows.

- The current place name displays names which are primarily in the direction of vehicle travel.
- The amount of time before the vehicle travel or turn angle is updated on the screen is longer than for the (flat) map display.
- The conditions for display of place names, roads, and other data are different for nearby areas and for more distant areas.
- Some thinning of the character data is done to prevent the display becoming too complex. In some cases and in some locations, the display contents may differ.
- The same place name, street name, etc. may be displayed multiple times.

Vehicle Mark Shows a Position Which is Completely Wrong

In the following cases, the vehicle mark may appear on completely different position in the map depending on the GPS satellite signal receiving conditions. In this case, perform location correction and direction correction.

- When location correction has not been done
- If the receiving conditions of the GPS satellite signal is poor, if the vehicle mark becomes out of place, it may move to a completely different location and not come back if location correction is not done. The position will be corrected if the GPS signal can be received.
- When the vehicle has traveled by ferry, or when the vehicle has been being towed

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION WITH BOSE]

- Because calculation of the current location cannot be done when traveling with the ignition off, for example when traveling by ferry or when being towed, the location before travel is displayed. If the precise location can be detected with GPS, the location will be corrected.

A

Vehicle Mark Jumps

In the following cases, the vehicle mark may appear to jump as a result of automatic correction of the current location.

B

- When map matching has been done
- If the current location and the vehicle mark are different when map matching is done, the vehicle mark may seem to jump. At this time, the location may be “corrected” to the wrong road or to a location which is not on a road.
- When GPS location correction has been done
- If the current location and the vehicle mark are different when the location is corrected using GPS measurements, the vehicle mark may seem to jump. At this time, the location may be “corrected” to a location which is not on a road.

C

D

Vehicle Mark is in a River or Sea

The navigation system moves the vehicle mark with no distinction between land and rivers or sea. If the vehicle mark is somehow out of place, it may appear that the vehicle is driving in a river or the sea.

E

Vehicle Mark Automatically Rotates

The system wrongly memorizes the rotating status as stopping when the ignition switch is turned ON with the turntable rotating. That causes the vehicle mark to rotate when the vehicle is stopped.

F

When Driving on Same Road, Sometimes Vehicle Mark is in Right Place and Sometimes it is in Wrong Place

The conditions of the GPS antenna (GPS data) and gyroscope (angular speed sensor) change gradually. Depending on the road traveled and the operation of the steering wheel, the location detection results will be different. Therefore, even on a road on which the location has never been wrong, conditions may cause the vehicle mark to deviate.

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AV CONTROL UNIT

< REMOVAL AND INSTALLATION >

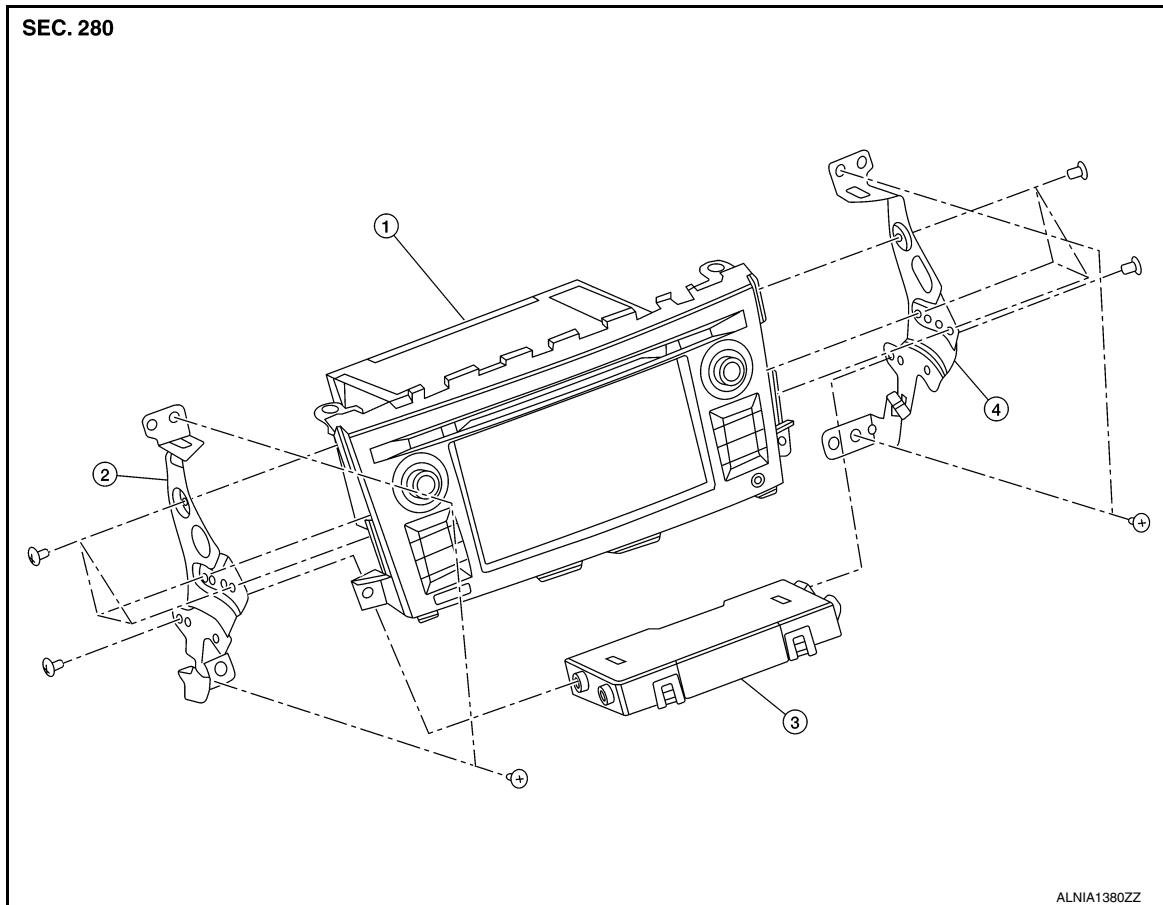
[NAVIGATION WITH BOSE]

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Exploded View

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1. AV control unit
2. AV control unit bracket (LH)
3. A/C auto amp.
4. AV control unit bracket (RH)

Removal and Installation

INFOID:000000010480354

REMOVAL

CAUTION:

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to [AV-352, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

1. Disconnect the negative battery terminal. Refer to [PG-78, "Removal and Installation"](#).
2. Remove cluster lid C. Refer to [IP-20, "Cluster Lid C"](#).
3. Remove the A/C switch assembly. Refer to [HAC-101, "Removal and Installation"](#).
4. Remove the AV control unit bracket screws, then pull out the AV control unit.
5. Disconnect the harness connectors from the AV control unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to [AV-245, "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).
- When replacing audio control unit, the audio control unit must be registered. Refer to [AV-351, "ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Work Procedure"](#).

USB INTERFACE

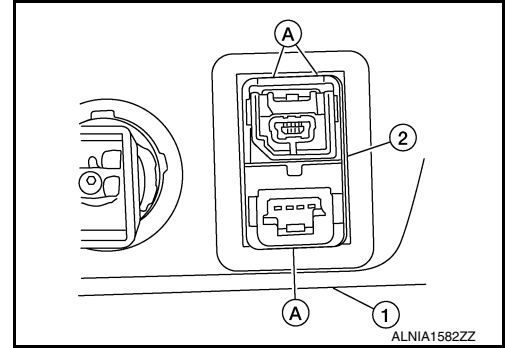
Removal and Installation

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REMOVAL

1. Remove the shift selector finisher. Refer to [IP-23. "Exploded View"](#).
2. Release the pawls (A) and remove the USB interface (2) from the back of the shift selector finisher (1).

⊖: Pawl



INSTALLATION

Installation is in the reverse order of removal.

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AV

AUX IN JACK

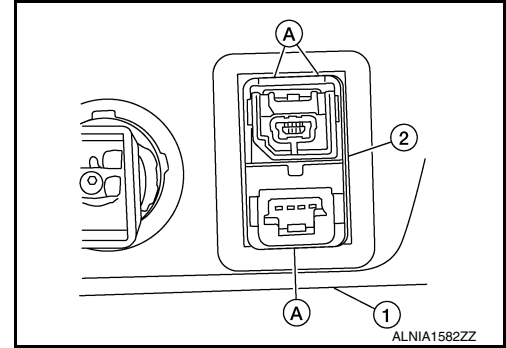
Removal and Installation

INFOID:000000010480356

REMOVAL

1. Remove the shift selector finisher. Refer to [IP-18, "Removal and Installation"](#).
2. Release the pawls (A) and remove the AUX in jack (2) from the back of the shift selector finisher (1).

○: Pawl



INSTALLATION

Installation is in the reverse order of removal.

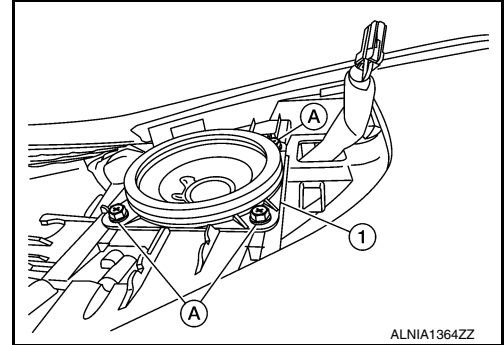
FRONT SPEAKER

Removal and Installation

INFOID:000000010480357

REMOVAL

1. Remove the front pillar finisher. Refer to [INT-21. "FRONT PILLAR FINISHER : Removal and Installation"](#).
2. Remove the front speaker grille using a suitable tool.
3. Remove the front speaker screws (A).
4. Pull out the front speaker (1), disconnect the harness connector from front speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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AV

CENTER SPEAKER

< REMOVAL AND INSTALLATION >

[NAVIGATION WITH BOSE]

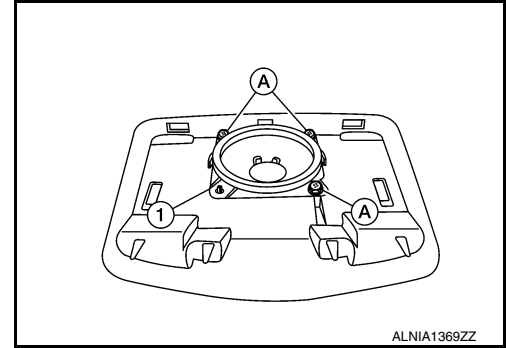
CENTER SPEAKER

Removal and Installation

INFOID:000000010480358

REMOVAL

1. Remove the center speaker grille using a suitable tool.
2. Remove the center speaker screws (A).
3. Pull out the center speaker (1), disconnect the harness connector from the center speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

< REMOVAL AND INSTALLATION >

[NAVIGATION WITH BOSE]

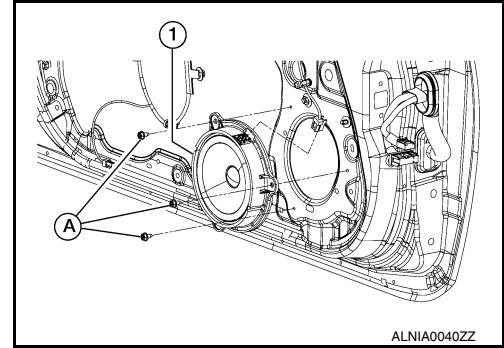
FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000010480359

REMOVAL

1. Remove the front door finisher. Refer to [INT-15, "Removal and Installation"](#).
2. Remove the front door speaker screws (A).
3. Disconnect the harness connector from the front door speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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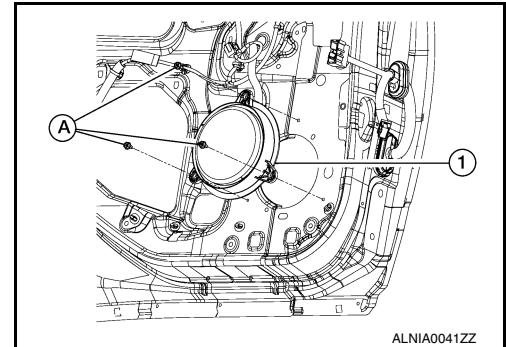
REAR DOOR SPEAKER

Removal and Installation

INFOID:000000010480360

REMOVAL

1. Remove the rear door finisher. Refer to [INT-18. "Removal and Installation"](#).
2. Remove the rear door speaker screws (A).
3. Disconnect the harness connector from the rear door speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

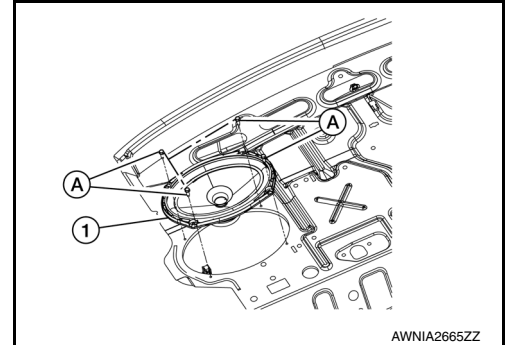
REAR SPEAKER

Removal and Installation

INFOID:0000000110480361

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to [INT-26. "Removal and Installation"](#).
2. Remove the rear speaker screws (A).
3. Disconnect the harness connector from the rear speaker (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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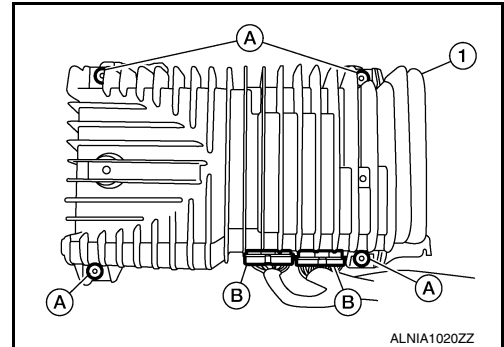
BOSE SPEAKER AMP

Removal and Installation

INFOID:000000010480362

REMOVAL

1. Open the trunk lid.
2. Remove the Bose speaker amp. screws (A).
3. Disconnect the harness connectors (B) from the Bose speaker amp. (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

SATELLITE RADIO ANTENNA

< REMOVAL AND INSTALLATION >

[NAVIGATION WITH BOSE]

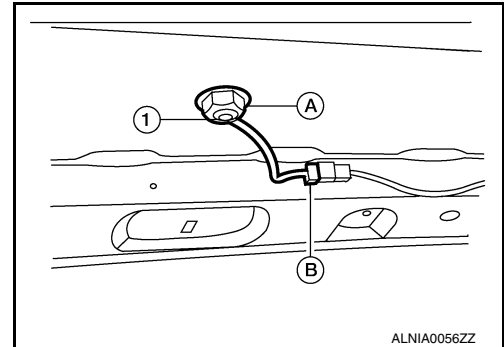
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:000000010480363

REMOVAL

1. Lower the headlining at the rear. Refer to [INT-30, "Removal and Installation"](#).
2. Remove the satellite radio antenna nut (A).
3. Disconnect the harness connector (B) from the satellite radio antenna (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

Satellite radio antenna nut : 6.5 N·m (0.66 kg·m, 58 in·lb)

CAUTION:

If the satellite radio antenna nut is not tightened to the specified torque, lower sensitivity of the antenna may be experienced. If the nut is tightened tighter than the specified torque, this will deform the roof panel.

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AV

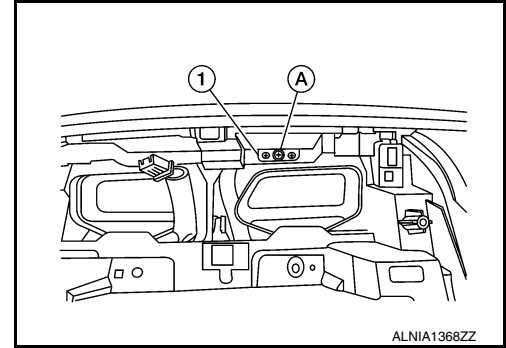
GPS ANTENNA

Removal and Installation

INFOID:000000010480364

REMOVAL

1. Remove the AV control unit. Refer to [AV-109, "Removal and Installation"](#).
2. Remove the GPS antenna screw (A) and the GPS antenna (1).



INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

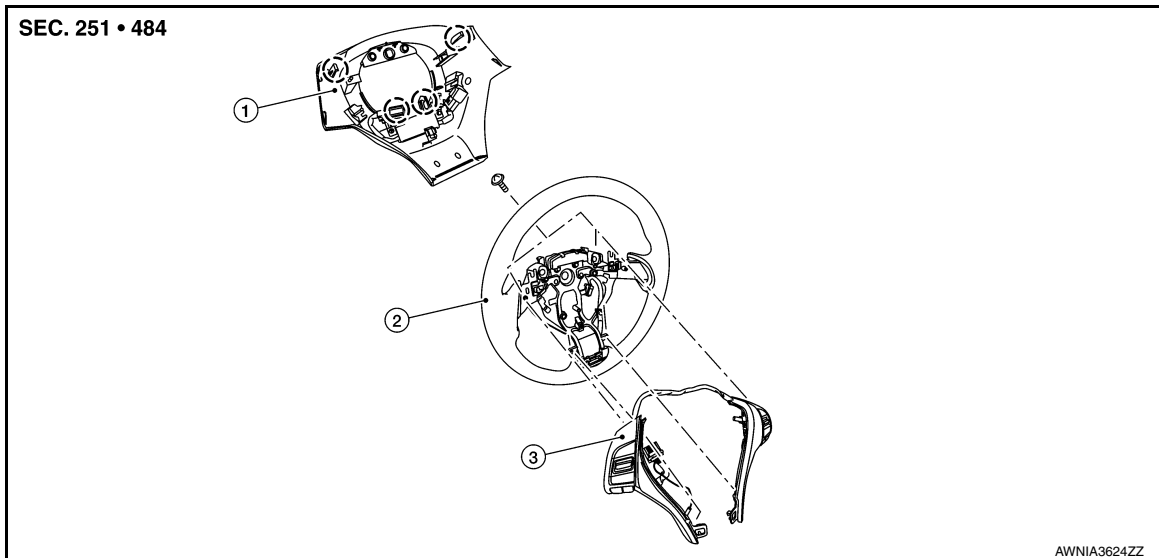
< REMOVAL AND INSTALLATION >

[NAVIGATION WITH BOSE]

STEERING SWITCH

Exploded View

INFOID:000000010480365



1. Steering wheel rear finisher 2. Steering wheel 3. Steering switches

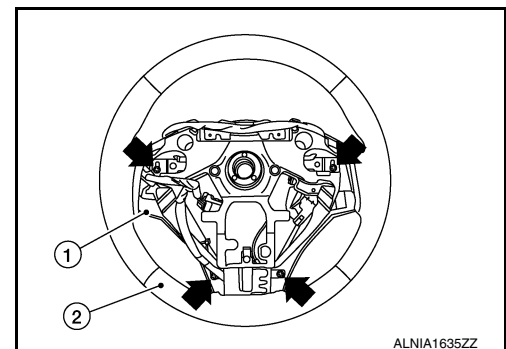
○ Pawl

Removal and Installation

INFOID:000000010480366

REMOVAL

1. Remove the steering wheel. Refer to [ST-31. "Removal and Installation"](#)
2. Release the pawls on the steering wheel rear finisher and remove.
3. Remove the steering switches screws (←).
4. Remove the steering switches (1) from steering wheel (2).



INSTALLATION

Installation is in the reverse order of removal.

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ANTENNA FEEDER

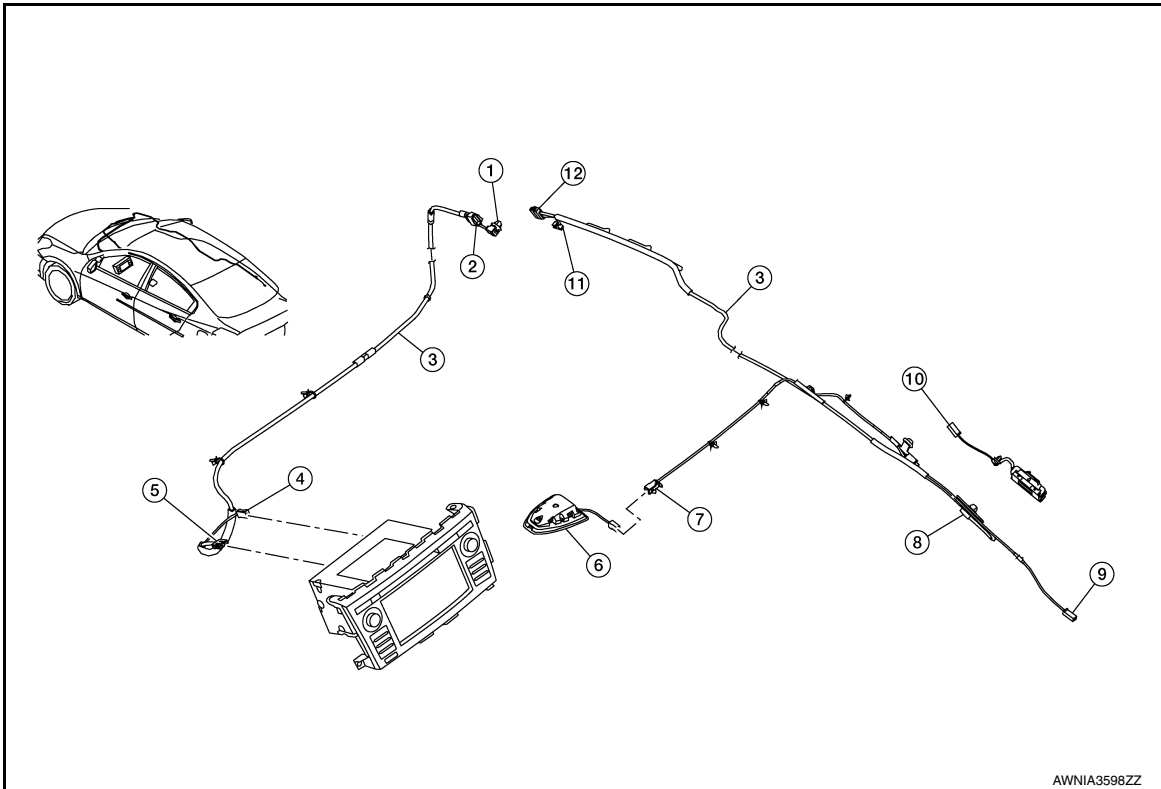
< REMOVAL AND INSTALLATION >

[NAVIGATION WITH BOSE]

ANTENNA FEEDER

Location of Antenna

INFOID:000000010480367



AWNIA3598ZZ

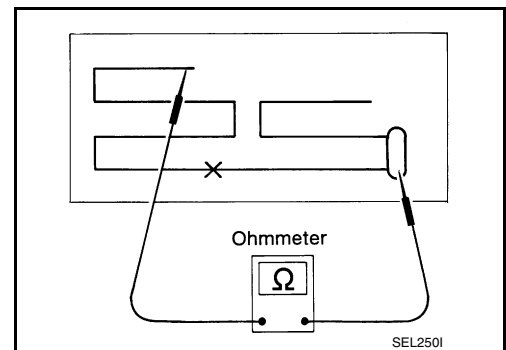
- | | | |
|----------|----------|----------------------|
| 1. M102 | 2. M101 | 3. Antenna feeder |
| 4. M99 | 5. M137 | 6. Satellite antenna |
| 7. B59 | 8. M502 | 9. M504 |
| 10. M503 | 11. M500 | 12. M501 |

Window Antenna Repair

INFOID:000000010480368

ELEMENT CHECK

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

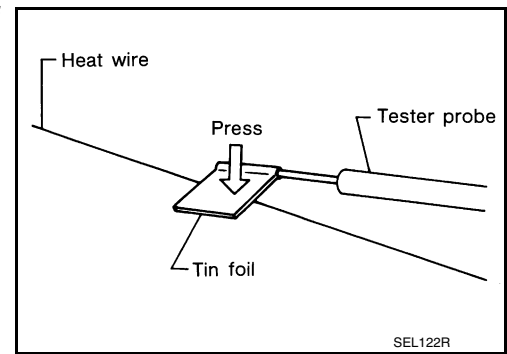


ANTENNA FEEDER

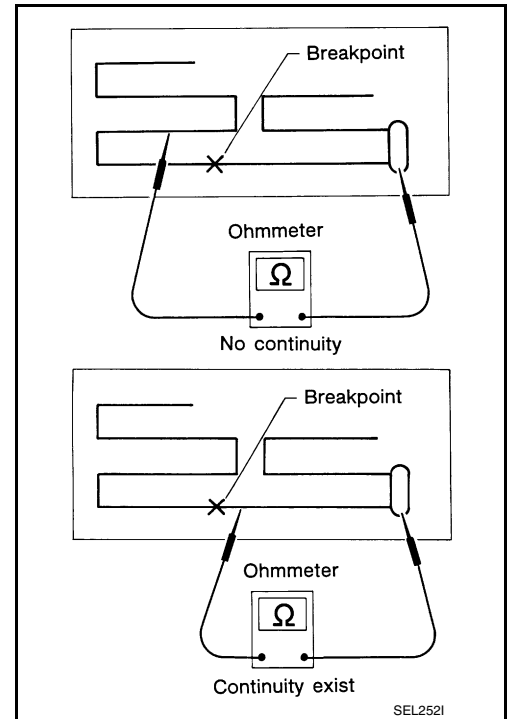
< REMOVAL AND INSTALLATION >

[NAVIGATION WITH BOSE]

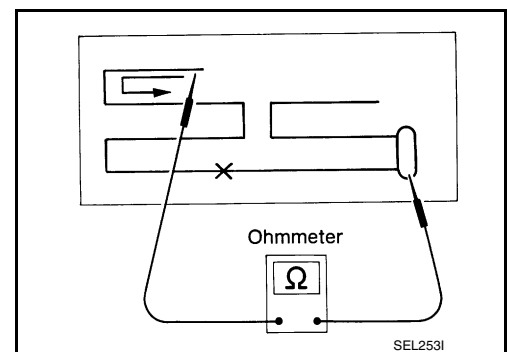
- When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



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



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



REPAIR EQUIPMENT

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

REPAIRING PROCEDURE

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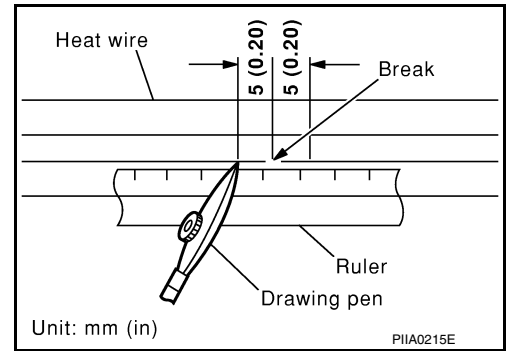
AV

ANTENNA FEEDER

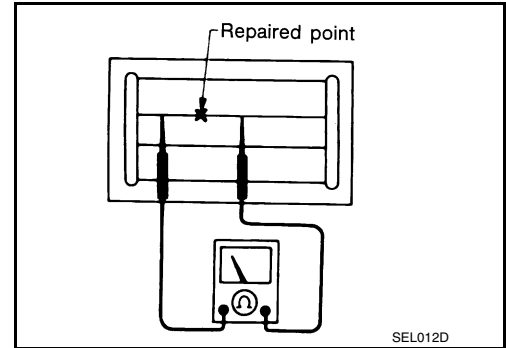
< REMOVAL AND INSTALLATION >

[NAVIGATION WITH BOSE]

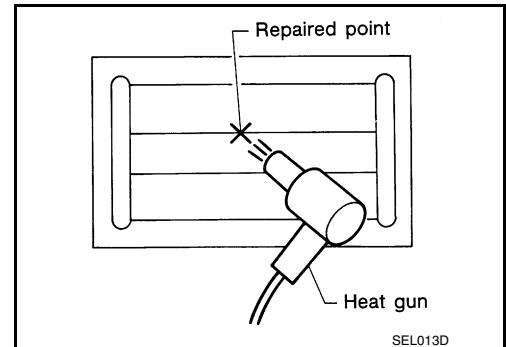
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.



4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited. Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.



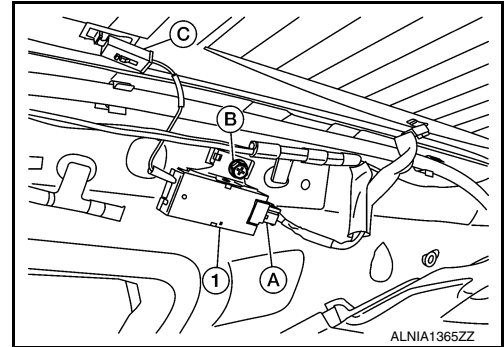
ANTENNA AMP.

Removal and Installation

INFOID:000000010480369

REMOVAL

1. Remove the rear pillar finisher (RH). Refer to [INT-25. "REAR PILLAR FINISHER : Removal and Installation"](#).
2. Disconnect the harness connector (A) from the antenna amp. (1).
3. Disconnect the antenna amp. harness connector (C) from the rear window glass.
4. Remove the antenna amp. screw (B) and the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

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MICROPHONE

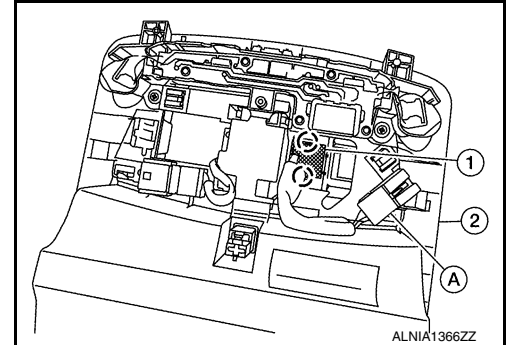
Removal and Installation

INFOID:000000010480370

REMOVAL

1. Remove the front room/map lamp assembly. Refer to [INL-62. "Removal and Installation"](#).
2. Disconnect the microphone connector (A) from the front room/map lamp assembly (2).
3. Release the microphone pawls, then remove the microphone (1).

○: Pawl



INSTALLATION

Installation is in the reverse order of removal.

REAR VIEW CAMERA

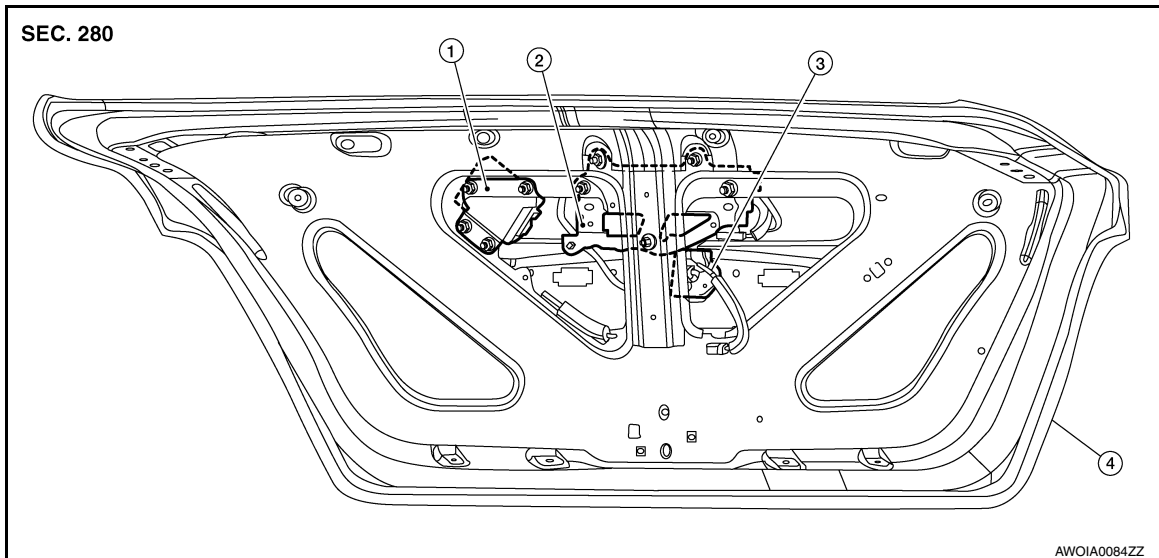
< REMOVAL AND INSTALLATION >

[NAVIGATION WITH BOSE]

REAR VIEW CAMERA

Exploded View

INFOID:0000000011181133



1. Rear view camera washer control unit
2. Rear view camera air pump motor
3. Rear view camera
4. Trunk lid

Removal and Installation

INFOID:0000000010480371

REMOVAL

1. Remove license lamp finisher. Refer to [EXT-36, "Removal and Installation"](#).
2. Disconnect the harness connector from rear view camera.
3. Disconnect rear washer tubes from rear view camera.
4. Remove rear view camera.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Perform rear view camera calibration. Refer to [DAS-40, "Description"](#).

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AV

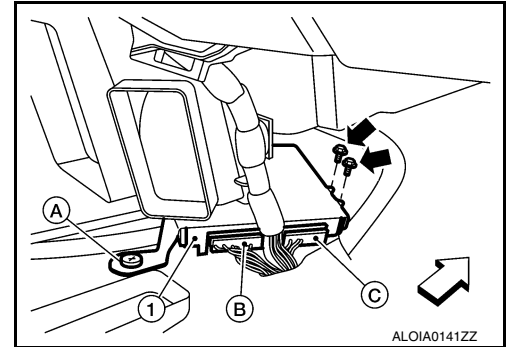
ITS CONTROL UNIT

Removal and Installation

INFOID:000000010480372

REMOVAL

1. Disconnect the battery negative terminal. Refer to [PG-78, "Removal and Installation"](#).
2. Remove the center console assembly. Refer to [IP-18, "Removal and Installation"](#).
3. Disconnect the harness connectors (B,C) from the ITS control unit (1).
↔: Front
4. Remove bolts (←) and plastic screw (A) that retain the ITS control unit (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.